| 1. Coastal Waters and Access | | | | |
| --- | --- | --- | --- | --- |
| **Data points** | **Measurements** | **Improvements Needed/ Maintenance Status** | **Monitoring Frequency** | **Data/Information Source** |
| **Water access points for boats** |  |  | Annually | Review State and local boating access: <https://www.maine.gov/dacf/parks/water_activities/boating/public_boat_launches/boat_sites.shtml>  Review marine resource section of current comprehensive plan or harbor management plan  Contact harbormaster, shellfish license holders and aquaculturists  Discuss with coastal waters/harbor committee, and identify points on a map |
| **Traditional walk-in access points** (Intertidal marine resource harvesting, e.g., clams, worms, seaweed, periwinkles, etc.) |  |  | Biannually | Discuss with the shellfish/marine resource committee, and identify points on a map  Contact shellfish license holders and other harvesters  Review marine resource section in current comprehensive plan or harbor management plan |
| **Harbor area** |  |  | Every 3-5 years | Measurements can be taken from a NOAA nautical chart (see page 5 of *Brunswick’s Harbor Management Plan* for an example of this method).[[1]](#footnote-0)  Measurements can also be taken using GIS maps and/or Google Earth (to access the extreme low water mark from 2016)  Approximate acres can be assessed using the measuring tool in the Community Intertidal Data Portal’s [Balancing Intertidal Uses web map](https://community-intertidal-data-portal-gpcog.hub.arcgis.com/apps/balancing-intertidal-uses-web-app/explore)[[2]](#footnote-1) |
| **Dredging/ deep-water access** |  |  | Every 3-5 years | U.S. Army Corps of Engineers - List of Maine navigation projects: <https://www.nae.usace.army.mil/Missions/Navigation/Maine-Projects/>  Review marine resource section of current comprehensive plan or harbor management plan |
| **Water- dependent use zoning and/or exclusive commercial fishing/ maritime districts** |  |  | Every 3-5 years | Review zoning maps and ordinances, specifically the shoreland zoning and floodplain management ordinances  Discussion with the planning/zoning committee  Contact town planner or regional planning organization |
| **Submerged lands** |  |  | Every 5-10 years | Contact the Submerged Lands Program - Maine DACF Bureau of Parks and Lands: <https://www.maine.gov/dacf/parks/about/submerged_lands.shtml> |
| **Open space/ conserved coastal land\*** |  |  | Every 5 years | Review conserved lands GIS data in the Maine GeoLibrary Data Catalog: <https://www.maine.gov/geolib/catalog.html>[[3]](#footnote-2)  Review land use sections in current comprehensive plan  Discuss with local/regional land trusts |
| **Underwater/ intertidal cultural resources\*** |  |  | Every 5-10 years | Review DACF’s comprehensive planning data set (this is not necessarily exhaustive data): <https://www.maine.gov/dacf/municipalplanning/comp_plans/planning_data.shtml>  Review the National Register of Historic Places: <https://www.nps.gov/subjects/nationalregister/database-research.htm>  Review the Maine Historic Preservation Commission: <https://www.maine.gov/mhpc/programs/national-register-of-historic-places>  Contact Tribal Historic Preservation Offices: <https://www.mitsc.org/resource-topics/tribal-sites>  Contact local historical societies |
| \*Notes: Open space/conserved land and cultural resources in general are likely to be included in the land use and cultural/historical resources inventory sections of comprehensive plans. Including these topics in the marine resources inventory would be limited specifically to coastal land and cultural resources. Alternatively, this information can be incorporated by reference to other sections in a comprehensive plan. | | | | |

| 1. Commercial Fishing and Aquaculture\* | | | | |
| --- | --- | --- | --- | --- |
| **Data points** | **Measurement** | **Improvements Needed/ Maintenance Status** | **Monitoring Frequency** | **Data/Information Source** |
| **Commercial fishing permits/licenses operating from a town** |  |  | Biannually | **Federal**: NOAA Fisheries has a database of federally-permitted fishing licenses by home port state and city: <https://www.greateratlantic.fisheries.noaa.gov/public/public/web/NEROINET/aps/permits/data/index.html> [[4]](#footnote-3)  -AND-  **State**: Maine DMR Licensing Division has compiled a spreadsheet that summarizes the number and type of State-issued commercial fishing licenses and standard aquaculture leases (but not experimental or LPAs) in a town. The spreadsheet for 2022 is available on MCFA’s website: <https://www.mainecoastfishermen.org/working-waterfront-inventory>[[5]](#footnote-4)  -AND-  **Local**: Town clerk (for municipal shellfish licenses and/or river herring leases, if applicable) |
| **Commercial fishing vessels** |  |  | Annually | **Federal, State, and local**: Maine DMR Licensing Division has compiled a spreadsheet that summarizes the number of commercial fishing vessels (by length in feet) in a town. The spreadsheet for 2022 is available on MCFA’s website: <https://www.mainecoastfishermen.org/working-waterfront-inventory>[[6]](#footnote-5) |
| **Commercial fishing landings and aquaculture harvest[[7]](#footnote-6)** |  |  | Biannually | **Federal, State, and local:**  Maine DMR has a fisheries landings data portal. Please read the “About” page first to learn about the data caveats and confidentiality, how to use the portal, and who to contact with questions: <https://mainedmr.shinyapps.io/Landings_Portal/> Then download data for ports in your town by following instructions in Appendix B. |
| **Seafood dealers/buyers** |  |  | Biannually | **Federal**: NOAA Fisheries maintains a dealer permit database for federally-managed species: <https://www.greateratlantic.fisheries.noaa.gov/public/public/web/NEROINET/aps/permits/data/index.html> [[8]](#footnote-7)  -AND-  **State**:  Submit a data request to the DMR Licensing Division by filling out the dealer data request forms, which can be found online (and select all license types): <https://www.maine.gov/dmr/commercial-fishing/licenses/index.html> or call (207) 624-6550. The spreadsheets for 2022 are available on MCFA’s website. |
| **Acres of mudflats** |  |  | Biannually | Review marine resource section of current comprehensive plan  Community Intertidal Data Portal: [Shellfish Conservation Map Viewer](https://community-intertidal-data-portal-gpcog.hub.arcgis.com/apps/local-shellfish-conservation-management/explore) - use the measurement tool (select area measurement and acres) to measure approximate mudflats between mean high water (MHW) and mean low water ([MLW](https://www.maine.gov/dacf/parks/about/sublands_lowater.shtml))[[9]](#footnote-8) |
| **Water quality status of shellfish growing areas** |  |  | Biannually | DMR Public Health GIS map viewer (click on any growing area, and a pop-up window will identify the acreage, classification, and conditional area details): <https://maine.maps.arcgis.com/apps/webappviewer/index.html?id=3b3450693fe54bf497004b153e536de8> |
| **Aquaculture leases and Limited Purpose Aquaculture (LPA) licenses** |  |  | Biannually | DMR Aquaculture map and lease inventory (search map and/or interactive data tables by town): <https://www.maine.gov/dmr/aquaculture/maine-aquaculture-leases-and-lpas/aquaculture-web-map> |
| **Working waterfront signage** |  |  | Every 5 years | Contact harbormaster |
| **Recreational boats** |  |  | Biannually | Contact Maine Department of Inland Fisheries and Wildlife Licensing Division to request data for all recreational vessels by town (specify # of boats registered to operate in “saltwater” and “both” [saltwater and freshwater]): (207) 287-8000 |
| **Recreational and non-commercial fishing licenses** |  |  | Every 5 years | Maine DMR Licensing Division has compiled a spreadsheet that summarizes the number of fishing licenses by town. The spreadsheet for 2022 is available on MCFA’s website (search for recreational and non-commercial licenses): [https://www.mainecoastfishermen.org/working-waterfront-inventory](https://www.mainecoastfishermen.org/working-waterfront-inventoryrking-waterfront)[[10]](#footnote-9) |
| Notes: \*Please refer to Section 2.2.1 for more information about data caveats, confidentiality, and other considerations for commercial fishing and aquaculture data. | | | | |

| (C) Marinas, Moorings, Wharves, and Piers | | | | |
| --- | --- | --- | --- | --- |
| **Data points** | **Measurement** | **Improvements Needed/Maintenance Status/Meets Demand** | **Monitoring Frequency** | **Data/Information Source** |
| **Moorings** |  |  | Every 3-5 years | Review comprehensive /harbor management plans  Review coastal waters/harbor ordinances  Contact harbormaster[[11]](#footnote-10) |
| **Boatyards/marinas** |  |  | Every 3-5 years | Online search  Contact harbormaster |
| **Recreational slips/ commercial berthing** |  |  | Every 3-5 years | If privately owned, contact marina owners  Review comprehensive/harbor management plans  Contact harbormaster and fishing/lobster license holders |
| **Wharves/piers** |  |  | Every 3-5 years | Satellite imagery (Google Maps/Earth)  Review comprehensive /harbor management plans  Contact harbormaster and fishing/lobster license holders  Review town-approved wharfing out permits  If privately owned, contact owners |
| **Discreet working waterfront[[12]](#footnote-11)** |  |  | Every 3-5 years | Contact fishing/lobster license holders and riparian landowners |
| **Anchorages** |  |  | Every 5-10 years | Review harbor/waterfront ordinances  Contact harbormaster  Review NOAA nautical charts for federal “Special Anchorage” areas |
| **Broadside berthing** (used for transient dockage and/or unloading) |  |  | Every 3-5 years | Contact harbormaster  Review comprehensive/harbor management plans |
| **Marine travel lift** |  |  | Every 5-10 years | Contact harbormaster  If privately owned, contact marina/wharf owners |
| **Ground out for maintenance** (area to beach/ground boat to conduct maintenance) |  |  | Every 10 years | Contact harbormaster  If privately owned, contact marina/wharf owners |
| **Emergency boat landing** (in the case of severe weather, e.g., hurricane, where boats may need to be hauled out) |  |  | Every 5-10 years | Contact harbormaster |
| **Harbor or bay management plan** |  |  | Every 10 years | Contact harbormaster |

| (D) Shoreside Support Infrastructure and Businesses | | | | |
| --- | --- | --- | --- | --- |
| **Data points** | **Measurement** | **Improvements Needed/ Maintenance Status/Meets Demand** | **Monitoring Frequency** | **Data/Information Source** |
| **Fishing Co-op** |  |  | Every 3-5 years | Review comprehensive/harbor management plans  Contact harbormaster or Co-op |
| **Ice seller** (specific to marinas, wharves, etc.) |  |  | Every 3-5 years | Review comprehensive/harbor management plans  Contact harbormaster or fishing/lobster license holders |
| **Bait storage or other cold storage** |  |  | Every 3-5 years | Review comprehensive/harbor management plans  Contact harbormaster or fishing/lobster license holders and aquaculturists |
| **Bait seller** |  |  | Every 3-5 years | Review comprehensive/harbor management plans  Contact harbormaster or fishing/lobster license holders |
| **Gear storage** (lobster traps, fishing nets, line, aquaculture gear, etc.) |  |  | Every 3-5 years | Contact fishing/lobster license holders and aquaculturists |
| **Trash disposal** (specific to marinas, wharves, etc.) |  |  | Annually | Contact public works department, harbormaster, or fishing/lobster license holders |
| **Fueling station** (marine gas/diesel) |  |  | Every 3-5 years | Contact harbormaster or fishing/lobster license holders |
| **Commercial offloading** (areas designated for commercial fishing/aquaculture offloading) |  |  | Every 3-5 years | Contact harbormaster, fishing/lobster license holders, and aquaculturists |
| **Hoist** |  |  | Every 3-5 years | Contact harbormaster  If privately owned, contact marina/wharf owners |
| **Crane** |  |  | Every 3-5 years | Contact harbormaster  If privately owned, contact marina/wharf owners |
| **Utilities** |  |  | Every 5 years | Contact public works department  If privately owned, contact marina/wharf owners |
| **Shore power** (specific to aquaculture or commercial fishing) |  |  | Every 10 years | Contact harbormaster  If privately owned, contact marina/wharf owners |
| **Pump out station** |  |  | Every 10 years | Contact harbormaster  If privately owned, contact marina/wharf owners |
| **Parking** (for marine-dependent uses, e.g., commercial fishing, aquaculture, etc.) |  |  | Annually | Count parking spaces  Contact harbormaster or fishing/lobster license holders and aquaculturists  Review comprehensive/harbor management plans |
| **Vessel repair** |  |  | Every 3-5 years | Review comprehensive/harbor management plans  Contact harbormaster |
| **Boat building** |  |  | Every 3-5 years | Review comprehensive/harbor management plans  Contact local business |

| (E) Social and Economic Data | | | |
| --- | --- | --- | --- |
| **Data points** | **Estimate** | **Monitoring Frequency** | **Data/Information Source** |
| *Fishing and Marine Related Social and Economic Data* | | | |
| **People employed in fishing** (or number of fishing establishments) |  | Every 5-10 years | **By Zip Code:**  Using the data at <https://data.census.gov/cedsci/all>, follow detailed instructions in Appendix D.[[13]](#footnote-12)  While not included in the instructions, data for the number of establishments can also be found using ArcGIS Business Analyst if a town or organization has an ArcGIS Business Analyst License. [[14]](#footnote-13)  **By County or State:**  Build a custom report at <https://coast.noaa.gov/quickreport/#!/index.html>  by following the instructions in Appendix D. This includes employment and self-employment data for the general ‘living resources’ category. [[15]](#footnote-14)  This data set may also be accessed at <https://coast.noaa.gov/enowexplorer/#/>.[[16]](#footnote-15) The spreadsheet for self-employment data for 2019 by marine sector and county is available on MCFA’s website: <https://www.mainecoastfishermen.org/working-waterfront-inventory> |
| **Youth in fishing** |  | Every 5 years | **State**: Maine DMR Licensing Division has compiled a spreadsheet that summarizes the number of fishing licenses by town, including lobster/crab apprentice. The spreadsheet for 2022 is available on MCFA’s website: <https://www.mainecoastfishermen.org/working-waterfront-inventory> [[17]](#footnote-16)  -AND-  **Town:**  Contact town clerk for student shellfish licenses sold  -OR-Review shellfish ordinance and/or license allocations[[18]](#footnote-17) |
| **Municipal marine staff capacity** |  | Every 5 years | Contact town manager |
| **New residential building permits in commercial fishing/maritime activity zones/districts, if applicable** |  | Annually | Contact local code enforcement department |
| *General Social and Economic Data[[19]](#footnote-18)* | | | |
| **Data points** | **Estimate** | **Monitoring Frequency** | **Data/Information Source**  All data is from the Census Bureau unless otherwise stated: <https://data.census.gov/>[[20]](#footnote-19) |
| **Population** |  | Every 10 years | Found at top of town profile |
| **% of population over 65** |  | Every 10 years | Found in Populations and People under Older Population |
| **Median age** |  | Every 10 years | Found in Populations and People under Age and Sex |
| **Median household income** |  | Every 10 years | Found in Income and Poverty under Income and Earnings |
| **Poverty rate** |  | Every 10 years | Found in Income and Poverty under Poverty |
| **Employment rate** |  | Every 10 years | Found in Employment under Employment and Labor Force Statistics |
| **Median gross rent** |  | Every 10 years | Found in Housing under Financial Characteristics |
| **Homeownership rate** |  | Every 10 years | Found in Housing under Homeownership Rate |
| **Housing stock** |  | Every 10 years | Found in Housing under Housing Units and Housing Occupancy |
| *Gentrification Indicators* | | | |
| **Median home price** |  | Annually | Maine State Housing Authority <https://www.mainehousing.org/policy-research/housing-data/housing-affordability-indexes>[[21]](#footnote-20) |
| **Affordable housing index** |  | Annually | Maine State Housing Authority <https://www.mainehousing.org/policy-research/housing-data/housing-affordability-indexes> |
| **State of origin for town real estate (buyers)** |  | Every 3-5 years | Contact local assessing and/or planning departments for real estate deeds and/or tax records |
| **Workforce or affordable housing** |  | Every 5 years | Contact local Planning Department  Review land use sections of comprehensive plan |

1. <https://www.brunswickme.org/DocumentCenter/View/1050/Harbor-Management-Plan-PDF> [↑](#footnote-ref-0)
2. Refer to the User Guide on the home page for more information on how to use the measurement tool, which is a ruler icon: <https://community-intertidal-data-portal-gpcog.hub.arcgis.com/> [↑](#footnote-ref-1)
3. Open the Maine conserved lands data layer, and zoom in to your town on the ArcGIS hub site or download the data layer: <https://maine.hub.arcgis.com/datasets/a6797f12a07b4229bc2501d3741c98d4/explore?location=45.199304%2C-69.003000%2C7.97> [↑](#footnote-ref-2)
4. Scroll down to 2022 Vessel Permits, then click on the desired file type (.pdf, .xls, .csv) to download the data file. Once downloaded, sort by "Home Port State" column, then sort by "Home Port City" column to get the list of federal fishing permits operating from a town. This data also includes the number and name of fishing vessels and owners. [↑](#footnote-ref-3)
5. Alternatively, submit a data request to the DMR Licensing Division by filling out the harvester request form, which can be found online - <https://www.maine.gov/dmr/commercial-fishing/licenses/index.html> - or by calling (207) 624-6550. [↑](#footnote-ref-4)
6. Alternatively, a similar spreadsheet may be accessed through the data packages that Maine DACF/Municipal Planning Assistance Program provides for comprehensive plans (<https://www.maine.gov/dacf/municipalplanning/comp_plans/planning_data.shtml>). Click on any town listed under the most recent year, and download the data package (zip file). Then open the marine resources folder, select the Excel spreadsheet, and click on the corresponding vessel worksheet, then find your town, and enter total vessel number and, if desired, length categories. DMR compiles these data on a biannual basis from the Inland Fisheries and Wildlife boater registration database, and it represents the vast majority of commercial fishing vessels that hold State and federal fishing licenses. [↑](#footnote-ref-5)
7. At the time of publication, species harvested on aquaculture leases are currently included in the Maine commercial landings, and are not separated out by mode of harvest. This reporting structure started in 2021, and aquaculture harvest may start to be separated from wild harvest species in 2023. When this change occurs, the data source for aquaculture harvest will be revised. Please note landings data for the most recent year are not typically available until March or April of the following year. [↑](#footnote-ref-6)
8. Scroll down to 2022 Dealer Permits, then click on the desired file type (.pdf, .xls, or .csv) to download the data file, and sort by "state" and "city." This provides information on dealers who are permitted to sell and/or process federally-managed species. [↑](#footnote-ref-7)
9. <https://community-intertidal-data-portal-gpcog.hub.arcgis.com/apps/local-shellfish-conservation-management/explore>. Refer to the User Guide on the home page for more information on how to use the measurement tool, which is a ruler icon. The DACF Bureau of Parks and Lands website provides information on how to determine the MLW mark: <https://www.maine.gov/dacf/parks/about/sublands_lowater.shtml> [↑](#footnote-ref-8)
10. Visit DMR’s website for more information on recreational saltwater licenses: <https://www.maine.gov/dmr/fisheries/recreational/licenses-registry/saltwater-recreational-fishing-registry-license> [↑](#footnote-ref-9)
11. If the town utilizes OnlineMooring software, they should be able to query their database for this information. [↑](#footnote-ref-10)
12. It is possible there will be overlap between the ‘wharves and piers’ data point and ‘discreet working waterfront’; however, these are listed separately as to not diminish the importance of discreet working waterfront that may serve a fewer number of harvesters and/or may not be used as an access point or loading/unloading point. Try to reduce any redundancy by defining what wharves and piers would be classified as ‘discreet’ and only including these in this data point. For more information about discreet working waterfronts, refer to this article: <https://asbpa.org/publications/shore-and-beach/shore-beach-in-2022-vol-90/discreet-working-waterfronts-are-a-lifeline-for-maine-fishermen/> [↑](#footnote-ref-11)
13. This method will show the number of establishments under chosen NAICS codes in chosen Zip Codes. Due to confidentiality constraints and the small size of many of these businesses, the exact number of employees may be unavailable. In this case, the number of establishments may be used as a relative proxy for employment. [↑](#footnote-ref-12)
14. <https://www.esri.com/en-us/arcgis/products/arcgis-business-analyst/overview> [↑](#footnote-ref-13)
15. This method only shows data at the county level, but will show the number of establishments, number of employees (or number of self-employed), wages, and gross domestic product for the selected year. As of the date of publication, 2019 data are the most recent available. The majority of fishermen and women in Maine are self-employed; therefore, these data are important to getting an accurate assessment of employment in the fishing industry. [↑](#footnote-ref-14)
16. There are multiple views in this dashboard. For this particular data point, the Employment tab will be most relevant. Total Ocean Economy data is available if multiple sectors are to be included in this data point, although the Living Resources tab will provide employment in commercial fishing (as well as fish hatcheries, aquaculture, seafood processing, and seafood markets). These data are only available at the “Living Resources” category, and not by NAICS categories. Graphics may be exported for use. [↑](#footnote-ref-15)
17. Alternatively, request data from the DMR Licensing Division by filling out the harvester data request forms (and select “Student, Apprentice Licenses”), which can be found online: <https://www.maine.gov/dmr/commercial-fishing/licenses/index.html> or by calling (207) 624-6550. [↑](#footnote-ref-16)
18. <https://www.maine.gov/dmr/fisheries/shellfish/nearshore-marine-resources-program/general-shellfish-ordinance-information/general-town-shellfish-information> [↑](#footnote-ref-17)
19. This particular set of data points are important considerations for the working waterfront; however, these indicators may be included in a separate section of a comprehensive plan, and thus incorporated by reference. For a stand-alone harbor management plan, these indicators provide important context for the fishing community and working waterfront. [↑](#footnote-ref-18)
20. This website provides easy access to demographic data at the town level. Enter the town’s name in the search bar and select the town‘s profile to access the most recent data if it does not automatically access the town’s profile. [↑](#footnote-ref-19)
21. Use Homeownership Housing Facts and Affordability Index for Maine Cities and Towns. Select the relevant town and desired year. [↑](#footnote-ref-20)