

City of Biddeford, Maine

Open Space Plan



Biddeford Pool Marshes & Wildlife Habitat

Prepared by the City of Biddeford Open Space
Committee

November 2012

PREFACE

When I was first asked to be on the Biddeford Open Space ad-hoc Committee by Marcel Polak of the Maine Association of Conservation Commissions on behalf of then, Mayor Joanne Twomey, I enthusiastically said “yes”. I was reasonably excited but cautiously optimistic. I have a very strong passion for land conservation and my knowledge of the subject is constantly evolving. After the introductions and brief conversations in our first meeting back in January 2009, the topic of the need for a chairperson came up. I now recall everybody’s eyes turning toward me and as they say “it is all history”. I graciously accepted and the reality of taking charge of organization, delegation, research, setting meetings and pushing for a draft of the Open Space Plan took hold. Now, close to three years later, and countless number of meetings, walks, and drafts, we have an Open Space Plan for the citizens of Biddeford.

As you read through this document, it is fluid and can be modified, added and changed. The data will need to be updated as time goes by. Parcels will be sold, merged, conserved, developed or remain the same. Land is static. This report is going to be electronically reproduced on City of Biddeford’s website where changes can be made. We have had public input and we are looking for more feedback. Biddeford is on the move and adapting to the constant demand of undeveloped space on untapped resources. This is not a report on “stop all growth and keep all green”. It is an inventory, a resource item, and a foundation guide for future land conservation and planning efforts. It is also an outreach to landowners to offer them options on their choice of land use. In land conservation terms, landowners can grant an easement, donate the land or sell it. The Open Space Committee is attempting to craft a vision, forge partnerships, provide incentives and be transparent in the information provided. There are many published reports detailing the benefits of conserving lands. There is a direct positive impact on the local and regional economy: outdoor tourism, hotel occupancy levels, general stores, retail shopping venues, food establishments, walking trails and access to public land. These are just a few examples of the direct economic benefits; there are also many indirect benefits that we may not think about in our daily lives. We all know Biddeford has a great product: Biddeford. Take a walk along a coastal path, hike up a hill, kayak on a tidal stream, and go hunt in your favorite spot during hunting season. All of these activities enhance our quality of life and Maine’s economy. Plus it makes you feel good; conserving land is well worth the price.

There are many people in the creation of this report that we give thanks to in our acknowledgement section but I need to give a very special “thank you!” to Dave and Lindy Anderson for all of their time in researching, writing, editing, typing, and layout in our plan.

Bill Durkin

Chair

Biddeford Open Space Committee

November 2012

Table of Contents

Preface.....	2
Table of Contents.....	3
1. Open Space Committee Mission.....	4
2. Introduction	4
3. Committee Members and Contributor Acknowledgements.....	5
4. History and Background of Biddeford Open Space Planning	5
5. Why an Open Space Plan for Biddeford?.....	6
6. Definition of Open Space.....	9
7. Benefits of Open Space to Biddeford Inhabitants.....	9
8. Summary of Public Input to the Plan	11
9. Guiding Vision and Plan Goals	14
10. Biddeford Open Space Inventory-Summary	15
11. Biddeford Open Space Map and Descriptions	16
12. Recent Open Space Acquisitions	18
13. Recommendations and Implementation Plan	20

Appendices

A. Stakeholders and Community Partners	24
B. Open Space Funding Sources	25
C. Biddeford Open Space Inventory.....	30
D. Biddeford Open Space Maps	45
E. Undeveloped Habitat Blocks	58
F. Summary of Biddeford Wildlife Data.....	63
G. Biddeford Open Space Conference.....	65
H. Community Survey Instrument.....	67
I. University of New England: Sustaining the Saco River Study	75
J. City of Biddeford: Land for Maine’s Future Bonds Voting Results	81
K. River and Ocean Rights of Way in Biddeford	82
L. Bibliography	85

1. Open Space Committee Mission

The mission of the City of Biddeford Open Space Committee is to seek ways to protect prime open space for the benefit of all current and future Biddeford citizens.

The City of Biddeford contains nearly 30 square miles (over 19,000 acres) of land, much of which remains privately owned open space. This land often contains important wildlife habitat, is adjacent to the Atlantic Ocean and the Saco River, or is inland; maturing-growth forest or grasslands. As these lands become available for purchase or donation, it is in the interest of Biddeford citizens to consider whether these parcels should become protected open space for the long-term benefit of the community.

2. Introduction

Along the southern coast of Maine, there are numerous small towns and villages that emerge from the economic shadows of New Hampshire and Massachusetts. The City of Biddeford stands above those towns as a larger, more diverse industrial and population center relative to the smaller, quaint coastal villages. Biddeford has a rich history as a thriving textile mill town, fishing community, seasonal resort, with a year around population of over 20,000 people. Many types of natural environments exist in



Main Street Biddeford

Biddeford: the Atlantic Ocean, the Saco River, maturing forest, coastal floodplains, tidal salt marshes and estuaries, barrier beaches, rocky shore land, open meadows, farm and working lands, hayfields, bog lands, low granite headlands, along with large parcels of unfragmented habitat. The man-made environment consists of a well-defined downtown area, a massive complex of old mill buildings, suburbia, farmlands, seasonal coastal homes, regional shopping malls, the University of New England, and Biddeford’s neighbor across the Saco River – the City of Saco. The Maine Turnpike (I-95) and Route 1 both bisect and travel through the City, along with the Eastern Trail Recreation Corridor.

The Biddeford Open Space Committee was established to create an Open Space Plan which would identify the various land, habitat and water features inside Biddeford’s boundaries worthy of potential protection for the enjoyment of current and future residents. The close proximity of valuable natural resources to highly developed areas in Biddeford is very unique to southern Maine. The committee has focused on identifying a wide variety of land parcels for possible conservation, but understands the importance of encouraging and supporting further economic development as well as preserving the value of landowner’s rights.

3. Committee Members and Contributor Acknowledgements

The Open Space Committee was formed at the request of then Mayor Joanne Twomey on November 6, 2008 and held their first meeting in January of 2009. At the present time, the committee is an ad-hoc committee appointed by the Mayor. The current members are:

Bill Durkin, Chairman
Karin Gregory Furman
Dave Anderson
Donna Roberts
Dave Ganter
Mike Viger

We are all Biddeford citizens, landowners, taxpayers, recreationalists, and outdoors people. We include small business owners, realtors, developers, lawyers, conservationists, a Maine guide and fishermen/hunters.

Marcel Polak of the Maine Associations of Conservation Commissions and Denis Rioux of the Biddeford Conservation Commission provide advice to the committee, along with the former Mayor, Joanne Twomey, and have been active contributors to the development of the plan. Richard Rhames, President of the Saco Valley Land Trust, has also been an important contributor to the discussions and report. Daniel Stevenson, Director of Economic & Community Development for Biddeford and Greg Tansley, City Planner, helped define the section on economic benefits to Biddeford of preserving open space. Greg Copeland, Biddeford GIS coordinator and Sue Bickford, of Wells Reserve, prepared numerous drafts (and final copies) of the open space maps. John Bubier, Biddeford City Manager, has been very supportive of our efforts and kindly provided some of the pictures featured in the plan.

We are also grateful to the Land for Maine's Future, Maine Coast Heritage Trust, Rachel Carson National Wildlife Refuge, Saco Valley Land Trust, Blanding's Park Wildlife Sanctuary, Kennebunkport Conservation Trust, The University of New England and numerous other conservation partners for their ongoing financial and other contributions to preserving and protecting open space in Biddeford.

4. History and Background of Biddeford Open Space Planning

Biddeford has long been concerned with land conservation in order to balance development with preserving open space for future generations. The Conservation Commission was established as a standing committee in the early 1980s. A major aspect of the Conservation Committee's mission was to focus on land use, to manage and index the open space assets of Biddeford so that they can be included in the Comprehensive Plan for the City.

The **1999 Biddeford Comprehensive Plan** emphasizes the protection and preservation of the critical resources and habitat within the City. In late 2008, with input from consultant Marcel Polak provided to

Biddeford by the Maine Association of Conservation Commissions, Mayor Twomey appointed a separate committee to specifically focus and address the open space assets of Biddeford and develop a plan to give Biddeford a road map for its future management of open space. The Biddeford Open Space Committee was then formed as an ad-hoc committee charged with reviewing the land assets of the City and developing an Open Space Plan with the assistance of and cooperation of the Conservation Commission.

5. Why an Open Space Plan for Biddeford?

The Biddeford Open Space Committee has generally met monthly for the past three years. The committee has discussed special open space locations in Biddeford, land acquisition funding sources, open space inventory data development, public participation, and reviewed various open space plans from other Maine communities. In the current plan, there is an inventory of open space parcels in Biddeford, various habitat and watershed map overlays, a historical/cultural background of the City and its people and their land use practices, a focus on the Saco River/Atlantic Ocean and their impact on the region, a look at the open space views of Biddeford citizens as well as their recreational preferences, the potential economic benefits of land conservation in the City, funding sources for open space purchase and mechanisms of land protection. The Open Space Plan will be part of the new **Biddeford Comprehensive Plan**, which is being coordinated by the City Planner, Greg Tansley.

The previous **1999 City of Biddeford Comprehensive Plan** detailed a number of key policy areas and implementation strategies related to protecting open space. The 1999 plan put a significant amount of emphasis on looking for ways to protect existing open space as well as expand open space to ensure vital natural resources and habitats were not threatened in the future. **Key policies below related to open space preservation and protection are highlighted below in bold type:**

A. *Water Resources*

Goal: To protect the quality and manage the quantity of our water resources, including lakes, aquifers, great ponds, estuaries, rivers and coastal areas.

Policy: To protect significant aquifers from chemical and septic contamination.

Policy: Protection of freshwater resources.

Policy: To protect the vital resources represented by the Saco River.

B. *Agricultural and Forest Resources*

Goal: To safeguard the City's agricultural and forest resources from development that is incompatible with uses related to the agricultural and forest industry.

Policy: The City shall adopt a comprehensive regulatory and non-regulatory approach to manage development so as to minimize impacts on rural resources.

Policy: The City shall create additional incentives for preservation of rural and natural resource areas.

C. *Critical Natural Resources*

Goal: To protect our critical natural resources including air, wetlands, wildlife and fisheries habitat, sand dunes, shore lands, scenic vistas and unique natural areas.

Policy: The City shall review and upgrade its enacted zoning ordinances which were conceived to protect and preserve the quality of local surface waters and wildlife habitats.

Policy: The City shall implement ordinances and practices that protect its fragile and dynamic coastal sand dune systems.

Policy: The City shall, pursuant to its home rule powers, enact a municipal environmental control and improvement ordinance to protect and enhance the public health and environment, and to prevent threats posed by the discharge of pollutants to air, water and land.

Policy: Since natural and rural landscapes are generally preferred over more urban settings, the City shall protect its open space, farmlands, woodlots, waterfronts and scenic vistas.

D. *Marine Resources*

Goal: To protect our marine resources industry, ports and harbors from incompatible development and to promote access to the shore for commercial fishermen and the public.

Policy: Amend existing zoning regulations and incorporate rules to effect marine resource protection.

Policy: Review existing facilities as well as future proposals to preserve and promote public access to the Saco River and ocean.

E. *Historical and Archeological*

Goal: To protect our historic and archeological resources.

Policy: The City shall create historic zones in the Downtown and/or other significant areas of archeological or historical importance.

F. *Outdoor Recreation*

Goal: To promote and protect the availability of outdoor recreation opportunities for all Biddeford citizens, including access to surface waters.

Policy: Develop a management system that promotes and protects outdoor recreation opportunities and facilities.

Policy: Continue to protect and upgrade existing parks and recreational areas.

Policy: Promote, protect and expand waterfront areas and parks as may be necessary to meet future growth while preserving undeveloped shore land access areas.

Policy: Create wildlife preserves and regional parks for additional outdoor recreation as well as protection of critical wildlife habitat.

G. *Coastal Management Policies*

Goal: Port and harbor development. Promote the maintenance, development and revitalization of the State's ports and harbors for fishing, transportation and recreation.

Policy: Amend existing zoning regulations and incorporate rules to effect marine resource protection.

Goal: Marine resource management. Manage the marine environment and its related resources to preserve and improve the ecological integrity and diversity of marine communities and habitats, to expand our understanding of productivity of the Gulf of Maine and coastal waters and to enhance the economic value of the State's renewable marine resources.

Policy: Amend existing zoning regulations and incorporate rules to effect marine resource protection.

Goal: Shoreline management and access. Support shoreline management that gives preference to water-dependent uses over other uses, that promote public access to the shoreline and that considers the cumulative effects of development on coastal resources.

Policy: Review existing facilities as well as future proposals to preserve and promote public access to the Saco River and ocean.

Goal: Scenic and natural area protection. Protect and manage critical habitat and natural areas of state and national significance and maintain a scenic beauty and character of the coast even to area where development occurs.

Policy: Since natural and rural landscapes are generally preferred over more urban settings, the City shall protect its open space, farmlands, woodlots, waterfront, and scenic views.

Goal: Recreation and Tourism. Expand the opportunities for outdoor recreation and encourage appropriate coastal tourism activities and development.

Policy: Create wildlife preserves and regional parks for additional outdoor recreation as well as protection of critical wildlife habitat.

Goal: Water Resources. Restore and maintain the quality of our fresh, marine and estuarine waters to allow for the broadest possible diversity of public and private uses.

Policy: Protection of freshwater resources. Since wetlands are vital to the water quality in our watersheds, such wetlands must be protected along with the Saco River.

6. Definition of Open Space

Open space is generally defined as undeveloped land and can include:

- Land with important ecological features, such as endangered or rare plants and animals
- Large, unfragmented blocks of land which could be preserved as habitat or used for recreation, such as hiking, hunting, fishing, and biking/off road vehicle/snowmobiles trails
- Natural and water resources, including wildlife habitats and fresh/salt water access
- Cultural resources, such as Native American settlements, early graveyards and building sites
- Farm lands, local farming operations and working landscapes, both active and inactive
- Scenic vistas along marshes, rivers, streams and the ocean
- Historic open space sites, such as old forts and early industrial sites
- Passive recreational resources, including trails such as Riverwalk and the Eastern Trail Corridor
- Parks, Athletic playing fields/courts/playgrounds for team and resident recreation
- Community Supported Agriculture (CSA) parcels, including community gardens
- Working and pleasure waterfront, such as river and ocean rights of way, boat yards and lobstering/fishing docks in Biddeford Pool.

7. Benefits of Open Space to Biddeford Inhabitants

Open space preservation benefits three primary constituents who currently live in Biddeford or will in the future.



Moose and Calf

First and foremost, in many people's minds, are the non-human creatures that have lived on this planet for millions of years. We share Biddeford with many thousands of species of insects, reptiles, fish, game and non-game animals and plants. They, like us, need somewhere to live, eat and reproduce. Providing space for biodiversity is a critical aspect of open space preservation. Many of these creatures survive only in very specific habitats. Once the habitat is developed, the creatures are often displaced or endangered.

Second, preserving open space is a gift to future generations. Protecting key open space parcels from development today will provide for scenic views and recreational activities for our grandchildren and their children.

Third, preserving open space is a critical part of sustainable economic development for current Biddeford citizens. Attracting new businesses is often about providing a wide range of benefits for prospective employees, including the ability to utilize parks and recreation areas. According to the authors of the Land for Maine's Future June 2011 Report, **Evaluating the Economic Benefits of Land Conservation in Maine**, the modern land conservation movement has sustained itself for over 100 years through a nostalgic, and sometimes difficult to define, appreciation for nature, wildlife, and wilderness. In the last 20 years, that idealism has come to recognize that the lands it sought to protect provide quantifiable economic benefits, which include revenue related to recreation, water purification, public health, clean air, tax base protection, natural disaster mitigation, species habitat, and jobs related to resource extraction. While a large number of conservationists rightly question the ability of economics to distill all of a parcel's value in terms of dollars, environmental economics represent a tremendous asset for the conservation movement as it seeks to conserve lands, especially in challenging fiscal times.

There is an increasing need for open space conservationists to explain the economic benefits associated



[Sunrise over Biddeford Pool](#)

with their projects. Although it is often difficult to fully account for nature's value in monetary terms, it is a practical necessity to attempt to do so. Fortunately, even when the practitioner restricts their analysis to the most pedestrian of economic measures, conservation provides numerous benefits. It fosters investment, encourages recreation and tourism, attracts a skilled labor force, protects watersheds, augments municipal tax revenues, provides habitat for game, and protects traditional natural resource industries, in addition to numerous other benefits.

Biddeford is similar to other communities in Maine in recognizing that land conservation is a long-term investment strategy. It is important to define the economic benefits associated with open space and park system preservation since municipalities are heavily dependent on property taxes for operating revenue. This is compounded by competing interests for land uses and a strong history of property rights preservation in Maine. Many recent studies, however, have affirmed that open space and park system preservation fosters many benefits, including, but not limited to, improving the quality of life for residents, attracting capital investment, encouraging recreation and tourism, attracting a skilled labor force, protecting watersheds, augmenting municipal tax revenues through increased property taxes from adjacent land and buildings and decreased service costs that can be attributable to sprawl, providing habitat for significant wildlife, and protecting traditional natural resource-based industries.

Both direct economic impacts and indirect economic benefits of land conservation contribute to the local economy. Research shows that entrepreneurs and skilled workers place high value on access to open spaces, recreational areas including water and water-based recreation, natural landscapes, and

high air and water quality when making decisions regarding location/relocation. These have been shown to be a part of the quality-of-place mix that contributes to attracting talent and generating economic activity.

In addition, conservation projects can create both direct and indirect economic benefits. Direct economic impacts include revenue generating activities linked to conservation such as:

- Working-landscape related jobs including forestry, guiding, hospitality, agriculture, and fishing;
- Revenue from the harvest and sale of farm, forest and marine products;
- Revenue from recreation and tourism including sale of permits, gear, etc.;
- Development of infrastructure that supports or enhances working landscapes including agricultural processing, creation of rail trails, construction of huts, etc.; and
- Jobs and investment from the development of new products and services derived from conserved lands including farmer's markets and tourism-related businesses.

Indirect economic benefits from open space conservation encompass quality of life indicators (typically realized in densely populated areas) such as:

- Increased land and home value in surrounding areas;
- Mitigation of costs associated with municipal services;
- Storm water mitigation and retention;
- Drinking water and air quality protection along with other ecosystem services;
- Health benefits from increased outdoor recreation; and
- Preservation of valued views, open space, and landscapes that make Maine distinct and attractive to tourists and new residents (Land for Maine's Future, *Supporting Rural Economies through Land Conservation in Maine*, November 2010).

8. Summary of Public Input to the Plan

The Open Space Committee sponsored public meetings, conducted a survey of Biddeford residents and led an Open Space Conference to understand public priorities for open space protection as well as how best to fund possible open space acquisition in the future.

Community Meetings

First, a natural resource based planning presentation was held in Biddeford City Council Chambers in November 2009. Here is a summary of the press release for the presentation:

"Where will you be able to hunt, cross-country ski, fish or simply look for wild flowers in Biddeford in 2030? York County is experiencing accelerating growth. As private rural lands are split up and developed and traditional access and opportunity for outdoor recreation becomes increasingly scarce we incrementally lose Maine's most promising economic advantage—"Quality of Place"—that will determine our future prosperity as a state. Each and every local land use decision has implications for local flora and fauna and resource opportunities available to the next generation. Knowledge of our local natural resources is a critical first step when developing plans to protect our rural character and our

town's quality of place. To that end, the City of Biddeford's Open Space Committee will host a presentation by Maine Inland Fisheries and Wildlife, "Beginning with Habitat" on tools available (see <http://www.beginningwithhabitat.org>) to mesh future growth with conservation of key habitats on Nov 30, 2009 at 7 PM at City Hall. All are welcome to attend."

In addition, on October 20, 2011, wildlife biologist Mark Ward, a consultant to the Biddeford Conservation Commission, and several University of New England faculty members, sponsored a presentation entitled, "What's in Your Backyard?" which highlighted the diversity of flora and fauna in Biddeford as well as in its rivers, lakes and oceans.

The meetings were well attended by the public and generated a number of open space preservation ideas which are included in the present plan.

Community Survey

Second, we conducted an online and paper survey of interested city residents to determine key priorities in protecting prime open space. The results of the initial survey are summarized below. Please note that individual question totals may not add to all participants and percentages may not add to 100% due to incomplete survey data for some participants.

Survey Demographics: In total, 130 people completed the survey, which was featured on the City of Biddeford's web site from early September to the end of November, 2009. Some respondents also picked up and completed a copy of the survey from the Biddeford City Clerk's office. The vast majority of respondents completed the survey online. Survey demographics were as follows:

- All but 11 said that they were full-time residents of Biddeford.
- Five percent of the participants were 16-25 years old, 10% were 25-35, 38% were 35-55, and 46% were 55 and older.
- Twenty six percent of the participants live downtown, 19% in the rural areas, 50% on the coast, and 5% on the river (one lives in the "suburbs" that used to be rural).
- Over 100 participants own a home, 33 rent, 23 own rental property and 11 own a second home (note: there is double counting in these results due to multiple responses to the question).
- Four percent of the participants have lived in Biddeford less than six months, 8% 6 months to 3 years, 8% 3 to 5 years, 17% 5 to 10 years, 20% 10 to 20 years, and 43% for more than 20 years.

Survey Results: In terms of priorities for protecting open space in Biddeford:

- 26% of the survey participants chose large, city maintained parks (such as Clifford Park, with recreational trails, etc.) as their top priority,
- 25% of the survey participants chose open space with no access (critical wildlife habitat),
- 17% chose open space with limited access (hiking trails, non-motorized bike trails, horse trails, etc.),
- 16% chose pocket, city maintained parks (small parcels in the downtown area),
- 2% chose water resources, including inland/coastal wetlands,

- 1% chose open space with motorized access (snowmobiles, off-road vehicles, ATV trails) or open space with outdoor activities (hunting, fishing), and
- Scenic views and vistas and farmland community gardens received no votes.

89% of the participants were in favor of a multi city/town open space planning effort, involving combining open space planning resources with cities and towns that border Biddeford and share similar open space issues, such as the Saco River watershed.

72% of the participants would be willing to support a City-endorsed effort to buy and preserve prime open space in Biddeford.

Appendix H (page 65) contains the survey questions and option responses to each question, along with demographic information collected on both online and hand written surveys.

Community Conference

Finally, an Open Space Conference, entitled “*Land, Parks and Trails for Biddeford’s Future*” was held at the University of New England on May 6, 2010, featuring speakers from numerous land conservation groups in Southern Maine. The conference featured numerous speakers describing the benefits of preserving open space, including Dr. Chris Fuert, Department of Environmental Studies at the University of New England; Ezekiel Callanan, Executive Director of the Heart of Biddeford; Steve Walker, State of Maine Inland Fisheries & Wildlife; and Marcel Polak, Maine Associations of Conservation Commissions. A complete agenda can be found in Appendix G (page 64).

The conference was designed to provide residents with an overview and details of Biddeford’s available open space. The Biddeford Open Space Plan Committee sought resident’s input into creating the vision and implementing the plan. Open Space is generally considered to include wildlife habitat, urban parks, scenic areas, and recreational areas, among others. Citizen participation and input into the Open Space Plan was used to determine what open space to potentially protect in Biddeford. Some of the conference presentations and discussion areas included:

Saco River - recreation, economy, ecology—protecting and conserving Biddeford’s most important natural habitats should be a key part of our Open Space Plan. Connecting of natural resources to recreation and the local economy, as these are components of an integrated healthy overall system, was discussed. The Saco River and its many recreational and commercial uses, as an example, exemplify these diverse qualities.

Green Spaces Protection—Biddeford has unique natural resources of state wide significance, perhaps surprising to some because it is a city with an industrial past. Identifying these areas and implementing strategies for protecting them should be an important aspect of the Biddeford Open Space Plan. Biddeford can integrate a vibrant downtown and a healthy local economy with permanently protected natural areas.

Trails and Urban Parks—protecting important natural resources in Biddeford are critical for ecological reasons, but they are also an important component of a livable vibrant city. Incorporating parks and

trails in these important natural areas provide much needed environmental education and a greatly valued recreational network for residents and visitors.

Again, the discussions at the conference between presenters and participants generated many new ideas on preserving open space which are included in the current plan.

9. Guiding Vision and Plan Goals

Using the public input from the meetings, surveys and conference, the Committee developed the following set of guiding principles for determining high priority open space parcels which could be considered for protection via acquisition, conservation easements or inclusion in Current Use Programs going forward (*Note-these are not in any priority order*):

Urban Open Space

- a. *Open space parcels surrounding large, city maintained parks*
- b. *Open space parcels which could be used for the development of pocket parks in residential Biddeford neighborhoods*
- c. *Open space parcels which could become large, city maintained parks or additional athletic fields*
- d. *Community sustainable agriculture sites for urban dwellers*

Rural Open Space

- a. *Open space parcels surrounding endangered and critical wildlife habitat*
- b. *Open space parcels which could be used for limited access activities (hiking, non-motorized bike trails, horse trails, etc.)*
- c. *Open space parcels from existing Current Use parcels (farm land, tree growth, open space land in Maine's Current Use Programs)*
- d. *Open space parcels around the Saco River/Atlantic Ocean/Eastern Trail Corridor/Riverwalk projects*
- e. *Open space for hunting, fishing, and motorized vehicle use (such as ATV's and snowmobiles)*
- f. *Large, undifferentiated open space parcels with maturing-growth forest and/or grasslands*

10. Biddeford Open Space Inventory-Summary

Besides the City itself, Biddeford has numerous conservation partners (see Appendix A) which own and



Rachel Carson Reserve Biddeford

protect open space in Biddeford. In all, approximately 5,162 acres (27% of total Biddeford acreage) of land in Biddeford (see Exhibit I) is in a variety of protection programs by the City, various Federal, State and local land trusts and by State of Maine Current Use programs. Of this 27% of total Biddeford acreage, over 1,667 acres (9 %) of open space is permanently protected by various conservation partners and 3,495 acres (18%) are semi-protected in State of Maine Current Use Programs (See

Appendix B for description). By comparison, approximately 14 % of all land in the State of Maine is permanently protected by land trusts, conservation groups, state and federal agencies. A more detailed description of each conservation partner/current land use program and their specific holdings can be found in Appendix B. In addition to open space land, the City of Biddeford has a number of river and beach rights of way bordering both the Saco River and the Atlantic Ocean. Access by the public to both water resources is an ongoing challenge as many traditional right of ways have been closed to the public over the years. Appendix K summarizes the major river and ocean public right of ways in the City.

Exhibit I	
Open Space Acreage in Biddeford	
(As of July 2012)	
<u>Conservation Partners</u>	<u>Total Acreage</u>
Saco Valley Land Trust	725.46
Rachel Carson National Wildlife Sanctuary	244.55
City of Biddeford	243.83
Blanding's Park Wildlife Sanctuary	197.44
Kennebunkport Conservation Trust	99.92
State of Maine	91.74
Maine Audubon Society	54.77
City of Biddeford Surplus Land*	4.64
Biddeford Pool Improvement Association	3.21
Biddeford Pool Land Trust	1.75
Subtotal	1667.31
<u>Current Use Programs**</u>	
Open Space Programs	206.12
Tree Growth Programs	1992.00
Farm Land Programs	1297.00
Subtotal	3495.12
Grand Total	5162.43

* City of Biddeford Surplus Land is not currently protected, but available for possible conservation.

** State of Maine Current Use Program, which is explained in detail in Appendix B, allows land to be removed from these programs if the landowner chooses and pays back deferred taxes.

11. Biddeford Open Space Maps and Descriptions

Appendix D contains various open space maps prepared in April 2012 by Greg Copeland, City of Biddeford Engineering Department, GIS Mapping Group, and summarizes land use in Biddeford, including rare plant and animal habitat, conservation and recreation lands and large remaining, unfragmented blocks of land. Electronic copies of these maps are available on the City of Biddeford website in the map room.

Map 1, entitled **Aerial Photography**, shows Biddeford from the air as of May 2007.

Map 2, entitled **Current Use, Conservation and Recreation Lands**, details Federal, State, City and non-profit held conservation land in Biddeford.

Map 3, entitled **Land Use**, details land use in the City of Biddeford in 2006. Only 19% of our total land is presently developed, while farms encompass 12%, forested wetlands 8%, wetlands 4%, grasslands 5% and forest land amount to 51% of the total.



Vernal Pool

Map 4, entitled **Beginning with Habitat Focus Areas**, details the Biddeford/Kennebunkport Vernal Pool Complex Focus Area—an area rich in springtime pools where salamanders and turtles breed and live.

Map 5, entitled **Rare Plants & Animals**, shows where endangered plants and animals have been observed and live, including the Biddeford/Kennebunkport vernal pool complex focus area.



Blue Spotted Salamander

Map 6, entitled **Large Undeveloped (Unfragmented) Blocks**, details remaining large blocks of undeveloped land within the City of Biddeford boundaries.

Map 7, entitled **Riparian Buffer**, details *Beginning with Habitat* riparian buffers (protected areas around water resources) within Biddeford.

Map 8, entitled **Riparian Buffer Land Use**, details the total riparian buffers in Biddeford by type of land use. In all, 4,206 acres or 22 percent of total Biddeford acreage fall within the buffer zones.

Map 9, entitled **Conserved Riparian Buffer**, shows the 701 acres, or 17 percent of Riparian area in Biddeford is protected in conservation.

Map 10, entitled **Watersheds**, shows the watersheds (drainage areas) of the five rivers with watersheds inside Biddeford—the Batson River, Goosefare Brook, Kennebunk River, Little River and the Saco River.

Map 11, entitled **Wetlands Functions**, details shellfish habitat, finfish habitat, flood control, sediment retention, cultural importance and plant/animal habitats that rely on wetlands for survival.

Map 12, entitled **Scenic Inventory**, details scenic view sheds in the City of Biddeford.

Map 13, entitled **Official Zoning Map**, shows current zoning as of February 2010 in the City of Biddeford.

Appendix E summarizes detailed habitat, flora and fauna information on eight major unfragmented blocks in Biddeford—West Brook, Moors Brook, Bush Brook, Little River, Proctor Road, Swan Pond Brook, Buzzell Road and River Road.



Blanding's Turtle

Appendix F contains a summary of rare and endangered species found not only in the unfragmented blocks and also in other parts of Biddeford, including the Blanding's Turtle.

Appendix G summarizes the Biddeford Open Space Conference held in May of 2010.

Appendix H presents the Open Space Survey questions, results and verbatim comments

Appendix I contains the results of a recent University of New England study of the Saco River watershed, including documentation of resident plants, bacteria and marine animals.

12. Recent Open Space Acquisitions

Four significant open space acquisitions and conservation easements totaling 481 acres were completed in Biddeford via unique public and private land preservation partnerships over the last two years:

Boutin Property/Clifford Park Expansion

The City of Biddeford, with the assistance of Maine Coast Heritage Trust (MCHT) and the Maine Natural Resource Conservation Program acquired the **Boutin Property**, a 53 acre parcel in the middle of Clifford Park from the Boutin family. The property fills a significant hole in the park and adds additional trails and recreation opportunities for the citizens of Biddeford.

Residents of Biddeford have walked and biked through Clifford Park for years, unaware that nearly 40% of the land was privately owned. Thanks to financial support from the City, a grant from Maine Coast Heritage Trust, and other funding, these private acres are now part of the municipal park. This new acquisition not only ensures access to popular trails, it also protects valuable wildlife habitat in the heart of southern Maine.

Clifford Park has long been popular with Biddeford residents for its hiking and mountain bike trails, as well as its proximity to the 16,000 undeveloped acres of the Biddeford/Kennebunkport Vernal Pool Complex Focus Area (approximately 55% of these acres are in Biddeford). The 80-acre park was actually in two sections, with the privately owned 53 acres of the Boutin property bisecting it. When the Boutin family decided to sell, MCHT stepped in to facilitate the process. MCHT provided \$50,000 and helped the city's Open Space Committee win an \$110,000 grant from the Maine Natural Resource Conservation Program. The Biddeford City Council unanimously approved appropriating \$130,000 to complete the project. The City then donated an easement to MCHT to assure permanent protection. The expansion of Clifford Park is a perfectly-sited piece of conserved lands in a city that is really interested in protecting vital community places for the future. (Source: **Maine Coast Heritage Trust** website).

Timber Point & Timber Island

The Rachel Carson National Wildlife Refuge, with the assistance of the Trust for Public Lands (TPL), the Kennebunkport Conservation Trust, the US Government and private donors acquired **Timber Point**, a spectacular ocean-front parcel abutting Kennebunkport.

Timber Point was one of the last large, privately owned, undeveloped properties along the 50-mile coastline between Cape Elizabeth and Kittery. Located in Biddeford where the Little River meets the Atlantic, Timber Point includes a 97-acre peninsula and a 13-acre island. Its shoreline offers both rocky oceanfront and a sheltered, sandy cove that are ideal habitat for a wide variety of

Rachel Carson National Wildlife Refuge: Timber Point



wildlife, migratory birds, and waterfowl. Generations of visitors to Goose Rocks Beach have long appreciated Timber Point's scenic backdrop.

TPL and its partners, the Kennebunkport Conservation Trust and Friends of Rachel Carson National Wildlife Refuge, met the \$2 million private fundraising goal necessary to secure this treasured piece of the Atlantic shoreline as an addition to the refuge. More than 600 individuals contributed to the effort, which drew on support from companies, foundations, and the local Kennebunkport and Biddeford Pool land trusts. The parcel will become part of the Rachel Carson National Wildlife Refuge's Little River Division, and the family will retain 13 acres and an existing farmhouse. (Source: **Trust For Public Lands** website).

Cranberry Marsh North

A 170-acre parcel of land in eastern Biddeford, a piece of the ecologically important Biddeford and Kennebunkport Vernal Pool Complex, was protected with a conservation easement purchased by the Saco Valley Land Trust. **Cranberry Marsh North** supports several species of rare plants and animals, including the spotted turtle. The easement will keep the land open to the public and prohibit development.

The parcel is at the end of Georgetown Drive off West Street. The Saco Valley Land Trust (SVLT) purchased the conservation easement on the property for an undisclosed sum from the estate of Arlene Thompson Chappell. Part of the land at Cranberry Marsh North was farmed as a cranberry bog in the 1700s. Chappell's easement sale, through her estate, is within the region known as the Biddeford/Kennebunkport Vernal Pool Complex Focus Area, which the State of Maine and the Maine Coast Heritage Trust have designated as an important conservation area. MCHT also assisted SVLT with easement negotiations and fundraising.

The site contains many vernal pools—temporary basins of water formed by snow melt and spring runoff that dry out during summer. The pools provide important breeding grounds for amphibians and invertebrates. Blanding's Turtles, pale green orchids, and small reed grass are among the rare species that inhabit the area. The vernal pool focus area is almost equally divided between Biddeford and Kennebunkport. The Kennebunkport Conservation Trust has already protected approximately 1,458 acres of the area. (Source: **The Portland Press Herald**, August 24, 2010; updated in January 2012 by the MCHT).

New England Woods

In late December 2011, the University of New England signed documents placing a conservation easement on **New England Woods**, 161 acres of its more than 300 acre parcel lying between West Street and Route 9 in eastern Biddeford near their campus. Saco Valley Land Trust holds the easement.

The easement was donated to SVLT as part of a mitigation agreement between the U.S. Army Corps of Engineers and the Maine DEP as part of a campus expansion project further east along Route 9. The land lies within the Biddeford/Kennebunkport Vernal Pool Complex Focus Area. Like most land within

the complex, the New England Woods is rich in forested wetlands and vernal pools as well as being home to rare species of turtles.

The University of New England Environmental Studies department uses the land as an outdoor classroom for UNE environmental studies students. Research by faculty and students is developing a body of information on the tract and its plants and wildlife. The Maine Coast Heritage Trust assisted SVLT with the easement negotiations. (Source: **Maine Coast Heritage Trust**, January 2012).

13. Recommendations and Implementation Plan

The Open Space Committee has the following five (5) recommendations for protecting, acquiring and managing additional high priority open space parcels in Biddeford:

1. **Establish open space preservation strategies to protect or acquire high priority available parcels**

Urban Open Space

- A. *Open space parcels surrounding large, city maintained parks*—protect or acquire adjacent land to existing parks if undeveloped parcels come available, such as the addition of the Boutin parcel to Clifford Park in 2011
- B. *Open space parcels which could be used for the development of pocket parks in residential Biddeford neighborhoods*—preserve current and future city-owned parcels in Biddeford neighborhoods which could become future recreation sites for citizens
- C. *Open space parcels which could become large, city maintained parks*—acquire parcels to convert into recreation and team sports fields to accommodate Biddeford population growth
- D. *Community sustainable agriculture sites for urban dwellers*—evaluate City of Biddeford surplus land parcels for possible urban garden locations

Rural Open Space

- A. *Open space parcels surrounding critical wildlife habitat*—protect or add adjacent land to existing protected open space, such as Biddeford Pool, Rachel Carson National Wildlife Refuge, Saco River corridor, deer yards and the Biddeford/Kennebunkport Vernal Pool Complex Focus Area (see Rare Plants & Animals map in Appendix C on page 48)
- B. *Open space parcels which could be used for limited access activities (hiking, non-motorized bike trails, horse trails, etc.)*—protect or acquire properties such as the Clair family parcel in West Biddeford, create a town forest and open them to public recreation

- C. *Open space parcels from existing Current Use parcels (farm land, tree growth, open space land in Maine’s Current Use Programs)*—protect or acquire Current Use parcels if they come up for sale, such as Timber Point
- D. *Open space parcels around the Eastern Trail Corridor/Riverwalk projects*—protect or acquire adjacent undeveloped land to extend/protect current recreational trail projects in the City of Biddeford
- E. *Open space for hunting, fishing, and motorized vehicle use (Such as ATV’s and snowmobiles)*—acquire open space suited for these activities, such as riparian rights along the Saco River
- F. *Large, undifferentiated open space parcels with maturing-growth forest and/or grasslands*—protect long-existing natural woodland and grasslands by acquiring land-locked parcels surrounded by development, but with no legal rights of way

2. **Create a dedicated, city-managed fund for the acquisition of open space in Biddeford**

- A. *Establish a city-managed fund, with the potential for matching federal, state and private contributions, for open space acquisition*
 - 1) Change regulations to encourage large development projects to donate cash and land to open space preservation
 - 2) Allocate funds from the city budget—such as real estate closing fees, building permit/licensing fees, etc.—to open space acquisition
 - 3) Add penalty fees for owners taking land out of tree growth, open space, farm and waterfront Current Use Programs to the fund
 - 4) Issue public bonds to fund open space acquisition
 - 5) Use City surplus funds to acquire open space parcels (similar to the Boutin transaction)
 - 6) Encourage private contributions to a nonprofit open space preservation program, such as municipal or private land trusts, with tax deductibility status
- B. *Seek state and federal matching funding for open space land purchases*
 - 1) Investigate relevant state, such as the **Land For Maine’s Future** program, and federal programs, for matching funds
 - 2) Understand funding cycles and requirements
 - 3) Establish relationships with relevant funding coordinators
- C. *Work with not-for-profits, such as **The Trust for Public Lands**, and other groups to assist in funding proposed open space purchases.*

3. Continue to work with Biddeford conservation partners (see Appendix A), land owners and developers to identify, track status and purchase high priority open space parcels

- A. *Schedule frequent joint meetings with Biddeford conservation partners and the City committees in charge of open space preservation*
 - 1) Determine high priority non-protected opens space parcels
 - 2) Monitor status of high-priority open space parcels and whether they are likely to come up for sale or development in the near term
 - 3) Engage in dialogue with open space owners and developers to assess how to best preserve all or part of the high priority parcels over the long term
- B. *Keep in touch with key local, state and federal open space acquisition funding sources to determine available programs and monies that could be brought together to acquire high priority parcels*
- C. *Work in conjunction with the City Planner, City Manager and the City Council to keep them well informed of all activities regarding high priority open space acquisition options or plans*

4. Strengthen existing and proposed land use regulations and tax incentives to help preserve open space

- A. *Support the preservation and enhancement of State of Maine Current Use Programs*
- B. *Avoid changes to zoning regulations that could negatively impact open space preservation*
- C. *Maintain cluster zoning in rural areas*
- D. *Promote sub-division/major development planning that preserves open space as part of a project*
- E. *Publicize and encourage landowners to consider adding conservation easements on their property*
- F. *Encourage the protection of farm lands for future generations*
- G. *Support the development of a build-out scenario for Biddeford in the proposed City Comprehensive Plan, detailing potential residential, commercial and industrial development under current zoning regulations.*

5. Promote the variety and possible uses of Biddeford's open space to potential residents and companies looking to locate in Biddeford

- A. *Feature open space and recreation sites on the City's website and in economic development packages so that individuals and businesses seeking to locate in Biddeford are aware of the City's commitment to preserving open space*
- B. *Coordinate open space planning strategies and recommendations with non-profit downtown development groups, such as the **Heart of Biddeford** and **Engine**; including helping them develop a long-term plan for improving downtown parks.*

Biddeford Open Space Plan

Appendices

A. Stakeholders and Community Partners.....	24
B. Open Space Funding Sources	25
C. Biddeford Open Space Inventory	30
D. Biddeford Open Space Maps.....	45
E. Undeveloped Habitat Blocks.....	58
F. Summary of Biddeford Wildlife Data	63
G. Biddeford Open Space Conference	65
H. Community Survey Instrument	67
I. University of New England: Sustaining the Saco River Study.....	75
J. City of Biddeford: Land for Maine’s Future Bonds Voting Results	81
K. River and Ocean Rights of Way in Biddeford.....	82
L. Bibliography.....	85

Appendix A: Stakeholders and Community Partners

Biddeford Conservation Partners

Biddeford Pool Land Trust P.O. Box 36 Biddeford Pool, ME 04006

Biddeford Pool Improvement Association P.O. Box 254 Biddeford Pool, ME 04006

Blanding's Park Wildlife Sanctuary (www.bpws.org)

Rachel Carson National Wildlife Refuge (<http://www.fws.gov/northeast/rachelcarson/>)

Maine Audubon (<http://www.maineaudubon.org/>)

Saco Valley Land Trust (<http://www.sacovalleylandtrust.org/>)

State of Maine (<http://www.maine.gov/doc/parks/contact/index.html>)

City of Biddeford (<http://www.biddefordmaine.org/>)

Kennebunkport Conservation Trust (<http://kporttrust.org/>)

Nature Conservancy (www.nature.org/maine)

Maine Coast Heritage Trust (<http://www.mcht.org/>)

Eastern Trail Alliance (<http://www.eastertrail.org/>)

Riverwalk Coalition (<http://www.heartofbiddeford.org/biddeford-riverwalk/>)

State of Maine Current Use Programs

(<http://www.maine.gov/revenue/propertytax/propertytaxbenefits/CurrentUseLandPrograms.htm>)

University of New England (<http://www.une.edu>)

Appendix B: Open Space Funding Sources

Appendix B details various private, state and federal open space funding sources (in no particular order of significance):

Fund for Maine Land Conservation (State of Maine)

The Fund for Maine Land Conservation seeks to support projects that advance land conservation and strengthen the ability of land conservation organizations and entities to conserve land. The fund does not currently have the resources to support the actual purchase of land or easements or other costs associated with those transactions. Projects that involve collaboration are strongly encouraged.

Land for Maine's Future (State of Maine)

The Land for Maine's Future program provides funds to help purchase development rights in order to preserve and protect key properties on the coast that provide access to and support commercial fisheries activities. The Land for Maine's Future program seeks to conserve lands that have exceptional recreational or ecological value along with working lands for farms, forests, tourism, and working waterfronts. These lands are the foundation for Maine's natural resource-based economy.

The Maine Natural Resources Conservation Program (State of Maine)

The Maine Natural Resources Conservation Program (MNRCP) was created to manage the allocation of funds collected through the "In Lieu Fee Compensation Program". This voluntary program allows entities that are impacting natural resources, primarily wetlands, to make a payment directly to the Maine Department of Environmental Protection (DEP) as an alternative to the traditional mitigation process. Fees collected by DEP are deposited in a Natural Resource Conservation Fund administered by The Nature Conservancy in Maine (TNC).

Communities for Maine's Future (State of Maine)

A funding resource at the state level is the Communities for Maine's Future (CMF) grant program. CMF is part of a bond initiative approved by Maine voters in 2010. The program provides \$3.5 million to Maine communities for the purpose of downtown revitalization. Eligible activities include the rehabilitation of buildings, streetscape improvements, walking trails and other recreational improvements, and the development of facilities in support of the "creative economy". Projects involving private property must include a public benefit. The program requires a dollar for dollar match. Eligible projects will be evaluated in terms of economic development, downtown revitalization, historic preservation, tourism development, sustainable development, and the degree of collaboration.

Maine Trails Funding Program (State of Maine-Bureau of Parks and Land)

The Bureau of Parks and Lands is the state agency to administer the program in Maine. Within the Bureau, the Division of Grants and Community Recreation provides day-to-day supervision of Recreational Trails Program (RTP) matters. The funds are derived from a percentage of gasoline taxes paid on

non-highway recreational use in off-highway vehicles from the Highway Trust Fund into the RTP for trail development, improvement and maintenance.

Eligible projects may include:

- Maintenance and restoration of existing recreational trails
- Development and rehabilitation of trail side and trailhead facilities and trail linkages for recreational trails
- Construction of new recreational trails
- Acquisition of easements or fee simple title to property for recreational trails or recreational trail corridors
- Operation of educational programs to promote safety and environmental protection as those objectives relate to use of recreational trails

The State has determined it will provide funds received under this program as grants-in-aid to municipalities, other qualified sub-divisions of state government and to qualified non-profit organizations under guidelines established by the Bureau of Parks and Lands in conjunction with the Maine Trails Advisory Committee.

Applications for RTP funding must stipulate full support of the program and must ensure public access to the recreation improvements funded by the grant.

Forest Legacy Program (U.S. Department of Agriculture-U.S. Forest Service)

The Forest Legacy Program (FLP) protects working forests, water quality, habitat, forest products, opportunities for recreation and other public benefits. FLP makes funding available to states on a matching basis primarily for the acquisition of conservation easements though it can also be used for acquisition of fee lands that will be managed for multiple uses.

Community Forest and Open Space Conservation (U.S. Department of Agriculture-U.S. Forest Service)

The Community Forest and Open Space Conservation Program makes funds available to local governments and non-profits for establishing community forests. When substantial funding is established for this program, it could be very beneficial to selected communities located on the edge of the Maine woods. Its use in Maine could be enhanced if there was the flexibility to utilize conservation.

Healthy Forest Reserve (U.S. Department of Agriculture-Natural Resources Conservation Service)

The Healthy Forest Reserve Program (HFRP) was established to promote the recovery of threatened and endangered species, improve biodiversity and enhance carbon sequestration. Funds can be utilized for the acquisition of term and permanent conservation easements and other conservation practices.

Wildlife Habitat Incentive Program (U.S. Department of Agriculture-Natural Resources Conservation Service)

The Wildlife Habitat Incentive Program (WHIP) assists landowners, as well as non-profit organizations, to improve habitat for species of state, tribal and national significance.

Healthy Forest Reserve Program (U.S. Department of Agriculture-Natural Resources Conservation Service)

The stewardship side of this program assists landowners with management for threatened and endangered species, biodiversity and carbon sequestration.

Land & Water Conservation Fund (U.S. Department of the Interior)

The country's most important funding source for acquisition of conservation lands is used for the acquisition of federal lands and easements related to federal units. The stateside portion of LWCF makes funds available directly to states for state-selected projects.

North American Wetlands Conservation Act (U.S. Department of the Interior—U.S. Fish & Wildlife Service)

The North American Wetlands Conservation Act (NAWCA) grants to states, tribes or land trusts are used to acquire fee and conservation easements that protect significant wetlands.

North Atlantic Landscape Conservation Cooperative (U.S. Department of the Interior—U.S. Fish & Wildlife Service)

The North Atlantic Landscape Conservation Cooperative exists to form a conservation science-management partnership focused on collaboratively developing science-based recommendations and decision-support tools.

Rivers, Trails Conservation Assistance Program (U.S. Department of the Interior—National Park Service)

When requested by a community, non-profit organization or other partners, RTCA provides technical assistance on trails, river and conservation projects. RTCA seeks to serve as a catalyst for projects where there is strong community support. RTCA could play an expanded role in developing and implementing river and recreation initiatives that evolve from the *Keeping Maine's Forests* initiative and are supported by surrounding communities.

Community Development Block Grant Program (U.S. Department of Housing and Urban Development)

The Community Development Program is a federal program intended to provide decent affordable housing and expanded economic opportunities for primarily lower and moderate income people. From 1975 to 1995, the City of Biddeford captured approximately \$15 million in Community Development Block Grant Funds (CDBG) made available through the state in competition with towns and cities throughout Maine. In 2004, Biddeford was awarded entitlement status, joining 5 other Maine cities that receive annual allotments from the federal government and no longer have to compete for state-administered CDBG funds. Since that time Biddeford has received about \$500,000 per year (the 2010 amount is \$527,233) to fund a broad variety of community development and recreation efforts.

Maine Farmland Trust (Private)

The Maine Farmland Trust (MFT) is an award-winning statewide organization committed to strengthening farming in Maine.

Their mission is to:

- Protect and preserve Maine's farmland
- Keep agricultural lands as working lands
- Support the future of farming in Maine

Structured as a land trust, MFT's is the state's leading force in preserving farmland, often working in partnership with local and regional land trusts. Much of the farmland they protect is achieved through donated and purchased agricultural easements. But both those efforts require a willing and patient landowner. In many instances, landowners do not have that luxury: they must sell and do so quickly. Through MFT's Buy/Protect/Sell (BPS) program, vulnerable farmland is purchased, permanently preserved through an easement, then sold - either as a whole or in parts - to a farmer at a more affordable "farmland value". Often the land is bought by a farmer participating in the FarmLink program. Other times, deals are designed to support existing farmers who are looking to secure land they currently lease or to bring additional land into their operation. To date, MFT has worked with 18 Maine properties totaling 4,032 acres.

All of these projects result in farmers getting on land they could not otherwise afford, and in preserving land that would have otherwise likely been developed. Financially, MFT must fill the gap between what it pays for a farm and what the farm sells for once protected, which it does through various strategies, including local fundraising.

The Open Space Institute (Private)

The Open Space Institute (OSI) protects scenic, natural, and historic landscapes to ensure public enjoyment, conserve habitats, and sustain community character. OSI achieves its goals through land acquisition, conservation easements, regional loan programs, fiscal sponsorship, creative partnerships, and analytical research.

Elmina B. Sewall Foundation (Private)

The mission of the Elmina B. Sewall Foundation is to support conservation of the natural environment and the well-being of animals and human beings, primarily in Maine. Through its giving, the Foundation seeks to make a significant impact, inspire the generosity of others and empower those who share its vision.

The Davis Conservation Foundation (Private)

The Davis Conservation Foundation (www.davisfoundations.org) is a public charitable foundation established in 1989 by Phyllis C. Davis and H. Halsey Davis of Falmouth, Maine, to support protection of the environment and conservation of our natural resources. The foundation was established following Mr. Davis's retirement as President and Chairman of Shaw's Supermarkets, Inc. and has provided over \$11.4 million in grants to conservation organizations since its founding in 1989. The

Davis Conservation Foundation's broad purpose is to support the wise utilization, protection and advancement of our physical environment and the different natural forms of life that inhabit it, including wildlife, sea life and mankind as they are impacted by the environment. To accomplish this, the foundation supports organizations whose areas of interest include:

- Projects related to wildlife, wildlife habitat, environmental protection and outdoor recreation.
- Projects that strengthen volunteer activity and outreach/community involvement in the above-noted areas.

Appendix C: Biddeford Open Space Inventory

Besides the City itself, Biddeford has numerous conservation partners (see Appendix A) which own and protect open space in Biddeford. In all, over 5,100 acres of land in Biddeford (see Exhibit I in the Open Space Plan) is permanently protected by the City, various Federal, State and local land trusts and semi-protected by State of Maine Current Use Programs (to be defined later in the section). Appendix C summarizes the current active conservation partners and their Biddeford open space land/easement holdings.

Biddeford Pool Land Trust

The Biddeford Pool Land Trust is organized to provide preserves for wildlife and plant life, including growth areas for marine and aquatic life, and to provide readily accessible coastal retreats. Founded in 1987, the land trust works closely with local land trusts and the U.S. Fish and Wildlife Service to inform landowners of their options when the Rachel Carson National Wildlife Refuge established its most recent (10th) division. The website lists 5 parcels (8 acres) owned and 2 parcels (3 acres) under conservation easement in Biddeford Pool. Note: the City of Biddeford GIS records list two parcels of 1.75 acres total (see Exhibit C-1).

Contact information: Biddeford Pool Land Trust, P.O. Box 306, Biddeford Pool, ME 04006

Exhibit C-1 BIDDEFORD POOL LAND TRUST

<u>Parcel Name</u>	<u>Address</u>	<u>Approx. Acreage</u>	<u>Owner</u>	<u>Parcel ID</u>
15 Yates St		1	BPLT	59-8
20 North & 0 Cole Rd		0.75	BPLT	59-81
Total Acreage		1.75		

Biddeford Pool Improvement Association

The Biddeford Pool Improvement Association, whose members are home owners in Biddeford Pool, owns two parcels of land totaling 3.21 acres in Biddeford Pool (see Exhibit C-2).

Contact information: Biddeford Pool Improvement Association, P.O. Box 256, Biddeford Pool, ME 04006

Exhibit C-2 BIDDEFORD POOL IMPROVEMENT ASSOCIATION

<u>Parcel Name</u>	<u>Address</u>	<u>Approx. Acreage</u>	<u>Owner</u>	<u>Parcel ID</u>
60 Ocean Ave	Off Ocean Avenue	3.03	BPIA	60-63
13 Staples Ave	Off Staples Avenue	0.18	BPIA	59-35
Total Acreage		3.21		

Blandings Park Wildlife Sanctuary

Blandings Park Wildlife Sanctuary (www.bpws.org) was founded in 2006 as a public charity 501 (c) 3 grass roots land trust. Their goal is to preserve and protect as many acres as possible in our defined focus area. Their mission is to guide the public to the benefits of conservation, education, recreation, and research for the benefit of all. The Sanctuary now has over 195 acres (see Exhibit C-3) of valuable wildlife habitat forever preserved.

The focus area for Blandings Park Wildlife Sanctuary is bounded by Pool Street, Guinea Road, West Street and Granite Street in Biddeford, Maine. The interior land contains over 1,000 vacant acres while the exterior frontage on all streets is well developed and home to many of the citizens of Biddeford.

The State of Maine through the Department of Inland Fisheries and Wildlife, *Beginning With Habitat*, defined their focus area as one rich in various species of plant and wildlife that are endangered, threatened, or species of special concern, especially the Blanding’s Turtle. The park and surrounding lands are also part of an extensive Biddeford/Kennebunkport Vernal Pool Complex Focus Area that stretches through Biddeford into Kennebunkport and Kennebunk, Maine.

Contact Information: Blandings Park Wildlife Sanctuary, 113 Old Pool Road, Biddeford ME 04005

Exhibit C-3

BLANDINGS PARK WILDLIFE SANCTUARY

<u>Parcel Name</u>	<u>Address</u>	<u>Approx. Acreage</u>	<u>Owner</u>	<u>Parcel ID</u>
Blandings Park Wildlife Sanctuary	Off Pool St	10	BPWS	8-10
	Off Pool St	30	BPWS	8-74
	Cranberry Lane	54.7	BPWS	8-73
	324 Pool St	0.27	BPWS	44-2
	Blanding's Way	31.02	BPWS	8-39
	Ledgemere Drive	34	BPWS	8-48
	Off Guinea Road	9.89	BPWS	76-53
	Off Guinea Road	4.8	BPWS	8-11-1
	Off West Street	10	BPWS	8-13
	Off Pool St	12.76	BPWS	8-41
Total Acreage		197.44		

Rachel Carson National Wildlife Refuge

The Rachel Carson National Wildlife Refuge (<http://www.fws.gov/northeast/rachelcarson/>) was established in 1966 in cooperation with the State of Maine to protect valuable salt marshes and estuaries for migratory birds. Located along 50 miles of coastline in York and Cumberland counties, the refuge consists of eleven divisions between Kittery and Cape Elizabeth. It will contain approximately 9,125 acres when land

acquisition is complete. The proximity of the refuge to the coast and its location between the eastern deciduous forest and the boreal forest creates a composition of plants and animals not found elsewhere in Maine. Major habitat types present on the refuge include forested upland, barrier beach/dune, coastal meadows, tidal salt marsh, and the distinctive rocky coast.

Rachel Carson owns land in two divisions within the City of Biddeford: the Little River Division and the Biddeford Pool Division, totally over 147 acres (see Exhibit C-4 for the detailed holdings). The majority of these parcels consist of coastal bird sanctuaries that border the ocean or rivers and streams that run into the ocean. Access to these properties is controlled by the U.S. Fish & Wildlife Service and generally requires permission to enter.

Refuge staffs constantly work to improve the quality of wildlife habitat. Management actions create, restore, and maintain diverse habitats to encourage use by many wildlife species. Some habitat management activities at Rachel Carson Refuge include restoring salt marshes, prescribed burning and mowing of grasslands, planting native trees and shrubs, biological control of invasive plants, and fencing piping plover nesting areas.

The protection of coastal habitats, including salt marsh, tidal rivers, and beach-dune, is their top priority. They seek to broaden our understanding and management of other critical habitats and species of concern that use these habitats. The refuge evaluates and uses the most cost-effective and environmentally sound techniques to manage habitats and conserve wildlife and plants. In addition they strengthen their biological inventory and monitoring program to allow better evaluation of their programs and to make more informed decisions.

The refuge land acquisition and cooperative land protection program encompasses some 14,383 acres. All of the proposed lands for acquisition support trust resources of concern in coastal Maine. They work with their land conservation partners to support collective efforts in watershed protection.

The approximately quarter-million refuge visitors are rewarded with opportunities for priority wildlife-dependent public uses, especially in wildlife observation and photography, environmental education, interpretation, fishing, and hunting in collaboration with partners.

Contact information: Rachel Carson National Wildlife Refuge, 321 Port Road, Wells, Maine 04090 (207)646-9226

Exhibit C-4
RACHEL CARSON NATIONAL WILDLIFE REFUGE

<u>Parcel Name</u>	<u>Address</u>	<u>Approx. Acreage</u>	<u>Owner</u>	<u>Parcel ID</u>
Little River Division	Timber Point & Island	97	USFW	5-1, 5-2
	0 Granite Point Rd	4.1	USFWS	67-2-2
	Off Granite Point Rd	2.3	USFWS	67-2-1
	Off Granite Point Rd	0.7	USFWS	68-5-3
	92 Granite Point Rd	0.76	USFWS	68-14-1
	Off Granite Point Rd	23	USFWS	5-5
	0 Granite Point Rd	23	USFWS	5-4
	Off Granite Point Rd	25	USFWS	5-3
	0 Granite Point Rd	4	USFWS	5-2-1
	48 Granite Point Road	5	USFWS	67-2
	Off Granite Point Rd/ROW	0.13	USA	67-7-1
	12 Heather Lane	1.15	USA	68-7-7
	102 Granite Point Rd	0.24	USA	68-12
	Scadlock Mill Rd	3.16	USA	4-50-3
	Scadlock Mill Rd	2.85	USA	4-50-4
	Biddeford Pool Division	Fortunes Rocks Rd	36.41	USA
863 Pool St		9.3	USA	5-14-1
871 Pool St		2	USA	5-8-2
19 Scadlock Rd		8.63	USA	5-8-4
865 Pool St		2.75	USA	5-8-10
40 Bridge St		1.84	USA	5-8-11
79 Old Pool Rd		23.7	USA	5-36
22 Days Landing		32.3	USA	10-15
18 Days Landing		2.08	USA	10-39
14 Days Landing		1.68	USA	10-40
Haley Farm/Old Pool Rd		2.37	USA	10-41
59 Old Pool Rd		10.33	USA	9-2
50 Old Pool Rd (Rear)		1.04	USA	10-43
60 Old Pool Road		3	USA	10-42
80 Hills Beach Rd		8	USA	10-43-1
Stone Cliff Rd		0.61	USA	54-93
97 Mile Stretch Rd		0.02	USA	57-13
77 Mile Stretch Rd		0.44	USA	61-4-1
83 Mile Stretch Rd		0.43	USA	61-21-1
11 Mile Stretch Rd		0.37	USA	61-22-1
76 Bridge St		0.23	USA	62-18
Bridge Street	0.02	USA	63-46-1	
Total Acreage		244.55		

Maine Audubon

Maine Audubon (<http://www.maineaudubon.org/>) works to conserve Maine’s wildlife and wildlife habitat by engaging people of all ages in education, conservation and action. In Biddeford, Maine Audubon owns over 54 acres of land--East Point in Biddeford Pool as well as Stage Island and Wood Island off of Biddeford Pool (see Exhibit C-5). These are bird sanctuaries that are open to the public.

Contact Information: Maine Audubon, 20 Gilsland Farm Road, Falmouth, Maine 04105 (207) 781-2330

Exhibit C-5

MAINE AUDUBON

<u>Parcel Name</u>	<u>Address</u>	<u>Approx. Acreage</u>	<u>Owner</u>	<u>Parcel ID</u>
East Point	Biddeford Pool	20	ME Audubon	57-12 & 58-2
Wood Island	off Biddeford Pool	30	ME Audubon	10-27
Stage Island	off Biddeford Pool	4	ME Audubon	
	105 Mile Stretch Rd	0.77	ME Audubon	61-26
Total Acreage		54.77		

Saco Valley Land Trust

The Saco Valley Land Trust (<http://www.sacovalleylandtrust.org/>) is a Federal 501 (c) 3 nonprofit chartered to hold conservation easements and own land as well as to promote the value of preservation of open spaces for wildlife, water quality and quality of space for all residents of Southern Maine.

The Saco Valley Land Trust (SVLT) is an all-volunteer organization with a highly involved Board of Directors and a core group of volunteers from the community. SVLT owns over 1,000 acres of land in Biddeford, Saco and Buxton, as well as conservation easements on 200 acres. As shown in Exhibit C-6, SVLT owns over 725 acres in Biddeford, including the Cranberry Marsh North and UNE property conservation easements.

Contact Information: Saco Valley Land Trust, P.O. Box 1581 Saco, ME 04072

Exhibit C-6

SACO VALLEY LAND TRUST LAND TRUST PROPERTIES IN BIDDEFORD

<u>Parcel Name</u>	<u>Address</u>	<u>Approx. Acreage</u>	<u>Owner</u>	<u>Parcel ID</u>
Chappell Easement	West Loop Road	4.4	SVLT	n/a
Land Stewards Donation	348 West Street	10.2	SVLT	4-8-5
Land Stewards Donation	West Street	72.06	SVLT	4-8-6
Moreau Donation	Benson Road	8.0	SVLT	4-12
Chretien Donation	Guinea Road	3.5	SVLT	
Sevigny Donation	Route 9	7.45	SVLT	4-40
Overlook Estates	Route 9 (private road)	17.73	SVLT	5-40-1
Davis Farm	Oak Ridge Road	55.51	SVLT	4-82-11
Teaberry Lane	Teaberry Lane	4.63	SVLT	3-19-13
Taylor Estates	Autumn Lane	30.6	SVLT	2-63-1
Garnache Donation	Grenier Lane	13.02	SVLT	72-33
Woodman Donation	Andrews Road	10	SVLT	2-16
Meadowridge Donation	Rear Waldin Road	8.96	SVLT	1-38-3
Meadowridge Donation	14 Waldin Road	35.14	SVLT	1-35
Huff Donation	Regina Drive	30.1	SVLT	4-88-3
Great Cranberry Marsh	off Proctor Road	53.6	SVLT	3-12-1
J.H. Curtis Lot	off Proctor Road	6.56	SVLT	3-17-4
Swan Pond Brook Lot	off South Street	23	SVLT	1-61
Cranberry Marsh North	Off West Street	170	RER	
UNE New England Woods	Off West Street	161	UNE	4-4
Total Acreage		725.46		

State of Maine

The State of Maine (<http://www.maine.gov/doc/parks/contact/index.html>) owns a number of open space parcels in Biddeford. Exhibit C-7 indicates that most of the land (over 85 acres) abuts the Maine Turnpike—likely held for possible highway expansion, while the Marblehead Boat Launch off of Pool Street (3.75 acres) makes up most of the remainder.

Contact Information: Eastern Region Lands, Bureau of Parks and Lands, 106 Hogan Road, Suite 5, Bangor Maine 04401, 207-941-4412

**Exhibit C-7
STATE OF MAINE**

<u>Parcel Name</u>	<u>Address</u>	<u>Approx. Acreage</u>	<u>Owner</u>	<u>Parcel ID</u>
Thatch Island	Biddeford Pool	0.5	State of Maine	
Turnpike Land	0 Precourt St	0.36	State of Maine	12-19
	520 Alfred St	22.99	State of Maine	2-58-2
	Off Alfred St	17	State of Maine	2-39-1
	Off Alfred St	45.93	State of Maine	2-37-1
	Western Ave	0.6	State of Maine	33-13-3
	202 South St	0.61	State of Maine	33-13
Marblehead Boat Launch	Off Pool St	3.75	State of Maine	47-1
Total Acreage		91.74		

City of Biddeford

The City of Biddeford (<http://www.biddefordmaine.org/>) owns over 247 acres of open space, primarily in parklands, ball fields, skating rinks, beaches, and boat launches (see Exhibit C-8 for details). In addition, the City owns numerous additional properties, many abandoned, landlocked or without taxes paid which they have donated to other conservation partners, primarily Blandings, Rachel Carson and Saco Valley Land Trust. The City has also identified a number of surplus land parcels, mostly in the urban areas of Biddeford, which could be used for pocket parks in the future (see Exhibit C-9).

Contact Information: City of Biddeford, Biddeford Recreation Department, J.R. Martin Community Center, 189 Alfred Street, Biddeford, ME 04005, 207-283-0841

Exhibit C-8

BIDDEFORD CITY PARKS

<u>Parcel Name</u>	<u>Address</u>	<u>Approx. Acreage</u>	<u>Owner</u>	<u>Parcel ID</u>
Clifford Park	Clifford Park	138	City of Biddeford	39-334, 8-3-1 & 8-1
Fortune's Rocks Beach	Fortune's Rock's Beach	0.32	City of Biddeford	64-1-1
Gilbert R. Boucher Memorial Park/Pool Beach	Biddeford Pool Beach	5.4	City of Biddeford	59-107
Rotary park	Outer Main Street	73.89	City of Biddeford	32-2
Pierson's Lane Playground	Bacon St and Pierson Lane	0.21	City of Biddeford	39-117&39-116
Doran Park	314 South Street	8.31	City of Biddeford	32-4
St. Louis Field	Little League Field	2	City of Biddeford	22-26
Brother Herbert Field	Practice Field	8	City of Biddeford	37-168
Vines Landing	Vines Landing Park	0.12	City of Biddeford	59-117
Mechanic's Park	Main Street	1.38	City of Biddeford	41-1
Liberty Park	2 Water Street	0.16	City of Biddeford	41-129
Shevernell Park	Shevernell Park	0.08	City of Biddeford	38-372
Memorial Park	Memorial Field	7.5	City of Biddeford	27-34
Park in the Pines	Park in the Pines	0.19	City of Biddeford	55-51
Waterhouse Field	St. Louis Field	9.6	City of Biddeford	28-270
Canopy Park	65 Bacon Street	0.11	City of Biddeford	39-129
Foav Court Park	2 Foav Court	0.22	City of Biddeford	39-137
Diamond Match Park (in design)	Outer Main Street	9.8	City of Biddeford	40-25-2
Beach Access	Saco River Beach Access	2.11	City of Biddeford	54-7-1
Ice Arena	Pomerleau Street	3.9	City of Biddeford	2-81-3
Waterhouse Field	West Street	5.25	City of Biddeford	28-166
Westbrook Skating Rink	1 Columbus Way	4	City of Biddeford	42-112
Gooseberry Island	Atlantic Ocean	1	City of Biddeford	10-28
15 Williams Court	Williams Court	0.13	City of Biddeford	38-169-1
10 Williams Court	Williams Court	0.06	City of Biddeford	38-182
8 Williams Court	Williams Court	0.09	City of Biddeford	38-183
Total Acreage		281.83		

Exhibit C-9

CITY SURPLUS PARCELS (POTENTIAL PARKS)

<u>Parcel Name</u>	<u>Address</u>	<u>Approx. Acreage</u>	<u>Owner</u>	<u>Parcel ID</u>
398 Hill Street	same	0.29	City of Biddeford	74-61-1
136 Hill Street	same	0.15	City of Biddeford	39-1
106/116 Hill Street	same	0.25	City of Biddeford	39-39 & 39-40
24 Birch Street	same	0.35	City of Biddeford	38-475
32 Maple Street	same	0.12	City of Biddeford	40-38
2 Bradbury Street	same	0.07	City of Biddeford	38-14
361 Main Street	same	0.07	City of Biddeford	38-14-1
71 Mile Stretch Rd	same	0.84	City of Biddeford	61-20
73 Mile Stretch Rd	same	0.75	City of Biddeford	61-20-1
87 Mile Stretch Rd	same	0.5	City of Biddeford	61-23
4 Gilbert Place	same	1.1	City of Biddeford	61-32
0 Fortunes Rocks Rd	same	0.15	City of Biddeford	65-19-2
Total Acreage		4.64		

Current Use Programs

The State of Maine has four "Current Use" programs (<http://www.maine.gov/revenue/propertytax/propertytaxbenefits/CurrentUseLandPrograms.htm>) which offer the property owner a reduction in their assessed value: Tree Growth, Farm Land, Open Space and Working Waterfront. All four programs are available to the property owner through an application process with the local municipality. Applications must be filed on or before April 1st. Certain criteria must be met for each program in order to be eligible and any future change in the use of the land which would cause disqualification would result in a penalty. It should be noted that land registered under these programs is not protected from development as their current/future owners can remove them from the programs at will.

FARM LAND

In the farmland program, the property owner is required to have at least 5 contiguous acres in their tract of land. The land must be used for farming, agriculture, horticulture and can include woodland and wasteland. Additionally, the tract must contribute at least \$2,000 gross income from farming activities, each year. The Department of Agriculture prepares a valuation guideline for the municipalities, which results from studies based on suggested values using a correlation from income stream and market data attributable to agricultural enterprise. If the property no longer qualifies as a farmland tract, then a penalty would be assessed. The penalty is an amount equal to the taxes that would have been paid in

the last five years if it had not been in the farmland, less the taxes that were originally assessed, plus any interest on that balance.

Biddeford presently has over 1,297 acres registered in the Farmland Program (see Exhibit C-10).

Exhibit C-10

Farm Land (Current Use Programs)

<u>Parcel Name</u>	<u>Address</u>	<u>Approx. Acreage</u>	<u>Owner</u>	<u>Parcel ID</u>
Jerome		60		4-035-01
Labonte		22.5		1-044-00
Girard		13		1-017-01
Girard		57		1-023-00
Girard		39		1-040-00
Sherman		94.47		1-039-00
Cote		45.5		8-037-00
Rioux		96		1-043-00
Labonte		17.5		1-049-00
Boisvert		33		1-033-00
Hussey		4.5		6-001-00
Hussey		85.5		1-002-00
Girard		24		1-025-00
Rhames		88.4		3-036-00
Dearborn		145.69		1-005-00
Dearborn		5.4		6-004-00
Baker		36		4-089-00
Clair		11		1-045-01
Ewing/Timber Point		93		5-002-00
Curro		194		3-017-00
Lowell		7.01		1-079-00
Lowell		37.34		1-015-00
Lowell		5.4		2-082-02
Hussey		16.14		6-024-00
Paquette		66		1-016-00
Total Acreage		1297.35		

OPEN SPACE

There is no minimum acreage requirement with this program. However, minimum areas and setbacks must be excluded from classification. The tract must be preserved or restricted in use to provide a public benefit. Benefits recognized include public recreation, scenic resources, game management or wildlife habitat. The municipal assessor is responsible for determining the valuation placed on Open Space land. In determining the value of open space land, the assessor must consider the sale price that particular parcel of open space land would command in the open market if it were to remain in the particular category or categories of open space land for which it qualifies. If an assessor is unable to determine the valuation of a parcel of open space land based on the valuation method above, the assessor may use the Alternate Valuation Method. Using this method, the assessor reduces the fair market value of an open space land parcel by the cumulative percentage reduction for which the land is eligible according to certain categories.

Those categories are as follows:

- Ordinary Open Space - 20% reduction
- Permanently Protected - 30% reduction
- Forever Wild - 20% reduction
- Public Access - 25% reduction

In other words, if the property met all of the above requirements, the owner would see a cumulative reduction of up to 95% on the classified land. If the property no longer qualifies as Open Space, then a penalty would be assessed using the same methodology as is used for removal from Tree Growth classification.

Biddeford presently has over 206 acres in the Open Space Current Use Program (see Exhibit C-11).

Exhibit C-11 OPEN SPACE (Current Use Programs)

<u>Parcel Name</u>	<u>Address</u>	<u>Classified Acreage</u>	<u>Owner</u>	<u>Parcel ID</u>
Henaire		7.74		4-035
Fortin		12		1-027-03
Cote		9.6		4-010-01
Smith		10		5-006-01
Rheault		16.5		9-037-00
Drummey		43.22		8-037-03
Carrier		17.75		4-059-00
Hutchins		30.8		4-059-03
Hutchins		11.06		4-061-00
Hutchins		39.45		4-059-04
Bolle		8		8-015-00
Total Acreage		206.12		

TREE GROWTH

This program provides for the land owner with at least 10 acres of forested land used for commercial harvesting. A Forest Management and Harvest Plan must be prepared and a sworn statement to that effect submitted with the application. Applications include a map of the parcel indicating the forest type breakdown as well as all other areas not classified as tree growth. Each year, the State Tax Assessor determines the 100% valuation per acre for each forest type by county and by year. If the forestland no longer meets the criteria of eligibility or the landowner opts to withdraw from tree growth classification, then a penalty would be determined. Depending upon the length of time that the parcel has been enrolled, the penalty would be an amount between 20 and 30% of the difference between the 100% tree growth value and the fair market value.

Biddeford presently has 1,992 acres in the Tree Growth Current Use Program (see Exhibit C-12).

**Exhibit C-12
Tree Growth (Current Use Programs)**

<u>Parcel Name</u>	<u>Address</u>	<u>Approx. Acreage</u>	<u>Owner</u>	<u>Parcel ID</u>
Rhames		166		3-032-00
Clair's		16.7		2-038-00
Haas		3		9-038-00
Hotin		22.5		9-008-02
Haas		21		9-038-01
Kroll		19		1-038-00
Rhames		32.9		9-018-02
Rhames		58		4-111-00
Rhames		11.3		3-014-04
Rhames		110		5-013-03
Rhames		166.8		3-036-01
Rhames		16.65		3-017-03
Rhames		27.2		9-018-03
Rhames		19.2		9-018-01
Rhames		60		3-010-02
Rhames		25.3		3-040-03
Clair's		370		1-014-01
Clair's		314		7-008-00
Sleeper		15		1-038-01
York		32		5-028-00
York		37		4-110-00
Hayes		52.45		5-013-00
Grose		99		5-013-04
York		86		9-018-00
York		162		4-025-00
Wing		24		77-022-00
Gosnel		25		5-017-02
Total Acreage		1992		

WORKING WATERFRONT

"Working waterfront land" means a parcel or portion of a parcel of land abutting tidal waters or one that is located in the intertidal zone (located between the high and low water mark) the use of which is more than 50% related to providing access to or in support of the conduct of commercial fishing (including commercial aquaculture) activities. Working waterfront land used predominantly (more than 90%) as working waterfront is eligible for a 20% reduction from just value. Working waterfront land used primarily (more than 50%) as working waterfront is eligible for a 10% reduction from just value. Working waterfront land that is permanently protected from a change in use through deeded restriction is eligible for the aforementioned reduction plus an additional 30% reduction.

If the property no longer qualifies as Working Waterfront, then a penalty would be assessed using the same methodology as is used for removal from Tree Growth classification.

Biddeford presently has no acreage in the Working Waterfront Current Use Program.

Eastern Trail Corridor

The purpose of the Eastern Trail Alliance (<http://www.easterntail.org/>) is to establish a four-season, 62 mile, non-motorized, multipurpose, transportation and recreation trail between Portsmouth, New Hampshire and South Portland, Maine, serving as the southern Maine portion of the East Coast Greenway, and to promote trail-associated economic development in York and Cumberland Counties by providing a trail directly serving the recreational, commercial, and social activities of residents and visitors to the southern Maine region.

Approximately 5 miles of the trail is open in Biddeford (see Exhibit C-13) some on public roads and some with the cooperation of property owners. A bridge allowing crossing of the Maine Turnpike in Kennebunk was opened for recreational traffic in October 2011.

Contact Information: Eastern Trail Alliance, P.O. Box 250, Saco, Maine 04072, 207-284-9260

**Exhibit C-13
EASTERN TRAIL CORRIDOR**

<u>Parcel Name</u>	<u>Address</u>	<u>Approx. Acreage</u>	<u>Owner</u>	<u>Parcel ID</u>
Eastern Trail Corridor	Biddeford	5 miles open	Eastern Trail Alliance	

Kennebunkport Conservation Trust

Since 1973, the Kennebunkport Conservation Trust (<http://kporttrust.org/>) has been working to preserve the beauty and character of our community. Their goal is to acquire undeveloped land within Kennebunkport so that it might remain in its natural state forever. These areas will thus provide retreats in an increasingly urbanized society in which wildlife can find refuge, traditional recreational sites can be maintained, and enough of the town's own natural beauty protected so that future generations will be able to enjoy it as we now do. They want to protect those places that speak to our heritage, like Goat Island Lighthouse and old Grist Mill property.

Besides their significant property holdings, on the southern border of Biddeford, the Kennebunkport Conservation Trust owns a 1 acre parcel off of West Street in Biddeford as well as a conservation easement on 99 acres of land off of Pool Street (see Exhibit C-14).

Contact Information: Kennebunkport Conservation Trust, P.O. Box 7004, Cape Porpoise, Me. 04014, 207-967-3465

Exhibit C-14

KENNEBUNKPORT CONSERVATION TRUST

Parcel Name	Address	Approx. Acreage	Owner	Parcel ID
Grose Parcel	501 West Street	0.92	KCT	5-13-5
Grose Parcel	880 Pool Street	99	KCT	5-13-4
Total Acreage		99.92		

RiverWalk Coalition

The vision of the Biddeford RiverWalk Coalition (<http://www.heartofbiddeford.org/biddeford-riverwalk/>) is to create an urban river walk along the Saco River between Mechanic’s Park via the Diamond Match property to Rotary Park in Biddeford, with connections across the river to Saco, to neighborhoods and businesses, and to nearby local, regional and national trails. The Coalition's purpose is to help implement the Biddeford RiverWalk by building public and political support; assisting with fundraising for a variety of needs, both organizationally and on the ground; and providing the city with citizen perspectives regarding design, implementation and management.

Contact Information: Biddeford RiverWalk Project Director, Alix Hopkins, at awhopkins@gwi.net .

Maine Coast Heritage Trust

The Maine Coast Heritage Trust (MCHT) holds a conservation easement on the 55 acre Boutin property in Clifford Park. MCHT also contributed \$50,000 to the purchase of the Boutin property in 2012 by the City of Biddeford. MCHT assisted the Saco Valley Land Trust in drafting an easement and raising funds to purchase the 170 acre Cranberry Marsh North property easement. MCHT worked with the SVLT and the University of New England to draft an easement for the New England Woods parcel, 161 acres owned by the University between Route 9 and West Street. All three projects lie within the Biddeford/Kennebunkport Vernal Pool Complex that MCHT has identified as a high priority for its conservation efforts. MCHT also assisted the Kennebunkport Conservation Trust with projects in the Kennebunkport portion of the vernal pool complex, including a 130 acre land donation by the Hutchins family to the KCT, which closed in late 2011 and abuts the Biddeford city line on the south.

Nature Conservancy

The Nature Conservancy (http://www.ltanet.org/findlandtrust/one.tcl?pc_id=188) does not hold any open space land or easements in Biddeford. They have worked closely with other Biddeford conservation partners to conserve open space in Biddeford.

Conservation Easements

Exhibit C-15 lists all of the registered conservation easements in the City of Biddeford as of May 16, 2012. Note that this list may not agree with listed easements in other tables as some landowners may have not renewed their easements on a yearly basis.

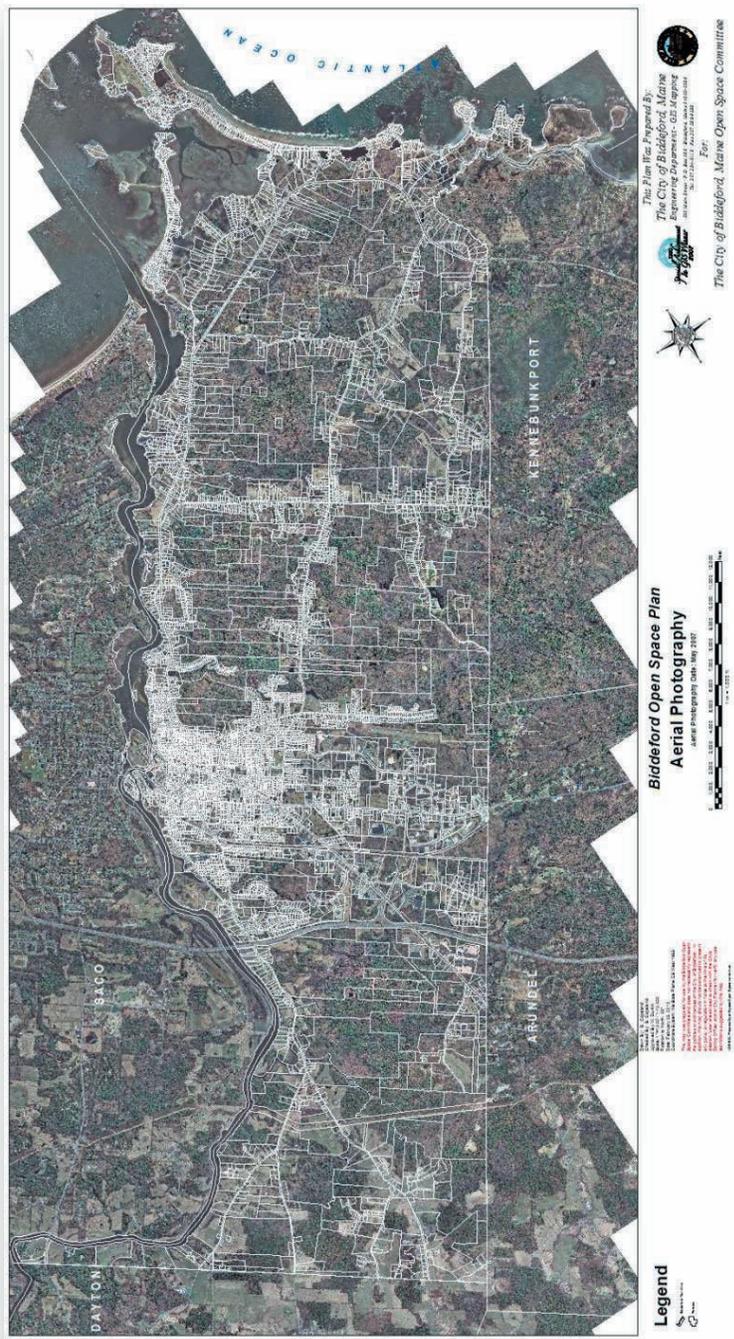
Exhibit C-15

City of Biddeford Conservation Easements			
Holder Name	Easement Name	Execution Date	Total Acres
Maine Audubon Society	Jane Russell	5/4/1988	10
Kennebunkport Land Trust	Grose	12/8/1980	110
Saco Valley Land Trust	Chapell Easement	4/11/1989	4.4
Saco Valley Land Trust	Cranberry Marsh North	3/10/2010	170
Saco Valley Land Trust	University Of New England Woodland	12/21/2011	161
Saco Valley Land Trust	Patoine Easement	10/13/2011	6
Total Acreage			477

Appendix D: Biddeford Open Space Maps

(NOTE: Electronic copies of all maps are available on the City of Biddeford web site in the map room)

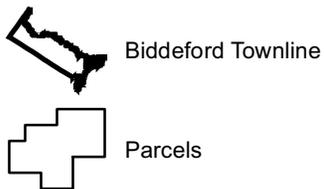
Map 1: Aerial Photography



Biddeford Open Space Plan

Aerial Photography

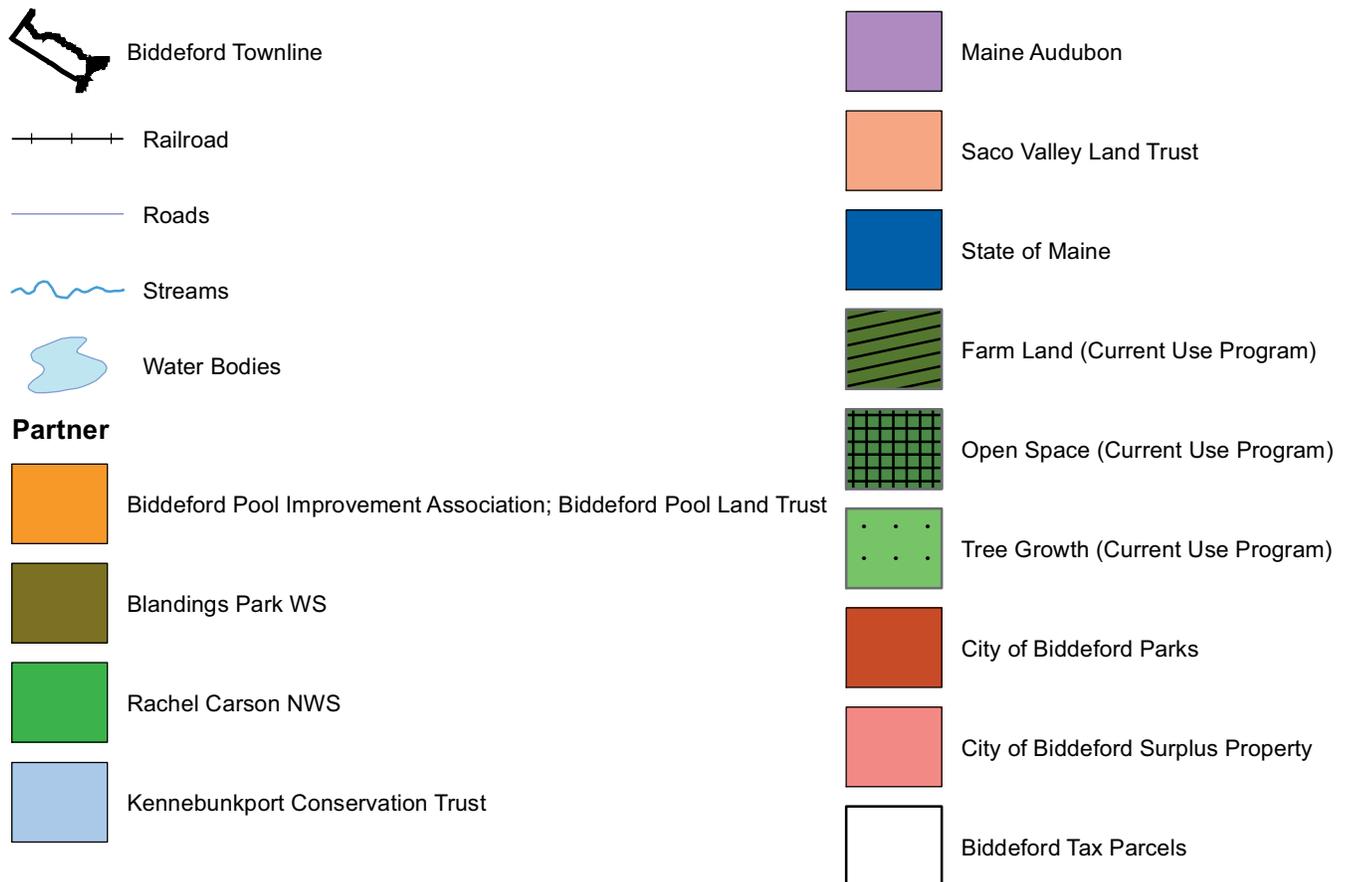
Legend



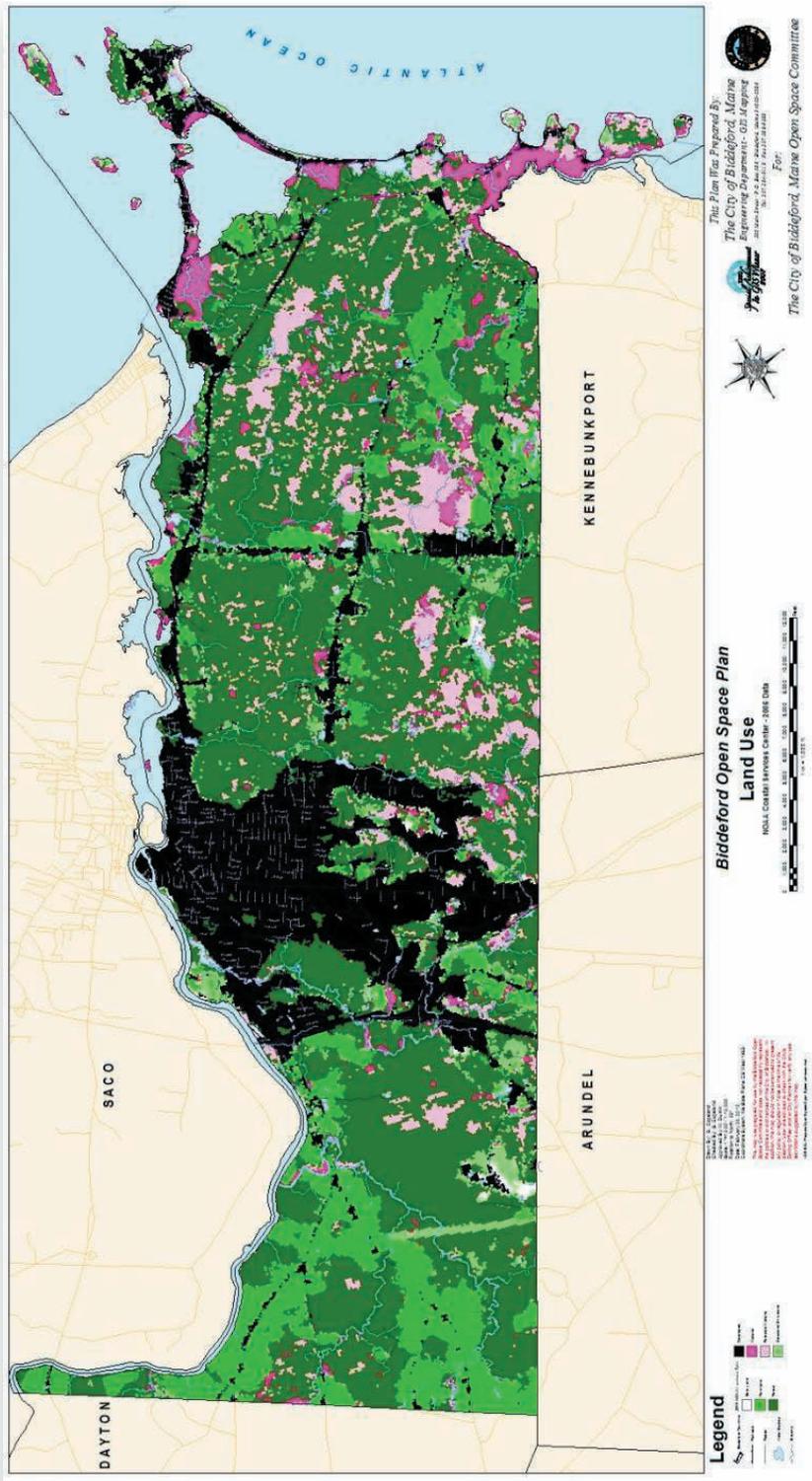
Biddeford Open Space Plan

Current Use, Conservation and Recreation Lands

Legend



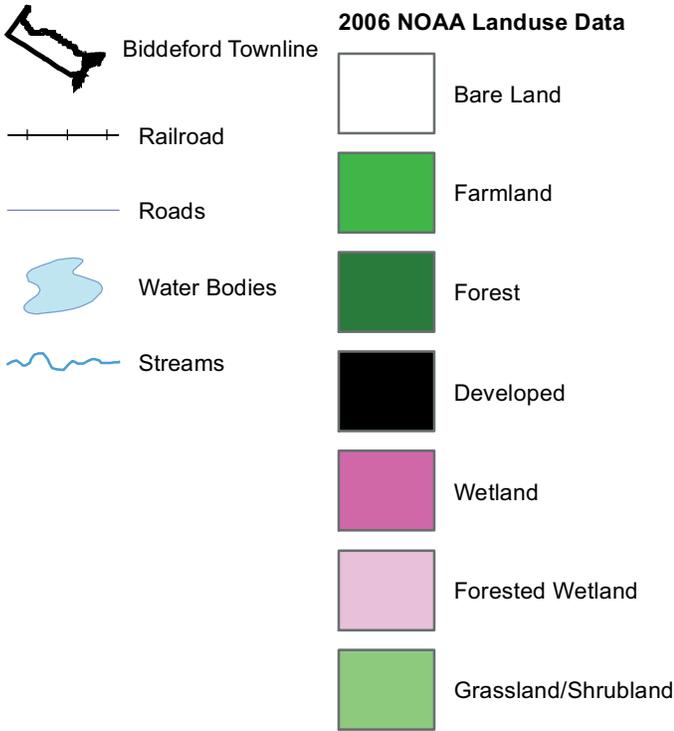
Map 3: Land Use



Biddeford Open Space Plan

Land Use

Legend



Biddeford Open Space Plan

Beginning With Habitat Focus Area

Legend



Biddeford Townline



Biddeford- Kennebunkport Vernal Pool Focus Area



Railroad



Roads



Streams

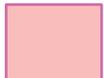


Water Bodies

Biddeford Open Space Plan

Rare Plant and Animals

Legend

	Biddeford Townline		Rare Animal Areas
	Railroad		Coastal Wading Bird
	Roads		Deer Wintering Area
	Streams		Plover/Least Tern
	Water Bodies		Inland Wading Bird
			Shorebird Areas
			Significant Vernal Pools
			B/K VP Complex Focus Area

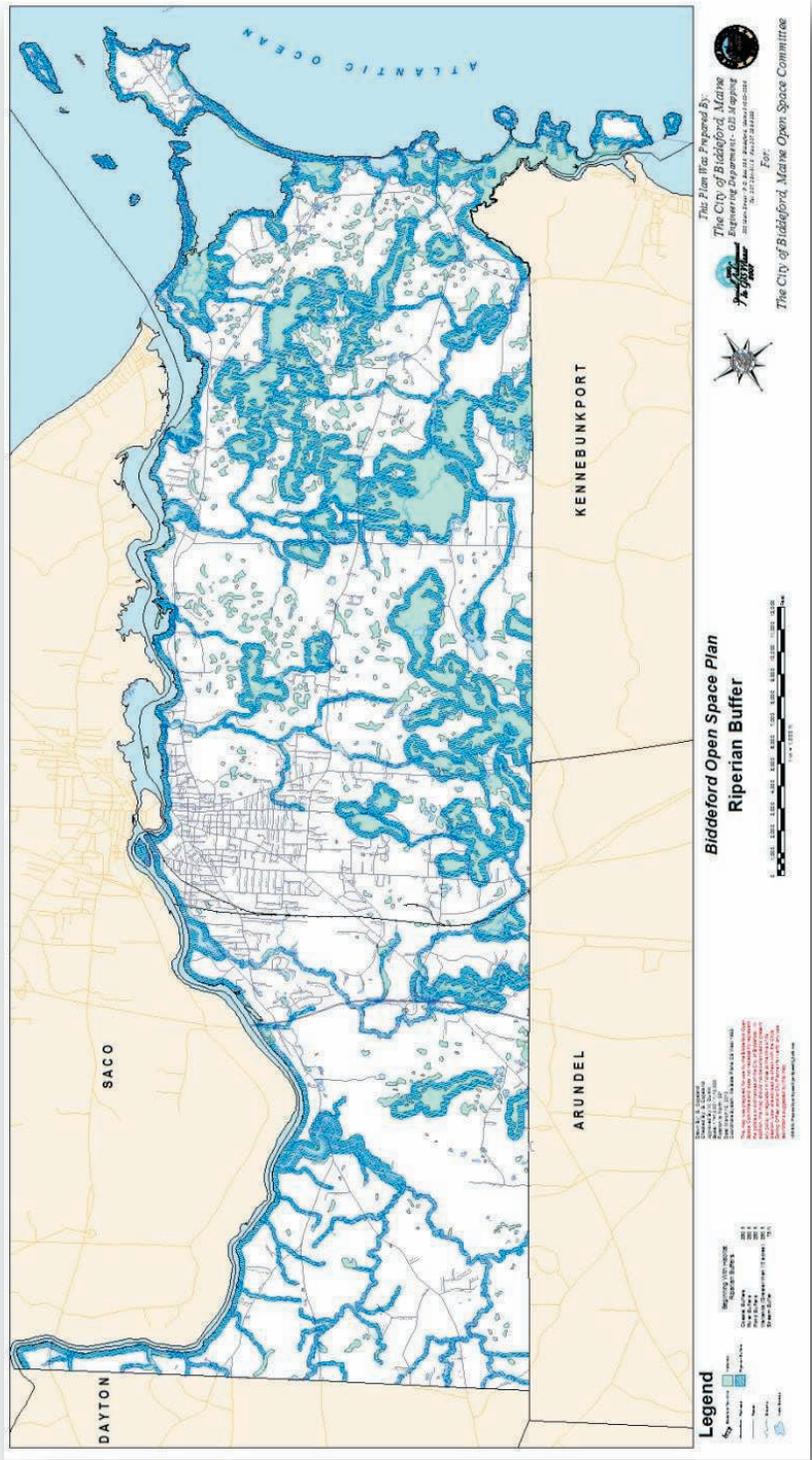
Biddeford Open Space Plan

Large Undeveloped (Unfragmented) Blocks

Legend

	Biddeford Townline	Undeveloped Blocks
	Roads	 0 - 500 Acres
	Railroad	 501 - 1000 Acres
	Water Bodies	 1001 - 3000 Acres

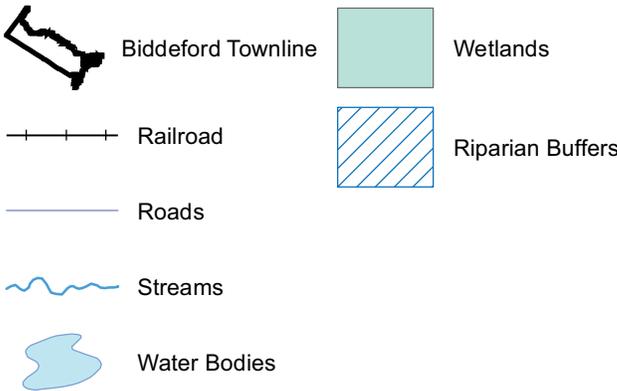
Map 7: Riparian Buffer



Biddeford Open Space Plan

Riparian Buffer

Legend



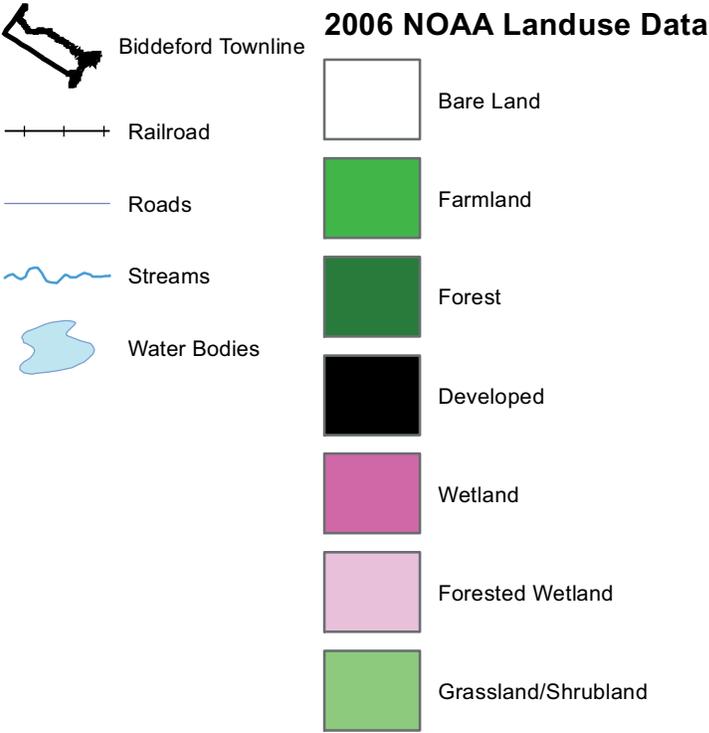
Beginning With Habitat Riparian Buffers

Coastal Buffers	250 ft
River Buffers	250 ft
Pond Buffers	250 ft
Wetlands (Greater than 10 acres)	250 ft
Stream Buffer	75 ft

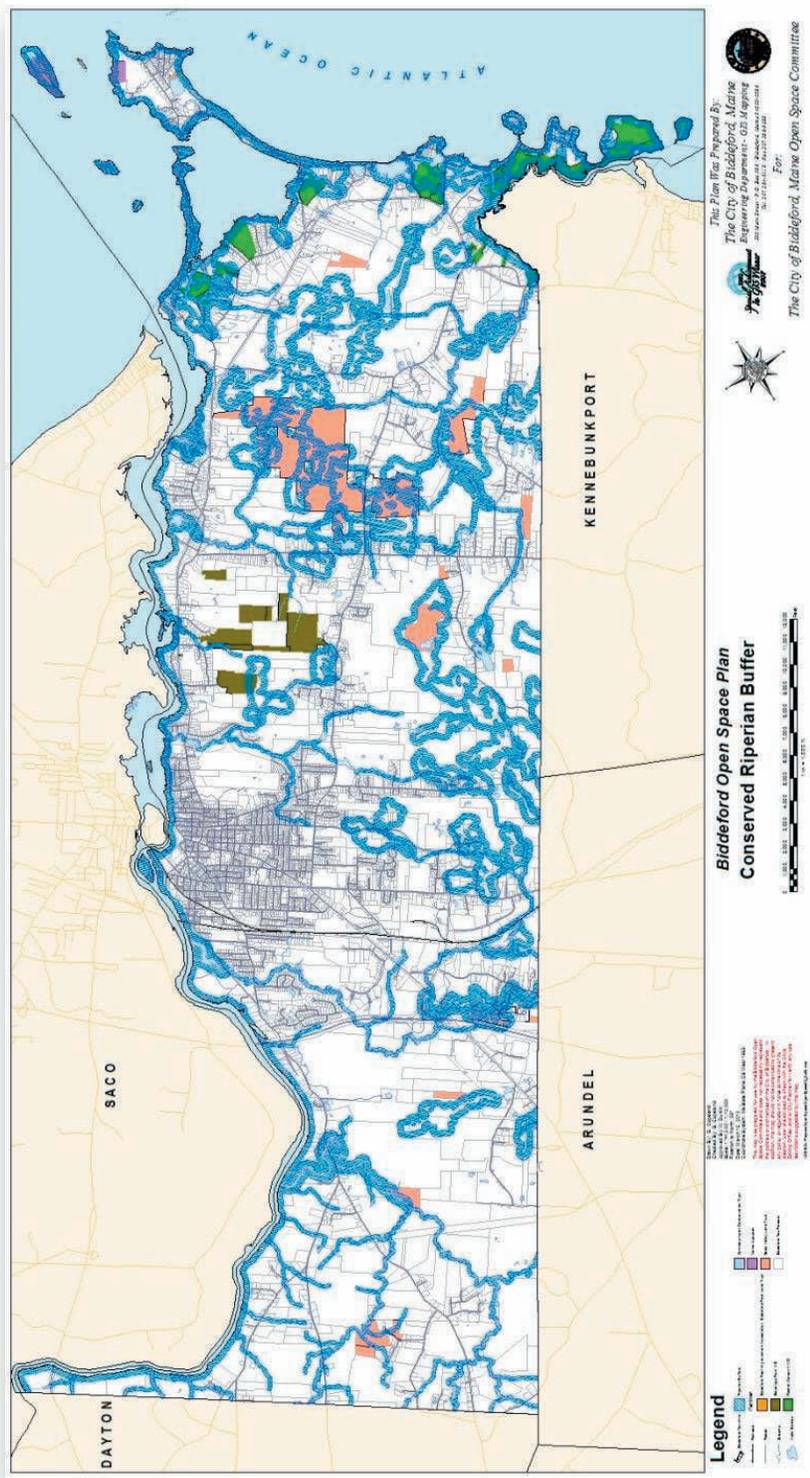
Biddeford Open Space Plan

Riparian Buffer Land Use

Legend



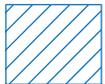
Map 9: Conserved Riparian Buffer



Biddeford Open Space Plan

Conserved Riparian Buffer

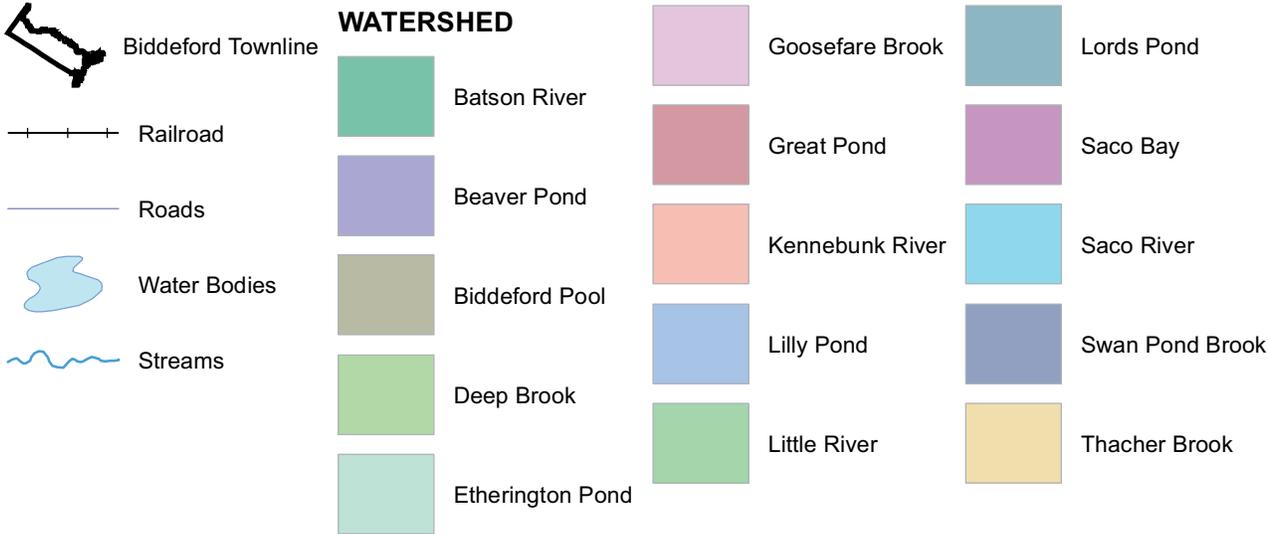
Legend

	Biddeford Townline	Partner	
	Railroad		Biddeford Pool Improvement Association; Biddeford Pool Land Trust
	Roads		Blandings Park WS
	Streams		Rachel Carson NWS
	Water Bodies		Kennebunkport Conservation Trust
	Riparian Buffers		Maine Audubon
			Saco Valley Land Trust
			Biddeford Tax Parcels

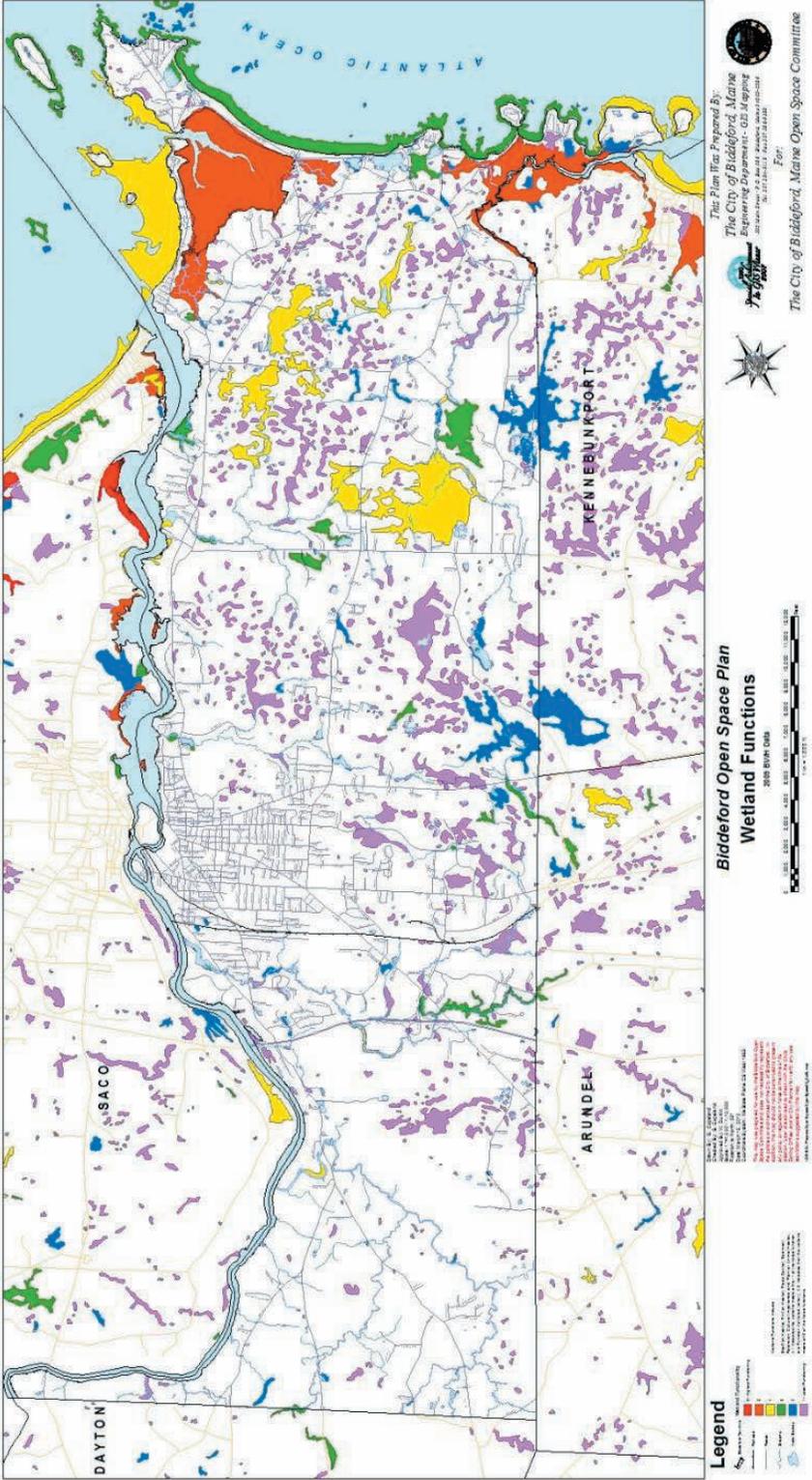
Biddeford Open Space Plan

Watersheds

Legend



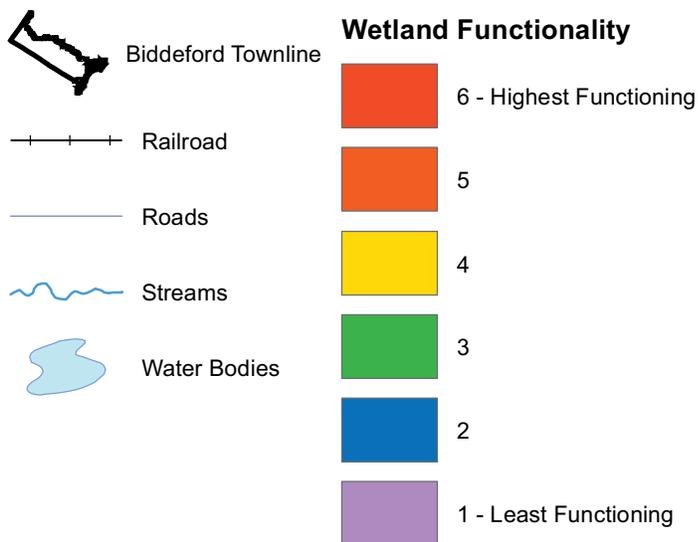
Map 11: Wetland Functions



Biddeford Open Space Plan

Wetland Functions

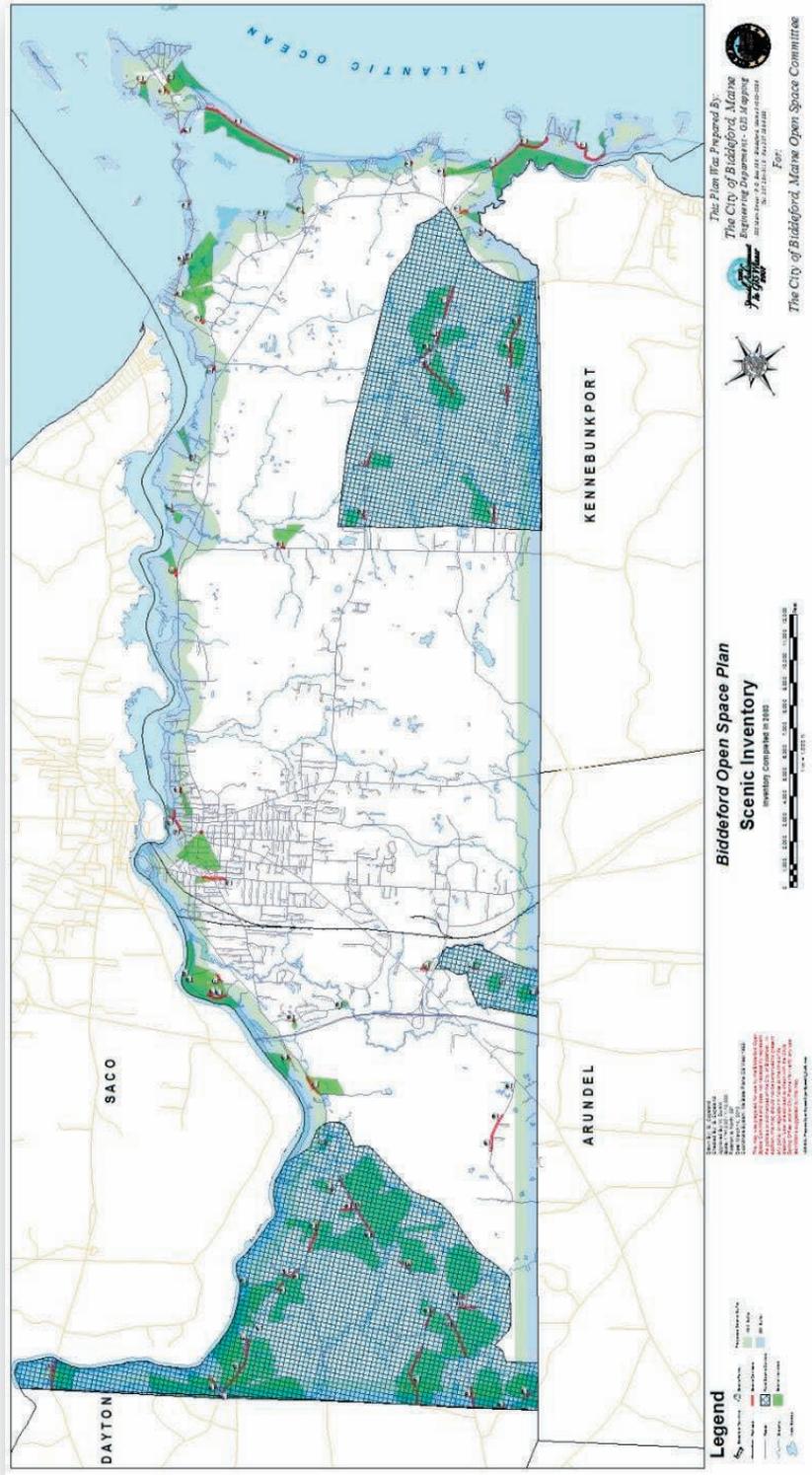
Legend



Wetland Functions include:

Shellfish Habitat; Finfish Habitat; Flood Control; Sediment Retention; Cultural Importance; and, Plant or Animal Habitat. A 1 indicates the wetland meets either 1 of the listed function or a Function not listed (other). A 6 indicates that the wetland meets all 6 of the listed functions.

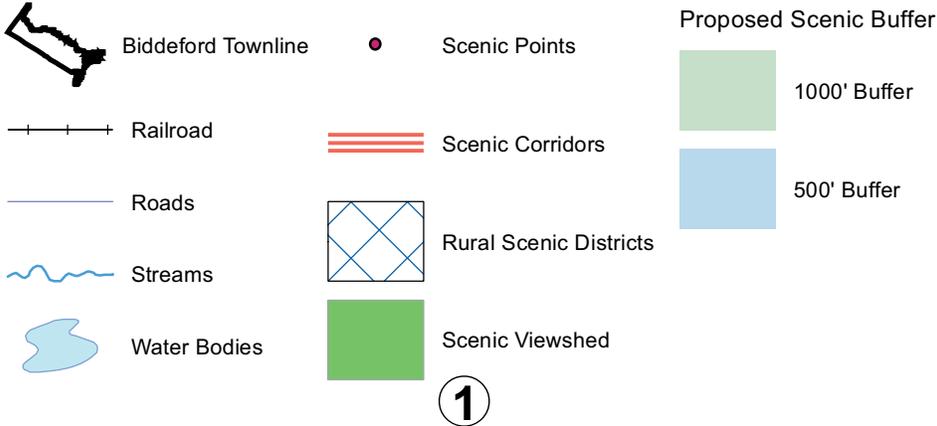
Map 12: Scenic Inventory



Biddeford Open Space Plan

Scenic Inventory

Legend



Biddeford Open Space Plan

Approved Zoning Map

Legend

 Roads	General Zoning	Overlay Zones
 Streams	 SR1: Suburban Residential	 RP: Resource Protection
 Rivers	 LRF: Limited Rural Farm	 RP-1: Resource Protection-1
 Ponds	 R1A: Residential 1A	 SP: Stream Protection (per NEA delineation)
 Parcels	 RF: Rural Farm	 LR: Limited Residential
 Contract Zones	 MSRD2: Residential Conservation	 GD-1: General Development 1
	 R2: Residential 2	 GD-2: General Development 2
	 R3: Residential 3	 LC: Limited Commercial
	 CR: Coastal Residential	 CFMA: Commercial Fisheries / Maritime Activities
	 B1: Business 1	 MHP: Mobile Home Parks
	 B2: Business 2	 APO: Aquifer Protection Overlay
	 MSRD1: Commercial Core	
	 OR: Office Residential	
	 I1: Industrial 1	
	 I2: Industrial 2	
	 I3: Industrial 3	
	 MSRD3: High Density / Mixed Use	
	 IN: Institutional	
	 M: Medical	
	 W1: Waterfront 1	
	 W2: Waterfront 2	
	 W3: Waterfront 3	

Appendix E: Undeveloped Habitat Blocks

The following descriptions of the undeveloped habitat blocks in the City of Biddeford were developed by wildlife biologist Mark Ward for the Biddeford Conservation Commission in 2006.

West Brook Block

Location Description: This block is located north of West St and west of Guinea Road and includes much of the West Brook watershed.

Size: 966 acres

Shape: Rectangular with minor interior road penetration

Part of Biddeford/Kennebunkport Vernal Pool Complex Focus Area

Number of Potential Vernal Pools: 29

Potential Vernal Pools Visited: 4

Documented "Significant" Vernal Pools: 2

Turtle Survey Work: This block has received a great deal of rare turtle survey work both by MDIFW and more recently in Fred Beaudry's turtle tracking project. As of January 2006 there were at least 26 documented turtle wetlands in this block. All these are located east of West Brook. The block contains 17 keds spotted turtles and 7 marked Blanding's turtles. West Brook offers some potential as a wood turtle stream and may warrant survey work. (There is one record of a wood turtle at Rte. 9 seen not too far from West Brook in 1993).

Deer Wintering Area: Present (~200 acres)

Natural Communities and/or Rare Plants: None documented

Large High Quality Wetlands: Only 3 on NWI maps (relatively low concentration)

Connectivity: Minimal connectivity with Proctor Road Block along West Brook (near Douglas Pond) and east of West Loop Road. Connectivity to Moors Brook Block is poor.

Moors Brook Block

Location Description: This block is located north of West Street, east of Guinea Road, and west of Newtown Road and contains much of the Moors Brook watershed.

Size: 979 acres

Shape: Rectangular with very little interior road penetration

Large Area of Interior Forest: >500 acres

Part of Biddeford/Kennebunkport Vernal Pool Complex Focus Area

Number of Potential Vernal Pools: 8 (most in northeastern part of block)

Potential Vernal Pools Visited: 2

Documented Significant Vernal Pools: 2

Turtle Survey Work: This block has received a relatively good amount of rare turtle survey work both by MDIFW and more recently in Fred Beaudry's turtle tracking project. As of January 2006 there were at least 12 documented turtle wetlands. The majority of the wetlands are in the northeastern section of this block. Only spotted turtles have been documented in this block.

Natural Communities and/or Rare Plants: None documented

Freshwater Waterfowl and Wading Bird Habitats: Small section abutting Newtown Road

Large High Quality Wetlands: Abundant throughout this block

Connectivity: Pretty good connectivity to Little River Block and Bush Brook Blocks, but connectivity to West Brook Block is poor.

Bush Brook Block

Location Description: This block is located east of Newtown Road and west of Route 9 and contains much of the Bush Brook watershed.

Size: 928 acres

Shape: Rectangular with minor interior road penetration, but some agricultural fields along the brook

Part of Biddeford/Kennebunkport Vernal Pool Complex Focus Area

Number of Potential Vernal Pools: 18 (scattered throughout the block)

Potential Vernal Pools Visited: 4

Documented Significant Vernal Pools: 2

Turtle Survey Work: This block has received a fair amount of rare turtle survey work by MDIFW. As of January 2006 there were 3 documented turtle wetlands in the block, but there are plenty of potential turtle wetlands here that have not yet been visited. Only spotted turtles have been documented in this block.

Large Area of Interior Forest: >500 acres

Deer Wintering Area: Present (~150 acres)

Natural Communities and/or Rare Plants: None documented

Freshwater Waterfowl and Wading Bird Habitats: Small section abutting Newtown Road and larger area along Bush Brook.

Large High Quality Wetlands: Several large wetlands (relatively abundant)

Connectivity: The connectivity to Moors Brook Block and Little River Block is pretty good.

Little River Block

Location Description: This block is located south of West Street, east of Guinea Road, and north of Oak Ridge Road; it contains a sizeable portion of the Little River watershed.

Size: 794 acres

Shape: Long and narrow with some interior penetration in the central part

Part of Biddeford/Kennebunkport Vernal Pool Complex Focus Area

Number of Potential Vernal Pools: 6 (all in the easternmost portion)

Potential Vernal Pools Visited: 1

Documented Significant Vernal Pools: 0

Turtle Survey Work: Fourteen wetlands have been visited in this block for Blanding's and spotted turtle survey work, but no rare turtle observations have been made here. This is a block that probably does not offer much potential for future rare turtle observations given the relatively scarcity of small wetlands in it.

Deer Wintering Area: Present (quite small~50 acres)

Natural Communities and/or Rare Plants: None documented

Large High Quality Wetlands: Abundant (especially in headwaters of Little River)

Early Successional Habitat: This block contains some grass/shrub land and agricultural land (especially north and west of Swan Pond Brook) that may host early successional species such as NE cottontail and/or grassland birds.

Connectivity: The connectivity to Moors Brook Block and Bush Brook Block is pretty good, but the connectivity to Proctor Road Block is minimal.

Proctor Road Block

Location Description: This block lies south of West Street, west of Guinea Road and east of Route 1; it includes Proctor Road and extends into Kennebunkport and Arundel.

Size: 1,400 acres in Biddeford (up to 4,400 acres with Kennebunkport and Arundel)

Shape: Portion in Biddeford is somewhat penetrated by Granite Road (but connectivity with adjoining areas in Arundel and Kennebunkport make this less significant)

Large Area of Interior Forest: >500 acres (most on the Kennebunkport portion of the block)

Part of Biddeford/Kennebunkport Vernal Pool Complex Focus Area

Number of Potential Vernal Pools: 22 (scattered throughout the block)

Potential Vernal Pools Visited: 6

Documented Significant Vernal Pools: 4

Turtle Survey Work: Survey work for Blanding's and spotted turtles in this block has been somewhat limited, but J. Haskins identified a number of potential wetlands in this block that he has not as yet visited. There are three to five documented spotted turtle locations in this block. This block offers very high potential return for new spotted turtle wetlands and individuals with greater survey work. The block contains 1 marked spotted turtle.

Natural Communities and/or Rare Plants: None documented

Large High Quality Wetlands: Abundant throughout block

Connectivity: The connectivity to the rest of this large undeveloped block in Kennebunkport is excellent, but the connectivity to West Street Block and Little River Block is minimal. Connectivity to the west is non-existent with Rte. 1 and I-95 corridors.

Swan Pond Brook Block

Location Description: This block lies west of I-95 and south of South Street and extends west beyond the town lines with Arundel and Dayton

Size: 2,000 acres in Biddeford (up to 2990 with Arundel and Dayton)

Shape: Long and wide, but some significant interior penetration from both the south and the north

Large Area of Interior Forest: >500 acres

Deer Wintering Area: Present (~300 acres)

Number of Potential Vernal Pools: 19 (many of these clustered in easternmost portion)

Potential Vernal Pools Visited: 1

Documented Significant Vernal Pools: 0

Turtle Survey Work: Almost no Blanding's and spotted turtle survey work has been done in this block though several unvisited areas were designated worthy of a visit by J Haskins. There are no turtle records documented in this block. Swan Pond Brook seems to hold good promise as a wood turtle stream and may warrant survey work.

Natural Communities and/or Rare Plants: None documented

Large High Quality Wetlands: Only 2 (relatively scarce)

Early Successional Habitat: This block contains a decent amount of grass/shrub land and agricultural land (especially north and west of Swan Pond Brook) that may host early successional species such as NE cottontail and/or grassland birds.

Connectivity: The connectivity to the rest of this large undeveloped block in Arundel is excellent. The connectivity to Buzzell Road Block is good, but the connectivity to the east is non-existent because of the I-95 corridor.

Buzzell Road Block

Location Description: This block lies south of Buzzell Road and River Road and north of South Street and extends beyond the town line with Dayton.

Size: 500 acres in Biddeford (up to 1000 acres with Dayton)

Shape: Quadrilateral with minor penetration in Biddeford, but the Dayton side looks like it has lots of agricultural land.

Number of Potential Vernal Pools: 1

Potential Vernal Pools Visited: 1

Documented Significant Vernal Pools: 1

Turtle Survey Work: None, potential is low.

Early Successional Habitat: This block contains a decent amount of grass/shrub land and agricultural land (especially along its southern part) that may host early successional species such as NE cottontail and/or grassland birds.

Connectivity: The connectivity to the rest of this undeveloped block in Dayton is OK, and the connectivity to River Road Block and Swan Pond Brook Block is good.

River Road Block

Size: 200 acres in Biddeford (up to 350 acres with Dayton)

Shape: Triangular with some penetration by agricultural lands especially on the Dayton side

Potential Vernal Pools: 0

Turtle Survey Work: None, potential is low.

Natural Communities and/or Rare Plants: None documented

Freshwater Waterfowl and Wading Bird Habitats: Small area abutting Dayton town line

Early Successional Habitat: This block contains some grass/shrub land and agricultural land (especially along River Road) that may host early successional species such as NE cottontail and/or grassland birds.

Connectivity: The connectivity to the rest of this undeveloped block in Dayton is good, as is the connectivity to Buzzell Road Block.

Appendix F: Summary of Biddeford Wildlife Data

The following summary of the City of Biddeford Wildlife Data was developed by wildlife biologist Mark Ward for the Biddeford Conservation Commission in 2006.

Rare turtles—to date 64 rare turtles have been captured and marked in Biddeford (57 spotted turtles and 7 Blanding’s turtles). Prior to 2005, 29 spotted turtles had been captured and marked in Biddeford. All but one of these marked turtles was located in the West St. Block, Moors Brook Block, or the Bush Brook Block. Prior to 2005 there were additional rare turtles documented in Biddeford, but these turtles were not marked so they do not help in estimates of population sizes and we have no way of knowing whether they are recaptures or not. In 2005, as a result of University of Maine graduate student effort, a total of 35 new rare turtle records - including 29 new spotted turtle records and 7 new Blanding’s turtle records - were documented. All previously unmarked turtles captured in 2005 were marked (three spotted turtles captured in 2005 had been previously marked). Of the spotted turtles captured in 2005, 18 of these were located in the West St. Block (where 3 were tracked using radio transmitters) and 14 were located in the Moors Brook Block (where 4 were tracked using radio transmitters). All turtle searching efforts in 2005 were in these two habitat blocks. Although infrequent Blanding’s turtle records from Biddeford existed prior to 2005, none of these turtles were marked. Seven Blanding’s turtles were captured and marked in the West St. Block in 2005 (four of these turtles were tracked using radio transmitters). It is not a comprehensive database of turtle survey effort in Biddeford, but turtle survey effort to date exceeds any other type of survey effort conducted in Biddeford.

New England Cottontail—eleven sites were surveyed in the winter of 2000-2001 in Biddeford and tracks and pellets of the New England cottontail were identified at one location. The location is east of I-95 on Thatcher Brook.

Barrow’s Goldeneye—twenty sites in Biddeford were surveyed in Jan-March 2000 for Barrow’s Goldeneye. One Barrow’s goldeneye was observed at each of two sites on the Saco River in January 2000.

Saltmarsh Bird Surveys—a total of eleven saltmarsh bird surveys were conducted at three different saltmarshes in Biddeford in 1997 and 1998 by MDIFW. Saltmarsh sharp-tailed sparrows were heard singing during seven of these surveys at two of the saltmarshes—Biddeford Pool and Little River Basin. No saltmarsh sharp-tailed sparrows were observed during three surveys at the Saco River saltmarsh.

Natural Community and Rare Plant Surveys—Site survey forms for nine visits to survey Biddeford for rare plants and natural communities were present in the Geographic Manual Files at the Maine Natural Areas Program (this does not mean that no other surveys have been completed, but this was all that was on file at MNAP). Four of the nine surveys were conducted in tidal marshes (three of these in Biddeford Pool), not surprisingly natural communities and rare plants associated with tidal marshes are the most heavily documented natural community and plant features on file at MNAP. Natural community data sheets from numerous site visits by turtle researchers to Biddeford from 1992-1995 are also on file at MNAP, but the natural community data on these sheets is very limited and would require a significant time investment to sort through and to determine its value. Two documents of potential interest also found in the files at MNAP are: “Significant Natural Resources of Biddeford Pool and the Potential Impacts of Development” by Humphrey and Lortie of Woodlot Alternatives (1990) and “Great Cranberry Bog—Report of Vegetation, Soils and Delineation” by Mase, Drew, and Hardingham (UNE students of Pam Morgan).

Vernal Pool Surveys—a total of 133 potential vernal pools were identified in Biddeford by Woodlot Alternatives during an analysis of high resolution aerial photography in 2001. Twenty-seven of these wetlands were visited in April and May of 2002 and 2003 to search for evidence of vernal pool breeding amphibians as part of Rob Baldwin's Ph.D. thesis work. Fifteen of these wetlands were determined to be "significant vernal pools" based on the abundance of wood frog egg masses, spotted salamander egg masses, presence of fairy shrimp, and/or the presence of a rare turtle. So 55% of the wetlands surveyed by Rob Baldwin with two well-timed visits per year for two years yielded sufficient data to establish them as "significant" vernal pools.

Appendix G: Biddeford Open Space Conference

Goal: To provide an opportunity for Biddeford citizens to learn about the value of open space/land conservation and to bring together diverse yet connected interests. Conference participants will contribute to developing a long term open space/land conservation vision for Biddeford.

LAND, PARKS, AND TRAILS FOR BIDDEFORD'S FUTURE Open Space Conference

Thursday, May 6, 2010 in the St. Francis Room, University of New England, Biddeford

4:30 - 5:00 PM - Registration

5:00 PM - 5:20 PM - Introduction and Welcome

Moderator - **Marcel Polak**, Maine Association of Conservation Commissions

Michael Morel, Lifelong Biddeford Resident; Chair, University of New England Land Board of Trustees

Mayor Joanne Twomey, City of Biddeford Mayor

5:20 - 6:15 - Saco River - Panel discussions with questions afterwards

Ezekiel Callanan, Maine River Guide -*River Recreation* - 15 minutes

Brian Phinney - *City of Biddeford Sustainable Hydro Power*- 15 minutes

Dr. Chris Feurt, Dept. of Environmental Studies, UNE, - *Water Quality and the Preservation of Green Ecosystem Services* - 15 minutes

6:15 - 6:30 - Light Dinner

Video Presentation on Timber Point

6:30 - 7:30 - *Green Spaces Protection* - Panel discussion with questions afterwards

Steve Walker, Maine IF&W - Beginning with Habitat -10 minutes

Mark Ward, Ecologist - 10 minutes

Richard Rhames, Saco Valley Land Trust - 10 minutes

Dr. Owen Grumbling, Wells Conservation Commission and Department of Environmental Studies, UNE - *Town of Wells Land Bank*

7:30 - 8:15 - Trails/Urban Parks - Panel discussion with questions afterwards

Dan Letellier, Biddeford Recreation Department - *Vision for urban parks and trails* - 10 minutes

John Andrews, Eastern Trail - 10 minutes

Alix Hopkins, Biddeford RiverWalk - 10 minutes

8:30 - 8:35 Conference Synthesis

Ezekiel Callanan, Heart of Biddeford

8:30 - 8:45 - Call to Action

Bill Durkin, Biddeford Open Space Committee

Denis Rioux, Biddeford Conservation Commission

Richard Rhames, Saco Valley Land Trust

8:45 Adjourn

LAND, PARK & TRAILS FOR BIDDEFORD'S FUTURE

OPEN SPACE

CONFERENCE

THURSDAY MAY 6

4:30PM - 9:00PM

ST. FRANCIS ROOM, KETCHUM LIBRARY
UNIVERSITY OF NEW ENGLAND
11 HILLS BEACH ROAD, BIDDEFORD

BRING
YOUR
ENTHUSIASM,
EXCITEMENT,
EDUCATION, IDEAS
ABOUT OPEN SPACE
IN RURAL AND URBAN
BIDDEFORD.

free
TO THE PUBLIC
LIGHT DINNER INCLUDED
GUEST SPEAKERS
PANEL
DISCUSSIONS

RSVP TO marcel@meacc.net
OR CALL 207.665.2577



Appendix H: Survey Instrument

2009 Biddeford Open Space Survey

The mission of the Biddeford Open Space Committee is to seek ways to “protect prime open space for the benefit of all Biddeford citizens.” We are conducting an initial survey of interested city residents to determine key priorities in protecting prime open space. Future, more comprehensive surveys will explore open space acquisition and use issues in more detail. The initial survey should take no more than a few minutes to complete.

1. Are you a resident of Biddeford?

- Are you a resident of Biddeford? Yes
- No

2. What is your age?

- What is your age? Under 16
- 16-25
- 25-35
- 35-55
- 55 and older

3. Do you live (choose one only):

- Do you live (choose one only): in downtown
- in rural areas
- on coast
- on river

4. Do you (check all that apply):

- Do you (check all that apply): own a home
- rent an apartment or home
- own rental property
- own a second home

5. Have you lived in Biddeford?

- Have you lived in Biddeford: Less than six months
- Six months to three years
- Three to five years
- Five to ten years
- Ten to twenty years
- More than 20 years
- Other____

6. What are your priorities for protecting open space in Biddeford? (Choose your top 3 priorities from the following list):

- What are your priorities for protecting open space in Biddeford? (Choose your top 3 priorities from the following list): Pocket, city maintained parks (small parcels in the downtown area)
- Large, city maintained parks (such as Clifford Park, with recreational trails, etc.)
- Recreation fields (city maintained ballparks, tennis courts, basketball courts, etc.)
- Open space with no access(critical wildlife habitat)
- Open space with limited access (hiking trails, non-motorized bike trails, horse trails, etc.)
- Open space with motorized access (snowmobiles, off-road vehicles, ATV trails)
- Open space with outdoor activities (hunting, fishing)
- Water resources, including inland/coastal wetlands
- Scenic views and vistas
- Farmland/community gardens
- Other (please be specific):_____

7. Would you be in favor of a multi-city/town open space planning effort? This would involve combining open space planning resources with cities and town that border Biddeford and share similar open space issues, such as the Saco River watershed.

- Would you be in favor of a multi-city/town open space planning effort? This would involve combining open space planning resources with cities and town that border Biddeford and share similar open space issues, such as the Saco River watershed. Yes
- No

8. Would you be willing to endorse a City-sponsored effort to buy prime open space in Biddeford?

- Would you be willing to endorse a City-sponsored effort to buy prime open space in Biddeford? Yes
- No

9. Is there anything else you would like to share with the Open Space Committee on protecting Biddeford's open spaces? (Please be specific)

Is there anything else you would like to share with the Open Space Committee on protecting Biddeford's open spaces? (Please be specific)

Verbatim Comments

Please protect the resources we currently have, especially along the coast of Biddeford. Once we lose this resource it will be gone forever. More building in fragile ecological areas will hurt our coastline, the habitat living there and the tourist industry that come to visit such a beautiful place.

Develop the beautiful resource along the river with trails, vistas and give residents an opportunity to enjoy this once hidden resource.

Please get involved with the Shore land zoning proposal

Transportation issues in the city will become more urgent as the Mill redevelopment progresses and will affect open areas that exist as well as the creation of new ones. Encouraging and planning for alternative transportation should begin now.

Recently there has been discussion of land acquisition for the airport using Federal and State money. We don't need to have more red tape attached to this facility. The airport should be able to be self-supporting with no Federal or State funding and should be kept small as approved by the city council. This land would open the door to expansion of the airport even though the current reasoning is for airport safety. This facility only accommodates a small group of people. Keep it open, keep it small, keep it safe for everyone, keep it supporting. Leave the land for a future generation to decide its usefulness.

Unclaimed property well posed (i.e. previous owners are researched and directly contacted) and not claimed after 5 years and not sold at public auction 12 months following. It should be considered available or grandfathered to "city owned" and available for open spaces under all of the listed conditions in question #6.

Preserving open space raises the quality of life, gives children access to nature and, in the long run, leads to lower taxes. Specifically, I like the idea of the City passing a bond issue to purchase development rights from land owners who volunteer to sell them to the City. The voluntary transfer of development rights to the City would be a win-win for everyone because it means fewer roads to maintain, fewer classrooms to build, more opportunities for children to observe nature, etc. Many communities in the New England region are doing this.

The Open Space Committee might find it helpful to get input from the city's Project Canopy Committee, as well as Parks and Rec.

We have some beautiful parcels of land in Biddeford; I want to thank all of you who serve on this important committee. I am anxious to float a bond that will help the city protect these open spaces and try to get all the grant money we can to be able to achieve this goal.

Sincerely, Mayor Twomey

Please keep me posted of your meetings; I would like to attend them.

Bob Mills
City Councilor
Ward 5

The city should not infringe upon owners of land or property. I'm in the building trades and have very little work because you're holding up projects because of petty little things.

THANK YOU FOR TAKING THE INITIATIVE IN LOOKING AT AN OPEN SPACE PLAN. KEEP IT UP.

Concern about open space complements the effort to have a stronger downtown. I'm in favor of the city having growth, but it's best to focus the growth where the infrastructure is already in place.

David Flood

The residents [sic] location options does not include suburban. 30 years ago where I live was rural, now it is suburban. This is a great loss for many reasons; it is a trend that should be resisted with all the tools available to the City including regulation, acquisition, incentives, etc. We should find a way to work with Kennebunkport and the state to preserve the large block of undeveloped land in the State recognized Biddeford-Kennebunkport Vernal Pool Complex.

We need to be like our neighboring towns. Saco, Scarborough, Kennebunk, and Kennebunkport all have land trust programs. We need to change our direction. We need to start curb side recycling. Biddeford has a poor reputation when it comes to going green. PLEASE let's change it.

Every day when I drive past Emery School, I see people using the old playground as a makeshift dog park. I would like the city to officially sanction this area as a dog park and improve the grounds.

The users seem to be responsible; they even have trash bags hanging on the fence to put their pets' waste in. It would be nice if the public works department would deliver and maintain some actual trash cans in this area. The remaining asphalt should be pulled up and replaced with turf or something appropriate for dogs. It would also be nice if it could be expanded.

There are many residents with little or no yards to exercise their pets, and this area has served them well. Let's see if we can help them out.

Thanks, Tim Lambert
143 West St.

GrowSmart Maine is a useful resource

I would really like to protect the woods on the Trolley Museum land and all around that area between West Street in Biddeford and Log Cabin Road in Kennebunk for biking, ATVs, and hunting.

I totally believe that protecting open spaces is very important to and for the health and well-being of Biddeford and the surrounding multi-cities and towns.

We desperately need to protect the open spaces along Mile Stretch Road in Biddeford Pool.

Stop the loosening of zoning restrictions in Biddeford Pool.

I want to see as much land as possible in Resource Protection Zone.

Open space should already be existing [sic]. City should not buy.

We need to preserve what little open space is left in the City. It is a mistake to allow development of the few remaining undeveloped coastal lots left.

The city already owns a great piece of land on the border of Arundel at the end of Granite Street Extension. Don't waste it by letting the fly boys use it as their personal playground. Share, share, share it with as many citizens of Biddeford as possible. All taxpayers of the city should have access to public lands.

The residents[sic] location options does not include suburban. 30 years ago where I live was rural, now it is suburban. This is a great loss for many reasons; it is a trend that should be resisted with all the tools available to the City including regulation, acquisition, incentives, etc. We should find a way to work with Kennebunkport and the state to preserve the large block of undeveloped land in the State recognized Biddeford-Kennebunkport Vernal Pool Complex.

Please make every effort to protect the wetlands and shore lands around the beautiful Biddeford Pool area...for the benefit of all current and future residents of Biddeford. Thank you.

Open space should be given a very high priority. I urge the Committee to look into the history of open space in Redding, CT, where Stuart Chase (economist in Roosevelt admin.) in the 1950s began advocating an open space policy based on the economic interest of the town. He argued that purchasing open space reduced need for town services, saving the town more money than the illusory notion of encouraging development to increase tax base.

Peter Meyer

Pet friendly areas including a dog park in a central location.

I support John Condon's efforts to protect from development the 700 acres roughly in the area of South Street-turnpike--Route 111. This would be a beautiful park with intact acreage for wildlife. Saco has done this with Horton Woods out on Route 112 where Saco Bay Trails is developing a trail system.

Preserving open space raises the quality of living for everyone in Biddeford.

Keep all existing open space around Biddeford Pool and its surrounding marsh and feeding tributaries intact.

There are huge tracts of open space in this city already--over 200 acres in the coastal area alone. Blandings Park, Saco Valley Land Trust and others have much land being protected. Look at it collectively you will find you do not need more land and the city does not need to spend any additional money.

Maintaining the coastal wetlands around Biddeford Pool is critical for migratory birds and wildlife. I am completely opposed to any further development along the stretch.

I am opposed to the changes proposed for Mile Stretch Road.

Please keep the RP designation for Mile Stretch and don't open this land to development. The wetlands are crucial and the scenic vistas valuable.

Biddeford desperately needs more athletic fields. These can be gracefully combined with other open recreation areas.

Protect open space at:

Granite Point, keep RP, continue to protect high value contiguous freshwater wetlands adjacent to Rachel Carson NWR. Buy open land to protect

Biddeford Pool, keep RP, protect Pool, adjacent salt marshes, dunes,

View sheds, buy open land to protect

Fortunes Rocks and Hills Beach, keep RP, buy open land to protect

Make all Rachel Carson NWR lands RP.

Protect Great Cranberry Bog, off West St.

Make RP zone, buy land to protect

Little River watershed, buy land to protect

Create "open space zone" for lands that are not included under shore land zoning protection.

You need to block off part of downtown Biddeford and have shops and cafés similar to Church Street in Burlington, Vermont.

There should be an effort to identify and make known to the public the existing open spaces. There should also be an effort to provide multiple open spaces with multiple public uses.

I would like to see tax incentives for open space. I do not think the city should buy property currently as there are better, more important needs for our tax dollars. Thank you.

I think that the children in the town of Biddeford would greatly benefit from numerous small sized parks which would include swing set(s), slides, basketball court (even if it is just 1/2 sized with a couple of hoops) and a few benches for their parents to watch them play. A lot of children don't have access to the bigger parks because of transportation or convenience issues.

Need areas where well behaved dogs can be walked off-leash.

We must be very careful. We MUST protect open spaces because when they are gone, they are gone. Biddeford is very fortunate to have open space, we must preserve it.

Appendix I: University of New England: Sustaining the Saco River Study

University of New England: Sustaining Quality of Place and Ecosystem Health in the Saco River Estuary

1. Collaborative Research Links Knowledge to Action to Sustain Economically Important Ecosystem Services

The 1,500 square mile Saco River watershed is the largest in southern Maine. For centuries the river has been the economic life blood of the region serving as transportation corridor, energy source and drinking water source for thousands. The University of New England (UNE) is located on the estuarine portion of the river where the consequences of watershed wide land use practices manifest and influence the biophysical environment at the land sea interface. Researchers at UNE investigate how the physical attributes of the watershed such as water quality, flow of pollutants and nutrients from headwaters to the ocean and policies and practices of land use in the region interact to affect estuarine ecosystem services.

2. Research to Assess Ecosystem Health Linked to Community Assets

As part of the *Sustainability Solutions Partnership*, research scientists and undergraduate research teams from the University of New England are working to link scientific research and civil society through innovative interdisciplinary collaboration. Student and faculty researchers:

- Determined and categorized existing land use along the Saco River using GIS technology and field reconnaissance, assessing land use practices including land conversion, impervious surface, and maintenance of vegetated buffers,
- Developed ecological metrics associated with tidal marshes, fish and bird diversity that respond to land use policies and practices in the Shore land Zone along the Saco River.

UNE scientists are equally interested in understanding the social and economic characteristics of the region surrounding the estuary. Research is currently addressing these questions:

- How do people use the estuary for livelihoods and recreation?
- What businesses depend upon the health of the estuary?
- How are governments, businesses, and organizations working to understand and protect the ecological, social and economic values of the estuary?

3. Workshops and Community Dialogues Integrate Research and Application

Through workshops, trainings and community dialogues UNE engaged interdisciplinary researchers and land use decision-makers in collaborative learning to examine gaps in scientific knowledge required to answer management and policy questions. The innovative “**Sustaining the Saco**” workshop was developed by undergraduate researchers as part of an Environmental Communication course. Students developed research skills to bridge the science to management divide including conducting a needs assessment, designing a collaborative learning workshop and engaging workshop participants to identify values, concerns and protection strategies to sustain the Saco. Through this course and internships, UNE uses EPSCOR funds to build critically important knowledge and research skills in the next generation of scientists. The skills developed through this research aim to build undergraduate competence in assessing coupled human and natural systems and designing and executing research that bridges jurisdictions and disciplines to build resilience in governance, policy and management systems.

Sustaining Quality of Place in the Saco River Estuary Through Community Based Ecosystem Management

Project Overview for "Sustaining the Saco" Workshop UNE May 16, 2012

Project Description:

The Saco River watershed is the largest watershed in southern Maine, encompassing more than 1,500 square miles. The tidally-influenced (estuarine) portion of the river lies below the first dam on the river, and its edges are dominated by tidal wetlands. Coastal development, point and non-point source pollutants (especially nitrogen), sea level rise and invasive species are some of the major threats to the health of the estuary. The town of Saco and the city of Biddeford are on either side of this portion of the river, and the University of New England (UNE) is located near the mouth of the river. The overarching goal for this project remains to sustain the structure and function of the Saco River estuary by connecting human values and actions with the ecological health of the estuary. Community based ecosystem management (CBEM) is the framework within which social, economic and ecological objectives are organized and implemented. We have discovered stakeholder values and concerns, and are now focusing on a number of specific threats to the estuary and opportunities for protecting the estuary into the future. One of our major initiatives is to develop socioeconomic and ecological indicators that connect to and reflect the status of what people value about the estuary with the land use, conservation and management actions that have both positive and negative effects on the ecosystem services provided by the estuary and its immediate watershed.

Objectives for year three September 2011 – August 2012

- Objective** (1) Continue to develop and refine ecological and sociological indicators and monitoring methods that integrate and create feedback loops for ecosystem health, community values, and land use policies and practices in the Shoreland Zone along the Saco River Estuary.
- Objective** (2) Compare land use and intertidal marsh habitat between 1962 and the present using aerial photography and Geographic Information Systems (GIS) to inform policy analysis.
- Objective** (3) Complete development of a visual model that links social, economic and ecological indicators in the Saco River estuary to provide a feedback mechanism linking quality of place and ecosystem health with policy and management.
- Objective** (4) Continue to use Collaborative Learning to engage estuary stakeholders and interdisciplinary researchers in a *Community of Practice* to bridge cultural, perceptual and cognitive barriers to improved land use practices and policies that sustain valued attributes of the Saco River estuary.
- Objective** (5) Continue development of communication strategies for dissemination of project results and to insure continued stakeholder engagement.
- Objective** (6) Develop a plan that will insure that the Saco River Estuary Project is sustained into the future and continues to adapt and respond to stakeholder needs and concern.

The Saco Estuary Project

A Summary of University of New England College of Arts and Sciences

Undergraduate Research and Scholarship

INVASIVE PLANTS IN ESTUARINE MARSHES: *PHRAGMITES AUSTRALIS* ALONG THE SACO RIVER

Almeida, W.T., French, C., Tamulonis, R. and P.A. Morgan. Department of Environmental Studies, University of New England, Biddeford, ME.

The Saco River Estuary Project brings together the social and natural sciences with a long-term goal of sustaining the structure and function of the Saco River estuary. We are surveying the avian, plant and fish species that use the estuary's marshes, and will connect these surveys to economic and community values. Moving upstream from the mouth of the river we have found salt marshes, brackish marshes, and tidal fresh marshes. One objective this summer was to establish baseline information concerning the presence of *Phragmites australis* along estuarine marshes of the Saco River. All patches surveyed along the Saco River were discovered to be the invasive haplotype. The patch size varied from 1.5m by 1 m, to 108m by 21.5m. The living stem densities ranged from 7 stems to 572 stems per 2.5m² quadrat, and the average heights from 75cm ±12 to 282cm ± 16. This data collection will allow for long term monitoring of the invasive plants patches, with hope that alongside local community collaboration, management practices may be established.

BIRD COMMUNITIES OF THE SACO RIVER'S TIDAL MARSHES

French, C. and N. Perlut. Department of Environmental Studies, University of New England, Biddeford, ME

The Saco River Project started in 2010 to understand the diverse ecological and human-uses of the tidal marshes from the dams in Biddeford to the mouth of the river. Birds are a critical indicator of marsh health and function, and they are an important part of the human experience on the river. Marshes are important for birds because they provide habitat for breeding, resting, staging prior to migration, and as stopover during migration. We evaluated bird communities in 10 (2010) to 16 (2011) tidal marshes on the Saco River. We collected data from late-April/early-May to early-September by conducting 10 minute fixed-radius point counts once during the low and once during the high tide of each month between the hours of 5am to 9am. Across years, we counted 9,057 individuals and 114 species, including 10% of the state threatened species and 34% of the species of special concern. We counted 34% of the 331 species known to occur in Maine. This diverse species assemblage included birds that use all habitat types and foraging substrates, spanning from core forest (black-throated blue warbler) to grassland (bobolink) to scrubland (brown thrasher) to marsh (Virginia rail). Along with continuing the current methods, future work may include nocturnal counts, beginning the count earlier, and continuing later in the fall.

CLASSIFICATION AND ASSESSMENT OF LAND COVER CHANGE (1962-2003) OF THE LOWER SACO RIVER WATERSHED, MAINE, U.S.A.

Smith, C., Adams, M., Steen-Adams, M. and P.A. Morgan. Department of Environmental Studies, University of New England, Biddeford, ME

In this study, we examined landscape pattern of the Saco River estuary. Our objectives were to: (1) Establish baseline data of landscape pattern, specifically land-cover, in the Saco River estuary. "Baseline" refers to the earliest date for which aerial photography is available for this study area (1962), and (2) Quantify land cover change of the Saco River estuary over a 4-decade period (1962-2003). We obtained the historic (1962) aerial photographs from the US Department of Agriculture Natural Resource Conservation Service (USDA-NRCS) (scale: 1:20,000, black and white), and we downloaded 2003 aerial photographs from the Maine Office of GIS (scale: 1:24,000, 24-bit color). We developed our classification scheme to correspond with the 2006 National Land Cover Data (NLCD) classification scheme and then applied this scheme to classify land cover. Our results indicate that land cover change has occurred among some classes during the 4-decade study period (1962- 2003). The most significant changes were reduction in the total area of tidal marshes, disappearance of the grassland and shrub classes, and increase in low and medium intensity development. These preliminary results suggest that some areas dominated by grassland, shrub, and forest land covers in 1962 were converted to development by 2003, while some areas of shrub cover matured to become forest in 2003. More research will be needed to verify the extent of marshes in both images, and additional field checks will be made to validate the accuracy of the classification.

EVALUATING THE SACO BAY ESTUARY SYSTEM AS A NURSERY GROUND FOR COMMERCIALY VALUABLE AND ECOLOGICALLY IMPORTANT FISH SPECIES

Smith, K. M. and J. A. Sulikowski. Marine Science Department, University of New England, Biddeford, ME

Coastal river systems, such as the Saco River, are known to play an important role in the early life history of many marine species within the Gulf of Maine (GOM). Although the Saco River is the fourth largest in Maine, data regarding the fauna within this dynamic system is limited. The goal of this project is to compile an up to date baseline ecosystem structure of the wild fish populations within the Saco River estuary (SRE). Over the course of this five year study, various sampling methods including beach seines, modified lobster traps, plankton tow nets, and settlement collectors have been used to collect larval, post-larval, and juvenile fish species from this habitat. Sizes and relative abundances of species caught have been recorded and analyzed on a seasonal and geospatial basis. Out of a total 48 fish species collected, 44 species representing 31 families have been observed using the SRE system as a nursery ground. Overall, fish abundance and diversity was highest during spring and summer months with both marine and freshwater species observed representing resident, migratory, and transient life history categories. *Alosa aestivalis* (blueback herring), *Alosa pseudoharengus* (alewife), *Menidia menidia* (Atlantic silverside), *Ammodytes americanus* (American sand lance), and *Pomatomus saltatrix* (bluefish) were among the most abundant species collected. Examining early life history characteristics of the significant species richness present in these waters is essential for future conservation and management of commercially important and threatened GOM fish stocks.

BACTERIA IN THE SACO RIVER

Spillane, T. and S. Zeeman. Marine Science Department, University of New England, Biddeford, ME

Fecal Indicator Bacteria (FIB), which includes *Escherichia coli*, detects the presence of fecal waste in an environment, which can contain pathogens that negatively affect humans and other organism's health. The Saco River flows through many towns, farms and wetlands, making it potentially high in FIB, and therefore a water quality concern. This study focuses on 18 sites along the 134-mile river from 2010 to 2012. Water and sediment samples are retrieved using the Idexx Colilert-18© and Enterolert© water testing system which gives the number of FIB in the sample; the Colilert-18© test for both total coliform bacteria and total number of *E. coli*, while the Enterolert© cover enterococci. The results show relatively low concentrations of bacteria in the winter months, leading to a large spike in April after a rain event and increasing throughout the summer months. In order to fully understand the data a side study was done to determine the effects of environmental factors on *E. coli*. Three different survivability experiments were done testing against varying degrees of sunlight, temperature, and salinity. The base test showed that *E. coli* can survive for weeks in sterile river water, but in contact with sunlight is deactivated within a couple hours. Similar results showed that with increased temperature (40 C) and high salinity (30 ppt) also increased death rates. Some of the results translate to the data on the river, with very low numbers of FIB found at Biddeford Beach, a high saline environment. Sampling continues into 2012 and will examine other factors involved.

PLANT COMMUNITY STRUCTURE OF TIDAL WETLANDS IN THE SACO RIVER ESTUARY, MAINE

Tamulonis, R. and P.A. Morgan. Department of Environmental Studies, University of New England, Biddeford, ME

To date, very little is known about the tidal wetlands of the Saco River estuary. This study aimed to determine what plant species are present in the estuary's marshes, as well as what patterns exist in their distribution among the varying salt, brackish, and freshwater tidal wetlands found there. Ten tidal wetlands were selected for study along a salinity gradient in a stratified random manner. We used the point intercept method to quantify plant cover in 1m² quadrats along randomly placed transects at each study site. Cluster analysis was used to determine plant associations, and indicator species analysis revealed dominant species within each identified group. We also discovered a number of plant species currently listed as rare or threatened in the state of Maine, including *Bidens hyperborea*, *Crassula aquatica*, *Eriocaulon parkeri*, *Lilaeopsis chinensis*, *Limosella australis*, *Sagittaria calycina*, *Sagittaria rigida*, *Samolus valerandi* and *Zannichellia palustri*. The next step is to look for relationships between plant associations and abiotic factors, including salinity, distance up-river, available nitrogen, and shoreline development.

Stakeholders of the Saco River – A Video Documentary

Videographer: Michael D'Apice

Advisor: Joe Habraken Department of Business and Communications

This 20 minute documentary explores the relationships between businesses established along the estuary of the Saco River and the interdependence of a healthy local economy with a healthy estuary. UNE plans to make this documentary available on the project website sometime this summer.

For more information about The Saco Estuary project and *Sustaining the Saco* contact:

Dr. Christine Feurt at cfeurt@une.edu or

Dr. Pamela Morgan at pmorgan@une.edu

Opportunities to engage in the project during summer 2012:

Participate in field research with faculty and students

Set sail for one of the “We’re All in the Same Boat” estuary tours with researchers, managers and stewards of the Saco.

Appendix J: City of Biddeford: Land for Maine's Future Bonds Voting Results

Land for Maine's Future Bonds

City of Biddeford Voting Results

<u>Year</u>	<u>Total Votes</u>	<u>#Yes</u>	<u>#No</u>	<u>%Yes</u>	<u>%No</u>
1999	6297	4555	1742	72%	28%
2005	5933	3675	2258	62%	38%
2007	4407	2561	1846	58%	42%
2010	7939	4752	2884	60%	40%
2012	9329	5478	3851	59%	41%

Appendix K: River and Ocean Rights of Way in Biddeford

Source: City of Biddeford Planning Office

East Point Sanctuary

Maine Audubon's 30-acre sanctuary on the eastern tip of Biddeford Pool offers visitors a wide, easy trail around the peninsula, plus paths down to the shore (but beware of steep, eroding shore banks and poison ivy throughout). The point looks directly out onto Wood Island Light, with a string of smaller islands to the west. Visitors can also see the sweep of sandy beaches that end in the Prouts Neck headland to the northeast. Fishermen frequent the rocks on the rim of East Point and birders consider it a "must stop" location. Extending so far into the water, it is a good area for migration as well as unusual storm-blown species. Respect private land and posted rules. No dogs allowed. No bathroom facilities.

From Downtown Biddeford take ME 208/ME 9/Pool Street approximately 5 miles to ME 208/Bridge Road. Follow ME 208/Bridge Road to Mile Stretch Road and turn left. Travel 1.1 miles and merge right onto Lester Orcutt Blvd. Very limited parking, pull onto shoulder. Trailhead begins at end of road.

Fortune Rocks Beach

A 2-mile sandy beach fronting open ocean offers traditional beach activities. Reliable surf delights those who enjoy body surfing, skim boarding and kayaking. The unbroken and mainly level beach is ideal for walking and jogging on hard-packed sand. Birders look for shorebirds in migration and seek out Lily Pond's songbirds at the edge of the strand. The beach parallels the road, making it easy to access but less private. Lifeguards are seasonal. Portable bathrooms are provided. Dogs and horses are not allowed during the day from May to September. When dogs are allowed they must be leashed and dog waste must be cleaned up. If possible, time a visit to avoid full high tide, when the beach area is most restricted.

From Downtown Biddeford take ME 208/ME 9/Pool St approximately 5 miles to ME 208/Bridge Road. Follow ME 208/Bridge Road to Fortunes Rocks Road and turn right to the beach. There is limited parking, on the street. A seasonal parking permit is required from Biddeford City Hall between June 15 and Labor Day. No overnight parking.

Gil Boucher Park

Biddeford Pool Beach includes a big, sandy beach with grassy dunes that offers some privacy from nearby homes. The beach is ideal for swimming and other summer beach activities. Small-boat users may hand-carry and launch from the beach. The site offers seasonal lifeguards and bathrooms. Dogs and horses are not allowed during the day from May to September. When dogs are allowed they must be leashed and dog waste must be cleaned up. Tip: Ocean swells may be large.

From Downtown Biddeford take ME 208/ME 9/Pool Street approximately 5 miles to ME 208/Bridge Road. Follow ME 208/Bridge Road to Mile Stretch Road and turn left. Travel 0.9 miles and turn right onto Gilbert Place to the parking lot. A seasonal parking permit is required from Biddeford City Hall between June 15 and Labor Day. No overnight parking.

Hills Beach

Located in a residential area near University of New England on the north side of Biddeford Pool, this narrow, sandy beach at the outlet of the Saco River is most often used for fishing (from the jetty) and bird watching at nearby wetlands. Its 500-yard stretch of sand offers more protection, with warmer air and water as well as smaller waves. Occasional grassy dunes offer some privacy. Small-boat users may hand-carry and launch from the beach. There are no lifeguards or bathroom facilities. Dogs and horses are not allowed during the day from May to September. When dogs are allowed they must be leashed and dog waste must be cleaned up.

From Downtown Biddeford take ME 208/ME 9/Pool Street approximately 4 miles to Hills Beach Road. Travel approximately ¾ mile and the beach is accessible off side streets to the left. Limited parking is available on odd-numbered sides of the side streets. Cars must face the direction of traffic flow.

Marblehead (Meetinghouse Eddy) Boat Launch

This state-owned launch site, the most active on the river, has two well-constructed, all-tide ramps and a float that allows boaters to head down the Saco River for open water – or tarry on the river to fish. In early summer where river meets ocean, striper fishing lures dedicated fishermen to the mouth of the Saco. This launch site also offers excellent shore fishing access and anglers may cast from the long dock, the concrete ramp or grassy lawns. An outhouse is provided.

From Downtown Biddeford take ME 208/ME 9/Pool Street approximately 2.5 miles to Marblehead Lane. A brown sign marks boat access. Upper and lower parking lots offer space for many vehicles and trailers.

Middle Beach

This long, sandy beach offers a flat, wide surface ideal for beach walks and jogging on firm, ocean packed sand. Wide enough to accommodate games and sand castles, this area also has classic shallow wading for young children as it gently slopes into deeper water. Seasonal lifeguards are provided. No bathroom facilities. Dogs and horses are not allowed during the day from May to September. When dogs are allowed they must be leashed and dog waste must be cleaned up.

From ME 208/ME 9/Pool Street, take slight left onto ME 208/Bridge Road. At the intersection, go straight into a small parking lot. A seasonal parking permit is required from Biddeford City Hall between June 15 and Labor Day. No overnight parking.

Park in the Pines

This small, scenic park along tidal Biddeford Pool, which lies across the street from Hills Beach, offers birders good access to tide pools, mud flats, and a nearby marsh. It also offers visitors a place to picnic or simply sit on shaded benches and watch boat traffic and wheeling gulls. Paddlers can hand-carry and launch from a half-tide, gravel ramp and might choose to time their paddling to avoid a muddy take out at low tide. Low-tide visitors will confront a vast quantity of mud. The park is open dawn to dusk. Alcoholic beverages and unleashed dogs are prohibited. No bathroom facilities.

From Downtown Biddeford take ME 208/ME 9/Pool St. approximately 4 miles to Hills Beach Rd. Travel 1.6 miles to find the park on the right side of the road. Vehicles may enter the park to drop off kayaks or canoes but parking is unavailable.

Vines Landing

This shore-front municipal park in the center of Biddeford Pool provides a terrific view of Wood Island Light's stone tower rising over rock ledges and low island growth on a small, offshore island. The landing has a gravel boat ramp with slabs of concrete able to support small trailers and light craft. Paddlers may hand-carry as well. Anglers may fish from the park's shore or launch and try their luck in the pool or nearby open waters. Kayak rentals, a grocery store, shops and a post office are within easy walking distance. Those interested in a lighthouse tour can contact "Friends of Wood Island Lighthouse". Leashed dogs are allowed. No bathroom facilities.

From Downtown Biddeford take ME 208/ME 9/Pool Street approximately 5 miles to ME 208/Bridge Road. Follow ME 208/Bridge Road to Mile Stretch Road and turn left. Travel 1 mile and turn left onto Yates Street and follow to the end. Minimal parking is available. No overnight parking.

Mechanic's Park/White's Wharf

This attractive park on the shore of the Saco River offers an observation deck from which visitors can observe gulls wheeling over the water and boats zipping back and forth. Interpretive panels provide fascinating details for those interested in history. Landscaping and native flowers border the mowed area, inviting visitors to stay and picnic – or at least enjoy a moment of rest on the benches. Roller blading, skate boarding, ball games, and Frisbees are not permitted. The park is open from dawn to dusk. No bathroom facilities.

From ME 9/Main Street in Biddeford, turn onto Water Street, southwest of the Saco River. The park is immediately on the left. Parking is available on street and in a City owned parking lot.

Appendix L: Bibliography

City of Biddeford, *1999 Comprehensive Plan*, Biddeford Planning Department, January 2000

Land for Maine's Future, *Evaluating the Economic Benefits of Land Conservation in Maine*, June 2011

Maine Fisheries and Wildlife, *Beginning with Habitat*, 2003

Land for Maine's Future, *Supporting Rural Economies through Land Conservation*, November 2010

Scarborough Maine Land Trust, *Economics of Land Conservation*, 2011

America's Great Outdoors, *Progress Report*, 2011

