

A Response to the Proposed Sheepscot River Development

i.e. Spinney Dock and Golden Ridge Sportsman's Club

Written and researched by Steven W. Cheff

12/2019-1/2020

I. OUTLINE.

A. Description & Current Use of the Sheepscot River-Upper Estuary 2020.

1. Description
2. Current Use
 - a. Canoeing and kayaking
 - b. Walking and hiking.
 1. Preserves Bass falls, Trout brook and other preserves
 2. Private access
 - c. Bird watching
 - d. Fishing
 - e. Swimming
 - f. other
3. What is NOT on the river.
 - a. Motorized boats
 - b. Permanent structures, including docks,
 - c. Campgrounds
 - d. Waterfowl hunting
 - e. Noise pollution



B. Adverse Effects of the Proposed Development

1. The proposed activity will unreasonably interfere with existing scenic and aesthetic uses of the Sheepscot River and will disrupt the current uses of the river.
2. The proposed activity will disrupt wetlands and wildlife habitat along the Sheepscot river.
 - a. DEP Rules and other legal documents
 - Sheepscot River Management Plan
 - DEP Chapters 310, 315, & 325
 - others
 - b. What the development entails
 - c. Effects on habitat and wildlife
 - i. Disruption of habitat
 - ii. Noise pollution
 - iii. Increased nonpoint pollution and shoreline erosion
 - iv. Introduction of Invasive species.

C. Supporting Documents

Why the DEP, the town of Alna, and Army Corps should reject the Proposed Sheepscot River Development. (Spinney Dock and Golden Ridge Sportsman's Club)

A. Description & Current Use of the Sheepscot River-Upper Estuary

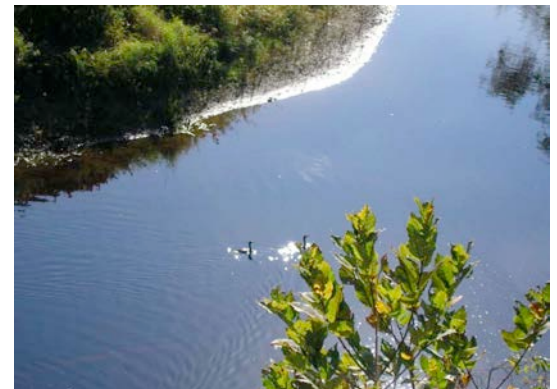
1. Description of the Sheepscot upper Estuary

- “The 58 mile long Sheepscot River rises in the hills of West Montville, widens into Sheepscot Pond in Palermo, then falls swiftly over rocks and gravel through the rural Whitefield countryside to the picturesque village of Coopers Mills, where spars for the U.S.S. Constitution were cut. Farther downstream it drops over the Head Tide Dam to mix with the incoming tide, flowing by the delightful antique houses of Alna. After meandering through Sheepscot Village, with its reversing falls, the river slides through Newcastle and Wiscasset” <https://mainerivers.org/watershed-profiles/sheepscot-river/>
- The Sheepscot River upper tidal estuary is the 3-4 mile stretch between Sheepscot Village and Head Tide (where the proposed development is planned). This 3-4 mile stretch of river is about 20-50 feet wide and 4-5 feet deep at low tide and about 50-100 feet wide and 4-15 feet deep at high tide. Twice a day, during the diurnal high tide, the river escapes its natural mud banks and overflows by a foot or two onto tidal marshes filled with grasses essential creating essential habitat for fish, bird, and invertebrate breeding. This is an ideal ecosystem for many organisms.

Upper Estuary



Cormorants Upper River Estuary



- “Streams enter the river here, Trout brook, the Dyer River in Sheepscot Village and the Marsh River and Deer Meadow Brook just above Wiscasset. The Marsh River/Deer Meadow Marsh complex is a highly productive brackish marsh system (rare in Maine) that harbors many threatened and endangered species”. “Life thrives in the river’s rich tidal mud flats and salt marshes, which support rare mussels and plant species. Fish and invertebrates attract osprey, eagles and other mammals that feast on the river’s bounty. Its forested banks provide habitat for moose, white-tailed deer, and many other creatures”.

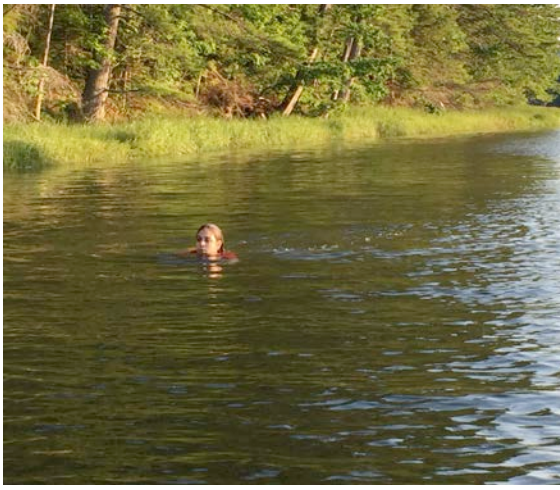
<https://mainerivers.org/watershed-profiles/sheepscot-river/>

Near Ben Brook close to proposed development



2. Current use of Sheepscot River Estuary from the Village up to Head Tide

“In the spring, canoes and kayaks blossom with the first wildflowers. As the river races to the ocean, full with the melting snow, excellent rapids appear, especially between King’s Mills and Alna’s Head Tide Dam. As the seasons change, residents and visitors use the river and its banks for bass and trout fishing or turkey and deer hunting. The lazy days of summer find children splashing in the swimming holes, with



their adult companions splashing away beside them, and community members enjoying swimming the warm waters. Cross-country skiing and snowshoeing have become popular winter sports especially with plentiful winter snows. The section from North Whitefield to Sheepscot is often paddled by kayakers and canoeists, and several preserves provide trails to the river, including Palermo Preserve, Whitefield Salmon Preserve, Bass Falls, Trout Brook preserve, Griggs Preserve, and Oven's Mouth (Sheepscot River Management plan Jan26.07)

a. Canoeing and kayaking

On any summer weekend there are dozens of kayakers and canoeist who paddle up and down the river, enjoying the peace and serenity of a river without powerboats.

b. Walking and hiking.

1. Preserves

a. Bass falls preserve <https://www.midcoastconservancy.org/preserve/sheepscot-valley/bass-falls-preserve/>

The Bass Falls Preserve in Alna was purchased in 1998 with assistance from National Fish & Wildlife Foundation, Land for Maine's Future, the Sweetwater Trust and the Grand Circle Foundation. The SVCA recently purchased an additional 36 acres abutting the preserve, more than doubling its size. Hiking trails lead through mixed forestlands to the Sheepscot River and an old fishing camp.

*The proposed development is less than ¼ mile from here

b. Trout brook preserve <https://www.midcoastconservancy.org/preserve/sheepscot-valley/trout-brook-preserve/>

2. Private access

c. Bird watching, d. Fishing e. Swimming



3. Current Use-What is NOT on the river

a. There are few, if any motorized boats. There are no ski boats or personal watercraft**

- Current Maine law states that boats cannot operate within 200 feet of a shore if they are creating a wake. This encompasses the entire upper estuary. This precludes water skiing, jet skis, and other activities suggested by the developer from this section of river.

b. There are no permanent structures, including docks, on this stretch of river and only three or four houses visible from the river.

c. There are no camping sights on this stretch of river.

d. There is no waterfowl hunting on this stretch of the river.

e. There is very little noise pollution on this stretch of the river.

This is contrary to most of the views expressed by those supporting the development

**“It is illegal to operate any vessel in a reckless manner. Specifically, it is illegal to operate a vessel towing a person(s) on any device within 200 feet of any shoreline, including islands, unless operating in a manner that does not endanger any person or property while picking up or dropping off a person on water skis, surfboard, or other device in a way that causes the device or the person on the device to move within 200 feet of any shoreline, including islands”.

<https://www.boat-ed.com/maine/handbook/page/48/Requirements-for-Towing-Skiers/>

Improper Speed or Distance is not keeping a proper speed and distance while operating a vessel. You may not:

- a. Operate at a rate of speed that is not reasonable and prudent for existing conditions. Operators must regulate their speed to avoid endangering, injuring, or unnecessarily inconveniencing another vessel and its occupants, whether anchored or underway. Operators also must also consider the effect of their vessel's wake on waterfront piers, floats, other property, or shorelines.
- b. Operate a vessel at greater than “headway speed” within 200 feet of any shoreline, including islands or within a marina or an approved anchorage in coastal or inland waters “Headway Speed” means the slowest speed at which it is still possible to maintain steering and control of the vessel.

<https://www.boat-ed.com/maine/handbook/page/38/Unlawful-Operation/>

B. ADVERSE EFFECTS OF THE PROPOSED DEVELOPMENT

1. The proposed activity will unreasonably interfere with existing scenic and aesthetic uses of the Sheepscot River and will disrupt the current uses of the river.

a. Statutes. Chapter 315. ASSESSING AND MITIGATING IMPACTS TO EXISTING SCENIC AND AESTHETIC USES.

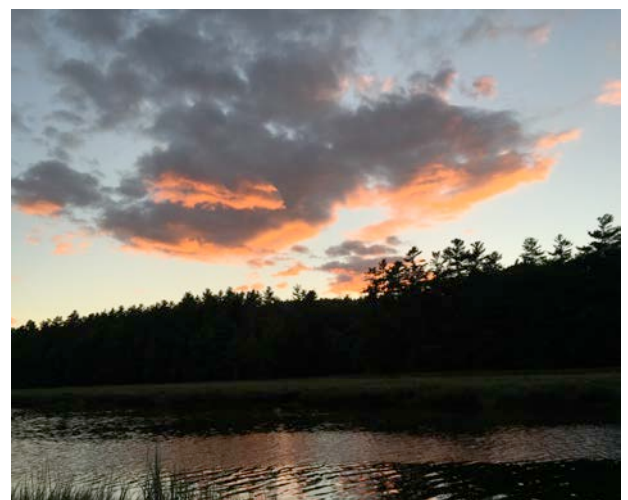
“Applicants for permits under the NRPA are required to demonstrate that a proposed activity meets the standards of the NRPA that have been established by the Legislature. Standard 1 in Section 480-D of the NRPA requires an applicant to demonstrate that a proposed activity will not unreasonably interfere with existing scenic and aesthetic uses”. Unreasonable adverse visual impacts are those that are expected to unreasonably interfere with the general public’s visual enjoyment and appreciation of a scenic resource, or those that otherwise unreasonably impair the character or quality of such a place.

***b. The SVCA is actively working to protect the **Forever Wild**

Corridor, a three-mile stretch of river from Alna Head Tide to Sheepscot Village. Only three houses are visible from the river in this entire stretch. But since it is located in fast-developing midcoast Maine, preservation of this wild experience is of tremendous importance.

<https://mainerivers.org/watershed-profiles/sheepscot-river/>

c. The Sheepscot River is recognized by the State Legislature as an Outstanding River Segment (12 M.R.S.A § 403). This designation places the Sheepscot among those rivers which, because of their “unparalleled natural and recreational values, provide irreplaceable social and economic benefits to the people in their existing state”. New dams and water diversions are prohibited without specific authority of the Legislature. Outstanding River Segments are also given additional protections under the Natural Resources Protection Act



(NRPA) and Shoreland Zoning. The "unparalleled natural and recreational values" of the Sheepscot are many. In addition to its importance as breeding and rearing habitat for federally endangered Atlantic salmon and short-nosed sturgeon, the Sheepscot supports a number of other anadromous fishes, has important freshwater and tidal wetland plant communities, supports native brook trout in the upper reaches, and is well-known regionally for its beauty and recreational value. (Sheepscot River Management plan Jan26.07.)

2. The proposed activity will disrupt wetlands and wildlife habitat along the Sheepscot river.

a. DEP Rules and other legal documents

i. DEP Chapter 335. SIGNIFICANT WILDLIFE HABITAT

This chapter applies to an activity that takes place in, on, or over a significant wildlife habitat, or adjacent to significant wildlife habitat contained within a freshwater wetland, and requires approval from the department pursuant to the Natural Resources Protection Act. Even if the activity has no practicable alternative, and the applicant has minimized the proposed alteration as much as possible, *the application will be denied if the activity will have an unreasonable impact on protected natural resources or the subject wildlife.* "Unreasonable impact" means that one or more of the standards of the NRPA at 38 M.R.S.A. §480-D will not be met. In making this determination, the department considers the area of the significant wildlife habitat affected by the activity, including areas beyond the physical boundaries of the project and the cumulative effects of frequent minor alterations of significant wildlife habitats.

ii. DEP Chapter 310: WETLANDS AND WATERBODIES PROTECTION

Emergent Marsh Vegetation. Plants that: 1. are erect, rooted and herbaceous; 2. grow in semi-permanently to permanently flooded areas; and 3. do not tolerate prolonged inundation of the entire plant. Examples of emergent marsh vegetation include cattails, burreed, tussock sedge, rice cut grass, pickerel weed, arrowhead and bulrush.

iii. "The tidal wetlands downstream of Alna village and in neighboring Newcastle have been identified by the Maine Natural Areas Program as a Focus Area of Ecological Significance. The salt marshes, mud flats, support rare mussels and several species of rare plants, such as the salt marsh false foxglove (*Agalinis maritima*)". (Sheepscot River Management plan Jan26.07.)

iv. "Estuaries are fragile ecosystems, vulnerable to natural and man-made disturbances. The forces of nature—such as winds, tidal currents, waves, and temperature—all affect the estuary's natural balance. Human activities on land can harm estuary health,

Low tide looking up river just below the power lines. Sturgeon and bass jumping.



Winter on the Sheepscot



often degrading living conditions for estuary residents and visitors. Stream and river banks can be damaged by erosion, outdated agricultural or forestry methods, or construction too close to the stream. Fish numbers then decline because their nesting and feeding areas are destroyed. Dams, invasive species, and poor boating and fishing habits cause even more damage”.

<https://www.fisheries.noaa.gov/estuary-habitat#challenges-for-estuaries>



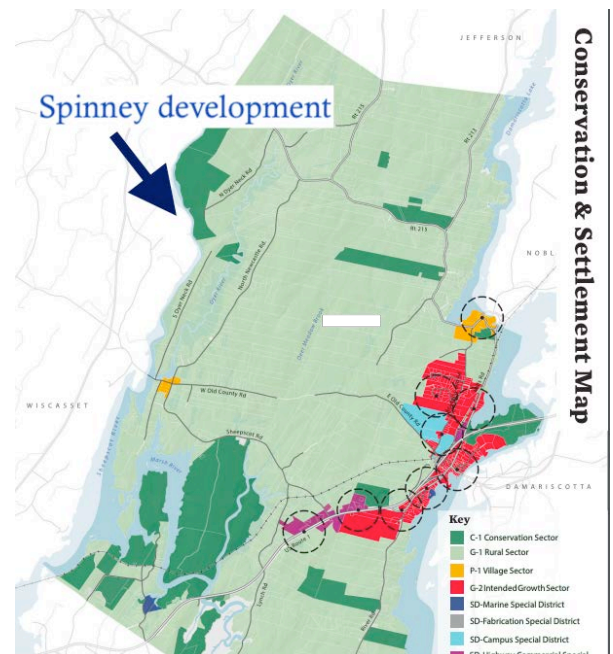
This is looking at the area where the Town of Newcastle has declared this a conservation sector of the Sheepscot.

V. The Sheepscot is one of the last remaining rivers with remnant populations of the nearly extinct native Atlantic salmon. These and other anadromous fish such as striped bass, shad, alewife and eel, return from the sea to spawn in the river’s clean gravel bottom before migrating back to the ocean. <https://mainerivers.org/watershed-profiles/sheepscot-river/>

vi. **Newcastle Comprehensive plan

This conservation area in Newcastle is directly across the river from the proposed development. *C-1 Conservation Sector The Conservation Sector includes lots entirely protected from development in perpetuity, through purchase or easement, including land acquired for conservation, open space, farming, public access and recreation; and, timber harvesting and forestry management.*

https://www.newcastlemaine.us/wp-content/uploads/2018/03/CONDENSED-Newcastle-Comp-Plan_Final-Public-Hearing-Draft_04232018.pdf



b. What the Development entails

1. The dock itself
 - a. The building and use of the dock by dozens of people will adversely affect this small area. More importantly, allowing the dock will set a **PRECEDENT**
 - b. Allowing a permanent large boat launch on the upper Sheepscot estuary will set a precedent, that once set, will make it difficult to prohibit other such developments.
2. Motorized Boats on the river
 - a. Damage to the abiotic component of the estuary ecosystems
 - boat wakes hit shoreline and excessive erosion of shoreline (see picture)
 - increased nonpoint pollution dues to use of a hunting club
 - increased oil and gas in the water
 - b. Damage to the biotic part of the estuary ecosystem. Noise, oil and gas, wakes and
 - Disturbance of invertebrates
 - Disturbance of plant species
 - Disturbance of fish and birds
3. A hunting and camping club (no specifics given). Who knows what this means.

c. Effect on habitat and wildlife

i. Habitat destruction

- The upper reaches of the brackish estuary of the Sheepscot from the reversing falls to Head Tide contain some pristine breeding grounds for fish, birds and many invertebrates. There are multiple small inlets on the River (Ben Brook, Trout Brook) that are guarded from the general waves and currents of the River. Since most boats can only ride the River near high tide, the ensuing wakes could cause significant damage to riparian areas that rarely deal with large waves. Boat wakes at high tide would do immeasurable damage to nesting sites, spawning grounds, and invertebrate habitats
- “Boating activity is a primary disturbance, as it induces biological stress and morphological changes along the coastline. This high-energy environment that boat wakes create has resulted in loss of surrounding oyster reefs and salt marsh vegetation, ultimately leading to shoreline and habitat erosion”.
“Mitigating Erosional Effects Induced by Boat Wakes with Living Shorelines”
<https://www.mdpi.com/2071-1050/10/2/436/htm>
- “Review of boat wake wave impacts on shoreline erosion and potential solutions for the Chesapeake Bay”
http://ccrm.vims.edu/2017_BoatWakeReviewReport.pdf
- How do boats affect aquatic ecosystems?
“Boats interact with the aquatic environment by a variety of mechanisms, including emissions and exhaust, propeller contact, turbulence from the propulsion system, waves produced by movement, noise, and movement itself. In turn, each of these impacting mechanisms may have multiple effects on the aquatic ecosystem. Sediment re-suspension, water pollution, disturbance of fish and wildlife, destruction of aquatic plants, and shoreline erosion are the major areas of concern”
“The Effects of Motorized Watercraft on Aquatic Ecosystems”
http://www.trpa.org/wp-content/uploads/2010-WI-Dept-of-Natural-Resources_UW-Boats-effects-on-ecosystems.pdf

ii. Noise pollution if boats and hunting are allowed

- Active motorboats will destroy the peace and quiet that all of the residents enjoy living here. Detrimental effects of boating on marine fauna has recently been recognized, and linked to noise levels (Codarin, et al., 2009; Slabbekoorn, et al., 2010). Other effects may include strikes from propellers (Killgore, et al., 2011; Balazik et al., 2012) or pollution from outboard exhaust (Situ and Brown, 2013). Noise from boats may increase stress levels of fish (Smith, Kane & Popper, 2004). While the passage of boats may break up schools and cause increased activity and energy expenditure due to the movement away from the disturbance. Animals living within estuaries are particularly vulnerable to potential adverse effects of recreational boating because, relative to open coastal regions, they are often spatially restricted in terms of depths and width, especially during the high tide.

“Does boat traffic cause displacement of fish in estuaries?”

<https://www.nrc.gov/docs/ML1434/ML14345A583.pdf>

“Impacts of recreational motorboats on fishes: A review” (2014)

https://www.researchgate.net/publication/261837999_Impacts_of_recreational_motorboats_on_fishes_A_review

iii. Increased nonpoint pollution and shoreline erosion

The Sheepscot River Watershed Management Plan, written in 2007 concludes that nonpoint pollution is one of the biggest risks to the health of the Sheepscot River.

<http://www.kcswcd.org/Projects/Sheepscot/WHOLE%20PLAN%20Jan26.07.pdf>

The proposed development will increase the release of oil and gas into the watershed. The boat wakes will also hasten the erosion of shoreline

iv. Introduction of Invasive species

It sounds as if many of the people who wish to use the River could possibly be from out of state.

This greatly increases the risk of the introducing of non-native species into the ecosystem.

“Finally, the use of recreational boats as vectors of aquatic invasive organisms is very real and has created major problems to the ecology of aquatic systems”.

https://www.researchgate.net/publication/261837999_Impacts_of_recreational_motorboats_on_fishes_A_review

D. Supporting Documents/Bibliography

a. Sheepscot River Management Plan

<http://www.kcswcd.org/Projects/Sheepscot/WHOLE%20PLAN%20Jan26.07.pdf>

b. DEP Documents

Maine DEP Chapter 310 WETLANDS AND WATERBODIES PROTECTION

https://www.maine.gov/dep/land/nrpa/310_booklet.pdf

Maine DEP Chapter 315 “ASSESSING AND MITIGATING IMPACTS TO EXISTING SCENIC AND AESTHETIC USES” & DEP Chapter 335 “SIGNIFICANT WILDLIFE HABITAT”

<https://www.maine.gov/dep/land/nrpa/>

c. Maine Midcoast Conservancy

<https://www.midcoastconservancy.org/>

c. Focus areas of Statewide ecological significance

https://www.maine.gov/dacf/mnap/focusarea/lower_sheepscot_river_focus_area.pdf

d. (KRIS) The Klamath Resource Information System. Some great maps pictures data about the Sheepscot watershed.

<http://www.krisweb.com/kris/sheepscot/krisdb/html/krisweb/backintr.htm>

e. The Estuary Book (1991) “A Guide to Promoting Understanding and Regional Management of Maine's Estuaries and Embayments”

<https://www.govinfo.gov/content/pkg/CZIC-gc512-m2-r84-1991/html/CZIC-gc512-m2-r84-1991.htm>

f. NOAA Fisheries “Estuary Habitat”

<https://www.fisheries.noaa.gov/estuary-habitat#challenges-for-estuaries>

g. Ecology of the Sheepscot River Estuary. Stickley, Alden P. 1959. US Department of the Interior.

<https://spo.nmfs.noaa.gov/sites/default/files/legacy-pdfs/SSRF309.pdf>

h, Newcastle Comprehensive Plan

https://www.newcastlemaine.us/wp-content/uploads/2018/03/CONDENSED-Newcastle-Comp-Plan_Final-Public-Hearing-Draft_04232018.pdf

i. Maine Boater Safety Handbook and Rules

<https://www.boat-ed.com/maine/handbook/page/1/Introduction/>

j. “Does boat traffic cause displacement of fish in estuaries?”

<https://www.nrc.gov/docs/ML1434/ML14345A583.pdf>

k. “Impacts of recreational motorboats on fishes: A review” (2014)

https://www.researchgate.net/publication/261837999_Impacts_of_recreational_motorboats_on_fishes_A_review

l. “Mitigating Erosional Effects Induced by Boat Wakes with Living Shorelines”

<https://www.mdpi.com/2071-1050/10/2/436/htm>

m. “Review of boat wake wave impacts on shoreline erosion and potential solutions for the Chesapeake Bay”

http://ccrm.vims.edu/2017_BoatWakeReviewReport.pdf

n. “The Effects of Motorized Watercraft on Aquatic Ecosystems”

http://www.trpa.org/wp-content/uploads/2010-WI-Dept-of-Natural-Resources_UW-Boats-effects-on-ecosystems.pdf

