

Chena Slough Elodea Treatment



The Elodea infestation in Chena Slough (between Plack Rd crossing and the mouth of Chena Slough) is being treated with the aquatic herbicide fluridone (Sonar™). Four years of treatment (2017-2020) have been successfully completed, and it is working! The dense, tangled mats of elodea are all gone. We are monitoring a few sparse, isolated patches of elodea that were detected in two locations. In 2020 we conducted the fourth and likely final year of herbicide treatment. Liquid fluridone was delivered via an herbicide injection system at a concentration of 5-8 parts per billion (ppb) and pelleted fluridone was applied twice over the summer.

Well Water Sampling Results Throughout Treatment (2017-2020)

Five wells that are located within 200 ft of Chena Slough within the Elodea treatment area (Plack Rd crossing to the mouth of Chena Slough) were selected randomly from 23 wells which corresponded to landowners who responded to a survey soliciting willing well test candidates. Well water samples were collected prior to the start of the fluridone treatment, and then 2-3 times each season since then. Samples were sent to ARS Aleut Analytical Lab for analysis of fluridone concentration. As per the DEC Pesticide Use Permit (Permit No.16-AQU-07) stipulations, if fluridone in excess of 20 ppb is detected in any private drinking water well, the permittee will refrain from any additional fluridone application until specifically authorized to continue by DEC. **Fluridone has not been detected in any well water samples to date.**

	2017 Pre-treatment baseline	2017 Post-treatment 1	2017 Post-treatment 2	2018 Pre-treatment baseline	2019 Sampling Event 1	2019 Sampling Event 2	2020 Sampling Event 1	2020 Sampling Event 2
Site/Date	6/13/17	7/5/17	8/25/17	6/19/18	7/24/19	8/7/19	6/16/20	9/2/20
Christine	<MRL	<MRL	<MRL	<MRL	ND	ND	ND	ND
Candle	<MRL	<MRL	<MRL	<MRL	ND	ND	ND	ND
Persinger	<MRL	<MRL	<MRL	<MRL	ND	ND	ND	ND
Benshoof	<MRL	<MRL	<MRL	<MRL	ND	ND	ND	ND
Ursa	<MRL	<MRL	<MRL	<MRL	ND	ND	ND	ND

- Note: 2017-2018 “MRL” indicates that no fluridone was detected in the sample. The minimum amount of fluridone that can be detected by this method is 0.075ppb.
- Note: 2019-2020 “ND” indicates that no fluridone was detected in the sample. (The Method DetectionLimit (MDL) is 0.06parts per billion (ppb).)

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Water Sampling Results (2017-2020)

The drip treatment of liquid herbicide (SonarGenesis) was started on June 23rd, 2020 and continued for approximately 12 weeks. The pelleted herbicide (SonarH4C) was applied in early July, and a second time in mid-September. Water samples were collected in Chena Slough near Natalie Ave., Repp Rd., Nordale Rd., Peede Rd., and Persinger Rd. and analyzed for fluridone concentration in parts per billion (ppb) at SePRO Research and Technology Campus. Twice during the season, the water samples collected were analyzed at a local third party lab (ARS Aleut Analytical) for fluridone concentration. Results can be found below.

Site/Date	6/24/20	7/2/20	7/9/20	7/13/20	7/24/20	7/29/20	8/13/20	8/18/20	8/31/20	9/8/20	9/15/20	10/7/20
Natalie	3.2	2.1	3.3	3.8	3.3	2.7	0	0	2.7	4.1	0	1.8
Repp	4.8	4.8	6.4	6.9	4.2	5.3	0	0	3.9	6.6	0	2.3
Nordale	1.7	3.5	5.4	4.1	2.4	3.9	0	1.1	2.9	4.4	0	3.2
Peede	<1	3.2	4.5	2.9	2.6	3.1	1.3	1.7	1.7	3	0	1.6
Persinger	<1	2.8	5.3	5.6	2.8	4.8	0	3.1	2.7	3.4	1	2.4

Irrigation Restrictions During Treatment

- For plants in the Solanaceae family (tomatoes, peppers, potatoes, tobacco), newly seeded crops, or newly seeded grasses such as overseeded golf course greens, do not use water directly from Chena Slough if fluridone concentration is **>5ppb**.
- Do not use water directly from Chena Slough for hydroponic farming if fluridone concentration is **>1ppb**.
- Do not use water directly from Chena Slough for greenhouse and nursery plants if fluridone concentration is **>1ppb**.
- When fluridone concentration is less than **10ppb**, there are **NO IRRIGATION PRECAUTIONS** for irrigating established tree crops, established row crops, or turf. When restrictions apply we recommend using an alternate water source (such as well water) for irrigation