

Open Space & Recreation Plan – 2013

Town of Reading



Compiled, Written and Updated by:

Open Space & Recreation Planning Task Force

**Town Hall
16 Lowell Street
Reading, Massachusetts 01867**

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Table of Contents

| | |
|---|----|
| Section 1 Plan Summary | 1 |
| Section 2 Introduction..... | 2 |
| A. Statement of Purpose | 2 |
| B. Planning Process and Public Participation..... | 2 |
| C. Accomplishments..... | 3 |
| D. Plan Authors..... | 5 |
| Section 3 Community Setting..... | 6 |
| A. Regional Context | 6 |
| B. History of the Community..... | 7 |
| C. Population Characteristics | 8 |
| D. Growth and Development Patterns..... | 10 |
| Section 4 Environmental Inventory and Analysis | 15 |
| A. Geology, Soils and Topography | 15 |
| B. Landscape Character..... | 16 |
| C. Water Resources | 17 |
| D. Vegetation..... | 19 |
| E. Fisheries and Wildlife..... | 21 |
| F. Scenic Resources and Unique Environments | 22 |
| G. Environmental Challenges..... | 22 |
| H. Environmental Justice, Open Space and Recreation Inequalities..... | 26 |
| Section 5 Inventory of Lands of Conservation and Recreation Interest..... | 26 |
| Section 6 Community Vision | 29 |
| A. Description of Process | 29 |
| B. Statement of Open Space and Recreation Goals | 30 |
| C. Consistency with the 2005 Master Plan..... | 31 |
| D. Consistency with MetroFuture..... | 32 |
| Section 7 Analysis of Needs..... | 33 |
| A. Summary of Resource Protection Needs | 33 |
| B. Summary of Community's Needs..... | 34 |
| C. Management Needs, Potential Change of Use..... | 42 |
| Section 8 Goals and Objectives | 45 |
| Section 9 Seven-Year Action Plan – 2013-2017..... | 48 |

| | | |
|------------|------------------|----|
| Section 10 | Comments | 55 |
| Section 11 | References | 56 |

Appendices

Appendix A – Section 5 Inventory

Appendix B – Survey Analysis

Appendix C – Community Preservation Act Information

Appendix D – Biodiversity List

Appendix E – Green Dog Rules

Appendix F – ADA Policy

Appendix G – ADA Access Self-Evaluation

Appendix H – Public Meeting Minutes and Presentation

Appendix I – Special Needs Recreation Programming

Appendix J – Ipswich River Greenway Final Report (incl. Grant Resources; ADA Standards)

Appendix K – Mattera Cabin Open House Flyer

Appendix L – Walkable Reading Surveys

Appendix M – Park Master Plans

Appendix N – Composting and Shade Tree Program

Appendix O – Walkable Communities Advocate Speaks

Appendix P – Survey and Public Meeting Publicity

Appendix Q - Town Pool Comments

OPEN SPACE AND RECREATION PLAN - 2013

Section 1 Plan Summary

Reading's Open Space and Recreation Plan – 2013 is a formal inventory and planning document developed from existing Town, State and Federal information, from citizen and nonprofit organization input, and from the results of a town-wide survey. The 2013 plan is an update of the Town's prior plans, the most recent written in 2007.

Reading has continued to lose open space over the last five years, though not at the rate seen in the mid 2000's when the Town's two remaining farms were developed for housing. The Town's challenge now is to meet the demand for passive and active recreation opportunities for the residents who have moved into the many new apartment, condo, and townhouse units. Reading must also strive to meet the needs of long-time residents and to preserve what open space it has left. Citizen groups and surveys express a desire to preserve the Town's character as a family-friendly community where citizens can gather for recreation and community building. Reading must remain vigilant to slow the rate of landscape change in order to maintain the quality of life in Reading.

The current plan concludes that the overarching open space and recreation goals of the community are to have and maintain a variety of active and passive recreational opportunities for all persons and for those opportunities to be distributed throughout town, to provide physical connections and community connectedness, to protect natural resources, and to preserve the character of the town.

The major goals formulated in this plan are:

1. Maintain and enhance existing open space for passive recreation
2. Maintain and enhance existing recreation facilities and programs
3. Make Reading pedestrian and bicycle friendly, improve connections, encourage climate protection and personal health
4. Protect open space for wildlife habitat and watershed protection
5. Preserve the character of the town
6. Develop a strong financial plan and seek new sources for funding

Section 2 Introduction

A. Statement of Purpose

The purpose of the open space and recreation planning process is to understand the town's open space and recreation needs and assets and to develop a plan for meeting these needs in the future. On a practical level, updating the plan maintains the Town's eligibility to apply for certain grants from the State. On a philosophical level, the process of updating the plan ensures that we as a Town look at our needs and our assets prior to and independent of considering a particular open space or recreation initiative or land acquisition. Equally important, is to consider recreation and open space needs as closely related rather than competing.

The process requires us to take the pulse of the community, to sit back and listen to what the community has to say rather than assuming an advocacy stance telling the community what its needs are. An effective open space and recreation planning process starts with listening, then synthesizes what the community has to say, sets out a plan for the future, and ultimately advocates for that plan.

As you read this plan, we hope you will follow the same process. Listen with an open mind, then struggle with us to balance the competing desires of the community and the competing needs of Town government. Finally, work to meet the open space and recreation goals of the Town of Reading and ensure its continued high quality of life.

Reading's first Open Space & Recreation Plan was written in 1995¹. It was updated in 2001; an update completed in 2007 was submitted to the state in draft form, but never finalized.

B. Planning Process and Public Participation

In January 2012 the Town Manager assigned the update of Reading's Open Space and Recreation plan to a staff working group. The group's first task was to create an on-line survey, *Open Space and Recreation Survey, Town of Reading, 2012* (Attachment A-1). The survey was launched in time for Reading's Friends and Family Day, a major community fair held in June 2012. The survey was also publicized on the Town's website, in a digital newsletter, in two local papers, and in an on-line paper, Reading-North Reading Patch. Open space and recreation groups were encouraged to publicize the survey, the Recreation Division sent an email notice to over 4,000 email addresses, and a notice of all three surveys was posted in the Town Hall entrance and included in a weekly employee newsletter. Finally, an intern spent parts of eight days in the Town Forest during the first two weeks of July asking walkers to fill out the Town Forest and Open Space surveys on a tablet or to do so at home. One hundred sixty five responses were received over ten weeks.

¹ There may be versions predating 1995. Planning Board minutes from 8/17/1983 indicate that they had received a copy of "the updated Open Space Plan" and would submit it to the State.

A public meeting was held on October 30, 2012. The Staff Planner facilitated the discussion. About two dozen people attended. Meeting minutes and presentation slides can be found in Appendix H.

Finally, comments on the draft plan were solicited from members of the committees listed above, from the Historical Commission, and from members of the 2007 Open Space & Recreation Task Force.

C. Accomplishments

What has the Town of Reading accomplished since the last published plan was approved by the state's Division of Conservation Services in 2001? Two additional open space purchases were made, each adjacent to existing open space, and an important connecting parcel was acquired by the Reading Open Land Trust (ROLT). Dividence Meadows, a 10.4-acre parcel abutting the Town Forest and in the aquifer protection district was purchased in 2006. The Town made a strategic acquisition in 2007 purchasing approximately 2.5 acres of abutting land to Bare Meadow. This would later be named the Mattera Conservation Area after the former owner. The land features a quaint 900 square foot log cabin that is under the care and custody of the Conservation Commission and administrated by the Recreation Division for the purpose of rentals and programming. Finally, life-long resident Benjamin Nichols (now deceased) donated his family's colonial era wood lot to the ROLT in January 2007. This 6.5-acre parcel connects Kurchian Woods with Sledge Woods, both under the control of the Conservation Commission.

The Town has purchased no new land for open space or recreation since 2007. Other accomplishments are listed below are.

The Mattera Cabin was renovated by students from Northeast Metropolitan Vocational School with funding from citizens and several non-profit organizations. It is now used for Town events and is rented to private parties. It is managed by the Recreation Division.

A task force completed a proposal for the Ipswich River Greenway in December 2007. This 2.7 mile greenway would connect multiple conservation areas from the Town Forest to Haverhill Street. An Ipswich River Greenway Feasibility Study, funded by the Massachusetts Riverways Program, was completed in June 2008. Its focus was a proposed .87 mile boardwalk section of the greenway. The task force's final report is included as Appendix J; the feasibility study² can be found on the Town's website.

In 2008 the Town established a Trails Committee based on a recommendation of the greenway task force. The Reading Trails Committee and many volunteers have completed the following projects:

² Ipswich River Greenway Feasibility Study, Town of Reading, MA, June 30, 2008

- Established an Adopt-A-Trail program in 2008 and completed several adopter training events.
- Built a 400 foot accessible trail connecting the Mattera Cabin to Bare Meadow Conservation Area. REI hosted a 2008 National Trails Day to complete the project. Considerable help was received from Reading DPW on this and the following two projects.
- In 2008 a viewing platform was built at the end of the accessible trail. Funding was provided by a grant from REI in collaboration with Friends of Reading Recreation.
- Trail improvements including 180 feet of boardwalk were completed connecting Bare Meadow trails to Haverhill Street. Funded by a state Recreation Trails Grant, the project completed a missing portion of the planned Ipswich River Greenway. The project was completed in 2010.
- 380 feet of boardwalk was replaced in Kurchian Woods Conservation Area funded by a second Recreation Trails Grant. Work was completed in fall 2012.

The Trails Committee and the Reading Open Land Trust have established a strong working relationship. They jointly laid out the Evergreen Trail from Charles Lawn Cemetery through ROLT's Evergreen Lot to Kylie Drive. In the summer of 2013 the Trails Committee built a bridge – funded by ROLT – connecting ROLT's Nichols Wood Lot to Kurchian Woods.

A Fishing and Boating Access Site was established at the Lobs Pound Mill site in 2010. There is now parking, a sign kiosk, several picnic tables, and an informal canoe landing at the site.

Multiple Boy Scout and Girl Scout trail projects have spruced up trail entrances and signage, blazed trails, and built bridges and boardwalks. Several projects have also removed invasive species.

The Town Forest Committee was enlarged from three to five members. Under their leadership a Forest Stewardship Plan was completed in 2010. It was funded under the DCR's Forest Stewardship Program. A Natural Resource Inventory & Conservation Vision was conducted by the Massachusetts Audubon Ecological Extension Service. It was completed in 2012.

In the area of recreation, since 2007 the Recreation Division has continued to enhance the overall use of recreational facilities in town. Parker Middle School field, otherwise known as Collins Field was completely renovated in 2009. The new field is synthetic field turf. The field is lined specifically for high school soccer and girls' lacrosse play.

The other large enhancement was the complete renovation of the Bancroft Ave tennis courts at Birch Meadow. The courts were in dire need of replacement and that came in 2009. The courts now feature professional lighting, beautiful black vinyl fencing and hitting court for practicing. Six courts in total have made the Reading Community Tennis Courts the top municipal courts in the state.

Additionally, the Town continued its renovation of playgrounds. Over the past five years the town has completely overhauled playgrounds at Killam Elementary School, Barrows Elementary School, Joshua Eaton Elementary School, Sturges Park and Washington Park. Master plans for most of the Town's parks can be found in Appendix M.

Finally, the Town has also continued to install sidewalks as funding permits. A seemingly simple step, sidewalks are powerful neighborhood connectors.

D. Plan Authors

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Section 3 Community Setting

A. Regional Context

The Town of Reading occupies 9.98 square miles of land (6,388 acres) in the east central portion of Middlesex County, Massachusetts, 12.5 miles north of Boston. Reading's borders are delineated by distinct barriers: Interstate 93 to the west, Interstate 95 to the south, a series of swamps and wetlands to the east, and the Ipswich River to the north (see Map 1 – Regional Context). The land occupied by the Town is part of the Seaboard Lowland of New England, a region characterized by low rolling hills of less than 500 feet, gradually sloping eastward and southeastward toward the Atlantic Ocean.

Reading is located within three watersheds: Ipswich, Aberjona (part of the larger Mystic River watershed), and Saugus (part of the larger North Coastal watershed). The protection afforded around these rivers and headwaters contributes to the water quality and flood control for downstream communities.

Reading has no lakes or ponds of sufficient size for recreational purposes. The Ipswich River is navigable only in times of high water.

Reading is a member of the North Suburban Planning Council (NSPC), one of eight sub-regions of the Metropolitan Area Planning Council (MAPC). The NSPC is a group of communities north of Boston that meet regularly to discuss issues of common interest. One particular project which has a regional impact is the Priority Mapping Project. That project, which is expected to be completed by the end of 2013, is a project which will identify sub-regional priority development and priority preservation areas as well as significant transportation investments. This will enable the region to understand the goals for the NSPC sub-region and make more informed decisions regarding land use issues.

Although Reading benefits from the easy accessibility offered by the closeness of two major interstate highways, these same road systems, coupled with extensive wetlands, serve to cut Reading off from its neighbors. Reading is investigating funding sources to develop a bicycle and pedestrian plan to increase accessibility in Town and also to assess regional connections to adjacent communities in the region.

Reading's accessibility and proximity to Boston is also the source of most of its open space and recreation challenges. High traffic volume cuts neighborhoods off from each other and makes it difficult to access open space and recreation areas. Despite the Great Recession, land prices remain high, making it expensive for the town to acquire land. Privately owned undeveloped land is in very short supply. Accessibility and high quality schools bring school-aged families to town, ensuring continued high demand for recreation space. With this in mind, Reading has begun to think about regionalization opportunities. In particular, Reading has begun to have preliminary discussions with Wakefield on the possibility of regionalizing recreation services/activities.

 Reading Town Bound

 Towns from Survey Points

 Watersheds

 Rivers and Streams

 Lakes and Ponds

MAP 1 REGIONAL CONTEXT READING, MA

EOT Roads

 Limited Access Highway

Passenger Railroads

 Amtrak/MBTA

 MBTA

 Commuter Rail Stations



Map by Town of Reading
Date: 6/2013
Data from Town of Reading
and MassGIS. Data are for
planning purposes only.

0 2 4
Miles

B. History of the Community

Prior to its settlement by English emigrants, the Reading area was largely “meadow” (defined in modern parlance as “swamp”) used as a hunting ground, but probably not as a living area, by the Quannapowitt Indians who inhabited this part of the Massachusetts Bay Colony. This characteristic remains, with much of the remaining open land in town classified as wetland.

Reading’s early settlers were farmers whose agricultural work and animal husbandry provided for most of the needs of their families. The Reading area was first settled in 1638, when residents of the Lynn land grant were awarded additional land that comprised the areas of present-day Reading and Wakefield, which they first called “Lynn Village.” In 1644, they renamed this area “Redding,” and in 1647, they elected their first Board of Selectmen. Land encompassing present-day North Reading was added to this grant in 1651. In the decades that followed, various areas of the resulting plantation petitioned to form separate parishes, each with its own Meeting House. North Reading was the first to do so in 1713, followed by Wood End (present-day Reading, the West Parish) in 1769, and South Reading (South Parish) in 1812. Reading and North Reading incorporated as towns in 1853, and South Reading was renamed Wakefield in 1868. The West Parish’s (i.e., Reading’s) meeting house was located on the Town Common near the current Town Hall. A 1790 census identified 1,802 people living within what became the three communities.

In the 18th century, many farmers augmented their incomes by doing piecework at home, such as cordwaining (“shoemaking” in modern parlance). In the later 19th and 20th centuries, Reading businesses included pipe-organ factories and many greenhouses. The town’s first straight thoroughfare – then called the Andover-Medford Turnpike, now Route 28 – was laid out in 1806. The railroad to Boston was opened in 1845, leading to Reading’s development as a commuter suburb.

The Town of Reading had an open town meeting form of government until 1945 when it was changed to representative town meeting. The Charter adopted by Town Meeting in March 1986 was amended through 1990 to allow for a Town Manager with a five-member Board of Selectmen.³

In the 20th century, Reading became a residential community with commuter service to Boston on the Boston and Maine Railroad and the Eastern Massachusetts Street Railway. Both commuter services were later taken over by the Massachusetts Bay Transportation Authority (MBTA), and for many years, there was discussion of extending the MBTA Orange Line to Reading. Industrial expansion during that time included the Goodall-Sanford Co. off Ash Street, later sold to General Tire & Rubber Company, later known as GenCorp. Additional businesses created after World War I included the Boston Stove Foundry, Roger Reed Waxes, Ace Art, Addison-Wesley Publishing and several other companies. For many years, Wes Parker’s Fried Clams was a landmark off state Route 128.

³ http://en.wikipedia.org/wiki/Reading,_Massachusetts

Military installations also came to the town, with two Nike missile sites, one on Bear Hill and the other off Haverhill Street, and the opening of Camp Curtis Guild, a National Guard training facility. The business community currently consists of a number of retail and service businesses in the downtown area, a series of commercial businesses in and around the former town dump on Walker's Brook Road (formerly John Street) as well as the Analytical Sciences Corporation (TASC).⁴

In 1944, Reading adopted the representative town meeting model of local government in place of the open town meeting. This retained the representative town meeting and board of selectmen, but focused policy and decision making in a smaller number of elected boards and committees whilst providing for the employment of a town manager to be responsible for day to day operations of the local government.⁵

In recent years the town of Reading struggled with the decisions to build a new elementary school, to cope with the influx of new families to the community, and renovate Reading Memorial High School which was opened in 1954 with an addition added in 1971. Both of these projects were approved and in August 2007 the new \$57 million dollar renovation at the High School was completed.⁶

C. Population Characteristics

In 2010, the US Census documented Reading's population at 24,747 which is an increase of 4.4% from 2000. The Town Clerk's office reports that by the end of September 2012 the population was 24,945. Population projections from MetroFuture⁷ indicate Reading's population will remain fairly stable through 2020 and then increase to 25,189 by 2030 (3.5% increase). The number of new apartments, condos, and townhouses being built suggests that these projections may be low.

The number of households in Reading in 2010 was 9,305 representing an increase of 10% from 2000. MetroFuture projections indicate the number of households will continue to increase at a moderate rate and there will be approximately 10,346 households by 2030, an increase of 10.7%.

Although the number of households is expected to increase, the average household size has decreased over the past 10 years. In 2010 the average household size was 2.71 a decrease from 2.84 in 1999. The relatively stable population growth and the moderate increase in the number of households is reflective of a national trend suggesting that the number of households is increasing as the size of households is decreasing.

⁴ http://en.wikipedia.org/wiki/Reading,_Massachusetts

⁵ Ibid

⁶ Ibid

⁷ MetroFuture is a regional plan developed by the Metropolitan Planning Commission that addresses future growth in the Boston metropolitan region

Assessing the age composition of Reading residents is a good tool when planning for the future needs of the community. In 2010, the largest percentage of Reading's population was people aged 35-59 (39%). The second largest groups are persons aged from persons aged 0-9 years (13.5%) and 10-19 years (13.5%). These groups, with the exception of 0-9 years, experienced an increase in population between 2000 and 2010.

As mentioned above, it is anticipated that Reading's population will experience slow growth over the next 20 years, but it is anticipated that a significant change in the composition of the age groups will occur. Based on the MetroFuture projections, four age groups are expected to decrease by 2030; ages 0-9 (-13.1%), ages 10-19 (-12.2%), 20-24 (-14.1%) and ages 35-59 (-31.6%). Although the younger age groups will decrease over time, ages 0-19 will still comprise nearly one-fourth of the total population. Ages 25-34 are expected to increase slightly by 3.7%, while ages 60-74 is expected to increase by 71% and will become the second largest age group in Reading (21.3%). Although we can expect a decrease in the number of persons age 35-59 to decrease by 31%, this group will still remain the largest age group in Reading comprising 32.4% of the population in 2030. This is likely due to one age group shifting into the next age group over time.

An important factor to note is that the 75+ age group is also expected to increase by 2030 resulting in the elderly population (60-75+) comprising 31% of the total population in 2030. Recreational facilities and program will need to be planned and designed to accommodate the needs of this large population group.

According to the 2010 US Census, Reading's median household income was \$99,130. Although this number is higher than the Area Median Income (AMI)⁸ of \$91,800, Reading has approximately 22% of households below the low income limit (making less than) of \$50,000 annually.

In 2000, approximately 63% of Reading's labor force was employed and was just below the national rate of 64%. Most of those working individuals held occupations in a management or professional capacity. These trends were similar in 2011 as the American Community Survey reported approximately 62% of the labor force was employed, again, with the primary occupation within a management or professional capacity.

Many of Reading's residents commute to work (72% of the workforce) and in 2011 those commuters had with an average travel time of 27.5 minutes. This did not change from 2000.

⁸ The Area Median Income (AMI) is a number that is determined by the median family income of a Metropolitan Statistical Area (MSA) and thresholds established by HUD are a percentage of AMIs. Reading is included in the Boston-Cambridge-Quincy Metropolitan Fair Market Rent (FMR) area. FMRs are gross rent estimates that include the shelter rent plus the cost of tenant-paid utilities.

Reading, as described below, is primarily a residential suburb with a small economic sector. In 2000, the US Census reported the primary industry in Reading to be education, health care and social care. Manufacturing, professional services, scientific industries and retail followed. According to U.S. Department of Labor, the 10 major employers in Reading in 2011 included Market Basket, Wingate Nursing Home, Home Depot, Stop N Shop, Jordan's Furniture, Sentinel Benefits (financial services), Austin Preparatory School, REI, Longwood Place (retirement home), Daniels Nursing Home, Reading Cooperative Bank, Rite Aid, Hallmark Health Care, and CVS.

D. Growth and Development Patterns

1. Patterns and Trends

Reading evolved from an out-lying and isolated collection of farms to a specialized farming community centered on a village center, to a minor center for the manufacture of everyday commodities, to a residential suburb. From 1951 and 1981, Reading's land use changed from only 32 percent urban, predominately agricultural, forest, wetlands to 51 percent urban, predominantly residential. This change continued and in 2011 approximately 61% of Reading's land area was developed. (see Map 2 – Land Use). (Undeveloped land is predominantly undevelopable wetlands.)

Reading has a large stock of older and historic homes.⁹ The town's oldest homes were constructed between 1650 and 1830 and located primarily along the earliest streets (South and West Streets, Walnut, Washington, Haverhill, Salem, Ash, Lowell, Franklin, Pearl and Mill). By 1870 there were approximately 520 homes and 237 barns. Housing construction progressed with the introduction of indoor plumbing and electricity in the early 1900s. Although many homes were constructed prior to 1950, Reading experienced an increase in 3,700 housing units between 1950 and 1980. According to the 2010 US Census, Reading had a total of 9,617 housing units which is an 8.2% increase from 2000.

Today, with many of the town's empty lots and wooded areas gone for new housing, trends are moving toward enlarging existing homes and the building of larger residences where smaller ones recently stood. With open land at a premium, many new housing developments are constructed on lots which contain older homes. Recent development has been in the form of smaller subdivisions (in the number of lots if not the size of homes), and large condo, apartment, and townhouse developments at Johnson Woods, Reading Commons, and Reading Woods.

With real estate close to Boston at a premium, Reading is pressured with increased density and is acquiring an increasingly urban character. Reading adapted to this change by adopting Smart Growth Zoning (M.G.L. Chapter 40R) which allows for increased density of housing developments within areas of concentrated development, transportation centers, or areas underutilized by current zoning regulations. This type of

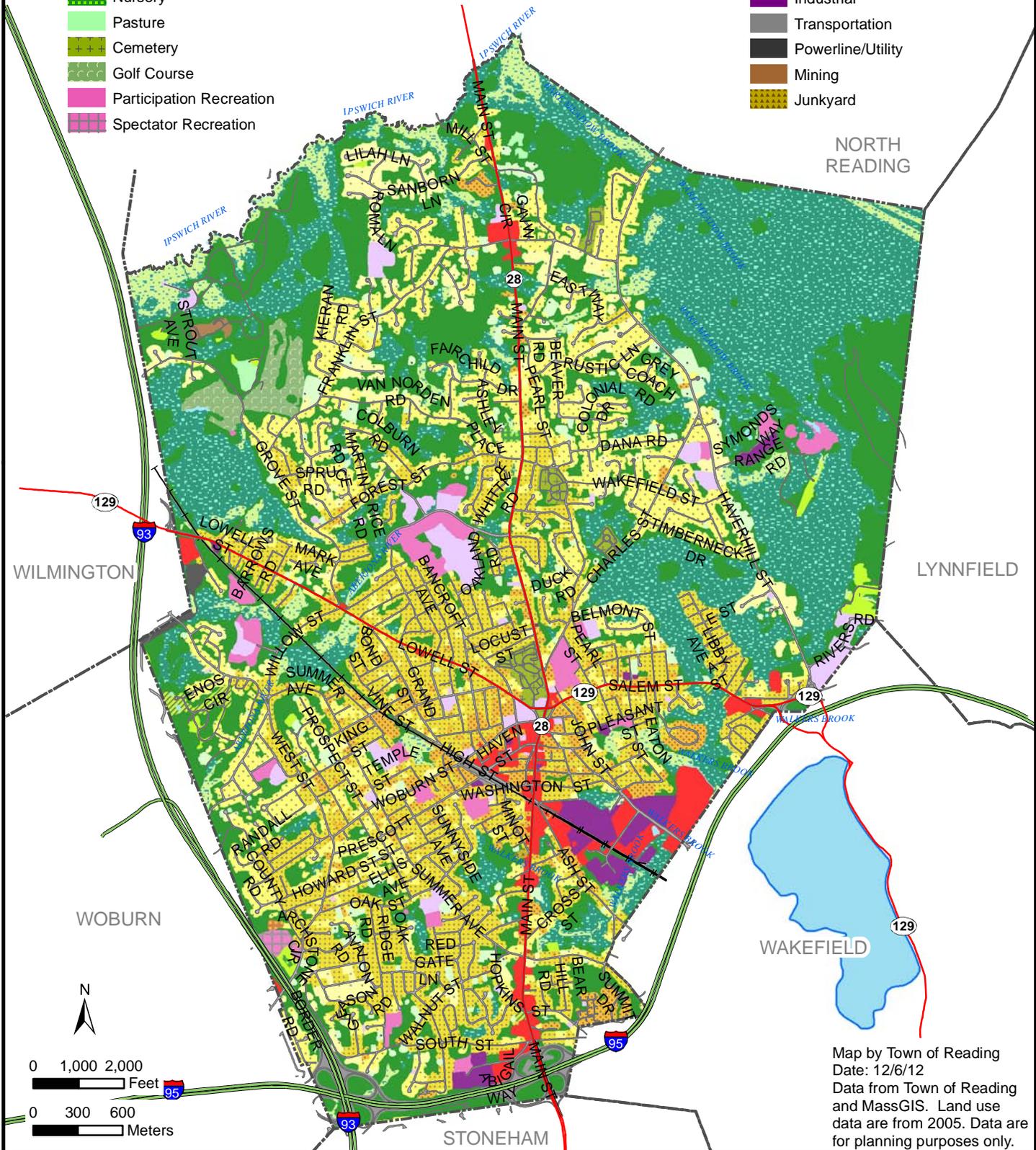
⁹ See the 2001 and 2007 (draft) Open Space & Recreation Plans for a detailed discussion of historic housing styles.

MAP 2 LAND USE READING, MA

Land Use (2005)

- Forest
- Brushland/Successional
- Open Land
- Water
- Forested Wetland
- Non-Forested Wetland
- Orchard
- Nursery
- Pasture
- Cemetery
- Golf Course
- Participation Recreation
- Spectator Recreation

- Multi-Family Residential
- High Density Residential
- Medium Density Residential
- Low Density Residential
- Very Low Density Residential
- Transitional
- Urban Public/Institutional
- Commercial
- Industrial
- Transportation
- Powerline/Utility
- Mining
- Junkyard



Map by Town of Reading
Date: 12/6/12
Data from Town of Reading
and MassGIS. Land use
data are from 2005. Data are
for planning purposes only.

zoning is to encourage growth in areas previously developed to allow the preservation of natural resources and open space that are integral to Reading's suburban character.

2. Infrastructure

a.) Transportation

Streets and Roads

Reading has approximately 105 miles of streets and roads within its borders. It also contains portions of Interstate 95 (also known as State Highway 128), and Interstate 93. Other principal routes through the Town are State Routes 28 and 129, which intersect at the Common in the Town's center.

Reading's street network was established over a long period, and neither its basic framework nor its major streets were designed to accommodate large numbers of fast-moving vehicles. Even if Reading were to experience no further development of its own, impacts from regional traffic traversing the Town is projected to load its street network even more. West Street, with major residential developments at both ends, is one of the streets most heavily impacted by increased traffic.

In May 2007, MassHighway (now known as MassDOT) awarded the funding for the Main Street Streetscape Rehabilitation Project. The project was complete in 2010 making Reading's downtown more pedestrian friendly with both visual amenities and traffic calming features. The \$5.6 million reconstruction project has enhanced the ease of parking and the ability of pedestrians to access the downtown stores and restaurants.

Reading has no designated bicycle lanes or paths, though it has recently added bike-activated traffic signal controls in the downtown area.

Commuter Rail

The Massachusetts Bay Transportation Authority (MBTA) operates regularly-scheduled trains between Boston's North Station and Reading's centrally-located depot, with most trains continuing to Haverhill. Oaktree, near the depot, is a high-density, mixed-use (condominiums, retail, restaurant), transit-oriented project constructed in the Downtown Smart Growth District (40R). Its recent completion is a Smart Growth success story and it has been well received by the Department of Housing and Community Development (DHCD)

Bus Service

The MBTA operates two bus routes from the Reading railroad depot through the southeastern portion of Town to the Malden rapid transit station (Orange Line) via Wakefield and Melrose. Recent MBTA budget shortfalls threatened these routes.

b.) Public Water Supply

The Town's water distribution system has approximately 110 miles of distribution mains serving the entire town. The water was drawn exclusively from groundwater through wells in the Ipswich River watershed until May 2006 when the town received partial supply from the Massachusetts Water Resource Authority (MWRA). One hundred percent MWRA supply began in September 2006. Water supply is considered adequate for any new development and it no longer impacts the Ipswich River resource.

| | | |
|--------------------------------|------|----------|
| Average Day Water Consumption: | 1990 | 1.91 mgd |
| | 1995 | 1.85 mgd |
| | 2000 | 1.84 mgd |
| | 2005 | 1.88 mgd |
| | 2010 | 1.76 mgd |

| | | |
|--------------------------------|------|----------|
| Maximum Day Water Consumption: | 1990 | 3.81 mgd |
| | 1995 | 3.00 mgd |
| | 2000 | 2.81 mgd |
| | 2005 | 2.95 mgd |
| | 2010 | 3.12 mgd |

c.) Public Sewer

The Sewer System, owned and operated by the Town, serves the entire Town. As of September, 2012, approximately 195 properties throughout the Town are not yet connected to the available public sewer system. New subdivision and Planned Residential Development (PRD) projects are required to connect to the sewer system. This requirement has probably slowed development in several outlying areas of town. Reading's sewage is discharged into a regional sewerage system operated by the MWRA with its principal treatment facility on Deer Island.

d.) Storm Water

Reading established a storm water utility in 2006. The utility was established at the Annual Town Meeting, authorizing the town to generate revenue by imposing a user fee on owners of developed properties. The impervious surface-based fee, calculated using the Town's geographic information system (GIS), was first billed in September 2006 as part of the water/sewer bill. Revenue are used to fund new infrastructure maintenance and public education activities imposed by the National Pollutant Discharge Elimination System (NPDES) Phase II storm water regulations. Revenue in excess of \$250,000 is generated each year.

Reading's storm water utility is one of the first implemented in Massachusetts. It has become a model for other communities wishing to do the same.

3. Long-term Development Patterns

The Zoning Bylaws control development in Town through the following zoning districts (see Map 3 - Zoning):

Base Zoning Districts

| | | |
|------------|---------------------------|-------|
| Residence | Single Family 15 District | S-15 |
| Residence | Single Family 20 District | S-20 |
| Residence | Single Family 40 District | S-40 |
| Residence | Apartment 40 District | A-40 |
| Residence | Apartment 80 District | A-80 |
| Business | Business A District | Bus.A |
| Business | Business B District | Bus.B |
| Business | Business C District | Bus.C |
| Industrial | Industrial | Ind. |

Overlay Districts

| | |
|---|-------|
| Aquifer Protection District | AQ |
| Municipal Building Reuse District | MR |
| Mixed Use Overlay District | MU |
| Planned Residential Development - General | PRD-G |
| Planned Residential Development - Municipal | PRD-M |
| Planned Unit Development - Business | PUD-B |
| Planned Unit Development - Industrial | PUD-I |
| Planned Unit Development - Residential | PUD-R |
| Gateway Smart Growth District | GSGD |
| Downtown Smart Growth District | DSGD |

Planned Unit Developments (PUD) and Planned Residential Developments (PRD) allow for closer proximity of buildings to each other but with greater amounts of combined open space. Five PRDs (cluster zoning) have been constructed since 1995. There has been mixed reaction as to their success. There is evidence to suggest the PRD is used in cases where conventional plans would not be possible. The PRD process is also cumbersome due to the initial step of Town Meeting ratification. Changes were made to PRD regulations in the 1990s to strengthen open space set-aside requirements.

In 2010, FEMA issued and Town Meeting accepted a new flood plain map (see Map 7). It replaces a previous flood plain map, and was incorporated into the Town's Zoning Bylaw in order to prevent development in flood-prone areas.

The Aquifer Protection District was designed to control development in sensitive areas as well as safeguard water recharge. In 2011, Town Meeting voted to amend the Aquifer Protection District regulations. The approved changes allow for a maximum 15% or 2,500 square feet (whichever is greater) of impervious area coverage. Any new construction which exceeds those thresholds is required to provide recharge. The changes were designed to increase recharge while allowing developers some flexibility in doing so.

MAP 3 ZONING READING, MA

Town Boundary

Roads

Paved

Unpaved

Railroad

Overlay District

Aquifer Protection District

Zoning

A-40

A-80

Bus. A

Bus. B

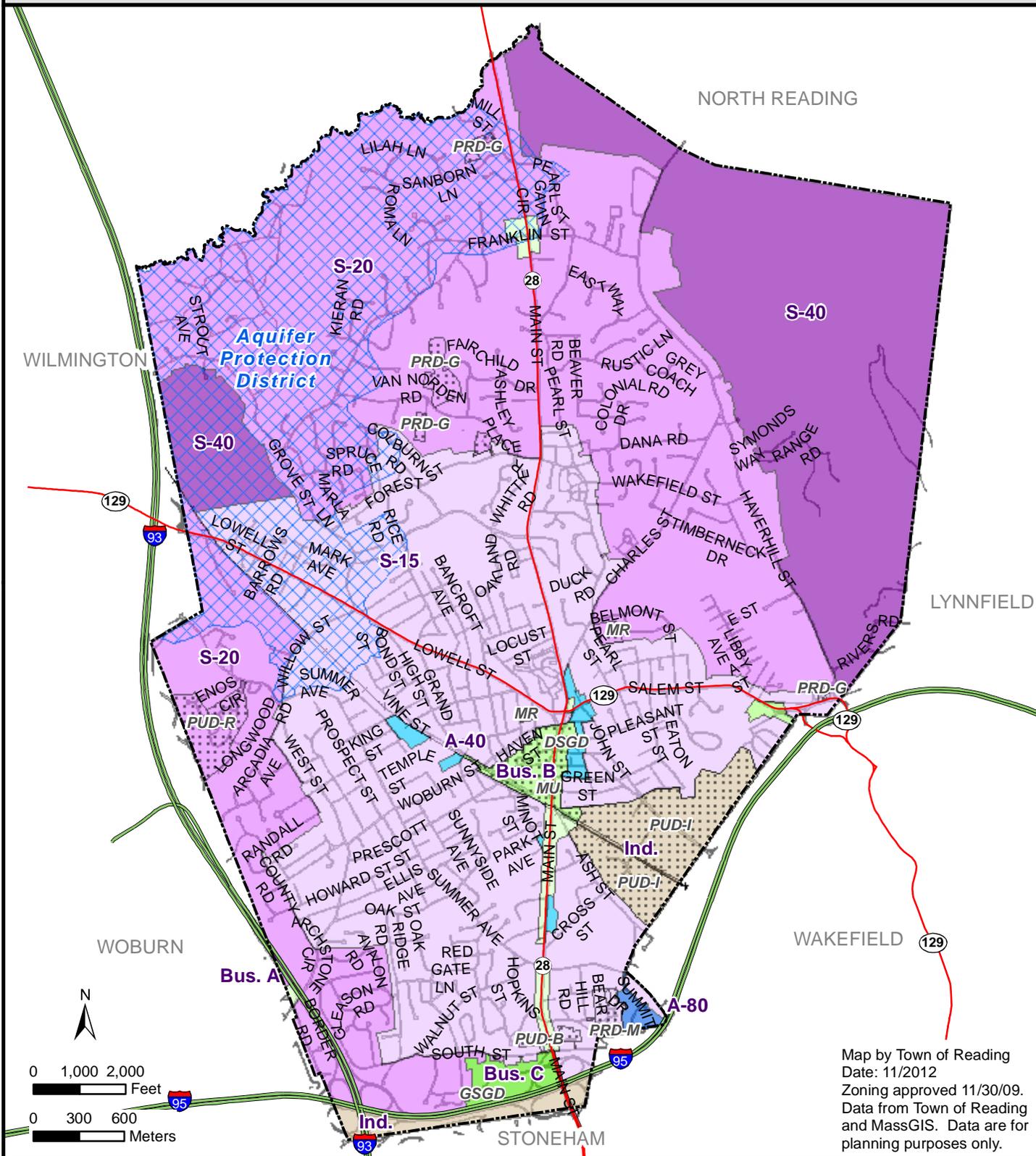
Bus. C

S-15

S-20

S-40

Ind.



0 1,000 2,000 Feet

0 300 600 Meters

Map by Town of Reading
Date: 11/2012
Zoning approved 11/30/09.
Data from Town of Reading
and MassGIS. Data are for
planning purposes only.

A shift in planning focus has also occurred due to the state's Executive Order 418 in 2000, which requires communities to increase affordable housing. Since then, the Town has made several zoning changes to increase the number of affordable units. Most notably is the adoption of two Smart Growth (40R) Districts, which was a recommendation of the Reading Housing Plan (2006). An update to the 2006 Housing Production Plan was completed and approved by DHCD in early 2013. That plan update evaluates the town's current affordable housing needs and progress towards meeting the state's affordable housing requirements.

The Housing Plan also addresses build-out. A GIS analysis based on land use codes and existing zoning, indicated that 1,756 acres (27.5%) of land in Reading is undeveloped or is Chapter 61 land. Of that, just 372 acres are potentially developable and, after regulatory constraints¹⁰ are taken into account, 139 acres of developable land remain. That yields an estimated 262 buildable lots based on existing zoning.

It's fair to say that most residents do not and cannot imagine an additional 262 single family homes in Reading. The majority of those lots (186 of them) would be on what is now Chapter 61 land (Meadow Brook Golf Club and the Lester forestry land on Main Street near Franklin Street). The lot density of these parcels could be considerably higher if developed under PUD-R or Smart Growth overlays or under Chapter 40B regulations. The development of these lands would be a significant loss of open space for the town. Although Chapter 61 lands are not now available for public use, the Meadow Brook Golf Club in particular is of scenic value and contributes to the character of the Town with its stone walls and open vistas.

To some extent, the Town controls its fate with respect to these parcels since Chapter 61 land must be offered to the Town before it can be sold to a private entity. That said, the Town has no rainy day fund available for land acquisition.

¹⁰ Only residential-zoned parcels were included in the analysis. Constraints include FEMA 100 year flood zones, 100' buffers around wetlands, streams, and vernal pools, and 200' buffers around perennial streams. Aquifer protection district and slope were not included as constraints. Infrastructure needs were not considered in calculating potential lots.

Section 4 Environmental Inventory and Analysis

A. Geology, Soils and Topography

A Surficial Geology Map (Map 5 based on data from the U.S. Geological Survey) is included in this report that shows soil types within Reading. The map shows that Reading is composed primarily of igneous and metamorphic rock, with sand and gravel deposits or glacial till deposits with bedrock outcrops. Minor amounts of floodplain alluvium are found near surface water bodies (streams and ponds). Outcroppings appear generally on hilltops scattered around many parts of the central ridge in the southwest and central part of the Town. As the glacier of 10,000 years ago receded, it left behind debris that varies from boulder-rich till to fine-sorted sand. The glacier also left behind kames, eskers and drumlins. Muck and peat deposits occurred in many areas of the Town, particularly North and South Cedar Swamps and Timberneck Swamp and along what is now the Ipswich and Aberjona Rivers. These features provide the town with unique characteristics that are highlighted by the amount of open space throughout Reading. The landscape characteristics which comprise the town's character are the rock outcroppings, woodlands and swamps in town; it is these features that Reading residents strive to preserve.

In general, the overall slope of the Town is from the high land of the south and west toward the low land of the north and east. Within this general orientation, the area encompasses the headwaters of the Saugus River on the southeast, the Aberjona River on the west-central side, and tributaries to the Ipswich River on the north.

The topography in Reading is relatively flat and often marshy. Many of the Town's existing parks and playing fields are on filled wetlands; these could not have been built today. Expansion and improvement of recreation facilities is highly constrained by wetlands and the remaining open space is largely wetlands unsuitable for the development or recreational facilities.

The Town's soils and topography have shaped Reading's settlement patterns (see Map 4 – Soils – Development Limitations, and Map 5 – Surficial Geology). Early settlement in the Town of Reading was on the high, dry areas, with the lower and wetter areas left to be used as meadows, farms and woodlots. The town was originally referred to as "Wood End" because of the abundance of trees, which ultimately were harvested for timber. Sand and gravel deposits have mostly been mined out or built upon, except the protected areas such as the Town Forest, Bare Meadow and Cedar Swamp.

Prior to the 1970s, when state wetlands protection laws were passed, significant portions of the Town were drained and filled to accommodate pressures for residential and industrial development. The Aberjona and Saugus Rivers, in particular, were channelized and riprapped. In many areas they no longer moderate springtime flooding, major storm events or the increased runoff from housing development, ultimately resulting in flooding downstream. Thus, houses built in these low areas now frequently have water problems in their basements and yards.

Town Boundary

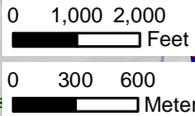
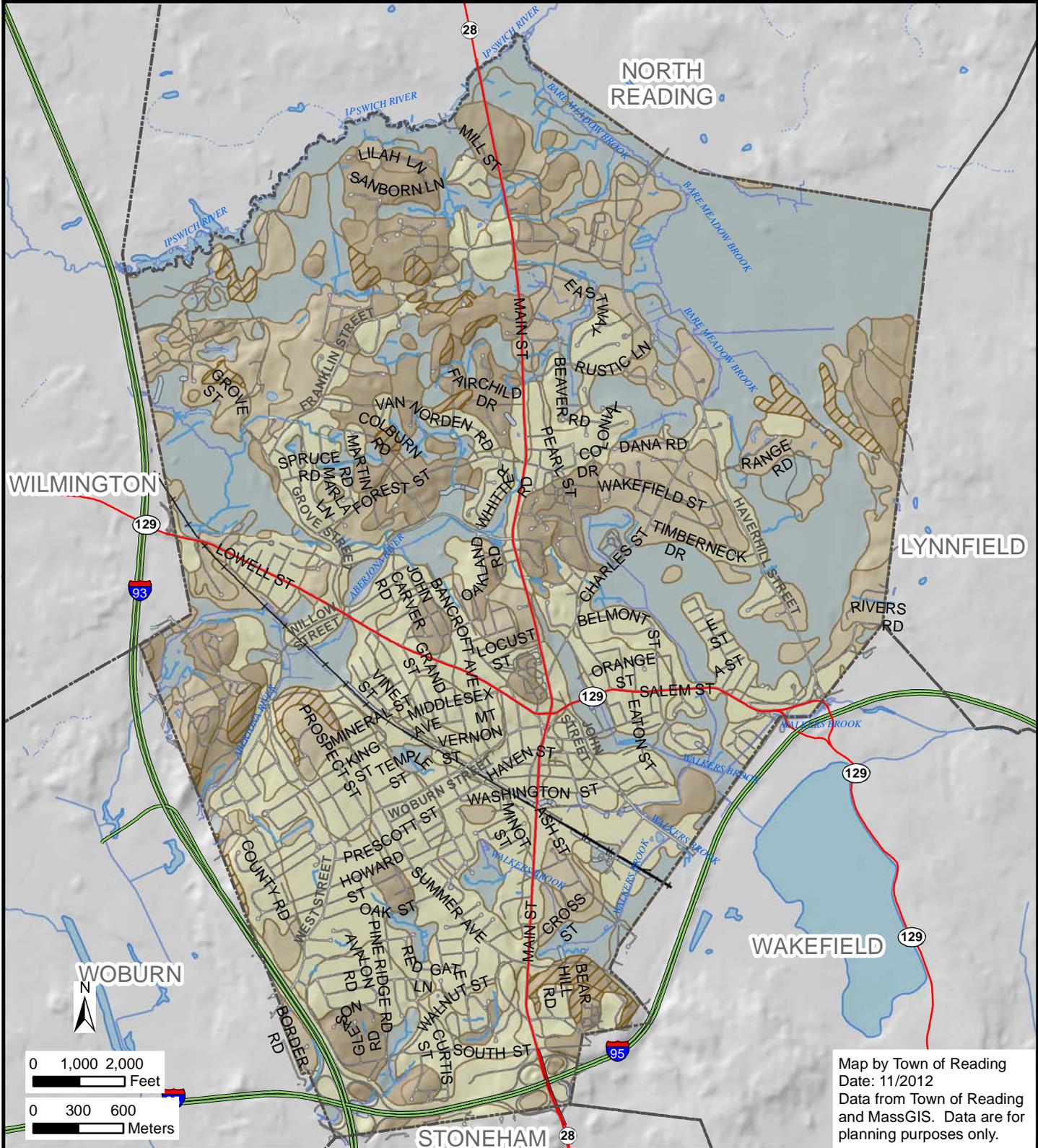
USGS Hydrography

- Perennial Stream
- Intermittent Stream
- Ditch/Canal
- Pond, River

MAP 4 SOILS - DEVELOPMENT LIMITATIONS READING, MA

Soils

- Urban, Urban Land Complex
- Silt, Sand, Loam
- Bouldery, Stony, Rocky, Outcrop, Refuse
- Muck, Wet, Water
- Slope GE 15%



Map by Town of Reading
Date: 11/2012
Data from Town of Reading and MassGIS. Data are for planning purposes only.

MAP 5 SURFICIAL GEOLOGY READING, MA

 Esker (approx. location)

Shallow Bedrock

 Abundant Outcrop and Shallow Bedrock

Postglacial Deposits

 Artificial Fill

 Floodplain Alluvium

 Swamp Deposits

Glacial Stratified Deposits

 Coarse

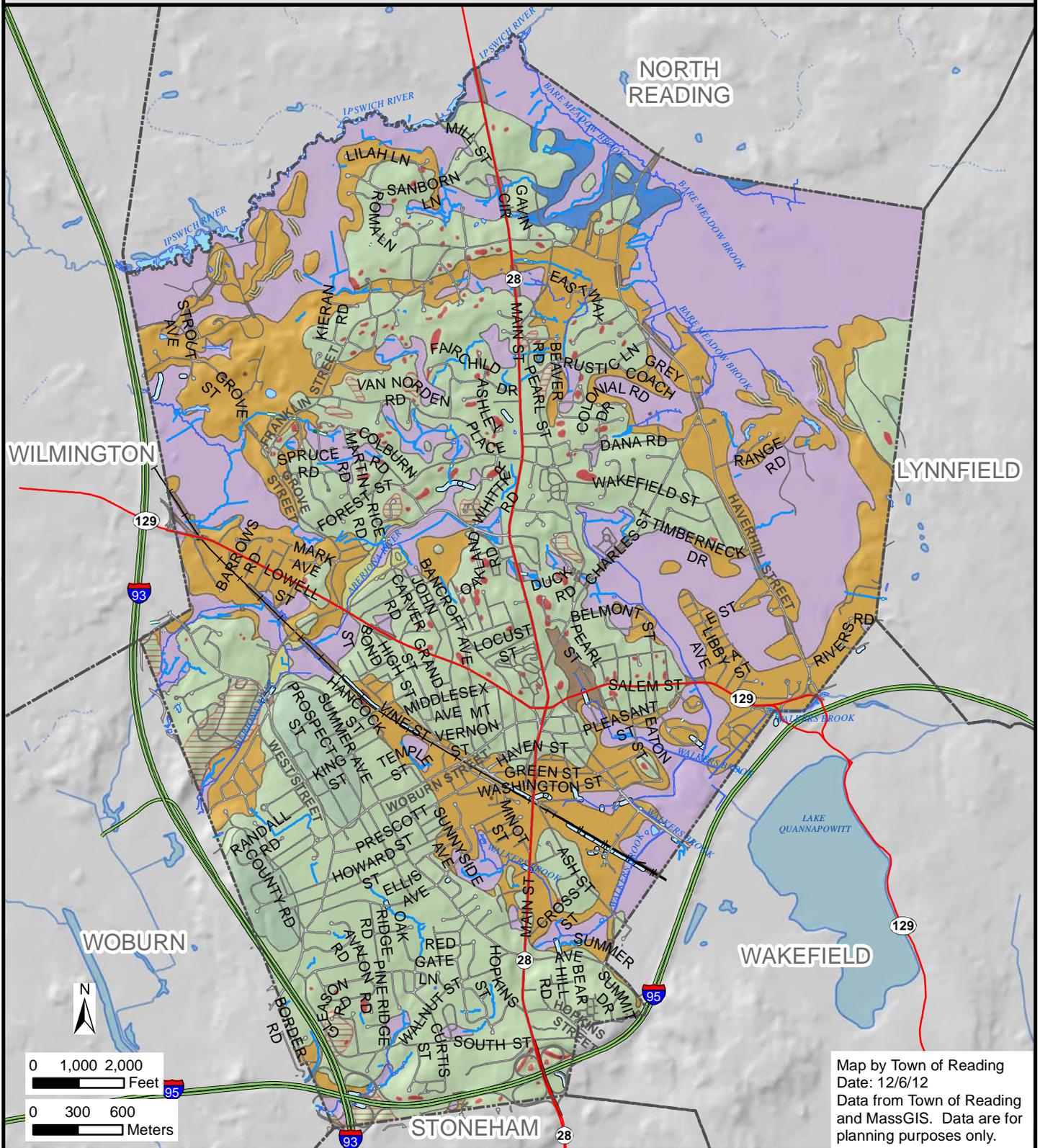
 Glaciolacustrine Fine

Till Bedrock

 Thick Till

 Bedrock Outcrop

 Thin Till



B. Landscape Character

Sculpted by glacial activity, the Town is a series of gentle hills split by ravines with a few steep slopes. The town's highest point, Dobbins Hill, is 232 feet above sea level. Surfaces of Reading's woods and meadows are broken by numerous outcroppings of bedrock. Drumlins, kames and eskers dot the landscape and can be seen in the Town Forest and North Cedar Swamp. Swamps, wetlands and floodplains make up more than 30 percent of Reading's land area. Because of Reading's topography and development, major areas that offer opportunities for active recreation are in the south or central part of town, while areas that offer opportunities for passive recreation are primarily in the north sections of Town.

The headwaters of the Saugus and Aberjona are within Reading's boundaries. The Ipswich River flows along the northern border. The many smaller creeks, intermittent streams and wetlands throughout the Town contribute to these river systems, but there are no significant lakes or ponds. The channels, swamps and tributaries control flooding downstream as well as providing undisturbed habitat for fish, birds, mammals and plants.

The Town Forest and well fields (no longer in use) encompass 310 acres along the northern perimeter of town abutting the Ipswich River. Much of this area lies within the floodplain of the Ipswich River. Reforested areas were planted in the 1930s and now form a dense pine forest. There are several access roads and trails for hiking, cross-country skiing, birding, and nature study. Trails in the Town Forest follow the glacial eskers and drumlins – some of the most unusual geologic features in Town.

A private golf club is located to the southwest of the Town Forest and comprises 139 acres. It is within the Zone II of the well fields and abuts wetland resource areas. The club has a Chapter 61 B restriction. It is a scenic resource.

North Cedar Swamp (429.1 acres) and South Cedar Swamp (119 acres) stretch the length of the town's eastern boundary. It is one of the few areas in Town where bow hunting is allowed. The Reading Rifle & Revolver Club owns 51.9 acres between these areas and has the only civilian 600 yard high-powered rifle range in the state. Timberneck Swamp (101 acres) is a wooded swamp at the headwaters to the Saugus River.

Camp Curtis Guild National Guard Base is located to the south and east of South Cedar Swamp, straddling the boundary line of three communities and containing 275 acres within Reading. A portion of this land is upland (195 acres) and could be developed if the base were to close. The 1990 Master Plan suggested rezoning this area from S-40 to PUD. Current zoning would allow 293 single-family homes, and a zoning change would permit an industrial or commercial area adjacent to Route 128 (Interstate 95). This property is also included in the Priority Mapping Project being completed by MAPC and the NSPC sub-region. As part of that project, this property has been identified as both a Priority Development Area and Priority Preservation Area. Town Staff as well as

other participants agreed that this parcel could serve some development needs, but that much of the land is wetland and should be preserved as open space.

Bare Meadow (84.5 acres) is under Conservation Commission jurisdiction and abuts Fairbanks Marsh (32 acres) owned by the Reading Open Land Trust (ROLT). This area in the northeast quadrant of Town includes marsh, wet meadows, wooded wetlands with vernal pools, forested upland and the only open meadow habitat in Reading. Bow hunting is allowed along the northern edge of Bare Meadow.

Marion Woods (8.6 acres) completes the public-owned greenway corridor along the Town's northern border abutting the Ipswich River. Together with the Lobs Pound Mill Site, this area is known as the Biller Conservation Area. These riverfront parcels feature bordering vegetated wetlands, an upland pine grove and a certified vernal pool.

Kurchian Woods (32.7 acres), an upland open space surrounded by residential development, includes stands of mature trees, rocky outcrops, and vernal pools. The area is crossed by a Tennessee Gas Pipeline easement. It acts as a natural buffer between subdivisions while providing passive recreational options. A total contiguous area of 58 acres of open space is available when combined with town-owned Sledge Woods, a parcel off Pondview Lane, and an adjacent tax-title parcel, and ROLT's Nichols Wood Lot and Fienemann Ice Pond parcels. Kurchian Woods abuts 11 acres of Chapter 61 forestry land.

One of the largest changes in landscape character over the last ten years has been the loss of Spence Farm and Longwood Poultry Farm, both on West Street. At completion, 536 apartments, condos, and townhouses will occupy the two sites known as Reading Commons and Johnson Woods. It is worth noting that the town failed to exercise its right of first refusal on both Spence and Longwood farms when they gave up their Chapter 61A status.

A second large change in landscape character is the development of Walkers Brook Drive as a major retail, restaurant, and office area just off Route 95. More recently, the former Addison Wesley office site, is being developed as Reading Woods. It will contain 424 apartment, condos, townhouses.

In residential neighborhoods smaller, older homes are being replaced by large ones and lots are being combined to be rebuilt as small subdivisions. Old stone walls are removed; the Town is gradually losing its historic feel. Thankfully, the forested area and wetlands of the Town Forest and Ipswich River are unchanged, protected by town ownership. Reading's marshes, swamps and wetlands provide scenic environments, natural buffers for privacy, and visual escape from the stresses of modern life.

C. Water Resources

Because of its low-lying topography, Reading is dotted with small ponds, swamps, and wooded wetlands. The Town is situated at the drainage divide of three watersheds: the Aberjona, the Ipswich and the Saugus Rivers (see Map 6 – Water Resources). The

☐ Closed Water Supply Well

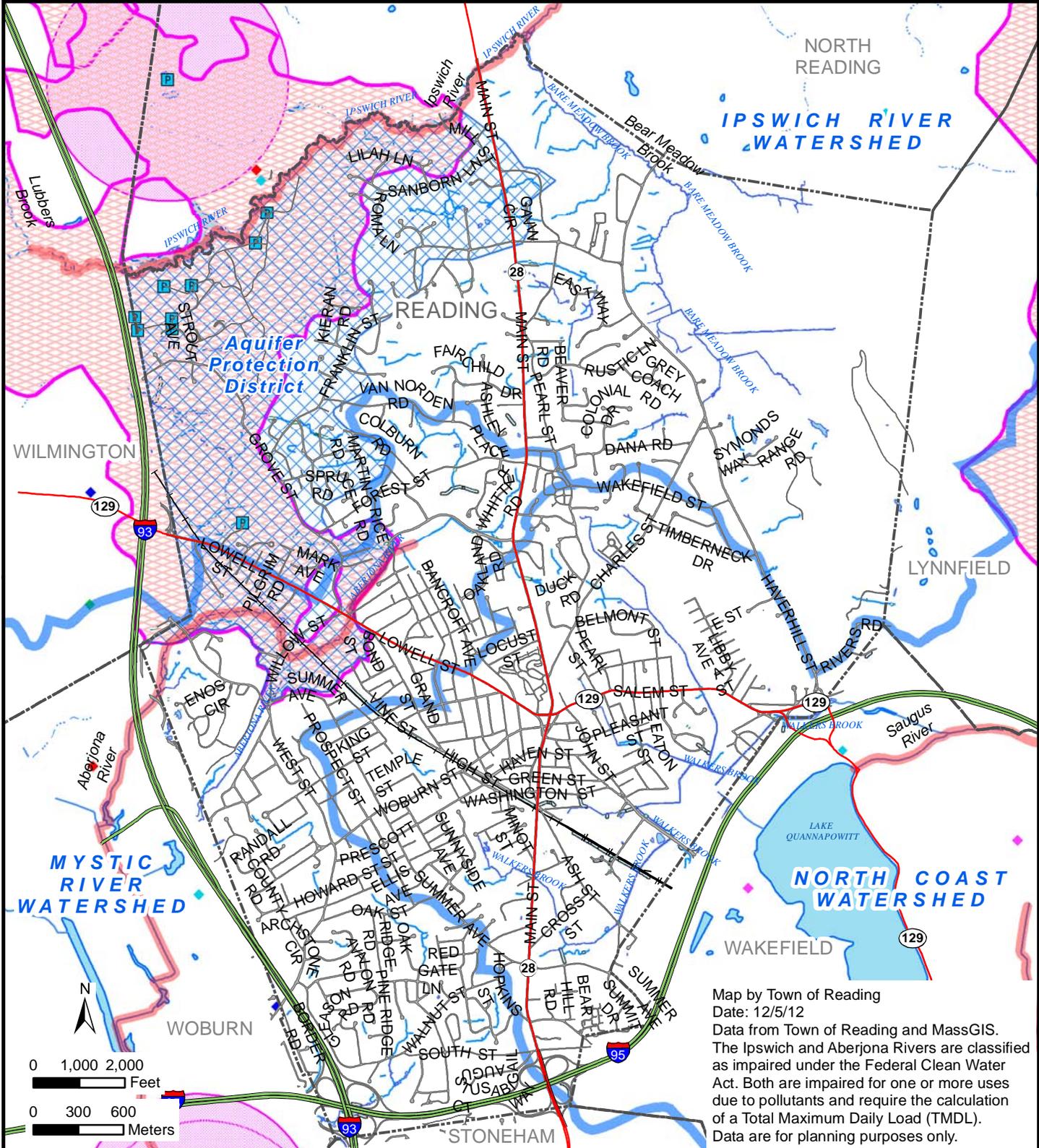
MADEP Haz. Material Site

- ◆ Tier 1A
- ◆ Tier 1B
- ◆ Tier 1C
- ◆ Tier 1D
- ◆ Tier II

MAP 6 WATER RESOURCES READING, MA

CWA Impaired Water Bodies

- Waters requiring a TMDL
- ☐ Watersheds
- ☐ Aquifer Protection District
- ☐ Wellhead Prot. Area (Zone II)
- ☐ Interim Wellhead Prot. Area



Map by Town of Reading
Date: 12/5/12
Data from Town of Reading and MassGIS.
The Ipswich and Aberjona Rivers are classified as impaired under the Federal Clean Water Act. Both are impaired for one or more uses due to pollutants and require the calculation of a Total Maximum Daily Load (TMDL).
Data are for planning purposes only.

Ipswich River serves as its northern boundary and provided the town's municipal drinking water supply through 2006. Bare Meadow Brook, which traverses the northeast corner of Town, is a major tributary to the Ipswich River.

Reading's Aquifer Protection District (APD) encompasses the now unused well fields in the northwest corner of town and extends along much of the Ipswich River drainage (see Map 6). It was modified in November 2001 based on a water supply study and a new map was incorporated. The language generally mirrors the model bylaw from the Department of Environmental Protection that was in effect at that time. The definition and allowable percentage of impervious surface has been tweaked several times in recent years with reference to DEP stormwater guidelines, most recently in 2011. Proper stormwater treatment and infiltration are encouraged. Underground residential propane storage tanks were allowed in 2005. The Town Forest and Water Department lands along the Ipswich River act in concert with the APD to protect the aquifer recharge area.

FEMA updated its Flood Hazard mapping of Reading in 2010 and the flood zones were adopted by Town Meeting (see Map 7 – Flood Hazard Zones).

Much of Reading's wetlands are Town owned and controlled by the Conservation Commission for the purpose of water supply protection, passive recreation and wildlife habitat (see Map 8 – Habitat & Watersheds). Presently, the Commission has over 900 acres of lands under its jurisdiction.

The Ipswich River is especially vulnerable to pollution due to its proximity to Interstate Route 93 and the industrial developments across the river in North Reading. The residents discovered this in 1992 when an oil tanker overturned on Route 93 at the crossing of the Ipswich River, dumping ten thousand gallons of petroleum product into adjacent wetlands. Although contamination did not reach the Town's water supply wells, six of the town's nine wells were temporarily closed due to the potential for contamination. Remediation is now complete.

The Ipswich River has been impacted by heavy water withdrawals within its watershed for many years. In 1997, the river was listed as one of the 20 most threatened rivers in North America. A study of the river by the U. S. Geological Survey determined that pumping groundwater wells was the main cause of the low flow problem. Water withdrawals from Reading and, upstream, from Wilmington had contributed to the problem. The town joined the MWRA to supply all of its water in 2006.

In the past five years, the Town has been proactive in its attempts to enhance the protection of the Ipswich River, Aberjona River and the Saugus River watersheds. Activities include a water conservation program (\$250,000 annually) that offers rebates on rain barrels, low-water use toilets and clothes washers, and moisture sensors for irrigation systems. Low-flow showerheads, faucet aerators, hose nozzles, as well as rain gauges are available free to residents. Outdoor water use restrictions remain in effect year round.

--- Town Boundary

FEMA Flood Zone

 100 Year Flood Zone (A, AE)

 Area not mapped on FIRMS (D)

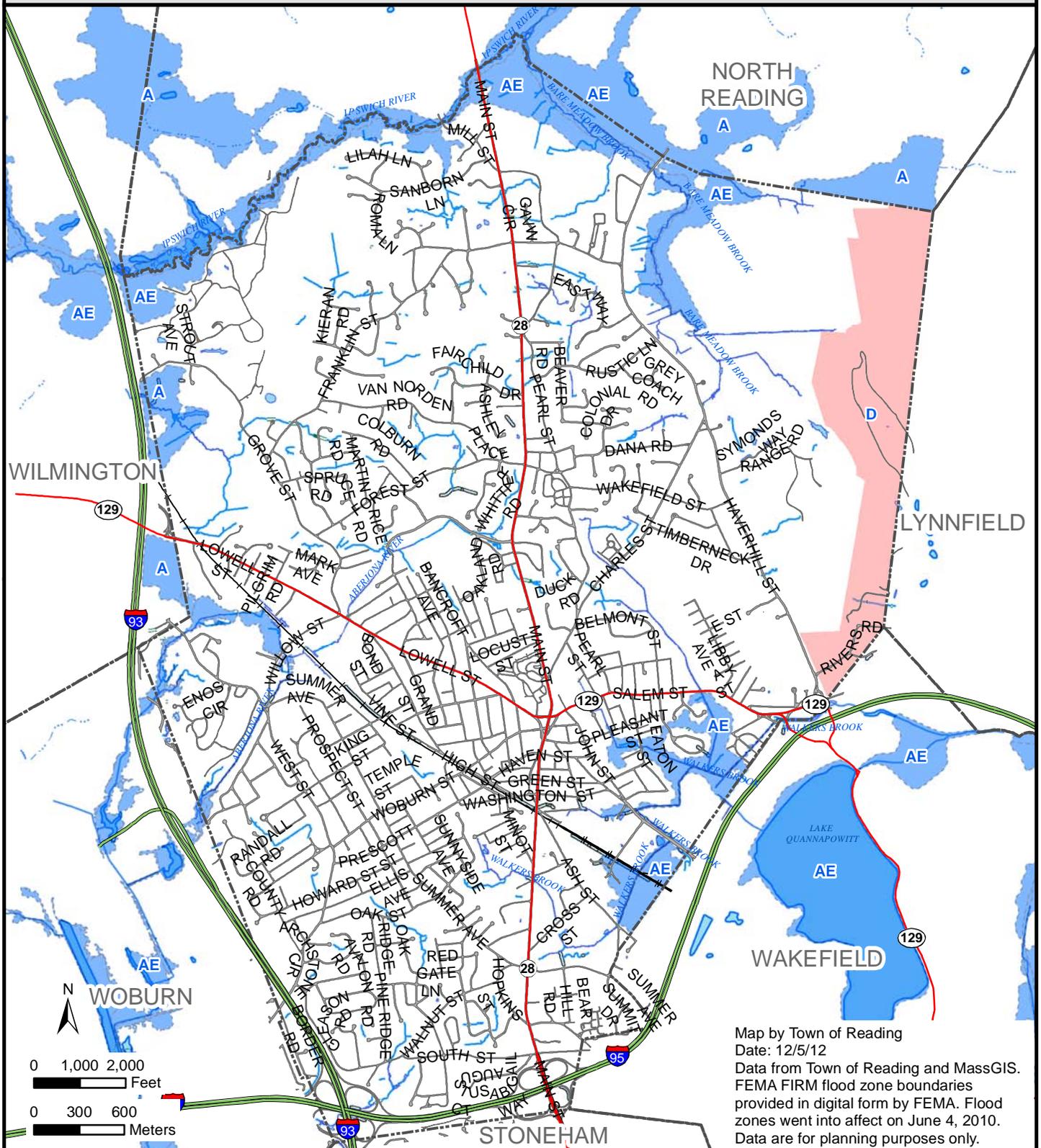
 Streams

 Ditch

 Culvert

 Lakes, ponds & rivers

MAP 7 FLOOD HAZARD ZONES READING, MA



Map by Town of Reading
 Date: 12/5/12
 Data from Town of Reading and MassGIS.
 FEMA FIRM flood zone boundaries
 provided in digital form by FEMA. Flood
 zones went into affect on June 4, 2010.
 Data are for planning purposes only.

The Ipswich River in Reading is underutilized as a recreational resource. Canoeing is difficult from Route 93 on the west to Mill Street on the east due to limited access and the narrowness of the channel downstream of the Town Forest. There is no canoe access in the Town Forest and views are limited as well. The Ipswich River Greenway plan envisions a fishing pier projecting into the ponded area, but no specific plan or funding is in place.

The Lobs Pound Mill site is now a Massachusetts Fishing and Boating Access facility with dedicated parking, an accessible trail, a barrier to stand or sit behind while fishing, and an informal canoe landing. It can be used during medium to high water as the starting point for a canoe trip downstream. The Lobs Pound Mill site is a popular fishing area in the spring when the State stocks the river with trout. The mill site has not been mowed on a regular basis and is getting overgrown; picnic tables at the site have not been maintained.

D. Vegetation

In the residential areas of the community, much of the vegetation is ornamental and non-native. The most frequent trees and shrubs are the common white, red, pitch and Scotch pine; Norway, blue, white, red and black spruce; balsam and Douglas fir; tupelo, dogwood, weeping willow; American elm; black cherry; a few American chestnuts; white, gray, yellow and black birch; poplar; linden, white, black, red, swamp and pin oak; sassafras; red, sugar, Norway, silver and mountain maple; American sycamore; shagbark and bitternut hickory; black walnut; box elder; staghorn, smooth and poison sumac; white and mountain ash; catalpa, black and honey locust; witch hazel; buckeye; dogwood; beech; gingko; rhododendrons and azaleas.

The swamps abound with skunk cabbage, high bush blueberry; and cinnamon, royal, maidenhair, rattlesnake, New York and marsh ferns. The tree layer includes American larch, black spruce, white pine, eastern hemlock, red maple and sugar maple. The shrub layer includes sweet pepperbush, red osier, viburnum, arrowwood and aster. There is prevalent swamp reed grass, a variety of sedges, moss, holly, ragwort, goldenrod, knotweed, jewelweed, cattails and purple loosestrife. In several locations in town there are areas with beech and tamarack. Invasive species of purple loosestrife, buckthorn and phragmites have spread widely.

Reading has continued to survey its Biodiversity since 2000. There have been over 700 species identified as of July 1, 2008 (Attachment D). Efforts are continuing to add new species to its biodiversity lists. Of the plants listed, the following are rare, threatened, or endangered¹¹:

¹¹ *Massachusetts List of Endangered, Threatened and Special Concern Species*, Natural Heritage & Endangered Species Program (NHESP): www.mass.gov/eea/agencies/dfg/dfw/natural-heritage/species-information-and-conservation/mesa-list/list-of-rare-species-in-massachusetts.html#MESApplant

| Taxonomic Group | Common Name | Scientific Name | MA Status |
|----------------------------------|--|--|------------------|
| Asteraceae (Asters, Composites) | New England Blazing Star  | <i>Liatris scariosa</i> var. <i>novae-angliae</i> | Special Concern |
| Celastraceae (Staff Tree Family) | American Bittersweet  | <i>Celastrus scandens</i> | Threatened |
| Cupressaceae (Cedars, Junipers) | Arborvitae  , Northern White Cedar | <i>Thuja occidentalis</i> | Endangered |
| Cyperaceae (Sedges) | Slender Cottongrass  | <i>Eriophorum gracile</i> | Threatened |
| Ophioglossaceae (Grape Ferns) | Adder's-tongue Fern  | <i>Ophioglossum pusillum</i> | Threatened |
| Orchidaceae (Orchids) | Showy Lady's-slipper  | <i>Cypripedium reginae</i> | Endangered |
| Orchidaceae (Orchids) | Leafy White Orchis  | <i>Platanthera dilatata</i> | Threatened |
| Rubiaceae (Bedstraws, Bluets) | Long-leaved Bluet  | <i>Houstonia longifolia</i> | Endangered |

The Town Forest protects 300+ acres and also supplies a buffer zone to the Ipswich River. It has several acres of large pine and includes the floodplain of the Ipswich River, reclaimed sand pits, an old cranberry bog, mature woods and wetlands. Over 114 varieties of lichen have been identified. A forest management plan was completed in 2010¹² and a natural resources inventory and conservation vision was completed in late 2012.¹³ Both plans were completed under the supervision of the reenergized Town Forest Committee. The Committee hopes to start selective harvesting to improve tree vigor and forest habitat value as recommended in the forest management plan.

There is also a cranberry bog in Fairbanks Marsh. In the eastern part of both north and south Cedar Swamp there is a black ash swamp. A white cedar bog at the north end of Cedar Swamp at the Reading-North Reading boundary is about 10 acres in size. There is also a 1-2 acre parcel at the easterly end of Meadow Brook Golf Club of northern white cedar. These areas provide habitat for a variety of insects and wildlife.

Bow hunting is allowed in North and South Cedar Swamps as well as in the northern part of Bare Meadow and the adjacent Anderson Meadow. Per state law, hunting is not allowed near homes or roads. No other hunting is allowed in Reading.

¹² Forest Management Plan, completed by Philip B. Benjamin, CF, 2010

¹³ Reading Town Forest Natural Resource Inventory & Conservation Vision, Liz Newlands, Mass Audubon Ecological Extension Service, 2012

A private 10-acre parcel of Chapter 61 forestry land abuts Kurchian Woods Conservation Area. This is known as the Lester Land.

Reading was designated as Tree City USA in 1985 and has retained that designation annually since then. The town has a shade tree program to enhance public roadsides as well as a commemorative shade tree planting program (see Appendix N).

Reading Subdivision Regulations include a tree policy governing all new subdivisions and planned residential developments. Each site is walked with the Tree Warden and Town Planner, accompanied by the project proponent, to see what trees can be saved, to minimize clear cutting and to enhance tree lawn plantings.

Leaves, branches, and logs may be transported to the town's compost area. Days and times vary throughout the year (see Appendix N). Compost materials are windrowed and decomposed and available to the residents in the spring for yard use and are used for other Town projects. Dumping of yard debris in wetlands and on Town-owned or undeveloped property is a perpetual problem.

E. Fisheries and Wildlife

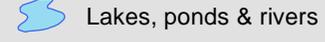
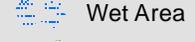
Wildlife seen in town includes much of the usual New England wildlife: deer, red and gray fox, raccoons, ground hogs, rabbits, skunks, coyote, fisher, beaver, river otter, muskrat, an occasional moose, wild turkeys, opossum, frogs, spotted turtles, dragonflies, damselflies, spotted salamanders, geese, ducks and over 100 varieties of birds. Because of the many acres of swamps, the Town has a large mosquito population. Fish exist in the Ipswich and Aberjona Rivers and the headwaters of the Saugus River.

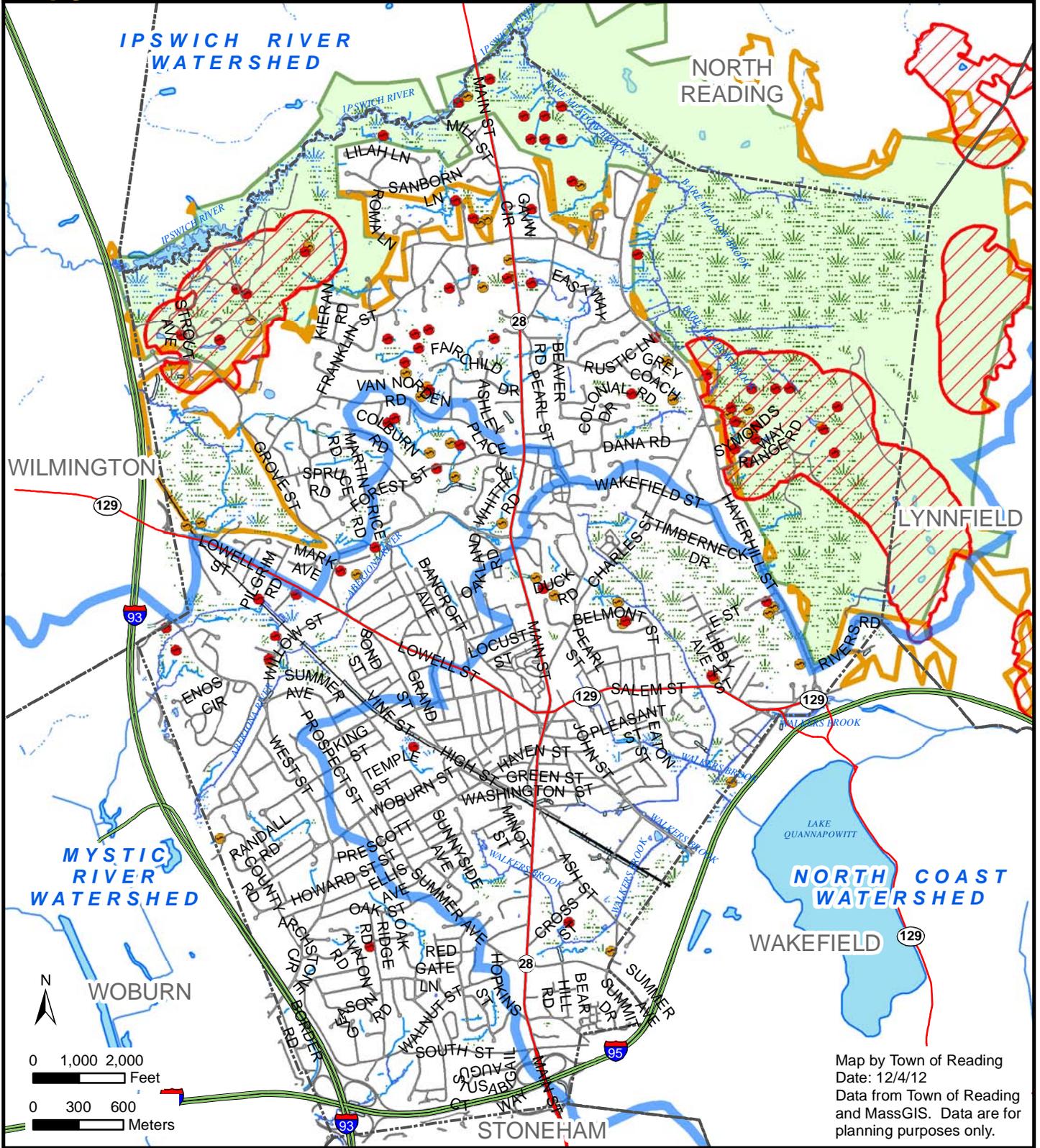
The Ipswich River corridor, the NEPCO high-tension electric lines at the north end of Camp Curtis Guild, and the Tennessee Gas Pipeline through the Cedar Swamp areas provide corridors of undeveloped forested wetlands in an otherwise residentially-populated area for wildlife to live and traverse.

There are 65 certified vernal pools in Reading. The Town's Wetland Protection Bylaw, currently under revision, protects vernal pools. The Commission reviews any proposed project within 100 feet of such pools.

Species on the Massachusetts Endangered Species List that are found in Reading include the blue-spotted salamander. The spotted turtle and the Mystic Valley amphipod have been delisted. There are two areas of Natural Heritage and Endangered Species Program (NHESP) *Estimated and Priority habitat* in Reading – in the Town Forest and in Cedar Swamp. The entire northern border of Reading adjacent to the Ipswich River and Bare Meadow Brook, as well as North and South Cedar Swamps is NHESP *BioMap Core Habitat*. Several adjacent areas are designated as *Biomap Supporting Natural Landscapes* (see Map 8 - Habitat & Watersheds).

MAP 8 HABITAT & WATERSHEDS READING, MA

-  Town Boundary
-  NHESP Certified Vernal Pools
-  NHESP Potential Vernal Pools
-  Watersheds
-  NHESP Priority & Estimated Habitat
-  NHESP BioMap Core Habitat
-  BioMap Supporting Natural Landscape
-  Streams
-  Ditch
-  Culvert
-  Lakes, ponds & rivers
- Wetlands**
-  Wet Area
-  Forested Wet Area



Map by Town of Reading
Date: 12/4/12
Data from Town of Reading
and MassGIS. Data are for
planning purposes only.

F. Scenic Resources and Unique Environments

Nearly 100 Reading properties are listed in the National Register of Historic Places, and the Town Common and part of Woburn Street are classified as National Register Districts (see Map 9 – Unique Features). The Town’s historic inventory includes 357 buildings, a cemetery (Laurel Hill), a historic site (Lobs Pound Mill on the Ipswich River), and four markers. The West Street Historic District was established in 2005 and, in 1995, Reading adopted a Demolition Delay Bylaw to protect historic properties. It allows up to a six-month demolition delay while alternatives are explored; it is currently under review by the Selectmen and Town Meeting.

Three of the Town’s more rural roads, Mill, Walnut and South Street, have been designated as scenic roadways. Several other roads in town also retain an earlier New England character.

The Town enjoys a green belt along the entire length of the Ipswich River. The Ipswich River Greenway is planned as a system of trails to connect the quilt of open spaces along the northern border of town. It is complete through the Town Forest, and through the Biller, Mattera, and Bare Meadow Conservation Areas. One feature along the Greenway is an accessible viewing platform atop Bare Meadow that allows visitors to enjoy the meadow.

The Town Forest is one of Reading’s unique assets. *The Reading Town Forest Natural Resources Inventory & Conservation Vision*¹⁴, prepared by the Mass Audubon Ecological Extension Service in 2012 documents this resource and makes recommendations for its continued use and health.

Eskers in the Town Forest and near Symonds Way and bedrock outcroppings throughout the town are unusual geologic features (see Map 5). Meadow Brook Golf Course is a scenic resource that can be seen from several Reading streets.

G. Environmental Challenges

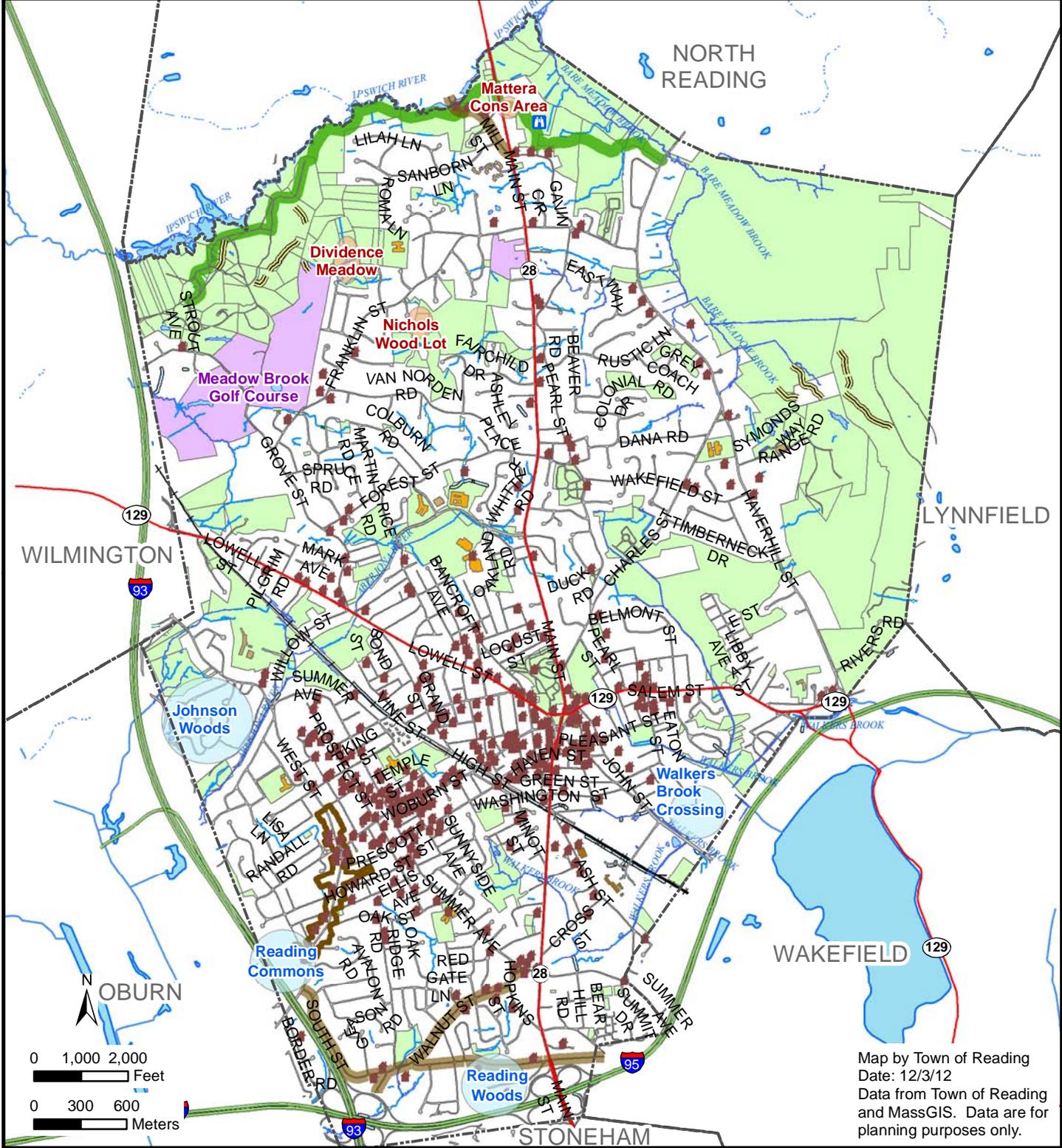
Environmental challenges that relate to open space and recreation include impacts of development pressures and traffic, wetland degradation, stormwater management, and water supply (quantity and quality), and hazardous materials

Reading recognizes that global warming is an issue that needs to be addressed. Energy saving devices, tree plantings, energy conservation and water conservation are among the many programs that have been used to mitigate the impact of global warming. The Cities for Climate Control Committee work with both the public and with Town officials to bring awareness to global warming impacts. Energy upgrades to Town and school buildings are being done through the Energy Savings Performance Contracting process under MGL Chapter 25A Section 111. The Town is also in the process of developing an

¹⁴ Reading Town Forest Natural Resource Inventory & Conservation Vision, Sept. 2012, Elizabeth Newlands, Mass Audubon Ecological Extension Service.

MAP 9 UNIQUE FEATURES READING, MA

- Protected & Unprot. Open Space
- Chapter 61 Land
- Recent Acquisitions
- New Developments
- Historic Properties
- West St. Historic Dist.
- Scenic Road
- Esker (approx. location)
- Ipswich R Greenway
- Streams
- Lakes, ponds & rivers
- 🔍 Viewing Platform



Map by Town of Reading
Date: 12/3/12
Data from Town of Reading and MassGIS. Data are for planning purposes only.

energy plan under the Local Energy Action Program with the Metropolitan Area Planning Council (MAPC). This plan will identify additional opportunities for energy use reduction and seeks to promote the use of alternative energy resources.

Reading's convenient location, its increasing population, its rail station, as well as cut-through traffic all result in high traffic volume on Reading's streets. Fast-moving traffic makes Reading streets noisy, unpleasant, unsafe and unhealthy for walkers, joggers, and bicyclists. This discourages environmentally friendly modes of exercise and travel such as biking and walking, and encourages even more vehicle use.

Wide roads, sidewalks, and parking in new subdivisions and commercial developments increase impervious surface area preventing infiltration of rainwater and exacerbating runoff problems. Flooding isn't a wide spread problem in town in part because of the many wetlands that absorb runoff. Flooded basements are more common than neighborhood flooding, but runoff from built areas in Reading exacerbates flooding in downstream communities along the Ipswich River. (Reading has wisely prevented development near the river.)

Town-wide, the suburban love affair with green lawns increases water demand and causes pesticide pollution of wetlands and streams. The many paved surfaces contribute to stormwater runoff and pollution. The Town is working hard to comply with EPA NPDES stormwater regulations including adding stormwater infrastructure to the GIS.

The American Rivers Association listed the Ipswich River as one of the 20 most endangered rivers in 1997 and again in 2003. It flows through densely populated north suburban Boston and provides drinking water for 13 towns, until recently including Reading. Reading's acceptance into the MWRA system has alleviated some of the stress on the river. Reading continues to cooperate with regional planning efforts and with neighboring towns to address watershed issues.

Reading has three water quality monitoring locations where trained volunteers do monthly data collection under the guidance of the Ipswich River Watershed Association.¹⁵ All three locations have been monitored since the late 1990's.

Under the Massachusetts Water Quality Management Program, the Ipswich River is classified as a Class B water, designated as suitable for supporting aquatic life, recreational uses such as swimming and boating, and fish consumption. It is also classified as Category 5: Impaired or threatened for one or more uses and requiring the state to calculate total maximum daily loads (TMDLs).¹⁶ (See Map 6.) The current

¹⁵ For more information on this program go to this link: <http://ipswichriver.org/riverwatch/>

¹⁶ Massachusetts Year 2012 Integrated List of Waters: Final Listing of the Condition of Massachusetts' Waters Pursuant to Sections 305(b), 314 and 303(d) of the Clean Water Act, Commonwealth of Massachusetts Executive Office of Energy and Environmental Affairs, 2012. <http://www.mass.gov/dep/water/resources/12list2.pdf>

health of the Ipswich River is summarized by the EPA's Ipswich-Parker Suburban Watershed Channel:¹⁷

There are some water quality problems in the Ipswich River. These are reported on the S. 303(d) list of impaired waters in Massachusetts, issued by the Department of Environmental Protection. The listed waters do not meet state or federal water quality standards. The largest problem remains flow impairment, which affects the Ipswich River from its sources in Wilmington throughout its course to the sea in Ipswich. In the Ipswich River, water quality and water quantity cannot be considered independently.

The upper reaches of the river often do not meet water quality standards for dissolved oxygen (DO), especially during low-flow periods. On several occasions during the past 5 years, DO of 0-1 mg/l has been recorded and verified; the standard is 5 mg/l. An investigation of the factors which result in low dissolved oxygen is being done by the Ipswich River Watershed Association, to try to identify how DO is affected by low-flows, oxygen-demanding pollutants, high temperatures and other human-influenced factors.

High fecal coliform, high levels of methyl mercury, and excess aquatic weed growth are not known to be problems in Reading although they are found elsewhere along the Ipswich River.

The Aberjona River, part of the Mystic River Watershed, is also classified as Class B, Category 5: Impaired or threatened for one or more uses and requiring a TMDL.

All-terrain-vehicle use, illegal on Town land, is a recurring problem. ATVs cause wetland and habitat destruction and noise pollution, and are a safety concern for passive users of open space.

Reading's landfill is capped and is now a thriving commercial area. It poses no known environmental problems. Erosion is generally not a problem in town except at construction sites. There are no lakes in Reading to fill up with sedimentation, though streambeds, wetlands, and catch basins receive sand from winter street sanding and sediment from nearby construction activity. Point and nonpoint source pollution is typical for a suburban town. Reading has little industry and no commercial agriculture, but it has its share of retail developments, auto dealerships, and gas stations all of which contribute to nonpoint pollution. The town is almost fully sewered so faulty septic systems are not a significant source of pollution.

At this time all commercial underground storage tanks have been either removed or upgraded to ensure ground water protection. Propane tanks, however, are now allowed underground throughout town, including in the aquifer protection district.

¹⁷ http://www.ipswatch.sr.unh.edu/ipswatch_faq.html

There are no 21E sites in Reading. The status of the 21E contaminant sites in North Reading (see Map 6), which once threatened Reading's water supply, can be summarized as follows:

- **Sterling Supply:** Sterling Supply was a dry cleaning supply firm handling bulk deliveries of PCE. The PCE, TCE and DCE contamination in Reading's well 82-20 is believed to have originated there. There is no viable responsible party for the contamination, so DEP is handling the cleanup.
- **Roadway Express:** There is PCE and chlorobenzene contamination in the bedrock at this site, which originated from a discharge to an on-site catch basin. A fracture trace analysis of the site's bedrock showed a fracture zone extending from the contaminated area towards the Town Forest well.
- **General Electric:** This site was responsible for the closing of North Reading's Stickney Well in 1978. PCE and TCE at this site extend towards the Ipswich River. This plume is by far the largest and most complex of the contaminant plumes in the area. In a 1991 settlement with the Town of Reading, GE contributed to the installation of air stripping equipment at the Reading water supply plant.
- **MSM Industries:** The MSM Industries site has introduced 1,1,1- trichloroethane contamination to the overburden and the bedrock. The groundwater recovery and treatment has been ongoing since 1995. A contaminant plume extends beneath the Ipswich River towards Reading wells and is still being investigated.

Reading has no widespread forestry disease problems or insect infestations although nonnative invasive plant species are a problem at the entrance to almost all of our parks, fields, and trails. Asian Longhorn Beetles have not been found in Reading, but Emerald Ash Borer may be an issue in upcoming years.¹⁸

A Forest Management Plan prepared for the Town Forest in 2010 describes the forest health as "relatively good"¹⁹ and habitat diversity as "superb."²⁰ The low diversity of tree sizes and species in the pine plantation areas is the main problem identified²¹. In addition, the plan recommends maintaining a modest amount of grassland and early successional habitat on the property since these are disappearing habitats in New England and are important wildlife habitat.²²

¹⁸ Personal correspondence with Robert Keating, Supervisor, Reading Parks and Forestry Division, July 5, 2013.

¹⁹ Forest Management Plan, Philip B. Benjamin, June 18, 2010, p. 5

²⁰ Ibid

²¹ Ibid, p. 6

²² Ibid

H. Environmental Justice, Open Space and Recreation Inequalities

The Environmental Justice Policy, established by the Commonwealth's Executive of Energy and Environmental Affairs, aims to address inequalities of environmental impacts by low-income populations and communities which have a strong minority population. Many times, these populations also have limited access to open space and recreational facilities or "environmental assets". Using various factors, these populations are also known as Environmental Justice Populations (EJ Populations). Although Reading does not have any EJ Populations, it is important to provide access to open space and recreation facilities to all populations and all residents throughout a community.

Reading has a variety of open space and recreation facilities as depicted in the Open Space and Recreation Map as well as Appendix A – Section 5 Inventory. However, it was observed by the staff working group as well as through public comment that there is a lack of facilities on the west side of town. As mentioned below in Section 6.b, many of the farms located in those areas have been redeveloped into a mix of housing (apartments, condos, townhouses) not of traditional single family homes. These residents, who lack back yards, or may not have a car, have different needs for open space and recreation and also may have to travel further distances to access existing facilities in Town. However, it is important to point out that many of the new housing development projects were developed under regulations that require a certain amount of open space specifically for recreational purposes. Even though there may be a lack of available space on the west side of Town to establish more/new open space or recreational facilities, another way serve this area of Town is to better improve connections to the existing open space in the other locations within the community. The goal, as described in this plan, is to continue to evaluate opportunities for new facilities and also seek out ways to connect new and existing housing developments to open space and recreational facilities throughout the Town.

Section 5 Inventory of Lands of Conservation and Recreation Interest

Open space preservation is important for environmental, scenic, recreational, health, educational, and economic reasons.

- Open space protects water and wetlands resources, provides wildlife habitat, absorbs flooding, and absorbs carbon dioxide thereby slowing global warming.
- Open space provides scenic vistas, backyard greenery, and buffers between homes and neighborhoods. It buffers residential neighborhoods from commercial and industrial areas as well.
- Open space provides the space we need for parks, playing fields, playgrounds, walking trails, and water trails. In the winter, Reading residents get out on the many marshlands by cross-country skis and snowshoes.
- Open space provides spaces for people to walk, run, swim, canoe, climb, and play sports. Physical activity is healthy for all ages, but the importance of being involved in non-organized outdoor activities is increasingly acknowledged as important to children's healthy development.²³ Open space provides spiritual renewal for all ages and counter-balances the stress of modern life. Comments in the Town Forest Survey make this point almost verbatim.
- Open space is a living classroom for people of all ages.
- Open space enhances property values of individual properties. Communities with substantial open space resources are rated higher in quality of life and thus enhance all property throughout the town.

The Town of Reading must understand its open space assets before it can sensibly plan for their preservation. The inventory of lands that follows (see Open Space & Recreation Plan map as well as Appendix A – Section 5 Inventory) includes both conservation and recreation lands, and both public and private lands. It includes ownership and access information on each parcel and, most importantly, includes information on each parcel's protection status. Not all publicly owned open space is permanently protected from development. Conversely some privately owned open space is protected. Knowing the status of each parcel is critical to understanding the open space opportunities and threats faced by the town. Public land (local, state, and national), private parcels, and land owned by nonprofit organizations are included in the inventory if they are currently protected or have conservation or recreation potential. See the *Protected & Recreational Open Space, Reading, MA* map for the locations of the parcels in the open space inventory. See the *Town Owned Open Space & Recreation Land By Controlling Department* map breaks these parcels out by owner.

Protected land, according to the state's guidelines, includes land controlled by the conservation or water departments, by a state conservation agency, by a non-profit land trust (for example, Reading Open Land Trust), or land purchased with state

²³ See the National Wildlife Federation's Be Out There program, www.nwf.org/Be-Out-There.aspx, the Children & Nature Network, www.childrenandnature.org/, or Richard Louv's book *Last Child in the Woods: Saving our Children from Nature-Deficit Disorder*, Algonquin Books, 2008, and the resources guide associated with it: <http://richardlouv.com/books/last-child/resource-guide/>.

conservation grant money (Bare Meadow, Kurchian Woods, Sledge Woods, Marion Woods, Dividence Meadow). Parcels in these categories are protected under Article 97 of the Articles of Amendment to the State Constitution. These lands were acquired for natural resources purposes and cannot be converted to other use without approval by the controlling commission, Town Meeting, EOEA, and the state legislature. Private land is considered permanently protected if it is deed restricted or has a conservation restriction. Reading has recorded 32 conservation restrictions, most of them within the past ten years.

Reading's most recent open space purchase, in January of 2007, is what has become the Mattera Conservation Area. This property was purchased through supplemental state funding and a generous donation by a private citizen. The parcel features a log cabin, which is used for conservation programming by Town committees and which can be rented by private parties.

A significant open space partner in Reading is The Reading Open Land Trust, Inc. ROLT preserves land in its natural state: wetlands, open lands and lands of historical significance. Since its founding in 1979, the Trust has acquired over 68 acres of open land. ROLT received a significant donation in 2007 from 99-year-old Benjamin Nichols (now deceased) who donated his family's colonial era wood lot to the Trust.

"Chapter 61" properties are a special category of temporarily protected private land. These parcels, managed as open space, receive a property tax break in exchange for the granting of the right of first refusal to the town if the parcel is sold. Chapter 61 lands generally have significant open space potential. Since Reading's first Open Space and Recreation Plan were written (1995) the Town has lost two of its four Chapter 61 lands. Spence Farm (6+ acres) and Longwood Poultry Farm (35+ acres) (both Chapter 61A agricultural) both opted out of their Chapter 61 status and are now major housing developments. The Lester land (10+ acres, Chapter 61 forestry) and Meadowbrook golf course (139 acres, Chapter 61B recreation) remain under Chapter 61 protection.

Unprotected open space includes Town-owned land controlled by other departments (schools, housing, cemetery), land owned by other state and federal agencies (MBTA, Camp Curtis Guild), and other privately owned land. These lands are not protected from development. Camp Curtis Guild, 275 acres of which is in Reading, is the largest of these. Girl Scout Camp Rice Moody, eight acres, is also worth noting. It abuts three open space parcels between Birch Meadow Drive and Grove Street.

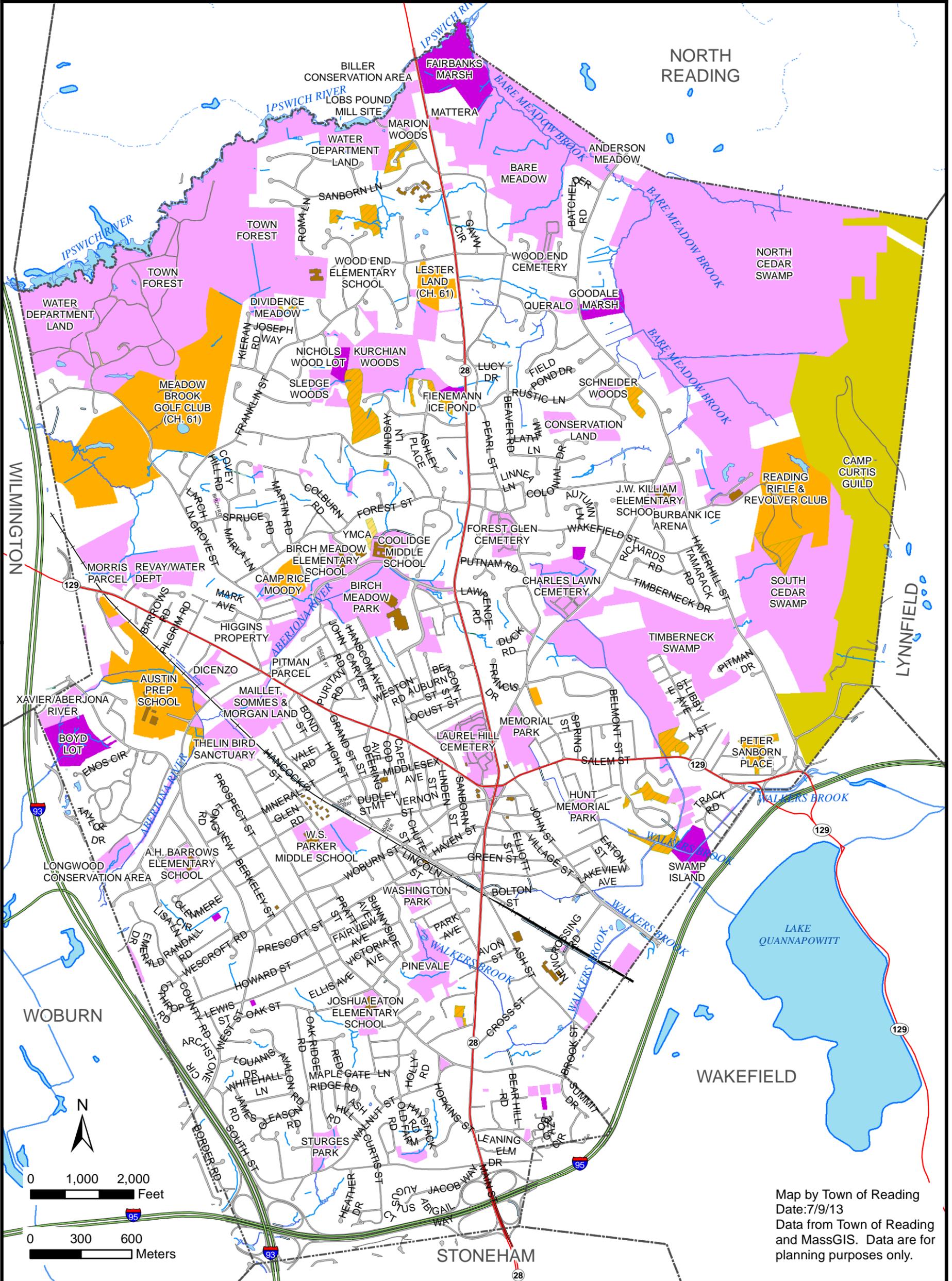
An Americans with Disabilities Act (ADA) Self-Evaluation of handicapped accessibility of all conservation and recreation sites is included as Appendix G. Also included is the Designation of an ADA Coordinator and the Board of Selectmen policies relative to the ADA in Appendix F. A table of accessibility standards for trails is included in Appendix J – Ipswich River Greenway Final Report. Appendix I includes a listing of special needs recreation programming from a recent Reading Recreation Magazine.

Open Space

- Commonwealth of Mass.
- Municipal
- Land Trust
- Non-Profit
- Private
- Conservation Restriction

PROTECTED & RECREATIONAL OPEN SPACE READING, MA 2013

- Town Boundary
- Streams
- Ditch
- Culvert
- Lakes, ponds & rivers



Map by Town of Reading
Date: 7/9/13
Data from Town of Reading
and MassGIS. Data are for
planning purposes only.

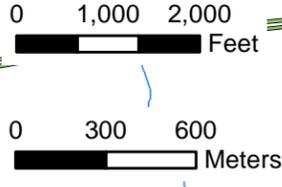
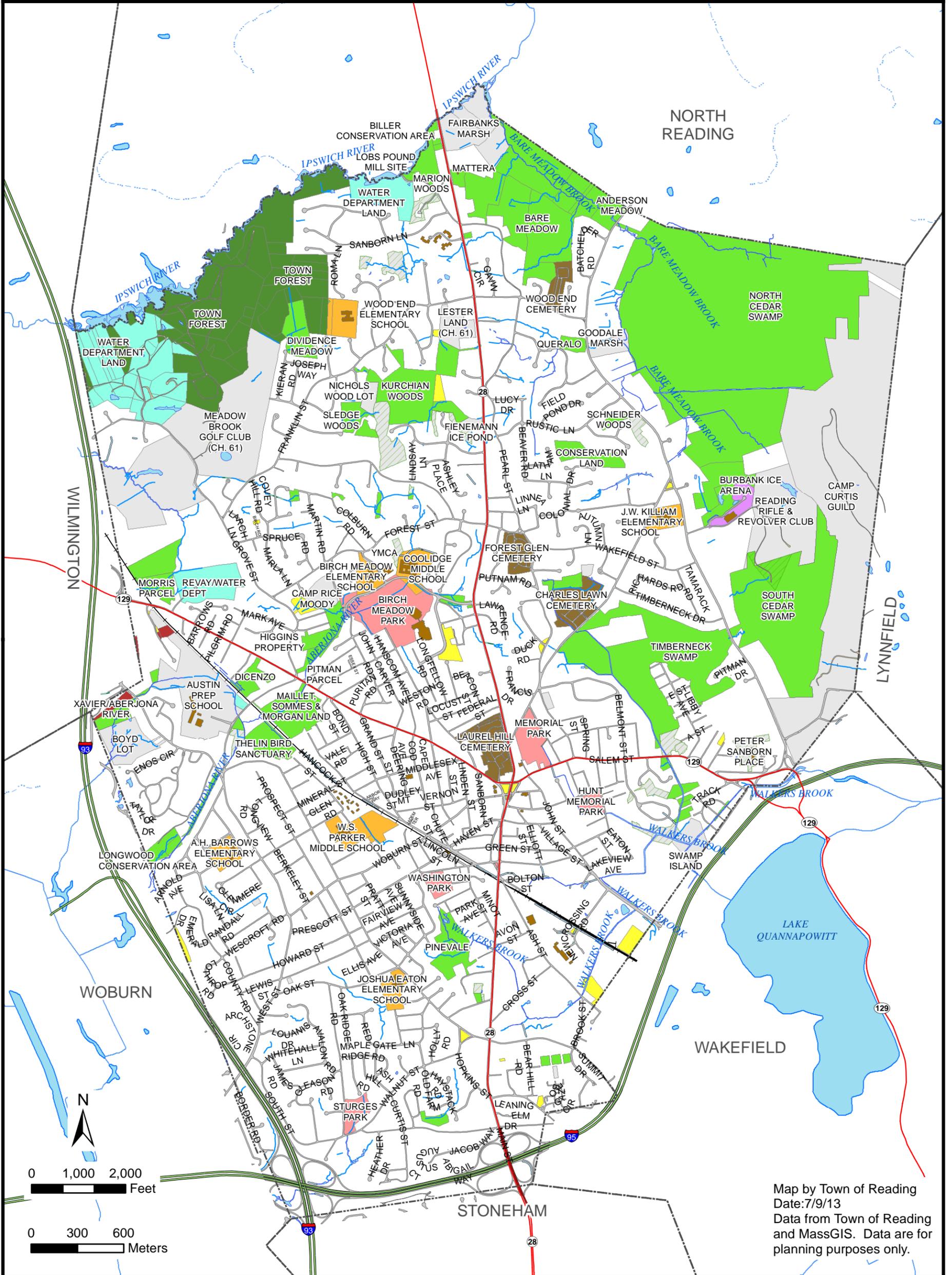
Open Space by Control

- General Government
- Town Forest Committee
- Conservation Commission
- Water Department
- School Department
- Parks and Recreation Depts
- Cemetery Department

Open Space by Control, cont.

- Municipal Light Department
- Ice Arena Authority
- Not Town-Owned
- Conservation Restriction
- Ditch
- Streams
- Lakes, ponds & rivers

TOWN OWNED OPEN SPACE & RECREATION LAND BY CONTROLLING DEPARTMENT READING, MA 2013



Map by Town of Reading
Date: 7/9/13
Data from Town of Reading and MassGIS. Data are for planning purposes only.

Section 6 Community Vision

A. Description of Process

In January 2012 the Town Manager assigned the update of Reading's Open Space and Recreation plan to a staff working group consisting of the Conservation Administrator, the Recreation Administrator, the Staff Planner, and the GIS Coordinator.

An on-line survey, *Open Space and Recreation Survey, Town of Reading, 2012* (Appendix B) was created. The survey was launched in time for Reading's Friends and Family Day, a major community fair held on June 16, 2012. Staff and volunteers were on hand to promote the survey. One hundred flyers were handed out urging people to respond to this survey as well as two other surveys, the Town Forest Survey and the Housing Production Survey. Two tablet computers were available for fair-goers to take the survey on the spot.

The survey was also publicized on the Town's website, in a digital newsletter, in two local print newspapers, and in an on-line paper (see Appendix P). Open space and recreation groups were encouraged to publicize the survey to their members. These include Walkable Reading, a local group dedicated to making the town more pedestrian-friendly, Friends of Reading Recreation, a family oriented recreation group, the Cities for Climate Protection Committee, as well as the Conservation, Recreation, Trails, and Town Forest committees. The Recreation Department sent an email notice to over 4,000 email addresses, and a notice of all three surveys was posted in Town Hall and included in a weekly employee newsletter. Finally, an intern spent parts of eight days in the Town Forest during the first two weeks of July asking walkers to fill out the Town Forest and Open Space surveys on a tablet or to do so at home.

A public meeting was held on October 30th, 2012 (see Appendix H – Public Meeting Minutes). The meeting was widely publicized including emailing those survey respondents who asked to be notified. The goal of the meeting was to elicit the community's vision of what the Town's open space and recreation assets *could* be, what our needs are, and how we might get there. The Staff Planner facilitated the discussion. About two dozen people attended.

Other studies that informed the community vision include the *Town Forest Natural Resource Inventory & Conservation Vision* by the Mass Audubon Ecological Extension Services and the *Reading Housing Production Plan* recently completed by the Planning Division. A Town Forest survey and a public meeting about the Natural Resource Inventory provided valuable insight into the Town's largest open space resource.

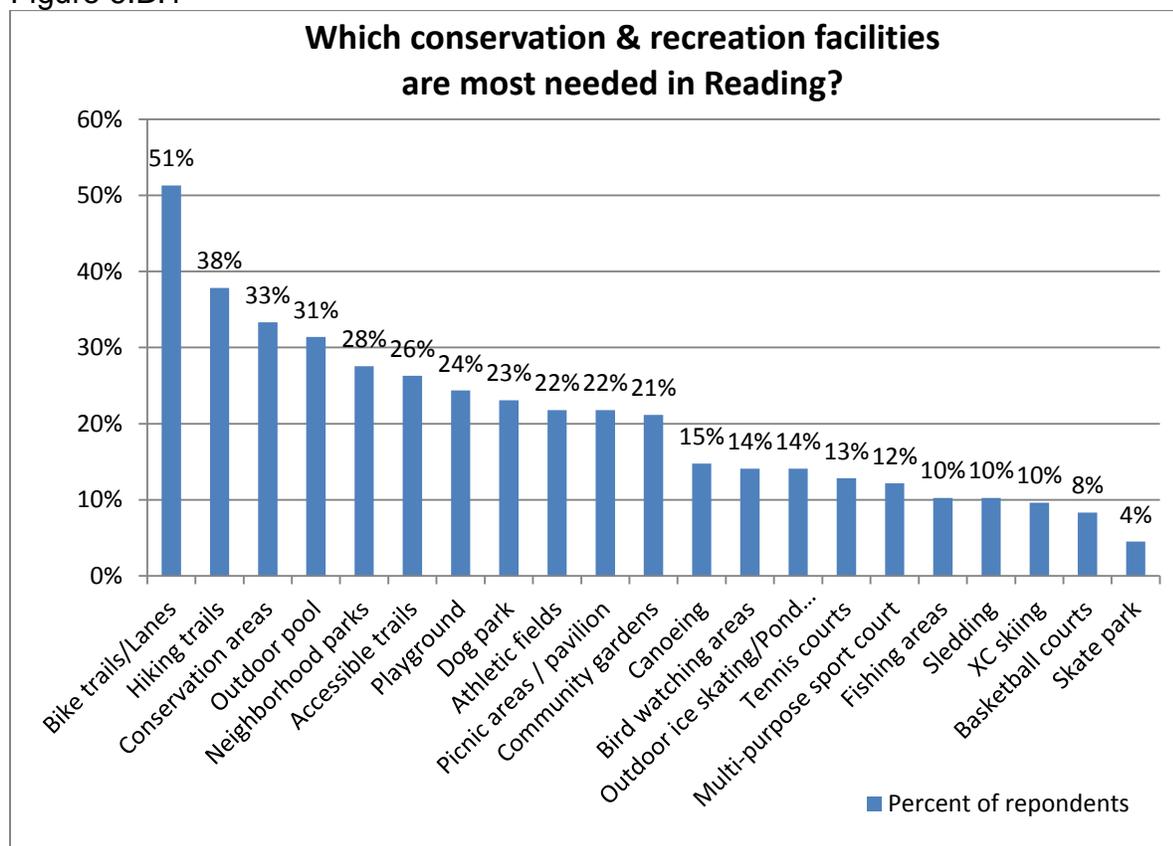
A draft of the *Open Space and Recreation Plan – 2013* was circulated to town boards and officials for comments. Comments were incorporated into the final document and helped shape the community vision.

B. Statement of Open Space and Recreation Goals

Looking back at the 2007 Open Space & Recreation Plan (draft), two topics stood out: first, angst over the loss of the last two farms in Town and with them the lost opportunity for new playing fields and open space and, second, a strong sense that conservation areas were underutilized, poorly maintained and poorly publicized.

Five years later residents seem to have moved past the loss of open space and simply want more of everything! The desire for more playing fields and playgrounds and for more conservation areas and trails is still there, but so is the desire for a variety of new recreation facilities such as bike trails, a splash park or outdoor pool, a dog park, picnic areas, and community garden space. See Appendix Q for comments on a town pool.

Figure 6.B.1



Source: Open Space and Recreation Survey Town of Reading 2012

A need is also expressed in the survey for accessible trails and neighborhood parks and, in comments, for more open space on the west side of town. The west side is where the farms have been replaced by 365 apartments, condos, and townhouses (536 at completion). Another 424 apartments, condos and townhouses are being developed along the Town's southern border. (These new residents are under-represented in the survey – only nine respondents said they live in this type of housing.) As a matter of equity, one of the community's goals should be to provide recreational opportunities for

apartment/condo/townhouse dwellers who do not have backyards, for those who do not have a car or who prefer to walk, and for seniors and individuals with disabilities.

Survey comments call for connections between open spaces, and for safer walking routes. These desires along with the interest in community gardens, a dog park, and a splash park all suggest that community connectedness be added as an open space and recreation goal.

Finally, resource protection, for wildlife habitat and watershed protection, and preservation of community character remain goals just as they were in 2001 and 2007.

To summarize, Reading's open space and recreation goals are to have and maintain a variety of active and passive recreational opportunities for all persons and for those opportunities to be distributed throughout town, to provide physical connections and community connectedness, to protect natural resources, and to preserve the character of the town.

C. Consistency with the 2005 Master Plan

The Town of Reading Master Plan was developed by Master Plan Advisory Committee and adopted in 2005. The plan is a vital tool which captures the community's vision and allows for thoughtful planning into the future. The Master Plan was structured into three major sections which evaluate Reading's history, identifies proposed community goals/objectives and includes a proposed action plan on how to best achieve those goals. The objectives identified for Open Space and Recreation are:

- 1) Create path systems connecting schools, open space, and neighborhoods;
- 2) Acquire more land for playing fields, a family picnic area and pocket parks;
- 3) Make public aware of the importance of public and private conservation land and open space;
- 4) Re-consider the Community Preservation Act;
- 5) Develop new sources of recreation funding, apply for grants and self-help funds and create a Friends or Stewardship program to help maintain open spaces.

The goals outlined in this plan as detailed in Section 8 below all support these objectives in the Master Plan. As mentioned in the previous section above, the goals for open space and recreation are themed around the maintenance of existing land and facilities, acquisition of new land/facilities, and development of physical connections between these lands while preserving the strong character of the town.

D. Consistency with MetroFuture

MetroFuture is a 30-year plan for MAPC, the regional planning agency for the Boston Metro Area Communities. The plan, which was adopted in 2008, identifies various goals for the region as well as strategies for implementation. This Open Space and Recreation Plan is consistent with the following goals and objectives outlined in MetroFuture:

Goal 2: Most new growth will occur through reuse of previously developed land and buildings.

Goal 7: Cities, Towns and neighborhoods will retain their sense uniqueness and community character.

Goal 9: The region's landscape will retain its distinctive green spaces and working farms.

Goal 23: All neighborhoods will have access to safe and well maintained parks, community gardens, and appropriate play spaces for children and youth.

Goal 47: Most people will choose to walk or bike for short trips.

Goal 62: The region's rivers, streams, lakes, and ponds will have sufficient clean water to support healthy populations of native fish and other species, as well as recreational uses.

Section 7 Analysis of Needs

A. Summary of Resource Protection Needs

Reading's acceptance into the MWRA has taken much of the strain off of the Ipswich River. The river's base flow is no longer impaired due to pumping from Reading's water supply wells. The Tier 1A sites in North Reading are approaching final remediation and, since Reading is no longer pumping from its Ipswich River well fields, pollutants from these sites no longer threaten our water supply.

Protecting the headwaters of the Ipswich, Aberjona, and Saugus rivers remains a top resource protection priority, however. The high amount of impervious surface area in town causes runoff, which in turn causes streambed erosion and flushes contaminants into our surface waters. The town's storm water fee provides revenue to help maintain storm water infrastructure and provide incentives for storm water best management practices.

Wetlands, which provide wildlife habitat and which act as buffers against flooding, are stressed by development. The town needs to continue to work with property owners and developers to protect wetlands resources. Acquisition and conservation restrictions are tools that the town should continue to use. Vernal pools should be protected by these mechanisms as well. Recent anti-regulation sentiment among some elected officials and members of the public threatens to weaken or eliminate the local Wetlands Protection Bylaw. The Town's challenge will be to continue to protect its wetlands resources if this happens.

Reading recently lost some of its regulatory protection due to the delisting of the spotted turtle by the state's Natural Heritage & Endangered Species Program (NHESP). Habitat for the spotted turtle and other vernal pool species are still protected under the Wetlands Protection Act, the local Wetlands Protection Bylaw, and the Rivers Protection Act.

Wildlife habitat is increasingly fragmented by development. Reading should prioritize land acquisition and conservation restrictions that provide wildlife corridors. The southern half of town is particularly fragmented and has seen large residential and commercial development since the previous Open Space Plan. A wildlife corridor that used to exist along the western border of Town has also been significantly reduced by residential development.

The Ipswich River Greenway, from Route 93 on the west to Bare Meadow Brook and Haverhill Street on the east, is intact as a wildlife corridor and riparian buffer. Completion of the greenway trail system – if it occurs – should not be allowed to negatively impact wildlife habitat.

The demolition of the water treatment plant offers the opportunity for an active recreation area as well as a resource protection challenge. Vernal pools flank Strout Avenue and the area is habitat for the endangered Blue Spotted Salamander.

Development of this area should not be allowed to negatively impact wildlife habitat. Also along Strout Avenue, the Town Compost is an area of high vehicle activity. It should be managed in a way sensitive to the surrounding natural resources as recommended in the Town Forest Natural Resources Inventory & Conservation Vision.²⁴ The shoulders of Strout Avenue and Grove Street are crumbling and should be rebuilt to protect wetlands and vernal pools.

Management of our conservation lands is an increasingly critical need. While trail maintenance has improved in the last five years, maintenance of conservation areas in general has not. Regular mowing of Bare Meadow and the Lobs Pound Mill site is no longer occurring. The growing in of the edges of the meadows at Bare Meadow Conservation Area is of particular concern. This is rare habitat in Reading and historically has been the site of the American woodcock's dramatic spring courtship display. The woodcock is listed in the State Wildlife Action Plan.

The Town also has no plan for control of invasive species. The worst offenders are glossy buckthorn, Japanese knotweed, garlic mustard, oriental bittersweet, purple loosestrife, and phragmites. Regular users of the Town Forest, Biller Conservation Area, and Bare Meadow have noted a dramatic conversion from a relatively open under-story to an inhospitable buckthorn jungle. Japanese knotweed chokes all entrances to Pinevale and lines the edges of Birch Meadow Drive as one approaches our playing fields. The Town Forest Management Plan makes this recommendation:

Although it is a daunting and somewhat overwhelming task, it may be prudent to begin to address the control of some of these species in order to slow their spread. One strategy to consider is to focus initially on the smaller occurrences along the trails in the interior of the Town Forest, especially in the white pine and red pine plantations ... and slowly work out towards the exterior of the property. Using various combinations of physical removal, repeated cuttings, and/or the prudent use of herbicides such as Round-Up should bear positive results, although it will be a never-ending endeavor.²⁵

B. Summary of Community's Needs

Demand for recreation programs and facilities by Reading residents continues to be strong judging from survey responses and from the number of volunteer groups dedicated to open space and recreation. Some of these needs can be met by better maintenance or the enhancement of existing facilities or lands, and some of the needs will simply go unmet unless additional land is acquired and funding allocated.

The availability of the open field at the site of the former water treatment plant has prompted new or renewed interest in a dog park, community gardens, and a picnic area or pavilion. The Town Forest survey elicited interest in managing the field as meadow habitat, something Reading has little of, and in leaving it as an open field for dogs to

²⁴ Ibid, pp. 19-20

²⁵ Forest Management Plan, completed by Philip B. Benjamin, CF, 2010, p. 47

play in. This is a rare chance for the community to envision something new, although a concept plan for the site calls for two practice fields.

The community's needs, broken down into several broad categories, are discussed below. (Comments from the Open Space & Recreation Survey 2012 are included in italics.)

Need for Active Recreation Areas

I think many positive changes have been made in town (updated facilities at high school, tennis courts, new playgrounds at elementary schools), but there is still room for improvement.

Just over half of survey respondents are satisfied with the quality and quantity of recreation space for children and youth in Reading (54% satisfied with the quality and 56% satisfied with the quantity). Satisfaction is slightly lower for recreation space for adults (51% satisfied with the quality and 48% satisfied with the quantity).

In terms of field use, active field space demand continues to increase. Youth and Adult organizations alike have been forced to creatively schedule practices/games to accommodate the needs of the community. The Recreation Committee has worked hard to protect the space that is currently available for use as well as investigating ways to create space within the space. Auxiliary lighting was added to the Birch Meadow softball field to extend play into the evenings especially in the fall. Collins Field at Parker Middle School was converted to a synthetic field in 2009. The Town is also investigating the possibility of a new field located at the site that formerly housed the Town's Water Treatment Plant. The Town has programmed capital funding for FY19 to replace the Coolidge Middle School field with synthetic turf.

Youth are the main users of the fields. Each organization would likely want more space if it were available. Many youth play multiple sports in multiple seasons. Interestingly, this has forced organizations to work together on scheduling. For instance, in the spring Reading Youth Lacrosse runs games only on Sunday to accommodate those players that play baseball on Saturday. The Recreation Committee is exploring ways to develop multipurpose facilities to expand recreational opportunities and encourage appropriate use of other facilities.

Demand will continue to climb as encouragement to get out, stay active and prevent obesity is a goal. In some cases programs will need to at some point cap enrollment.

A following specific active recreation facilities hold moderate interest to survey respondents:

Outdoor pool – 31%
Playground – 24%
Athletic fields – 22%

Survey comments include specific requests and suggestions including:

- Interest in a splash park, skate park, and street hockey rink
- Concern with the loss of Imagination Station
- Dislike of the restrictions at Memorial Park
- Desire for more shade in parks and playgrounds
- Concern that skating areas aren't maintained well enough in the winter and are wasted space in the summer
- Uncertainty about field location and rules
- Concern about the maintenance of some parks, courts, and fields

The desire for an outdoor pool and a splash park are consistent with SCORP-reported demand in the Northeastern Region.²⁶ SCORP ranks swimming third (after road biking and playground activity) in the need for recreational facilities in our region.

Need for Passive Recreation Areas

Reading is on the right track with open space, but should look to acquire more. I love the Town Forest and spend many memorable mornings walking there with the dog.

Many of the Town's passive recreation needs can be met by better trail maintenance and publicity. The Trails Committee and scouts have improved some trails. A nascent trail adopter program has potential to institutionalize trail maintenance.

The Town Forest is in danger of over-use (87% of survey respondents use it), Bare Meadow and Mattera get moderate use (41% each), and Kurchian Woods with its newly completed boardwalk and newly blazed trails in arguably underused (27%). Targeted trail building and maintenance could spread use throughout town and more equitably meet needs.

Respondents to the Open Space Survey are most interested in the following passive recreation facilities:

- Hiking trails – 38%
- Conservation areas – 33%
- Neighborhood parks – 28%
- Accessible trails – 26%
- Picnic area / pavilion – 22%
- Community gardens – 21%

Top priorities for open space amenities include completing the Ipswich River Greenway, building a fishing platform projecting into the Ipswich River in the Town Forest, building an "esker connector" boardwalk in the Town Forest, and building a West Side Trail to connect the Longwood Conservation Area, Johnson Woods, ROLT's Boyd Lot, and the

²⁶ MASSACHUSETTS OUTDOORS 2006: STATEWIDE COMPREHENSIVE OUTDOOR RECREATION PLAN, Commonwealth of Massachusetts , Figure 26, p. 50

Xavier/Aberjona River Conservation Area. The latter would be a valuable addition to the underserved southwestern part of town.

Need for Information and Accessibility

Conservation areas need to be better advertised, mapped, and introduced to the public with guided walks, etc.

Better information about conservation areas needs to be developed and shared with residents. There have been significant improvements in signage, trail blazing, and maps in *some* conservation areas since the 2007 draft plan. Nevertheless, many of the survey respondents expressed frustration with the lack of information or easy access to trails.

Trail maps are available on the Town's website and the website will soon be upgraded to make it easier to keep content current. This is an opportunity to try again to create an easy-to-use resource for recreation and conservation news and information.

Better access to open space is also a community need. *Massachusetts Outdoors*, the Massachusetts Statewide Comprehensive Outdoor Recreation Plan (SCORP), states that 20% of Massachusetts' households contain someone with a disability²⁷. By providing access for the disabled, we will be providing better access for seniors and folks pushing baby strollers as well.

Access improvements have been made to both playgrounds and trails since the previous Open Space Plan. The playground at Wood End Elementary School is fully accessible, and ADA compliant playgrounds were installed at Barrows, Joshua Eaton and Killam Elementary Schools and Washington park. There is a 400 foot accessible trail from the Mattera parking area to an accessible wildlife viewing platform overlooking Bare Meadow, and the Lobs Pound Mill site features an accessible trail to a fishing area. The Trails Committee works with scouts to insure that trail structures have no steps up or down or gaps that would make them less friendly to walking-impaired or visually-impaired individuals. Accessibility standards for trails are included in Appendix J.

Lack of parking is an access issue as well. All conservation areas with trails have dedicated or on-street parking; some have dedicated handicap parking spaces. Therefore this is a need that can be solved largely with better information. The Town Forest is the exception. Most users drive to the Town Forest and most park on Grove Street and walk in along Strout Avenue. Traffic to and from the compost, including DPW trucks, creates a hazard to pedestrians, bikers, and dog walkers. The *Reading Town Forest Natural Resources Inventory & Conservation Vision* addresses this issue at length.

²⁷ Ibid p. 21

Need for More Pedestrian and Bike Friendly Connections Between Areas

Encourage safe sidewalks and bike paths. Reading streets are hazardous for walkers, especially senior citizens.

The desire for more bike trails and bike lanes is the strongest need expressed by survey respondents: 51% of respondents listed this need. Efforts must be made to develop bike and walking routes between protected areas to allow residents better access to enjoy and appreciate both the developed and the natural areas of Reading. Bike routes to attractions in neighboring towns (e.g. Lake Quannapowitt and the Ipswich River Park) and to commuter rail are also needed. Meeting these needs has the added benefit of improving residents' health and reducing the number of cars on the road.

Reading residents' desire for bike trails and lanes is consistent with an analysis found within SCORP of 160 Open Space and Recreation Plans approved since 2001. The analysis states: *Community demand was highest (66% or 112 plans) for paved trails for a combination of walking, running, jogging, biking, or skating.*²⁸

Walkable Reading's 2007 survey of adults (Appendix L) indicates that high traffic volume and a lack of sidewalks are the main obstacles to more walking and biking. Local officials attended a June 2012 presentation on building communities that encourage biking and walking (Appendix O). Two proposed projects would help meet these needs: a bike lane along Haverhill Street from the Route 95 cloverleaf to the North Reading line and new sidewalks along West Street as part of the (unfunded) West Street Reconstruction project.

Need for Community Connectedness

I would like to see better investment in the open field. A dog park? A baseball field? Something that would act as a congregation point for reading residents to meet and get to know each other. [From the Town Forest survey in reference to the field at the former water treatment plant.]

Whether fulfilled by a splash park, a dog park, a playing field or playground, residents seek community connectedness. Solutions as simple as more picnic tables and benches at existing facilities will help satisfy this need. The Town should continue its strong push to build more sidewalks as well to connect neighborhoods.

In addition, a variety of groups have sprung up to support playground revitalization, to provide family recreational opportunities, and to make Reading more walkable. All provide community connectedness.

The following are some of the groups dedicated to meeting the open space and recreation needs in the community:

²⁸ Ibid p. 55

| Town Committees | Private Groups |
|---|---|
| Trails Committee | Reading Open Land Trust (www.rolt.org) |
| Town Forest Committee | Friends of Reading Recreation (www.forr1867.org) |
| Conservation Commission | Reading/North Reading Stream Team (readingnorthreadingstreamteam@hotmail.com) |
| Recreation Committee | Walkable Reading (https://www.facebook.com/walkablereading) |
| Cities for Climate Protection Program Committee | Friends of Reading Tennis http://www.readingtennisopen.com/main.html |
| | Friends of Washington Park https://sites.google.com/site/forrashingtonpark/resource-center |
| | Friend of the Tot Lot |
| | Reading Boosters |

Concern for Loss of Community Character

When we originally moved to Reading in 1950, the Town's population was approximately 10,000. In the past 60+ years, development throughout many areas of the Town has changed the "feel" of the Town not for the better, although probably inevitable. In order to experience some of the rustic pleasures which were once available within the Town, we now tend to seek such pleasures elsewhere than in Reading.

Although the survey did not ask directly which landscape and aesthetic features residents wish to see preserved, survey comments reveal the community's sense of loss over changes to the character of the town.

Dog Management Needs

The Town will need to address dog management over the next seven years. Annual dog licensing by the Town provides an opportunity to disseminate rules and information and, if necessary, fund a dog program.

Twenty three percent of survey respondents would like to have a dog park in Reading – something that wasn't even asked about in the 2007 survey. The Town Forest survey revealed both the enthusiasm of dog walkers for open space (the Town Forest in particular) and the concern of others over unruly dogs and over dog waste. Town parks are seriously polluted with dog feces.

Appendix E is an example of “green dog” regulations; a second example can be found in the Town Forest Natural Resources Inventory available on the Town’s website.²⁹

Figure 7.B.1 shows a steady increase in the number of dogs in Reading; up 32% since 2002.

Figure 7.B.1 Number of Licensed Dogs in Reading

| YEAR | # OF LICENSED DOGS |
|------|--------------------|
| 2002 | 1,867 |
| 2003 | 1,892 |
| 2004 | 1,904 |
| 2005 | 1,929 |
| 2006 | 1,919 |
| 2007 | 2,055 |
| 2008 | 2,115 |
| 2009 | 2,186 |
| 2010 | 2,187 |
| 2011 | 2,365 |
| 2012 | 2,538 |
| 2013 | 2,469 |

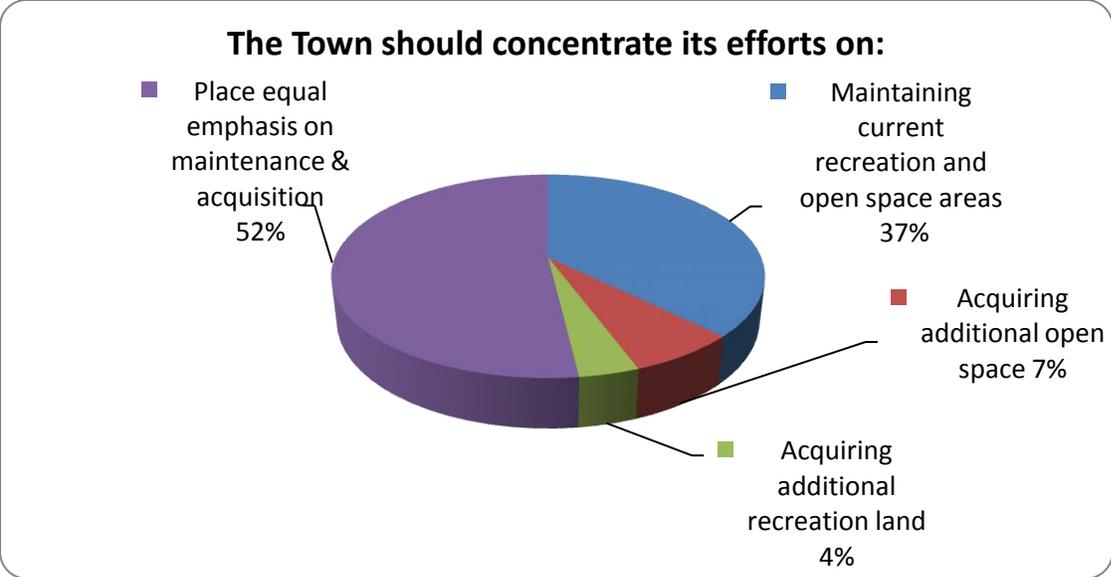
Source: Town Clerk’s Office

Need for Land Acquisition and Funding

More open space should be preserved. Too much building and development and overcrowding. Johnson woods was a mistake to not keep as open land.....

There is not enough Town owned land to meet the desire for more recreation and conservation facilities, therefore land acquisition is a community need. Willingness to fund land acquisition is mixed. When asked what the Town should concentrate its efforts on, only 11% said “acquiring additional land” (4% for recreation land and 7% for conservation land). Fifty two percent believe that the Town should place equal emphasis on maintenance and acquisition, however.

²⁹ Reading Town Forest Natural Resource Inventory & Conservation Vision, Sept. 2012, Elizabeth Newlands, Mass Audubon Ecological Extension Service.



Seventy percent of survey respondents felt that the purchase of open space should be a standard part of the Town’s capital plan. Only 44%, however, would be willing to pay more taxes to purchase land for recreation and conservation.

In recent years the Town has allocated no regular funding for land acquisition, open space maintenance, or trail building. The 2013 Annual Town Meeting allocated a one-time \$1,000 to the Trails Committee and to the Town Forest Committee. Regular funding is a community need.

Asked if they would support the adoption of the state’s Community Preservation Act (CPA), which would place a 1 to 3 percent surcharge on real estate transactions for open space protection, historic preservation, affordable housing, and outdoor recreation, just 46% said “Yes”, but another 27% said “Maybe”. In other words 73% *might* support the CPA. (See Appendix C for background information on the CPA.)

The CPA is one of the strongest tools available to provide stable open space and recreation funding. Reforms to the program and additional funding were approved by the state legislature and will be available to CPA communities in the fall of 2013. The state match is estimated to be 48%. Reforms include broadened eligibility of existing recreational facilities and the ability to exempt the first \$100,000 of commercial property value from the CPA surcharge.³⁰

The CPA also provides a mechanism to prioritize diverse projects - from open space purchases to historic renovation to affordable housing to playing fields – all under the same umbrella. By statute, a five to nine member Community Preservation Committee must be set up to administer the CPA. It must include members from the following municipal committees: Conservation, Planning, Historical, Housing, and Parks. At-large

³⁰ The ability to exempt the first \$100,000 of residential property value and to exempt property owned by low income individuals and low to moderate income seniors is already a part of the CPA.

members are also allowed. This committee is charged with developing a Community Preservation Plan and with reviewing and recommending projects to Town Meeting. There is no comparable structure in place in Reading at the present time. The committees mentioned above operate with little reference to each other and each competes for limited resources from the Town's general fund. With the CPA in place, a new, dedicated revenue source would be used to fund prioritized needs.

CPA communities also have improved chances of receiving state grants both because grant scoring rewards communities that have implemented the CPA and because CPA funds can be used to provide the local matching funds that many grants require.³¹

Grants are a valuable, but sporadic source of open space and recreation funding. A recent LAND grant application to purchase parcels abutting Bare Meadow and Mattera Conservation areas and a PARK grant application to renovate the Birch Meadow tennis courts were both unsuccessful. On the other hand, two state Recreation Trails Grants were received (2008, 2011) totaling over \$29,000. A patchwork of grants, donations, volunteer labor, and Town funds were used to renovate the Mattera Cabin for public use (see Appendix K). A table of grant resources can be found in Appendix J - Ipswich River Greenway Final Report.

C. Management Needs, Potential Change of Use

"The need for additional staff to manage the Town's conservation areas has become clear." So begins this section of the 2007 Open Space & Recreation Plan. Since then the position of Conservation Administrator has been cut from full-time to 23 hours per week. The Administrator's time and the Conservation Commission's time are almost entirely taken up by regulatory requirements. Management of Reading's conservation lands is simply not happening.

Management plans were written years ago for two of our conservation areas, Sledge Woods and Marion Woods (both purchased with Self-Help funds). Plans need to be developed for the remainder of the sites including boundary surveys, signage, invasive species management, and plans for trail development and maintenance. The Trails Committee and Girl Scouts have completed sporadic invasive species removal projects. Mowing of Bare Meadow and the Lobs Pound Mill area has lapsed, while mowing at Castine Field has been overly-aggressive, violating an agreement between DPW and the Conservation Commission. Coordination between departments is needed.

The Trails Committee has absorbed much of the demand for additional trails, signage, and maps. Coordination between the Conservation Commission, Trails Committee, and Town Forest Committee, however, could be improved. Scout projects in particular

³¹ CPA communities won the majority of State Land grants in 2012, 95% of the total funding. "CPA provides communities with a local funding source for the required match, giving them a leg up when it comes to applying for grants like this one." <http://www.communitypreservation.org/news/345> and Appendix C page 13.

receive inconsistent permitting and supervision. A related management challenge is that scouts complete trail projects, but do not provide ongoing maintenance. Thus conservation areas are frequently spruced up, but quickly fall into disrepair once again. The Trails Committee launched an Adopt-A-Trail program in 2008 that has never really gotten off the ground. As stated previously, the Town provides no regular funding for trails building or maintenance.

The Town offers no conservation programming (with the exception of occasional walks led by the Library or the Trails Committee). Unlike the Recreation Division, Conservation collects no user fees so has no funds to use for programming, supplies, or equipment. (The Conservation Commission does have a revolving fund – typically with a balance of less than \$2,000 – funded by developers to be used at its discretion.)

Master plans have been developed for most of the Town's parks (see Appendix M). The Recreation Division has three full-time staff and hires camp staff in the summer. Demand is always high, but staff meet it with a year-round calendar of classes, teams, and events. Activity fees cover activity costs and partially cover staffing and facility maintenance. The Recreation Division pays close to \$20,000 per year to supplement the park division with an extra seasonal staff to help keep up with the maintenance and growing recreation needs of the community.

During the summer of 2012 both West Nile Virus and Eastern Equine Encephalitis were detected in mosquitos in Reading. Lyme disease is another insect-borne disease found in Reading. Management plans for parks, fields and conservation areas should assess these health threats. At a minimum, signage should educate residents on how to minimize exposure.

Change in the use of the open field at the site of the former water treatment plant is one of the Town's biggest open space opportunities – and challenges. *The Town Forest Natural Resource Inventory and Conservation Vision* recommends allowing the field to revert to wet meadow for habitat; a plan developed by the Recreation Division envisions practice fields. Town Forest survey respondents also suggest developing the field as a dog park, as community gardens, or as a picnic area. A well-attended public meeting held in October 2012 allowed the public to weigh in on the use of this area.

Before any town-owned lot is developed and before any change of use takes place the Town should research which department controls the land. There is uncertainty about whether the Water Department or the Town Forest Committee controls some of the lots in the area of the former water treatment plant. In addition, some transfers of (tax title or private) parcels to the Conservation Commission and some conservation restrictions and trail easements have not been finalized.

It is important to remember that each developed facility puts a burden, large or small, on the surrounding neighborhood and on the environment. The Town should be especially sensitive to the Grove Street/Strout Avenue neighborhood as it contemplates redevelopment of the water treatment plant area. Traffic, wetlands and vernal pool

impact, and water use (for irrigation) will all have to be weighed against the desire for playing fields, Town Forest access, and parking.

The Town should be vigilant in the event that either of the remaining Chapter 61 lands (Meadow Brook Golf Club and the Lester land) becomes available. Camp Curtis Guild (Massachusetts Army National Guard) and Camp Rice Moody (Girl Scouts of Eastern Massachusetts) may also someday be available for reuse. It is worth noting that the Town has no acquisition funds set aside and no quickly-accessible source of funding available should one of these properties come on the market.

The Town recently sold a small open space parcel on Lothrop Road and is in the process of selling an open space parcel on Audubon Road. Either could have become a neighborhood park. The Town should be cautious in selling even small parcels; each site should be reviewed for its potential to fill gaps in parks and open space. Pocket parks are great facilitators of community connectedness.

Section 8 Goals and Objectives

The goals and objectives detailed below were derived from the *Survey on Open Space and Recreation in the Town of Reading 2012*, from the town's previous Open Space and Recreation Plans, from the public meeting held in October 2012, and from the many reviewers of the draft version of this plan. Five open space and recreation goals have been identified. These goals are discussed below. Objectives, or concrete ideas for accomplishing each goal, are listed under each.

1. Maintain and enhance existing open space for passive recreation

Reading has a significant amount of open space with trails suitable for walking, running, cross-country skiing, and snowshoeing. Interest is strong, but funding is limited and residents complain that they don't know where the trails are or that there is insufficient parking and poor trail conditions once they get there. Maintaining and enhancing our existing open spaces is the most cost effective way to meet residents' needs.

Objectives:

- A. Publicize existing trail systems.
- B. Maintain and improve trails, trail structures, signage, and parking at conservation areas. Create new trails where possible.
- C. Continue development of the Ipswich River Greenway.
- D. Seek funding for maintenance and improvement.
- E. Equitably distribute open space opportunities in all parts of Town and provide access to people of all abilities.

2. Maintain and enhance existing recreation facilities and programs

Reading has an extensive inventory of fields, playgrounds and facilities for the use of the public. Many areas have been renovated recently by way of playground restoration, reestablishment of field limits or replacement of key field components. This has been done mostly in accordance with master plans that have previously been developed and accepted by the Town's Board of Selectmen. To continue to enhance these facilities, money will need to be set aside. This should be looked at during the capital improvements process and areas should be prioritized.

Objectives:

- A. Focus on development of holistic master plans for each park.
- B. Prioritize items on the master plans to reflect the town's needs during the capital planning process.
- C. Watch trends in the recreation industry for new innovative ways to enhance our facilities.

D. Equitably distribute recreation opportunities in all parts of Town and provide access to people of all abilities.

3. Make Reading pedestrian and bicycle friendly, improve connections, encourage climate protection and personal health

Open space and recreation facilities are resources bring residents together and create a sense of community. One way to strengthen the community is to develop viable connections between these open space areas, recreation areas and the surrounding neighborhoods. Establishing these connections through pedestrian and bicycle facilities will improve the town neighborhood network, encourage healthy living and reduce the reliance of automobile usage.

Objectives:

- A. Develop walking and biking trails between open space and recreation areas.
- B. Improve and encourage walking and biking to school.
- C. Delineate bike lanes through the painting of lanes or implementing roadway “sharrows”.
- D. Provide legal rights of way between neighborhoods to and from new subdivisions and commercial development/redevelopment adjacent to public land.
- E. Work with adjacent communities to improve pedestrian and bicycle connections to public spaces and to commuter rail.
- F. Encourage use of open space resources for health.

4. Protect open space for wildlife habitat and watershed protection

The natural environment plays an important role in defining the character and identity of Reading. Open space protects habitat for plants and animals and protects our rivers and streams. It also provides corridors for wildlife, buffers between neighborhoods, and reduces flooding.

Objectives:

- A. Actively manage conservation areas.
- B. Educate the public on habitat and watershed issues.
- C. Monitor environmental threats imposed by development within and outside of Reading.
- D. Conserve water and manage stormwater.
- E. Acquire additional open space for wildlife habitat, wetlands protection, and aquifer protection.

5. Preserve the character of the town

Reading residents mourn the loss of open space whether it is lands they once hiked or vistas that no longer exist. Open fields, pine woods, stone walls, and country lanes are fondly remembered. The town strives for the look and atmosphere of a New England village even as its residents enjoy the amenities of suburban living. Acquiring privately held land to maintain as open space is one strategy towards preserving the look of the town. Enhancing opportunities for families and individuals to interact is a strategy for preserving the family-friendly character of the town.

Objectives:

- A. Designate more scenic roads.
- B. Use Smart Growth tools to shape new development.
- C. Use subdivision control ordinances to retain landscape features such as stone walls.
- D. Develop pocket parks.
- E. Build community connectedness into new and existing facilities.

6. Develop a strong financial plan and seek new sources for funding

Reading will need to be mindful of the open space and recreation plan as budgets are developed for the future. A financial plan is critical to converting opportunity into success.

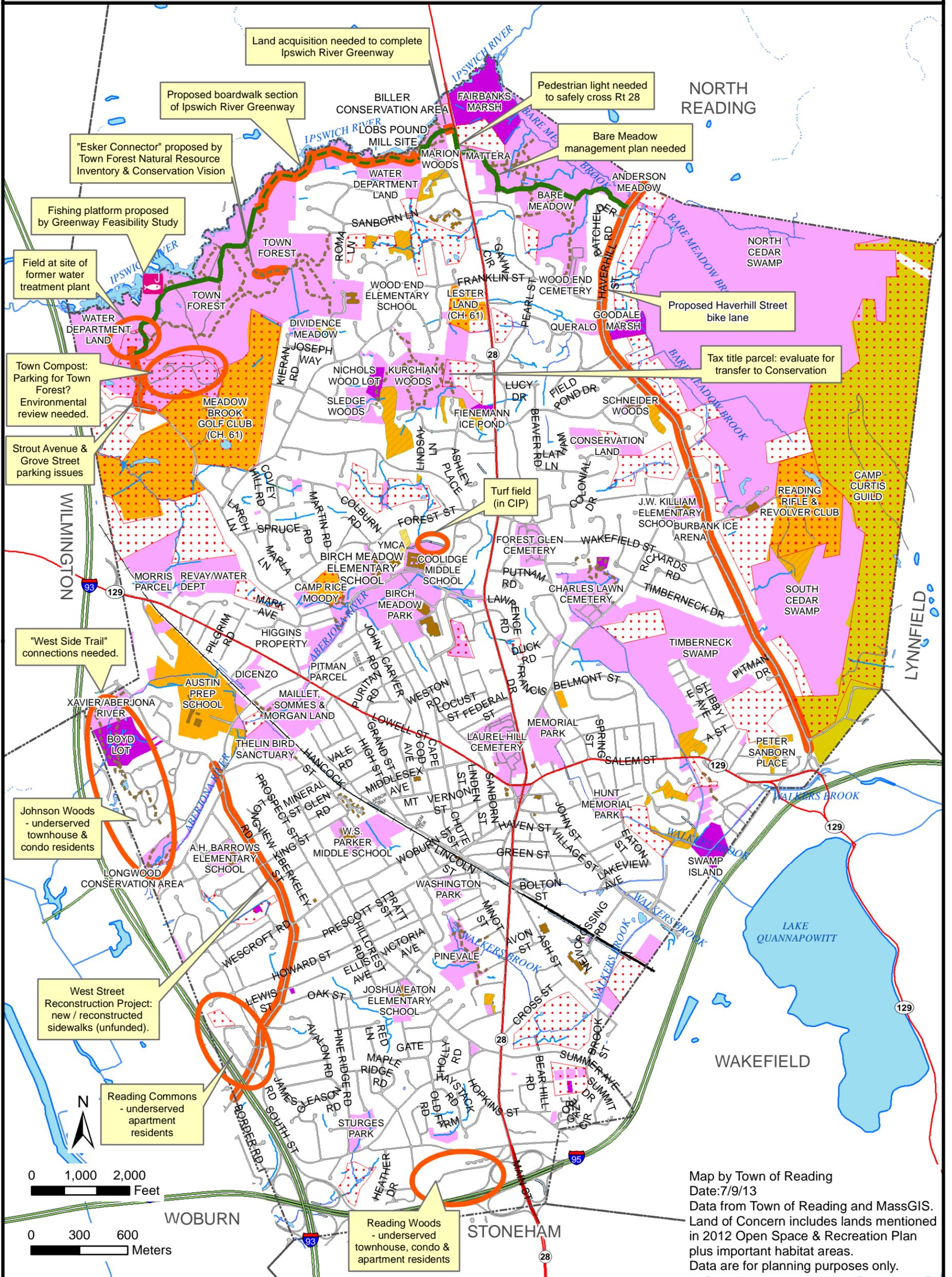
- A. Search and apply for self-help grants.
- B. Develop priorities for items in the plan and place them on the capital improvements budget and review annually.
- C. Seek funding for projects through private benefactors, interest groups and fund raising.
- D. Continue to look at models such as the Community Preservation Act to provide a regular funding source for open space and recreation development.

Open Space

- Commonwealth of Mass.
- Municipal
- Land Trust
- Non-Profit
- Private
- Conservation Restriction
- Land of Concern

OPEN SPACE & RECREATION ACTION PLAN READING, MA 2013

- Action Plan Areas
- Action Plan Items
- Ipswich River Greenway
- Trail
- Streams
- Ditch
- Culvert
- Lakes, ponds & rivers



Map by Town of Reading
Date: 7/9/13
Data from Town of Reading and MassGIS.
Land of Concern includes lands mentioned
in 2012 Open Space & Recreation Plan
plus important habitat areas.
Data are for planning purposes only.

Section 9 Seven-Year Action Plan – 2013-2019

The Seven-Year Action Plan detailed below lists the goals, objectives, and actions proposed by the Town of Reading. The Open Space & Recreation Action Plan map shows current protected and unprotected open space as well as “Land of Concern”. Land of concern includes Town-owned lands proposed for sale or redevelopment, and Chapter 61 or other state and private properties mentioned in this report that the Town might be interested in acquiring. It also includes privately owned areas shown in Map 8: Habitat & Watersheds as important habitat.³² Several areas are also included that include habitat, wildlife, or potential trail corridors contiguous to Town-owned land. Most of the lands of concern are *not* specifically mentioned in this plan, nor are they on any list of desired acquisitions. Rather they are areas that the Town should be vigilant in watching should they come up for sale, development, or redevelopment.

Abbreviations for Boards, Committees and Commissions:

BOS = Board of Selectmen and its staff/liaison
 CC = Conservation Commission and its staff/liaison
 CPDC = Community Planning & Development Commission and its staff/liaison
 DPW = Department of Public Works
 FC = Finance Committee
 RC = Recreation Committee and its staff/liaison
 HC = Historical Commission and its staff/liaison
 DPW = Department of Public Works and its staff/liaison
 HA = Housing Authority and its staff/liaison
 TC = Trails Committee and its staff/liaison
 TF = Town Forest Committee and its staff/liaison
 TM = Town Meeting
 SD = School Department
 SC = School Committee

Goal 1: Maintain and enhance existing open space for passive recreation

| Objectives | Actions | When | Who | Funding |
|-----------------------------------|--|---------------------|---------------|---------|
| Publicize existing trail systems. | Update Town website. | Year 1 Quarterly | TC, CC, TF | TOWN |
| | Write articles for town newsletters & local papers | Quarterly | TC, CC, TF | N/A |
| Maintain and improve | Conduct regular trail | Quarterly | TC, TF, | TOWN |

³² These areas include NHESP certified vernal pools, Priority and Estimated Habitat, BioMap Core Habitat, and BioMap Supporting Natural Landscapes.

| | | | | |
|---|--|-----------|-------------------------------------|---|
| trails, trail structures, signage, and parking at conservation areas. | maintenance | | trail adopters | |
| | Seek individuals or groups to do one-time projects. | Ongoing | TC, CC, TF, trail adopters, Scouts. | Scouts raise own funds; local businesses. |
| Create new trails. | Seek individuals or groups to do one-time projects | Ongoing | TC, CC, TF, trail adopters, Scouts | Scouts raise own funds; local businesses. |
| Continue development of Ipswich River Greenway. | Seek grants to build boardwalk | Ongoing | TC, CC. | state and private grants. |
| | Acquire private parcel between Marion Woods and Rt 28. | Ongoing | CC | LAND grant or private grant. |
| | Explore ways to cross Route 28 safely. | Ongoing / | DPW Discuss with Mass Highway. | N/A |
| Address use conflicts in Town Forest | Meet with user groups, formulate & post rules | Ongoing | TF | N/A |
| Improve Town Forest parking | Explore alternatives, improve roads and/or parking areas | Year 2 . | BOS, DPW, TF | Town funds |
| Seek funding for maintenance and improvement. | Budget for trail creation & maintenance. | Annually | FC, BOS, TM | Town budget |
| | Apply for grants. | Annually | CC, TC, TF | Source: various |
| Equitably distribute open space opportunities in all | Prioritize new trails in lesser-served parts of town | Ongoing | TC, CC | N/A |

| | | | | |
|--|--|-----------|----------------|-------|
| parts of Town and provide access to people of all abilities. | and near apartment complexes | | | |
| | Develop "West Side Trail" linking Longwood Cons. Area, Johnson Woods, Boyd Lot, & Xavier Cons Area | Year 5 | TC, CC. | ROLT, |
| | Ensure that trail structures meet ADA standards | As needed | TC, TF, Scouts | |

2. Maintain and enhance existing recreation facilities and programs.

| Objectives | Actions | When | Who | Funding |
|---|---|--------------|---------------------|----------------|
| Focus on development of holistic master plans for each park. | Develop committees for each park, advertise | Annually | BOS, RC, CPDC | TOWN CIP |
| Prioritize items on the master plans to reflect the town's needs during the capital planning process. | Assign costs to components of the plan, meet with finance committee to discuss needs of open space plan | Annually | CC, FC, TC | N/A |
| Watch trends in the recreation industry for new innovative ways to enhance our facilities. | Read industry periodicals, attend conferences | As available | RC, DPW, TC, TF, CC | N/A |
| Equitably distribute recreation opportunities in all parts of Town and provide access to people of all abilities. | Develop needs assessment for active and non-active groups. | As needed | RC, CC | N/A |

3. Make Reading pedestrian and bicycle friendly, improve connections, encourage climate protection and personal health

| Objectives | Actions | When | Who | Funding |
|---|--|-------------|------------|----------------|
| Develop walking and biking trails between open space and recreation areas. | Review filings, solicit public input, submit for grants, contact property owners. | Annually | CC, BOS | TOWN |
| Build more sidewalks | Continue sidewalk building efforts especially as roads are rebuilt, e.g. West Street Reconstruction Project. | Ongoing | BOS, DPW | TOWN |
| Improve and encourage walking and biking to school. | Solicit public input; publish walking/biking routes to schools; public outreach. | Annually | RC, BOS | N/A |
| Delineate bike lanes on roadways through the use of lane painting or implementing “sharrows” | Work with DPW and BOS during roadway planning. Investigate opportunities during roadway resurfacing / reconstruction projects. | Annually, | DPW, BOS | TOWN |
| | Add bike lane to Haverhill Street repaving. | | BOS, DPW | |
| Work with adjacent communities to improve pedestrian and bicycle connections to public spaces and to commuter rail. | Develop liaisons and collaborate; work with regional planning organization | Annually | CC, BOS | N/A |
| Encourage use of open space resources for healthy living. | Work with Health Department and school department on outreach. | Annually | RC, HD, SD | N/A |

4. Protect open space for wildlife habitat and watershed protection

| Objectives | Actions | When | Who | Funding |
|---|--|-----------|--------------------|-----------------------------|
| Actively manage conservation areas. | Prepare management plans | Ongoing | CC | TOWN |
| Educate the public on habitat and watershed issues. | Write articles for local papers | Quarterly | CC | TOWN/ Cons Commission |
| Monitor environmental threats imposed by development within and outside of Reading. | Attend Development Review Team meetings | As needed | Conservation Agent | N/A |
| Protect habitat surrounding Town Compost and "tree nursery" | Establish & permanently mark boundary of use areas | Year 2 | DPW, CC, BOS | N/A |
| | Clarify allowed uses of, e.g. asphalt dumping? | Year 2 | DPW, BOS | N/A |
| | Establish run-off controls | Year 2 | CC | N/A |
| Conserve water and manage stormwater. | Continue the town's water conservation and stormwater management programs. | Ongoing | DPW | TOWN |
| Permanently protect tax title parcels with habitat or open space value | Evaluate tax title parcels, transfer to Conservation where appropriate | Year 3 | CC, BOS | N/A |

| | | | | |
|--|---|---------|--------------------------|---|
| Confirm control of town-owned lands | Research deeds of Town Forest and Conservation lands. See that land transfers, conservation restrictions, and trail easements are complete. | Ongoing | Town Clerk, Town Counsel | N/A |
| Acquire additional open space for wildlife habitat, wetlands protection, and aquifer protection. | Seek grants and gifts of land | Ongoing | BOS, CC | state & private grants, Town funds?, CPA? |

5. Preserve the Character of the Town

| Objectives | Actions | When | Who | Funding |
|--|---|-------------|-------------------------|-------------------------------|
| Designate more scenic roads. | Work with town citizens and the CPDC. | Annually | CPDC | N/A |
| Use Smart Growth Tools to shape new development. | Encourage development within existing smart growth districts. Support amendments/expansion of smart growth districts in the future. | Ongoing | CPDC, Planning Division | TOWN |
| Use subdivision control ordinances to retain landscape features such as stone walls. | Review plans; comment at public hearings. | As filed | CPDC | N/A |
| Develop Pocket Parks | Appoint study group; identify locations, evaluate funding. | Year 4 | BOS, DPW, CC, RC | TOWN CAPITAL IMPROVEMENT PLAN |

| | | | | |
|---|---|---------|---------|------|
| Build community connectedness into new and existing facilities. | Ensure facilities are safe and welcoming for all users. Provide benches, water fountains, and shade trees to encourage use. | Ongoing | RC, DPW | TOWN |
|---|---|---------|---------|------|

6. Develop a strong financial plan and seek new sources for funding

| Objectives | Actions | When/Who/Funding | | |
|--|---|-------------------------|-------------------|-------------------------------|
| Search and apply for self-help grants. | Search internet and Mass.gov site for grant info; submit grants | Annually | RC, CC, BOS | N/A |
| Develop priorities for items in the plan and place them on the capital improvements budget and review annually. | List items in plan on spreadsheet; Rec Committee and Cons Com review; Request time on Fin Com. agenda | Annually | RC, CC, FC | TOWN CAPITAL IMPROVEMENT PLAN |
| Seek funding for projects through private benefactors, interest groups and fund raising. | Publicly acknowledge the needs of the plan; identify key players and garner support; solicitation letters | Ongoing | RC, CC | N/A |
| Continue to look at models such as the Community Preservation Act to provide a regular funding source for open space and recreation development. | Educate the citizens Town Meeting and referendum | As available | RC, CC, CPDC, BOS | N/A |

Section 10 Comments

Distribution List:

Board of Selectmen
Community Planning and Development Commission
Conservation Commission
Recreation Committee
Metropolitan Area Planning Council



**Town of Reading
16 Lowell Street
Reading, MA 01867**

Stephen Goldy, Chairman
Ben Tafoya, Vice Chairman
Richard W. Schubert, Secretary
John Arena
James E. Bonazoli

BOARD OF SELECTMEN
(781) 942-9043
FAX: (781) 942-9071
Website: www.ci.reading.ma.us

December 18, 2012

Melissa Cryan, Grants Manager
Dept. of Conservation and Recreation
251 Causeway Street
Boston, MA 02114

Re: Draft Open Space and Recreation Plan, 2012 Update

To Whom It May Concern:

The Board of Selectmen has reviewed the 2012 Draft Open Space and Recreation Plan (OSRP) and hereby issues this letter of support for its final approval. The Board of Selectmen believes the draft plan has identified appropriate and realistic goals that will address the current and future needs for open space and recreation facilities in Reading. The OSRP will provide an excellent framework as the Town continues to prepare detailed Master Plans for the many park and recreation sites throughout the community.

The Board of Selectmen recognizes the importance of the OSRP as it will serve as a vital tool for thoughtful planning in the future. The Board of Selectmen voted unanimously in support of the plan on December 18, 2012.

Sincerely,

Stephen Goldy, Chairman
Board of Selectmen



Town of Reading
16 Lowell Street
Reading, MA 01867-268

**Community Planning and
Development Commission**
Phone: (781)942-9010
Fax: (781)942-9070
Website: www.ci.reading.ma.us

December 10, 2012

Re: Draft Open Space and Recreation Plan, 2012 Update

To Whom It May Concern:

The Community Planning and Development Commission (CPDC) has reviewed and provided input for the 2012 Draft Open Space and Recreation Plan (OSRP) and hereby issues this letter of support for its review and final approval. The CPDC believes the draft plan has identified appropriate and realistic goals that will address the current and future needs for open space and recreation facilities in Reading. Furthermore, the goals for the OSRP are in-line with the goals and objectives of Reading's 2005 Master Plan.

The CPDC recognizes the importance of the OSRP as it will serve as a vital tool for thoughtful planning in the future. The CPDC voted unanimously in support of the plan on December 10, 2012.

Sincerely,

Charles Adams
Chairman, CPDC



Town of Reading
16 Lowell Street
Reading, MA 01867-2683

CONSERVATION COMMISSION
Phone (781) 942-6616
Fax (781) 942-9071
ctirone@ci.reading.ma.us

October 16, 2013

Re: Draft Open Space and Recreation Plan, 2012 Update

Dear Ms. Honetschlager:

The Reading Conservation Commission has reviewed the draft plan and discussed it at its meeting of December 12, 2012 and provided input for the 2012 Draft Open Space and Recreation Plan (OSRP). We found it thorough and hereby issue this letter of support for its review and final approval. The Commission believes the draft plan has identified future needs and appropriate goals that will challenge our community over the next seven years.

In summary, on behalf of the Reading Conservation Commission, I would like to extend our sincere thanks for the time and effort that was expended by the OSRP staff working group in compiling the information and putting together a community road map that identifies our need and reflect the desires of the town's residents.

Sincerely,

Annika Scanlon
Chair, Reading Conservation Commission



Town of Reading
16 Lowell Street
Reading, MA 01867-2685

FAX: (781) 942-5441

RECREATION DIVISION: (781) 942-9075

December 11, 2012

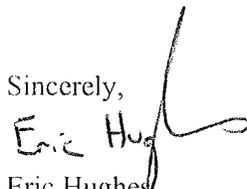
Re: Open Space and Recreation Master Plan

To Whom It May Concern:

The Recreation Committee supports the 2012 Reading Open Space and Recreation Master Plan as presented. We feel the plan adequately represents the Town's position on furthering recreational opportunities, whether active or passive. The plan includes detailed information and a comprehensive plan of where the community expects to be over the next five years.

The goals listed in the plan are broad enough to capture the wants and needs of the community, while specific enough to give clear direction for planning.

Sincerely,


Eric Hughes
Chairman
Recreation Committee
Town of Reading



January 29, 2012

Jessie Wilson
Staff Planner
Town of Reading
16 Lowell Street
Reading, MA 01867

Dear Ms. Wilson:

Thank you for submitting the "Town of Reading Open Space and Recreation Plan – 2012", to the Metropolitan Area Planning Council (MAPC) for review.

The Division of Conservation Services (DCS) requires that all open space plans must be submitted to the regional planning agency for review. This review is advisory and only DCS has the power to approve a municipal open space plan. While DCS reviews open space plans for compliance with their guidelines, MAPC reviews these plans for their attention to regional issues generally and more specifically for consistency with *MetroFuture*, the regional policy plan for the Boston metropolitan area.

The following are MAPC's recommendations for amendments to the Reading Open Space and Recreation Plan.

Surrounding Communities – In the section on regional context, there should be mention made of the open space planning activities and open space plans of surrounding communities. Connections between those communities and the open space needs and objectives of Reading should be explored. We encourage all communities to consult with their neighbors concerning their open space plans and initiatives especially since open space parcels and similar resources often occur near municipal boundaries and can be influenced by the actions of neighbors.

Environmental Justice - We note that the plan does not address the issue of Environmental Justice (EJ) as required by the 2008 guidelines for preparing an open space plan. The environmental justice guidelines are spelled out in more detail in the 2008 Open Space and Recreation Planners Workbook.

In brief, the guidelines indicate two levels of addressing EJ. If a municipality includes EJ populations as defined by the state you must include certain information. If a city or town does not have identified EJ populations you are still required in the inventory section to consider and describe park and recreation inequities within the community as well as strategies to address those inequities. Although Reading does not include any EJ populations as defined by the state, it does need to address park and recreation inequities.

You should consult the workbook for more details on these requirements and discuss these new requirements with the staff at the Division of Conservation Services. The workbook is on-line at <http://www.mass.gov/eea/docs/eea/dcs/osrp-workbook08.pdf>.

Consistency with MetroFuture - *MetroFuture* is the official regional plan for Greater Boston, adopted consistently with the requirements of Massachusetts General Law. The plan includes goals and objectives as well as 13 detailed implementation strategies for accomplishing these goals. We encourage all communities to become familiar with the plan by visiting the web site at <http://www.metrofuture.org/>.

The Reading Open Space and Recreation Plan only mentions *MetroFuture* in the context of population projections. While population projections are an important part of the regional plan we recommend that the Reading Open Space and Recreation Plan consider *MetroFuture* in a broader context. We encourage communities to include a brief paragraph about *MetroFuture* in Chapter III under Regional Context. Ideally this paragraph should explain ways in which Reading's Open Space and Recreation Plan will help to advance some of the goals and implementation strategies that relate specifically to open space, recreation, and the environment generally.

In the case of Reading's plan, this shouldn't be too hard to do since we see many positive connections between your plan and *MetroFuture* such as an awareness of the regional nature of open space resources and the adoption of Smart Growth zoning (40R). These activities are highly consistent with *MetroFuture*.

For further information on the implementation strategies related to environmental issues, please see <http://www.metrofuture.org/strategy/11>.

Community Preservation Act - Adoption of the Community Preservation Act (CPA) is a key strategy recommended by *MetroFuture*. We note that Reading has not adopted the CPA. We strongly urge the town to consider adoption of the CPA.

You are undoubtedly aware of the fact that state matching funds for CPA communities have declined precipitously in recent years. However, reforms to the program and potential additional funding were passed by the Legislature and signed by the Governor in July. Up to \$25 million in additional funding will be available to cities and towns in the fall of 2013, bringing the state match up to an estimated 48% from its current 23%. Reforms include broadened eligibility of recreational facilities, the option to exempt up to the first \$100,000 of commercial property value from the CPA surcharge, and the ability to use additional municipal revenue to qualify for state matching funds. More detailed information on all of these changes can be found at http://www.communitypreservation.org/2012_Section_by_Section.pdf, or by contacting MAPC's Government Affairs staff.

Duration of the Plan - The Division of Conservation Services now allows open space and recreation plans to be good for seven years if a seven year action plan is submitted. If you add two more years' worth of activities to your action plan it will extend the life of the plan.

Reading's Open Space and Recreation Plan is very thorough and it should serve the town well as it continues its efforts to preserve open space and provide for the recreational needs of its residents.

Thank you for the opportunity to review this plan.

Sincerely,

A handwritten signature in black ink, appearing to read "Marc D. Draisen". The signature is fluid and cursive, with a prominent initial "M" and a long, sweeping underline.

Marc D. Draisen
Executive Director

cc: Melissa Cryan, Division of Conservation Services
Steven Sadwick, MAPC Representatiave, Town of Reading

Section 11 References

Town of Reading Public Documents and Data

Assessor Records and Plans
At Wood End, Reading, Massachusetts, 1644-1994: A Pictorial History, 1994.
Conservation Division Records and Plans
Conservation Assessment of Conservation Lands
Engineering Division Records and Plans
Geographic Information System
Land Bank Committee Records and Plans
Master Plan, 2005
Open Space & Recreation Plan, 1995
Open Space & Recreation Plan, 2001
Open Space & Recreation Plan, 2007 (draft)
Planning Division Records and Plans
Recreation Division Records and Plans
Killam Field Master Plan
Washington Park Master Plan
Joshua Eaton School Master Plan
Barrows Elementary School Master Plan
Memorial Park Master Plan
Birch Meadow Complex Master Plan
Water Division Records
Zoning Bylaws
Reading Subdivision Regulations
MassGIS data layers and metadata
Open Space and Recreation Plan Survey 2012

Publications

Chapter 61B Open Space and Recreational Land: Current Use Tax Program, Paul Catanzaro, et al., The Trustees of Reservations, no date,
http://www.thetrustees.org/hci/library/CH61B_final_1.pdf

Commonwealth Connections: A greenway vision for Massachusetts, Commonwealth of Massachusetts, Department of Environmental Management, no date.
<http://www.mass.gov/dcr/stewardship/greenway/pdfs/connections.pdf>

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The Conservation Finance Handbook, Trust for Public Land, June 2004

Conservation and Land Use Planning Under Massachusetts' Chapter 61 Laws: A Primer for Cities, Towns, and Conservation Organizations, by Stacey Francese and Jay Rasku, Mount Grace Land Conservation Trust, Inc.; Second Revised Edition, November 2007. http://www.ashburnhamconservationtrust.org/pdf/Mount_Grace_Ch61_Info.pdf

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Land Conservation Options, A Guide for Massachusetts Landowners, Essex County Greenbelt Association and The Trustees of Reservations on behalf of the Massachusetts Land Trust Coalition, October 2001, 5th revised edition.

Losing Ground: Beyond the Footprint, Massachusetts Audubon Society, 2009, 4th edition. <http://www.massaudubon.org/losingground/download.php>

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Wikipedia, Reading, Massachusetts.
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Internet Sites of Interest

Private, Non-Profit

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| Mass. Association of Conservation Comm. | http://www.maccweb.org/ |
| The Trustees of Reservations | http://www.ttor.org/ |
| The Trust for Public Land | http://www.tpl.org/ |
| Massachusetts Land Trust Coalition | http://www.massland.org/ |
| The Nature Conservancy | http://www.nature.org/ |
| | |
| The Vernal Pool Association | http://www.vernalpool.org/ |
| Ipswich River Watershed Association | http://www.ipswichriver.org/ |
| Saugus River Watershed | http://www.saugusriver.org/ |
| Mystic River Watershed | www.mysticriver.org/ |
| Community Preservation Coalition | www.communitypreservation.org/ |
| New England Wild Flower Society | http://www.newfs.org/ |
| Public Open Space and Dog | www.petnet.com.au/openspace |
| National Trust for Historic Preservation | http://www.nationaltrust.org |
| Rails to Trails Conservancy | http://www.railtrails.org |
| Mass. Bicycle Coalition | http://www.massbike.org/ |
| Reading Open Land Trust | http://ROLT.org |

Government

Town website:

Reading Recreation Division

www.readingma.gov

Massachusetts Home Page

<http://www.readingrec.com>

Executive Office of Environmental Affairs

<http://www.mass.gov/>

Department of Conservation & Recreation

<http://www.mass.gov/envir/>

Mass. Historical Commission

www.mass.gov/dcr

Metropolitan Area Planning Council

www.sec.state.ma.us/mhc/

Massachusetts Watershed Coalition

<http://www.mapc.org/>

Mass Geographic Information Systems

<http://www.commonwaters.org/>

Natural Heritage & Endangered Species

<http://www.mass.gov/mgis/>

<http://www.mass.gov/dfwele/dfw/nhesp/nhesp.htm>

Mass. Fish & Wildlife

<http://www.mass.gov/dfwele/dfw/>

Public Access to Waters of Mass.

www.mass.gov/dfwele/pab/index.htm

Mass. Open Space, Recreation, & Conservation Resources

<http://www.mass.gov/eea/grants-and-tech-assistance/guidance-technical-assistance/open-space-resources>