Open Space & Recreation Plan – 2012

Town of Reading

16 Lowell Street
Reading, Massachusetts 01867

December, 2012

Table of Contents

Section 1 Plan Summary 4
Section 2 Introduction 5
A. Statement of Purpose 5
B. Planning Process and Public Participation 5
C. Accomplishments 6
D. Plan Authors 8
Section 3 Community Setting 9
A. Regional Context 9
B. History of the Community 9
C. Population Characteristics 10
D. Growth and Development Patterns 11
Section 4 Environmental Inventory and Analysis 17
A. Geology, Soils and Topography 17
B. Landscape Character 17
C. Water Resources 19
D. Vegetation 20
E. Fisheries and Wildlife 22
F. Scenic Resources and Unique Environments 22
G. Environmental Problems 23
Section 5 Inventory of Lands of Conservation and Recreation Interest 25
A. Description of Process 27
B. Statement of Open Space and Recreation Goals 28
C. Consistency with the 2005 Master Plan 29
Section 7 Analysis of Needs 30
A. Summary of Resource Protection Needs 30
B. Summary of Community's Needs 31
C. Management Needs, Potential Change of Use 38
Section 8 Goals and Objectives 41
Section 9 Five-Year Action Plan – 2013-2017 44
Section 10 Comments 50
Section 11 References 50

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

Appendix I – Public Meeting Presentation

Appendix J – Ipswich River Greenway Feasibility Study

Appendix K – Mattera Cabin Open House Flyer

Appendix L – Walkable Reading Surveys

Appendix M – Park Master Plans

OPEN SPACE AND RECREATION PLAN - 2012
TOWN OF READING

Section 1 Plan Summary

Reading's Open Space and Recreation Plan – 2012 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 2012 plan is an update of the Town's prior plans, the most recent written in 2007. 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.

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 of in order to maintain the quality of life in Reading.

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 1995[1]. 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 appendices H and I.

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 (Appendix J), funded by the Massachusetts Riverways Program, was completed in June 2008. Its focus was a proposed .87 mile boardwalk section of the greenway.

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:

- 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 is being replaced in Kurchian Woods Conservation Area funded by a second Recreation Trails Grant. Work began in 2011 and will be completed in fall 2012.

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.

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 is currently being conducted by the Massachusetts Audubon Ecological Extension Service.

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 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

John Feudo, Recreation Administrator
Kim Honetschlager, GIS Coordinator
Chuck Tirone, Conservation Administrator
Jessie Wilson, Staff Planner

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, one of eight subregions of the Metropolitan Area Planning Council (MAPC). The North Suburban Planning Council is a group of communities north of Boston that meet regularly to discuss issues of common interest.

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 currently working with MAPC on a subregional priority mapping project. The project is designed to increase coordination of open space planning and economic development.

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, and privately owned undeveloped land all but non-existent. Accessibility and high quality schools bring school-aged families to town, ensuring continued high demand for recreation space.

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.

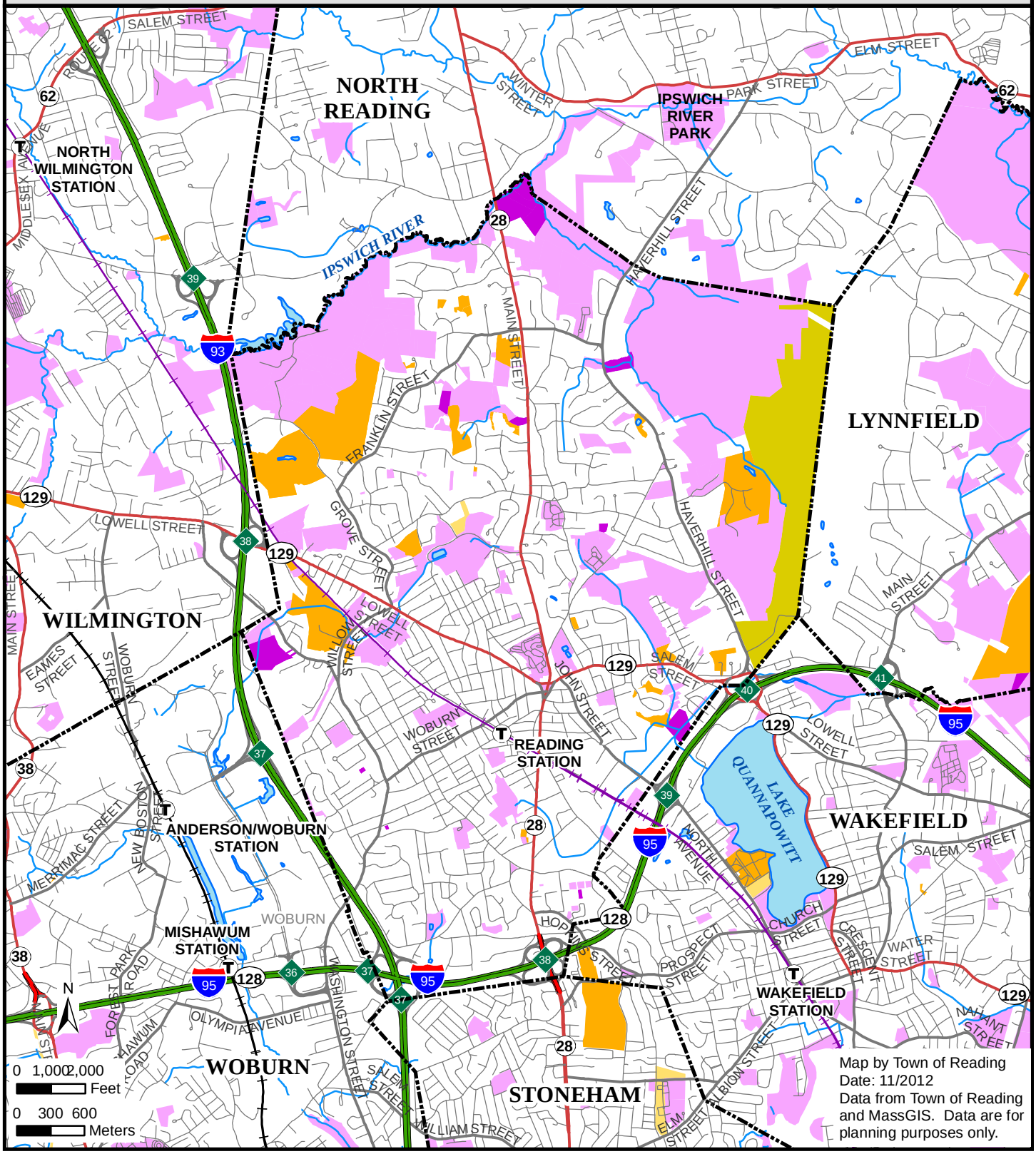
EOT Roads
- Limited Access Highway
- Multi-lane Hwy
- Other Numbered Hwy
- Major Road, Collector
- Minor Road, Ramp

Passenge Railroads
- Amtrak/MBTA
- MBTA

MAP 1
REGIONAL CONTEXT
READING, MA

- Com. Rail Stations

Open Space
- Comm. of MA
- Municipal
- Land Trust
- Non-Profit
- Private



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

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 site of the current Town Hall. A 1790 census identified 1802 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 18th and 19th centuries, Reading businesses included a pipe-organ factory and many greenhouses. The town's first straight thoroughfare – then called the Andover 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. [2]

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 MetroFuture[3] 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%.

[2] See *At Wood End: Reading Massachusetts 1644–1994 A Pictorial History*, by Reading 350th Anniversary Celebration Steering Committee, 1994 for a more detailed history.
[3] MetroFuture is a regional plan developed by the Metropolitan Planning Commission that addresses future growth in the Boston metropolitan region

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.

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)[4] of $91,800, Reading has approximately 22% of households below the low income limit (making less than) of $50,000 annually.

D. Growth and Development Patterns

1. <u>Patterns and Trends</u>

[4] 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 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.[5] 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 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

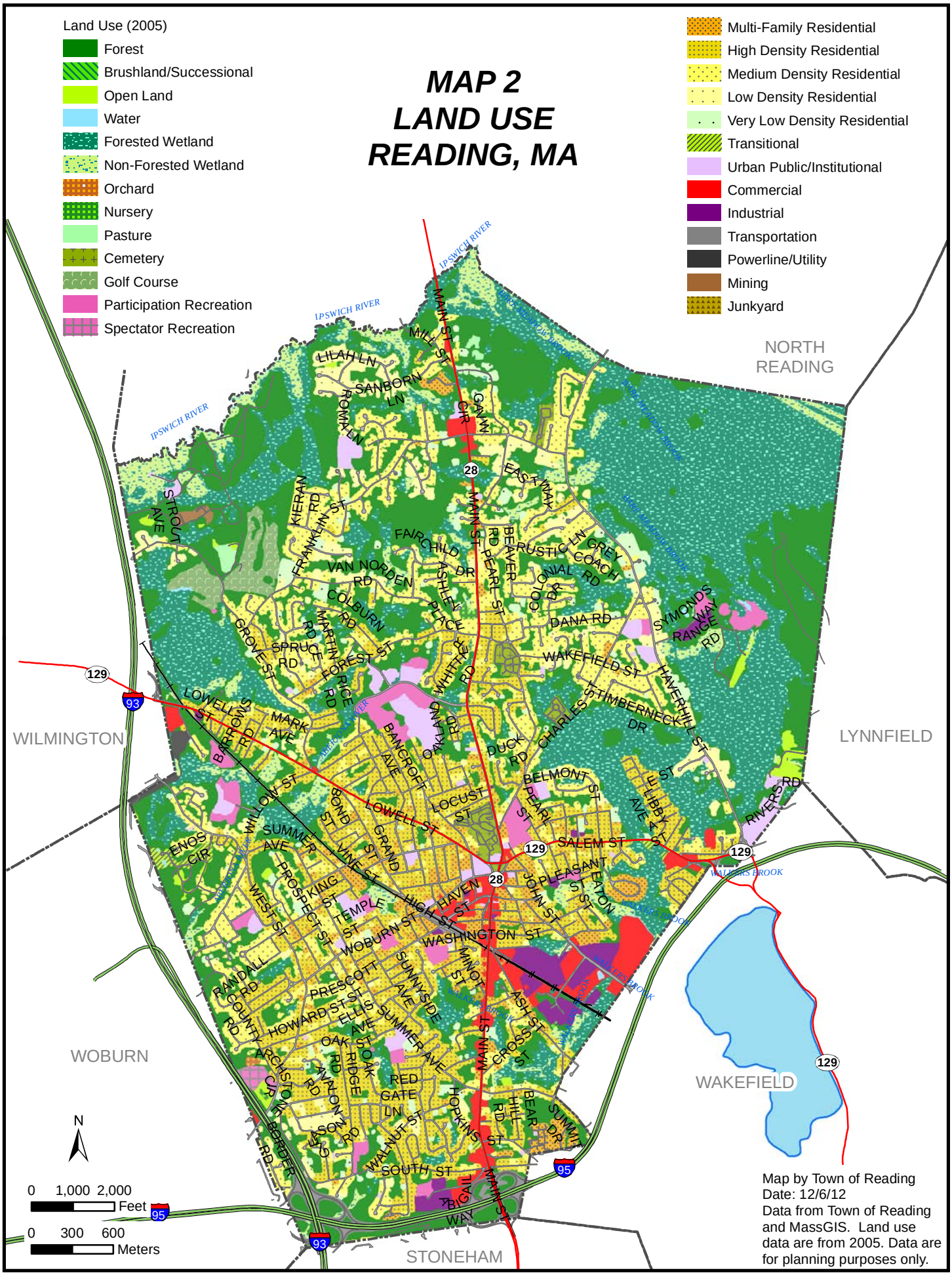
a.) Transportation

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.

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

MAP 2
LAND USE
READING, MA



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.

In May 2007, MA Highway 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, a high-density condo/retail, transit-oriented project near the depot is nearing completion. It is a Smart Growth success story.

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 PRD developments 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 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.

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

Town Boundary

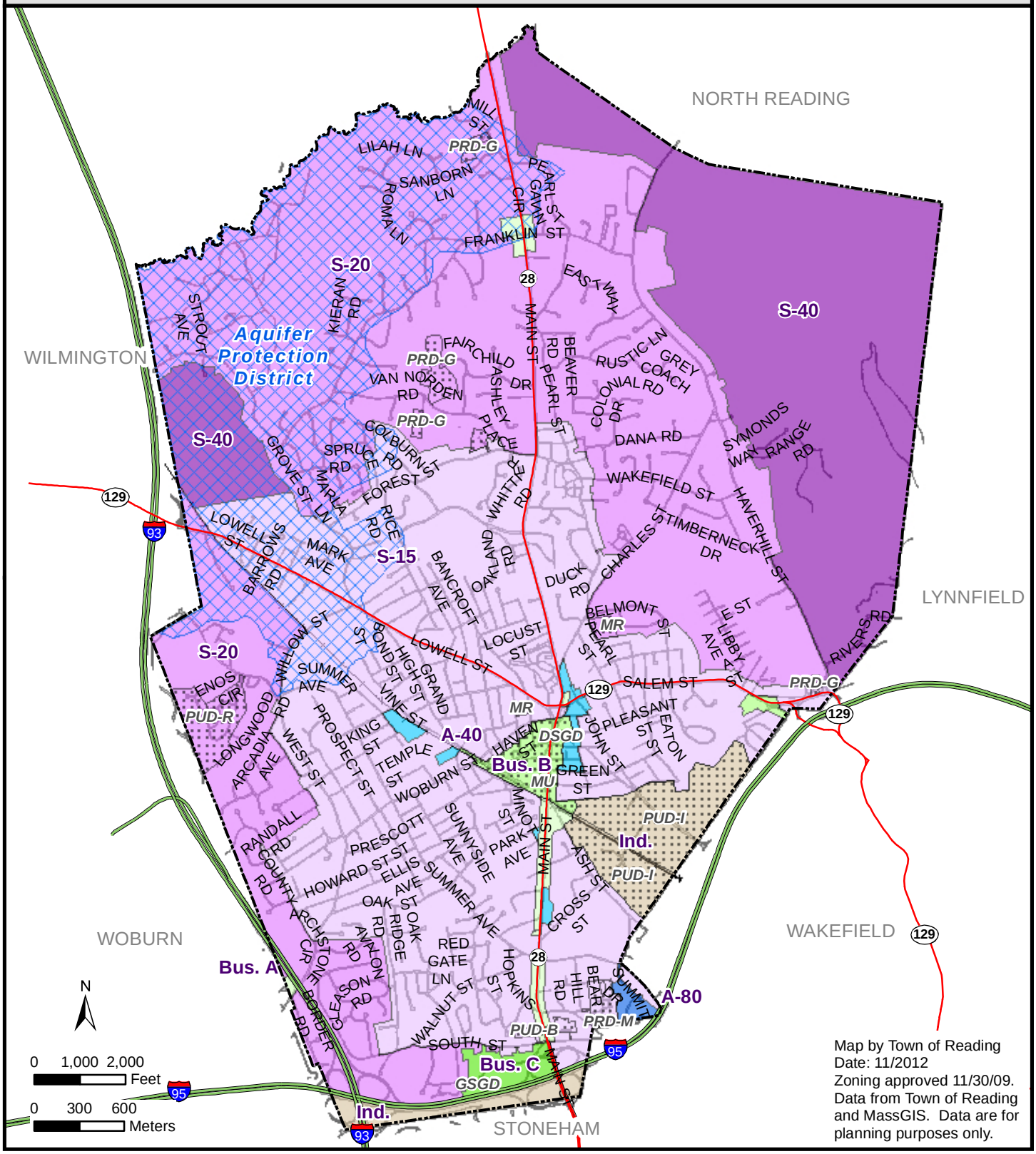
Roads

- Paved
- Unpaved
- Railroad
- Overlay District
- Aquifer Protection District

MAP 3
ZONING
READING, MA

Zoning

- A-40
- A-80
- Bus. A
- Bus. B
- Bus. C
- S-15
- S-20
- S-40
- Ind.



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.

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.

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). A 2012 Housing Plan[6] update will evaluate 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 constraints[7] are taken into account, 139 acres of developable land remain. That yields an estimated 262 buildable lots based on existing zoning.

[6] Town of Reading MA, Housing Plan, rev. 2012.

[7] 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.

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.

Section 4 Environmental Inventory and Analysis

A. Geology, Soils and Topography

The Town of Reading is composed primarily of igneous and metamorphic rock, with glacial deposits on that bedrock. 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.

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 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.

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.

Town Boundary

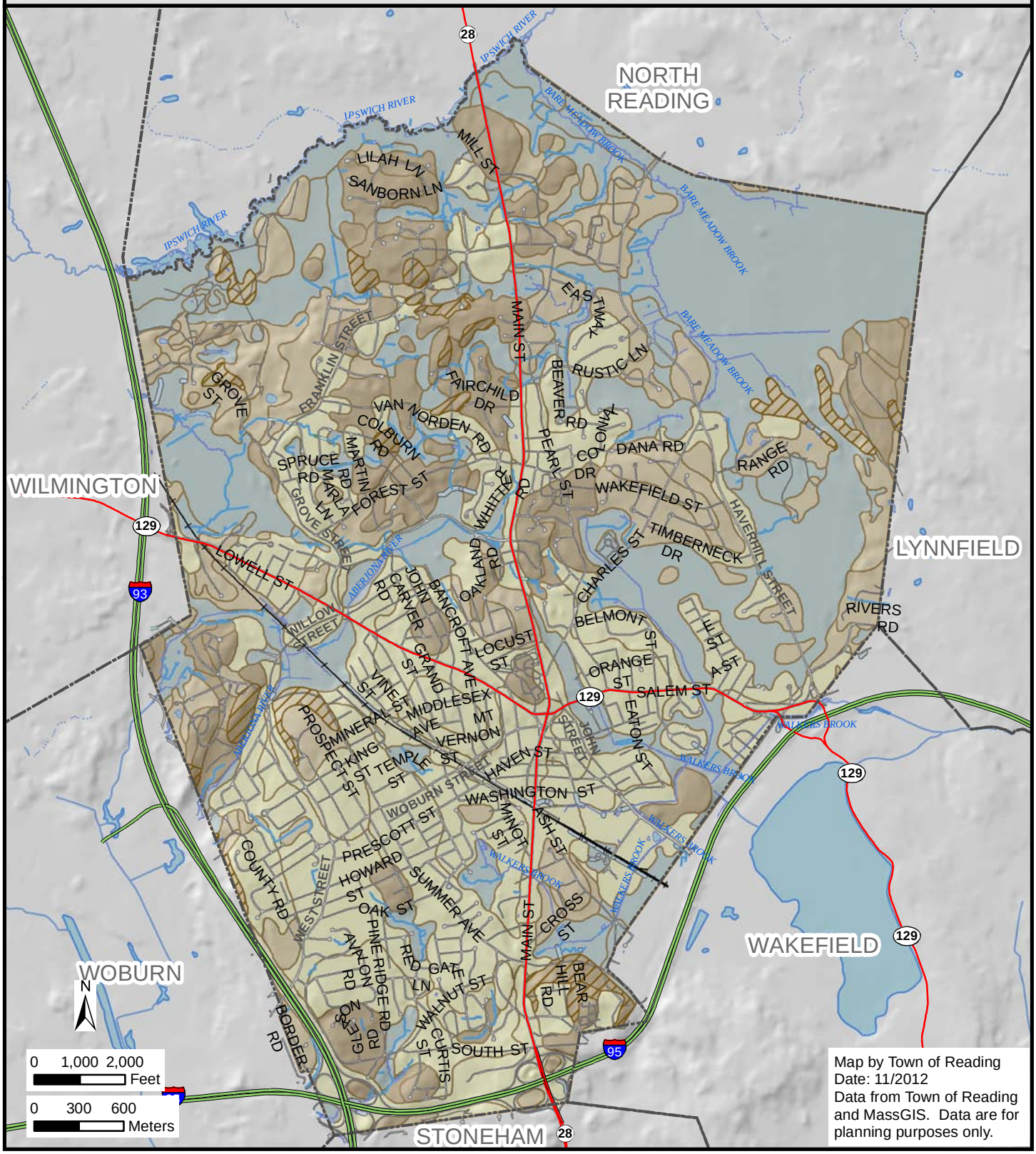
USGS Hydrography

- 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

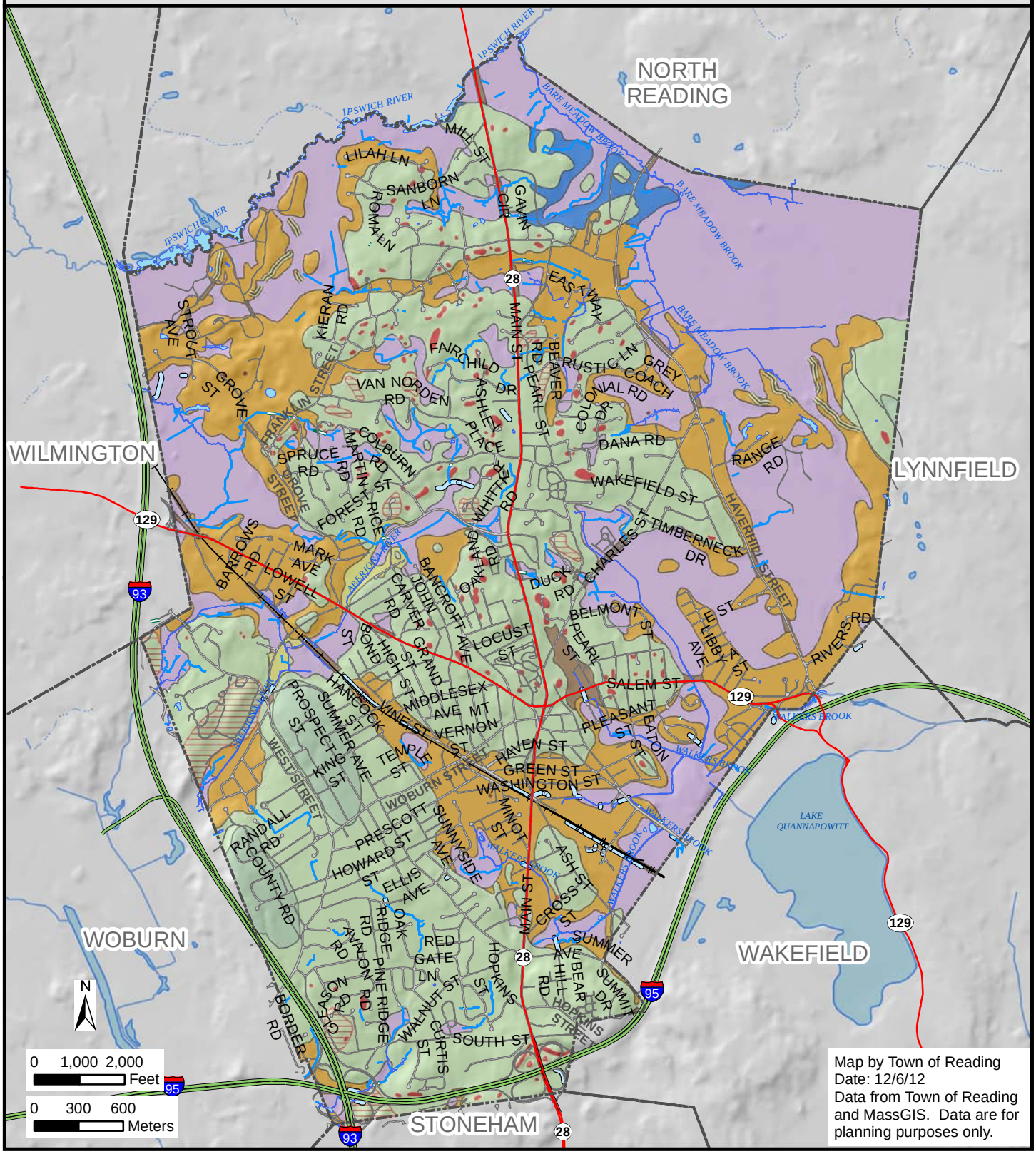
Glaciolacustrine Fine

Till Bedrock

Thick Till

Bedrock Outcrop

Thin Till



0 1,000 2,000 Feet

0 300 600 Meters

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

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 occurs. The Reading Rifle & Revolver Club owns 51.9 acres between these areas. 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). The Town is monitoring the state’s actions in its review of future uses for this area.

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.

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 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 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.

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 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,

Closed Water Supply Well

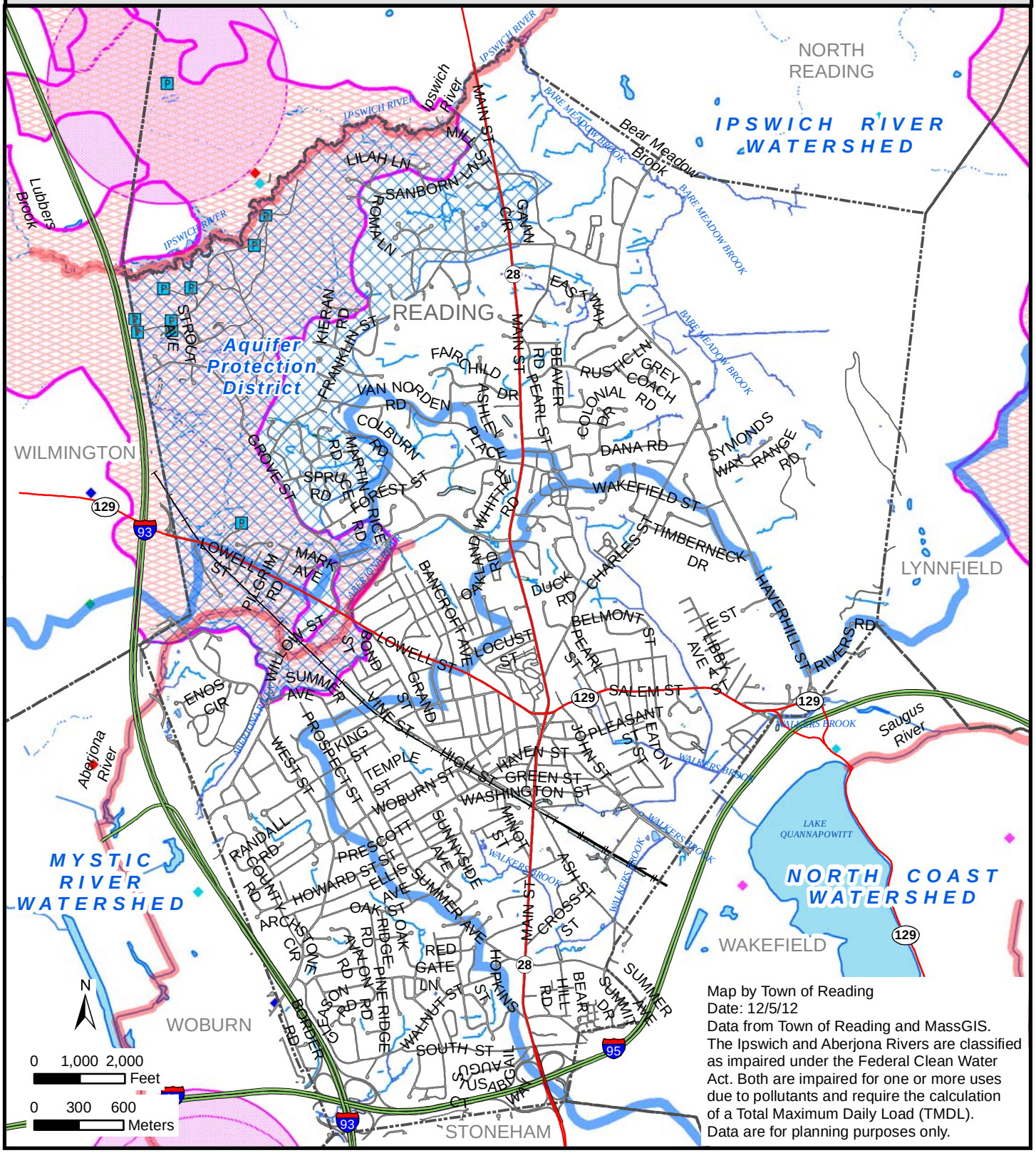
MADEP Haz. Material Site

- 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.

Town Boundary

FEMA Flood Zone

100 Year Flood Zone (A, AE)

Area not mapped on FIRMS (D)

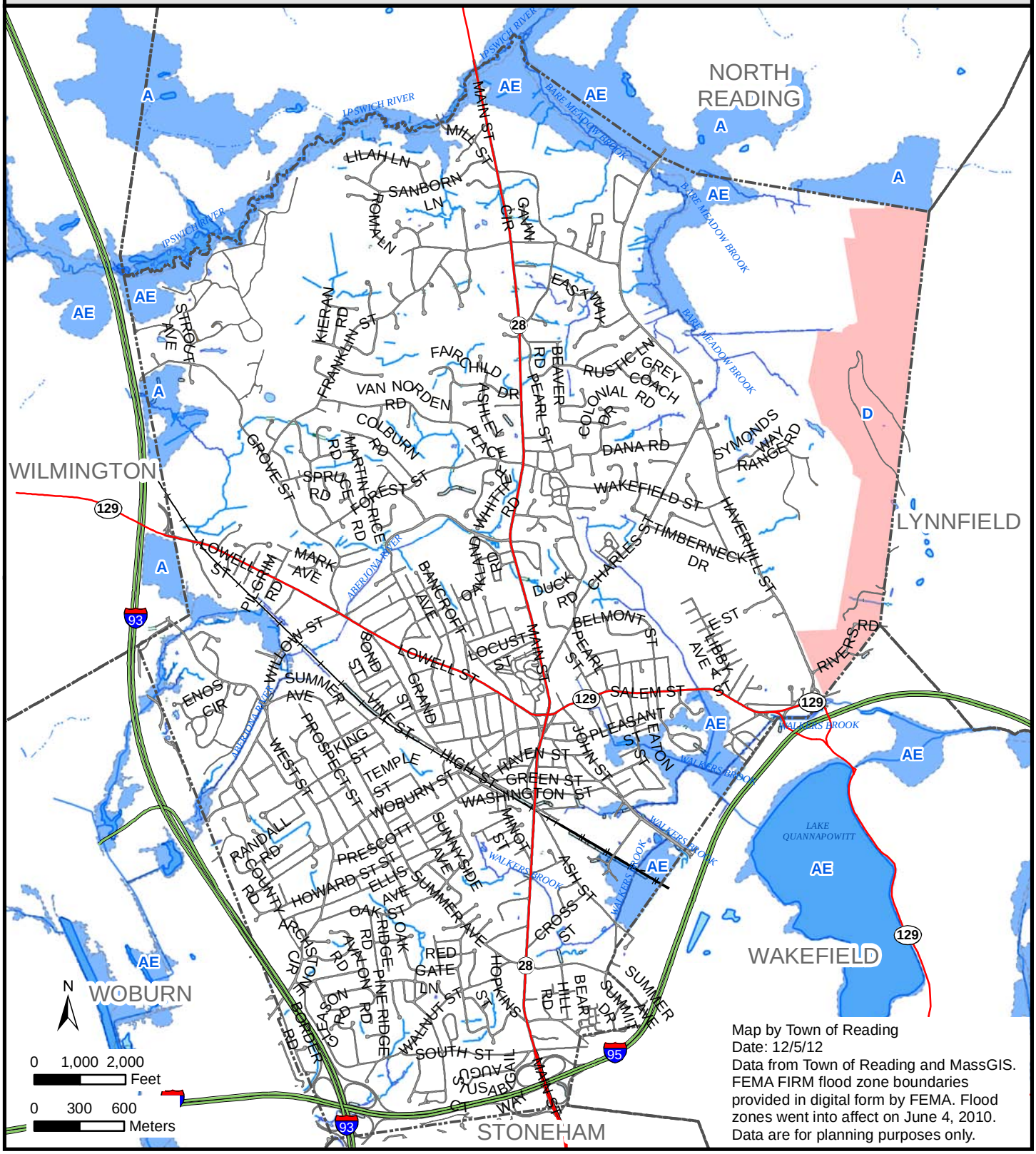
MAP 7
FLOOD HAZARD ZONES
READING, MA

Streams

Ditch

Culvert

Lakes, ponds & rivers



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.

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.

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). Ongoing efforts are continuing to add new species to its biodiversity lists.

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 2010[8] and a natural resources inventory and conservation vision will be finalized in late 2012.[9] 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.

A private 10-acre parcel of Chapter 61 forestry land abuts Kurchian Woods Conservation Area.

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 maintain public roadside.

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. Compost materials are windrowed and decomposed

[8] Forest Management Plan, completed by Philip B. Benjamin, CF, 2010
[9] Reading Town Forest Natural Resource Inventory & Conservation Vision, Liz Newlands, Mass Audubon Ecological Extension Service, 2012

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, 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).

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.

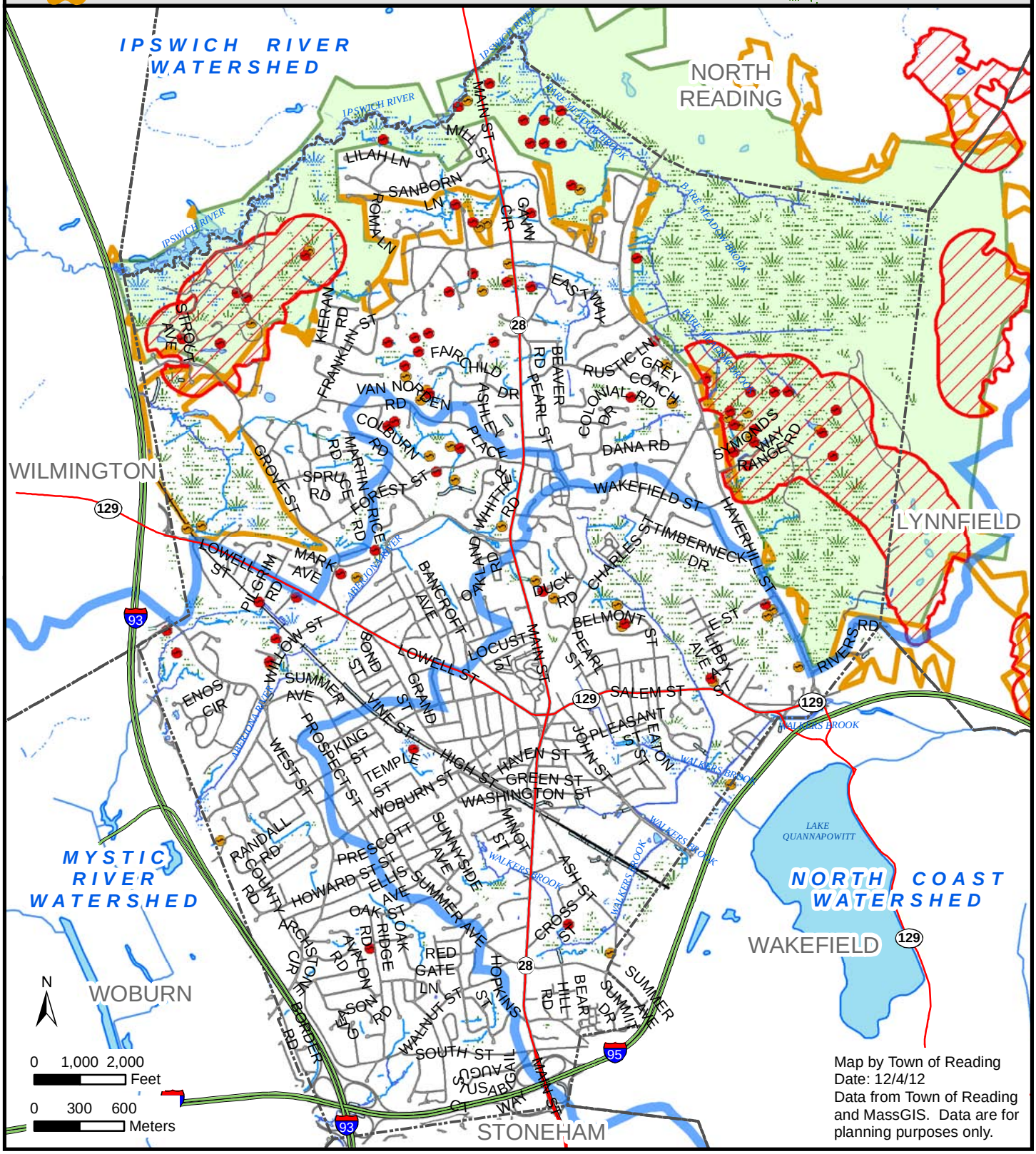
Three of the Town's more rural roads, Mill, Walnut and South Street, have been designated as scenic roadways. Several other roads in town also retain an earlier New England character.

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.

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.

The Town Forest is one of Reading's unique assets. *The Reading Town Forest Natural Resources Inventory & Conservation Vision*[10], prepared by the Mass Audubon Ecological Extension Service in 2012 documents this resource and makes recommendations for its continued use and health.

A viewing platform atop Bare Meadow allows visitors to enjoy the meadow. The town's several eskers and bedrock outcroppings (Map 5) are also scenic resources, as is Meadow Brook Golf Course.

G. Environmental Problems

Environmental problems that relate to open space and recreation include impacts of development pressures and traffic, wetland degradation, and water supply (quantity and quality).

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.

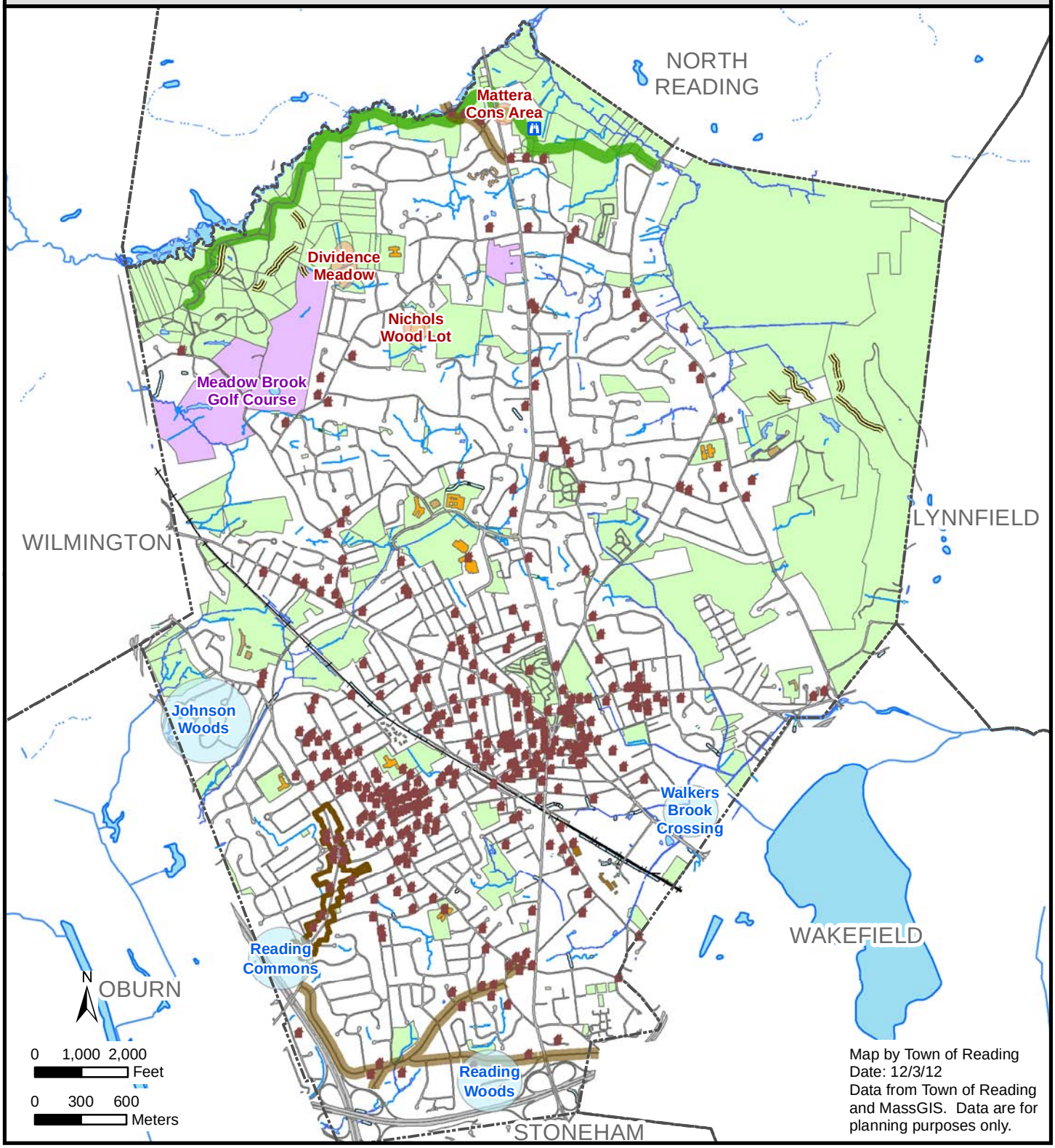
Reading's convenient location, its increasing population, its rail station, as well as cut-through traffic all result in high traffic volume on Reading's streets. Old roads that were not designed to carry a large volume of vehicles are under pressure to be widened, straightened and flattened, and denuded of 100-year old trees and stone walls. Fast-moving through-traffic makes these residential streets noisy, unpleasant, unsafe and unhealthy for walkers, joggers, and bicyclists. This, in turn, discourages environmentally friendly modes of exercise and travel such as biking and walking, and encourages even more vehicle use.

The shape of new developments, with wide streets, cul-de-sac off cul-de-sac, and few pedestrian rights of way encourages a car-dependent, environmentally unfriendly lifestyle. Planning bylaws adopted over the last fifteen years have restricted cul-de-sac length and made cluster development more attractive in an effort to lessen the environmental impact of new subdivisions.

[10] 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.

Wide roads and sidewalks in new subdivisions increase safety, but also increase impervious surface area preventing infiltration of rainwater and exacerbating runoff problems. Town-wide, the suburban love affair with green lawns increases water demand and causes pesticide pollution of wetlands and streams. Wetlands are threatened by new development as well as by additions to existing houses, by mansionization, and by commercial developments.

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.

The American Rivers Association listed the Ipswich River as one of the 20 most endangered rivers in 1997. 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.

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.

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 outside of the aquifer protection district.

Section 5 Inventory of Lands of Conservation and Recreation Interest

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.

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 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.

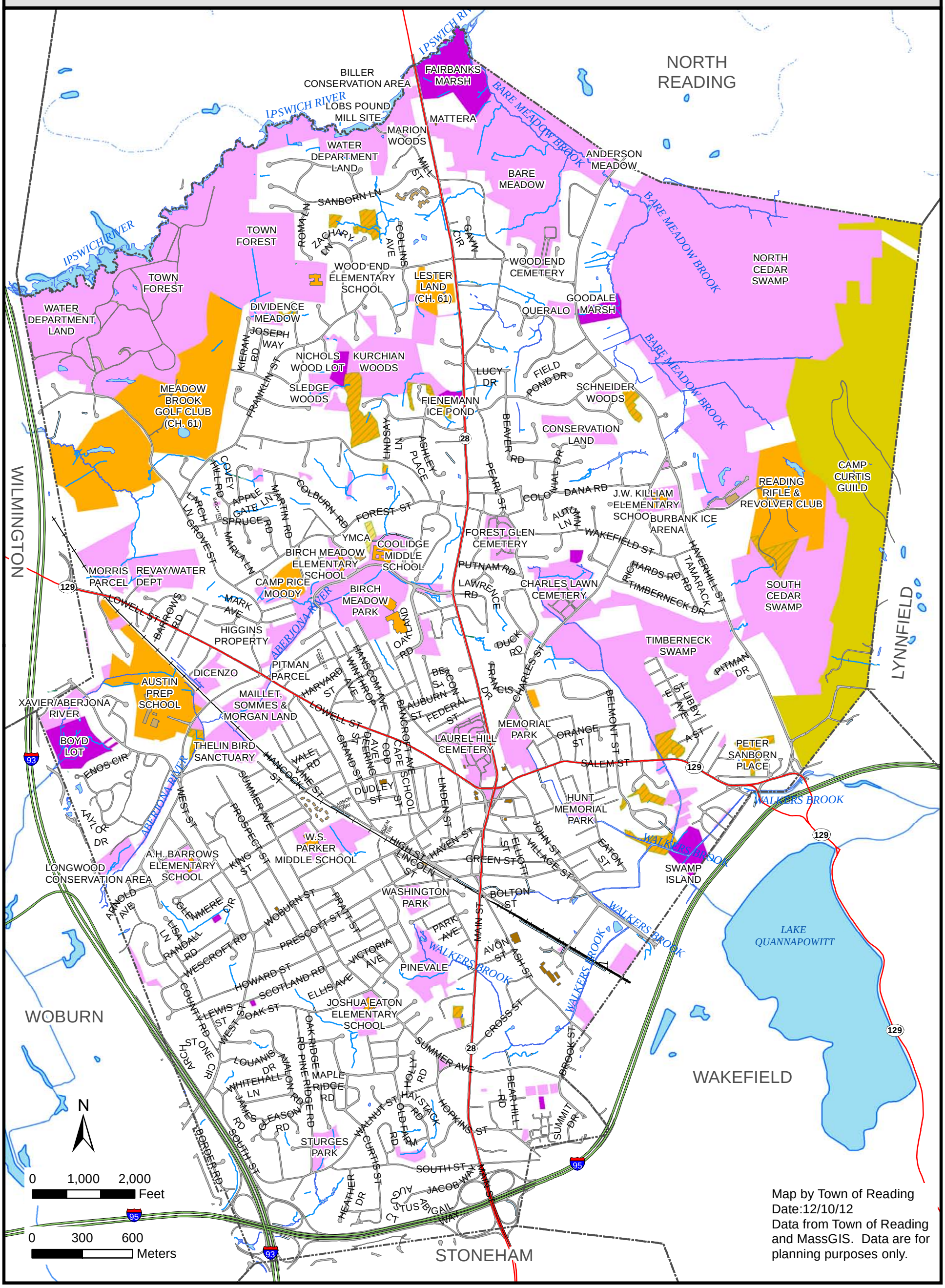
An Americans with Disabilities Act (ADA) Self-Evaluation of handicapped accessibility of all conservation and recreation sites is included as Appendix G. Also included is the Designation of an ADA Coordinator and the Board of Selectmen policies relative to the ADA in Appendix F.

PROTECTED & RECREATIONAL OPEN SPACE READING, MA 2012

Open Space

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

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



Map by Town of Reading
Date:12/10/12
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 (Attachment A-1) 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. 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 Appendices H – Public Meeting Minutes and I – Public Meeting Presentation). 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 on-going studies that have informed the community vision, include a *Town Forest Natural Resource Inventory & Conservation Vision* being finalized by the Town Forest Committee and the Mass Audubon Ecological Extension Services and the *Reading Housing Production Plan* being finalized 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.

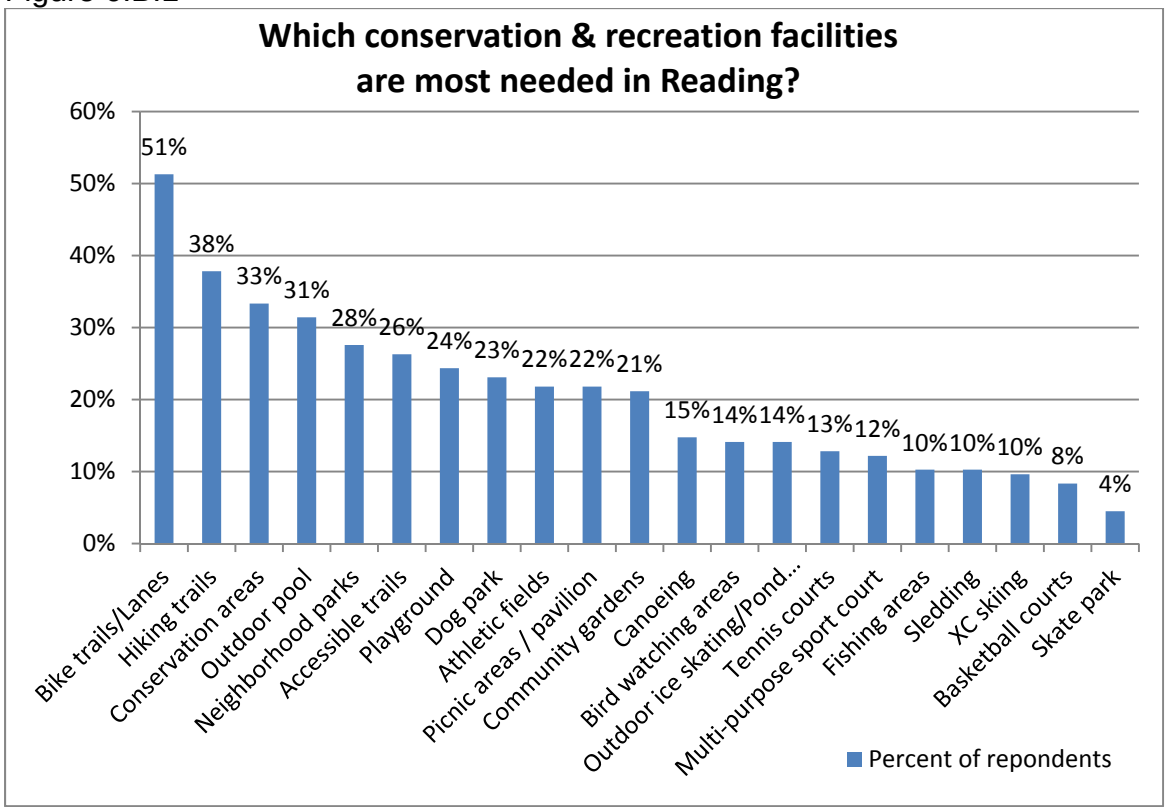
A draft of the *Open Space and Recreation Plan – 2012*, will be circulated to town boards and officials for comments. Comments will be incorporated into the final document and will help shape the community vision.

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.

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 don't have back yards, for those who don't 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 were:
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.

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.[11] 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.[12]

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

[11] Ibid, pp. 19-20
[12] 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 also programmed capital funding for FY16 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.[13] 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

[13] 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 disability[14]. 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.

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.

[14] 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.*[15]

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.

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:

Town Committees	**Private Groups**
Trails Committee	Reading Open Land Trust (www.rolt.org)
Town Forest Committee	Friends of Reading Recreation

[15] Ibid p. 55

	(www.forr1867.org)
Conservation Commission	Reading/North Reading Stream Team (readingnorthreadingstreamteam@hotmail.com)
Recreation Committee	Walkable Reading (www.walkablereading.org)
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/forrwashingtonpark/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

Twenty three percent of respondents would like to have a dog park in Reading – something that wasn't even asked about in the 2007 survey. Figure 7.B.1 shows a steady increase in the number of dogs in Reading; up 36% 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

Source: Town Clerk's Office

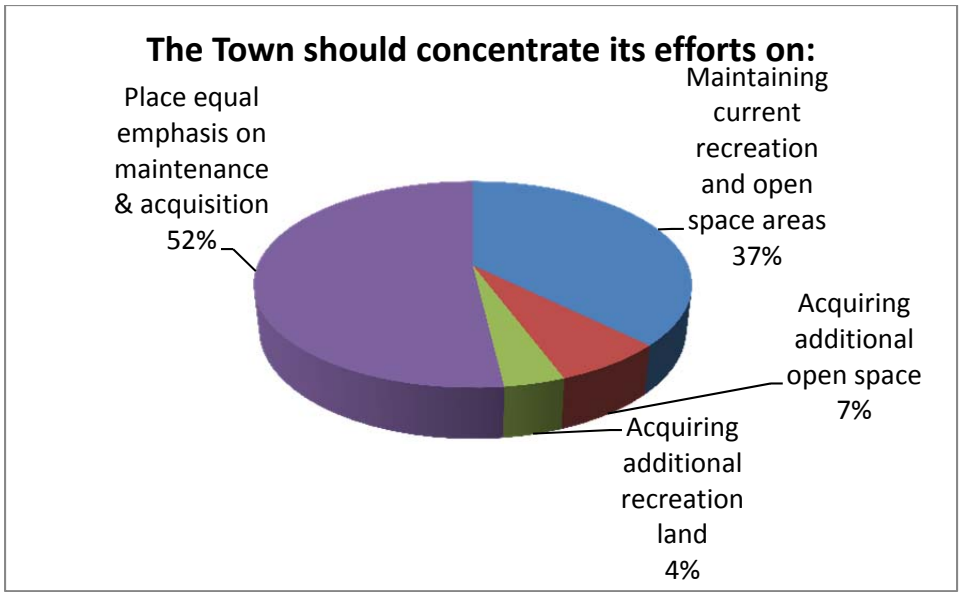
The Town Forest survey revealed both the enthusiasm of dog walkers for open space (the Town Forest in particular) and the concern of others over unruly dogs and over dog waste. Town parks are seriously polluted with dog feces. The Town will need to address dog management over the next five years. Appendix 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.[16] Annual dog licensing by the Town provides an opportunity to disseminate rules and information and, if necessary, fund a dog program.

Need for Land Acquisition and Funding

> *More open space should be preserved. Too much building and development and over crowding. 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.

[16] 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.

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 to fund open space acquisition, affordable housing, and historic preservation, 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.)

Grants are a valuable, but sporadic source of 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.[17] 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 Feasibility Study.

The Town allocates no annual funding to land acquisition, open space maintenance, or trail building. Regular funding is a community need.

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

[17] 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.

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 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 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 Department 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 public meeting planned for October 2012 will allow the public to weigh in on the use of this area.

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 is in the process of selling several open space parcels (e.g. parcels on Lothrop Road and on Audubon Road) that could have become neighborhood parks. 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 tails 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.

Section 9 Five-Year Action Plan – 2013-2017

The Five-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.[18] 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.	Quarterly/TC, CC, TF
	Write articles for town newsletters & local papers	Quarterly/TC, CC, TF
Maintain and improve trails, trail structures, signage,	Conduct regular trail	Quarterly / TC, TF, trail

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

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

abilities.

	Develop “West Side Trail” linking Longwood Cons. Area, Johnson Woods, Boyd Lot, & Xavier Cons Area	Year 2 / TC, CC. Funding: ROLT, Johnson Woods developer?
	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
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
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
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

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

Objectives	**Actions**	**When/Who/Funding**

Develop walking and biking tails between open space and recreation areas.	Review filings, solicit public input, submit for grants, contact property owners.	Annually, CC, BOS
Improve and encourage walking and biking to school.	Solicit public input; publish walking/biking routes to schools; public outreach.	Annually, RC, BOS
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
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
Encourage use of open space resources for healthy living.	Work with Health Department and school department on outreach.	Annually, RC, HD, SD

4. Protect open space for wildlife habitat and watershed protection

Objectives	**Actions**	**When/Who/Funding**
Actively manage conservation areas.	Prepare management plans	Ongoing / CC
Educate the public on habitat and watershed issues.	Write articles for local papers	Quarterly / CC
Monitor environmental threats imposed by development within and outside of Reading.	Attend Development Review Team meetings	As needed / Conservation Agent
Protect habitat surrounding Town Compost and “tree	Establish & permanently mark boundary of use	Year 1 / DPW, CC, BOS

nursery”	areas	
	Clarify allowed uses of, e.g. asphalt dumping?	Year 1 / DPW, BOS
	Establish run-off controls	Year 1 / CC
Conserve water and manage stormwater.	Continue the town’s water conservation and stormwater management programs.	Ongoing / DPW
Permanently protect tax title parcels with habitat or open space value	Evaluate tax title parcels, transfer Conservation	Year 1 / CC, BOS
Acquire additional open space for wildlife habitat, wetlands protection, and aquifer protection.	Seek grants and gifts of land	Ongoing / BOS, CC. Funding: 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
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.	On going, CPDC, Planning Division.
Use subdivision control ordinances to retain landscape features such as stone walls.	Review plans; comment at public hearings.	As filed, CPDC
Develop Pocket Parks	Appoint study group; identify locations, evaluate	Annually, BOS, DPW, CC, RC

	funding.	
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.	On going. RC, DPW

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
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 Comm review; Request time on Fin Com. agenda	Annually/RC, CC, FC
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	On going/RC, CC
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

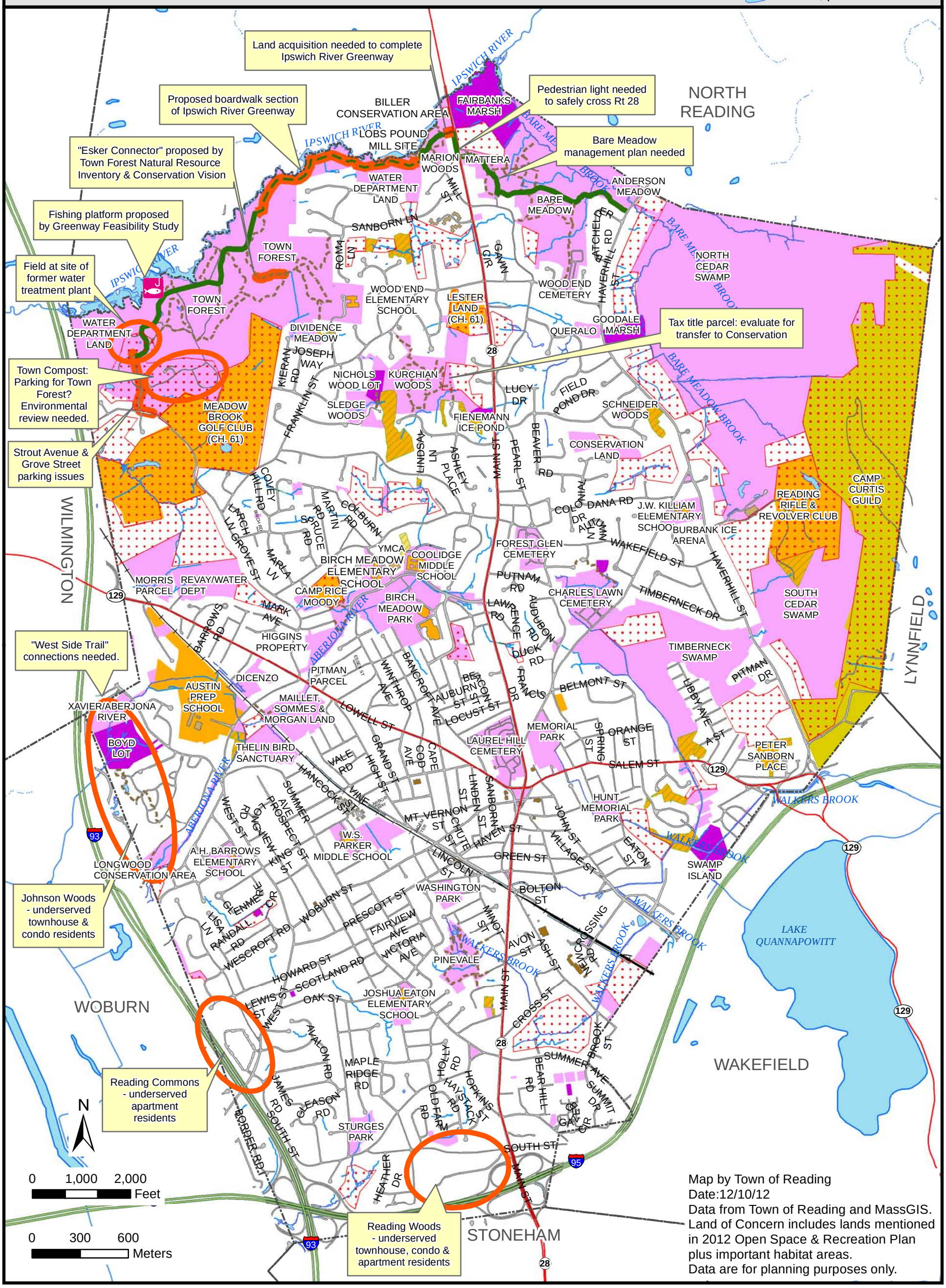
OPEN SPACE & RECREATION ACTION PLAN READING, MA 2012

Open Space

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

Ipswich River Greenway

- Existing
- Proposed
- Trail
- Streams
- Ditch
- Culvert
- Lakes, ponds & rivers



Map by Town of Reading
Date:12/10/12
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 10 Comments

Distribution List:

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

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

Community Forests: Needs & Resources for Creating & Managing Community Forests, Trust for Public Land, March 2011
Conservation: An Investment That Pays. The Economic Benefits of Parks and Open Space, Trust for Public Land, July 2010

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

Conserving our Common Wealth: A Vision for the Massachusetts Landscape, prepared by The Land Conservation Center of the Trustees of Reservations, 1999.

Creating Greenways: A Citizen's Guide, Commonwealth of Massachusetts, Department of Environmental Management, Greenways Program, (no date). http://www.mass.gov/dcr/stewardship/greenway/creatinggreenways.htm

Doing Deals: A Guide to Buying Land for Conservation, The Trust for Public Land, Land Trust Alliance and The Trust for Public Land, 1995.

The Economic Benefits of Land Conservation, Trust for Public Land, March 2007

Environmental Handbook for Massachusetts Conservation Commissioners, Nineth Edition, Massachusetts Association of Conservation Commissions, revised 2006.

The Forest Stewardship Source Book: Information and Services for Massachusetts Woodland Owners, Massachusetts Forestry Association and Massachusetts Forest Stewardship Program, 2012

The Health Benefits of Parks, Trust for Public Land, November 2006

Ipswich River Basin Water Conservation Report Card,, Ipswich River Watershed Association and Massachusetts Audubon Society, August 2002.

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

Massachusetts Conservation Restriction Stewardship Manual: A Handbook for Land Trusts and Conservation Commission, Massachusetts Audubon, March 2006, http://www.massaudubon.org/PDF/land/CRManualFinal.pdf

Massachusetts Outdoors 2006: Statewide Comprehensive Outdoor Recreation Plan, Commonwealth of Massachusetts, 2006. http://www.mass.gov/eea/docs/eea/dcs/massoutdoor2006.pdf

Our Irreplaceable Heritage; Protecting Biodiversity in Massachusetts, Henry Barbour, Tim Simmons, Patricia Swain and Henry Woolsey; Natural Heritage and Endangered Species Program, Mass. Division of Fisheries and Wildlife and the Massachusetts Chapter of the Nature Conservancy, 1998.

Reading the Land: Massachusetts Heritage Landscapes, A Guide to Identification and Protection, Massachusetts Department of Conservation and Recreation, no date, http://www.mass.gov/dcr/stewardship/histland/reading_the_land.pdf

Technical Guide to Forest Wildlife Habitat Management in New England. Richard DeGraaf, et al. University Press of New England, 2007

Trails Guidelines and Best Practices Manual, Department of Conservation and Recreation, State of Massachusetts, updated March 2012. http://www.mass.gov/dcr/stewardship/greenway/docs/DCR_guidelines.pdf

Internet Sites of Interest

Private, Non-Profit

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:	www.readingma.gov
Reading Recreation Division	http://www.readingrec.com
Massachusetts Home Page	http://www.mass.gov/
Executive Office of Environmental Affairs	http://www.mass.gov/envir/
Department of Conservation & Recreation	www.mass.gov/dcr
Mass. Historical Commission	www.sec.state.ma.us/mhc/
Metropolitan Area Planning Council	http://www.mapc.org/
Massachusetts Watershed Coalition	http://www.commonwaters.org/
Mass Geographic Information Systems	http://www.mass.gov/mgis/
Natural Heritage & Endangered Species	

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