

From: [Thomas, Sue](#)
To: [BrownScott, Jennifer](#)
Subject: Fw: [EXTERNAL] RE: recent forage fish data for Dungeness Harbor
Date: Monday, August 2, 2021 11:49:18 AM
Attachments: [Dungeness Bay Rake surveys 2021.xlsx](#)
[Q_spawn_detected DungenessBay 2012-2020.xlsx](#)

Good question. This is what I received from Todd, though the map does not include older records when herring spawn occurred in the project area. Sounds like they survey annually, so we could either request that he release preliminary data once completed or the permittee could make the request and cc us.

Conservation measures 7-9 address this but do not provide timeframes for spawning surveys by sp or the length of time necessary for eggs to hatch. I'd suggest we follow those guidelines for forage fish on Refuge lands to assure forage fish are not harmed by ground disturbance activities associated with removal of debris. The issue then becomes how to balance disturbance vs mortality especially with larger or more wide-spread releases of debris.

If that doesn't meet the need, I could reach out to Todd again to get specifics. They are releasing a new assessment this fall (see below) so it seems that the stock status from 2016, published in 2019, stands for now unless they update annually but do not publish. I will reach out to clarify that point. Is there anything else I should ask while I'm at it?

Sue

Sue Thomas
Wildlife Biologist
Washington Maritime NWRC
360 457 8451

From: Sandell, Todd A (DFW) <Todd.Sandell@dfw.wa.gov>
Sent: Thursday, July 29, 2021 5:21 PM
To: Thomas, Sue <sue_thomas@fws.gov>
Cc: Dionne, Phillip E (DFW) <Phillip.Dionne@dfw.wa.gov>; Clark, Roy (DFW) <Roy.Clark@dfw.wa.gov>
Subject: [EXTERNAL] RE: recent forage fish data for Dungeness Harbor

This email has been received from outside of DOI - Use caution before clicking on links, opening attachments, or responding.

Hi Sue- I just saw your request and I'm off tomorrow so sending this ASAP. Looks like our previous correspondence covered through 2018 but just to be sure I attached all the rakes where spawn was

detected for 2011-2020 here. We are in the process of generating the 2020 Quadrannual herring report but it won't be done until fall.

In 2021 we found a total of 34.152751 tonnes of spawn in Dungeness Bay; these data have not yet been merged with the "master" database so I included it here in a separate excel sheet, with lat/longs. Adam has taken another position within the Department so we are without a GIS/mapping expert for awhile. However, he did make a map for Dungeness through 2020; that is also attached. The project area appears clear of recent herring spawn but if it has aquatic vegetation it may be inside the buffer for being protected.

Hope this information is useful. I am interested to see how this plays out.

Cheers,

Todd

*** Please note that herring season has begun and I will be out in the field the majority of the time through June. As a result I will be slow to respond to emails; if you need a quick response please call or text. ***

Todd Sandell, Ph.D. (He/Him)
Senior Forage Fish Ecologist
Puget Sound Marine Fish Science Unit
Region 4, Mill Creek Annex
(work cell) 425-287-2877

Want to know more about herring in the Southern Salish Sea?

<https://wdfw.wa.gov/publications/02105>

From: Thomas, Sue <sue_thomas@fws.gov>
Sent: Thursday, July 29, 2021 4:01 PM
To: Sandell, Todd A (DFW) <Todd.Sandell@dfw.wa.gov>
Subject: recent forage fish data for Dungeness Harbor

External Email

Hi Todd,

My apologies for sending this email during the busy field season.

Unfortunately, we are working under a tight timeline to document forage fish distribution within Dungeness Harbor for an aquaculture farm and I'm working on providing the most current data & metadata. You shared the attached info on herring spawning distribution on 4/2019 and I'm wondering if these data have been provided in a recent report. If so, can you forward when you get a moment? Anything that provides more detail on the data points for the record would be appreciated.

Thanks for your help and hope you had time to get out in the field this year,
Sue

Sue Thomas
Wildlife Biologist
Washington Maritime NWRC
360 457 8451

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Survey Area	fs_herring_rake_surveys_c_post.Da	Station Number
Dungeness Bay	Mon Mar 15 2021 10:36:46 GMT-0700 (PDT)	1
Dungeness Bay	Mon Mar 15 2021 10:39:21 GMT-0700 (PDT)	2
Dungeness Bay	Mon Mar 15 2021 10:41:58 GMT-0700 (PDT)	3
Dungeness Bay	Mon Mar 15 2021 10:44:27 GMT-0700 (PDT)	4
Dungeness Bay	Mon Mar 15 2021 10:46:48 GMT-0700 (PDT)	5
Dungeness Bay	Mon Mar 15 2021 10:49:05 GMT-0700 (PDT)	6
Dungeness Bay	Mon Mar 15 2021 10:52:31 GMT-0700 (PDT)	7
Dungeness Bay	Mon Mar 15 2021 10:56:05 GMT-0700 (PDT)	8
Dungeness Bay	Mon Mar 15 2021 10:59:03 GMT-0700 (PDT)	9
Dungeness Bay	Mon Mar 15 2021 11:02:53 GMT-0700 (PDT)	10
Dungeness Bay	Mon Mar 15 2021 11:05:37 GMT-0700 (PDT)	11
Dungeness Bay	Mon Mar 15 2021 11:07:59 GMT-0700 (PDT)	12
Dungeness Bay	Mon Mar 15 2021 11:10:12 GMT-0700 (PDT)	13
Dungeness Bay	Mon Mar 15 2021 11:12:48 GMT-0700 (PDT)	14
Dungeness Bay	Mon Mar 15 2021 11:15:20 GMT-0700 (PDT)	15
Dungeness Bay	Mon Mar 15 2021 11:20:34 GMT-0700 (PDT)	16
Dungeness Bay	Mon Mar 15 2021 11:24:56 GMT-0700 (PDT)	17
Dungeness Bay	Mon Mar 15 2021 11:29:00 GMT-0700 (PDT)	18
Dungeness Bay	Mon Mar 15 2021 11:32:15 GMT-0700 (PDT)	19
Dungeness Bay	Mon Mar 15 2021 11:36:44 GMT-0700 (PDT)	20
Dungeness Bay	Mon Mar 15 2021 11:40:01 GMT-0700 (PDT)	21
Dungeness Bay	Mon Mar 15 2021 11:41:42 GMT-0700 (PDT)	22
Dungeness Bay	Thu Mar 04 2021 10:41:59 GMT-0800 (PST)	1
Dungeness Bay	Thu Mar 04 2021 10:46:26 GMT-0800 (PST)	2
Dungeness Bay	Thu Mar 04 2021 10:48:54 GMT-0800 (PST)	3
Dungeness Bay	Thu Mar 04 2021 10:51:08 GMT-0800 (PST)	4
Dungeness Bay	Thu Mar 04 2021 10:54:03 GMT-0800 (PST)	5
Dungeness Bay	Thu Mar 04 2021 10:56:58 GMT-0800 (PST)	6
Dungeness Bay	Thu Mar 04 2021 11:00:50 GMT-0800 (PST)	7
Dungeness Bay	Thu Mar 04 2021 11:06:47 GMT-0800 (PST)	8
Dungeness Bay	Thu Mar 04 2021 11:11:05 GMT-0800 (PST)	9
Dungeness Bay	Thu Mar 04 2021 11:15:40 GMT-0800 (PST)	10

Dungeness Bay	Thu Mar 04 2021 11:20:39 GMT-0800 (PST)	11
Dungeness Bay	Thu Mar 04 2021 11:23:59 GMT-0800 (PST)	12
Dungeness Bay	Thu Mar 04 2021 11:27:10 GMT-0800 (PST)	13
Dungeness Bay	Thu Mar 04 2021 11:30:36 GMT-0800 (PST)	14
Dungeness Bay	Thu Mar 04 2021 11:35:19 GMT-0800 (PST)	15
Dungeness Bay	Thu Mar 04 2021 11:39:14 GMT-0800 (PST)	16
Dungeness Bay	Thu Mar 04 2021 11:42:29 GMT-0800 (PST)	17
Dungeness Bay	Thu Mar 04 2021 11:48:21 GMT-0800 (PST)	18
Dungeness Bay	Thu Mar 04 2021 11:51:22 GMT-0800 (PST)	19
Dungeness Bay	Thu Mar 04 2021 11:56:45 GMT-0800 (PST)	20
Dungeness Bay	Thu Mar 04 2021 11:59:15 GMT-0800 (PST)	21
Dungeness Bay	Thu Mar 04 2021 12:02:35 GMT-0800 (PST)	22
Dungeness Bay	Wed Feb 24 2021 10:46:37 GMT-0800 (PST)	1
Dungeness Bay	Wed Feb 24 2021 10:50:27 GMT-0800 (PST)	2
Dungeness Bay	Wed Feb 24 2021 10:52:25 GMT-0800 (PST)	3
Dungeness Bay	Wed Feb 24 2021 10:54:36 GMT-0800 (PST)	4
Dungeness Bay	Wed Feb 24 2021 10:57:06 GMT-0800 (PST)	5
Dungeness Bay	Wed Feb 24 2021 11:00:11 GMT-0800 (PST)	6
Dungeness Bay	Wed Feb 24 2021 11:05:13 GMT-0800 (PST)	7
Dungeness Bay	Wed Feb 24 2021 11:08:07 GMT-0800 (PST)	8
Dungeness Bay	Wed Feb 24 2021 11:10:52 GMT-0800 (PST)	9
Dungeness Bay	Wed Feb 24 2021 11:14:08 GMT-0800 (PST)	10
Dungeness Bay	Wed Feb 24 2021 11:21:58 GMT-0800 (PST)	11
Dungeness Bay	Wed Feb 24 2021 11:25:48 GMT-0800 (PST)	12
Dungeness Bay	Wed Feb 24 2021 11:29:33 GMT-0800 (PST)	13
Dungeness Bay	Wed Feb 24 2021 11:32:31 GMT-0800 (PST)	14
Dungeness Bay	Wed Feb 24 2021 11:36:37 GMT-0800 (PST)	15
Dungeness Bay	Wed Feb 24 2021 11:44:19 GMT-0800 (PST)	16
Dungeness Bay	Wed Feb 24 2021 11:49:54 GMT-0800 (PST)	17
Dungeness Bay	Wed Feb 24 2021 11:53:27 GMT-0800 (PST)	18
Dungeness Bay	Wed Feb 24 2021 11:58:23 GMT-0800 (PST)	19
Dungeness Bay	Wed Feb 24 2021 12:02:10 GMT-0800 (PST)	20
Dungeness Bay	Wed Feb 24 2021 12:07:14 GMT-0800 (PST)	21

Dungeness Bay	Wed Feb 24 2021 12:11:28 GMT-0800 (PST)	22
Dungeness Bay	Wed Feb 24 2021 12:13:27 GMT-0800 (PST)	23
Dungeness Bay	Wed Feb 24 2021 12:21:20 GMT-0800 (PST)	24
Dungeness Bay	Thu Feb 11 2021 10:11:22 GMT-0800 (PST)	1
Dungeness Bay	Thu Feb 11 2021 10:13:32 GMT-0800 (PST)	2
Dungeness Bay	Thu Feb 11 2021 10:15:16 GMT-0800 (PST)	3
Dungeness Bay	Thu Feb 11 2021 10:17:01 GMT-0800 (PST)	4
Dungeness Bay	Thu Feb 11 2021 10:19:24 GMT-0800 (PST)	5
Dungeness Bay	Thu Feb 11 2021 10:22:15 GMT-0800 (PST)	6
Dungeness Bay	Thu Feb 11 2021 10:24:40 GMT-0800 (PST)	7
Dungeness Bay	Thu Feb 11 2021 10:27:53 GMT-0800 (PST)	8
Dungeness Bay	Thu Feb 11 2021 10:30:43 GMT-0800 (PST)	9
Dungeness Bay	Thu Feb 11 2021 10:33:24 GMT-0800 (PST)	10
Dungeness Bay	Thu Feb 11 2021 10:35:37 GMT-0800 (PST)	11
Dungeness Bay	Thu Feb 11 2021 10:38:16 GMT-0800 (PST)	12
Dungeness Bay	Thu Feb 11 2021 10:41:27 GMT-0800 (PST)	13
Dungeness Bay	Thu Feb 11 2021 10:43:50 GMT-0800 (PST)	14
Dungeness Bay	Thu Feb 11 2021 10:46:40 GMT-0800 (PST)	15
Dungeness Bay	Thu Feb 11 2021 10:49:54 GMT-0800 (PST)	16
Dungeness Bay	Thu Feb 11 2021 10:52:39 GMT-0800 (PST)	17
Dungeness Bay	Thu Feb 11 2021 10:58:58 GMT-0800 (PST)	18
Dungeness Bay	Thu Feb 11 2021 11:01:14 GMT-0800 (PST)	19
Dungeness Bay	Mon Feb 01 2021 10:48:57 GMT-0800 (PST)	1
Dungeness Bay	Mon Feb 01 2021 10:51:42 GMT-0800 (PST)	2
Dungeness Bay	Mon Feb 01 2021 10:54:12 GMT-0800 (PST)	3
Dungeness Bay	Mon Feb 01 2021 10:57:13 GMT-0800 (PST)	4
Dungeness Bay	Mon Feb 01 2021 10:59:43 GMT-0800 (PST)	5
Dungeness Bay	Mon Feb 01 2021 11:03:03 GMT-0800 (PST)	6
Dungeness Bay	Mon Feb 01 2021 11:05:24 GMT-0800 (PST)	7
Dungeness Bay	Mon Feb 01 2021 11:08:05 GMT-0800 (PST)	8
Dungeness Bay	Mon Feb 01 2021 11:10:46 GMT-0800 (PST)	9
Dungeness Bay	Mon Feb 01 2021 11:13:41 GMT-0800 (PST)	10
Dungeness Bay	Mon Feb 01 2021 11:16:22 GMT-0800 (PST)	11

Dungeness Bay	Mon Feb 01 2021 11:18:46 GMT-0800 (PST)	12
Dungeness Bay	Mon Feb 01 2021 11:21:13 GMT-0800 (PST)	13
Dungeness Bay	Mon Feb 01 2021 11:23:29 GMT-0800 (PST)	14
Dungeness Bay	Mon Feb 01 2021 11:26:50 GMT-0800 (PST)	15
Dungeness Bay	Mon Feb 01 2021 11:29:47 GMT-0800 (PST)	16
Dungeness Bay	Mon Feb 01 2021 11:35:36 GMT-0800 (PST)	17
Dungeness Bay	Mon Feb 01 2021 11:38:21 GMT-0800 (PST)	18
Dungeness Bay	Mon Feb 01 2021 11:40:57 GMT-0800 (PST)	19
Dungeness Bay	Mon Feb 01 2021 11:43:14 GMT-0800 (PST)	20
Dungeness Bay	Mon Feb 01 2021 11:46:04 GMT-0800 (PST)	21
Dungeness Bay	Mon Feb 01 2021 11:49:04 GMT-0800 (PST)	22
Dungeness Bay	Mon Feb 01 2021 11:54:18 GMT-0800 (PST)	23
Dungeness Bay	Wed Jan 27 2021 14:06:05 GMT-0800 (PST)	1
Dungeness Bay	Wed Jan 27 2021 14:09:44 GMT-0800 (PST)	2
Dungeness Bay	Wed Jan 27 2021 14:11:51 GMT-0800 (PST)	3
Dungeness Bay	Wed Jan 27 2021 14:14:20 GMT-0800 (PST)	4
Dungeness Bay	Wed Jan 27 2021 14:16:43 GMT-0800 (PST)	5
Dungeness Bay	Wed Jan 27 2021 14:19:15 GMT-0800 (PST)	6
Dungeness Bay	Wed Jan 27 2021 14:24:03 GMT-0800 (PST)	7
Dungeness Bay	Wed Jan 27 2021 14:26:32 GMT-0800 (PST)	8
Dungeness Bay	Wed Jan 27 2021 14:29:37 GMT-0800 (PST)	9
Dungeness Bay	Wed Jan 27 2021 14:32:03 GMT-0800 (PST)	10
Dungeness Bay	Wed Jan 27 2021 14:35:12 GMT-0800 (PST)	11
Dungeness Bay	Wed Jan 27 2021 14:37:54 GMT-0800 (PST)	12
Dungeness Bay	Wed Jan 27 2021 14:40:36 GMT-0800 (PST)	13
Dungeness Bay	Wed Jan 27 2021 14:43:24 GMT-0800 (PST)	14
Dungeness Bay	Wed Jan 27 2021 14:46:21 GMT-0800 (PST)	15
Dungeness Bay	Wed Jan 27 2021 14:48:29 GMT-0800 (PST)	16
Dungeness Bay	Wed Jan 27 2021 14:51:01 GMT-0800 (PST)	17
Dungeness Bay	Wed Jan 27 2021 14:52:48 GMT-0800 (PST)	18
Dungeness Bay	Wed Jan 27 2021 14:55:35 GMT-0800 (PST)	19
Dungeness Bay	Thu Jan 21 2021 10:13:23 GMT-0800 (PST)	1
Dungeness Bay	Mon Jan 11 2021 10:33:38 GMT-0800 (PST)	1

Dungeness Bay	Mon Jan 11 2021 10:36:19 GMT-0800 (PST)	2
Dungeness Bay	Mon Jan 11 2021 10:38:28 GMT-0800 (PST)	3
Dungeness Bay	Mon Jan 11 2021 10:41:16 GMT-0800 (PST)	4
Dungeness Bay	Mon Jan 11 2021 10:43:59 GMT-0800 (PST)	5
Dungeness Bay	Mon Jan 11 2021 10:46:14 GMT-0800 (PST)	6
Dungeness Bay	Mon Jan 11 2021 10:48:12 GMT-0800 (PST)	7

Location	Start Depth	End Depth
Latitude:48.151520, Longitude:-123.153261	5	6
Latitude:48.150579, Longitude:-123.157200	8	7
Latitude:48.150423, Longitude:-123.160605	6	4
Latitude:48.149998, Longitude:-123.164346	7	5
Latitude:48.148956, Longitude:-123.169015	6	5
Latitude:48.149526, Longitude:-123.174447	10	10
Latitude:48.151472, Longitude:-123.177771	10	10
Latitude:48.154016, Longitude:-123.175071	10	10
Latitude:48.156189, Longitude:-123.172237	10	10
Latitude:48.158288, Longitude:-123.168717	9	9
Latitude:48.161396, Longitude:-123.165786	8	8
Latitude:48.163202, Longitude:-123.163335	4	4
Latitude:48.161359, Longitude:-123.159774	3	4
Latitude:48.158228, Longitude:-123.164514	7	6
Latitude:48.155035, Longitude:-123.169116	9	9
Latitude:48.152112, Longitude:-123.172716	9	9
Latitude:48.151821, Longitude:-123.169304	9	9
Latitude:48.153518, Longitude:-123.165440	9	9
Latitude:48.155092, Longitude:-123.160431	10	11
Latitude:48.156267, Longitude:-123.153801	10	7
Latitude:48.152923, Longitude:-123.156025	10	10
Latitude:48.153370, Longitude:-123.159915	9	9
Latitude:48.151656, Longitude:-123.153364	6	7
Latitude:48.150579, Longitude:-123.156605	7	7
Latitude:48.150531, Longitude:-123.160145	8	5
Latitude:48.150277, Longitude:-123.164019	7	8
Latitude:48.149327, Longitude:-123.167652	6	7
Latitude:48.149046, Longitude:-123.171996	10	11
Latitude:48.150648, Longitude:-123.175779	11	10
Latitude:48.153409, Longitude:-123.175372	10	10
Latitude:48.156543, Longitude:-123.171720	10	10
Latitude:48.159494, Longitude:-123.168253	9	9

Latitude:48.161922, Longitude:-123.165007	7	7
Latitude:48.161118, Longitude:-123.161239	8	9
Latitude:48.158401, Longitude:-123.164369	9	7
Latitude:48.155684, Longitude:-123.167566	9	9
Latitude:48.151924, Longitude:-123.171041	10	10
Latitude:48.151523, Longitude:-123.168205	10	10
Latitude:48.153389, Longitude:-123.163488	10	10
Latitude:48.154637, Longitude:-123.161098	9	9
Latitude:48.155667, Longitude:-123.158858	11	11
Latitude:48.155631, Longitude:-123.154033	11	11
Latitude:48.153466, Longitude:-123.155259	10	10
Latitude:48.152537, Longitude:-123.158433	10	10
SEE COMMENT	8	9
	8	7
	10	8
	9	8
	7	9
	9	8
	13	13
	13	13
	13	13
	12	12
	11	11
	10	10
	12	12
	15	12
	12	13
	13	13
	13	13
	13	13
	13	13
	13	13

	11	10
	13	13
	14	14
Latitude:48.153454, Longitude:-123.154117	13	12
Latitude:48.155629, Longitude:-123.154289	14	14
Latitude:48.155586, Longitude:-123.158157	15	14
Latitude:48.156228, Longitude:-123.161967	12	11
Latitude:48.157245, Longitude:-123.165953	12	12
Latitude:48.158753, Longitude:-123.168985	12	12
Latitude:48.156518, Longitude:-123.172456	13	13
Latitude:48.153498, Longitude:-123.176991	12	12
Latitude:48.151026, Longitude:-123.179786	12	12
Latitude:48.149145, Longitude:-123.176288	13	12
Latitude:48.148356, Longitude:-123.173209	12	11
Latitude:48.148691, Longitude:-123.170460	10	9
Latitude:48.149966, Longitude:-123.165611	10	9
Latitude:48.150337, Longitude:-123.162897	8	7
Latitude:48.151828, Longitude:-123.166672	14	12
Latitude:48.153871, Longitude:-123.169639	14	13
Latitude:48.151780, Longitude:-123.173177	14	13
Latitude:48.151101, Longitude:-123.159047	13	13
Latitude:48.152488, Longitude:-123.160141	14	13
Latitude:48.157570, Longitude:-123.152254	11	9
Latitude:48.158599, Longitude:-123.156030	13	9
Latitude:48.159899, Longitude:-123.159554	8	9
Latitude:48.161155, Longitude:-123.163092	12	12
Latitude:48.159740, Longitude:-123.166158	12	12
Latitude:48.158990, Longitude:-123.161909	11	13
Latitude:48.157319, Longitude:-123.157757	19	19
Latitude:48.154625, Longitude:-123.155491	14	14
Latitude:48.154865, Longitude:-123.158204	14	14
Latitude:48.155927, Longitude:-123.161623	11	11
Latitude:48.156579, Longitude:-123.165200	12	12

Latitude:48.158015, Longitude:-123.167898	12	11
Latitude:48.156990, Longitude:-123.171349	12	12
Latitude:48.155825, Longitude:-123.167354	12	12
Latitude:48.154674, Longitude:-123.162402	12	12
Latitude:48.153404, Longitude:-123.157276	13	13
Latitude:48.150612, Longitude:-123.155984	10	7
Latitude:48.150261, Longitude:-123.159167	7	9
Latitude:48.152624, Longitude:-123.158222	13	14
Latitude:48.152553, Longitude:-123.160530	13	12
Latitude:48.150383, Longitude:-123.162344	9	7
Latitude:48.149126, Longitude:-123.167946	7	8
Latitude:48.151582, Longitude:-123.167939	12	12
Latitude:48.151311, Longitude:-123.153413	10	10
Latitude:48.150751, Longitude:-123.157795	14	13
Latitude:48.150711, Longitude:-123.163102	14	14
Latitude:48.149191, Longitude:-123.168620	12	10
Latitude:48.148849, Longitude:-123.173503	12	12
Latitude:48.151682, Longitude:-123.172715	15	15
Latitude:48.152878, Longitude:-123.177974	14	13
Latitude:48.155699, Longitude:-123.174113	15	14
Latitude:48.158613, Longitude:-123.170583	13	13
Latitude:48.160909, Longitude:-123.166785	12	12
Latitude:48.161268, Longitude:-123.162440	14	14
Latitude:48.158473, Longitude:-123.164051	12	12
Latitude:48.155286, Longitude:-123.166433	14	14
Latitude:48.152403, Longitude:-123.167614	15	15
Latitude:48.153029, Longitude:-123.162458	14	14
Latitude:48.155918, Longitude:-123.159707	13	12
Latitude:48.158833, Longitude:-123.157302	18	22
Latitude:48.157092, Longitude:-123.153891	15	13
Latitude:48.153790, Longitude:-123.155442	15	15
Latitude:48.151960, Longitude:-123.153325	9	10
Latitude:48.152087, Longitude:-123.153192	10	11

Latitude:48.150577, Longitude:-123.156394	9	11
Latitude:48.150472, Longitude:-123.160381	12	10
Latitude:48.149878, Longitude:-123.165210	12	10
Latitude:48.148851, Longitude:-123.169693	11	12
Latitude:48.150274, Longitude:-123.174413	16	16
Latitude:48.152416, Longitude:-123.177031	16	15

Overall Spawn Intensity	Eel Grass	Agardhiella	Gracillariopsis
NP	NP	NP	X
NP	X	X	X
NP	X	NP	NP
NP	X	X	NP
NP	NP	NP	X
NP	X	NP	X
NP	NP	NP	X
NP	X	NP	X
NP	NP	NP	X
NP	NP	NP	X
NP	X	NP	X
NP	X	NP	X
NP	X	NP	X
NP	X	NP	X
NP	X	NP	X
NP	X	X	X
NP	X	X	X
NP	NP	NP	X
NP	X	NP	X
NP	X	NP	X
NP	NP	NP	X
NP	X	NP	NP
NP	NP	X	X
NP	X	X	X
NP	X	X	NP
NP	X	NP	X
NP	NP	NP	NP
NP	X	NP	X
NP	X	NP	X
NP	X	NP	X
NP	X	NP	X
NP	X	NP	NP
NP	X	NP	X

NP	X	NP	X
NP	X	NP	X
NP	X	NP	X
NP	X	NP	X
NP	NP	NP	X
NP	NP	NP	X
VL	VL	NP	VL
NP	X	NP	X
NP	X	X	X
NP	NP	X	X
NP	NP	NP	X
NP	NP	X	X
NP	NP	X	X
NP	NP	NP	X
NP	X	NP	NP
NP	X	NP	X
NP	X	NP	X
NP	NP	NP	X
NP	X	NP	NP
NP	NP	NP	X
NP	X	NP	X
NP	NP	NP	NP
NP	X	NP	X
NP	X	NP	X
NP	X	X	NP
NP	X	NP	X
VL	VL	NP	X
VL	X	VL	VL
NP	X	NP	X
NP	NP	NP	X
NP	X	NP	X
NP	X	NP	X
NP	NP	X	X

NP	X	NP	X
NP	NP	NP	X
NP	X	X	X
NP	NP	NP	X
NP	NP	NP	X
NP	NP	NP	X
NP	X	NP	NP
NP	NP	NP	X
NP	NP	NP	NP
NP	X	NP	NP
NP	X	NP	X
NP	X	NP	X
NP	X	NP	NP
NP	NP	NP	X
NP	X	NP	X
NP	X	NP	NP
NP	X	NP	NP
NP	NP	NP	X
NP	X	NP	NP
NP	X	NP	X
NP	NP	NP	NP
NP	NP	NP	X
NP	X	NP	X
NP	X	NP	NP
NP	X	NP	NP
NP	X	NP	X
NP	NP	NP	X
NP	NP	NP	NP
NP	X	NP	X
NP	X	NP	NP
NP	X	NP	X
NP	X	NP	X
NP	X	NP	X

NP	X	NP	NP
NP	NP	NP	X
NP	X	X	NP
NP	X	NP	X
NP	X	X	X
NP	NP	NP	X
NP	X	NP	X
NP	X	NP	NP
NP	X	NP	X
NP	X	NP	X
NP	X	NP	X
NP	NP	X	X
NP	X	NP	X
NP	NP	NP	X
NP	X	NP	NP
NP	X	NP	NP
NP	NP	NP	NP
NP	X	NP	NP
NP	NP	NP	NP
NP	X	NP	NP
NP	X	NP	NP
NP	X	NP	X
NP	X	NP	NP
NP	X	NP	X
NP	NP	NP	X
NP	NP	NP	X
NP	X	NP	NP
NP	X	NP	NP
NP	X	NP	NP
NP	X	X	X
NP	NP	NP	X
NP	X	NP	X
NP	NP	X	X

NP	X	NP	X
NP	X	NP	X
NP	X	NP	X
NP	NP	NP	NP
NP	X	NP	NP
NP	NP	NP	X

[illegible]

NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	X	NP	NP
NP	NP	NP	X	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	X	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

Odonthalia	Plocamium	Polyneura	Prionitis	Rhodoptilum
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	X	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP

NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	X	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP

[illegible]

[illegible]

[illegible]

Rhodymelia	Rhodymenia	Sargassum	Ulva	Urospora
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	X
NP	NP	NP	NP	NP
NP	NP	NP	NP	X
NP	NP	NP	X	NP
NP	NP	NP	X	NP
NP	NP	NP	X	NP
NP	NP	NP	NP	X
NP	NP	NP	X	NP
NP	NP	NP	X	X
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	X	X
NP	NP	NP	X	X
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	X
NP	NP	NP	X	X
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	X
NP	NP	NP	X	X
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	X	NP
NP	NP	NP	NP	NP
NP	NP	NP	X	NP
NP	NP	NP	NP	X
NP	NP	NP	NP	NP

NP	NP	NP	X	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	X	NP
NP	NP	NP	NP	NP
NP	NP	NP	X	NP
NP	NP	NP	NP	X
NP	NP	NP	NP	NP
NP	NP	NP	X	NP
NP	NP	NP	X	X
NP	NP	NP	NP	X
NP	NP	NP	X	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	X	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	X	NP
NP	NP	NP	X	X
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	X	X
NP	NP	NP	NP	NP
NP	NP	NP	X	NP
NP	NP	NP	X	NP
NP	NP	NP	X	X
NP	NP	NP	X	X
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	X
NP	NP	NP	X	NP

NP	NP	NP	NP	NP
NP	NP	NP	NP	X
NP	NP	NP	NP	NP
NP	NP	NP	X	NP
NP	NP	NP	NP	X
NP	NP	NP	X	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	X
NP	NP	NP	NP	NP
NP	NP	NP	X	NP
NP	NP	NP	NP	X
NP	NP	NP	NP	X
NP	NP	NP	NP	NP
NP	NP	NP	NP	X
NP	NP	NP	NP	NP
NP	NP	NP	NP	X
NP	NP	NP	NP	NP
NP	NP	NP	NP	X
NP	NP	NP	NP	NP
NP	NP	NP	X	NP
NP	NP	NP	X	NP
NP	NP	NP	X	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	X	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	X
NP	NP	NP	X	NP
NP	NP	NP	NP	X
NP	NP	NP	X	NP

NP	NP	NP	NP	X
NP	NP	NP	NP	NP
NP	NP	NP	X	X
NP	NP	NP	X	X
NP	NP	NP	X	X
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	X	X
NP	NP	NP	X	X
NP	NP	NP	NP	X
NP	NP	NP	NP	NP
NP	NP	NP	X	X
NP	NP	NP	X	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	X	NP
NP	NP	NP	X	NP
NP	NP	NP	X	NP
NP	NP	NP	X	NP
NP	NP	NP	X	NP
NP	NP	NP	X	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	X
NP	NP	NP	NP	X
NP	NP	NP	NP	X
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	X	X
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP

NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	NP	NP
NP	NP	NP	X	NP
NP	NP	NP	NP	NP

[illegible]

NP		No		NP
NP		No		NP
NP		No		NP
NP		No		NP
NP		No		NP
NP		No		NP
NP		No		NP
NP		No		NP
NP		No		NP
NP		No		NP
NP		No		NP
NP		No		NP
NP		No		NP
NP		No		NP
NP		No		NP
NP		No		NP
NP		No		NP
NP		No		NP
NP		No		NP
NP		No		NP
NP		No		NP
NP		No		NP
NP		No		NP
NP		No		NP
X		No		NP
NP		No		NP
NP		No		NP
NP		No		NP

[illegible]

[illegible]

[illegible]

Terrestrial Debris	Man Made Debris	Vegetation Present?	Sampled	Sample Jar Number (from)
NP	NP	Yes	No	
NP	NP	Yes	No	
NP	NP	Yes	No	
NP	NP	Yes	No	
NP	NP	Yes	No	
NP	NP	Yes	No	
X	NP	Yes	No	
NP	NP	Yes	No	
NP	NP	Yes	No	
NP	NP	Yes	No	
NP	NP	Yes	No	
NP	NP	Yes	No	
NP	NP	Yes	No	
NP	NP	Yes	No	
X	NP	Yes	No	
NP	NP	Yes	No	
NP	NP	Yes	No	
X	NP	Yes	No	
NP	NP	Yes	No	
X	NP	Yes	No	
NP	NP	Yes	No	
NP	NP	Yes	No	
NP	NP	Yes	No	
NP	NP	Yes	No	
NP	NP	Yes	No	
NP	NP	Yes	No	
NP	NP	Yes	No	
NP	NP	No	No	
NP	NP	Yes	No	
NP	NP	Yes	No	
X	NP	Yes	No	
X	NP	Yes	No	
X	NP	Yes	No	
NP	NP	Yes	No	

[illegible]

NP	NP	Yes	No	
NP	NP	Yes	No	
NP	NP	Yes	No	
NP	NP	Yes	No	
NP	NP	Yes	No	
NP	NP	Yes	No	
NP	NP	Yes	No	
X	NP	Yes	No	
X	NP	No	No	
X	NP	Yes	No	
NP	NP	Yes	No	
NP	NP	Yes	No	
NP	NP	Yes	No	
X	NP	Yes	No	
NP	NP	Yes	No	
X	NP	Yes	No	
NP	NP	Yes	No	
NP	NP	Yes	No	
NP	NP	Yes	No	
NP	NP	Yes	No	
NP	NP	Yes	No	
NP	NP	Yes	No	
NP	NP	Yes	No	
NP	NP	Yes	No	
NP	NP	Yes	No	
X	NP	Yes	No	
NP	NP	Yes	No	
NP	NP	Yes	No	
NP	NP	Yes	No	
NP	NP	No	No	
X	NP	Yes	No	
NP	NP	Yes	No	
NP	NP	Yes	No	
X	NP	Yes	No	
X	NP	Yes	No	

[illegible]

NP	NP	Yes	No	
NP	NP	Yes	No	
NP	NP	Yes	No	
NP	NP	No	No	
NP	NP	Yes	No	
NP	NP	Yes	No	

Mammals/Birds?	Jellyfish	Latitude	Longitude	Comments
		48.15152	-123.153261	
		48.150579	-123.1572	
		48.150423	-123.160605	
		48.149998	-123.164346	
		48.148956	-123.169015	
		48.149526	-123.174447	
		48.151472	-123.177771	
		48.154016	-123.175071	
		48.156189	-123.172237	
		48.158288	-123.168717	
		48.161396	-123.165786	
		48.163202	-123.163335	
		48.161359	-123.159774	
		48.158228	-123.164514	
		48.155035	-123.169116	
		48.152112	-123.172716	
		48.151821	-123.169304	
		48.153518	-123.16544	
		48.155092	-123.160431	
		48.156267	-123.153801	
		48.152923	-123.156025	
		48.15337	-123.159915	
		48.151656	-123.153364	
		48.150579	-123.156605	
		48.150531	-123.160145	
		48.150277	-123.164019	
		48.149327	-123.167652	
		48.149046	-123.171996	
		48.150648	-123.175779	
		48.153409	-123.175372	
		48.156543	-123.17172	
		48.159494	-123.168253	

[illegible]

		48.153454	-123.154117	
		48.155629	-123.154289	
		48.155586	-123.158157	
		48.156228	-123.161967	
		48.157245	-123.165953	
		48.158753	-123.168985	
		48.156518	-123.172456	
		48.153498	-123.176991	
		48.151026	-123.179786	
		48.149145	-123.176288	
		48.148356	-123.173209	
		48.148691	-123.17046	
		48.149966	-123.165611	
		48.150337	-123.162897	
		48.151828	-123.166672	
		48.153871	-123.169639	
		48.15178	-123.173177	
		48.151101	-123.159047	
		48.152488	-123.160141	
		48.15757	-123.152254	
		48.158599	-123.15603	
		48.159899	-123.159554	
		48.161155	-123.163092	
		48.15974	-123.166158	
		48.15899	-123.161909	
		48.157319	-123.157757	
		48.154625	-123.155491	
		48.154865	-123.158204	
		48.155927	-123.161623	
		48.156579	-123.1652	

		48.158015	-123.167898	
		48.15699	-123.171349	
		48.155825	-123.167354	
		48.154674	-123.162402	
		48.153404	-123.157276	
		48.150612	-123.155984	
		48.150261	-123.159167	
		48.152624	-123.158222	
		48.152553	-123.16053	
		48.150383	-123.162344	
		48.149126	-123.167946	
		48.151582	-123.167939	
		48.151311	-123.153413	
		48.150751	-123.157795	
		48.150711	-123.163102	
		48.149191	-123.16862	
		48.148849	-123.173503	
		48.151682	-123.172715	
		48.152878	-123.177974	
		48.155699	-123.174113	
		48.158613	-123.170583	
		48.160909	-123.166785	
		48.161268	-123.16244	
		48.158473	-123.164051	
		48.155286	-123.166433	
		48.152403	-123.167614	
		48.153029	-123.162458	
		48.155918	-123.159707	
		48.158833	-123.157302	
		48.157092	-123.153891	
		48.15379	-123.155442	
		48.15196	-123.153325	
		48.152087	-123.153192	

		48.150577	-123.156394	
		48.150472	-123.160381	
		48.149878	-123.16521	
		48.148851	-123.169693	
		48.150274	-123.174413	
		48.152416	-123.177031	

Area	Date	Latitude	Longitude	Spawn_Intensity	Vegetation_Type
Dungeness Bay	03/02/2011	48.15136	-123.1737	VL	Eelgrass
Dungeness Bay	02/10/2011	48.15044	-123.1601	VL	Eelgrass
Dungeness Bay	02/10/2011	48.15028	-123.1633	VL	Eelgrass
Dungeness Bay	02/10/2011	48.1528	-123.16	VL	Eelgrass
Dungeness Bay	02/10/2011	48.15039	-123.1576	VL	Eelgrass
Dungeness Bay	02/16/2011	48.151	-123.1552	VL	Eelgrass
Dungeness Bay	02/16/2011	48.1507	-123.1579	VL	Eelgrass
Dungeness Bay	02/16/2011	48.15079	-123.1609	VL	Eelgrass
Dungeness Bay	02/16/2011	48.14934	-123.1683	VL	Eelgrass
Dungeness Bay	02/16/2011	48.15746	-123.1705	VL	Eelgrass
Dungeness Bay	02/16/2011	48.15276	-123.1657	VL	Eelgrass
Dungeness Bay	02/16/2011	48.15033	-123.1654	VL	Eelgrass
Dungeness Bay	02/04/2010	48.15055	-123.1625	VL	Eelgrass
Dungeness Bay	02/11/2010	48.15048	-123.1622	VL	Eelgrass
Dungeness Bay	02/17/2010	48.15049	-123.1566	VL	Eelgrass
Dungeness Bay	02/17/2010	48.15039	-123.1595	VL	Eelgrass
Dungeness Bay	02/17/2010	48.14977	-123.1652	VL	Eelgrass
Dungeness Bay	02/25/2010	48.15049	-123.1563	VL	Eelgrass
Dungeness Bay	02/25/2010	48.15033	-123.1608	VL	Eelgrass
Dungeness Bay	03/04/2010	48.15059	-123.1568	VL	Eelgrass
Dungeness Bay	03/04/2010	48.15041	-123.1598	VL	Eelgrass
Dungeness Bay	03/04/2010	48.15036	-123.1626	VL	Eelgrass
Dungeness Bay	03/10/2009	48.1504	-123.1593	VL	Eelgrass

Dungeness Bay	03/10/2009	48.15022	-123.1627	VL	Eelgrass
Dungeness Bay	02/19/2009	48.15039	-123.1601	VL	Eelgrass
Dungeness Bay	03/04/2009	48.15045	-123.1571	VL	Eelgrass
Dungeness Bay	03/04/2009	48.15026	-123.16	VL	Eelgrass
Dungeness Bay	03/04/2009	48.15011	-123.1632	VL	Eelgrass
Dungeness Bay	03/04/2009	48.14923	-123.1664	VL	Eelgrass
Dungeness Bay	02/21/2008	48.15036	-123.1594	VL	Eelgrass
Dungeness Bay	02/28/2008	48.15023	-123.1601	VL	Eelgrass
Dungeness Bay	02/28/2008	48.15017	-123.1625	VL	Eelgrass
Dungeness Bay	02/28/2008	48.15824	-123.163	VL	Eelgrass
Dungeness Bay	03/05/2008	48.15265	-123.173	VL	Eelgrass
Dungeness Bay	03/12/2008	48.15303	-123.1705	VL	Eelgrass
Dungeness Bay	03/01/2007	48.15305	-123.1684	VL	Eelgrass
Dungeness Bay	03/08/2007	48.15258	-123.1727	VL	Eelgrass
Dungeness Bay	02/09/1983	48.15244	-123.1674	VL	Eelgrass
Dungeness Bay	02/09/1983	48.15023	-123.1663	VL	Eelgrass
Dungeness Bay	02/09/1983	48.15074	-123.1628	VL	Eelgrass
Dungeness Bay	02/09/1983	48.15554	-123.152	VL	Eelgrass
Dungeness Bay	02/16/1983	48.15182	-123.1517	VL	Eelgrass
Dungeness Bay	02/19/1986	48.15258	-123.1554	VL	Eelgrass
Dungeness Bay	03/12/1986	48.15091	-123.1557	VL	Eelgrass
Dungeness Bay	03/12/1986	48.15031	-123.1646	VL	Eelgrass
Dungeness Bay	03/19/1986	48.14989	-123.1657	VL	Eelgrass

Dungeness Bay	03/05/1986	48.153	-123.1522	VL	Eelgrass
Dungeness Bay	02/03/1995	48.15998	-123.1632	L	Eelgrass
Dungeness Bay	02/10/1995	48.16031	-123.1608	VL	Eelgrass
Dungeness Bay	02/10/1995	48.15688	-123.1649	VL	Eelgrass
Dungeness Bay	02/10/1995	48.15837	-123.157	VL	Eelgrass
Dungeness Bay	02/10/1995	48.16056	-123.1543	VL	Eelgrass
Dungeness Bay	02/17/1995	48.15088	-123.1646	VL	Eelgrass
Dungeness Bay	02/17/1995	48.15012	-123.1669	VL	Eelgrass
Dungeness Bay	02/24/1995	48.15012	-123.1647	VL	Eelgrass
Dungeness Bay	02/03/1995	48.15084	-123.1571	VL	Eelgrass
Dungeness Bay	02/03/1995	48.15103	-123.1591	VL	Eelgrass
Dungeness Bay	02/03/1995	48.15089	-123.162	VL	Eelgrass
Dungeness Bay	02/03/1995	48.15859	-123.1688	L	Eelgrass
Dungeness Bay	02/10/1995	48.15103	-123.1606	VL	Eelgrass
Dungeness Bay	02/10/1995	48.15007	-123.1639	VL	Eelgrass
Dungeness Bay	02/10/1995	48.15873	-123.1699	VL	Eelgrass
Dungeness Bay	02/17/1995	48.15974	-123.1625	VL	Eelgrass
Dungeness Bay	02/17/1995	48.16146	-123.1609	VL	Eelgrass
Dungeness Bay	02/17/1995	48.16317	-123.1583	VL	Eelgrass
Dungeness Bay	02/17/1995	48.16199	-123.1555	VL	Eelgrass
Dungeness Bay	02/17/1995	48.16032	-123.1575	VL	Eelgrass
Dungeness Bay	03/03/1995	48.15017	-123.1648	VL	Eelgrass
Dungeness Bay	03/03/1995	48.16098	-123.1582	VL	Eelgrass

Dungeness Bay	01/24/1996	48.16222	-123.1566	VL	Eelgrass
Dungeness Bay	01/24/1996	48.15938	-123.1494	VL	Eelgrass
Dungeness Bay	01/24/1996	48.15671	-123.1515	VL	Eelgrass
Dungeness Bay	02/01/1996	48.15566	-123.1514	VL	Eelgrass
Dungeness Bay	02/01/1996	48.15895	-123.1497	VL	Eelgrass
Dungeness Bay	02/01/1996	48.15951	-123.1582	VL	Eelgrass
Dungeness Bay	02/01/1996	48.16088	-123.1612	VL	Eelgrass
Dungeness Bay	02/09/1996	48.15146	-123.1628	VL	Eelgrass
Dungeness Bay	03/08/1996	48.14835	-123.1715	VL	Eelgrass
Dungeness Bay	01/30/1997	48.14911	-123.1693	VL	Eelgrass
Dungeness Bay	01/30/1997	48.15831	-123.1605	VL	Eelgrass
Dungeness Bay	02/21/1997	48.14988	-123.1635	VL	Eelgrass
Dungeness Bay	02/21/1997	48.15514	-123.1518	VL	Eelgrass
Dungeness Bay	02/01/1996	48.15193	-123.1607	VL	Eelgrass
Dungeness Bay	02/01/1996	48.15199	-123.1571	VL	Eelgrass
Dungeness Bay	02/01/1996	48.15118	-123.1545	VL	Eelgrass
Dungeness Bay	02/09/1996	48.15366	-123.1523	VL	Eelgrass
Dungeness Bay	02/09/1996	48.16236	-123.1642	VL	Eelgrass
Dungeness Bay	02/09/1996	48.16512	-123.1598	VL	Eelgrass
Dungeness Bay	02/09/1996	48.1585	-123.1631	VL	Eelgrass
Dungeness Bay	03/01/1996	48.15146	-123.1605	VL	Eelgrass
Dungeness Bay	03/01/1996	48.15055	-123.1651	VL	Eelgrass
Dungeness Bay	01/28/1999	48.15097	-123.1663	VL	Eelgrass

Dungeness Bay	01/28/1999	48.15504	-123.1516	VL	Eelgrass
Dungeness Bay	02/06/1998	48.15921	-123.1688	VL	Eelgrass
Dungeness Bay	03/06/1998	48.15669	-123.1647	VL	Eelgrass
Dungeness Bay	01/28/1999	48.1553	-123.1688	VL	Eelgrass
Dungeness Bay	02/12/1999	48.15669	-123.1656	VL	Eelgrass
Dungeness Bay	02/25/1999	48.15727	-123.1587	VL	Eelgrass
Dungeness Bay	02/09/2000	48.1534	-123.1705	VL	Eelgrass
Dungeness Bay	02/19/1999	48.16446	-123.1552	L	Eelgrass
Dungeness Bay	02/19/1999	48.15726	-123.1651	VL	Eelgrass
Dungeness Bay	03/11/1999	48.15337	-123.152	VL	Eelgrass
Dungeness Bay	02/03/2000	48.15711	-123.1692	VL	Eelgrass
Dungeness Bay	02/24/2000	48.15085	-123.1563	VL	Eelgrass
Dungeness Bay	02/24/2000	48.15959	-123.1674	VL	Eelgrass
Dungeness Bay	02/24/2000	48.15822	-123.1646	VL	Eelgrass
Dungeness Bay	02/02/2001	48.15827	-123.1636	VL	Eelgrass
Dungeness Bay	02/02/2001	48.15636	-123.1651	VL	Eelgrass
Dungeness Bay	02/08/2001	48.15703	-123.159	VL	Eelgrass
Dungeness Bay	02/13/2001	48.15378	-123.1676	VL	Eelgrass
Dungeness Bay	03/01/2001	48.15127	-123.1615	VL	Eelgrass
Dungeness Bay	03/01/2001	48.14983	-123.167	VL	Eelgrass
Dungeness Bay	02/07/2002	48.15683	-123.1673	VL	Eelgrass
Dungeness Bay	02/20/2002	48.15371	-123.1662	VL	Eelgrass
Dungeness Bay	02/08/2001	48.15689	-123.1627	VL	Eelgrass

Dungeness Bay	03/01/2001	48.15684	-123.1622	VL	Eelgrass
Dungeness Bay	03/01/2001	48.15732	-123.1601	VL	Eelgrass
Dungeness Bay	02/14/2002	48.15856	-123.168	VL	Eelgrass
Dungeness Bay	02/14/2002	48.16085	-123.1658	VL	Eelgrass
Dungeness Bay	02/14/2002	48.15852	-123.1626	VL	Eelgrass
Dungeness Bay	02/14/2002	48.15776	-123.1584	VL	Eelgrass
Dungeness Bay	02/28/2002	48.15313	-123.1669	VL	Eelgrass
Dungeness Bay	02/12/2004	48.15751	-123.1709	VL	Eelgrass
Dungeness Bay	02/07/2012	48.15018	-123.1583	VL	Eelgrass
Dungeness Bay	02/07/2012	48.1502	-123.1636	VL	Eelgrass
Dungeness Bay	03/19/2012	48.15061	-123.1607	VL	Eelgrass
Dungeness Bay	03/19/2012	48.1504	-123.1631	VL	Eelgrass
Dungeness Bay	02/20/2013	48.15738	-123.161	VL	Eelgrass
Dungeness Bay	03/20/2013	48.15612	-123.1603	VL	Eelgrass
Dungeness Bay	02/13/2014	48.15348	-123.1718	VL	Eelgrass
Dungeness Bay	02/26/2014	48.15461	-123.1528	VL	Eelgrass
Dungeness Bay	03/06/2014	48.15071	-123.1576	VL	Eelgrass
Dungeness Bay	02/19/2014	48.15196	-123.1656	VL	Eelgrass
Dungeness Bay	02/26/2014	48.15045	-123.1588	VL	Eelgrass
Dungeness Bay	03/06/2014	48.15572	-123.1677	VL	Eelgrass
Dungeness Bay	02/05/2015	48.15037	-123.1609	VL	Eelgrass
Dungeness Bay	02/16/2016	48.15816	-123.1653	VL	Eelgrass
Dungeness Bay	02/16/2016	48.15931	-123.1624	VL	Eelgrass

Dungeness Bay	02/16/2016	48.15968	-123.1593	VL	Eelgrass
Dungeness Bay	02/01/2017	48.15468	-123.1722	VL	Eelgrass
Dungeness Bay	02/01/2017	48.15369	-123.1704	VL	Eelgrass
Dungeness Bay	02/01/2017	48.15593	-123.1608	VL	Eelgrass
Dungeness Bay	02/13/2017	48.15378	-123.1743	VL	Eelgrass
Dungeness Bay	02/13/2017	48.15397	-123.1696	VL	Eelgrass
Dungeness Bay	02/13/2017	48.15243	-123.1665	VL	Eelgrass
Dungeness Bay	02/13/2017	48.15243	-123.1665	VL	Eelgrass
Dungeness Bay	02/13/2017	48.15558	-123.161	VL	Eelgrass
Dungeness Bay	02/02/2018	48.15133	-123.1696	VL	Eelgrass
Dungeness Bay	01/28/2019	48.15409	-123.1639	VL	Eelgrass
Dungeness Bay	02/25/2019	48.15633	-123.1556	VL	Eelgrass
Dungeness Bay	03/04/2019	48.15397	-123.1634	VL	Eelgrass
Dungeness Bay	02/10/2020	48.15771	-123.1707	VL	Eelgrass
Dungeness Bay	03/02/2011	48.15136	-123.1737	VL	Gracillariopsis
Dungeness Bay	02/17/2010	48.15024	-123.1626	VL	Gracillariopsis
Dungeness Bay	02/25/2010	48.15033	-123.1608	VL	Gracillariopsis
Dungeness Bay	02/10/2011	48.15044	-123.1601	VL	Gracillariopsis
Dungeness Bay	02/10/2011	48.15028	-123.1633	VL	Gracillariopsis
Dungeness Bay	02/10/2011	48.1528	-123.16	VL	Gracillariopsis
Dungeness Bay	02/16/2011	48.151	-123.1552	VL	Gracillariopsis
Dungeness Bay	02/16/2011	48.1507	-123.1579	VL	Gracillariopsis
Dungeness Bay	02/16/2011	48.15079	-123.1609	VL	Gracillariopsis

Dungeness Bay	02/16/2011	48.14934	-123.1683	VL	Gracillariopsis
Dungeness Bay	02/16/2011	48.15746	-123.1705	VL	Gracillariopsis
Dungeness Bay	02/16/2011	48.15276	-123.1657	VL	Gracillariopsis
Dungeness Bay	02/16/2011	48.15211	-123.1539	VL	Gracillariopsis
Dungeness Bay	02/16/2011	48.15513	-123.171	VL	Gracillariopsis
Dungeness Bay	02/16/2011	48.1548	-123.1589	VL	Gracillariopsis
Dungeness Bay	03/08/2007	48.15258	-123.1727	VL	Gracillariopsis
Dungeness Bay	03/08/2007	48.1511	-123.1712	VL	Gracillariopsis
Dungeness Bay	03/12/2008	48.15303	-123.1705	VL	Gracillariopsis
Dungeness Bay	03/12/2008	48.15778	-123.1608	VL	Gracillariopsis
Dungeness Bay	03/01/2007	48.15329	-123.1722	VL	Gracillariopsis
Dungeness Bay	03/01/2007	48.15305	-123.1684	VL	Gracillariopsis
Dungeness Bay	02/09/1983	48.16531	-123.1574	VL	Gracillariopsis
Dungeness Bay	02/09/1983	48.14901	-123.1717	VL	Gracillariopsis
Dungeness Bay	02/09/1983	48.14794	-123.1739	VL	Gracillariopsis
Dungeness Bay	02/09/1983	48.14944	-123.1683	VL	Gracillariopsis
Dungeness Bay	02/16/1983	48.15152	-123.1615	VL	Gracillariopsis
Dungeness Bay	02/16/1983	48.15045	-123.1651	VL	Gracillariopsis
Dungeness Bay	02/16/1983	48.14973	-123.1689	VL	Gracillariopsis
Dungeness Bay	02/16/1983	48.14837	-123.1729	VL	Gracillariopsis
Dungeness Bay	03/09/1983	48.15132	-123.1593	VL	Gracillariopsis
Dungeness Bay	03/09/1983	48.15107	-123.1626	VL	Gracillariopsis
Dungeness Bay	03/09/1983	48.151	-123.1656	VL	Gracillariopsis

Dungeness Bay	03/09/1983	48.14963	-123.1701	VL	Gracillariopsis
Dungeness Bay	03/09/1983	48.14733	-123.1758	VL	Gracillariopsis
Dungeness Bay	03/14/1980	48.14764	-123.1744	VL	Gracillariopsis
Dungeness Bay	03/14/1980	48.14728	-123.1772	VL	Gracillariopsis
Dungeness Bay	02/09/1983	48.15244	-123.1674	VL	Gracillariopsis
Dungeness Bay	02/09/1983	48.15023	-123.1663	VL	Gracillariopsis
Dungeness Bay	02/09/1983	48.15316	-123.1627	VL	Gracillariopsis
Dungeness Bay	02/09/1983	48.15281	-123.1589	VL	Gracillariopsis
Dungeness Bay	02/09/1983	48.1526	-123.1557	VL	Gracillariopsis
Dungeness Bay	02/09/1983	48.15118	-123.1538	VL	Gracillariopsis
Dungeness Bay	02/09/1983	48.15325	-123.1519	VL	Gracillariopsis
Dungeness Bay	02/09/1983	48.15554	-123.152	VL	Gracillariopsis
Dungeness Bay	02/09/1983	48.15739	-123.154	VL	Gracillariopsis
Dungeness Bay	02/16/1983	48.15182	-123.1517	VL	Gracillariopsis
Dungeness Bay	02/16/1983	48.15075	-123.1539	VL	Gracillariopsis
Dungeness Bay	02/16/1983	48.14772	-123.1745	VL	Gracillariopsis
Dungeness Bay	03/02/1983	48.15356	-123.1515	VL	Gracillariopsis
Dungeness Bay	03/02/1983	48.15157	-123.1527	VL	Gracillariopsis
Dungeness Bay	03/02/1983	48.15058	-123.1568	VL	Gracillariopsis
Dungeness Bay	03/02/1983	48.15075	-123.1634	VL	Gracillariopsis
Dungeness Bay	03/02/1983	48.14939	-123.1677	VL	Gracillariopsis
Dungeness Bay	03/02/1983	48.14926	-123.1708	VL	Gracillariopsis
Dungeness Bay	03/02/1983	48.14752	-123.1744	VL	Gracillariopsis

Dungeness Bay	02/05/1986	48.14737	-123.1782	VL	Gracillariopsis
Dungeness Bay	02/12/1986	48.15078	-123.1629	VL	Gracillariopsis
Dungeness Bay	02/12/1986	48.14989	-123.1662	VL	Gracillariopsis
Dungeness Bay	02/12/1986	48.14899	-123.1699	VL	Gracillariopsis
Dungeness Bay	02/26/1986	48.15401	-123.1509	VL	Gracillariopsis
Dungeness Bay	03/05/1986	48.15192	-123.1594	VL	Gracillariopsis
Dungeness Bay	03/05/1986	48.15168	-123.1617	VL	Gracillariopsis
Dungeness Bay	03/12/1986	48.15091	-123.1557	VL	Gracillariopsis
Dungeness Bay	03/12/1986	48.15031	-123.1646	VL	Gracillariopsis
Dungeness Bay	03/12/1986	48.14983	-123.1669	VL	Gracillariopsis
Dungeness Bay	02/19/1986	48.15556	-123.1515	VL	Gracillariopsis
Dungeness Bay	02/26/1986	48.15235	-123.1521	VL	Gracillariopsis
Dungeness Bay	02/05/1986	48.15007	-123.1655	VL	Gracillariopsis
Dungeness Bay	02/05/1986	48.14947	-123.1674	VL	Gracillariopsis
Dungeness Bay	02/05/1986	48.14881	-123.1707	VL	Gracillariopsis
Dungeness Bay	02/05/1986	48.14755	-123.1752	VL	Gracillariopsis
Dungeness Bay	02/12/1986	48.14803	-123.173	VL	Gracillariopsis
Dungeness Bay	02/12/1986	48.14743	-123.176	VL	Gracillariopsis
Dungeness Bay	02/19/1986	48.15288	-123.152	VL	Gracillariopsis
Dungeness Bay	02/19/1986	48.15103	-123.1548	VL	Gracillariopsis
Dungeness Bay	02/19/1986	48.15258	-123.1554	VL	Gracillariopsis
Dungeness Bay	02/19/1986	48.15043	-123.1645	VL	Gracillariopsis
Dungeness Bay	02/19/1986	48.14791	-123.1758	VL	Gracillariopsis

Dungeness Bay	03/12/1986	48.14833	-123.1735	VL	Gracillariopsis
Dungeness Bay	03/12/1986	48.14725	-123.1769	VL	Gracillariopsis
Dungeness Bay	03/12/1986	48.15255	-123.1748	VL	Gracillariopsis
Dungeness Bay	03/12/1986	48.15491	-123.1515	VL	Gracillariopsis
Dungeness Bay	02/03/1995	48.15084	-123.1571	VL	Gracillariopsis
Dungeness Bay	02/03/1995	48.15089	-123.162	VL	Gracillariopsis
Dungeness Bay	02/03/1995	48.15007	-123.1658	VL	Gracillariopsis
Dungeness Bay	02/10/1995	48.15085	-123.1537	VL	Gracillariopsis
Dungeness Bay	02/10/1995	48.14959	-123.1663	VL	Gracillariopsis
Dungeness Bay	02/10/1995	48.14835	-123.171	VL	Gracillariopsis
Dungeness Bay	02/10/1995	48.16236	-123.164	VL	Gracillariopsis
Dungeness Bay	02/17/1995	48.15802	-123.1684	VL	Gracillariopsis
Dungeness Bay	02/17/1995	48.15974	-123.1625	VL	Gracillariopsis
Dungeness Bay	02/24/1995	48.15012	-123.1647	VL	Gracillariopsis
Dungeness Bay	02/24/1995	48.14935	-123.1683	VL	Gracillariopsis
Dungeness Bay	02/03/1995	48.15859	-123.1688	L	Gracillariopsis
Dungeness Bay	02/17/1995	48.15285	-123.1523	VL	Gracillariopsis
Dungeness Bay	02/17/1995	48.15012	-123.1669	VL	Gracillariopsis
Dungeness Bay	02/24/1995	48.14835	-123.1724	VL	Gracillariopsis
Dungeness Bay	03/03/1995	48.15061	-123.1562	VL	Gracillariopsis
Dungeness Bay	03/03/1995	48.15017	-123.1648	VL	Gracillariopsis
Dungeness Bay	03/03/1995	48.14911	-123.169	VL	Gracillariopsis
Dungeness Bay	03/03/1995	48.14782	-123.1742	VL	Gracillariopsis

Dungeness Bay	01/24/1996	48.15671	-123.1515	VL	Gracillariopsis
Dungeness Bay	02/01/1996	48.15352	-123.1518	VL	Gracillariopsis
Dungeness Bay	02/23/1996	48.15564	-123.1636	VL	Gracillariopsis
Dungeness Bay	01/30/1997	48.1606	-123.1632	VL	Gracillariopsis
Dungeness Bay	01/30/1997	48.1625	-123.1607	VL	Gracillariopsis
Dungeness Bay	02/07/1997	48.14959	-123.1675	VL	Gracillariopsis
Dungeness Bay	01/24/1996	48.15304	-123.1518	VL	Gracillariopsis
Dungeness Bay	02/01/1996	48.15193	-123.1607	VL	Gracillariopsis
Dungeness Bay	02/09/1996	48.15366	-123.1523	VL	Gracillariopsis
Dungeness Bay	02/09/1996	48.16512	-123.1598	VL	Gracillariopsis
Dungeness Bay	02/09/1996	48.1585	-123.1631	VL	Gracillariopsis
Dungeness Bay	03/01/1996	48.15055	-123.1651	VL	Gracillariopsis
Dungeness Bay	03/01/1996	48.14835	-123.1734	VL	Gracillariopsis
Dungeness Bay	03/01/1996	48.14829	-123.181	VL	Gracillariopsis
Dungeness Bay	03/08/1996	48.14724	-123.1786	VL	Gracillariopsis
Dungeness Bay	01/30/1997	48.15113	-123.1547	VL	Gracillariopsis
Dungeness Bay	01/30/1997	48.14911	-123.1693	VL	Gracillariopsis
Dungeness Bay	01/30/1997	48.14724	-123.1781	VL	Gracillariopsis
Dungeness Bay	02/07/1997	48.15616	-123.1692	VL	Gracillariopsis
Dungeness Bay	02/14/1997	48.1494	-123.1683	VL	Gracillariopsis
Dungeness Bay	02/14/1997	48.15569	-123.1674	VL	Gracillariopsis
Dungeness Bay	02/14/1997	48.15442	-123.156	VL	Gracillariopsis
Dungeness Bay	02/14/1997	48.15854	-123.1689	VL	Gracillariopsis

Dungeness Bay	02/14/1997	48.16207	-123.1647	VL	Gracillariopsis
Dungeness Bay	02/21/1997	48.14988	-123.1635	VL	Gracillariopsis
Dungeness Bay	03/12/1997	48.14988	-123.1692	VL	Gracillariopsis
Dungeness Bay	03/12/1997	48.14811	-123.1729	VL	Gracillariopsis
Dungeness Bay	01/29/1998	48.16293	-123.163	VL	Gracillariopsis
Dungeness Bay	02/06/1998	48.15921	-123.1688	VL	Gracillariopsis
Dungeness Bay	02/06/1998	48.16679	-123.1572	VL	Gracillariopsis
Dungeness Bay	02/12/1998	48.15237	-123.1526	VL	Gracillariopsis
Dungeness Bay	02/20/1998	48.15576	-123.1517	VL	Gracillariopsis
Dungeness Bay	03/06/1998	48.15669	-123.1647	VL	Gracillariopsis
Dungeness Bay	01/28/1999	48.15097	-123.1663	VL	Gracillariopsis
Dungeness Bay	03/17/1999	48.15166	-123.1525	VL	Gracillariopsis
Dungeness Bay	03/17/1999	48.15098	-123.1632	VL	Gracillariopsis
Dungeness Bay	03/17/1999	48.14926	-123.1681	VL	Gracillariopsis
Dungeness Bay	03/17/1999	48.14835	-123.1727	L	Gracillariopsis
Dungeness Bay	02/21/1997	48.15511	-123.1734	VL	Gracillariopsis
Dungeness Bay	02/21/1997	48.15754	-123.1699	VL	Gracillariopsis
Dungeness Bay	02/21/1997	48.15514	-123.1518	VL	Gracillariopsis
Dungeness Bay	03/18/1997	48.14978	-123.1702	VL	Gracillariopsis
Dungeness Bay	01/29/1998	48.16675	-123.1564	VL	Gracillariopsis
Dungeness Bay	01/29/1998	48.16942	-123.1532	VL	Gracillariopsis
Dungeness Bay	02/12/1998	48.15466	-123.1515	VL	Gracillariopsis
Dungeness Bay	02/12/1998	48.15838	-123.1506	VL	Gracillariopsis

Dungeness Bay	02/20/1998	48.14844	-123.1717	VL	Gracillariopsis
Dungeness Bay	02/20/1998	48.15844	-123.1696	VL	Gracillariopsis
Dungeness Bay	03/06/1998	48.15903	-123.1613	VL	Gracillariopsis
Dungeness Bay	01/28/1999	48.1553	-123.1688	VL	Gracillariopsis
Dungeness Bay	01/28/1999	48.15504	-123.1516	VL	Gracillariopsis
Dungeness Bay	02/03/1999	48.14978	-123.1663	VL	Gracillariopsis
Dungeness Bay	02/03/1999	48.14768	-123.1738	VL	Gracillariopsis
Dungeness Bay	02/03/1999	48.1562	-123.1733	VL	Gracillariopsis
Dungeness Bay	02/12/1999	48.14902	-123.1701	VL	Gracillariopsis
Dungeness Bay	02/12/1999	48.14744	-123.1771	VL	Gracillariopsis
Dungeness Bay	02/12/1999	48.15669	-123.1656	VL	Gracillariopsis
Dungeness Bay	02/12/1999	48.15536	-123.1613	VL	Gracillariopsis
Dungeness Bay	02/19/1999	48.16446	-123.1552	L	Gracillariopsis
Dungeness Bay	02/19/1999	48.15922	-123.1619	VL	Gracillariopsis
Dungeness Bay	02/19/1999	48.15726	-123.1651	VL	Gracillariopsis
Dungeness Bay	02/19/1999	48.15627	-123.1609	VL	Gracillariopsis
Dungeness Bay	02/25/1999	48.15214	-123.1526	VL	Gracillariopsis
Dungeness Bay	02/25/1999	48.15069	-123.1631	VL	Gracillariopsis
Dungeness Bay	02/25/1999	48.15035	-123.167	VL	Gracillariopsis
Dungeness Bay	03/11/1999	48.15755	-123.1617	VL	Gracillariopsis
Dungeness Bay	03/11/1999	48.15337	-123.152	VL	Gracillariopsis
Dungeness Bay	01/27/2000	48.15425	-123.173	VL	Gracillariopsis
Dungeness Bay	02/17/2000	48.1525	-123.1647	VL	Gracillariopsis

Dungeness Bay	02/03/1999	48.15855	-123.1649	VL	Gracillariopsis
Dungeness Bay	02/03/1999	48.15741	-123.1608	VL	Gracillariopsis
Dungeness Bay	02/12/1999	48.15371	-123.152	VL	Gracillariopsis
Dungeness Bay	02/12/1999	48.15108	-123.1605	VL	Gracillariopsis
Dungeness Bay	02/12/1999	48.15088	-123.1631	VL	Gracillariopsis
Dungeness Bay	02/19/1999	48.15376	-123.1518	VL	Gracillariopsis
Dungeness Bay	02/19/1999	48.15185	-123.1562	VL	Gracillariopsis
Dungeness Bay	02/19/1999	48.14974	-123.1667	VL	Gracillariopsis
Dungeness Bay	02/19/1999	48.14873	-123.1698	L	Gracillariopsis
Dungeness Bay	02/19/1999	48.14782	-123.1742	VL	Gracillariopsis
Dungeness Bay	02/25/1999	48.15473	-123.1668	VL	Gracillariopsis
Dungeness Bay	02/25/1999	48.15895	-123.1498	VL	Gracillariopsis
Dungeness Bay	02/25/1999	48.15533	-123.1513	VL	Gracillariopsis
Dungeness Bay	03/11/1999	48.15088	-123.1668	VL	Gracillariopsis
Dungeness Bay	02/03/2000	48.15711	-123.1692	VL	Gracillariopsis
Dungeness Bay	02/09/2000	48.15544	-123.1725	VL	Gracillariopsis
Dungeness Bay	02/09/2000	48.15782	-123.1698	VL	Gracillariopsis
Dungeness Bay	02/09/2000	48.15616	-123.1669	VL	Gracillariopsis
Dungeness Bay	02/09/2000	48.1534	-123.1705	VL	Gracillariopsis
Dungeness Bay	02/09/2000	48.15116	-123.1727	VL	Gracillariopsis
Dungeness Bay	02/09/2000	48.15164	-123.1676	VL	Gracillariopsis
Dungeness Bay	02/24/2000	48.15487	-123.1746	VL	Gracillariopsis
Dungeness Bay	02/24/2000	48.15606	-123.1712	VL	Gracillariopsis

Dungeness Bay	02/24/2000	48.1575	-123.1695	VL	Gracillariopsis
Dungeness Bay	02/24/2000	48.1545	-123.1696	VL	Gracillariopsis
Dungeness Bay	02/07/2002	48.15683	-123.1673	VL	Gracillariopsis
Dungeness Bay	02/14/2002	48.15594	-123.1668	VL	Gracillariopsis
Dungeness Bay	02/20/2002	48.15628	-123.1659	VL	Gracillariopsis
Dungeness Bay	03/09/2000	48.15135	-123.1742	VL	Gracillariopsis
Dungeness Bay	02/02/2001	48.15978	-123.1671	VL	Gracillariopsis
Dungeness Bay	02/02/2001	48.15502	-123.1676	VL	Gracillariopsis
Dungeness Bay	02/07/2002	48.15627	-123.1638	VL	Gracillariopsis
Dungeness Bay	02/14/2002	48.16085	-123.1658	VL	Gracillariopsis
Dungeness Bay	02/28/2002	48.1549	-123.1649	L	Gracillariopsis
Dungeness Bay	02/10/2003	48.15756	-123.17	VL	Gracillariopsis
Dungeness Bay	02/10/2003	48.15417	-123.1714	VL	Gracillariopsis
Dungeness Bay	02/21/2003	48.15532	-123.1721	VL	Gracillariopsis
Dungeness Bay	02/21/2003	48.1577	-123.1687	VL	Gracillariopsis
Dungeness Bay	02/21/2003	48.15975	-123.1653	VL	Gracillariopsis
Dungeness Bay	02/04/2004	48.15408	-123.1741	VL	Gracillariopsis
Dungeness Bay	03/06/2012	48.15418	-123.1694	VL	Gracillariopsis
Dungeness Bay	03/06/2012	48.15227	-123.1706	VL	Gracillariopsis
Dungeness Bay	02/20/2013	48.15836	-123.1581	VL	Gracillariopsis
Dungeness Bay	03/20/2013	48.15612	-123.1603	VL	Gracillariopsis
Dungeness Bay	02/20/2013	48.15389	-123.1645	VL	Gracillariopsis
Dungeness Bay	02/20/2013	48.15738	-123.161	L	Gracillariopsis

Dungeness Bay	02/20/2013	48.15903	-123.1582	VL	Gracillariopsis
Dungeness Bay	02/13/2014	48.15348	-123.1718	VL	Gracillariopsis
Dungeness Bay	02/19/2014	48.15196	-123.1656	L	Gracillariopsis
Dungeness Bay	02/26/2014	48.15153	-123.153	VL	Gracillariopsis
Dungeness Bay	02/26/2014	48.15295	-123.153	VL	Gracillariopsis
Dungeness Bay	03/06/2014	48.15572	-123.1677	VL	Gracillariopsis
Dungeness Bay	02/16/2016	48.15816	-123.1653	VL	Gracillariopsis
Dungeness Bay	02/01/2017	48.15119	-123.168	VL	Gracillariopsis
Dungeness Bay	02/01/2017	48.15332	-123.1665	L	Gracillariopsis
Dungeness Bay	02/01/2017	48.15593	-123.1608	VL	Gracillariopsis
Dungeness Bay	02/13/2017	48.15378	-123.1743	VL	Gracillariopsis
Dungeness Bay	02/13/2017	48.15397	-123.1696	VL	Gracillariopsis
Dungeness Bay	02/13/2017	48.15243	-123.1665	VL	Gracillariopsis
Dungeness Bay	02/13/2017	48.15243	-123.1665	VL	Gracillariopsis
Dungeness Bay	02/13/2017	48.15405	-123.164	VL	Gracillariopsis
Dungeness Bay	02/13/2017	48.15558	-123.161	VL	Gracillariopsis
Dungeness Bay	02/23/2017	48.15431	-123.1669	VL	Gracillariopsis
Dungeness Bay	03/06/2017	48.15047	-123.1563	VL	Gracillariopsis
Dungeness Bay	01/24/2018	48.15313	-123.1645	VL	Gracillariopsis
Dungeness Bay	02/23/2018	48.15394	-123.1681	VL	Gracillariopsis
Dungeness Bay	01/24/2018	48.15313	-123.1645	VL	Gracillariopsis
Dungeness Bay	01/24/2018	48.15313	-123.1645	VL	Gracillariopsis
Dungeness Bay	03/02/2018	48.15045	-123.1626	VL	Gracillariopsis

Dungeness Bay	03/02/2018	48.1538	-123.1599	VL	Gracillariopsis
Dungeness Bay	01/28/2019	48.15409	-123.1639	VL	Gracillariopsis
Dungeness Bay	02/25/2019	48.15313	-123.1652	VL	Gracillariopsis
Dungeness Bay	03/04/2019	48.15282	-123.1662	VL	Gracillariopsis
Dungeness Bay	03/04/2019	48.15397	-123.1634	L	Gracillariopsis
Dungeness Bay	01/21/2020	48.15543	-123.1709	VL	Gracillariopsis
Dungeness Bay	02/10/2020	48.1561	-123.1732	VL	Gracillariopsis
Dungeness Bay	02/10/2020	48.15013	-123.1797	VL	Gracillariopsis
Dungeness Bay	02/10/2011	48.15044	-123.1601	VL	Agardhiella
Dungeness Bay	02/21/2008	48.1543	-123.1708	VL	Agardhiella
Dungeness Bay	03/05/2008	48.15479	-123.1699	VL	Agardhiella
Dungeness Bay	03/08/2007	48.15258	-123.1727	VL	Agardhiella
Dungeness Bay	02/17/2010	48.15024	-123.1626	VL	Agardhiella
Dungeness Bay	02/17/2010	48.14977	-123.1652	VL	Agardhiella
Dungeness Bay	03/08/2007	48.1511	-123.1712	VL	Agardhiella
Dungeness Bay	02/19/1986	48.15729	-123.1517	VL	Agardhiella
Dungeness Bay	02/26/1986	48.15235	-123.1521	VL	Agardhiella
Dungeness Bay	02/26/1986	48.15092	-123.1546	VL	Agardhiella
Dungeness Bay	02/26/1986	48.15073	-123.1577	VL	Agardhiella
Dungeness Bay	02/26/1986	48.15114	-123.1611	VL	Agardhiella
Dungeness Bay	03/05/1986	48.14946	-123.1746	VL	Agardhiella
Dungeness Bay	03/05/1986	48.16157	-123.1535	VL	Agardhiella
Dungeness Bay	03/02/1983	48.14939	-123.1677	VL	Agardhiella

Dungeness Bay	03/02/1983	48.14926	-123.1708	VL	Agardhiella
Dungeness Bay	02/19/1986	48.14983	-123.1673	VL	Agardhiella
Dungeness Bay	02/19/1986	48.14994	-123.1701	VL	Agardhiella
Dungeness Bay	02/19/1986	48.14881	-123.1724	VL	Agardhiella
Dungeness Bay	02/26/1986	48.15007	-123.1653	VL	Agardhiella
Dungeness Bay	02/26/1986	48.14947	-123.1682	VL	Agardhiella
Dungeness Bay	02/26/1986	48.14869	-123.1718	VL	Agardhiella
Dungeness Bay	02/26/1986	48.14743	-123.1749	VL	Agardhiella
Dungeness Bay	03/05/1986	48.15675	-123.1517	VL	Agardhiella
Dungeness Bay	03/05/1986	48.15132	-123.1644	VL	Agardhiella
Dungeness Bay	02/12/1999	48.15108	-123.1605	VL	Agardhiella
Dungeness Bay	01/27/2000	48.15425	-123.173	VL	Agardhiella
Dungeness Bay	02/09/2000	48.1534	-123.1705	VL	Agardhiella
Dungeness Bay	03/01/2001	48.15684	-123.1622	VL	Agardhiella
Dungeness Bay	02/10/2003	48.15417	-123.1714	VL	Agardhiella
Dungeness Bay	01/30/1997	48.1606	-123.1632	VL	Agardhiella
Dungeness Bay	02/06/1998	48.16679	-123.1572	VL	Agardhiella
Dungeness Bay	02/01/2017	48.15332	-123.1665	VL	Agardhiella
Dungeness Bay	02/23/2017	48.15431	-123.1669	VL	Agardhiella
Dungeness Bay	02/25/2019	48.15633	-123.1556	VL	Agardhiella
Dungeness Bay	02/10/2020	48.15102	-123.1706	VL	Agardhiella
Dungeness Bay	02/16/2011	48.1507	-123.1579	VL	Botryoglossum
Dungeness Bay	02/11/2010	48.15262	-123.1629	VL	Botryoglossum

Dungeness Bay	02/09/2000	48.1534	-123.1705	VL	Botryoglossum
Dungeness Bay	02/07/1997	48.15616	-123.1692	VL	Botryoglossum
Dungeness Bay	02/12/1999	48.14744	-123.1771	VL	Botryoglossum
Dungeness Bay	02/12/1999	48.15536	-123.1613	VL	Botryoglossum
Dungeness Bay	02/25/1999	48.15035	-123.167	VL	Botryoglossum
Dungeness Bay	02/02/2001	48.15827	-123.1636	VL	Botryoglossum
Dungeness Bay	02/02/2001	48.15636	-123.1651	VL	Botryoglossum
Dungeness Bay	02/13/2001	48.15697	-123.1693	VL	Botryoglossum
Dungeness Bay	02/13/2001	48.15378	-123.1676	VL	Botryoglossum
Dungeness Bay	02/13/2001	48.15584	-123.1602	VL	Botryoglossum
Dungeness Bay	02/28/2002	48.15313	-123.1669	VL	Botryoglossum
Dungeness Bay	03/06/2012	48.15195	-123.1671	VL	Botryoglossum
Dungeness Bay	02/20/2013	48.15389	-123.1645	VL	Botryoglossum
Dungeness Bay	02/23/2017	48.15431	-123.1669	VL	Botryoglossum
Dungeness Bay	02/26/1986	48.15092	-123.1546	VL	Callophyllis
Dungeness Bay	02/02/2001	48.15636	-123.1651	VL	Callophyllis
Dungeness Bay	02/17/1995	48.15802	-123.1684	VL	Ceramium
Dungeness Bay	01/29/1998	48.16274	-123.1583	VL	Gigartina
Dungeness Bay	03/11/1999	48.15337	-123.152	VL	Gigartina
Dungeness Bay	02/10/2011	48.15044	-123.1601	VL	Hydroids
Dungeness Bay	02/10/2011	48.15028	-123.1633	VL	Hydroids
Dungeness Bay	02/25/2010	48.15033	-123.1608	VL	Hydroids
Dungeness Bay	02/21/2008	48.1543	-123.1708	VL	Hydroids

Dungeness Bay	02/16/2011	48.15079	-123.1609	VL	Hydroids
Dungeness Bay	02/16/2011	48.15746	-123.1705	VL	Hydroids
Dungeness Bay	02/09/1983	48.16531	-123.1574	VL	Hydroids
Dungeness Bay	02/09/1983	48.14944	-123.1683	VL	Hydroids
Dungeness Bay	02/16/1983	48.14973	-123.1689	VL	Hydroids
Dungeness Bay	03/14/1980	48.15607	-123.1732	VL	Hydroids
Dungeness Bay	03/14/1980	48.15772	-123.1713	VL	Hydroids
Dungeness Bay	02/19/1986	48.15556	-123.1515	VL	Hydroids
Dungeness Bay	02/26/1986	48.15092	-123.1546	VL	Hydroids
Dungeness Bay	02/26/1986	48.15073	-123.1577	VL	Hydroids
Dungeness Bay	03/12/1986	48.15031	-123.1646	VL	Hydroids
Dungeness Bay	02/10/1995	48.14959	-123.1663	VL	Hydroids
Dungeness Bay	02/19/1999	48.15922	-123.1619	VL	Hydroids
Dungeness Bay	02/21/2003	48.15975	-123.1653	VL	Hydroids
Dungeness Bay	02/12/1986	48.15078	-123.1629	VL	Hydroids
Dungeness Bay	02/19/1986	48.15103	-123.1548	VL	Hydroids
Dungeness Bay	02/19/1986	48.14983	-123.1673	VL	Hydroids
Dungeness Bay	03/05/1986	48.153	-123.1522	VL	Hydroids
Dungeness Bay	03/12/1986	48.15091	-123.1557	VL	Hydroids
Dungeness Bay	02/09/2000	48.1534	-123.1705	VL	Hydroids
Dungeness Bay	03/06/2012	48.15418	-123.1694	VL	Hydroids
Dungeness Bay	03/06/2014	48.15572	-123.1677	VL	Hydroids
Dungeness Bay	02/13/2017	48.15243	-123.1665	L	Hydroids

Dungeness Bay	02/13/2017	48.15243	-123.1665	L	Hydroids
Dungeness Bay	02/23/2018	48.15394	-123.1681	VL	Hydroids
Dungeness Bay	03/12/2008	48.15303	-123.1705	VL	Laminaria
Dungeness Bay	02/09/1983	48.15244	-123.1674	VL	Laminaria
Dungeness Bay	02/09/1983	48.15316	-123.1627	VL	Laminaria
Dungeness Bay	02/09/1983	48.15281	-123.1589	VL	Laminaria
Dungeness Bay	02/16/1983	48.14973	-123.1689	VL	Laminaria
Dungeness Bay	02/24/2000	48.15487	-123.1746	VL	Laminaria
Dungeness Bay	01/27/2000	48.15425	-123.173	VL	Laminaria
Dungeness Bay	02/28/2002	48.1549	-123.1649	VL	Laminaria
Dungeness Bay	02/23/2017	48.15431	-123.1669	VL	Laminaria
Dungeness Bay	03/08/2007	48.15258	-123.1727	VL	Odonthalia
Dungeness Bay	02/13/2008	48.15701	-123.1667	VL	Plocamium
Dungeness Bay	02/28/2002	48.1549	-123.1649	VL	Plocamium
Dungeness Bay	02/10/2011	48.15044	-123.1601	VL	Polyneura
Dungeness Bay	02/10/2011	48.1528	-123.16	VL	Polyneura
Dungeness Bay	03/08/2007	48.15258	-123.1727	VL	Polyneura
Dungeness Bay	02/17/1995	48.16146	-123.1609	VL	Polyneura
Dungeness Bay	01/27/2000	48.1564	-123.1706	VL	Polyneura
Dungeness Bay	02/19/1986	48.15258	-123.1554	VL	Polyneura
Dungeness Bay	02/12/1999	48.14902	-123.1701	VL	Polyneura
Dungeness Bay	02/12/1999	48.14744	-123.1771	VL	Polyneura
Dungeness Bay	02/19/1999	48.16446	-123.1552	L	Polyneura

Dungeness Bay	02/19/1999	48.15922	-123.1619	VL	Polyneura
Dungeness Bay	01/28/1999	48.15097	-123.1663	VL	Rhodymenia
Dungeness Bay	02/16/2011	48.15513	-123.171	VL	Terrestrial_Debris
Dungeness Bay	02/09/1983	48.14794	-123.1739	VL	Terrestrial_Debris
Dungeness Bay	02/03/1999	48.1562	-123.1733	VL	Terrestrial_Debris
Dungeness Bay	02/19/1999	48.16446	-123.1552	VL	Terrestrial_Debris
Dungeness Bay	03/11/1999	48.15755	-123.1617	VL	Terrestrial_Debris
Dungeness Bay	02/14/2002	48.15852	-123.1626	VL	Terrestrial_Debris
Dungeness Bay	03/06/1998	48.15903	-123.1613	VL	Terrestrial_Debris
Dungeness Bay	02/19/1999	48.14782	-123.1742	VL	Terrestrial_Debris
Dungeness Bay	02/09/2000	48.1534	-123.1705	VL	Terrestrial_Debris
Dungeness Bay	02/24/2000	48.14967	-123.1797	VL	Terrestrial_Debris
Dungeness Bay	02/07/2002	48.15627	-123.1638	VL	Terrestrial_Debris
Dungeness Bay	02/28/2002	48.1549	-123.1649	L	Terrestrial_Debris
Dungeness Bay	01/21/2020	48.15543	-123.1709	VL	Terrestrial_Debris
Dungeness Bay	03/02/2011	48.15136	-123.1737	VL	Ulva
Dungeness Bay	02/16/2011	48.151	-123.1552	VL	Ulva
Dungeness Bay	02/16/2011	48.15746	-123.1705	VL	Ulva
Dungeness Bay	02/16/2011	48.15276	-123.1657	VL	Ulva
Dungeness Bay	02/16/2011	48.15211	-123.1539	VL	Ulva
Dungeness Bay	03/08/2007	48.15258	-123.1727	VL	Ulva
Dungeness Bay	02/09/1983	48.15281	-123.1589	VL	Ulva
Dungeness Bay	02/19/1986	48.15258	-123.1554	VL	Ulva

Dungeness Bay	02/17/1995	48.15802	-123.1684	VL	Ulva
Dungeness Bay	02/03/1999	48.15855	-123.1649	VL	Ulva
Dungeness Bay	02/21/1997	48.14988	-123.1635	VL	Ulva
Dungeness Bay	02/03/1999	48.1562	-123.1733	VL	Ulva
Dungeness Bay	02/19/1999	48.16446	-123.1552	L	Ulva
Dungeness Bay	02/19/1999	48.15627	-123.1609	VL	Ulva
Dungeness Bay	02/03/2000	48.15711	-123.1692	VL	Ulva
Dungeness Bay	02/24/2000	48.14967	-123.1797	VL	Ulva
Dungeness Bay	02/24/2000	48.15487	-123.1746	VL	Ulva
Dungeness Bay	02/24/2000	48.1575	-123.1695	VL	Ulva
Dungeness Bay	02/24/2000	48.15959	-123.1674	VL	Ulva
Dungeness Bay	02/24/2000	48.1545	-123.1696	VL	Ulva
Dungeness Bay	02/13/2001	48.15879	-123.1663	VL	Ulva
Dungeness Bay	02/13/2001	48.15593	-123.1664	VL	Ulva
Dungeness Bay	02/14/2002	48.15594	-123.1668	VL	Ulva
Dungeness Bay	01/27/2000	48.15187	-123.175	VL	Ulva
Dungeness Bay	01/27/2000	48.15425	-123.173	VL	Ulva
Dungeness Bay	02/09/2000	48.15544	-123.1725	VL	Ulva
Dungeness Bay	02/09/2000	48.15782	-123.1698	VL	Ulva
Dungeness Bay	02/28/2002	48.15313	-123.1669	VL	Ulva
Dungeness Bay	02/21/2003	48.15532	-123.1721	VL	Ulva
Dungeness Bay	02/21/2003	48.1577	-123.1687	VL	Ulva
Dungeness Bay	02/21/2003	48.15975	-123.1653	VL	Ulva

Dungeness Bay	02/10/2003	48.15417	-123.1714	VL	Ulva
Dungeness Bay	02/01/2017	48.15119	-123.168	VL	Ulva
Dungeness Bay	02/01/2017	48.15332	-123.1665	VL	Ulva
Dungeness Bay	02/13/2017	48.15397	-123.1696	VL	Ulva
Dungeness Bay	02/23/2018	48.15394	-123.1681	VL	Ulva
Dungeness Bay	02/23/2018	48.14856	-123.1736	VL	Ulva
Dungeness Bay	03/02/2018	48.15045	-123.1626	VL	Ulva
Dungeness Bay	02/25/2019	48.15633	-123.1556	VL	Ulva
Dungeness Bay	03/04/2019	48.15397	-123.1634	VL	Ulva
Dungeness Bay	02/10/2020	48.15771	-123.1707	VL	Ulva
Dungeness Bay	02/09/1983	48.15316	-123.1627	VL	Urospora
Dungeness Bay	03/05/1986	48.15675	-123.1517	VL	Urospora
Dungeness Bay	03/03/1995	48.14782	-123.1742	VL	Urospora
Dungeness Bay	02/24/2000	48.15606	-123.1712	VL	Urospora
Dungeness Bay	02/10/2020	48.15129	-123.1728	VL	Urospora
Dungeness Bay	02/10/2020	48.15102	-123.1706	VL	Urospora
Dungeness Bay	02/11/2015	48.15653	-123.1729	MH	Alaria
Dungeness Bay	02/11/2015	48.15164	-123.1634	MH	Alaria
Dungeness Bay	02/10/2020	48.15771	-123.1707	VL	Manmade_Debris

Tonnes
6.350295
5.44311
6.350295
9.979035
6.350295
4.535925
5.44311
7.25748
6.350295
4.535925
7.25748
7.25748
6.350295

6.350295
5.44311
5.44311
7.25748
8.164665
6.350295
5.44311
5.44311
6.350295

6.350295
6.350295
5.44311
5.44311
6.350295
5.44311
9.07185
4.535925

9.07185
8.164665
8.164665
7.25748
5.44311
5.44311
6.350295
5.44311
6.350295

5.44311
5.44311
6.350295

33.565845
9.979035
5.44311
8.164665
9.07185

6.350295
3.62874
3.62874
5.44311
19.050885
5.44311
7.25748
9.07185
9.07185
6.350295
5.44311
6.350295
8.164665
8.164665

8.164665
8.164665
9.979035
9.979035
6.350295
8.164665
7.25748

6.350295
6.350295
6.350295
9.979035
6.350295
5.44311
5.44311

10.88622
8.164665
8.164665
8.164665
8.164665

8.164665
6.350295

9.07185
6.350295
8.164665
29.02992
8.164665
6.350295
10.88622

5.44311
8.164665
8.164665
5.44311
6.350295

5.44311
7.25748
8.164665
11.793405
5.44311

5.44311
5.44311
9.07185
9.979035
9.979035
9.979035
6.350295

4.535925
7.25748
4.535925
4.535925
30.84429
13.607775
10.88622
9.07185
0
8.164665
9.07185
12.70059
7.4249944
11.6583495
13.7417807

14.1628998
10.9047679
13.8008852
16.6970024
12.4267071
13.4019303
7.3437258
7.3437258
16.2684953
17.1550618
16.6643125
14.713073
13.5617205
7.926153
6.350295
5.44311
8.164665
5.44311
6.350295
9.979035
4.535925
5.44311
7.25748

6.350295
4.535925
7.25748
6.350295
4.535925
6.350295
7.25748
8.164665
8.164665
6.350295
7.25748
8.164665
8.164665
5.44311
5.44311
5.44311
9.07185
8.164665
6.350295
8.164665
6.350295
5.44311
8.164665

8.164665
4.535925

5.44311
5.44311

5.44311
5.44311

5.44311
5.44311

6.350295
7.25748

7.25748
8.164665
6.350295
6.350295
6.350295

6.350295
6.350295
6.350295

4.535925
5.44311
5.44311
4.535925
5.44311
5.44311

5.44311
6.350295
5.44311
6.350295

5.44311

6.350295
5.44311
8.164665

3.62874
5.44311
5.44311
5.44311
5.44311
5.44311

7.25748
9.07185
6.350295
5.44311
19.050885
5.44311

6.350295
6.350295
8.164665
8.164665
9.07185

9.979035
7.25748
9.07185
8.164665
5.44311
9.979035
9.07185
6.350295

8.164665
8.164665
8.164665
6.350295
6.350295
6.350295
6.350295
6.350295
6.350295
9.979035
9.07185
9.07185
5.44311
9.979035

6.350295
9.979035
9.07185
7.25748
8.164665
8.164665
8.164665

6.350295

5.44311

40.823325
8.164665

9.979035
7.25748
6.350295
7.25748
9.07185
9.979035

7.25748
9.07185
7.25748

8.164665
9.979035
5.44311
5.44311
9.07185
8.164665
29.02992

8.164665

9.07185
7.25748
7.25748

6.350295
7.25748

6.350295
8.164665
6.350295
5.44311
5.44311
6.350295
9.979035
5.44311
33.565845
8.164665

6.350295
9.979035
9.979035
10.88622
8.164665
7.25748
9.979035
8.164665
8.164665
9.979035
6.350295
4.535925

5.44311
6.350295
8.164665
9.07185

7.25748
8.164665
5.44311
9.979035
39.008955
5.44311
8.164665
8.164665
8.164665

8.164665
7.25748
5.44311
6.350295
13.607775
7.25748
30.84429

6.350295
10.88622
8.164665
8.164665
7.25748
12.70059
11.6583495
11.4367078
12.6040204
16.6970024
12.4267071
13.4019303
7.3437258
7.3437258
16.7561068
16.2684953
9.6487987
4.8613396
15.5592421
13.7417807
15.5592421
15.5592421
11.3923795

19.1055081
16.6643125
19.2336465
14.276771
13.5617205
9.6956
9.45321
6.568769
5.44311
9.07185
8.164665
7.25748
5.44311
5.44311
8.164665
5.44311
5.44311
5.44311
5.44311
7.25748
8.164665

6.350295

6.350295
4.535925
3.62874
5.44311
6.350295
5.44311
6.350295
7.25748

4.535925
5.44311
7.25748
8.164665
5.44311
8.164665
8.164665
8.164665
12.6040204
9.6487987
14.713073
8.0594675
5.44311
6.350295

8.164665
9.979035
5.44311
8.164665
7.25748
8.164665
5.44311
8.164665

6.350295
5.44311
7.25748
9.6487987
5.44311
5.44311
7.25748
7.25748
6.350295
5.44311
6.350295
8.164665
9.07185

7.25748
4.535925
8.164665
5.44311
6.350295

5.44311
5.44311
5.44311
5.44311
5.44311

6.350295
4.535925

5.44311
8.164665
7.25748
12.70059
7.3437258

7.3437258
13.7417807
8.164665
5.44311

5.44311
6.350295
6.350295
7.25748
39.008955
9.6487987
7.25748
8.164665
39.008955
5.44311
9.979035
7.25748
6.350295
8.164665

5.44311
5.44311
29.02992

4.535925
5.44311
9.979035
29.02992

9.979035
7.25748
8.164665
8.164665
5.44311
5.44311
39.008955
9.6956
6.350295
4.535925
4.535925
7.25748
6.350295
7.25748
5.44311

7.25748
6.350295
6.350295
9.979035
29.02992

10.88622
5.44311
6.350295
5.44311
5.44311
6.350295
6.350295

9.07185
5.44311
7.25748
8.164665
7.25748
6.350295
8.164665
8.164665

8.164665
11.4367078
12.6040204
13.4019303
13.7417807
16.3017415
11.3923795
14.713073
13.5617205
7.926153

9.07185
4.535925
15.02818
8.0594675

7.926153
