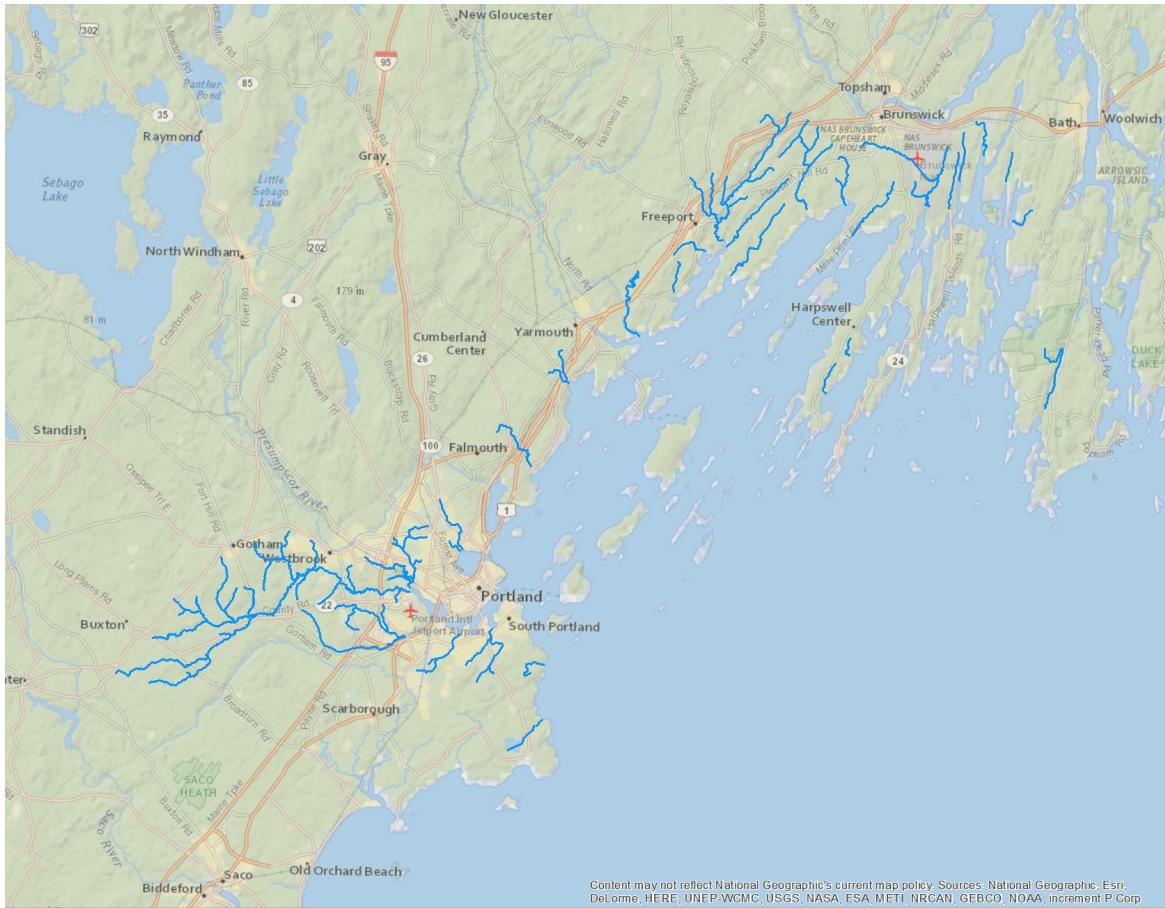


Small Coastal Streams

Atlas



This project was funded in part by the U.S. Environmental Protection Agency under Cooperative Agreement #CE 00A000630 to the University of Southern Maine, Casco Bay Estuary Partnership

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Introduction

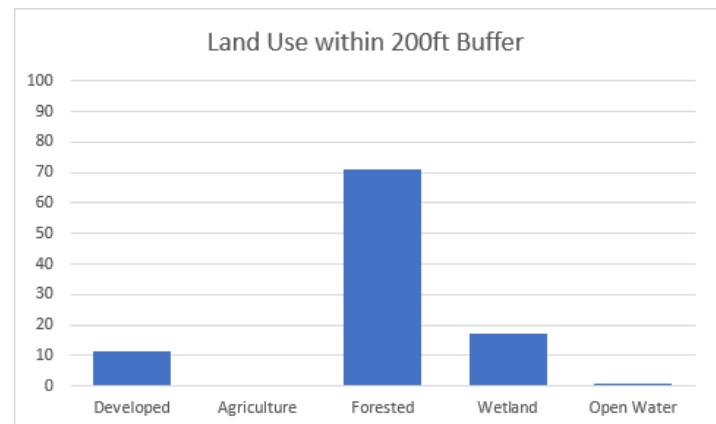
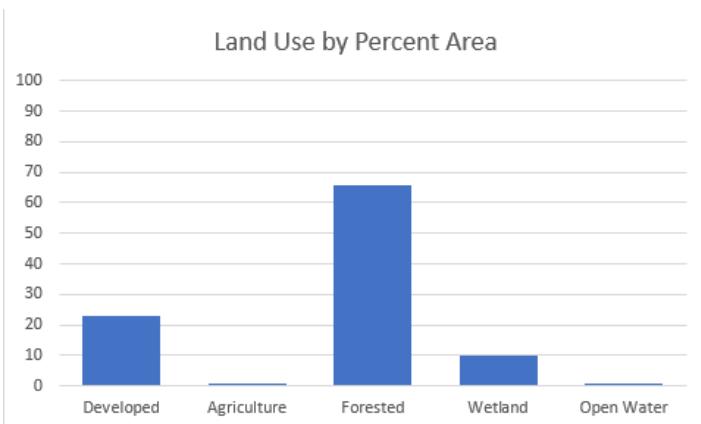
This project is meant to serve as an atlas of the various streams in the Casco Bay watershed that feed into the bay itself. Each stream was catalogued and analyzed to determine the challenges to fish passage and overall health of the stream. This analysis was completed by plotting known impediments along the streams and measuring land use within the watersheds of those streams.



Unnamed Stream #1

This is a perennial stream in Cape Elizabeth that runs for a length of approximately 1.5 miles (2.4 km). There are no documented impediments to fish passage along this stream.

The watershed itself is largely a mix of forests and developed land, with wetlands comprising 10% of the area. Using a 200 foot buffer along the stream, we see that forests and wetlands are the majority use types while developed land accounts for 11.2%.

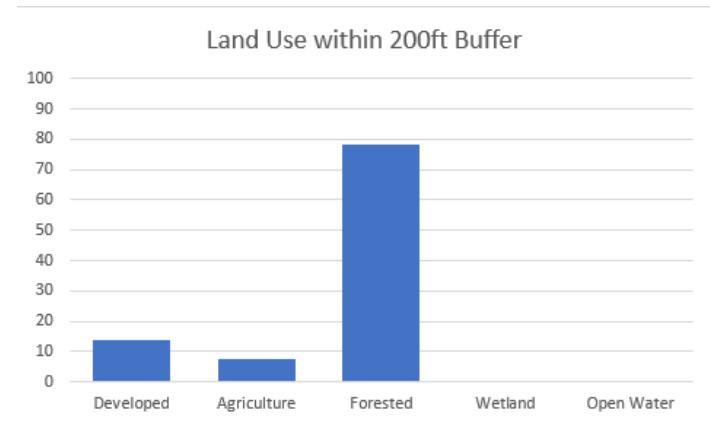
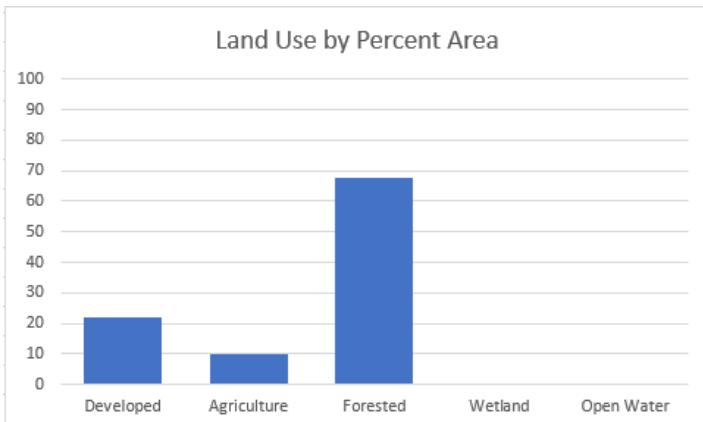


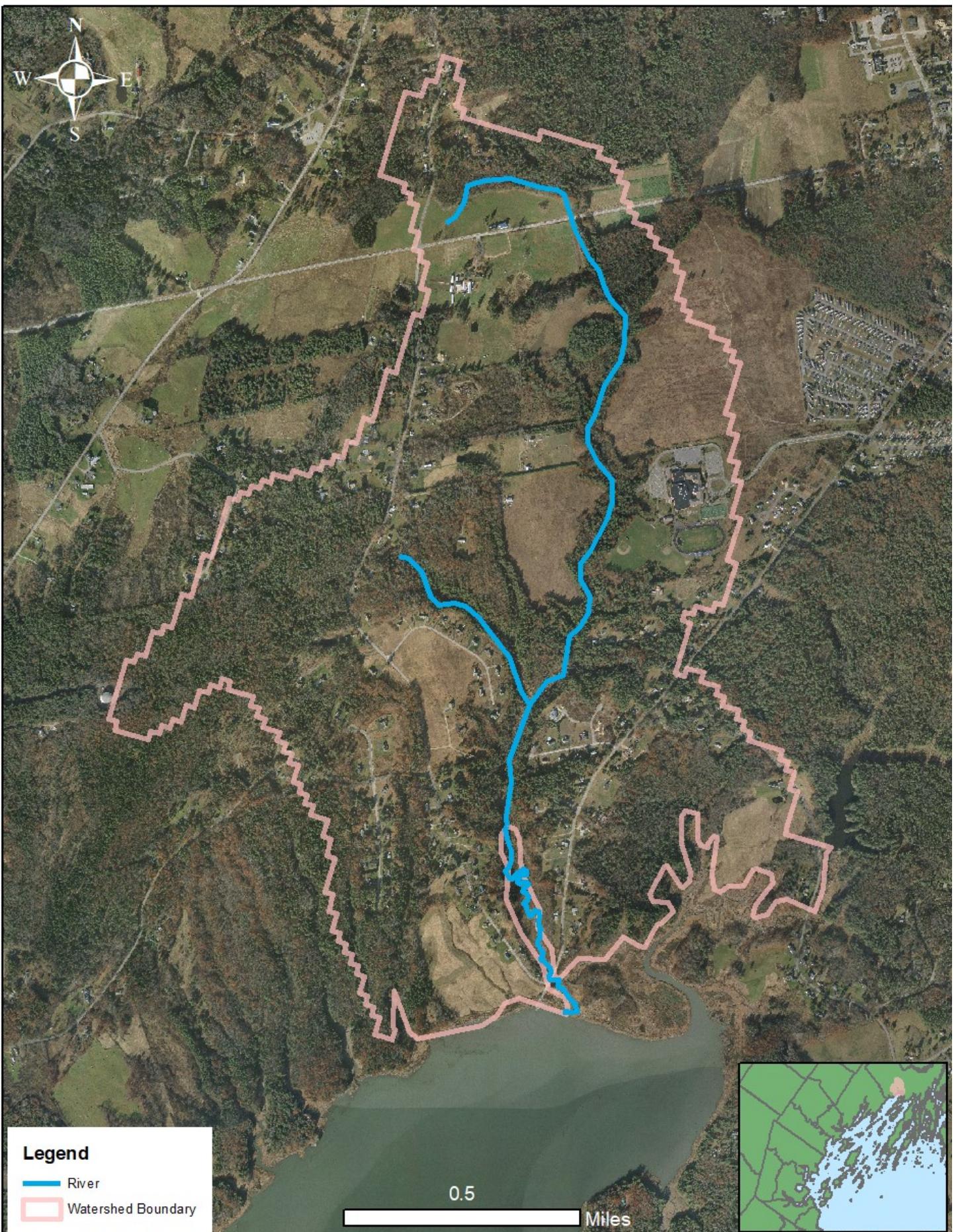


Unnamed Stream #2

This is a perennial stream in Freeport that runs for a length of approximately 1.3 miles (2.1 km). Available data shows a single metal culvert with an area of opening of 27.2 square feet that impedes fish passage along this stream.

The watershed itself is largely a mix of forested and developed land with wetlands comprising .4% of the area. Along the stream, however, the land use is much more encouraging for overall stream health. Using a 200 foot buffer along the stream, we see that forested and developed land are the majority use types while wetlands account for .1%.

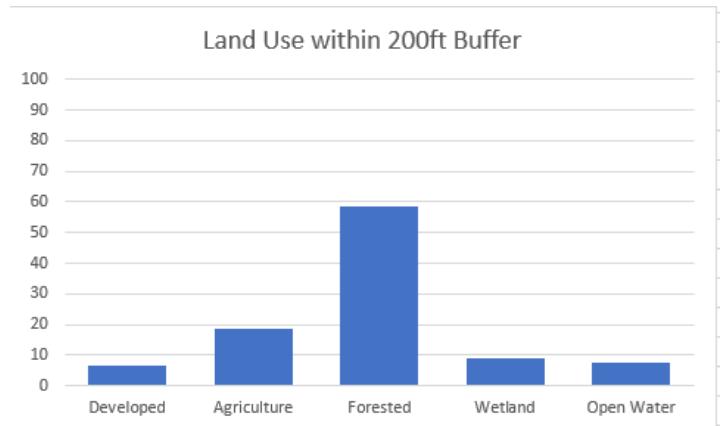
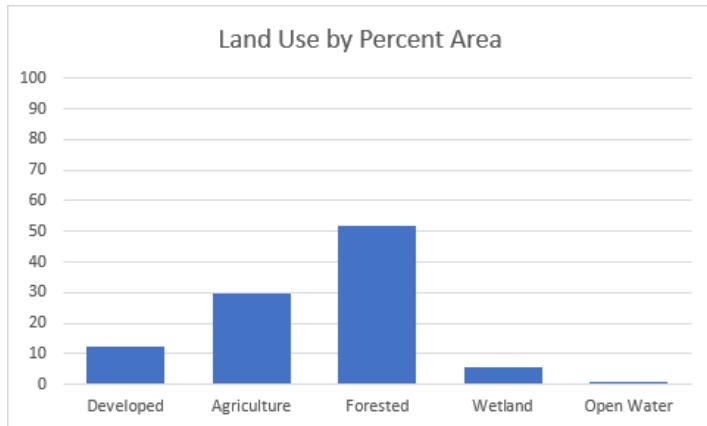




Unnamed Stream #3

This is a perennial stream in Brunswick that runs for a length of approximately 2.5 miles (4.1 km). There are no documented impediments to fish passage along this stream.

The watershed itself is largely a mix of forested and agricultural land, with wetlands comprising 5.5% of the area. Using a 200 foot buffer along the stream, we see that forested and agricultural land are the majority use types while developed land accounts for 6.5%.

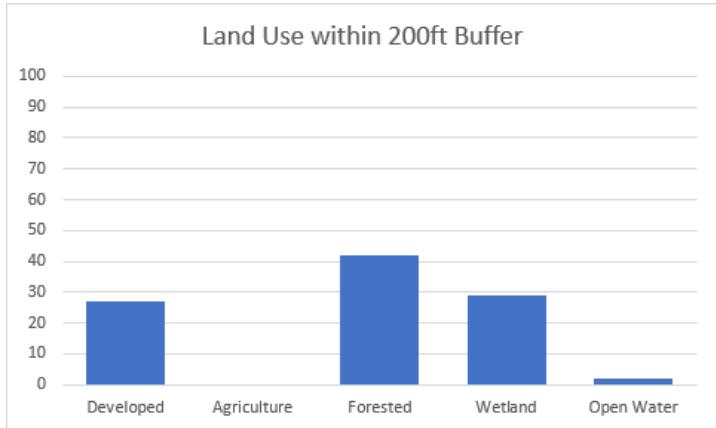
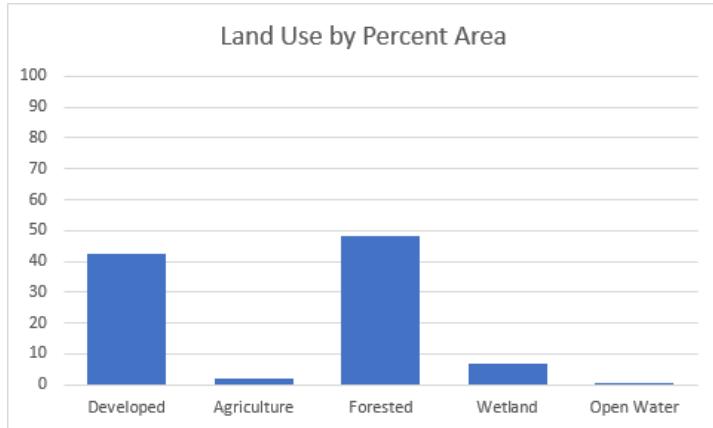




Unnamed Stream #4

This is a perennial stream that runs through Brunswick and Bath. The stream stretches for a length of approximately 1.9 miles (3 km). Along the stream there is a single dam that impedes fish passage.

The watershed itself is largely a mix of forests and developed land, with wetlands comprising 6.7% of the area. Using a 200 foot buffer along the stream, we see that forests and wetlands are the majority use types while developed land accounts for 27.2%.

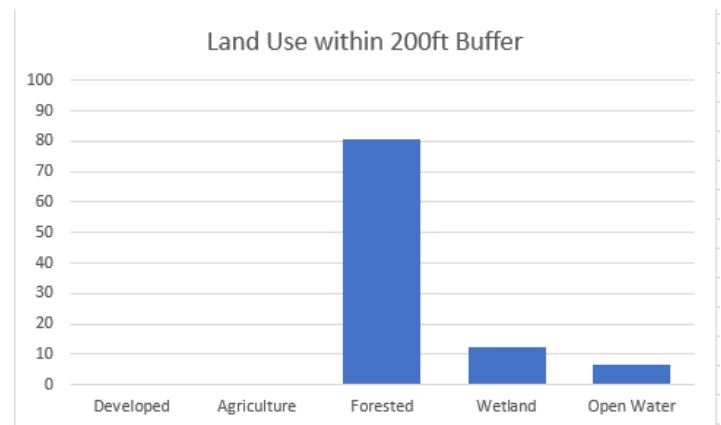
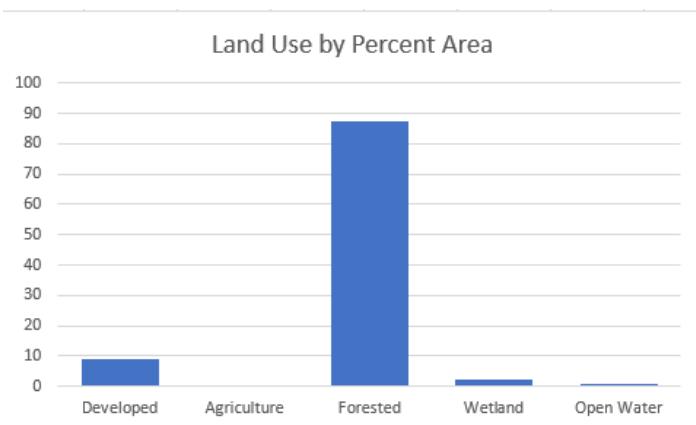




Unnamed Stream #5

This is a perennial stream in West Bath that runs for a length of approximately 1.2 miles (1.9 km). Available data shows a single plastic culvert with an area of opening of 6 square feet that impedes fish passage along this stream.

The watershed itself is largely a mix of forested land with wetlands comprising 2.4% of the area. Using a 200 foot buffer along the stream, we see that forests and wetlands are the majority use types with 80.9% and 12.2%.

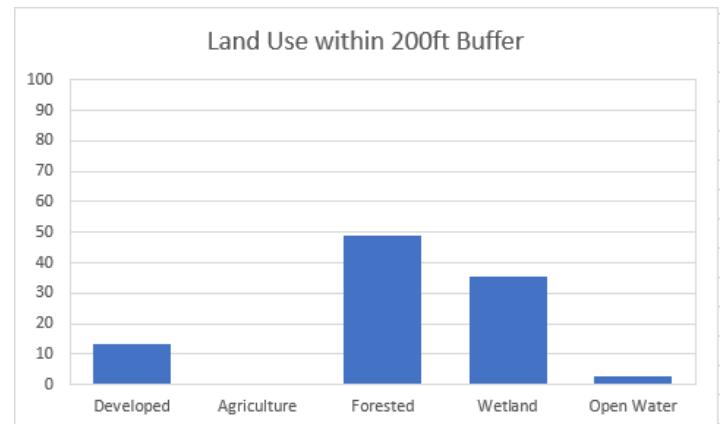
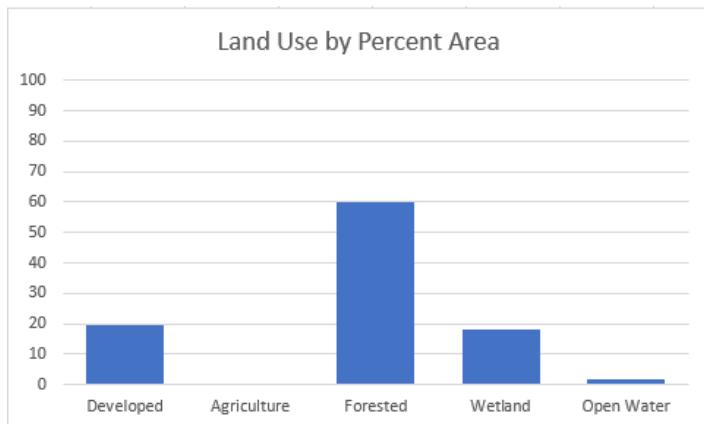




Unnamed Stream #6

This is a perennial stream in Harpswell that runs for a length of approximately 1.3 miles (2.1 km). Available data shows a single plastic culvert with an area of opening of 1.3 square feet that impedes fish passage along this stream.

The watershed itself is largely a mix of forests and developed land, with wetlands comprising 18.2% of the area. Using a 200 foot buffer along the stream, we see that forests and wetlands are the majority use types while developed land accounts for 13.1%.

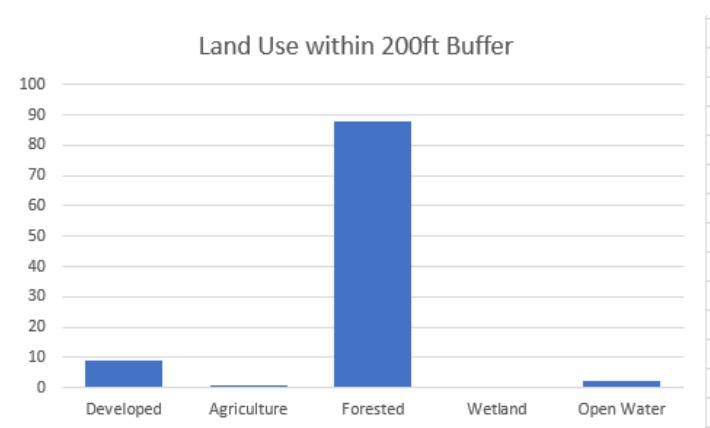
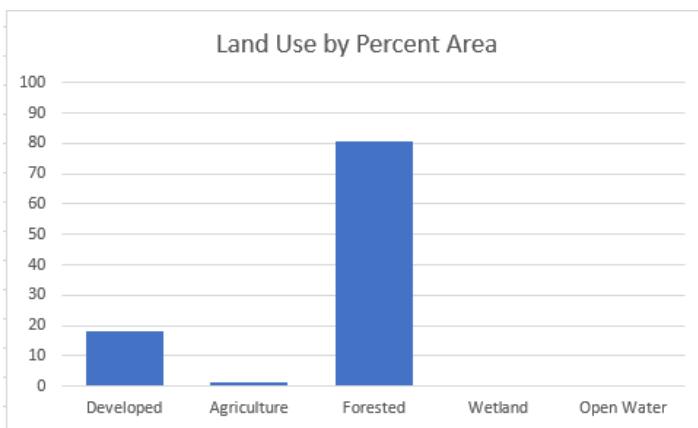




Unnamed Stream #7

This is a perennial stream in Brunswick that runs for a length of approximately .9 miles (1.5 km). Available data shows a single plastic culvert with an area of opening of 7 square feet that impedes fish passage along this stream.

The watershed itself is largely a mix of forests and developed land, with wetlands comprising .2% of the area. There are no wetlands within 200 feet of the river.

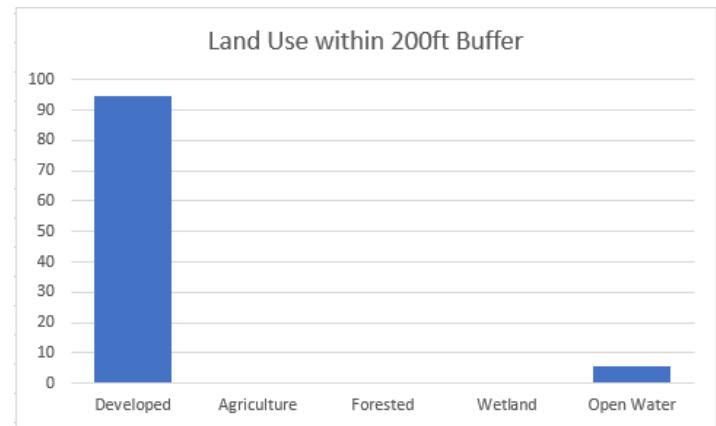
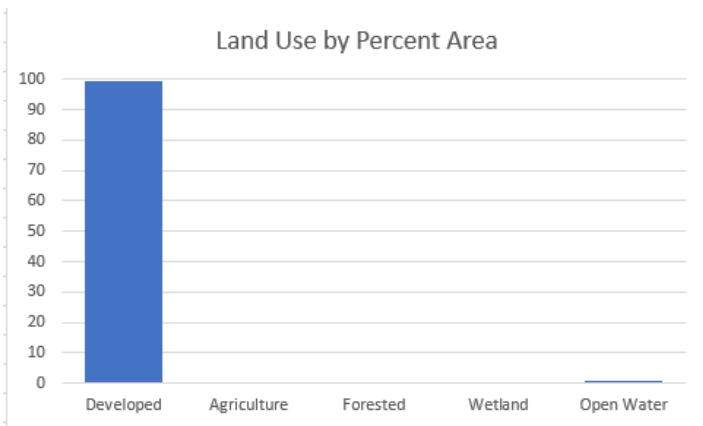




Unnamed Stream #8

This is a perennial stream in Portland that runs for a length of approximately .7 miles (1.1 km). Available data shows two culverts that impede fish passage. These culverts are made of metal and concrete and have areas of opening of 30.4 and 19 square feet, respectively.

The watershed itself is largely developed land and does not contain any wetlands. There are no wetlands within 200 feet of the river.

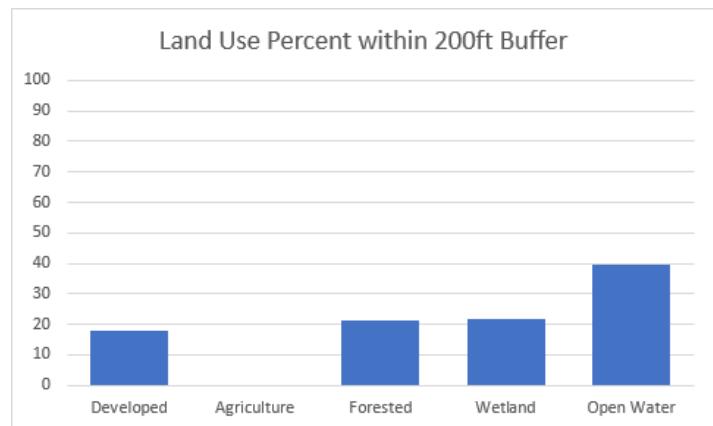
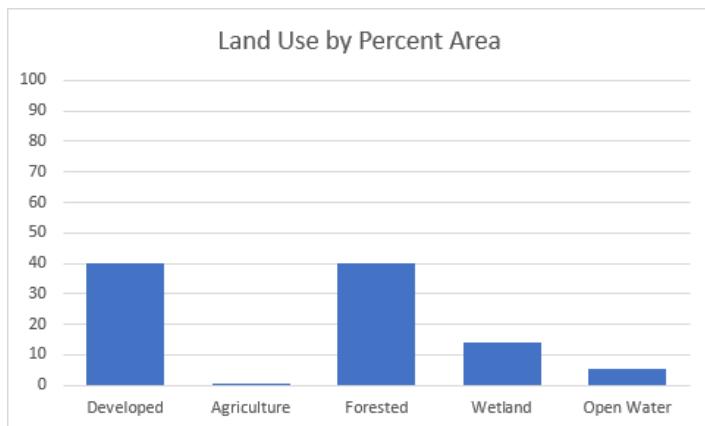


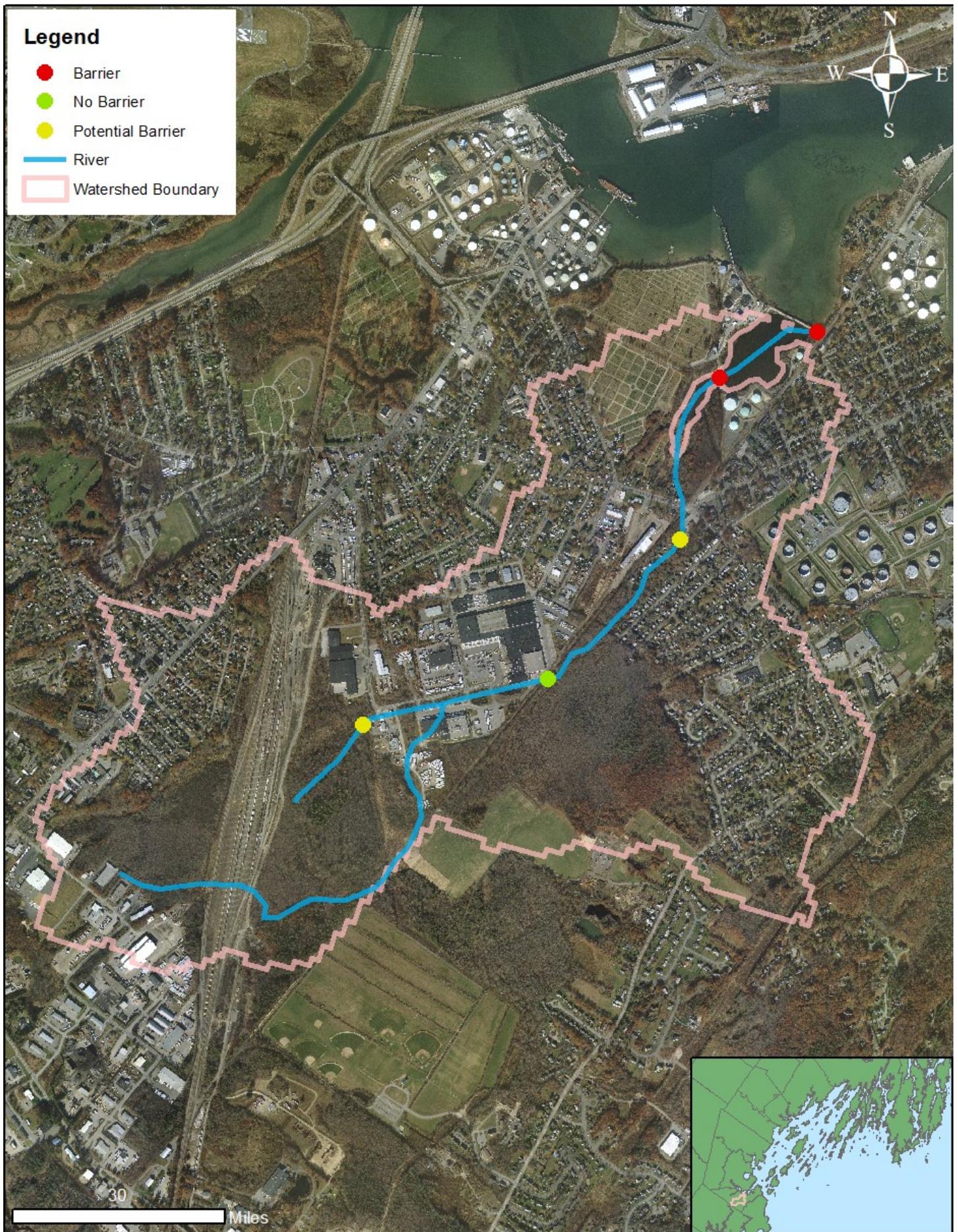


Alewife Brook

Alewife Brook is a perennial stream in Cape Elizabeth that runs for a length of approximately 1.86 miles (3km). Along the stream there are three sections that impede fish passage: one dam, two culverts with an area of opening approximately 23 square feet each, and one culvert with an area of opening approximately 27.4 square feet.

The watershed itself is largely a mix of forests and developed land, with wetlands comprising 13.8% of the area. Along the stream, however, the land use is much more encouraging for overall stream health. Using a 200 foot buffer along the stream, we see that forests and wetlands are the majority use types while developed land accounts for 17.9%.

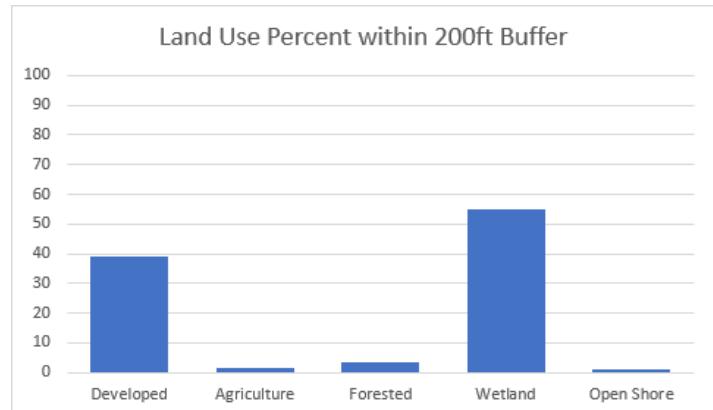
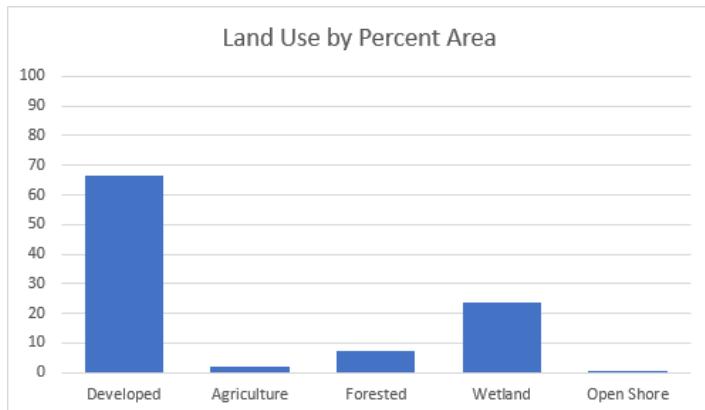


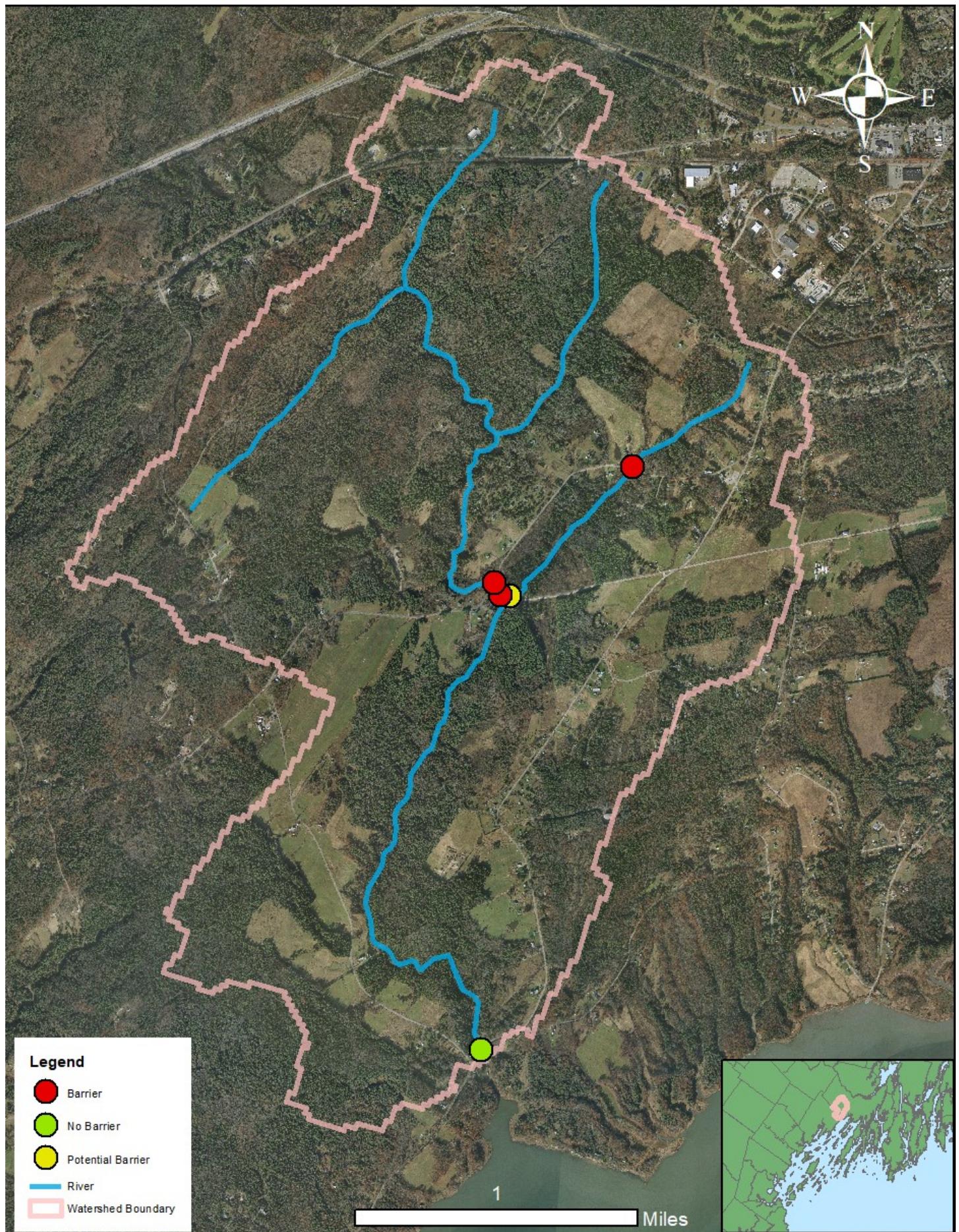


Barberry Creek

Barberry Creek is a perennial stream in South Portland that runs for a length of approximately 3.1 miles (5km). Along the stream there are four sections that impede fish passage: two dams and two culverts. The culverts are concrete with an area of opening of approximately 20 sq ft and metal with an area of opening of approximately 7.9 sq ft, respectively.

The watershed itself is largely developed land with a spattering of wetlands and forests. Using a 200 foot buffer along the stream, we see that wetlands make up 54.8% of the area with developed land and forested land comprising 39% and 3.4%, respectively.

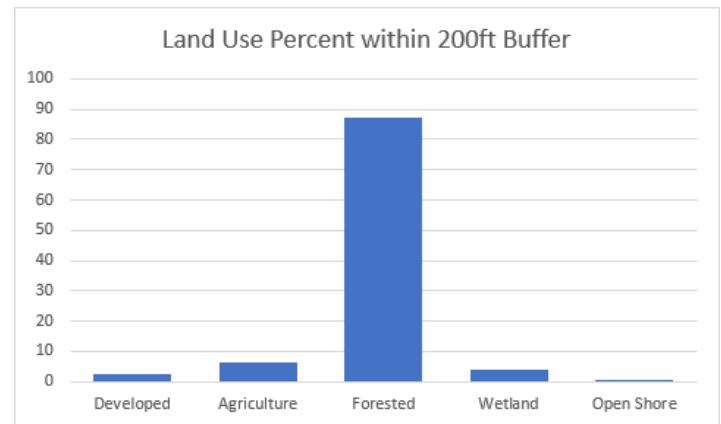
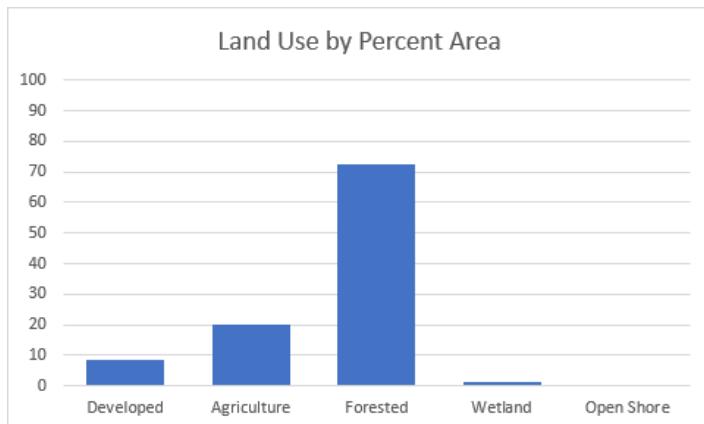




Bunganuc Stream

Bunganuc Stream is a perennial stream in Freeport that runs for a length of approximately 7.5 miles (12km). Along the stream there are four sections that impede fish passage and one bridge. The culverts are constructed from metal and have a range of area of openings from 17.8 sq. ft. to 50 sq. ft.

The watershed itself is mostly forested land, with agriculture and developed land being the other main use types. Using a 200 foot buffer along the stream, we see that forests comprise 87.8% of the area.

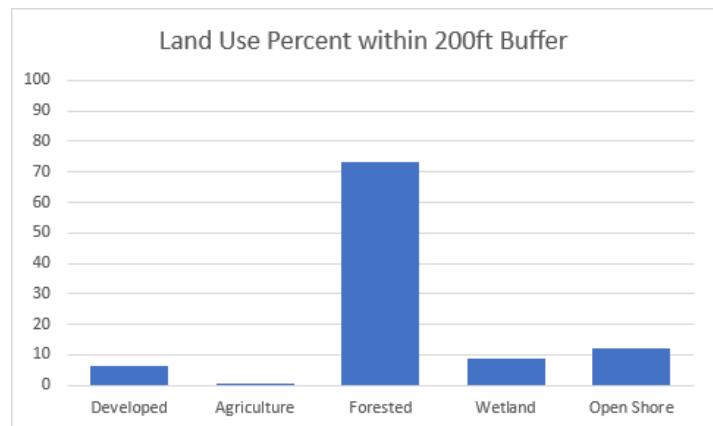
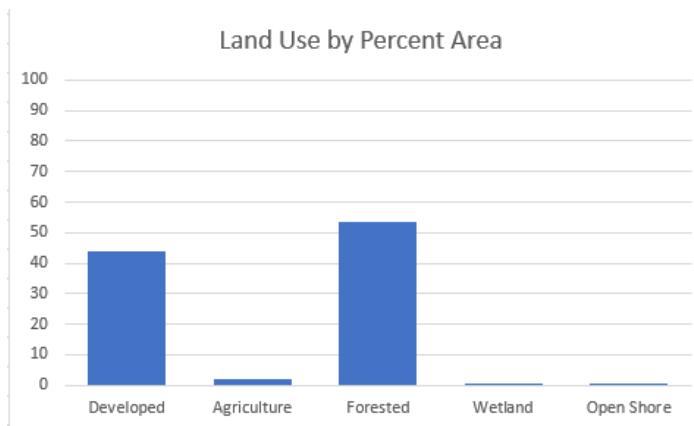


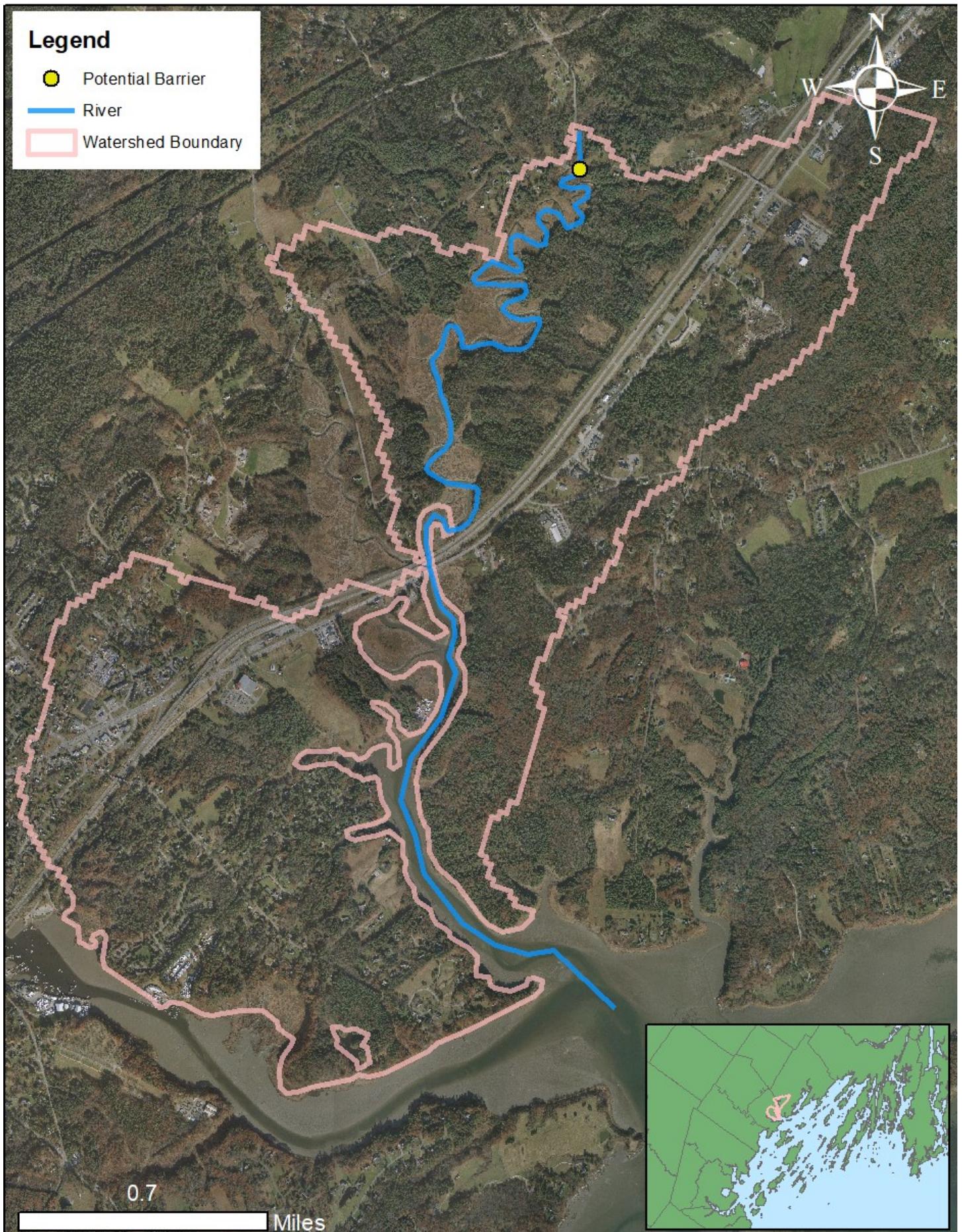


Concord Gully

Concord Gully is a perennial stream in Freeport that runs for a length of approximately 1.6 miles (2.6 km). Along the stream there are three sections that impede fish passage: one dam and two culverts with an area of opening approximately 54.1 square feet and 18.8 square feet.

The watershed itself is largely a mix of forests and developed land, 53.4% and 43.8% respectively. Along the stream, however, the land use is much more encouraging for overall stream health. Using a 200 foot buffer along the stream, we see that forested land comprises approximately 73% of the buffer area. Developed land, by contrast, makes up approximately 8.4% of the buffer area.

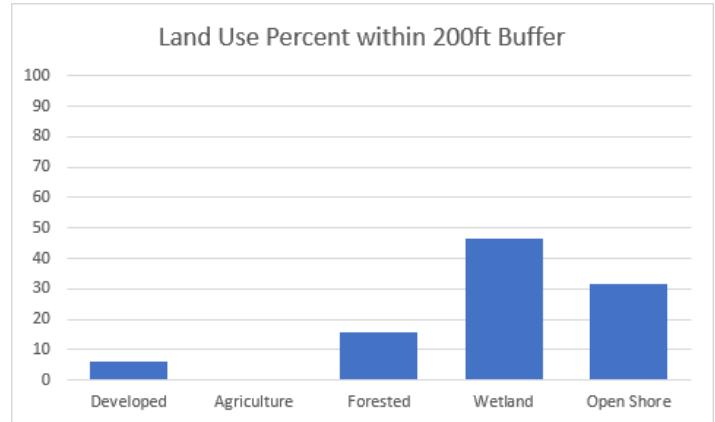
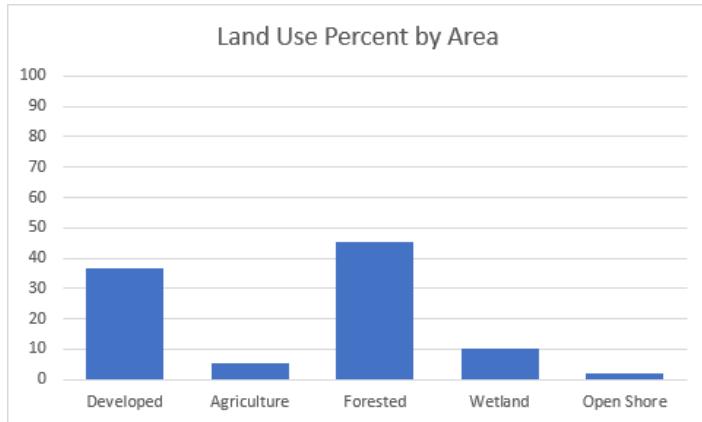


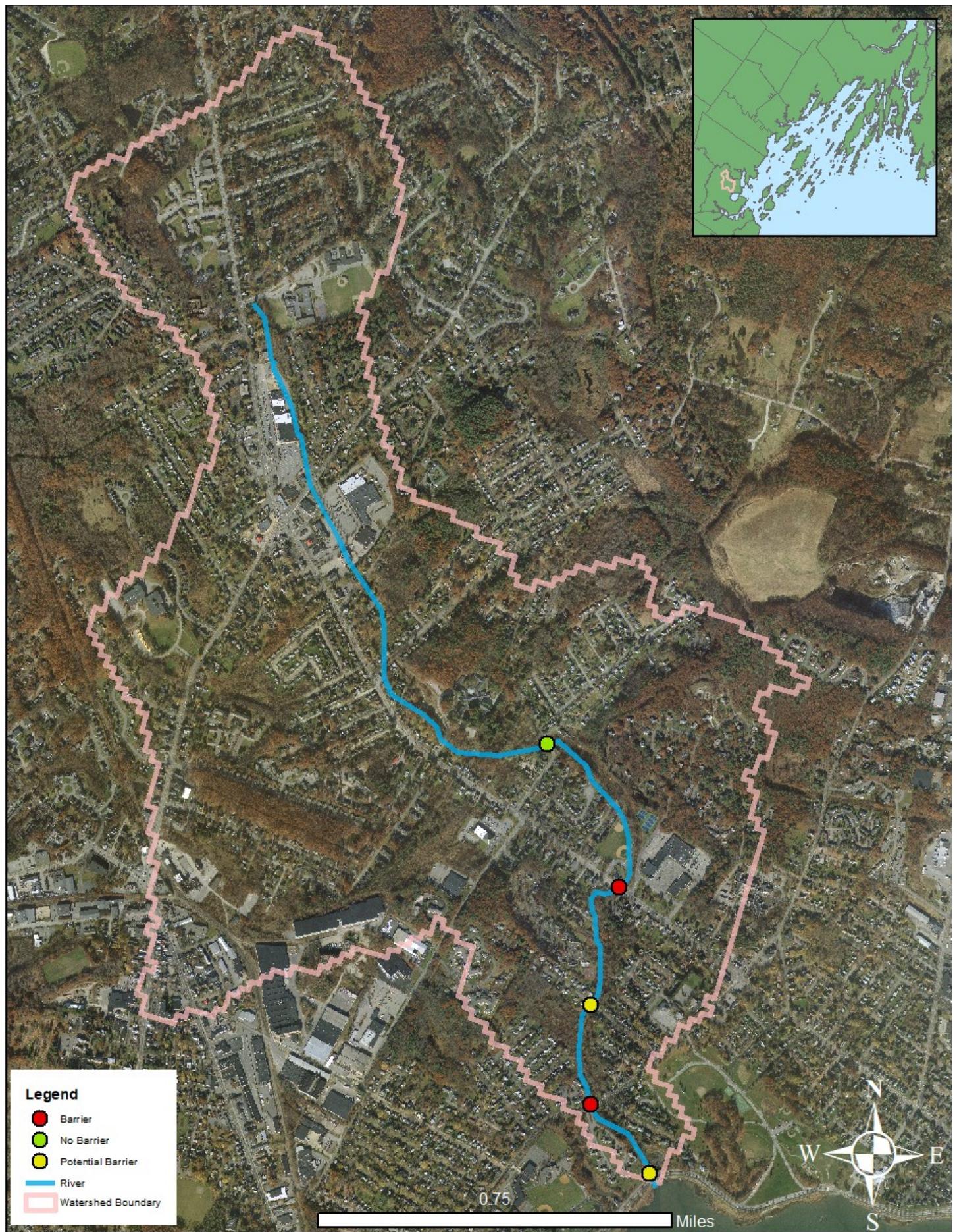


Cousins River

Alewife Brook is a perennial stream that runs through Freeport and Yarmouth. The stream stretches for a length of approximately 4 miles (6.6km). Along the stream there is one section that impedes fish passage: a metal culvert with an area of opening of 184.3 square feet.

The watershed itself is largely a mix of forests and developed land, with wetlands comprising 10.3% of the area. Using a 200 foot buffer along the stream, we see that wetlands comprise approximately 46.4% of the buffer area.

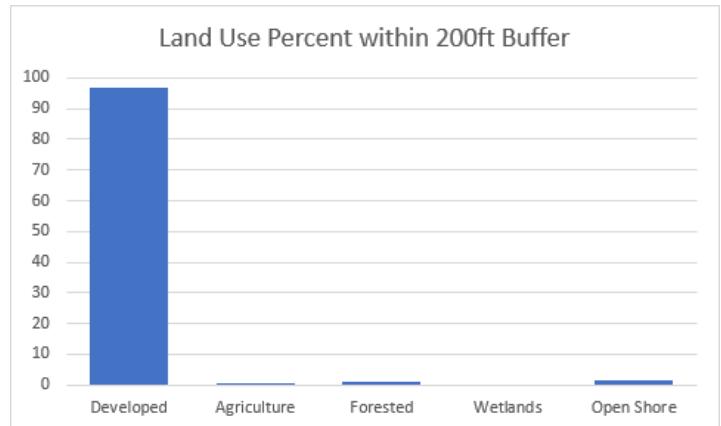
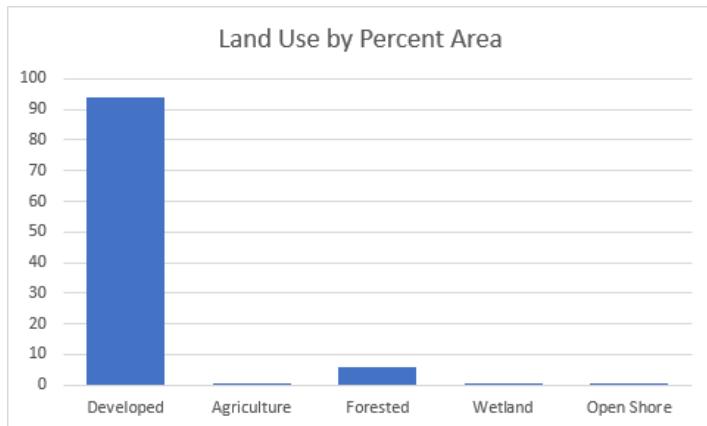


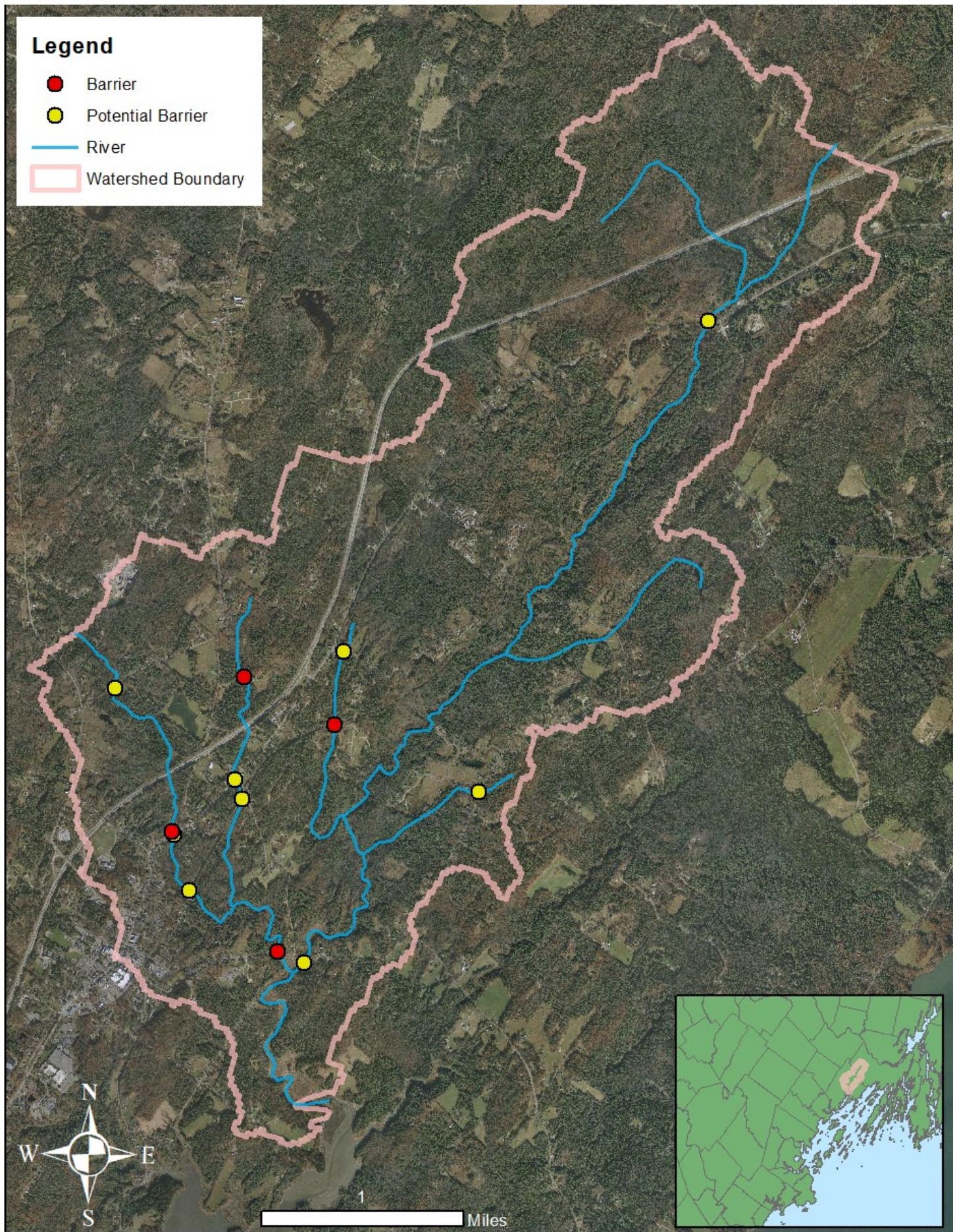


Fall Brook

Fall Brook is a perennial stream in Portland that runs for a length of approximately 2.3 miles (3.8km). Along the stream there are four culverts that impede fish passage; these culverts are made of concrete and have area of openings ranging from 44.6 square feet to 131.5 square feet

The watershed itself is approximately 93.7% developed land. Using a 200 foot buffer along the stream, we see that 96.7% of the land is developed while approximately 1% is forested.

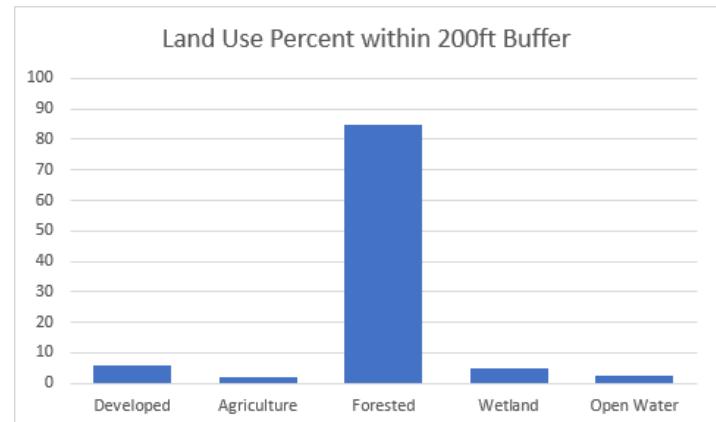
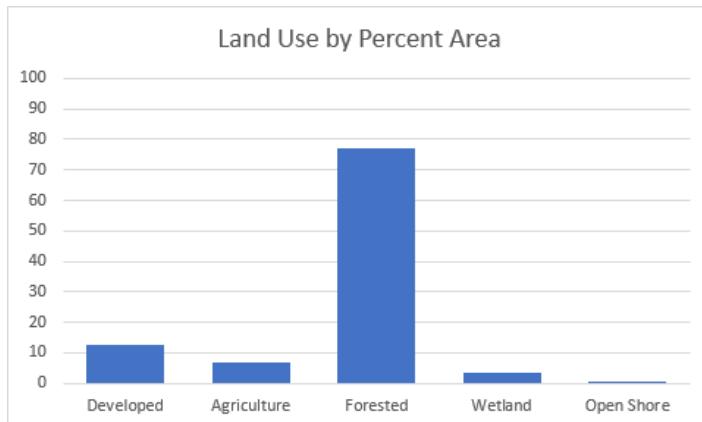




Frost Gully System

The Frost Gully system is a series of perennial streams in Freeport that runs for a length of approximately 15.2 miles (24.6km). There are a number of impediments to fish passage through the system: nine potential barriers and four barriers. The potential barriers are culverts with areas of opening between 3.2 square feet and 154.2 square feet. There are two dams that are considered barriers and two culverts with areas of opening of 30.5 square feet and 86 square feet.

The watershed itself is largely a mix of forests and developed land; 76.9% and 12.6%, respectively. Using a 200 foot buffer along the stream, we see that 84.9% of the buffer area is forested land.

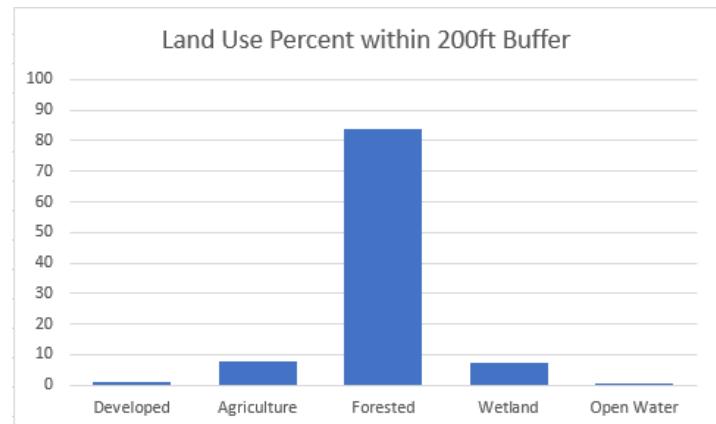
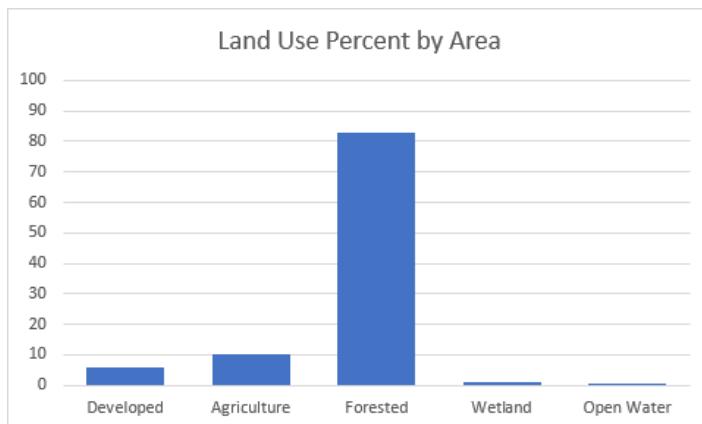




Kelsey Brook

Kelsey Brook is a perennial stream in Freeport that runs for a length of 3.8 miles (6.2km). There are no impediments to fish passage along the brook

The watershed itself is made up in large part by forested land, which accounts for 82.9% of the total area. Using a 200 foot buffer along the stream, we see that forested land again makes up 83.9% of the area.

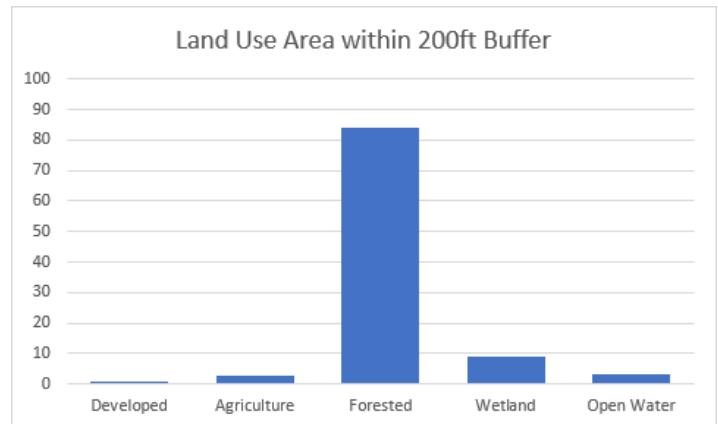
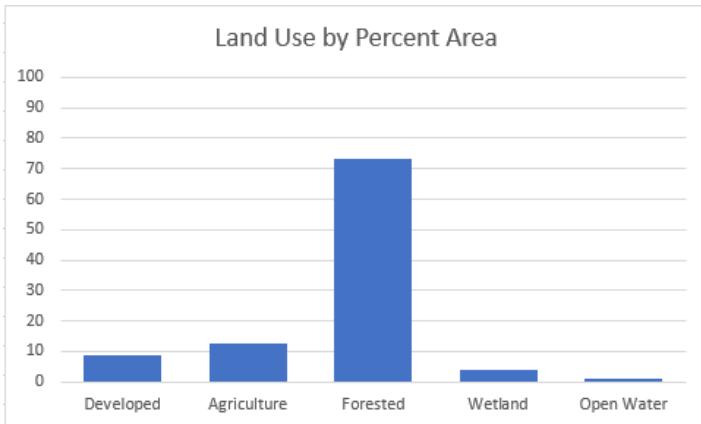


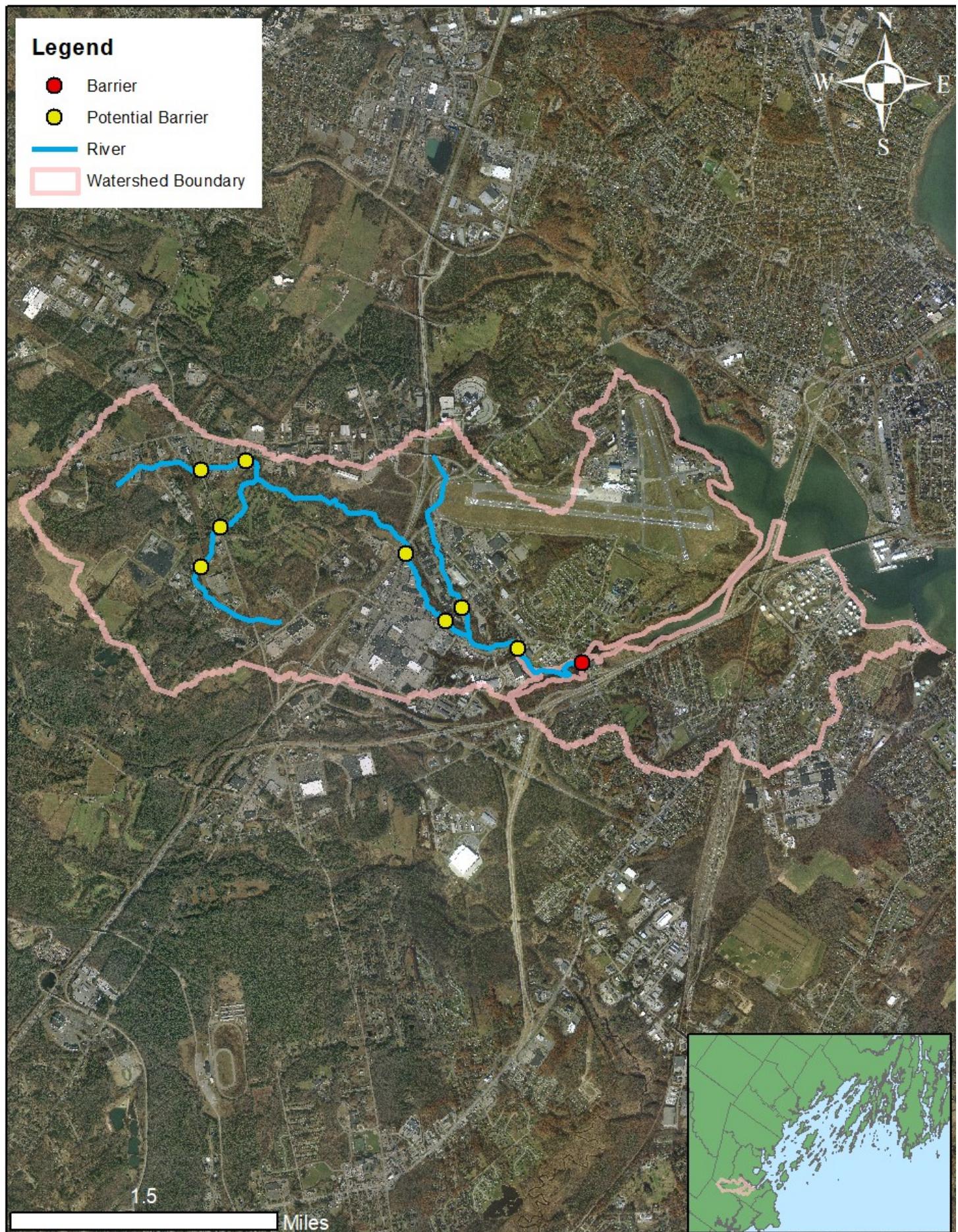


Little River

Little River is a perennial stream in Freeport that runs for a length of approximately 3.8 miles (6.2km). There is a single culvert with an area of opening of 13.3 square feet that impedes fish passage.

The watershed itself is largely forested, which comprises 73.5% of the total area. Using a 200 foot buffer along the stream, we see that forested land remains the dominant use type, comprising 84% of the area.

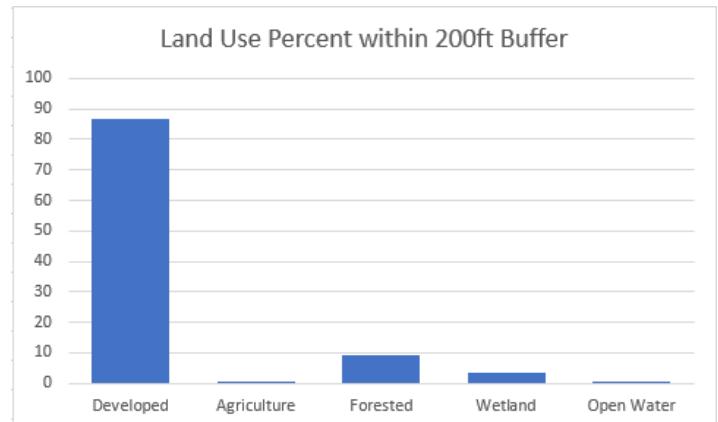
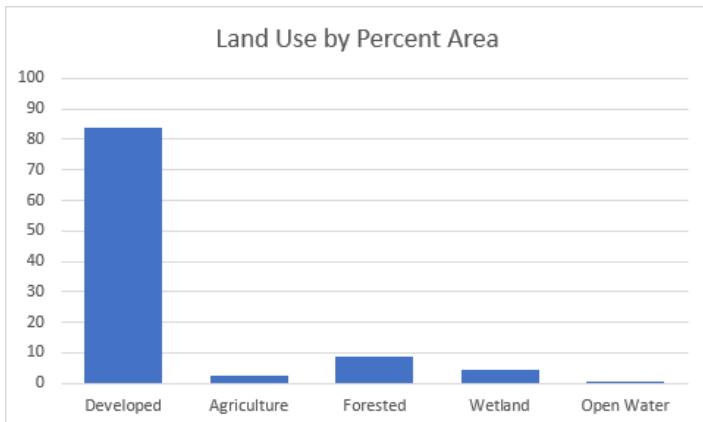


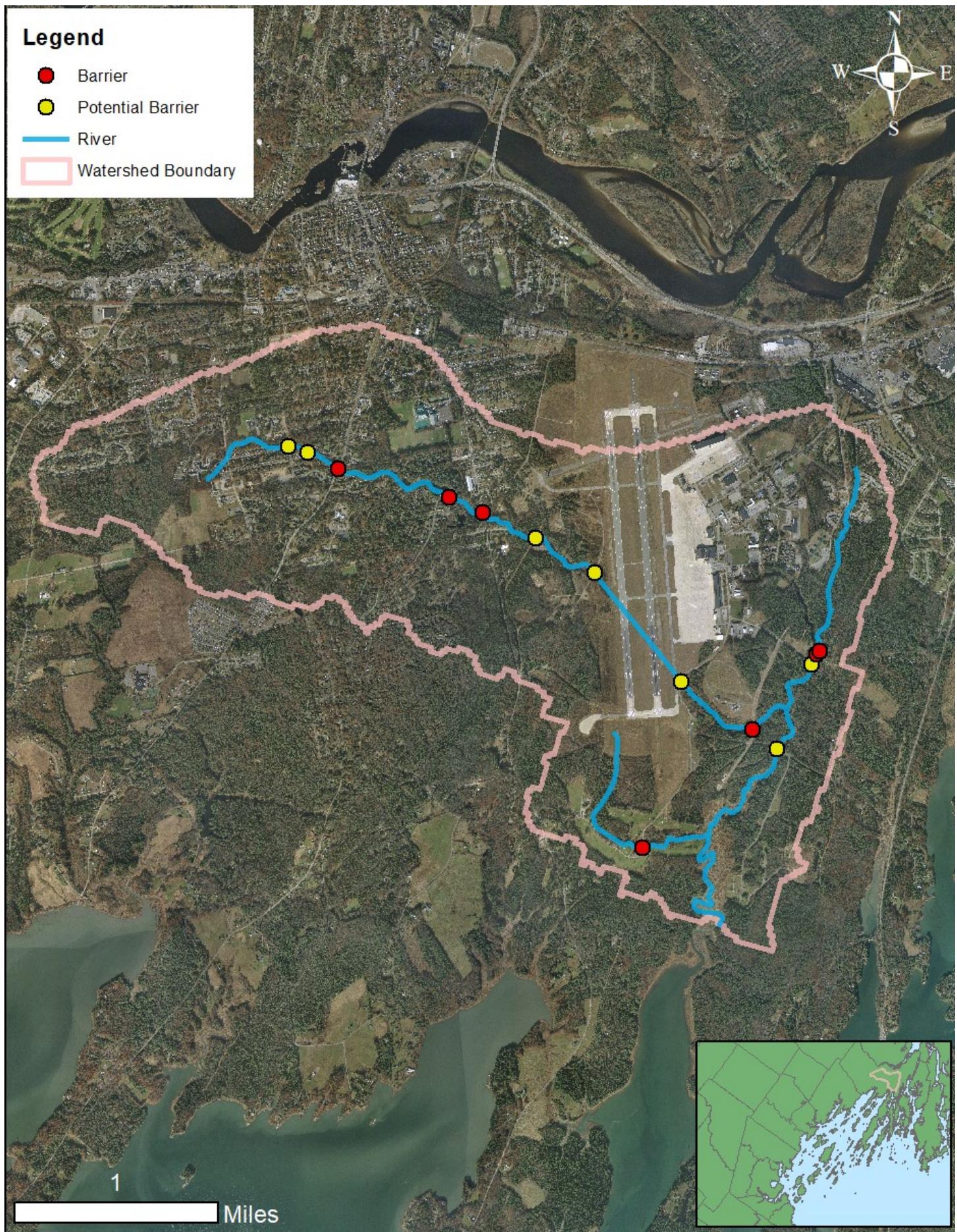


Long Creek

Long Creek is a perennial stream that runs through South Portland and Westbrook for a length of approximately 5.7 miles (9.2km). Along the stream there are three sections that impede fish passage: one dam, two culverts with an area of opening approximately 23 square feet each, and one culvert with an area of opening approximately 27.4 square feet.

The watershed itself is approximately 84% developed land , with forested land comprising only 14% of the total area. Along the stream, the situation is even more dire. Using a 200 foot buffer, we see that developed land accounts for 86.7% of land use and forested land accounts for 9%.

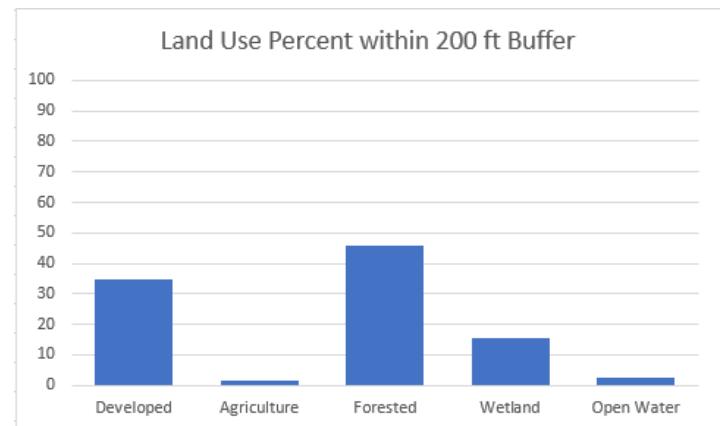
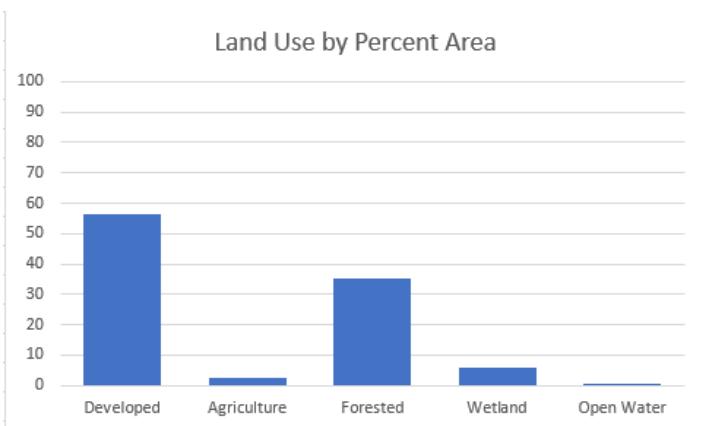


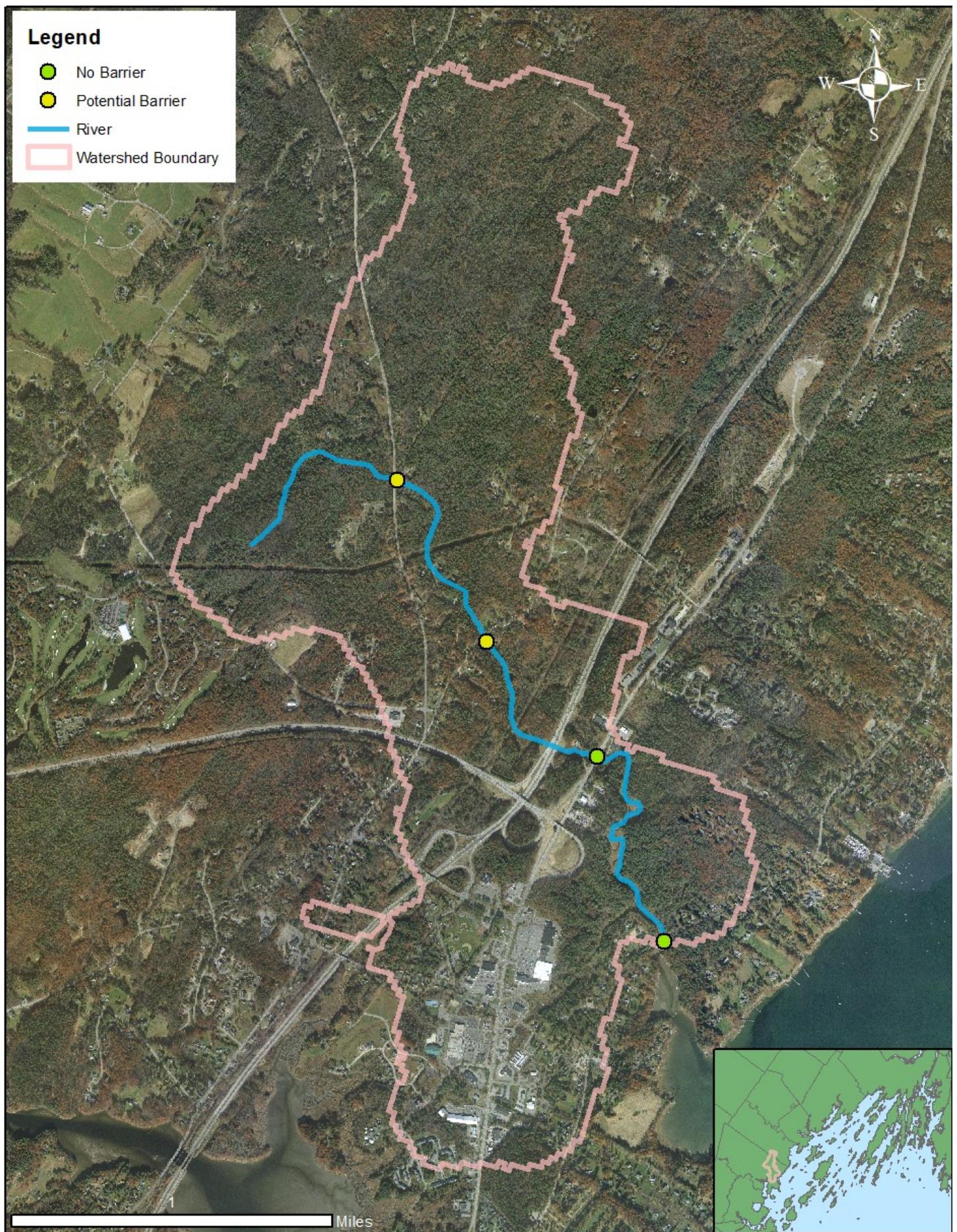


Mare Brook

Mare Brook is a perennial stream in Brunswick that runs for a length of approximately 7.5 miles (12km). There are thirteen possible barriers to fish passage long the river: five individual culverts, seven culvert groups, and two dams. The culverts have areas of opening ranging from 7.1 square feet to 84.8 square feet.

The watershed itself is largely a mix of developed and forested land, 56.4% and 35.4% respectively. Using a 200 foot buffer along the stream, we see that forested and developed land remain the majority use types with 45.9% and 34.7%.



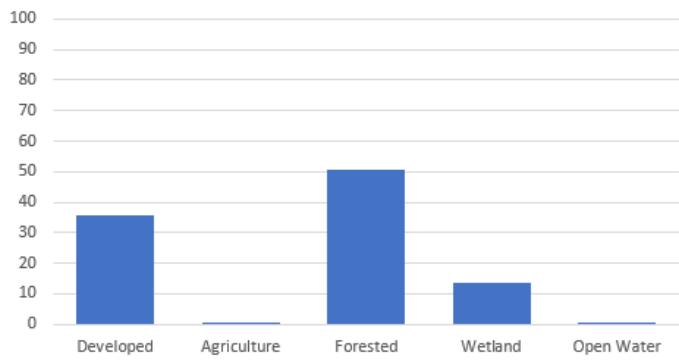


Mill Creek

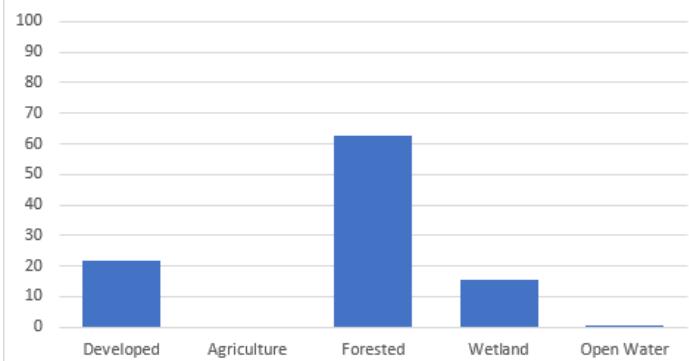
Mill Creek is a perennial stream in Falmouth that runs for a length of approximately 2.7 miles (4.4km). There are two impediments to fish passage: a metal culvert with a 73.5 square foot area of opening and a metal culvert with an area of opening of 4.6 square feet.

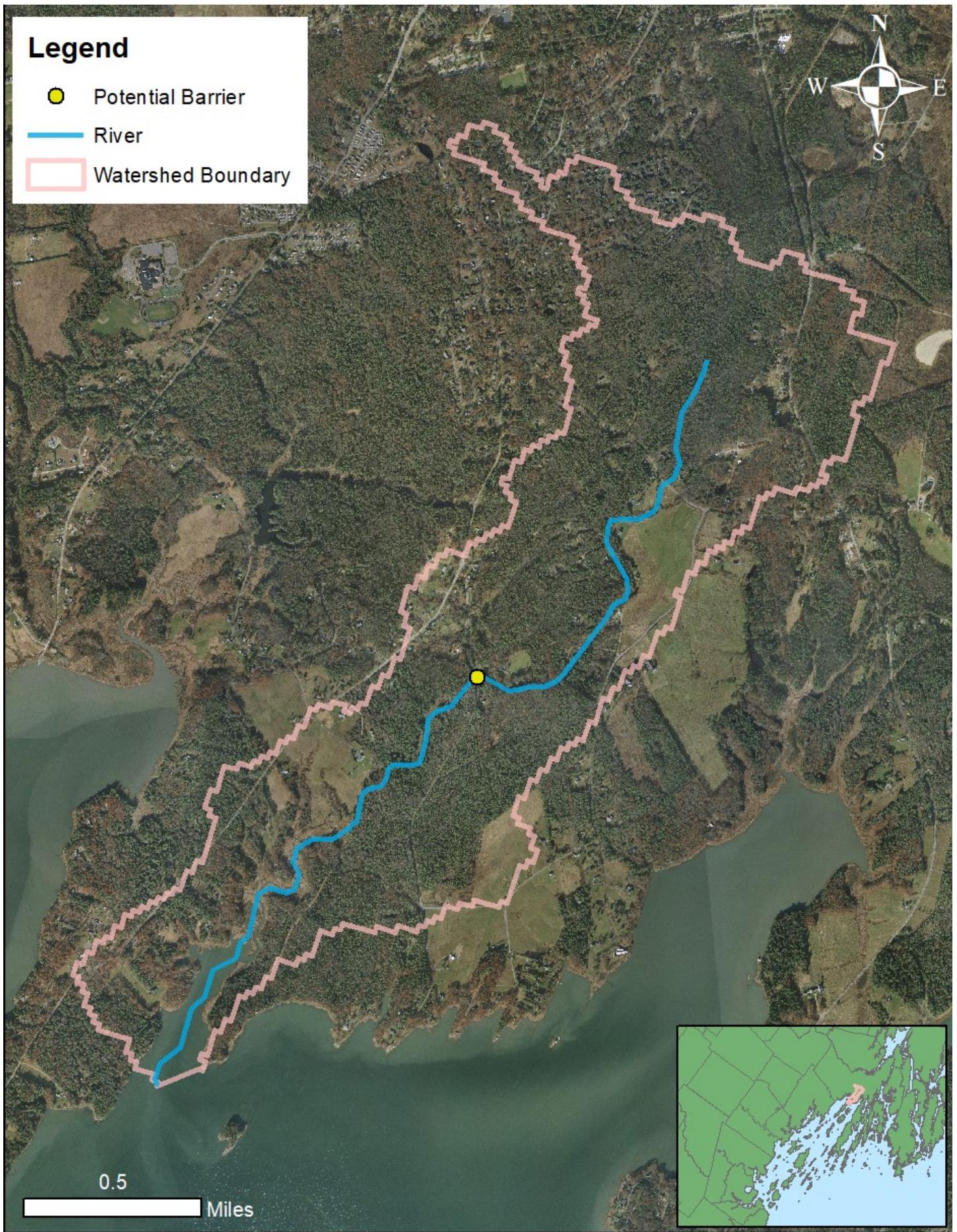
The watershed itself is 50.7 % forested and 35.4% developed . Using a 200 foot buffer along the stream, we see that forested land accounts for 62.8% of the buffer area and only 21.5% is developed.

Land Use by Percent Area



Land Use Percent within 200ft Buffer

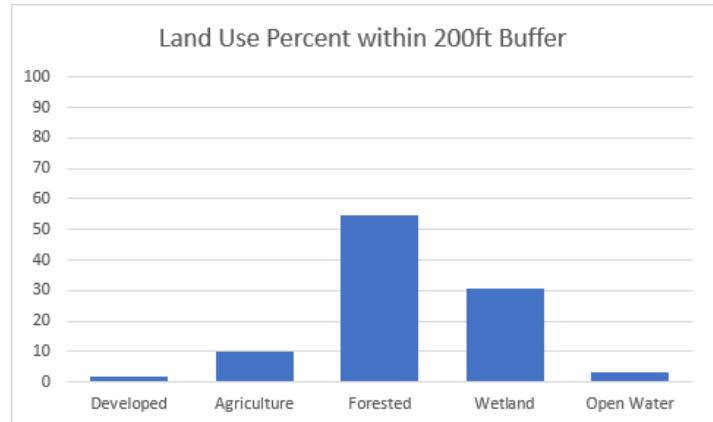
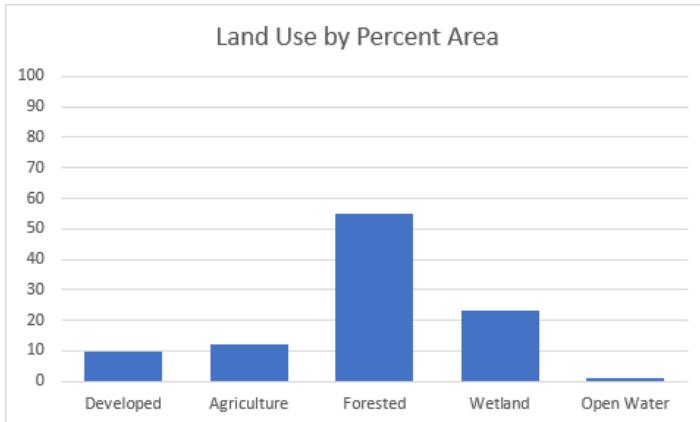


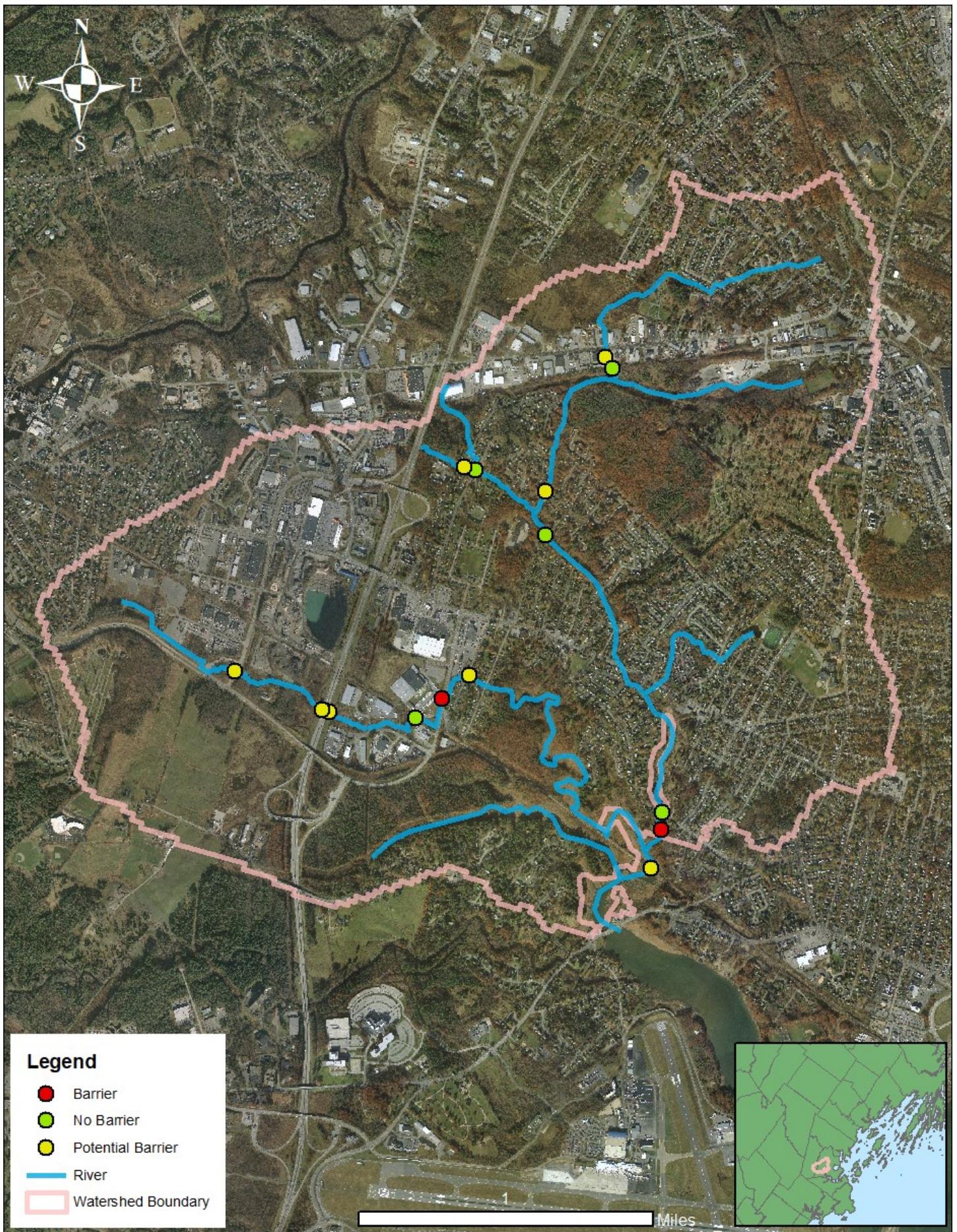


Miller Creek

Miller Creek is a perennial stream in Brunswick that runs for a length of approximately 2.8 miles (4.5km). There is a single metal culvert with an area of opening of 14.3 square feet.

The watershed itself is 54.8% forested, with developed land comprising 9.5% of the total area. Using a 200 foot buffer along the stream, we see that forests remain the majority use type while developed land accounts for 1.7% of the buffer areas.

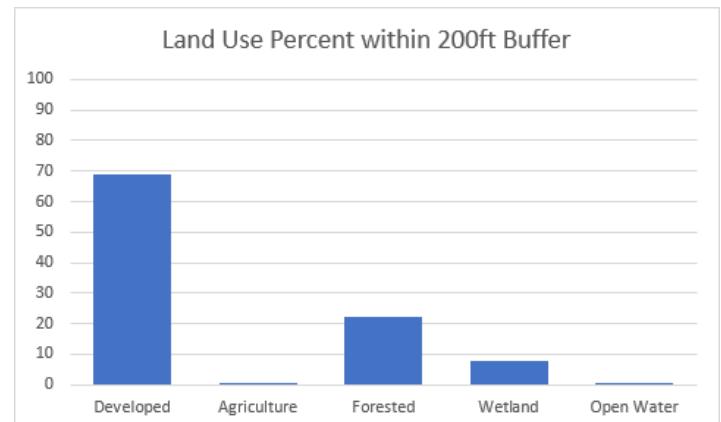
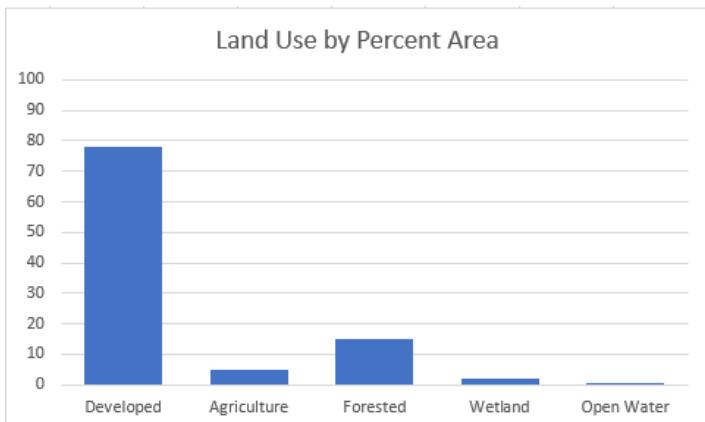


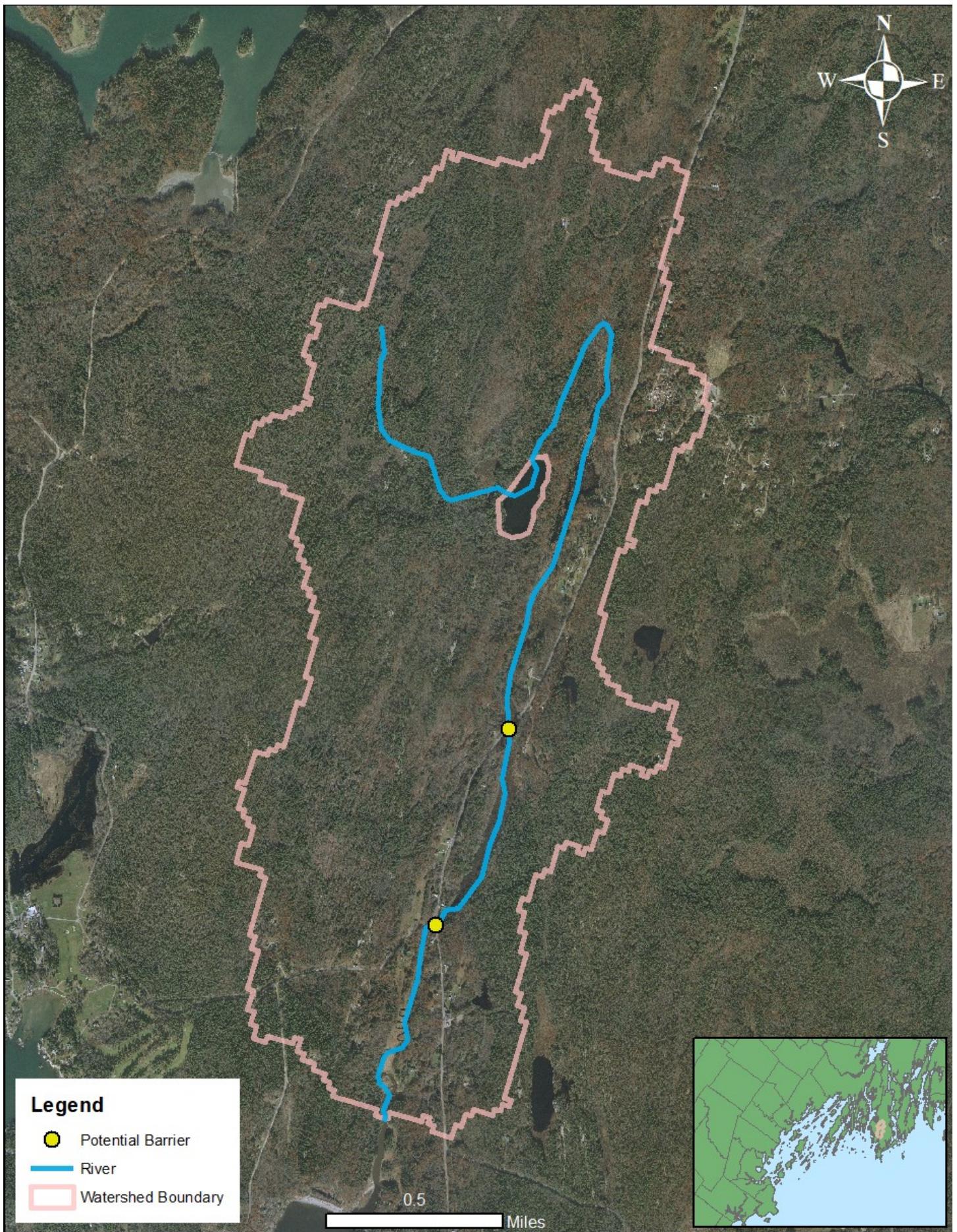


Capisic and Nasons Brooks

Capisic and Nasons Brooks are perennial streams that weave in and out of Portland and Westbrook. Due to these streams both emptying into Fore River, they have been combined for the purposes of this atlas. The system for a length of approximately 9.78 miles (15.7km). There are ten sections of the system that may impede fish passage: one dam and nine culverts. The culverts are mostly concrete and have areas of opening between 6.8 and 73.4 square feet.

The watershed itself is 78% developed land and only 14.9% forested land. Using a 200 foot buffer along the stream, we see that developed land still accounts for the majority land use while forests only make up 22% of the buffer area.

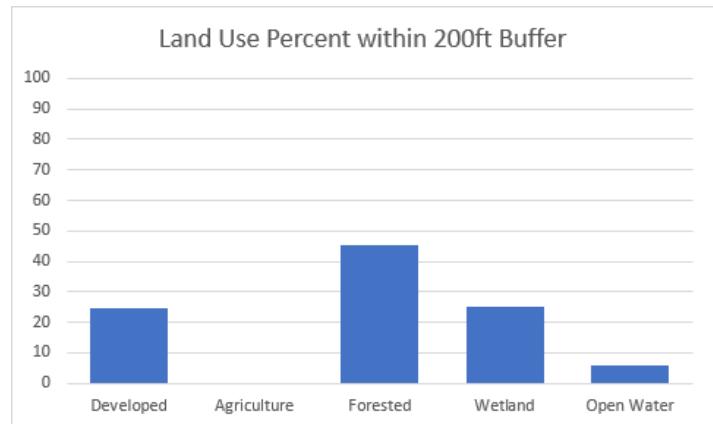
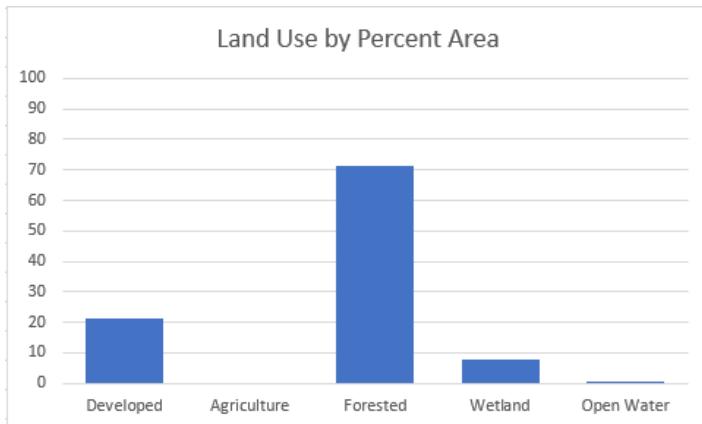


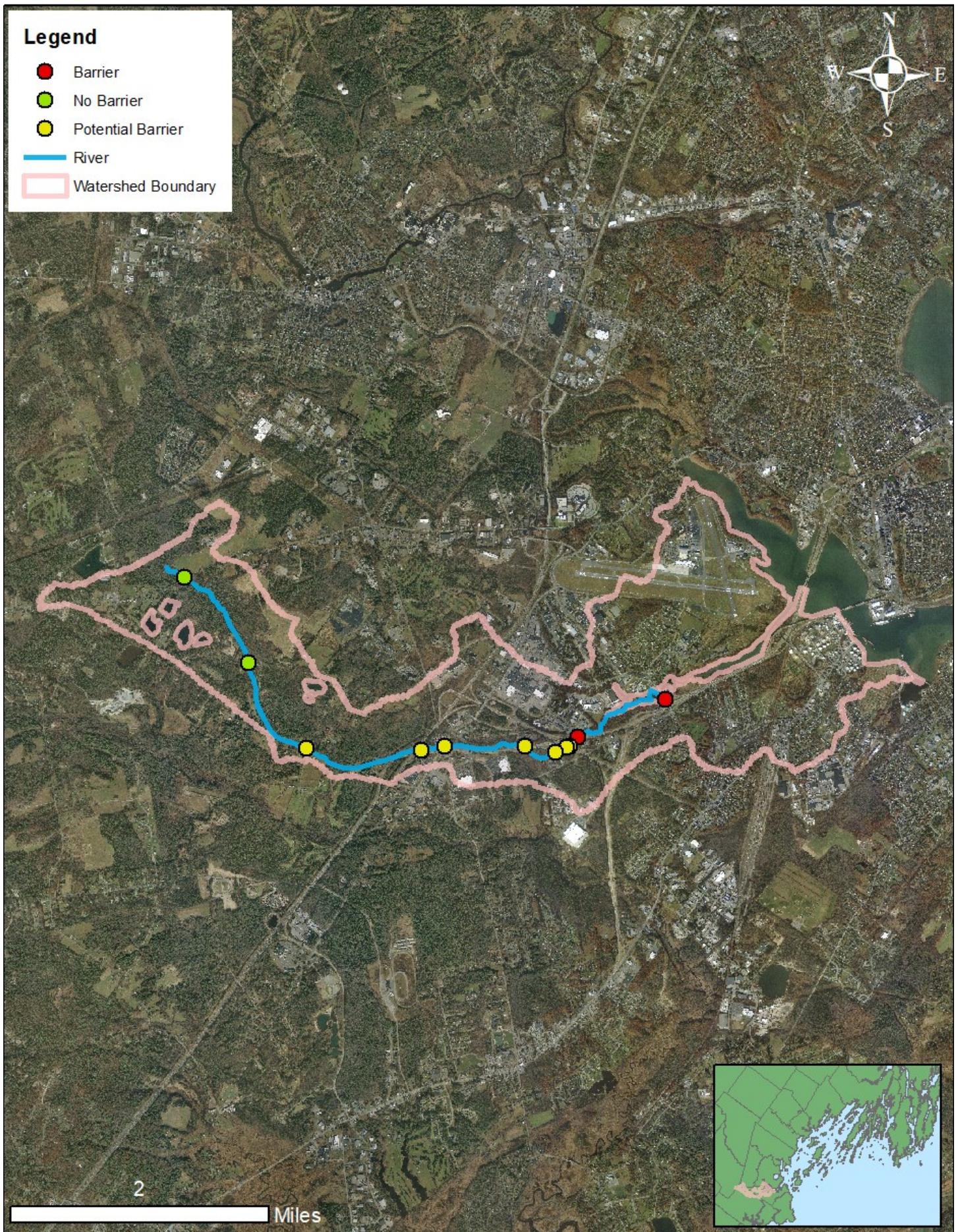


North Creek

North Creek is a perennial stream in Phippsburg than runs for a length of approximately 3.7 miles (6km). Along the stream there are two sections that impede fish passage: one culvert with an area of opening of 22.5 square feet and one culvert with an area of opening of 8.4 square feet.

The watershed itself is largely a mix of forests and developed land, comprising 71.2% and 21.1% respectively. Using a 200 foot buffer along the stream, we see that forests remain the largest land use class with 45.4% of the buffer area.

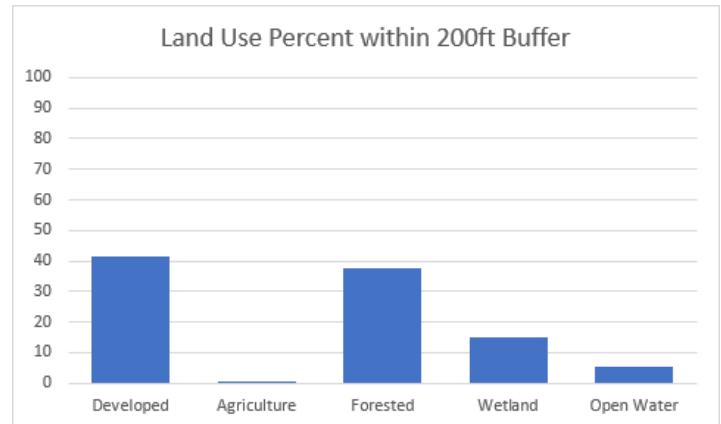
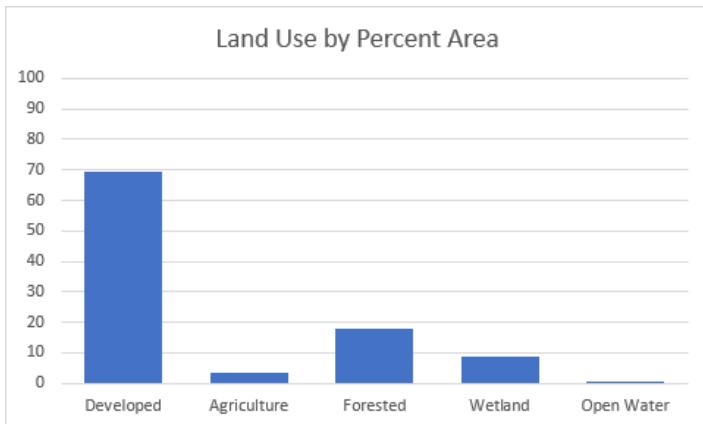


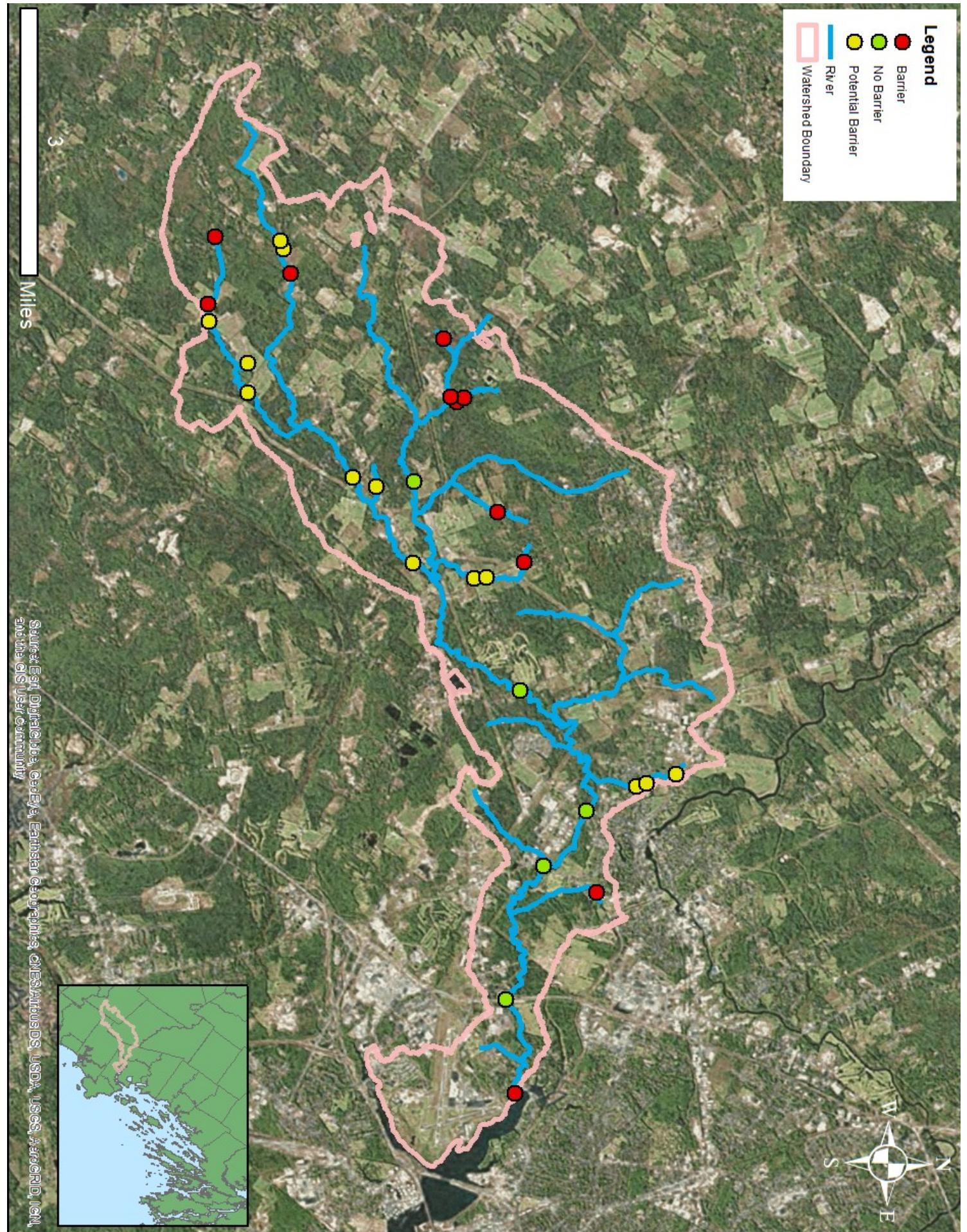


Red Brook

Red Brook is a perennial stream in South Portland that runs for a length of approximately 5.2 miles (8.3km). Along the stream there are nine sections that impede fish passage: one dam and eight culverts with areas of openings ranging from 35.9 to 125.9 square feet.

The watershed itself is largely a mix of developed and forested land comprising 69.4% and 18%, respectively. Using a 200 foot buffer along the stream, we see that forested lands makes up 37.8% while developed land comprises 41.5% of the buffer area.

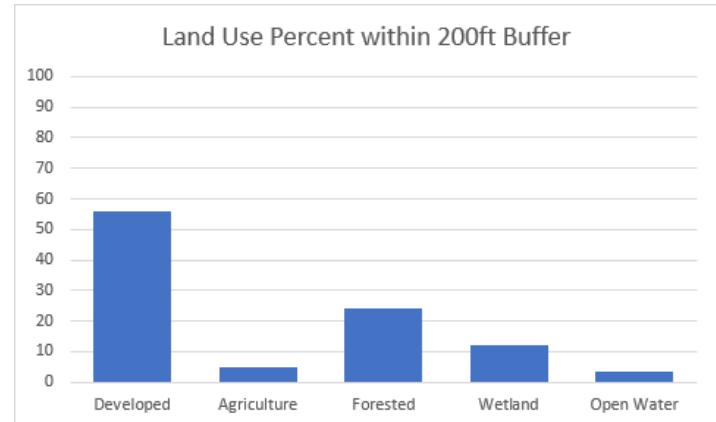
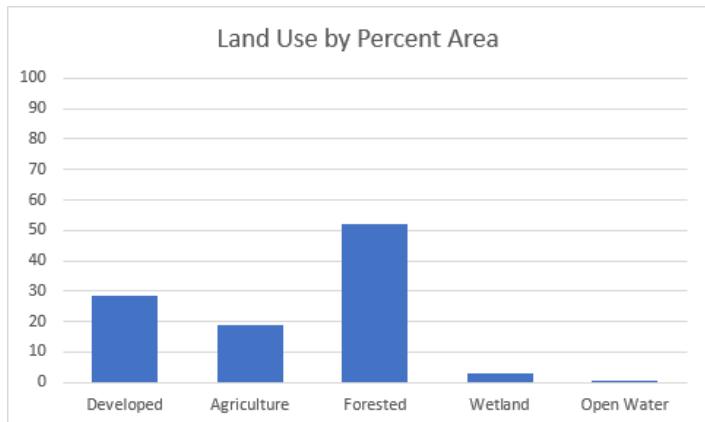


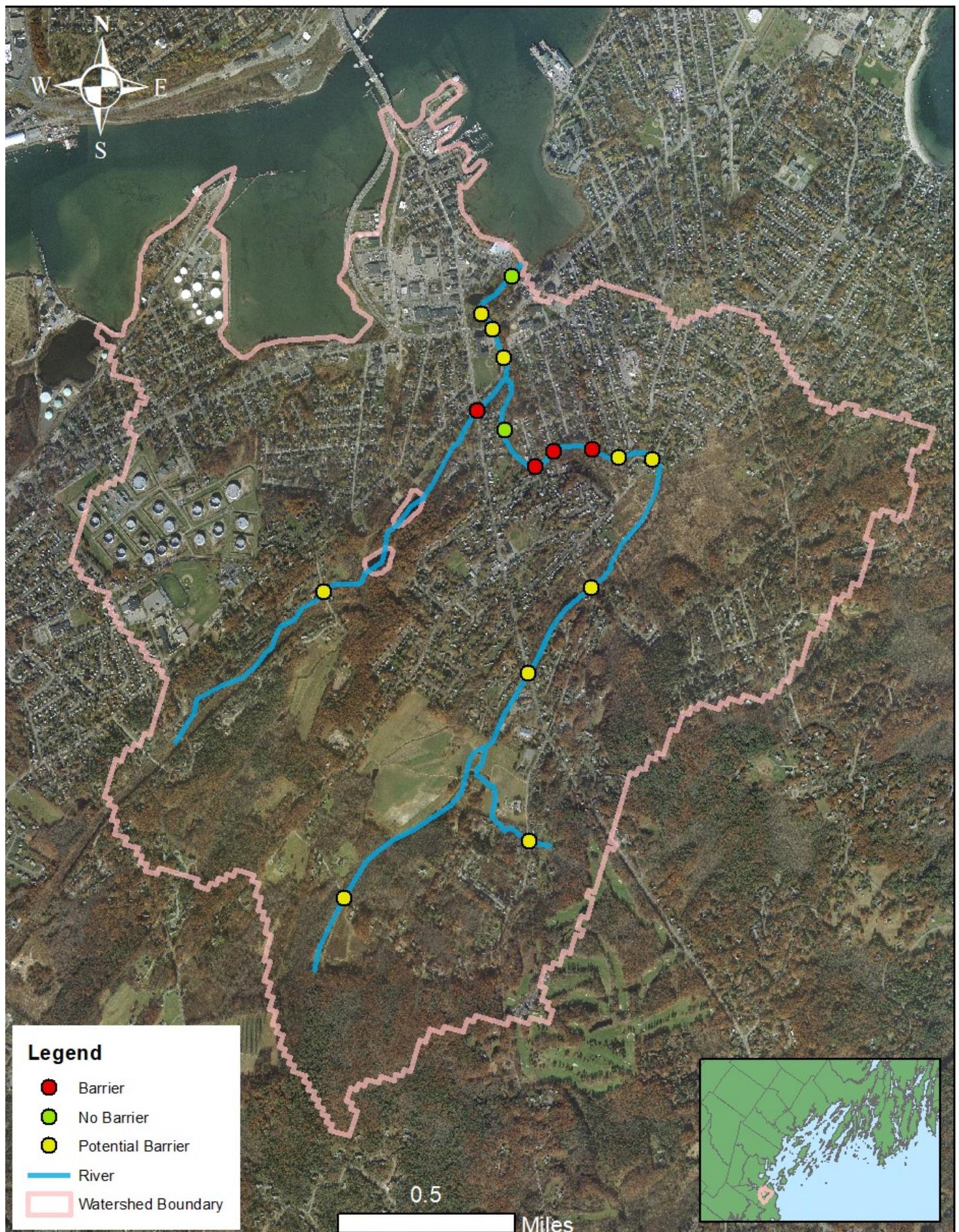


Stroudwater

The Stroudwater is a perennial river that runs through Portland, Gorham, Buxton, Scarborough, and Westbrook. The river stretches for a length of approximately 44.3 miles (71.3km). Along the river there are twenty-four sections that impede fish passage, all culverts with areas of opening that range from 3.1 to 97.4 square feet.

The watershed itself is largely a mix of forests and developed land, 51.9% and 28.6% respectively. Using a 200 foot buffer along the stream, we see that forested land comprises 71.1%.

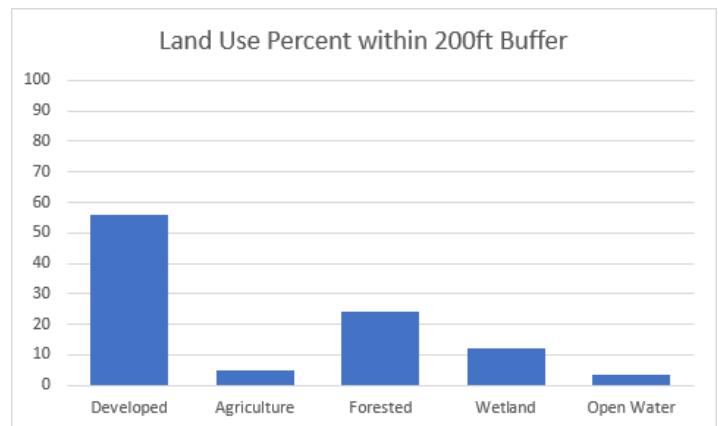
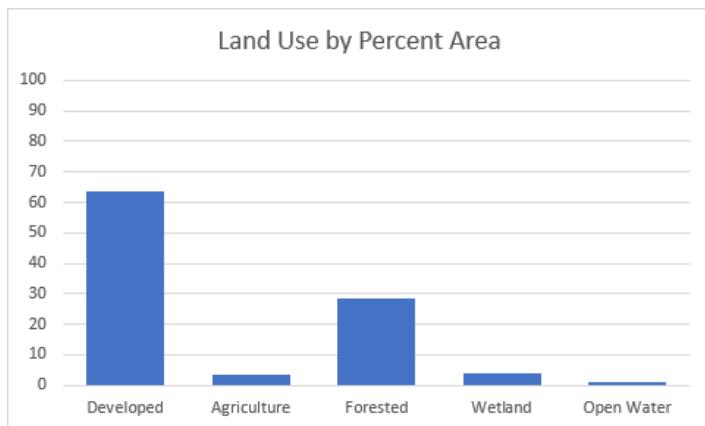




Trout Brook

Trout Brook is a perennial stream in South Portland and Cape Elizabeth that runs for a length of approximately 4.8 miles (7.7km). Along the stream there are fourteen sections that could impede fish passage; all are culverts with area of opening ranging from 4.6 to 36.4 square feet.

The watershed itself is 63.7% developed land and only 28.6% forested. Using a 200 foot buffer along the stream, we see that developed land remains the largest land use class with 55.9% while forested land accounts for 24.2%.



Sources

U.S. Geological Survey National Hydrography Dataset Plus v2

Maine Stream Habitat Viewer

Maine Office of GIS

ESRI Basemaps