

## **Chapter H: Marine Resources**

### **1. Purpose**

It is important that a Comprehensive Plan provides a thorough analysis of the town's strong dependence on fisheries-related employment and must address critical marine resource issues. Specifically, this chapter will do the following; and

- a) Describe Gouldsboro's current coastal marine resource areas, facilities, and water-dependent uses and changes since the last comprehensive plan update;
- b) Assess the adequacy of existing facilities and public access points to handle current and projected use demands; and
- c) Assess the effectiveness of existing measures to protect and preserve coastal marine resource areas and water-dependent uses.

### **2. Key Findings and Issues**

Marine resources contribute in important ways to Gouldsboro's economic and recreational activities. The local fishing community, which has flourished in the past, is now facing serious challenges which include climate change, international tariffs, adverse impacts due to reduced access to ocean-based livelihoods that confront the industry along the Eastern seaboard and Canadian geese whose feces contain pathogens and contribute to the spread of diseases like E. coli, listeria, salmonella and giardia. These diseases potentially threaten our clam flats and intertidal zone, which can affect the water quality and cause flat closures for up to three years. Overfishing of 50% of marine species according to Food and Agriculture Organizations have been fully or over-exploited, which in turn is destroying ecosystems and food chains. As the ocean absorbs up to one third of CO<sub>2</sub> that is emitted worldwide, the pH of surface waters of the ocean has fallen by 0.1pH units, which is equivalent to a 30% increase in acidity. This has a direct impact on calcifying organisms like coral, oysters, sea urchins, clams and many others. As food demands grow, one response is to grow as many fish as quickly as possible, regardless of the negatives that can occur like chemical pollution which can have destructive effects on natural habitats in the sea as well as accidental release of farmed fish which are destroying native stocks and passing on diseases. Gouldsboro residents still have desires to maintain, and where needed, restore the quality of its marine and fresh ground and surface water resources and continue its town policy to promote the preservation of the historical fishing community while maintaining the rural character and finding alternative solutions to improving public access.

### **3. Key Findings and Issues from 2005 Plan**

The plan stated that Gouldsboro had an abundance of marine resources, but that data suggest a

decrease in marine resource-based employment. Another issue was limited public access to the shore, and inadequate parking, docking facilities, and other limitations to public access. There was also a demand for additional moorings. The plan stressed the importance of a Comprehensive Harbor Management Plan to anticipate future growth and ensure adequate infrastructure for a working waterfront.

The 2005 plan indicated the community’s wishes to protect and enhance its marine resources in a way that assures usage by all residents and tax-payers while avoiding any harm to long-term viability. Improving public access for the general public and commercial fishing interests, recommendation of dredging harbors with minimal impact on sensitive marine resources, and constructing a breakwater were all important issues. Marine water quality and how to minimize any threats as well as water dependent uses, shellfish restoration, and preserving the fishing community were included as well suggested with implementation strategies.

#### 4. 2022 Public Opinion Survey Results

Only 10.17 percent of survey respondents believe that Gouldsboro storm water management is excellent, while 30.08% believe it is good, 28.39% believe it is fair, 11.02% believe it is poor and 20.34% were not sure. This makes it difficult to determine the resident’s true opinions as the question may have been misunderstood as to what was meant by storm water management. Increasing parking at fresh and saltwater access locations show quite important as 62.29% of respondents favor this, and 65.65% support expanded access to freshwater resources. It is clear that Gouldsboro residents are concerned about protecting all water resources, whether fresh or saltwater, ponds, streams, rivers and shoreline. Residents overwhelmingly do not approve of any large-scale aquaculture leases or operations within the town.

Other Results:

<b>Questions:</b>	<b>Yes</b>	<b>No</b>
Do you support large-scale aquaculture leases and operations within Gouldsboro?	9.21%	90.79%
Support the Town dredging harbors to allow for more moorings and safe passage of larger vessels	29.83	70.17%
Support the Town facilitating more public access to saltwater and the shoreline	72.46%	27.54%
Support creating more public boat ramps and launches	62.61%	37.39%
Should the Town encourage more commercial fishing?	42.37 %	57.63%

#### 5. Marine Resource Inventory

##### Shellfish:

The Maine Department of Marine Resources conducts regular and ongoing monitoring of water quality to determine where fishery and harvest closings are necessary. As of this draft, several Gouldsboro areas are closed to shellfish harvesting due to bacterial contamination

from a point source of pollution (See Shellfish Harvesting Area Classification – Notification of Changes August 25, 2023, Growing Area EJ, Schoodic Point to Dyer Point). This is to be expected, as there are several known overboard discharge sites in Gouldsboro (see Water Resources chapter). Other areas are closed periodically for reseeding. The closed areas thus change periodically and may have changed by the time this document is printed.

Table X-X: Prohibited Shellfish Harvesting Areas

Growing Area	Acreage
P2. Sand Cove (Gouldsboro) west of a line beginning at the eastern tip of Sampson Point running southwest to the opposite shore forming the south side of an unnamed cove.	0.49
P3. Corea Harbor (Gouldsboro): South and west of a line beginning at the east tip of Youngs point then running southeast to the west tip of Sheep Island; AND north of a line beginning at the west tip of Sheep Island, running southwest to the southern tip of an unnamed point of land forming the western mouth of Corea Harbor.	66.1
P4. Prospect Harbor (Gouldsboro): west of a line beginning at the most southeastern tip of Pettees Point, running north to the USCG navigational aid "Gong 3" (east of Clarks Ledge), then running northwest to an unnamed point on the west shore of Inner Harbor approximately 767 yards south of the mouth of Forbes Stream	116.37
P5. Shark Cove (Gouldsboro): northeast of a line beginning at a red-painted post at the northwest mouth of Shark Cove, running southeast to a red-painted post on the southeast mouth of Shark Cove.	21.03
P6. Birch Harbor (Gouldsboro): northwest of a line beginning at the eastern tip of an unnamed point on the southwest shore of Birch Harbor located approximately 600 yards south-southeast of the Rt. 186 bridge running northeast to another unnamed point on the north shore approximately 467 yards southeast of the Rt. 186 bridge.	16.05

Source: <https://www.maine.gov/dmr/sites/maine.gov/dmr/files/closures/EJ.pdf>

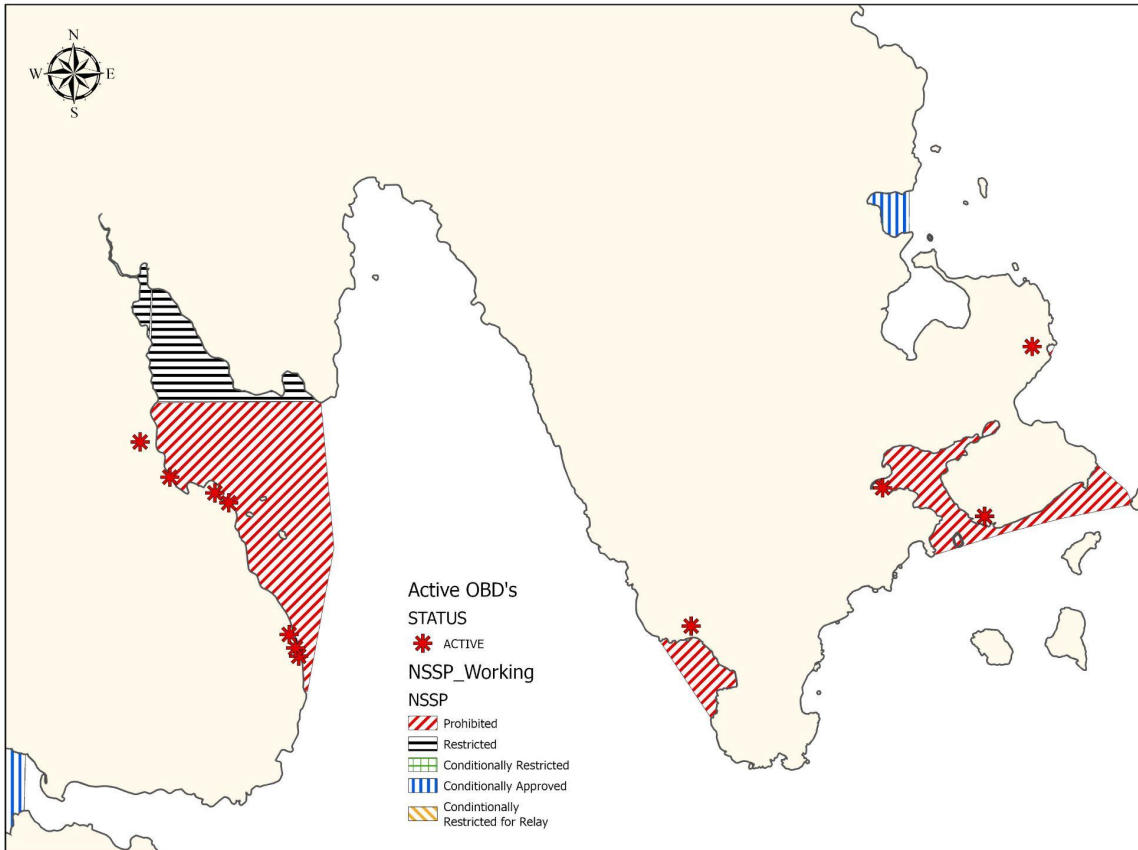
Table ? H- xx shows the numbers for intertidal acreage in Gouldsboro impacted by water quality closures. These figures are based on closures at the beginning of October 2023. The total intertidal acreage closed, because of pollution, is approximately 220. These numbers may have changed slightly since October 2023. The total intertidal acreage in the Town of Gouldsboro is approximately 3,458 acres and the total intertidal clam habitat is 1,964 acres. Map H-xx? shows Gouldsboros active OBD’s as of year end 2021.

Table H-xx Harbor Closings

ATLASID	TOWN	WATERBODY	NAME	STATUS
2772	Gouldsboro	PROSPECT	SCOLLARD,	A
3298	Gouldsboro	SHARK COV	WARLICK,	A
3370	Gouldsboro	INNER HAR	DAVID AND	A
3622	Gouldsboro	PROSPECT	PROSPECT	A
3834	Gouldsboro	COREA HAR	METZLER,	A
4315	Gouldsboro	GOLDSBORO	GREENWOOD	A
4667	Gouldsboro	PROSPECT	FINNICK,	A
4886	Gouldsboro	COREA HAR	GRAIG, WA	A
7934	Gouldsboro	INNER HAR	STINSON S	A
7935	Gouldsboro	INNER HAR	STINSON S	A
6308	Gouldsboro	Prospect HBR	Ronald & Gay	A
9180	Gouldsboro	<u>Corea HAR</u>	Joan Quintal	A

Map H -xx

## Gouldsboro Active OBD's end of year 2021



According to DMR data, there were 134 marine resource harvester licenses issued in the state during 2020 compared to 118 in 2002. Table H.1. Summarizes the licenses held in Gouldsboro by type. While Gouldsboro residents may hold licenses and harvest elsewhere, the only species that have been hauled into Gouldsboro ports in recent years are American Lobster, Jonah Crab, Soft-shell Clam, Elvers, and Sea Scallops (See Table H.2). By far the most lucrative fishery in Gouldsboro is the lobster catch. According to preliminary DMR data, the total weight of lobster brought to port in Gouldsboro and South Gouldsboro in 2019 and 2020 was 761,838 pounds, with a value of \$3,208,397.90. In 2009-2010, the lobster catch in these two ports was 739,795 pounds, worth \$2,065,817. Although fisheries tend to ebb and flow in abundance and market share, these data suggest that the lobster fishery remains robust and important, and is becoming more lucrative.

**Table H-xx** 2020 Harvester licenses by type

License	Gouldsboro
Commercial Fishing Crew (CFC)	10
Commercial Fishing Single (CFS)	14
Commercial Pelagic and Anadromous Crew (CPC)	4
Commercial Pelagic and Anadromous Single (CPS)	4
Elver 1 Fyke Net (E1)	3

Elver 1 Fyke Net Crew (E1C)	2
Elver 2 Fyke Nets Crew (E2C)	1
Elver Dip Net (E0)	1
Lobster/Crab +70 (LCO)	1
Lobster/Crab Apprentice (LA)	2
Lobster/Crab Class 1 (LC1)	8
Lobster/Crab Class 2 (LC2)	20
Lobster/Crab Class 2 +70 (LC2O)	2
Lobster/Crab Class 3 (LC3)	20
Lobster/Crab Class 3 +70 (LC3O)	2
Lobster/Crab Non Commercial (LNC)	7
Lobster/Crab student (LCS)	12
Lobster/Crab under 18 (LCU)	1
Quahog Mahogany (QM)	1
Recreational Saltwater Registry (SWR)	4
Scallop Diver (SDI)	1
Scallop Dragger (SD)	6
Scallop Non Commercial (NCS)	2
Sea Urchin Diver (SUH)	2
Sea Urchin Dragger (SUB)	1
Seaweed (SW)	2
Seaweed Supp (SWS)	1
<b>Grand Total</b>	<b>134</b>
Source: Maine Department of Marine Resources	

**Table H-xx** Reported Catch at the Ports of Gouldsboro and South Gouldsboro, 2015-2020

Species	Total Weight (lb)	Total Value (\$)	Total # Trips	Total # Harvesters
Crab Jonah	3,566.6	1,923.9	13	5
Scallop Sea	10,802.11	1,347,14.9	126	26
Clam Soft	359,092	749,820.4	3,634	173
Elver	909.83	1,446,714	752	230
Lobster American	3,138,844	10,525,266	7326	168
Source: Maine Department of Marine Resources				

**H-xx**

Historic Maine Fisheries Data on Annual Softshell Clam Harvest in Gouldsboro, in pounds and value

Year	Pounds	Value
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2007	42,871	\$53,464
2008	1,118	\$77,889
2009	82,657	\$101,720
2010	92,720	\$112,318
2011	122,534	\$173,014
2012	109,806	\$156,268
2013	106,693	\$159,867
2014	83,906	\$156,623
2015	85,634	\$203,472
2016	75,675	\$152,601
2017	43,932	\$69,036
2018	60,223	\$102,900
2019	52,275	\$124,338
2020	41,352	\$97,475
2021	42,202	\$132,445
2022	10,175	\$28,789

**Aquaculture:**

Gouldsboro was the first town to impose a moratorium specifically on large-scale finfish aquaculture in November of 2021 with other coastal communities following suit. As the Town reviews its ordinances, the planning board continues its work on creating a large-scale finfish licensing ordinance utilizing its broad home-rule authority. 90.79 percent of all survey respondents do not support large-scale aquaculture. The Department of Marine Resources reports that between 2017 and 2021 aquaculture leases in Maine waters increased from about 110 to 185 with the total acreage encompassed by active leases increased from less than 1,300 to about 1,750. The region has also seen growth of aquaculture on an “industrial scale”. Concerns within the community are the impact on the environment, including chemical and biological pollution, transmission of disease and parasite outbreaks which will transfer to migrating fish, fecal matter, unsustainable feeds and competition for coastal space. The community of Gouldsboro clearly overwhelmingly opposes any large scale industrial aquaculture and will continue to review

ordinances and make updates to protect against any of the above threats to our bays, shoreland, and town.

**Elvers:**

In 2020, elvers remained one of the most valuable species harvested in Maine. Despite a decrease in per-pound value of more than \$1,500 in 2021, Maine’s elver fishery rebounded on the strength of a per pound value of more than \$1,800. The overall landed value of more than \$16 million was an increase of more than \$10 million over the previous year. More than 2,600 people applied to the lottery for a 2022 harvester license for only 13 available spots due to licenses that were not renewed in 2020 and 2021; one of those was for a Gouldsboro resident.

**Harbors, Marinas and; Other Public Access to the Coastal Shore:**

Public access points include Gouldsboro Point, Prospect Harbor, Bunkers Harbor and South Gouldsboro. There are currently still no access points in Corea or Birch Harbor. Parking continues to be inadequate at all of the sites and as predicted in the 2005 plan, has worsened over the years. 62.29 percent of survey respondents support increased parking at fresh and saltwater access locations. 70.17 percent of survey respondents do not support dredging harbors.

Originally the Town opted to utilize a town-owned parcel on Prospect Harbor’s eastern shore for the small shellfish resilience lab project with a partnership between the town, Schoodic Institute and local schools to raise baby clams. The Town has now opened up a three quarter-acre, shorefront parcel on Lighthouse Point Road for water access instead and moved the clam lab location to Bunker Harbor. The small, half-tide ramps and parking areas at Bunkers Harbor, South Gouldsboro, Gouldsboro Point and West Bay Stream continue to be inadequate.

As found in the 2005 plan, more pressure is still being put on all public access points and seems to increase each year with limited parking and overcrowding. The previous harbor master believed there was a need for dredging and to add additional piers, floats and other docking facilities and this needs to be on the list of priorities to research for the future of Gouldsboro.

**Table H-xx Marine Boat Moorings and Floats**

There are still approximately 150 moorings in town. At the time of this writing the Harbor Master is in the process of mapping all mooring locations within Gouldsboro, updating the existing Harbor Ordinance which will include fees for moorings for residents and non-residents. This ordinance should include updates for harbor access and use, address parking as well as mooring plans. The overall use issues and should still consider likely trends in marine resources and government fishing policy while continued consideration of environmental impacts of harbor improvements..

**Table H-xx Documented Vessel Owners in Gouldsboro 2022**



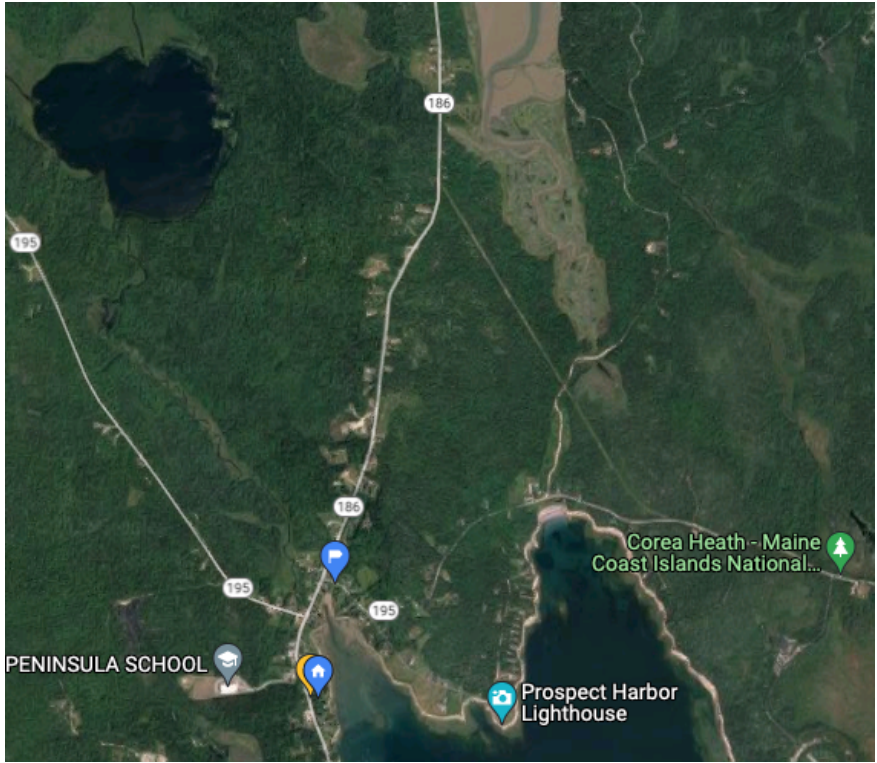
Total Documented Vessel Owners	40
Recreational Boats	6
Commercial Fishing Boats	34
Freight Barges	0
Passenger Boats	0
Other Vessels	0

**Other Marine Resource Issues:**

The comprehensive plan must recognize the importance of marine resources to the town and regional economy. As mentioned above, further growth and development will continue to place greater demand on the town’s harbors as recreational user numbers continue to increase. Many coastal communities including nearby Winter Harbor and the Schoodic Peninsula are facing similar issues.

**Gouldsboro Shore Project:**

A collaborative effort of the “Gouldsboro Shore Project” to restore clam flats has ensued in Gouldsboro over the past five years utilizing scientific techniques developed at Downeast Institute to protect clams from predators. The Maine Shellfish Restoration and Resiliency Fund, the Hancock County Fund of the Maine Community Foundation, the Schoodic Community Fund and the Schoodic Institute and local volunteers, the construction of the Shellfish Resiliency Lab was born about a year ago, as a way to expand the restoration and resilience effort. The lab can collect data, and volunteers conduct experiments to develop and refine approaches to shellfish conservation. The lab volunteers will continue to monitor, gather information about the growth and survival of first-year clams grown inside the lab.



Satellite view of Grand Marsh Bay's path to the ocean.



Shellfish Lab: Clams overwintering inside

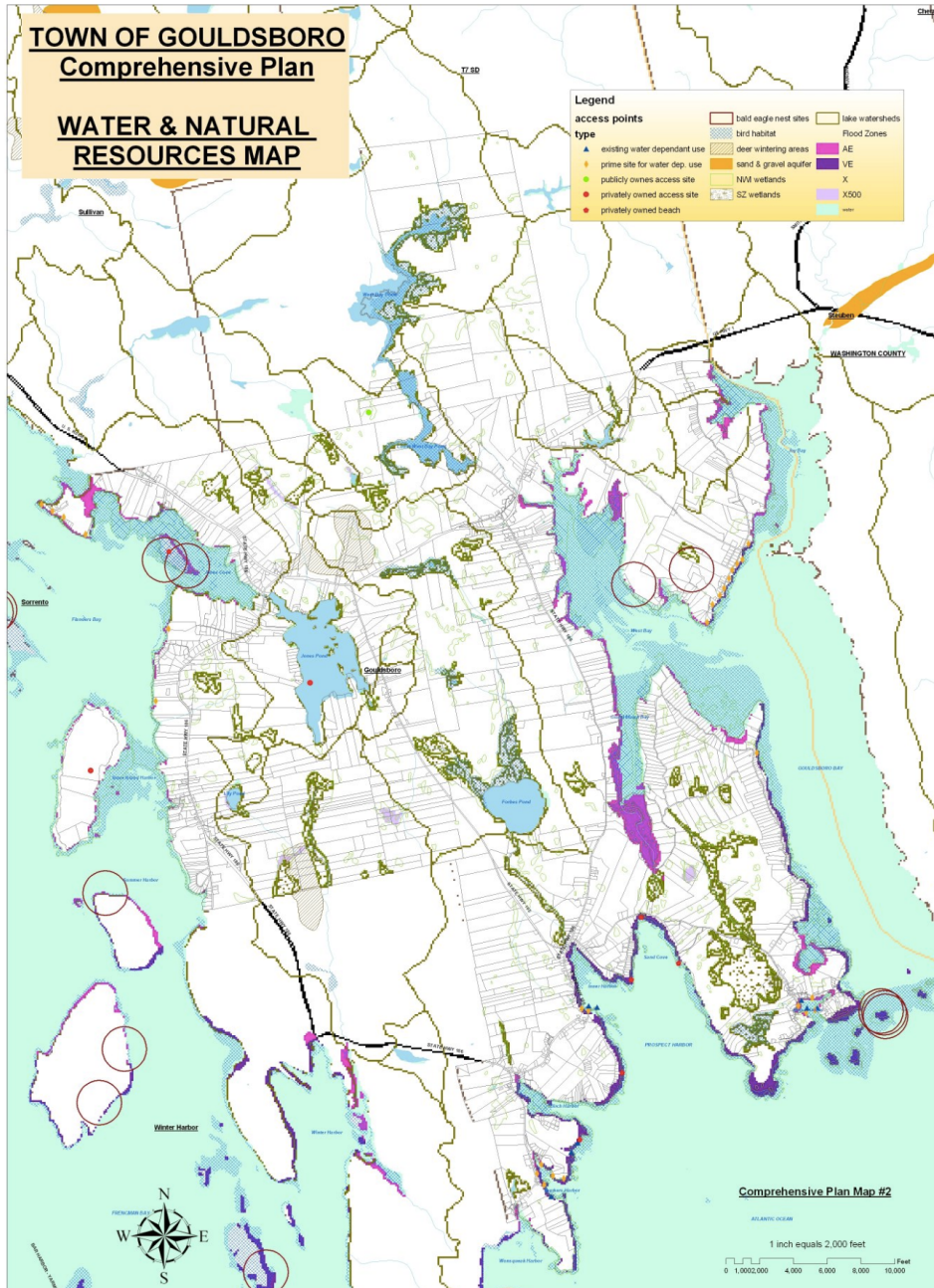
## **6. Adequacy of Access**

The Town has made some minor repairs to piers in recent years and plans to continue discussions in fulfilling its goal of providing better public access to the coastal shore for its citizens and visitors. The Town has opened the three quarter-acre town owned lot, which was the original planned site for its shellfish lab, for public access which includes a parking area. The Town will continue to look into the potential development of other feasible access points.

### **Water-Dependent Uses:**

Water-dependent uses are defined as those uses that require direct access to coastal waters; the fishing industry, including lobster, clams, rockweed, kelp, mussels, horseshoe crab, and marine worms are significant contributors to Goudsboro's economy and must be considered.

## Map – 1: Water & Natural Resources Map



### 7. Effectiveness of Existing Measures to Preserve Marine Resources

The primary way that marine resources are protected in Gouldsboro is through its Shoreland Ordinance, last revised in August of 2020. All Maine towns are required to have such an ordinance. Gouldsboro may want to review its current treatment of water quality concerns such as storm water runoff from development and revise ordinances to call for stricter attention to erosion and sedimentation prevention in new subdivisions. Site plan review procedures could

stress standards for the extent of impervious surface and drainage. Such measures could build on those already in place. Enforcement is an important part of any land use ordinance. Vegetative clearing and the construction of large homes have altered the view of the shoreline from the water. The impact of such development could be mitigated by thorough enforcement of existing (and any future) shoreline zoning standards. Overall, it is becoming more difficult for Gouldsboro and other coastal towns to retain their fishing heritage. The high price of shoreline, competition for public access, and federal fishing restrictions are making fishing more challenging. One specific measure that could be considered is a shoreline zoning restriction to protect water-dependent uses from being converted to residential use. There is currently no such protection in our town.

## **8. Regional Marine Resource Issues**

It is becoming more difficult for Gouldsboro as well as other coastal towns to retain their fishing heritage. The high price of shoreline, competition for public access and federal fishing restrictions are making fishing more challenging. Gouldsboro may consider sharing its marine resources with peninsula communities or nearby coastal towns. Conversations addressing issues such as water quality and public access with other towns may be beneficial for all.

Salmon farming is causing significant environmental impacts across the globe. Pollution, disease, and die-offs have resulted in serious damage in Canada, which has halted its test of salmon pens due to a marked decrease in water quality and increased rate of fish mortality. According to the Washington School of Marine and Environmental Affairs, salmon farming is causing significant environmental impacts across the globe with many regions reconsidering ocean-based finfish farming altogether. Many households in Gouldsboro being dependent on marine resources (e.g. fishing, recreation and other maritime trades), algal blooms, fuel spills, and mass die-offs threaten to disrupt how people make their living on the bay or waterfront.

### **Shore & Storm Project:**

Gouldsboro is vulnerable to flooding hazards related to sea level rise, storm surge and extreme precipitation events. Gouldsboro was fortunate to have been awarded funding from NOAA, through the Maine Coastal Program to address disappearing shore access and threats to coastal infrastructure from sea-level rise and increasingly severe storms. This project has allowed many sources of mapping information and data together to look across the coming decades as it seems the trend is that storms are getting more intense and predicted to continue. Gouldsboro has learned how to prioritize steps necessary to keep from losing critical shore infrastructure as well develop a realistic approach to preserving critical shore access with help from Maine Coast Heritage, Frenchman Bay Conservancy and many volunteers. The newly completed Shore Access Preservation Plan is in place documented in other areas of the comprehensive plan.

Results of a year-long study by FB environmental Associates on Gouldsboro’s shoreline and areas that are vulnerable to rising sea level and other climate-driven changes are listed by priority in table J-1.

Gouldsboro’s Storm & Shore Project and Vulnerability Assessment and Action Plan, may be found in its entirety beginning on page ??

J-1: List of priority areas in Gouldsboro

Highest Priority	Moderate Priority
Corea Working Waterfront	Crowley Island Road
Corea Road	Main Street-Prospect Harbor
Grand Marsh Bay Road	Bunker Pound Road
	Clinic Road Bridge
	Guzzle Road
	Redding Road



Photo Credit: Natasha Fouch

**Recommended actions for the highest priority vulnerabilities include:**

- Securing funding for and then undertaking feasibility and design studies to reduce vulnerability in Corea Harbor.
- Begin securing funding and shovel-ready engineering designs for modifications to Corea Road and Grand Marsh Bay Road, then incorporate these modifications into the Town's schedule of infrastructure upgrades and replacements. Work with State programs to secure grant funding for the modifications.
- Early in the next calendar year, the Gouldsboro Shore Program will work with Town Infrastructure Superintendent/CEO and the Harbormaster to create meetings and listening sessions to include Town property owners and residents in discussing the FB Environmental report and recommended actions.

### **How to address climate resiliency threats in Gouldsboro:**

- Gain Town support by using data to educate the public on the effects of climate change in their community. Involve the Town.
- Work to build a consensus on an action plan and short and long-term priorities. Establish funding strategy.
- Use existing action items to inform next steps and determine planning gaps: conduct feasibility assessments in high priority areas; create Town-wide Climate Action Plan, etc. and engineering design work in High Priority Areas.
- Begin engineering designs on chosen infrastructure priorities, complete permitting for construction work, secure funding for implementation work, etc. This is an example pathway of moving forward to implement climate resiliency measures. This pathway is an evolving process between planning and implementation.
- Begin implementation. Assess successes and lessons learned along the way. Update the action plan. Establish a committee of stakeholders committed to moving climate resiliency actions forward. Continue engaging the public such as through the Gouldsboro Shore website.
- Assess priorities based on the action plan presented in this document, bringing in community members, the Town, and other stakeholders. Consider joining the Community Resiliency Partnership through the State of Maine to access state funding opportunities. Conduct feasibility assessments of climate resiliency options for priority areas, such as at the Corea Harbor and Gouldsboro Shore Road.
- Secure funding for engineering designs for infrastructure upgrades to meet resiliency standards. Complete engineering designs using state climate resilience partnership funding; for example to upgrade undersized culverts on Corea Road to accommodate increased tidal flow and elevate the roadway to withstand 1.6 feet of sea level rise. Secure federal funding to

complete upgrades on Corea Road. Assess process, and use lessons learned in other priority areas of the Town.

<b>Goals &amp; Objectives: Marine Resources</b>			
<b>Objective</b>	<b>Strategy</b>	<b>Responsible Party(ies)</b>	<b>Timeline</b>
Assure community access to the Town's marine resources	Possible community workshops or brainstorming sessions	Selectboard. Gouldsboro Shoreline Project/Shellfish warden	Ongoing
Continue the work on the clam lab in Gouldsboro	Utilizing the shore project results and continued resources to move this project further	Selectboard/Shellfish & proactive community groups	ongoing
Protect harbors from incompatible development and assure community/public and commercial fishermen to the shore	Community input sessions with Selectboard and/or Planning Board for possible stricter ordinances or zoning	Town Manager/Selectboard/ Harbormaster /Planning Board	Immediate - 2years
Review Ordinances to ensure compliance with the Growth Management Act (38 M.R.S.A;1801)	Review Growth Management Act to ensure compliance/update ordinances as necessary	Selectboard and/or Planning Board	Immediate -2 years
Prioritize feasibility & design studies to reduce losing critical shore infrastructure, utilizing the Shore Access Preservation Plan	<u>High Priority</u> - Corea/Grand Marsh Bay Road <u>Moderate Priority</u> - Crowley Island Rd., Main St., Bunker Pound Rd., Clinic Rd bridge, Guzzle Rd, Redding Rd	Selectman with Shoreline Access Preservation Plan as guideline	Immediate - ongoing
Secure funding for feasibility studies/work with	Possibility of volunteers and/or grant writers	Town manager/select board/town manager	Immediate - ongoing



state programs to secure funding for modifications			
Educate residents on findings of environmental report/actions to take	Create workshops for property owners to discuss the FB environmental report and recommended actions	Harbor Master & Town Infrastructure Superintendent/CEO/ Selectboard	March -August 2024