



July 21, 2025

Attn: Scott Bayne
Black Point Beach Club Association
PO Box 715
Niantic, CT 06357

**RE: Submerged Aquatic Vegetation Survey
Assessor Lot ID #05.11 71, Niantic, CT**

Dear Mr. Bayne:

Coastline Consulting & Development, LLC (Coastline) conducted a submerged aquatic vegetation (SAV) survey of the Black Point Beach Club Association property located on Old Black Point Road in Niantic, CT. The purpose of this survey was to document the presence, species composition, and spatial extent of SAV in the nearshore waters directly offshore of the property. The findings are intended to support future waterfront planning efforts.

SAV refers to rooted aquatic plants that grow entirely underwater in sandy, silty, or muddy substrates. In Long Island Sound, SAV plays a vital ecological role by stabilizing sediments, improving water quality, and providing essential habitat for fish, shellfish, and other marine organisms. The most commonly encountered SAV species in the Niantic region are eelgrass (*Zostera marina*) and widgeon grass (*Ruppia maritima*).

Because SAV is recognized as a protected coastal resource under state and federal regulations, documenting its presence or absence is a necessary component of the regulatory permitting process for waterfront projects. The results of this survey will help ensure that future projects can be planned and executed in a manner that avoids or minimizes potential impacts to these underwater habitats.

Survey Methodology

The survey was conducted in accordance with the U.S. Army Corps of Engineers' "Submerged Aquatic Vegetation Survey Guidance for the New England Region," for Tier 1 Surveys (August 11, 2016). The following three-step approach was used to assess substrate conditions and detect vegetation:

1. Surface Visual Observations: Observations were made from a 14-foot Carolina Skiff workboat to assess water clarity, substrate type, and any vegetation visible at or near the water surface.
2. Underwater Video: A GoPro HERO12 camera was deployed over the side of the workboat to capture detailed video of the riverbed. The camera was lowered along twenty-one (21) parallel transects laid perpendicular to shore, spaced

approximately 80 to 200 feet apart. The camera locations were recorded using RTK GPS.

3. Hydrographic Soundings: A single-beam hydrographic survey was conducted using a vessel-mounted Teledyne Odom Echotrac CVM dual-frequency transducer. Low-frequency sonar was used to identify any features located above the substrate. Collected data were post-processed using HYPACK software to analyze for potential vegetation signatures.

Survey Results

The field survey was conducted on June 10, 2025, from 9:00 AM to 12:00 PM during high tide. Weather conditions were rainy with calm winds. The air temperature was approximately 60°F, and the water temperature was around 65°F. Water clarity was fair, with the substrate visible from the surface in shallow areas.

The survey area extended from just waterward of the Mean Low Water (MLW) line to approximately 350 feet offshore, spanning the full width of the property. Survey boundaries and elevations are shown on the “Topographic Survey & Hydrographic Survey” dated April 15, 2025, and revised June 10, 2025. Elevations within the survey area ranged from approximately -2.0 feet to -14.5 feet NAVD 88. The substrate consisted primarily of sand, with some scattered shell fragments and numerous rocks and large boulders.

Various species of seaweed were observed attached to rocks and boulders throughout the entire survey area. Common species included sea lettuce (*Ulva lactuca*), rockweed (*Fucus distichus*), and Irish moss (*Chondrus crispus*). Seaweed is a form of macroalgae—it anchors to hard surfaces but lacks true roots and is not classified as SAV.

A mixed bed of eelgrass (*Zostera marina*) and widgeon grass (*Ruppia maritima*) was observed across much of the survey area. Both species were confirmed through underwater video footage and were documented growing in sandy areas as well as between rocks.

The landward extent of SAV occurred between approximately -3.0 feet and -5.0 feet NAVD 88, where a moderate-density mixed bed was prevalent. This zone also included localized patches of higher density vegetation. Moving waterward, SAV density generally increased between -5.0 feet and -8.0 feet NAVD 88, where a high-density mixed bed dominated, with localized areas of both lower and higher density vegetation. Beyond this zone, between -8.0 feet and -11.0 feet NAVD 88, SAV presence declined, transitioning to a low-density and sparse mixed bed. This elevation range appeared to represent the waterward limit of SAV distribution within the survey area. No SAV was observed beyond -11.0 feet NAVD 88, where the substrate primarily consisted of bare sand and rock. Additionally, no SAV was documented in the areas immediately surrounding the groins located along the property’s shoreline.

Still images from the underwater video survey are provided as an attachment for reference. A photograph location map is also included, showing the image locations overlaid on the “Topographic Survey & Hydrographic Survey.”

Conclusion

The SAV survey confirmed the presence of a mixed bed of eelgrass (*Zostera marina*) and widgeon grass (*Ruppia maritima*) throughout much of the survey area, with distribution and density varying in relation to water depth.

Given the presence of the healthy SAV bed along the property, regulatory agencies will likely recommend that any proposed waterfront improvements be undertaken with care to minimize potential impacts to the resource. Provided that any such recommendations are implemented, it is anticipated that future improvements—including repairs to the existing groins within their historic footprints—can be completed and maintained without causing significant adverse impacts to SAV.

Please feel free to contact me at christina@coastlineconsulting.com or (203) 433-4486 should you have any questions regarding the SAV survey.

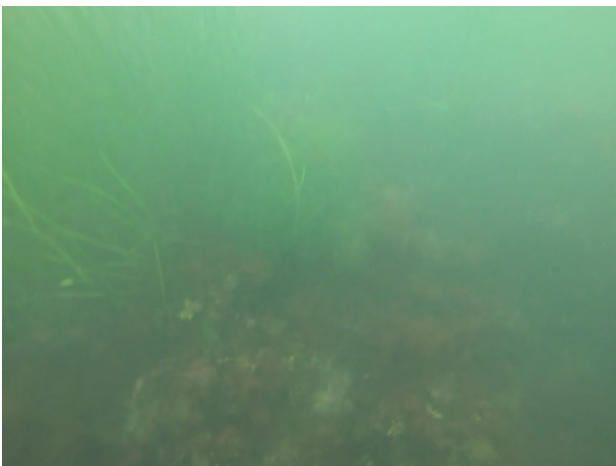
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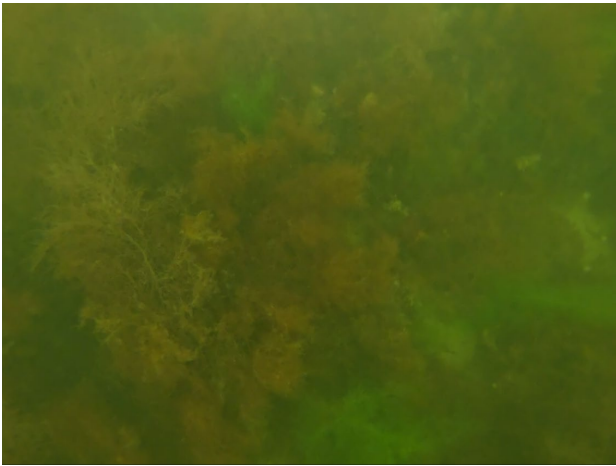
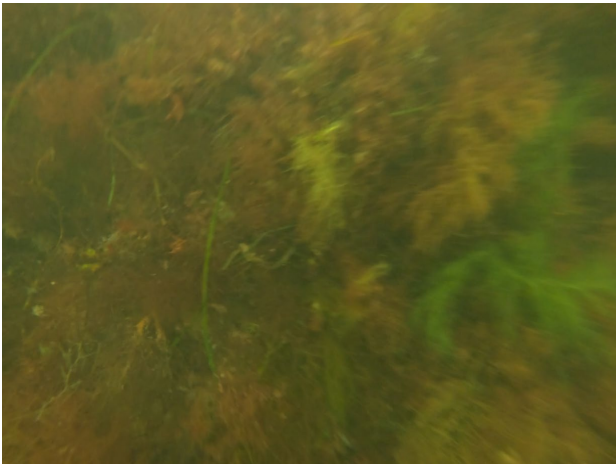
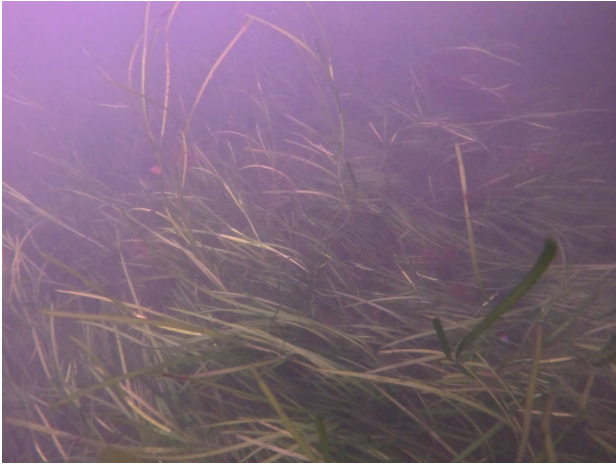


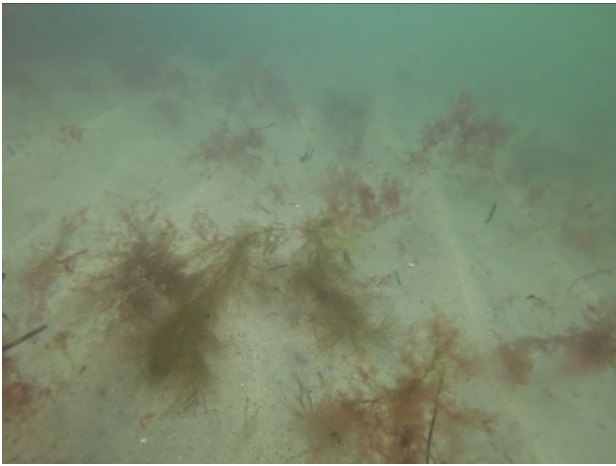
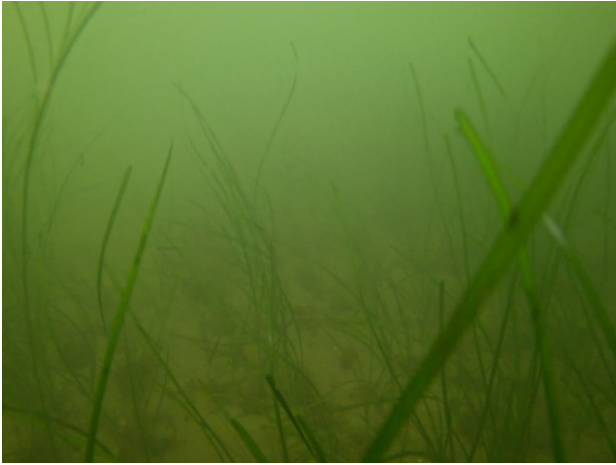
Christina Fluckiger, Project Manager
Coastline Consulting & Development, LLC

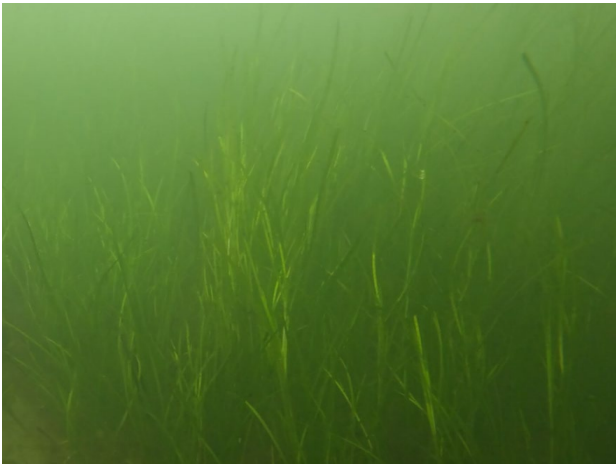
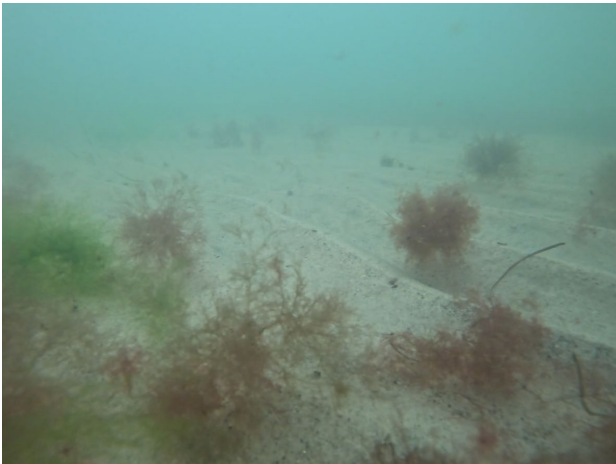
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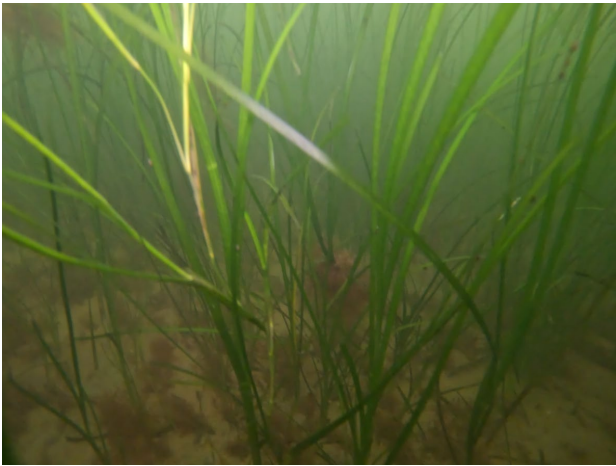
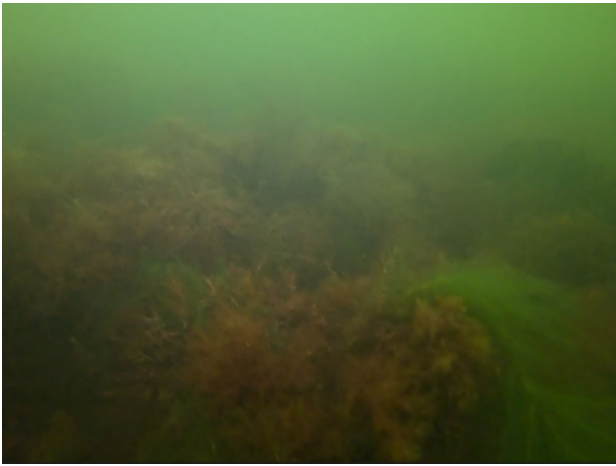
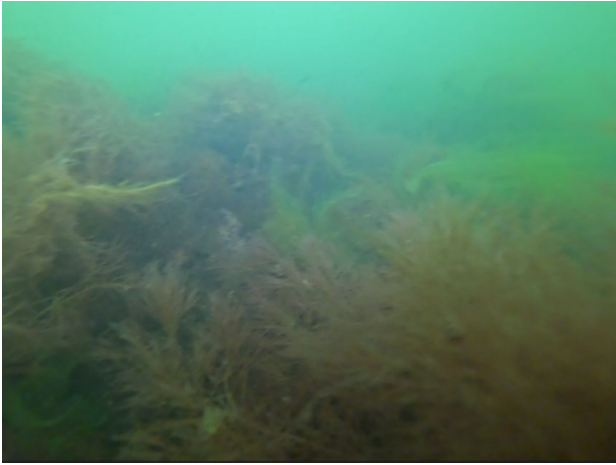
Topographic Survey & Hydrographic Survey (April 15, 20205; Rev. June 10, 2025)
SAV Photographs
SAV Photograph Location Map

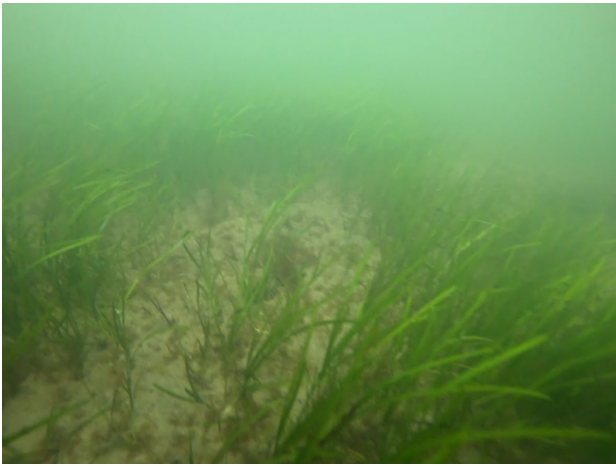
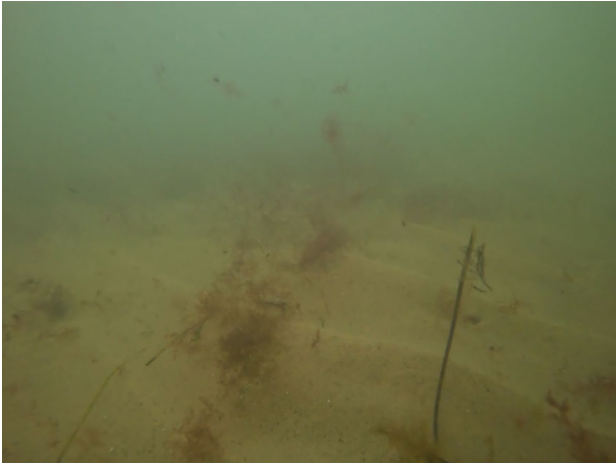
LOCATION ID	PHOTOGRAPH	DESCRIPTION
1		High-density mixed bed of <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass).
2		<i>Zostera marina</i> (eelgrass) rooted between large, seaweed-covered rocks.
3		Mixed <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass) rooted between large, seaweed-covered rocks.

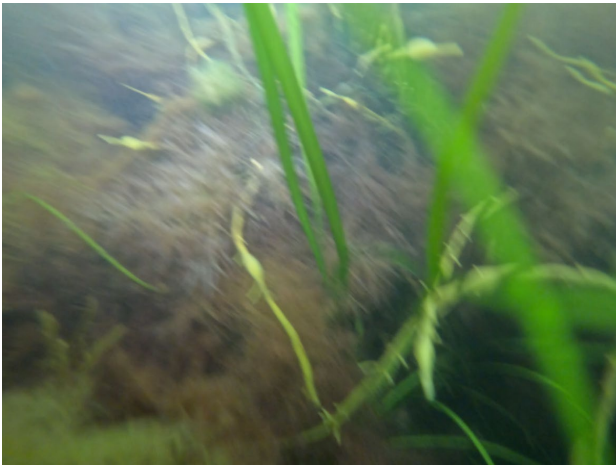
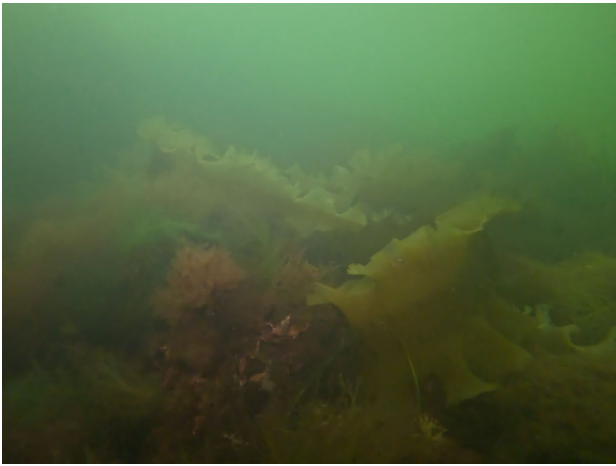
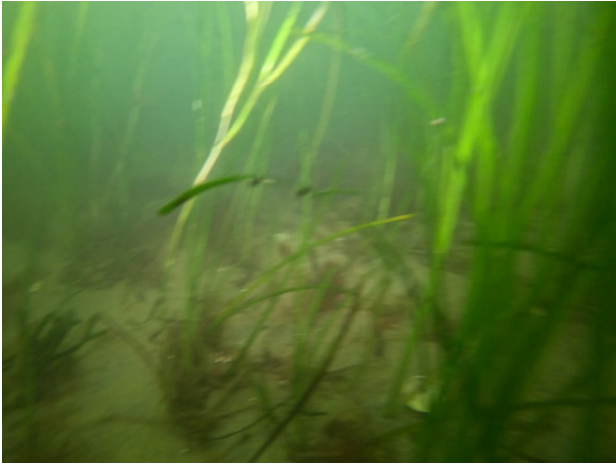
LOCATION ID	PHOTOGRAPH	DESCRIPTION
4		Large, seaweed-covered rocks with no visible SAV.
5		Large, seaweed-covered rocks with floating, uprooted <i>Zostera marina</i> (eelgrass) leaves.
6		High-density mixed bed of <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass).

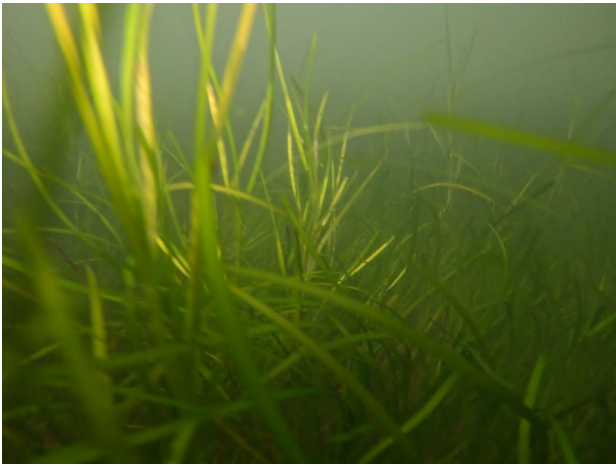
LOCATION ID	PHOTOGRAPH	DESCRIPTION
7		Sandy substrate with no visible SAV.
8		Sandy substrate covered with floating seaweed and uprooted <i>Zostera marina</i> (eelgrass) leaves.
9		Low-density mixed bed of <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass).

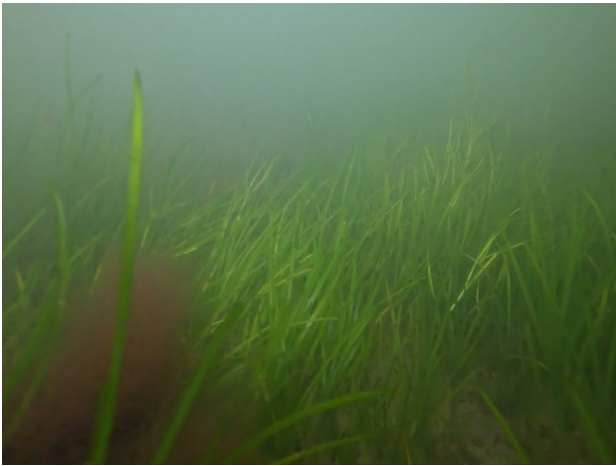
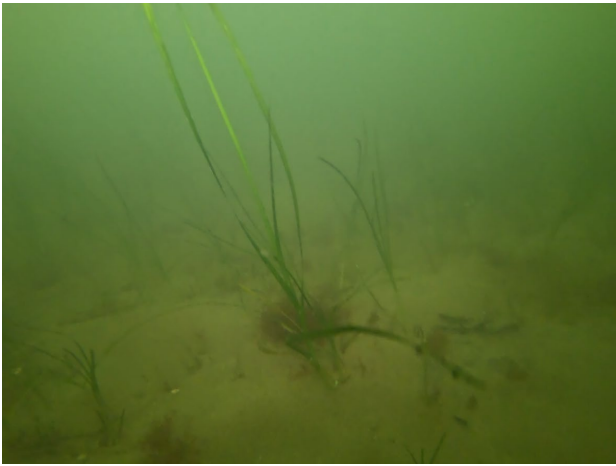
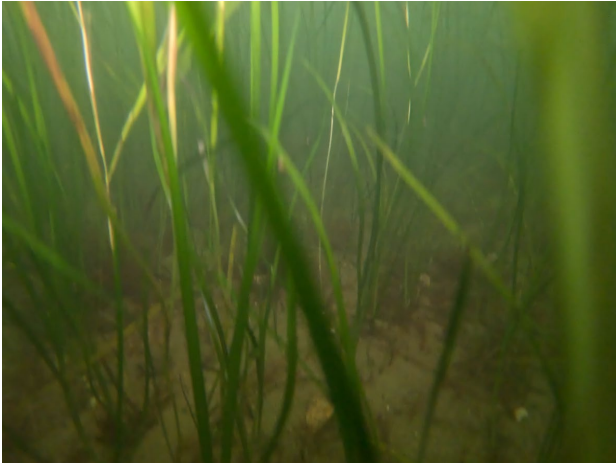
LOCATION ID	PHOTOGRAPH	DESCRIPTION
10		High-density mixed bed of <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass).
11		Sandy substrate covered with floating seaweed and uprooted <i>Zostera marina</i> (eelgrass) leaves.
12		High-density mixed bed of <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass).

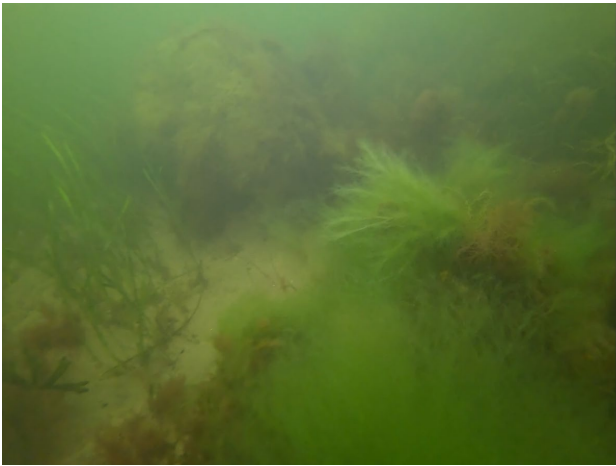
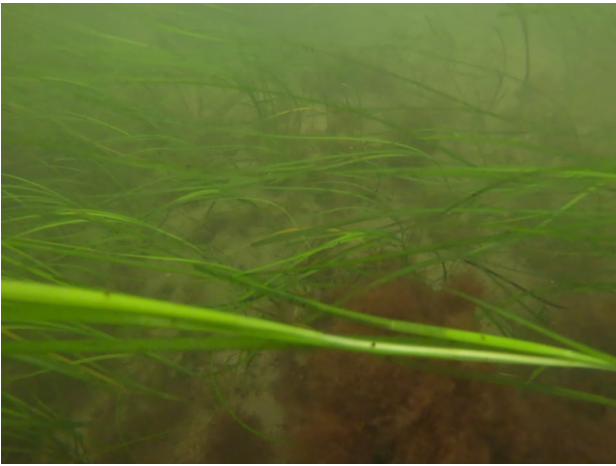
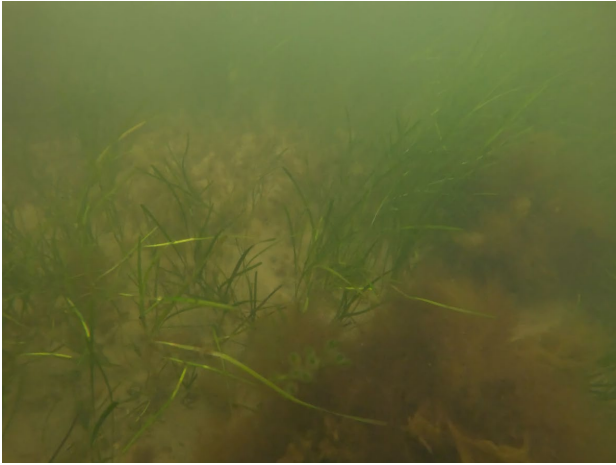
LOCATION ID	PHOTOGRAPH	DESCRIPTION
13		Low-density mixed bed of <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass).
14		Large, seaweed-covered rocks with no visible SAV.
15		Large, seaweed-covered rocks with no visible SAV.

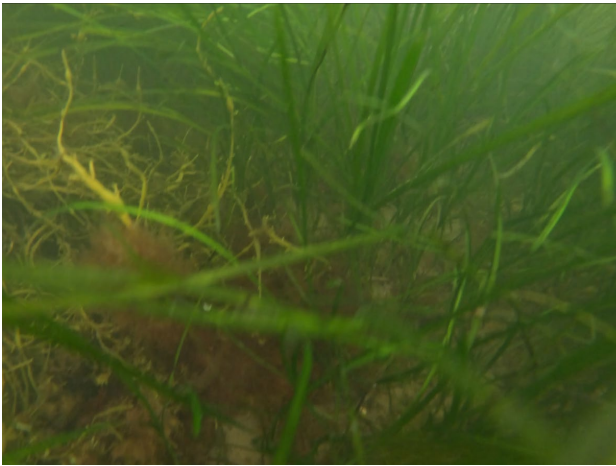
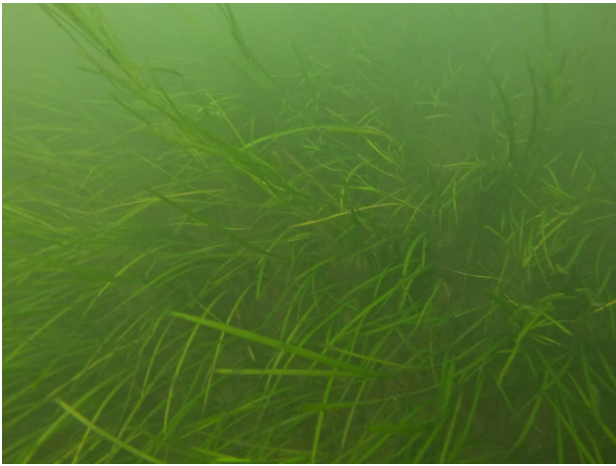
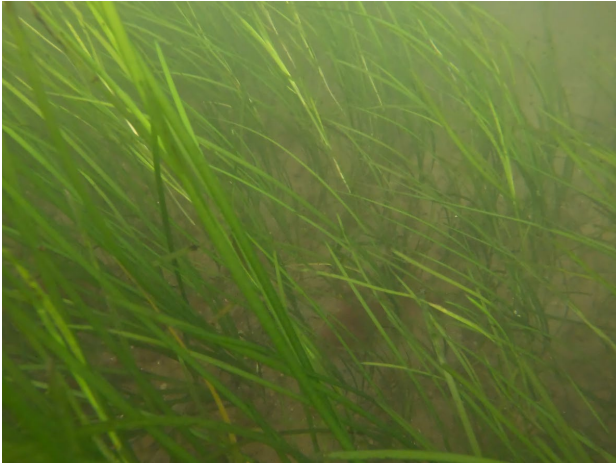
LOCATION ID	PHOTOGRAPH	DESCRIPTION
16		Mixed <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass) rooted between large, seaweed-covered rocks.
17		Moderate-density mixed bed of <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass).
18		Sandy substrate covered with floating seaweed and uprooted <i>Zostera marina</i> (eelgrass) leaves.

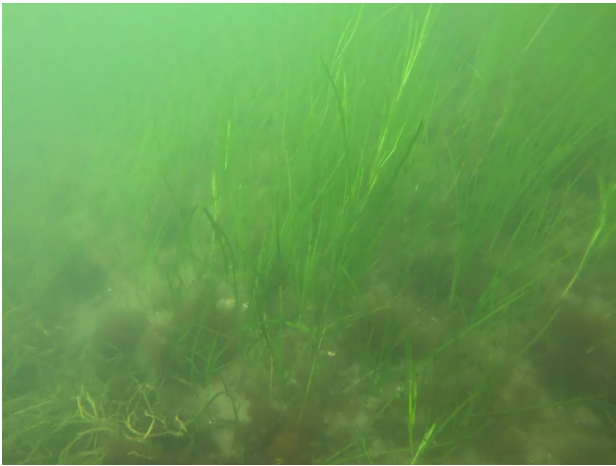
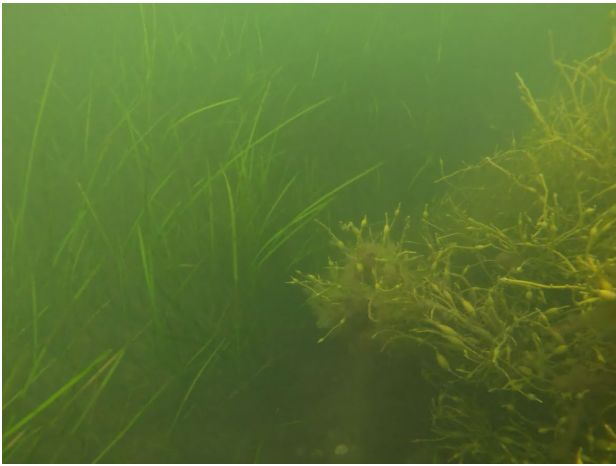
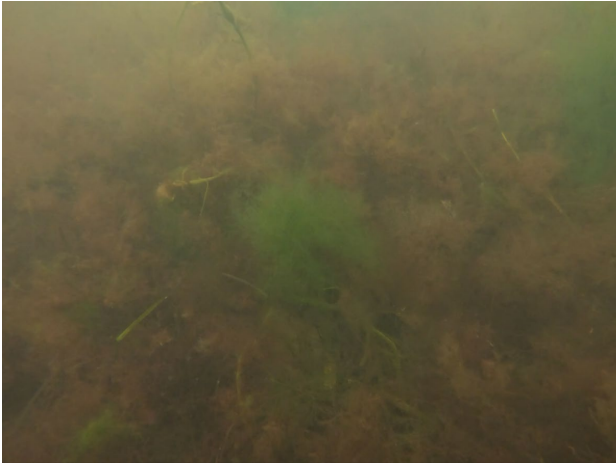
LOCATION ID	PHOTOGRAPH	DESCRIPTION
19		<i>Zostera marina</i> (eelgrass) rooted between large, seaweed-covered rocks.
20		Large, seaweed-covered rocks with no visible SAV.
21		Low-density mixed bed of <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass).

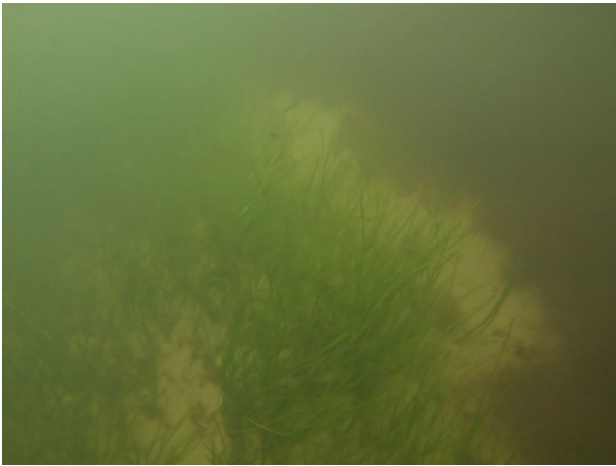
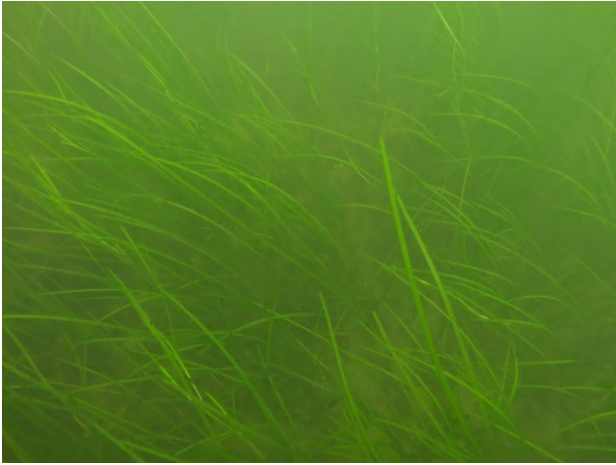
LOCATION ID	PHOTOGRAPH	DESCRIPTION
22		High-density mixed bed of <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass).
23		High-density mixed bed of <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass).
24		Moderate-density mixed bed of <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass).

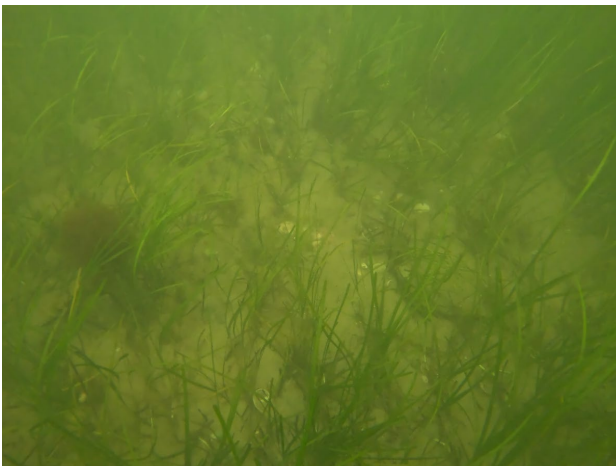
LOCATION ID	PHOTOGRAPH	DESCRIPTION
25		High-density mixed bed of <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass).
26		Sparse bed of <i>Zostera marina</i> (eelgrass).
27		Low-density mixed bed of <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass).

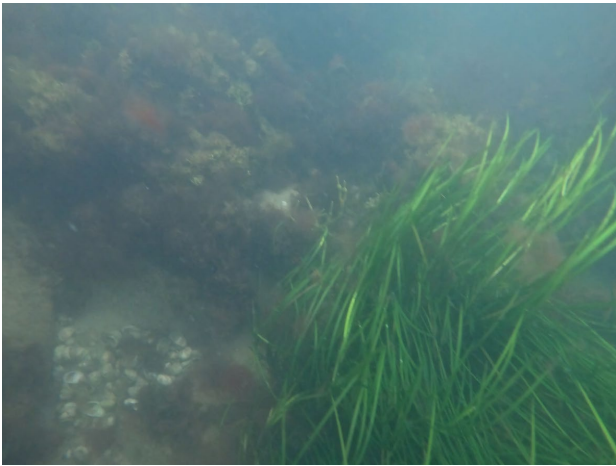
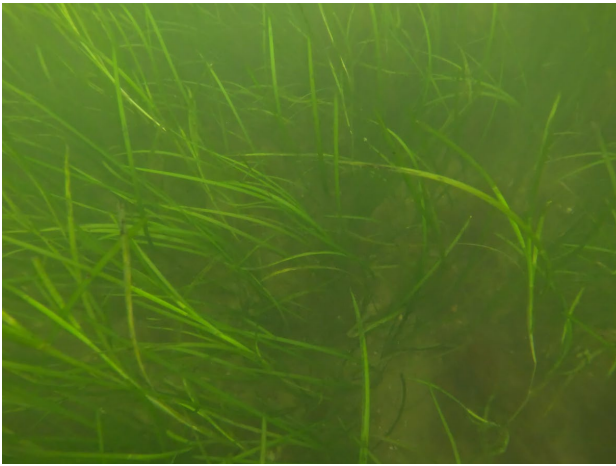
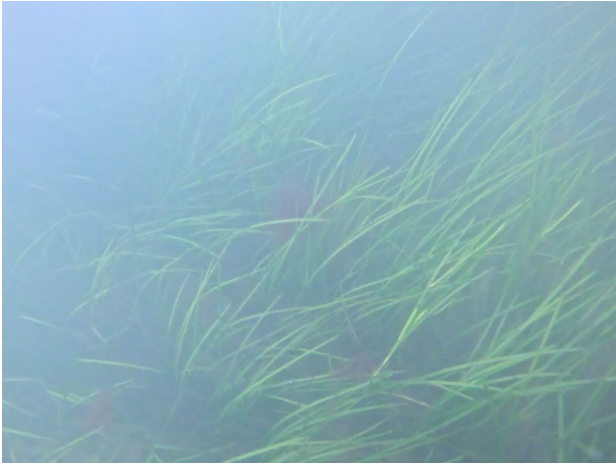
LOCATION ID	PHOTOGRAPH	DESCRIPTION
28		Mixed <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass) rooted between large, seaweed-covered rocks.
29		Low-density mixed bed of <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass).
30		Low-density mixed bed of <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass).

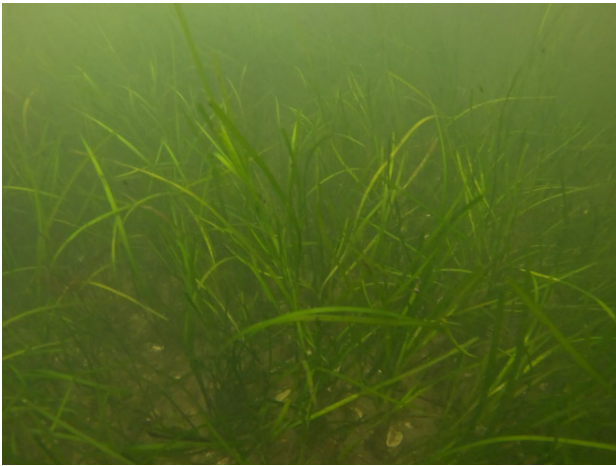
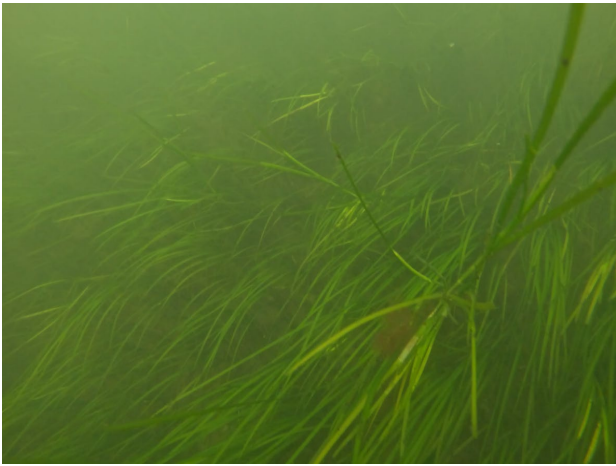
LOCATION ID	PHOTOGRAPH	DESCRIPTION
31		Mixed <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass) rooted between large, seaweed-covered rocks.
32		High-density mixed bed of <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass).
33		Moderate-density mixed bed of <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass).

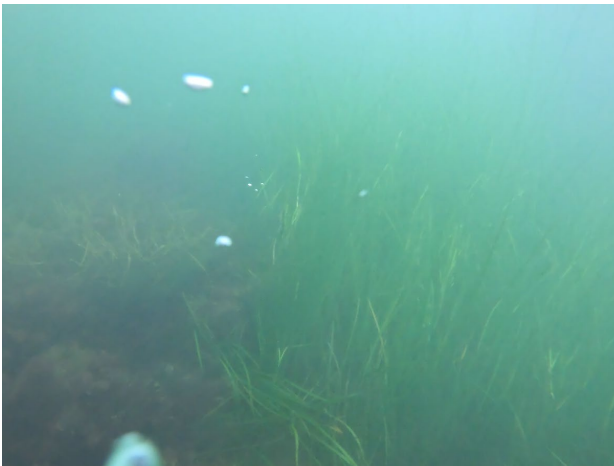
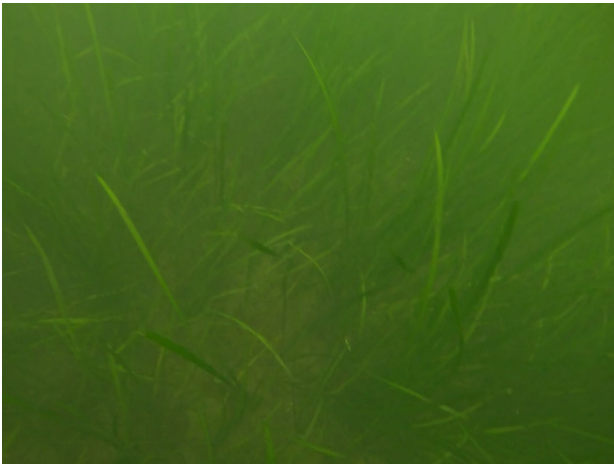
LOCATION ID	PHOTOGRAPH	DESCRIPTION
34		Mixed <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass) rooted between small, seaweed covered rocks.
35		Mixed <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass) rooted between large, seaweed covered rocks.
36		Large, seaweed-covered rocks and floating, uprooted <i>Zostera marina</i> (eelgrass) leaves.

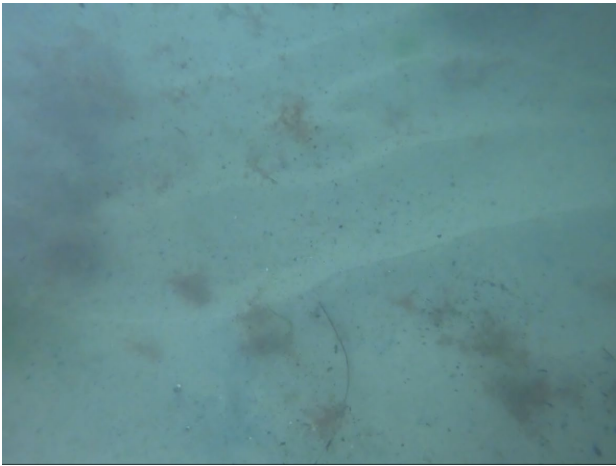
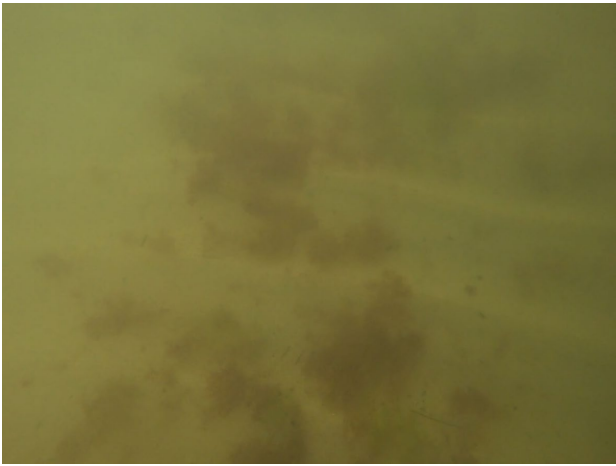
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37		Edge of moderate-density mixed bed of <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass).
38		High-density mixed bed of <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass).
39		High-density mixed bed of <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass).

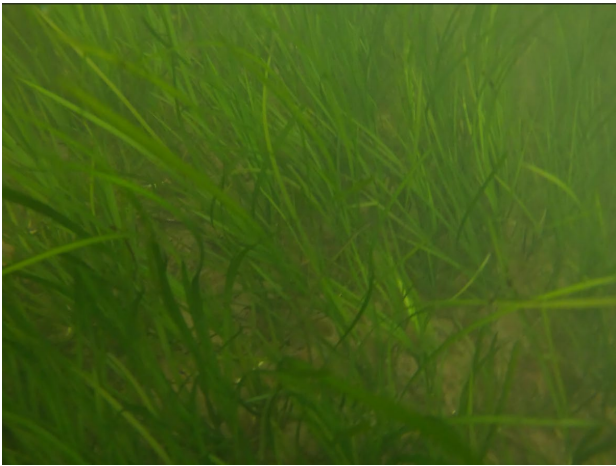
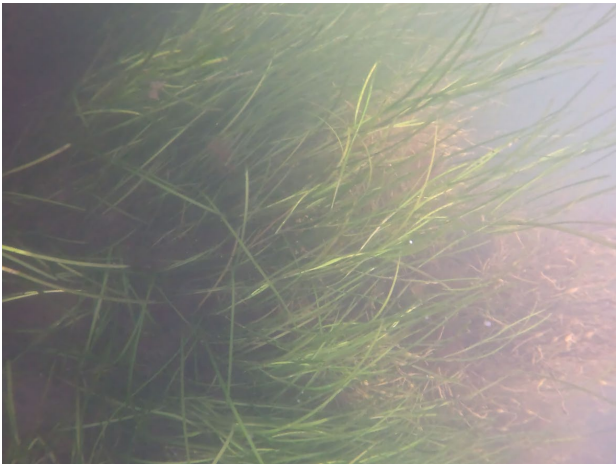
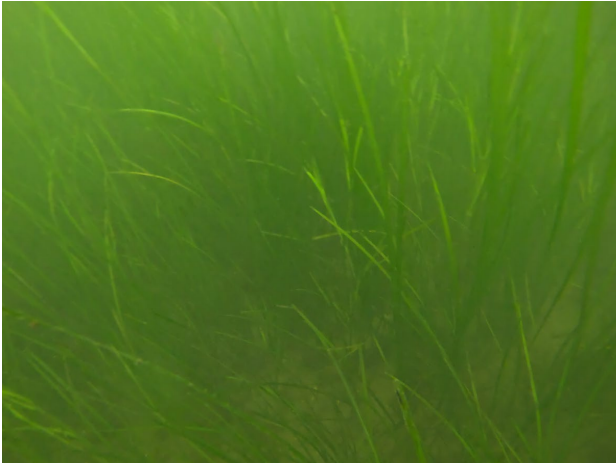
LOCATION ID	PHOTOGRAPH	DESCRIPTION
40		Low-density bed of <i>Zostera marina</i> (eelgrass).
41		Mixed <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass) rooted between large, seaweed-covered rocks.
42		Low-density mixed bed of <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass).

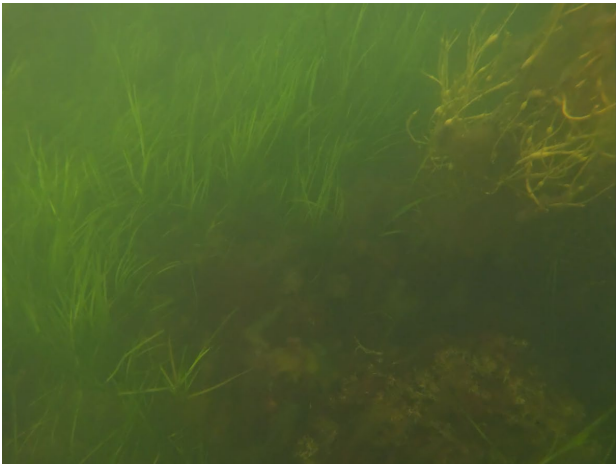
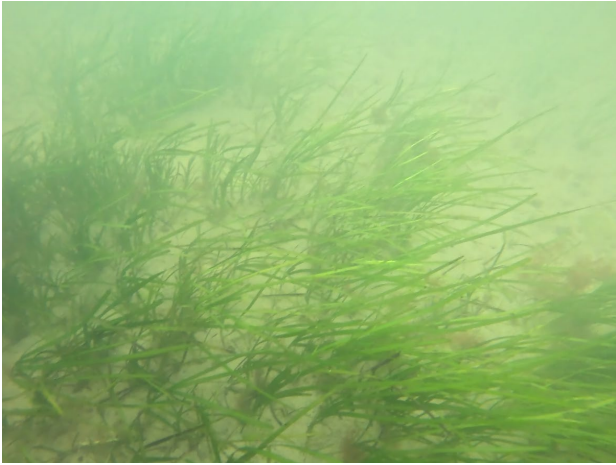
LOCATION ID	PHOTOGRAPH	DESCRIPTION
43		<i>Zostera marina</i> (eelgrass) growing between large rocks, which are covered in seaweed.
44		High-density mixed bed of <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass).
45		High-density mixed bed of <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass).

LOCATION ID	PHOTOGRAPH	DESCRIPTION
46		High-density mixed bed of <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass).
47		High-density mixed bed of <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass).
48		High-density mixed bed of <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass).

LOCATION ID	PHOTOGRAPH	DESCRIPTION
49		High-density mixed bed of <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass) growing around large, seaweed-covered rocks.
50		High-density mixed bed of <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass).
51		High-density mixed bed of <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass).

LOCATION ID	PHOTOGRAPH	DESCRIPTION
52		Sandy substrate covered with floating seaweed and uprooted <i>Zostera marina</i> (eelgrass) leaves.
53		Sandy substrate covered with floating seaweed. No visible SAV.
54		Sandy substrate covered with floating seaweed. No visible SAV.

LOCATION ID	PHOTOGRAPH	DESCRIPTION
55		High-density mixed bed of <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass).
56		High-density mixed bed of <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass).
57		High-density mixed bed of <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass).

LOCATION ID	PHOTOGRAPH	DESCRIPTION
58		<i>Zostera marina</i> (eelgrass) rooted between large, seaweed-covered rocks.
59		High-density mixed bed of <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass) growing around large, seaweed-covered rocks.
60		Edge of moderate-density mixed bed of <i>Zostera marina</i> (eelgrass) and <i>Ruppia maritima</i> (widgeon grass).



