

**A Recreation Master Plan  
for the  
Town of Upton, Massachusetts**

**Presented by Joseph B. Kacevich, Jr.  
Recreation Facilities Consulting, Inc.  
July 2006**

# Table of Contents

	<u>Page</u>
Acknowledgements	
Part 1: Assessment of Community Recreation Needs .....	1.1-5
Part 2: Developing a Recreation Facilities Master Plan .....	2.1-19
Part 3: Assessment of Existing Recreation Inventory .....	3.1-12
Part 4: Moving Towards a Recreation Master Plan.....	4.1-3
Part 5: Evaluation of Potential Sites for Recreation.....	5.1-6
Summary and Conclusions .....	6.1-4
Appendix 1	
Appendix 2	
Appendix 3	
Appendix 4	
Appendix 5	

## **ACKNOWLEDGEMENTS**

The author acknowledges the contributions of a number of people who made this study possible. Most notably, Recreation Commissioner Dave Adams moved the project along, arranged meetings with a number of different organizations, and introduced the author to numerous town officials and residents who added a unique perspective and valuable information to this endeavor. Tracey Tardy and Sue Bonina of the Assessor's Office, Diane Judd in the Code Enforcement Office, Denise Smith and Rufin Van Bossuyt of the Planning Board and Christine Scott, Chairperson of the Conservation Commission, were extremely helpful in providing information about various parcels of land in town. Town Clerk Kelly McElreath and Lauren Ferrucci of the School Department provided very valuable demographic data.

Bill Leaver, Director of Athletics at Nipmuc Regional High School and Dr. Michael F. Fitzpatrick, Superintendent Director of Blackstone Valley Regional Vocational Technical High School, Paul Daigle, Superintendent of Schools and Ruth Danforth, Principal of the Memorial School were extremely helpful in providing the author with information about the recreation facilities located on school properties.

The directors and coaches of the various youth sports organizations provided the author with enrollment data and insight into the facility needs of their respective programs. They include Rich Mayze, President of the Upton Youth Club and Softball Director; Rich Gazoorian, Baseball Director; Joe Stoopack, Basketball Director; Mike Brodeur, Registrar for the Mendon Upton Youth Soccer Association; Marilyn Alling, President of Upton Boys Lacrosse Association; CherylAnn Taylor of the Girls Lacrosse Program; Rich Rankins, Men's Softball Director; Shelia McCormick and Keri Brodeur, Women's Softball; and Rick Grant of Westboro Pop Warner Football Program.

Finally, Upton residents Chad Casamento, Bob Henderson, and Mark Fitzgerald are also acknowledged for their input regarding various parcels of land in Upton and for their knowledge of youth sports programs. Bruce Ey of Scofield Engineering provided the author with timely information about the Glen Echo project.

## PART 1 - ASSESSMENT OF COMMUNITY RECREATION NEEDS

The Upton Recreation Commissions “New Fields sub-Committee” and other volunteers initiated a community recreation survey over the weekend of April 24, 2005, during the Town’s Loyalty Day Parade. The survey was available in electronic form via the Town’s website and hard copies were made available at the Town Clerk’s Office, the Public Library and a few local businesses. The purpose of the survey was to allow Upton residents to express their views in regards to the type of recreation facilities and programs desired; to assist the town in building a blueprint for the type of programs and facilities desired; to identify any gaps between the existing programs and facilities and those desired; and to help the town develop an action plan in achieving the programs and facilities desired.

The total number of respondents was 171; 54 were handwritten responses and 117 were answered online. The number of respondents represents 6% of the 2723 households in the Town of Upton. Respondents were not asked their age. Rather, they were asked to describe the makeup of their households, i.e., the number of adults and children. Only one response per household was allowed. This information is summarized in Question 12. The results for each question in the survey are described below.

**Question 1:** On a scale of 1 to 5, how important to you and your family is the availability of local park and recreation opportunities in Upton (circle one number).

In answering Question 1, 113 responded with a 5 (extremely important), 41 with a 4, 9 with a 3, 5 with a 2 and 1 responded with a 1 (not at all important).

**Question 2:** Have you contacted the Upton Recreation Commission in the last 12 months (circle one answer)? 1 yes 2 no (if you answered “no”, SKIP TO QUESTION 3)

With Question #2, 136 reported that they had not contacted the Upton Recreation Department in the past year and 35 had contacted the Upton Recreation Department in the past year.

**Question 2a:** How good was the service you received? (circle one number).

Of those who had contacted the Department, 16 a **very good** experience (4), 8 reported having an **excellent** experience (5), 5 had a **fair** experience (2), 2 reported an **average** experience (3), and 1 reported having a **poor** experience (1). Three (3) respondents declined to answer the question.

**Question 3:** Which of the following age groups need more recreation programs? Respondents could choose as many age groups as desired. The responses were as follows:

- |                    |                    |                         |
|--------------------|--------------------|-------------------------|
| 1. 11-14 years: 85 | 5. 31-50 years: 45 | 9. 66 years & older: 28 |
| 2. 15-19 years: 73 | 6. 51-65 years: 39 | 10. Other (specify): 9  |
| 3. 7-10 years: 70  | 7. 20-30 years: 34 | 11. None of these: 4    |
| 4. 4-6 years: 61   | 8. 0-3 years: 30   |                         |

**Question 4:** Which of the following programs would you like to see added?

Respondents could choose as many programs as desired. The responses are found below:

- |                                      |  |
|--------------------------------------|--|
| 1. Nature & Outdoor Programs: 64     | 7. After-School Programs: 37             |
| 2. Summer Programs: 59               | 8. Computers and Technology Programs: 35 |
| 3. Adventure Programs: 47            | 9. Arts and Crafts Programs: 32          |
| 4. Fitness and Wellness Programs: 41 | 10. Cultural Programs: 22                |
| 5. Individual & Team Sports: 41      | 11. Other (specify): 5                   |
| 6. Family Programs: 40               | 12. None of These: 5                     |

Nature and Outdoor Programs led the way with 64 votes; Summer Programs were next with 59 votes; followed by Adventure Programs with 47 votes; Individual and Team Sports and Fitness and Wellness Programs tied with 41 tallies, followed closely by Family Programs with 40 votes.

**Question 5:** For Programs selected in Question #4, can you be any more specific with types of programs desired? The responses were very diverse:

- |  |   |
|--|---|
| 1. Summer Camp/Lessons: 25                                     | 28. Outdoor Cultural Events: 2          |
| 2. Tennis Lessons: 8   | 29. Pickup Softball: 2                  |
| 3. Birding: 5  | 30. Playground Programs: 2              |
| 4. Golf Lessons: 5   | 31. Programs to Promote Upton Spirit: 2 |
| 5. Nature Walks: 5   | 32. Sailing Lessons: 3                  |
| 6. Swimming Lessons: 5   | 33. Skateboarding: 2                    |
| 7. Arts and Crafts: 4  | 34. Star Gazing: 2                      |
| 8. Ice Hockey Program: 4                                       | 35. Street Hockey: 2                    |
| 9. Open Gym: 4   | 36. Summer Basketball League: 2         |
| 10. Preschool Programs: 4                                      | 37. Teen fun: 2                         |
| 11. After School Activities: 3                                 | 38. Track and Field Program: 2          |
| 12. Archery: 3   | 39. Ultimate Frisbee: 2                 |
| 13. Environmental/Wildlife Programs: 3                         | 40. Boating and Sailing: 1              |
| 14. Family Activities: 3                                       | 41. Cheerleading: 1                     |
| 15. Family Exercise Programs: 3                                | 42. Children's Exercise Programs: 1     |
| 16. Yoga Classes: 3  | 43. Drama and Singing: 1                |
| 17. Adult Group Activities: 2                                  | 44. Indoor Winter Activities: 1         |
| 18. Adult Volleyball: 2  | 45. Nutrition for Seniors: 1            |
| 19. Adult Basketball: 2  | 46. Palates: 1                          |
| 20. Biking: 2  | 47. Robotics: 1                         |
| 21. Canoeing and Kayaking: 2                                   | 48. Ropes Course: 1                     |
| 22. Computer Classes, Word and Internet: 2                     | 49. Animal Tracking: 1                  |
| 23. Flag Football: 2   | 50. Baseball Skills: 1                  |
| 24. Ice Skating Lessons: 2                                     | 51. Team Sports: 1                      |
| 25. Lacrosse: 2  | 52. Theatrical Productions: 1           |
| 26. Middle School Basketball, Softball,<br>Soccer, Baseball: 2 | 53. Tai Chi: 1                          |
| 27. Mountain Biking: 2   | 54. Team Sports: 1                      |

The need for a Summer Camp Program gained 25 votes, followed by a desire for tennis lessons (8). Birding, golf lessons, nature walks, and swimming lessons, each garnered 5 votes.

**Question 6:** How many times did you or a member of your household use the following facilities in the last 12 months?

Facility	None	1 Time	2-10 Times	11+ Times	Don't Know Facility
VFW Playground	23	8	78	56	1
Kiwanis Beach	27	10	75	49	5
Kiwanis Soccer Field	87	9	31	16	8
Kiwanis Tennis	112	10	23	5	12
Kiwanis Volleyball	130	2	9	5	13
Kiwanis Softball Field	78	10	42	22	4
Kiwanis Basketball	121	0	18	11	15
Lake Wildwood Access Area	95	2	15	4	32
Pratt Pond Boat Launch	100	12	28	2	11

By tallying the total number of visits for each of the facilities listed above, the most oft-visited facilities are: VFW Playground (142 visits); Kiwanis Beach Area (134 visits); Kiwanis Softball Field (74 visits); Kiwanis Soccer Field (56 visits); and Pratt Pond Boat Launch (42 visits).

**Question 7:** How would you rate the maintenance of the facilities owned and managed by the Town of Upton?

4 residents responded with a 1 rating (**very poor**), 6 answered with a 2; 65 gave a 3 rating (**average**); 77 with a 4; and 9 residents responded with a 5 (**very good**) rating. 9 persons chose not to answer the question.

**Question 7a:** Please provide any specific maintenance problems:

Given the level of activity at the Kiwanis Beach property, it was not surprising that many of the comments were related to this facility. Sixteen (16) respondents would like to see the Town improve the quality of the beachfront area, specifically, the unsanitary condition caused by goose droppings. Three (3) respondents expressed concern for the quality of the water, specifically the bacteria caused by geese fouling the water. Four (4) residents cited the need to improve the trash problem at Kiwanis; three persons cited the deterioration of the tennis courts, and 2 residents would like to see the basketball courts repaired. Ten (10) residents expressed concern over the condition of the VFW playground, citing equipment that was both outdated and poorly maintained. Three (3) residents expressed concern about the unsanitary condition of portable toilet facility at the VFW site.

Other responders cited a trash problem at the Lake Woodward access area (2); trash at sports fields (2); access to Pratt Pond by out of town residents (2); Pratt Pond water quality (1); Pratt Pond sand quality (1); and the height of the grass at various baseball diamonds (1).

**Question 8:** What new recreation facilities in Upton would you consider supporting with CPA funds and/or new tax dollars? (circle all that apply). The responder was able to choose as many of the items listed below as desired.

- |  |  |
|--|--|
| 1. bicycle/pedestrian paths: 127           | 12. more picnic areas: 46              |
| 2. indoor swimming pool: 88                | 13. golf driving range: 37             |
| 3. multi-generational community center: 81 | 14. more outdoor basketball courts: 31 |
| 4. more baseball/softball fields: 75       | 15. more tennis courts: 30             |
| 5. walking/hiking/X-C ski trails: 71       | 16. dog park: 30                       |
| 6. indoor ice skating arena: 63            | 17. more football fields: 25           |
| 7. more indoor gym space: 58               | 18. skateboard park: 24                |
| 8. more soccer/lacrosse fields: 53         | 19. more access to Lake Wildwood: 19   |
| 9. more open space/conservation land: 51   | 20. more sand volleyball courts: 10    |
| 10. mountain biking trails: 48             | 21. more access to Pratt Pond: 10      |
| 11. outdoor swimming pool: 49              | 22. no new facilities: 3               |

The need for additional Bicycle/Pedestrian Paths elicited the most support, with 127 tallies; an Indoor Swimming Pool was next with 88 votes; 81 voters chose a Multi-Generational Community Center; the need for more Baseball/Softball Fields was cited by 75 residents and additional Walking/Hiking/X-Country Ski Trails was chosen by 71 residents.

**Question 9:** Of the facilities selected in #9, which three are your top choices? (Write # of facility next to the priority). The responses were weighted as follows: a first priority response was awarded three points; a second priority response was awarded two points; a third priority response was awarded one point. The points accrued for each facility were then totaled.

- |  |  |
|--|--|
| 1. bicycle/pedestrian paths: 202           | 13. more football fields: 18           |
| 2. indoor swimming pool: 100               | 14. more picnic areas: 17              |
| 3. more baseball/softball fields: 98       | 15. more outdoor basketball courts: 16 |
| 4. multi-generational community center: 85 | 16. more tennis courts: 15             |
| 5. more soccer/lacrosse fields: 72         | 17. skateboard park: 14                |
| 6. indoor skating arena: 59                | 18. more access to Lake Wildwood: 12   |
| 7. more open space/conservation land: 52   | 19. dog park: 10                       |
| 8. outdoor swimming pool: 43               | 20. other: 10                          |
| 9. more indoor gym space: 42               | 21. more sand volleyball courts: 5     |
| 10. walking/hiking/X-C ski trails: 42      | 22. more access to Pratt Pond: 2       |
| 11. mountain biking trails: 21             | 23. no new facilities: 2               |
| 12. golf driving range: 21                 |  |

The top 5 vote getters were more bicycle/pedestrian paths (202 votes); an indoor swimming pool (100 votes); more baseball/softball fields (98 votes); a multi-generational community center (85); and more soccer/lacrosse fields (72 votes).

**Question 10:** Would you support a bicycle path being constructed within 200 feet of your residence? (circle one).

- |                        |                 |
|------------------------|-----------------|
| 1. yes, definitely: 65 | 3. not sure: 22 |
| 2. probably: 63        | 4. no: 12       |

**Question 11:** Quality recreation facilities and activities cost money to provide and maintain. How much additional property tax would you be willing to pay annually to increase recreation opportunities in Upton?

- |                        |                                |
|------------------------|--------------------------------|
| 1. \$76 to \$100: 43   | 5. None, CPA funds only: 17    |
| 2. more than \$100: 32 | 6. \$51 to \$75: 13            |
| 3. \$26 to \$50: 31    | 7. None, not even CPA funds: 3 |
| 4. \$1 to \$25: 30     |                                |

43 respondents (25%) would support an increase of \$76 to \$100 on their property tax bill to increase recreation opportunities in their town; 32 respondents (19%) would support an increase of more than \$100; 31 (18%) would support an increase of \$26 to \$50; 30 responded that they would support an increase of \$1 to \$25.

**Question 12:** How many children under the age of 18 live in your household? The respondents were asked to detail the number of children and adults that make up their household. With “A” meaning “Adult” and “C” meaning “Child,” the results are found below:

1A, 1C: 1	2A, 1C: 16	3A, 1C: 2	4A, 2C: 1	6A, 1C: 1	1A: 1
1A, 2C: 1	2A, 2C: 78	3A, 2C: 7			2A: 1
1A, 3C: 1	2A, 3C: 26	3A, 3C: 2			3A: 1
1A, 4C: 1	2A, 3C: 7				
	2A, 8C: 1				

## Conclusions

The survey revealed that Upton residents have expressed a desire for additional walking and bicycle trails; an indoor swimming pool, a Community Center and various types of athletic fields (baseball, soccer and lacrosse). Residents would also like Nature and Outdoor Programs, Summer Camp Programs and Adventure Programs added to the Recreation Programs currently offered. Additional recreation programs should be geared to children ages 7 to 19. The Conservation Commission has expressed a desire for a rail trail to be constructed along the Hopedale to Grafton Railroad line.

The VFW playground was the venue most often visited by Upton residents, followed by the Kiwanis Beach area and the Kiwanis Softball Field. Given the level of activity at the Kiwanis facility, it is not surprising that a number of residents expressed concern over the cleanliness of the Kiwanis Beach area and the quality of Kiwanis water.

## PART 2 - DEVELOPING A RECREATION FACILITIES MASTER PLAN

*Recreation, Park, and Open Space Standards* published by the National Recreation and Park Association in 1971 was the first-ever attempt to quantify the recreation inventory that might be necessary to meet the facility needs of a given community. However, it proved to be just that ... a guideline. What one town may desire and can afford may differ vastly from a town identical in size and economic means. One community may favor top-notch tennis courts; a neighboring community may place a high level of priority for an outdoor pool. Still another may favor walking trails and bicycle paths. A forty-member task force met in the late 1970's and *Recreation, Park, and Open Space Standards and Guidelines* was published in 1983. It was suggested that minimum, rather than maximum, standards be applied when determining a desired recreation inventory for each community.

In 1991, the National Recreation and Park Association held a meeting with members of the American Academy for Park and Recreation Administration to discuss the philosophy for "planning parks, recreation and open space." This team of experts concluded that "we should provide the best guidance possible for all communities regardless of size so that they may work within their own unique social, economic, and institutional structure to provide the park, recreation and open space system that is best for their community and is within their economic and financial capability."<sup>1</sup> As a result of that task force's work, *Parks, Recreation, Open Space and Greenway Guidelines* was published in 1995.

This publication favors a systems approach towards the planning of parks, recreation, open space and pathways. "This approach includes a level of service guideline that is needs based, facilities driven and land measured."<sup>2</sup> The components of such an approach include 1) Identifying Customers, 2) Obtaining Customer Involvement, 3) Assessing Need, 4) Developing a Strategic Plan, 5) Developing a System Planning Framework, 6) Developing a System Plan, 7) Developing a Recreation Services Delivery Plan, 8) Developing a Maintenance and Operations Plan, 9) Developing an Implementation Plan, and 10) Evaluating the Overall Effectiveness of Systems Plans and Service Delivery. While it is beyond the scope of this Study to incorporate all of the listed components, certainly any Master Plan would be remiss if it did not address the needs of the community. That is the focus of Part 2.

### 2.0 Developing An Athletic Field Master Plan

Projecting the Athletic Field Inventory that will meet the Program needs of a particular city or town is a rather involved process. The following factors are considered:

1. Enrollment figures for the various sports teams from the previous three to five years.
2. Demographic data for the K-8 school population and the adult population in a given Town.
3. A projection of the number of participants for each sports team for the outgoing five years.
4. A determination of the Program needs (practices and games) for the various sports teams.
5. A determination of the facility needs necessary to meet program needs and the projected growth in each sports program.
6. The "wear factor" for "high impact sports" such as soccer, lacrosse and football.
7. The physical condition of the existing athletic field inventory and the related infrastructure (parking, fencing, spectator seating, etc.).
8. A determination of any gaps between the existing inventory and the desired inventory.

### 2.1 Methodology

It is a complicated task to project the facility needs of a particular sport. First, the anticipated enrollment for each sports user group must be calculated. Since the Town of Upton employs a "no cut policy" in its youth and adult sports programs, enrollment data from previous years is an excellent predictor of future enrollment.

---

<sup>1</sup> *Parks, Recreation, Open Space and Greenway Guidelines*. National Recreation and Park Association, 1995, page 1.

<sup>2</sup> *Ibid*, page 7.

Enrollment data from the previous five years is used to calculate the percentage of persons in a particular age group who participated in each activity (example: the percentage of second graders who participated in Youth Soccer over the previous five years). Once the percentage of users is determined, the projected enrollment for each sport or activity can be calculated by multiplying the percentage of players who have historically participated in a given activity by the projected enrollment in the outgoing five years (example: second grade soccer players). The projected K-8 enrollment data for academic years 2006-2010, was provided by the School Department. The Town Clerk's Office provided the demographic data for the Adult (18+ years) population.

Once the total number of users is projected, the number of teams in that age group can also be projected, since the number of players on a typical team is known. Once the number of teams is determined, the Program needs (weekly practices and games) for each sports organization, as described by their respective Director, are also considered.

A more involved process is used to project the requisite athletic field inventory for "high impact sports" such as soccer, lacrosse and football than is necessary for "low impact sports" such as softball and baseball. The "wear factor" in "high impact sports" must be taken into account, whereas meeting the inventory needs of "low impact sports" is largely a function of meeting the Program needs (weekly practices and games) of that activity.

"Overusing" a field can destroy the structural integrity of an athletic field, especially the all-important thatch layer. "High impact" sports such as soccer, lacrosse and football require a lot of cutting and change of direction in relatively small spaces. Therefore, the "wear factor" must be taken into consideration when projecting the facility needs of these "high impact" sports. The number of annual "events" (practices and games) that an athletic field can "host" without undermining the structural integrity of each field, while maintaining a safe venue for the participants, is the most critical element in determining the inventory needs for "high impact sports."

For many years, this aspect of athletic field management was not adequately investigated, if at all. Dr. David Minner, Professor of Horticulture at Iowa State University, was the first person to apply field research to this question. He observed field wear patterns for Iowa State football, soccer and lacrosse players and concluded that 50 hours of annual use (a combination of games or practices) would result in no damage to the structural integrity of a properly-maintained athletic field; 100 hours of annual use would result in noticeable damage to the field's infrastructure; and, 120-130 of annual use would result in serious structural damage to the field, requiring that the field being taken offline and repaired.

While Dr. Minner's research was limited to Division 1 elite athletes, it served as a useful benchmark for projecting the field needs for youth sports. The Town of Southborough, Massachusetts utilized this research to project an athletic field inventory for that town, beginning in 1998. Adjusting Dr. Minner's research to the youth sports level, the Town of Southborough's Recreation Facilities Committee, used 155 hours of seasonal use that each youth soccer field could "host". Since the number of practices and games that a typical youth soccer team "hosts" each season is a known entity, it was relatively easy to determine the number of teams that could be assigned to a field, without surpassing the 155 hours of seasonal play. The ratio of teams assigned to each field became known as the "team/field ratio."

Beginning in spring, 1998, a 5:1 team/field ratio was implemented for the U-8, U-10, U-12 and U-14 age levels, i.e., five teams were assigned to each field, per season, to accommodate each team's practices and games. After carefully monitoring the field wear patterns for four seasons of play (2 fall seasons and 2 spring seasons), the ratios were adjusted as follows: the U-14 ratio was adjusted to 3:1; the U-12 ratio was adjusted to 4:1; and, the U-8 and U-10 ratio remained at 5:1. This amounted to approximately 140 hours of play for one field, for one season. Further, it was determined that a U-14 field could host 100-105 hours of play per season.

Since implementing the team/field ratios, the Town of Southborough has experienced superior results in maintaining its athletic fields. Not a single athletic field has been taken off line for repair. Other cities and towns throughout New England have implemented the same team: field ratios with similar results. The process described above, including the implementation of the team/field ratios, was utilized in projecting an athletic field inventory for the Town of Upton.

Since the focus of this Study is to determine a long-range Recreation Master Plan for the Town of Upton, enrollment data for Upton residents was used. Since many of the youth sports organizations are run in conjunction with the Town of Mendon, it was necessary to separate Upton participants from Mendon participants.

Demographic data for the adult population (18 years and older) of the Town of Upton was provided by the Town Clerk's Office. This data was used in projecting the number of participants in the Men's and Women's Softball Programs. The Office of the Superintendent of Schools provided the K-8 enrollment figures and projections. This information proved invaluable in projecting enrollment for the various youth sports programs.

## 2.2 Youth Soccer Program

The Mendon/Upton Youth Soccer program offers instruction and games for girls and boys in grades Kindergarten through 8<sup>th</sup> grade. The Program uses the facilities listed below.

West River Soccer Field (Upton)	Grover Field (Mendon)
Memorial School outfield (Upton)	Hood Field (Mendon)
Nipmuc Regional High School Practice Field	Memorial Park (Mendon)
Clough School Field (Mendon)	

### 2.2.1 Fall Soccer Enrollment Data, 2001-2005

As noted earlier, the first step in the process is to determine the enrollment data for the previous years. The enrollment data for Fall Soccer, for the years 2001-2005 is found below:

**TABLE 1**  
**Fall Soccer - Actual Enrollment**

	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>Total</b>	<b>K-8</b>
01	80	52	50	45	29	43	34	16	16	365	906
02	68	73	58	60	43	25	32	25	11	395	973
03	41	52	63	42	43	36	24	25	14	340	984
04	65	28	59	56	34	45	25	15	17	344	1046
05	70	49	29	51	48	39	32	12	22	352	1074
% participation	.54	.41	.43	.43	.34	.34	.30	.19	.17		

### 2.2.2 Spring Soccer Enrollment Data, 2000-2004

The enrollment data for Spring Soccer participation, for years 2000, 2001, 2003 and 2004 are found below. The data for spring 2002 is not available.

**TABLE 2**  
**Spring Soccer - Actual Enrollment**

	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>Total</b>
01	44	33	32	33	36	27	7	15	6	233
02	80	40	30	31	19	35	27	11	13	286
03										
04	34	46	42	41	36	24	13	21	27	284
05	43	27	45	50	29	30	23	8	9	264
% participation	.45	.36	.33	.38	.31	.32	.19	.20	.17	

### 2.2.3 Fall Soccer Projections, 2006-2010

The projected enrollments for Fall Soccer can be found below:

**TABLE 3**  
**Fall Soccer - Projected Enrollment**

	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>Total</b>	<b>K-8</b>
06	65	49	55	47	52	48	35	22	18	391	1108
07	58	52	52	57	39	53	42	23	20	396	1129
08	62	45	53	55	46	40	47	27	21	396	1149
09	62	48	48	45	45	47	35	30	24	384	1162
10	63	47	51	49	46	45	42	25	30	398	1036*

\*does not include projections for kindergarten

The minimum athletic field inventory necessary for the Fall Soccer Program, for years 2006-2010 is summarized in Tables 4-8. Any gaps between the existing inventory and the necessary inventory are noted.

**TABLE 4****Youth Soccer - Projected Enrollment - fall, 2006****Projected K-8 Population: 1,108**

Age Group	# Players	Players/Team	# Teams	Format	Events/Week in Upton	Team:Fields Ratio	Fields Needed	Fields Available
U-6	65	5-6	10	Skill Stations	1	n/a	1	1
U-7	49	7-8	7	3v3	2	5:1	1	1
U-8	55	8	7	4v4	2	5:1	2	2
U-10	99	12	8	6v6	1.5	5:1	2	1
U-12	83	12-14	7	8v8	1.5	4:1	2	1
U-14	40	18-20	2	11v11	1.5	3:1	1	0
<b>Totals</b>	<b>391</b>		<b>41</b>				<b>9</b>	<b>6</b>

% K-8 Population: 35%

Fields Used: Practice Field at Nipmuc Regional H.S., West River, Memorial School, Kiwanis Outfield (2)

Differential between Fields Needed and Fields Available: 3

**TABLE 5****Youth Soccer - Projected Enrollment - fall, 2007****Projected K-8 Population: 1,129**

Age Group	# Players	Players/Team	# Teams	Format	Events/Week	Team:Fields Ratio	Fields Needed	Fields Available
U-6	58	5-6	10	Skill Stations	1	n/a	1	1
U-7	50	7-8	7	3v3	2	5:1	1	1
U-8	52	8	6	4v4	2	5:1	1	2
U-10	96	12	8	6v6	1.5	5:1	2	1
U-12	95	12-14	8	8v8	1.5	4:1	2	1
U-14	43	18-20	2	11v11	1.5	3:1	1	1
<b>Totals</b>	<b>394</b>		<b>41</b>				<b>8</b>	<b>7</b>

% K-8 Population: 35%

Fields Used: Practice Field at Nipmuc Regional H.S., West River, Memorial School, Kiwanis Outfield,

Kiwanis Soccer Field

Differential between Fields Needed and Fields Available: 1

**TABLE 6****Youth Soccer - Projected Enrollment - fall, 2008****Projected K-8 Population: 1,149**

Age Group	# Players	Players/Team	# Teams	Format	Events/Week	Team:Fields Ratio	Fields Needed	Fields Available
U-6	62	5-6	10	Skill Stations	1	n/a	1	1
U-7	45	7-8	6	3v3	2	5:1	1	1
U-8	53	8	6	4v4	2	5:1	1	2
U-10	101	12	8	6v6	1.5	5:1	2	1
U-12	87	12-14	7	8v8	1.5	4:1	2	1
U-14	48	18-20	3	11v11	1.5	3:1	1	1
<b>Totals</b>	<b>396</b>		<b>40</b>				<b>8</b>	<b>7</b>

% K-8 Population: 35%

Fields Used: Practice Field at Nipmuc Regional H.S., West River, Memorial School, Kiwanis Soccer Field,

Kiwanis Outfield (2)

Differential between Fields Needed and Fields Available: 1

**TABLE 7**  
**Youth Soccer - Projected Enrollment - fall, 2009**  
**Projected K-8 Population: 1,162**

Age Group	# Players	Players/Team	# Teams	Format	Events/Week	Team:Fields Ratio	Fields Needed	Fields Available
U-6	62	5-6	10	Skill Stations	1	n/a	1	1
U-7	48	7-8	7	3v3	2	5:1	1	1
U-8	48	8	6	4v4	2	5:1	1	2
U-10	90	12	7	6v6	1.5	5:1	2	1
U-12	82	12-14	7	8v8	1.5	4:1	2	1
U-14	54	18-20	3	11v11	1.5	3:1	1	1
<b>Totals</b>	<b>384</b>		<b>40</b>				<b>8</b>	<b>7</b>

% K-8 Population: 33%

Fields Used: Practice Field at Nipmuc Regional H.S., West River, Memorial School, Kiwanis Soccer Field, Kiwanis Outfield (2)

Differential between Fields Needed and Fields Available: 1

**TABLE 8**  
**Youth Soccer - Projected Enrollment - fall, 2010**  
**Projected K-8 Population: 1,036** (does not include Kindergarten class)

Age Group	# Players	Players/Team	# Teams	Format	Events/Week	Team:Fields Ratio	Fields Needed	Fields Available
U-6	63	5-6	10	Skill Stations	1	n/a	1	1
U-7	47	7-8	7	3v3	2	5:1	1	1
U-8	51	8	6	4v4	2	5:1	1	2
U-10	95	12	8	6v6	1.5	5:1	2	1
U-12	87	12-14	7	8v8	1.5	4:1	2	1
U-14	55	18-20	3	11v11	1.5	3:1	1	1
<b>Totals</b>	<b>398</b>		<b>41</b>				<b>8</b>	<b>7</b>

% K-8 Population: 35%

Fields Used: Practice Field at Nipmuc Regional H.S., West River, Memorial School, Kiwanis Soccer Field, Kiwanis Outfield (2)

Differential between Fields Needed and Fields Available: 1

#### 2.2.4 Spring Soccer Projections, 2006-2010

The projected enrollments for Spring Soccer can be found below:

**TABLE 9**  
**Spring Soccer - Projected Enrollment**

	K	1	2	3	4	5	6	7	8	Total
06	53	45	35	56	43	37	21	21	18	329
07	54	43	42	42	48	45	22	23	18	337
08	49	44	40	50	35	50	27	24	20	339
09	52	39	41	48	42	37	30	29	21	339
10	51	42	37	49	41	45	22	30	25	342

The minimum athletic field inventory necessary for the Spring Soccer Program, for years 2006-2010 is summarized in Tables 10-14. Any gaps between the existing inventory and the necessary inventory are noted.

**TABLE 10****Youth Soccer - Projected Enrollment - spring, 2006****Projected K-8 Enrollment: 1,074**

Age Group	# Players	Players/Team	# Teams	Format	Events/Week	Team:Fields Ratio	Fields Needed	Fields Available
U-6	53	5-6	10	Skill Stations	1	n/a	1	1
U-7	45	7-8	6	3v3	2	5:1	1	1
U-8	35	8	4	4v4	2	5:1	1	0
U-10	99	12	8	6v6	1.5	5:1	2	1
U-12	58	12-14	5	8v8	1.5	4:1	1	0
U-14	39	18-20	2	11v11	1.5	3:1	1	0
<b>Totals</b>	<b>329</b>		<b>35</b>				<b>7</b>	<b>3</b>

% K-8 Population: 31%

Fields Used: West River, Nipmuc Outfield

Differential between Fields Needed &amp; Fields Available: 4

**TABLE 11****Youth Soccer - Projected Enrollment - spring, 2007****Projected K-8 Population: 1,108**

Age Group	# Players	Players/Team	# Teams	Format	Events/Week	Team:Fields Ratio	Fields Needed	Fields Available
U-6	54	5-6	10	Skill Stations	1	n/a	1	1
U-7	43	7-8	6	3v3	2	5:1	1	1
U-8	42	8	5	4v4	2	5:1	1	0
U-10	90	12	7	6v6	1.5	5:1	2	1
U-12	67	12-14	5	8v8	1.5	4:1	1	0
U-14	41	18-20	2	11v11	1.5	3:1	1	0
<b>Totals</b>	<b>337</b>		<b>35</b>				<b>7</b>	<b>3</b>

% K-8 Population: 30%

Fields Used: Nipmuc Practice Field, West River, Kiwanis Soccer Field (if back online)

Differential between Fields Needed &amp; Fields Available: 4

**TABLE 12****Youth Soccer - Projected Enrollment - spring, 2008****Projected K-8 Population: 1,129**

Age Group	# Players	Players/Team	# Teams	Format	Events/Week	Team:Fields Ratio	Fields Needed	Fields Available
U-6	49	5-6	10	Skill Stations	1	n/a	1	1
U-7	44	7-8	6	3v3	2	5:1	1	1
U-8	40	8	5	4v4	2	5:1	1	0
U-10	85	12	7	6v6	1.5	5:1	2	1
U-12	77	12-14	6	8v8	1.5	4:1	1	0
U-14	44	18-20	2	11v11	1.5	3:1	1	1
<b>Totals</b>	<b>339</b>		<b>36</b>				<b>7</b>	<b>4</b>

% K-8 Population: 30%

Fields Used: Same as spring 2007

Differential between Fields Needed &amp; Fields Available: 3

**TABLE 13****Youth Soccer - Projected Enrollment - spring, 2009****Projected K-8 Population: 1,149**

Age Group	# Players	Players/Team	# Teams	Format	Events/Week	Team:Fields Ratio	Fields Needed	Fields Available
U-6	52	5-6	10	Skill Stations	1	n/a	1	1
U-7	39	7-8	5	3v3	2	5:1	1	1
U-8	41	8	5	4v4	2	5:1	1	0
U-10	90	12	7	6v6	1.5	5:1	2	1
U-12	67	12-14	5	8v8	1.5	4:1	1	0
U-14	50	18-20	3	11v11	1.5	3:1	1	1
<b>Totals</b>	<b>339</b>		<b>35</b>				<b>7</b>	<b>4</b>

% K-8 Population: 30%

Fields Used: Same as 2008

Differential between Fields Needed &amp; Fields Available: 3

**TABLE 14****Youth Soccer - Projected Enrollment - Spring, 2010****Projected K-8 Population: 1,062**

Age Group	# Players	Players/Team	# Teams	Format	Events/Week	Team:Fields Ratio	Fields Needed	Fields Available
U-6	51	5-6	10	Skill Stations	1	n/a	1	1
U-7	42	7-8	6	3v3	2	5:1	1	1
U-8	37	8	4	4v4	1	5:1	1	0
U-10	90	12	7	6v6	1.5	5:1	2	1
U-12	67	12-14	5	8v8	1.5	4:1	1	0
U-14	55	18-20	3	11v11	1.5	3:1	1	1
<b>Totals</b>	<b>342</b>		<b>35</b>				<b>7</b>	<b>4</b>

% K-8 Population: 32%

Fields Used: Same as 2009

Differential between Fields Needed &amp; Fields Available: 3

**2.2.4.1 Conclusions**

It is concluded that between the years 2006 and 2010 a shortage of either one or two fields would exist for Fall Soccer. Beginning in spring 2006, a shortage of three fields of various configurations, would exist. This represents the bare minimum athletic field inventory that is necessary to meet the program needs, and does not allow for any field to be rested or rotated. The discrepancy between the required inventory for Fall Soccer and Spring Soccer lies in the fact that baseball outfields at the Kiwanis Beach facility and the Memorial School “double” as soccer fields in the fall season. Using baseball or softball outfields as soccer or lacrosse fields during the spring season is not recommended. Such usage only leads to scheduling nightmares and hard feelings amongst the various user groups. Also, the recommended hours of annual use for these grass areas can only be achieved if the baseball and softball outfields are not used for soccer or lacrosse during the spring season.

The Kiwanis Beach soccer field, currently offline for repair, is expected to be online for the fall, 2007 season, after the requisite three growing seasons have elapsed. It is critical that this field be made operational as soon as possible, since it is the only full-size field that is town-owned. The center field area of the Kiwanis Baseball Field, which is projected to be used for U-8 soccer in the fall season, should be top dressed and reseeded. The Memorial School athletic fields are in dire need of additional over-seeding and fertilization if they are to be used optimally. In addition, the electrical system that runs the in ground irrigation system must be set in such a way so as to allow optimal use of this system. Otherwise, any attempts to over-seed will prove fruitless. It is also very important that these athletic fields are restored to optimal condition, since the outfield areas can accommodate fields of varying configurations, most notably a U-10 size field (140' x 210') or a U-12 size field (160' x 240').

The West River soccer complex can accommodate either one field appropriate for the U-10 age group, or two fields large enough for the U-8 age group. The field needs to be over-seeded.

## 2.2.5 Women's Soccer Program

The Women's Soccer Program plays games on Sunday mornings at Nipmuc Regional High School during the fall and spring seasons. The program is five years old and fields one team, numbering 20-24 women. There are no practice sessions.

### 2.2.5.1 Conclusions

It is concluded that the facility needs of the Women's Soccer Program can be achieved through the continued use of the fields at Nipmuc Regional High School.

## 2.2.6 Pop Warner Football Program

Upton boys participate with the Westborough Pop Warner Football Program in four age groups: B, C, D and E, which include ages seven (E) through 11 (B). During the fall, 2004 season, forty-eight boys participated in football and two girls participated in cheerleading. If the goal of organizing an Upton-Mendon Pop Warner Football Program is realized, a full-size field (360' x 180') for practices and games will be necessary.

## 2.2.7 Youth Baseball Program

The Youth Baseball Program offers instruction and play from Kindergarten through Grade 8. The Program is age appropriate, ranging from T-ball offered to Kindergartners to Babe Ruth for 8<sup>th</sup> graders. The Program uses a practice field at Nipmuc Regional High School and the VFW fields. The enrollment data for the Youth Baseball Program, for years 2001 to 2005, as well as the projected enrollment, by grade, for years 2006 to 2010, can be found below:

**TABLE 15**  
**Baseball - Actual & Projected Enrollments**

	<b>PK</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>Total</b>	<b>K-8</b>
00-01	43	33	35	31	23	34	19	22	10	10	260	819
01-02	44	56	48	46	35	28	32	16	20	14	339	906
02-03	33	47	45	39	37	33	25	18	15	16	308	973
03-04	48	35	55	50	30	36	25	22	23	15	339	984
04-05	43	51	35	60	47	34	35	21	19	17	362	1046
% participation		.36	.39	.38	.31	.31	.26	.21	.19	.17		
05-06	54	42	49	40	46	43	30	24	20	18	366	1074
06-07	46	43	46	48	34	48	36	25	33	18	366	1108
07-08	35	39	47	46	41	35	41	30	23	20	357	1129
08-09	58	41	42	47	39	42	31	33	27	27	381	1149
09-10	47	41	45	42	40	41	36	25	30	30	372	1162

## 2.2.8 Youth Baseball Projections, 2006-2010

The minimum athletic field inventory for the Baseball Program, for years 2006-2010 is summarized in Tables 16-20.

**TABLE 16**

**Baseball - Projected Enrollment - spring, 2006**

**Projected K-8 Population: 1,396**

Program	Grades	# Players	Players/ Team	# Teams	Field Type	Format	Events/ Week	Fields Needed	Fields Available
T-Ball	PK	54	10	5	Grass Field	Instructional	2	1	1
A-Ball	K, 1	91	8	10	Grass Field	Coaches Pitch	2	1	1
AA	2, 3	86	11-12	8	45 ft. Base Paths	Pitch Machine	3	2	0
AAA	4	43	12-14	3	60 ft. Base Paths	Kids Pitch	3	1	1
Major League	5, 6	54	12-14	4	60 ft. Base Paths	Full Rules	3	2	1
S. Koufax	7, 8	38	12-14	3	90 ft. Base Paths	Full Rules	3	1	1
M. Mantle	9	13	12-14	1	90 ft. Base Paths	Full Rules	3	1	1
<b>Totals</b>		<b>379</b>		<b>34</b>				<b>9</b>	<b>6</b>

% K-8 Population: 27%

Fields Used: Practice Field at Nipmuc Regional H.S., Nipmuc (90 ft. diamond); VFW (2); Memorial School (2) (one 60 ft. diamond and one 90 ft. diamond)

**TABLE 17**

**Baseball - Projected Enrollment - spring, 2007**

**Projected K-8 Population: 1,463**

Program	Grades	# Players	Players/ Team	# Teams	Field Type	Format	Events/ Week	Fields Needed	Fields Available
T-Ball	PK	46	10	5	Grass Field	Instructional	2	1	1
A-Ball	K, 1	89	8	11	Grass Field	Coaches Pitch	2	1	1
AA	2, 3	82	11-12	7	45 ft. Base Paths	Pitch Machine	3	2	0
AAA	4	35	12-14	3	60 ft. Base Paths	Kids Pitch	3	1	1
Major League	5, 6	71	12-14	6	60 ft. Base Paths	Full Rules	3	2	1
S. Koufax	7, 8	43	12-14	3	90 ft. Base Paths	Full Rules	3	1	1
M. Mantle	9	13	12-14	1	90 ft. Base Paths	Full Rules	3	1	1
<b>Totals</b>		<b>379</b>		<b>36</b>				<b>9</b>	<b>6</b>

% K-8 Population: 26%

Fields Used: Same as 2006

**TABLE 18**

**Baseball - Projected Enrollment - spring, 2008**

**Projected K-8 Population: 1,502**

Program	Grades	# Players	Players/ Team	# Teams	Field Type	Format	Events/ Week	Fields Needed	Fields Available
T-Ball	PK	35	10	3	Grass Field	Instructional	2	1	1
A-Ball	K, 1	86	8	10	Grass Field	Coaches Pitch	2	1	1
AA	2, 3	87	11-12	8	45 ft. Base Paths	Pitch Machine	3	2	0
AAA	4	35	12-14	3	60 ft. Base Paths	Kids Pitch	3	1	1
Major League	5, 6	71	12-14	6	60 ft. Base Paths	Full Rules	3	2	1
S. Koufax	7, 8	43	12-14	3	90 ft. Base Paths	Full Rules	3	1	1
M. Mantle	9	14	12-14	1	90 ft. Base Paths	Full Rules	3	1	1
<b>Totals</b>		<b>371</b>		<b>34</b>				<b>9</b>	<b>6</b>

% K-8 Population: 25%

Fields Used: Same as 2006

**TABLE 19****Baseball - Projected Enrollment - spring, 2009****Projected K-8 Population: 1,552**

Program	Grades	# Players	Players/ Team	# Teams	Field Type	Format	Events/ Week	Fields Needed	Fields Available
T-Ball	PK	58	10	5	Grass Field	Instructional	2	1	1
A-Ball	K, 1	83	8	10	Grass Field	Coaches Pitch	2	1	1
AA	2, 3	86	11-12	7	45 ft. Base Paths	Pitch Machine	3	2	0
AAA	4	42	12-14	3	60 ft. Base Paths	Kids Pitch	3	1	1
Major League	5, 6	64	12-14	5	60 ft. Base Paths	Full Rules	3	2	1
S. Koufax	7, 8	48	12-14	4	90 ft. Base Paths	Full Rules	3	1	1
M. Mantle	9	15	12-14	1	90 ft. Base Paths	Full Rules	3	1	1
<b>Totals</b>		<b>396</b>		<b>35</b>				<b>9</b>	<b>6</b>

% K-8 Population: 26%

Fields Used: Same as 2006

**TABLE 20****Baseball - Projected Enrollment - spring, 2010****Projected K-8 Population: 1,575**

Program	Grades	# Players	Players/ Team	# Teams	Field Type	Format	Events/ Week	Fields Needed	Fields Available
T-Ball	PK	47	10	5	Grass Field	Instructional	2	1	1
A-Ball	K, 1	86	8	10	Grass Field	Coaches Pitch	2	1	1
AA	2, 3	82	11-12	7	45 ft. Base Paths	Pitch Machine	3	2	0
AAA	4	41	12-14	3	60 ft. Base Paths	Kids Pitch	3	1	1
Major League	5, 6	61	12-14	5	60 ft. Base Paths	Full Rules	3	2	1
S. Koufax	7, 8	55	12-14	4	90 ft. Base Paths	Full Rules	3	1	1
M. Mantle	9	15	12-14	1	90 ft. Base Paths	Full Rules	3	1	1
<b>Totals</b>		<b>387</b>		<b>35</b>				<b>9</b>	<b>6</b>

% K-8 Population: 25%

Fields Used: Same as 2006

**2.2.8.1 Conclusions**

It is concluded that the facility needs for the Youth Baseball Program include two diamonds with 45-foot base paths, one diamond with 60-foot base paths, and one diamond with 90-foot base paths for Babe Ruth level play. It is assumed that a 90-foot diamond at either Nipmuc Regional High School or Blackstone Valley Regional Vocational Technical High School can be utilized for Pony and Babe Ruth games.

The younger age groups currently use the 45-foot diamond at the VFW complex since the outfield area is so small. The left field and right field foul lines measure 110 and 112 feet respectively. The solar orientation (northwest/southeast) is not optimal. The "skinned" infield at this field is more appropriate for softball than baseball. Therefore, going forward, the projected use for this field would be for softball play.

The VFW Little League Field is an excellent facility; however, the solar orientation (north/south) is not optimal. The preferred solar orientation for a baseball or softball field is southwest to northeast, i.e., a straight line that begins at home plate and connects the pitcher's mound, second base and center field should run southwest to northeast. This orientation is preferred so as to prevent the rays of a setting sun to blind the batter, catcher, or pitcher. Since most batters are right-handed, resulting in the majority of batted balls being hit to the left side of the infield, secondary consideration is given to the third baseman, shortstop and left fielder, respectively. A less optimal solar orientation limits the number of hours that a baseball or softball field can be safely used.

The Memorial School Complex includes one diamond with 60-foot base paths and one diamond with 90-foot base paths. Given the fact that neither diamond has a home run fence, the suggested use of these fields, going forward, is for practice rather than games. Also, the fence that encloses the tennis court is too close to home plate of the 90' diamond, making it useless for competition.

## 2.2.9 Softball Program

The Girl's Softball Program offers instruction and games, beginning at the Kindergarten level. The Program uses the VFW softball diamond, a grass practice field and a 60-foot diamond at Nipmuc Regional High School. The enrollment data for the years 2001-2005, as well as the projected enrollment for the years 2006-2010 is found below:

**TABLE 21**  
**Softball - Actual & Projected Enrollments**

	PK	K	1	2	3	4	5	6	7	Total
00-01	18	25	9	9	4	11	9	9	12	88
01-02	40	22	21	16	10	8	8	7	11	103
02-03	16	36	15	29	11	12	8	11	7	139
03-04	32	31	18	21	19	13	17	9	5	133
04-05	36	37	20	20	24	23	15	19	10	168
% participation		.24	.14	.14	.12	.12	.11	.11	.11	
05-06		28	18	15	18	17	13	12	11	132
06-07		29	17	18	13	18	15	13	13	136
07-08		26	17	17	16	14	17	16	13	136
08-09		28	15	17	15	16	13	17	16	137
09-10		27	16	16	15	16	15	13	18	136

### 2.2.9.1 Softball Projections, 2006-2010

The enrollment projections for the Girls Softball Program are listed below.

**TABLE 22**  
**Girls Softball - spring, 2006**

**Projected K-8 Population: 1,396**

Program	Grades	# Players	Players/Team	# Teams	Field Type	Format	Events/Week	Fields Needed	Fields Available
T-Ball	K	28	10	3	Grass Field	Instructional	1	1	1
Farm League	1, 2	33	11-12	3	45 ft. Base Paths	Coaches Pitch	1	1	1
Junior League	3, 4	35	11-12	3	45 ft. Base Paths	Kids Pitch	1.5	1	1
Minor League	5, 6	25	11-12	2	60 ft. Base Paths	Full Rules	1.5	1	1
Major League	7, 8	11	11-12	1	60 ft. Base Paths	Full Rules	1.5	1	1
<b>Totals</b>		<b>132</b>		<b>12</b>				<b>5</b>	<b>5</b>

% K-8 Population: 1%

Fields Used: Nipmuc Practice Field, VFW (1), Kiwanis, Blackstone Valley Regional Vocational Technical H.S. Diamond, Nipmuc Softball Diamond

**TABLE 23**  
**Girls Softball - spring, 2007**

**Projected K-8 Population: 1,463**

Program	Grades	# Players	Players/Team	# Teams	Field Type	Format	Events/Week	Fields Needed	Fields Available
T-Ball	K	29	10	3	Grass Field	Instructional	1	1	1
Farm League	1, 2	35	11-12	3	45 ft. Base Paths	Coaches Pitch	1	1	1
Junior League	3, 4	31	11-12	3	45 ft. Base Paths	Kids Pitch	1.5	1	1
Minor League	5, 6	28	11-12	2	60 ft. Base Paths	Full Rules	1.5	1	1
Major League	7, 8	13	11-12	1	60 ft. Base Paths	Full Rules	1.5	1	1
<b>Totals</b>		<b>136</b>		<b>12</b>				<b>5</b>	<b>5</b>

% K-8 Population: 1%

Fields Used: Same as 2006

**TABLE 24****Girls Softball - spring, 2008****Projected K-8 Population: 1,502**

Program	Grades	# Players	Players/ Team	# Teams	Field Type	Format	Events/ Week	Fields Needed	Fields Available
T-Ball	K	26	10	3	Grass Field	Instructional	1	1	1
Farm League	1, 2	34	11-12	3	45 ft. Base Paths	Coaches Pitch	1	1	1
Junior League	3, 4	30	11-12	3	45 ft. Base Paths	Kids Pitch	1.5	1	1
Minor League	5, 6	33	11-12	3	60 ft. Base Paths	Full Rules	1.5	1	1
Major League	7, 8	13	11-12	1	60 ft. Base Paths	Full Rules	1.5	1	1
<b>Totals</b>		<b>136</b>		<b>13</b>				<b>5</b>	<b>5</b>

% K-8 Population: 1%

Fields Used: Same as 2007

**TABLE 25****Girls Softball - spring, 2009****Projected K-8 Population: 1,552**

Program	Grades	# Players	Players/ Team	# Teams	Field Type	Format	Events/ Week	Fields Needed	Fields Available
T-Ball	K	28	10	3	Grass Field	Instructional	1	1	1
Farm League	1, 2	32	11-12	3	45 ft. Base Paths	Coaches Pitch	1	1	1
Junior League	3, 4	31	11-12	3	45 ft. Base Paths	Kids Pitch	1.5	1	1
Minor League	5, 6	30	11-12	3	60 ft. Base Paths	Full Rules	1.5	1	1
Major League	7, 8	16	11-12	1	60 ft. Base Paths	Full Rules	1.5	1	1
<b>Totals</b>		<b>137</b>		<b>13</b>				<b>5</b>	<b>5</b>

% K-8 Population: 1%

Fields Used: Same as 2007

**TABLE 26****Girls Softball - spring, 2010****Projected K-8 Population: 1,575**

Program	Grades	# Players	Players/ Team	# Teams	Field Type	Format	Events/ Week	Fields Needed	Fields Available
T-Ball	K	27	10	3	Grass Field	Instructional	1	1	1
Farm League	1, 2	32	11-12	3	45 ft. Base Paths	Coaches Pitch	1	1	1
Junior League	3, 4	31	11-12	3	45 ft. Base Paths	Kids Pitch	1.5	1	1
Minor League	5, 6	28	11-12	3	60 ft. Base Paths	Full Rules	1.5	1	1
Major League	7, 8	18	11-12	1	60 ft. Base Paths	Full Rules	1.5	1	1
<b>Totals</b>		<b>136</b>		<b>13</b>				<b>5</b>	<b>5</b>

% K-8 Population: 1%

Fields Used: Same as 2007

**2.2.9.2 Conclusions**

It is concluded that the facility needs of the Girl's Softball Program can be achieved with the existing inventory. This assumes that the VFW softball field will be used for softball play and that the program receives permission to use the softball diamond at either high school. The Kiwanis Baseball Field should be converted to a skinned softball diamond, since it is used by Men's Softball, Women's Softball and the Youth Softball Program.

### **2.2.10 Women's Softball Projections, 2006-2010**

The Women's Softball Program has fielded 10 teams, each with approximately 17 players, for the past several years. The Program makes use of 5 diamonds: Nipmuc Regional High School, Blackstone Valley Regional Vocational Technical High School, Kiwanis Beach and two at Miscoe. All games are played on Monday evenings, beginning in the first week in June and ending on the first Monday in August. There are no practice sessions.

Since the Town of Upton's adult population (18 years and older) has remained relatively consistent in past years and is not expected to increase significantly in the outgoing five years (2006 to 2010) it can be concluded that the facility needs of the Women's Softball Program will continue to be realized. The adult population data for the Town of Upton for the years 2001-2005 is found below:

<b>Year</b>	<b>Population</b>
2001	4,779
2002	4,901
2003	4,806
2004	4,830
2005	5,131

### **2.2.11 Men's Softball Program, 2006-2010**

The Men's Softball Program began play, by most accounts, in the mid-1970s. This Program consistently fields six to eight teams, comprised of 16-17 players per team. According to the Director, 80% of the roster is comprised of Upton residents, and the remaining players are from Mendon. All games are played on Sunday mornings at the Kiwanis Beach softball field, beginning the first Sunday in May, and ending the last Sunday in August. Given the relative stability of the adult population in the Town of Upton it can be concluded that the facility needs of this Program can be realized with the Kiwanis Beach softball field, especially if this field is converted to a skinned infield.

### **2.2.12 Boy's Lacrosse Projections, 2006-2010**

The Boy's Lacrosse Program is two years old. The Program offers instruction (practices) and 10 games per season. The Program competes in the Massachusetts Bay Youth Lacrosse League. The Program includes one U-10 team; two U-11 teams; two U-13 teams; and one U-15 team. Each team practices twice per week, utilizing a grass behind the Mendon Gift Barn. The field is only 70 yards long, which is 30 yards below minimum. Games are played at Nipmuc Regional High School.

Since the Boys Lacrosse Program is only two years old, the sample population is too small with which to make an accurate projection of future enrollment. However, the game of lacrosse is one of the fastest-growing team sports in the country, both at the youth and high school level. Also, since the game is played at Nipmuc Regional High School, it is concluded that the Boy's Lacrosse Program will continue to grow, requiring the need for at least one full-sized field. This field could also be used for the Pop Warner Football Program in the fall season.

### **2.2.13 Girl's Lacrosse Projections, 2006-2010**

The towns of Upton, Mendon and Grafton combined to field one team at the U-11 ( 3<sup>rd</sup> and 4<sup>th</sup> graders) and one team at the U-15 level ( 7<sup>th</sup> and 8<sup>th</sup> graders) and competed in the Massachusetts Bays Girls Lacrosse League( MBGLL). The game of girl's lacrosse, which is played with a completely different set of rules than the boy's game, is also growing at a very fast pace across the country. Coupled with the fact that the sport is also played at Nipmuc Regional High School, it is expected that the youth program will continue to grow. This would require yet another full-size field, which could also be used for youth soccer in the fall season.

## 2.2.14 Youth Basketball

The Upton Club organizes the Youth Basketball Program, offering instructions and games for boys and girls from Upton and Mendon, from Kindergarten through eighth grade. The Program uses gymnasiums at the Upton Town Hall, Miscoe Elementary School, Memorial School and Clough Elementary School. The enrollment data below details the Upton boys and girls who have participated in the Program for the past five years, as well as the projected participation for the years 2005/2006 to 2009/2010.

**TABLE 27**  
**Boys Basketball - Actual Enrollment**

	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>Total</b>
00-01	13	13	15	12	17	20	28	15	7	14	154
01-02	20	20	15	18	16	16	16	25	13	3	162
02-03	23	24	14	16	19	13	18	12	19	12	170
03-04	17	25	19	16	17	25	16	15	11	19	180
04-05	21	18	29	20	24	19	22	18	15	9	195

**TABLE 28**  
**Girls Basketball - Actual Enrollment**

<b>Academic Year</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>Total</b>
00-01	8	5	7	11	9	9	5	8	7	0	69
01-02	4	11	10	5	10	11	8	2	7	1	80
02-03	11	10	13	17	10	19	11	8	3	2	106
03-04	8	17	7	8	9	9	19	5	7	0	89
04-05	10	11	16	7	9	10	13	17	2	6	107

**TABLE 29**  
**Boys Basketball - Projected Enrollment**

<b>Academic Year</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>Total</b>
05-06	19	21	16	22	23	22	40	18	16	14	201
06-07	19	20	19	17	26	27	25	19	16	14	202
07-08	17	21	18	20	19	30	30	20	17	17	209
08-09	18	19	18	19	23	22	33	25	18	16	211
09-10	18	20	17	19	22	26	25	27	22	17	213

**TABLE 30**  
**Girls Basketball - Projected Enrollment**

<b>Academic Year</b>	<b>K</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>	<b>Total</b>
05-06	8	11	9	10	12	14	12	9	7	3	95
06-07	8	11	11	10	14	17	13	10	7	3	104
07-07	8	11	11	12	10	19	16	11	8	3	109
08-09	8	10	11	11	12	14	17	13	8	3	107
09-10	8	10	10	12	12	17	13	14	10	4	110

## 2.2.15 Youth Basketball Projections, 2006-2010

The enrollment projections for the Youth Basketball Program, both Girls and Boys, are summarized below.

**TABLE 31**  
**Boys Basketball, 2005-2006 - Projected Enrollment**

Age Group	# Players	Players/Team	# Teams	Format	Events/Week
K-1	59	30	2	Instructional	1
2-3	38	8-9	5	3v3	1
4-5	45	8-9	6	5v5	2
6-7	58	8-9	7	5v5	2
8-9	30	8-9	4	5v5	2

Boys & girls are combined for this age group.

Gyms in Use: Town Hall, Memorial School, Blackstone Valley Regional Vocational Technical High School

**TABLE 32**  
**Boys Basketball, 2006-2007 - Projected Enrollment**

Age Group	# Players	Players/Team	# Teams	Format	Events/Week
K-1	58	30	2	Instructional	1
2-3	36	8-9	4	3v3	1
4-5	53	8-9	7	5v5	2
6-7	44	8-9	6	5v5	2
8-9	30	8-9	4	5v5	2

Gyms in Use: Same as 2005-2006

**TABLE 33**  
**Boys Basketball, 2007-2008 - Projected Enrollment**

Age Group	# Players	Players/Team	# Teams	Format	Events/Week
K-1	57	30	2	Instructional	1
2-3	38	8-9	5	3v3	1
4-5	49	8-9	6	5v5	2
6-7	50	8-9	6	5v5	2
8-9	34	8-9	4	5v5	2

Gyms in Use: Same as 2006-2007

**TABLE 34**  
**Boys Basketball, 2008-2009 - Projected Enrollment**

Age Group	# Players	Players/Team	# Teams	Format	Events/Week
K-1	55	30	2	Instructional	1
2-3	37	8-9	5	3v3	1
4-5	45	8-9	6	5v5	2
6-7	58	8-9	7	5v5	2
8-9	34	8-9	4	5v5	2

Gyms in Use: Same as 2007-2008

**TABLE 35**  
**Boys Basketball, 2009-2010 - Projected Enrollment**

Age Group	# Players	Players/Team	# Teams	Format	Events/Week
K-1	56	30	2	Instructional	1
2-3	36	8-9	4	3v3	1
4-5	48	8-9	6	5v5	2
6-7	52	8-9	6	5v5	2
8-9	39	8-9	5	5v5	2

Gyms in Use: Same as 2008-2009

**TABLE 36**  
**Girls Basketball, 2005-2006 - Projected Enrollment**

Age Group	# Players	Players/Team	# Teams	Format	Events/Week
K-1*	59	30	2	Instructional	1
2-3	19	7-8	3	3v3	1
4-6	38	7-8	5	5v5	2
7-9	19	7-8	3	5v5	2

Gyms in Use: Memorial School, Town Hall, Blackstone Valley Regional Vocational Technical High School

**TABLE 37**  
**Girls Basketball, 2006-2007 - Projected Enrollment**

Age Group	# Players	Players/Team	# Teams	Format	Events/Week
K-1*	58	30	2	Instructional	1
2-3	21	7-8	3	3v3	1
4-6	44	7-8	5	5v5	2
7-9	20	7-8	3	5v5	2

Gyms in Use: Same as 2005-2006

**TABLE 38**  
**Girls Basketball, 2007-2008 - Projected Enrollment**

Age Group	# Players	Players/Team	# Teams	Format	Events/Week
K-1*	57	30	2	Instructional	1
2-3	23	7-8	3	3v3	1
4-6	45	7-8	6	5v5	2
7-9	22	7-8	3	5v5	2

Gyms in Use: Same as 2006-2007

**TABLE 39**  
**Girls Basketball, 2008-2009 - Projected Enrollment**

Age Group	# Players	Players/Team	# Teams	Format	Events/Week
K-1*	55	30	2	Instructional	1
2-3	22	7-8	3	3v3	1
4-6	43	7-8	6	5v5	2
7-9	34	7-8	3	5v5	2

Gyms in Use: Same as 2007-2008

**TABLE 40**  
**Girls Basketball, 2009-2010 - Projected Enrollment**

Age Group	# Players	Players/Team	# Teams	Format	Events/Week
K-1*	56	30	2	Instructional	1
2-3	22	7-8	3	3v3	1
4-6	42	7-8	6	5v5	2
7-9	28	7-8	4	5v5	2

Gyms in Use: Same as 2008-2009

## 2.2.15.1 Conclusions

It is concluded that the facility needs of an Upton Youth Basketball Program cannot be realized with the use of the gymnasiums at the Memorial School, the Town Hall and the occasional use of the gymnasiums at either high school. The Town Hall gymnasium measures 36' x 76'. The hardwood floors are impeccably maintained. The safety margins at the court's periphery (sometimes referred to as "runoff area") is very limited and well below the recommended standards of 10 feet from the edge of the court to hard surfaces such as walls, bleachers, etc. In fact, the stage protrudes onto the actual playing surface. The two baskets are 10' high and are not height-adjustable, necessitating the use of "clip on" baskets that are hung from the fixed baskets, resulting in a rim height of 8 ½'. These baskets are used for the youngest age groups, K-2. It is suggested that a set of portable, stand-alone baskets, identical to those used at the Memorial School, be

purchased. These baskets could be set on the gym floor at a preferred distance from the walls, radiators, etc., thereby increasing the safety of the participants.

The Memorial School gymnasium includes a full-size court (84' x 50'), six height-adjustable baskets, and adequate runoff space at the court's periphery, a separate storage facility, adequate seating and superior lighting. The court dimensions do not allow for cross-court basketball to be played, however. Given the advantages of the height-adjustable baskets, this gymnasium would be most beneficial to the Youth Basketball Program.

The Nipmuc Regional High School gymnasium includes a full-size court; two cross-courts; six baskets (non-adjustable), adequate seating, acceptable runoff space at the court's periphery and superior lighting. The Blackstone Valley Regional Vocational Technical High School now includes two gymnasiums as a result of the recent addition and renovation project. The "old gymnasium" includes a full-size basketball court; two cross-courts; six baskets (non-adjustable) and adequate runoff space. The new "Competition Center" features a full-size basketball court, exceptional runoff space and two baskets (non-adjustable). As of this writing, it is unclear if the additional four baskets, yet to be ordered, will be height-adjustable. The older participants in the Youth Basketball Program and the Travel Basketball Program could use this gymnasium, albeit on a very limited basis. Therefore, it is doubtful that the Program needs of the Youth Basketball Program can be realized without the addition of one additional full-size basketball court. A full-size basketball court would be a key component of a Community Center, as preferred by a number of residents who responded to the Community Recreation Survey in Part 1 of this Study.

### **2.2.16 Travel Basketball Program**

The travel basketball program offers a more competitive league for boys and girls from Mendon and Upton, for grades four through eight. The league features tryouts for all teams. The Program uses Miscoe Elementary School for practices and Nipmuc Regional High School for games, which are played on Sunday afternoons. Enrollment data is available for only the 2004-2005 season.

<b>Grade</b>	<b>Boys</b>	<b>Girls</b>
4	9	
5	8	10
6	5	6
7	5	5
8	7	4

#### **2.2.16.1 Conclusions**

It is concluded that the facility needs of the Travel Basketball Program cannot be attained with the use of only the Nipmuc Regional High School gymnasium. There would be too many practice sessions to schedule during the week, as evidenced by the fact that the Travel Basketball Program currently utilizes the Miscoe School gymnasium for practice sessions.

## 2.3 Summary

Given the program needs of the town's sports programs, the recreation facility needs of an Upton-based recreation program includes three (3) soccer fields of various configurations; three (3) baseball fields of various configurations; and three (3) full-size athletic fields (360' x 180') to meet the needs of emerging programs such as Pop Warner Football and Youth Lacrosse. These conclusions are based on the assumptions that the Kiwanis Soccer Field will be returned to active status by fall 2007; that the town will continue to use the athletic fields and gymnasiums at Nipmuc Regional High School and Blackstone Valley Regional Vocational Technical High School; and that the team: field ratios, as described above, are adhered to when scheduling fields. Based on telephone conversations with Mr. Leaver, the Athletic Director at Nipmuc Regional High School and Dr. Fitzpatrick, the Superintendent of Blackstone Valley Regional Valley Technical High School, the Town of Upton can expect to receive a reasonable amount of use of the high school facilities, without interfering with the high school's program.

If properly maintained and scheduled, one of the full-size fields could be utilized for U-12 soccer play in the fall and lacrosse play in the spring, leaving a "gap" of only one U-10 size (210' x 140') in the fall season and one U-8 and one U-10 field in the spring season. It should be noted that Nipmuc Regional High School also lacks a full-size field for the Junior Varsity and Varsity Football Programs. Football games are played at the Miscoe Hill Middle School. While it is not the responsibility of the Town of Upton to meet the field needs of Nipmuc Regional High School, from a practical matter, it would make sense if the town and the high school could share a full-size field, either natural grass or a synthetic surface. A summary of the year-to year "gaps" in the various types of athletic fields, from 2006 to 2010, is summarized below.

The gymnasiums at the Town Hall, the Memorial School and Nipmuc Regional High School would not be adequate to meet the program needs of the Youth Basketball Program, the Travel Basketball Program and any "open gym" requirements, whereby residents could use the gyms in an informal setting.

**TABLE 41**  
**Gaps in Athletic Field Inventory for an Upton-Based Recreation Program (2006-2010)**

Year	Youth Baseball	Youth Softball	Fall Soccer	Spring Soccer	Boys & Girls Lacrosse	Pop Warner Football
2006	2 - 45 ft. Base Paths 1 - 60-ft. Base Path	Needs are met if VFW Field is used for Softball	1 U-10 1 U-12 1 U-14	1 U-8 1 U-10 1 U-12 1 U-14	2 Full-Size Fields	1 Full-Size Field (Boys Lacrosse Field)
2007	" " "	" " "	1 U-10 1 U-12	1 U-8 1 U-10 1 U-12 1 U-14	" " "	" " "
2008	" " "	" " "	1 U-10 1 U-12	1 U-8 1 U-10 1 U-12	" " "	" " "
2009	" " "	" " "	1 U-10 1 U-12	1 U-8 1 U-10 1 U-12	" " "	" " "
2010	" " "	" " "	1 U-10 1 U-12	1 U-8 1 U-10 1 U-12	" " "	" " "

### Soccer Field Sizes

U-8 150' x 75'  
U-10 210' x 140'  
U-12 240' x 160'  
U-14 330' x 170'

### Football/Lacrosse Field Sizes

Full Size 360' x 180'

## PART 3 - ASSESSMENT OF EXISTING RECREATION INVENTORY

A thorough evaluation of all current recreation facilities is an important step in any Recreation Master Plan. This entails not only an evaluation of the various playing surfaces (playing fields, basketball and tennis courts, playgrounds) but the related infrastructure (parking lots, fencing, spectator bleachers, etc), which has a significant effect as to whether or not a facility is being used optimally.

For example, an athletic field may be in “perfect” playing condition, but underutilized due to any number of factors, including: lack of parking capacity, poor solar orientation, lack of restroom facilities, etc. Evaluating the condition of the existing inventory results in a clearer understanding of the necessary steps that must be taken to close any gaps between the existing inventory and the desired inventory, as detailed in Part 1 of this Study.

Utilizing a “Turf Report Card System” from The Ohio State University Turf Program, various recreation venues in Upton were visited and evaluated. The Turf Report Card indicates such important features as soil permeability (knife test); thatch layer (thickness of the organic layer between the grass layer and the root system) a very important feature of an athletic field since it serves to “cushion” an athlete’s fall; overall description of the soils, suggested improvements to the soil and an overall evaluation of the infrastructure at a given locale. In short, the intention is provide an overall evaluation of the site’s condition as well as the suggested steps necessary to bring the site to optimal playing conditions. A soil sample was taken from each site and sent to the University of Massachusetts Turf Program for testing. A 1-5 grading system was used, with a “5” rating being optimal and a “1” rating being least favorable.

Optimal conditions for natural grass athletic fields:

1. Knife test: a “5” rating would mean that the soils are not compacted and would therefore offer superior vertical drainage. Since a knife will pass through wet soils more easily than dry soils, the condition of each field when it was tested was carefully noted.
2. Thatch layer: the ideal thatch depth is 1/2” -3/4” inch. This would earn a “5” rating.
3. Grass coverage: an athletic field that was devoid of any patches, bare spots, etc., would earn a “5” rating.
4. pH: the ideal pH for an athletic field is 6.5 – 7.2. This pH would earn a “5” rating.
5. Loam/sand blend. The ideal soil composition would be 80% sand and 20% loam.

### 3.1 Kiwanis Beach Softball Field (Kiwanis Beach Road, Upton)

**3.1.1 Dimensions** - 60-foot base paths; 267’ from home plate to the left field fence; 268’ to deep center field; 270’ to the right field fence.

**3.1.1.1 Condition When Tested:** dry

#### 3.1.2 Soils

- a. Knife Test: 4
- b. Thatch Layer: 4 (1/2”)
- c. Grass Coverage: 4
- d. Weeds: 5 (no evidence of weeds)
- e. Overall Description: sandy loam; 61.8% sand, 32.6% silt, 5.6% clay. Soil pH: 5.0.
- f. Suggested Improvements: Add 122 lbs. of calcitic lime per 1000 sq.ft. Add 50-lb/1000 sq.ft. in early spring and mid-autumn. Apply a 30-3-3 fertilizer in late April and late June. Apply a 10-6-4 fertilizer in very late August.



**3.1.3 Slope** - No discernable slope was detected.

- 3.1.4 Irrigation System** - None present.
- 3.1.5 Drainage System** - None present.
- 3.1.6 Solar Orientation** - The field is oriented in the preferred direction for a baseball or softball field: southwest/northeast.
- 3.1.7 Current Use** - Men's Softball, Women's Softball, and Girls' Youth Softball Programs
- 3.1.8 Maintenance Program** - Mowing, fertilization program in place.
- 3.1.9 Condition of Existing Infrastructure** - The parking lot has a capacity of approximately 70 cars and is currently being resurfaced. The backstop and fencing is in good condition with no obvious safety concerns noted. There are two small sets of wooden bleachers located behind the first base line, with a total seating capacity of 50 persons. Access to these bleachers is not ADA-compliant; however, the access path from the parking lot to the field is ADA-compliant. The dugouts are not protected by fencing and pose a safety issue to all participants.

## 3.2 Kiwanis Beach Soccer Field

3.2.1 **Dimensions** - The field measures 350 'x 200'.

3.2.1.1 **Condition When Tested:** dry

### 3.2.2 Soils

- a. Knife Test: 3
- b. Thatch Layer: 4 (½")
- c. Grass Coverage: 1 (most of the grass was recently removed from the field as part of a renovation project). Since the field was tested, excellent germination has been achieved.
- d. Weeds: 4 (clover present at the time of the visit).
- e. Overall Description: sandy loam; 68.8% sand; 27% silt; 4.1% clay. Soil pH: 7.0.
- f. Suggested Improvements to Establish New Growth: No limestone required. Apply either a 5-10-10 fertilizer at 40-lbs/1000 sq. ft., plus 0-0-60 (muriate of potash) fertilizer at 4 lbs./1000 sq.ft. into the top 3 to 4 inches of soil. Retest after one year after turf establishment.



3.2.3 **Slope** - The field pitches 4" from north to south.

3.2.4 **Irrigation System** - An in-ground irrigation system was installed in Fall 2005.

3.2.5 **Drainage System** - A drain system is present along the east side of the field, presumably to capture rainwater from the higher elevations. A Wick drainage system is suggested for this field in order to improve drainage.

3.2.6 **Solar Orientation** - The field is oriented, end-to-end, in the preferred north/south direction.

3.2.7 **Current Use** - This field is currently offline for repair. Most of the grass was stripped. The surface was regraded, new grass has propagated and an irrigation system was installed in November, 2005.

3.2.8 **Maintenance Program** - The field receives regular mowing and some fertilization. There is no evidence of a weed control program.

3.2.9 **Condition of Existing Infrastructure** - There is one set of aluminum bleachers with a seating capacity 50 persons. The bleachers are in fair condition. The site is not ADA-compliant. The driveway leading from the parking lot to this field is very steep. The gate at the bottom of the access driveway would have to be opened to allow a mobility-impaired person to access the field. There are no ADA-compliant parking spaces adjacent to the field.

**3.3 VFW Baseball Complex  
(15 Milford Street, Upton)**

Description of recreation facilities: large playground; one Little League field (60' base paths); one (1) softball field (skinned infield); one batting cage; two practice/warm-up pitching mounds.



**3.3.1 Dimensions** - Little League field: 177' to left field; 180' to center field; 182' to right field.

**3.3.1.1 Condition When Tested:** Wet

**3.3.2 Soils**

- a. Knife Test: 5
- b. Thatch Layer: 5 (  $\frac{3}{4}$ " )
- c. Grass Coverage: 5
- d. Weeds: 5 (few weeds present).
- e. Overall Description: Outfield soils can be described as loamy coarse sand; 80.3% sand, 16.8% silt, 2.9% clay. Soil pH: 5.1 The infield mix can be described as 3" of soft sand over 6" of coarse sand. The infield mix was observed to be firm in both rainy and dry weather.
- f. Suggested improvements: apply 53 lbs. of dolotomic limestone/ 1000 sq. ft. Apply a 30-3-3 fertilizer at 3 lbs/1000 sq. ft. in late April and late June; apply a 10-6-4 fertilizer at 10 lbs/1000 sq ft in very late August.

**3.3.3 Slope:** the field slopes upwards from home plate to deep center field a total of 24 inches.

**3.3.4 Irrigation System** – An in ground system is present.

**3.3.5 Drainage System** - There is no drainage system present.

**3.3.6 Solar Orientation** - The solar orientation is south/north.

**3.3.7 Current Use** - The field is used for Little League baseball practices and games.

**3.3.8 Maintenance Program** - There is evidence of a fertilization and weed control program. The grass is regularly mowed and the infield and pitcher's mound are very well maintained.

**3.3.9 Condition of Existing Infrastructure** - The backstop and fencing are in fair condition. The dugouts are very small and there is a lack of protective fencing, posing a safety issue for the participants. The small wooden bleachers behind the first and third base lines are in fair condition. Access from the parking lot to the field is ADA-compliant, but access to the bleachers is not ADA-compliant. The parking lot is currently being repaved. The parking capacity is approximately 70 cars.

### 3.4 VFW Softball Field

**3.4.1 Dimensions** - The field measures 112 feet to the left field fence; 165 feet to deep center field; and 110 feet to the right field fence. The distance from home plate to the backstop is only 10 feet.

**3.4.1.1 Condition When Tested:** Wet

#### 3.4.2 Soils

- a. Knife Test: 3
- b. Thatch Layer: 5 (  $\frac{3}{4}$ " )
- c. Grass Coverage: 5
- d. Weeds: 4 (some clover present).
- e. Overall Description: the outfield soils can be described as sandy loam; 66.2% sand, 26.5% silt, 7.3% clay. Soil pH: 5.6 The infield mix can be described as 3" of soft sand over 6" of coarse sand. The infield mix was observed to be too soft after rainy weather.

**3.4.3 Slope** – the field slopes downwards from home plate to deep centerfield a total of 32 inches.

**3.4.4 Irrigation System** - There is an in ground irrigation system.

**3.4.5 Drainage System** - There is no drainage system present.

**3.4.6 Solar Orientation** - The solar orientation is northwest/southeast. The preferred orientation is southwest/northeast.

**3.4.7 Current Use** - The field is currently used for both softball and baseball. Given the short distance to the outfield fences, it is used for the younger age groups.

**3.4.8 Maintenance Program** - See Little League field description above. The skinned infield does not appear to be as well maintained as the Little League diamond. Given the pronounced slope in the infield, it is much easier for rain to leave channels in the skinned infield, necessitating that the infield be constantly groomed.

**3.4.9 Condition of Existing Infrastructure** - The backstop is only 12 feet tall. The fenced dugouts are adequate. There is ample parking at the VFW facility for both the baseball and softball fields.



**3.5 West River Soccer Complex  
(South Street, Upton)**

**3.5.1 Dimensions** - The field measures 120' x 200'. Typical use is one U-10 size field or two U-8 size fields.

**3.5.1.1 Condition When Tested:** Wet

**3.5.2 Soils**

- a. Knife Test: 3
- b. Thatch Layer: 4 (½")
- c. Grass Coverage: 3
- d. Weeds: 5 (few weeds present)
- e. Overall Description: loamy coarse sand; 77.7% sand; 17.4% silt; 4.9% clay. Soil pH: 5.5.
- f. Suggested Improvements: incorporate 50-lbs./1000 sq.ft. lime into the top 6 inches of soil in early spring and mid-autumn. Incorporate either a 20-3-12 fertilizer at 5-lbs/1000 sq.ft. in late April, late June and very late August.

**3.5.3 Slope** - No crown present. The grade drops 6".

**3.5.4 Irrigation System** - There is no in ground irrigation system.

**3.5.5 Drainage System** - There is no drainage system.

**3.5.6 Solar Orientation** - The field is oriented, end-to-end, in the preferred north/south direction.

**3.5.7 Current Use** - The field is currently used for youth soccer practices and games.

**3.5.8 Maintenance Program** – An organic fertilizer fertilization plan is in place; field is mowed regularly.

**3.5.9 Condition of Existing Infrastructure** - There is a very large, gravel-based parking lot, with a capacity of approximately 70 vehicles.



### 3.6 **Memorial School (67 Main Street, Upton)**

Description of recreation facilities: playground; hard surface play area; one tennis court; one basketball court; one Little League (60' base paths) baseball field; one Babe Ruth (90' base paths) baseball field. There are no home run fences for either baseball field. The gymnasium includes a full-size basketball court with adequate safety margins, height-adjustable baskets, storage and spectator seating.



**3.6.1 Dimensions** - The outfield area shared by both diamonds measures 310' x 180'. The grass area between the Babe Ruth diamond infield and the fence that surrounds the basketball court measures 111' x 145'. Since there are no true home run fences for either baseball field, measurements were taken to various fenced landmarks. The distance from home plate of the Babe Ruth field to the fence that surrounds the outdoor basketball court measures 262' and 316' from home plate to the right field fence. The distance from home plate of the Little League field to the fence in right field that circumvents the basketball court and the tennis court is 185'.

**3.6.1.1 Condition When Tested:** Dry

#### **3.6.2 Soils**

- a. Knife test: 2
- b. Thatch Layer: 1
- c. Grass Coverage: 3
- d. Weeds: 4 (some weeds present)
- e. Overall description: sandy loam; 68.9% sand, 25.6% silt, 5.4% clay. Soil pH: 5.6
- f. Suggested improvements: apply 80 lbs. of dolotomic lime / 1000 sq.ft. Apply a 30-3-3 fertilizer in late April. Apply a 20-3-12 fertilizer in late June.

**3.6.3 Slope** - There is very little noticeable crown.

**3.6.4 Irrigation System** - There is an in ground irrigation system.

**3.6.5 Drainage System** - A drainage system is not evident.

**3.6.6 Solar Orientation** - The Babe Ruth Field (90' base paths) is oriented southeast/northwest. The Little League field is oriented northwest to southeast.

**3.6.7 Current Use** - These fields were returned to active use in fall, 2005, as part of the Memorial School renovation project. The grass area was used for Youth Soccer during fall, 2005 on a very limited basis. Given the lack of home run fences for either baseball field, the projected use for the baseball diamonds would be for practices, rather than games.

**3.6.8 Maintenance Program** - These fields are regularly mowed. There is an issue with the electrical system that causes the irrigation system to turn off prematurely, thus minimizing the irrigation system's effectiveness. The field needs to be reseeded and a starter fertilizer program implemented.

**3.6.9 Condition of Existing Infrastructure** - The backstops, fencing, player benches, parking area and lighting fixtures are in excellent condition. The parking area has a capacity of 100 cars. The infield areas need to be groomed and the pitcher's mound of the Babe Ruth diamond needs to be re-established. The major concern is deterioration of the grass outfield areas that has occurred from late spring to early fall 2005.

**3.7 Nipmuc Regional High School Athletic Fields (90 Pleasant Street, Upton)  
Soccer/Lacrosse Field**

**3.7.1 Dimensions** - The field measures 375' x 205'.

**3.7.1.1 Condition When Tested:** Dry

**3.7.2 Soils**

- a. Knife Test: 1 (lacks permeability).
- b. Thatch Layer: 4 (½")
- c. Grass Coverage: 5
- d. Weed Control: 5(no evidence of weeds)
- e. Overall Description: fine, sandy loam; 58% sand, 36.2% silt, 5.8% clay.
- f. Suggested Improvements: Apply 66 lbs. of dolotomic lime/1000 sq. ft. Apply a 20-3-12 fertilizer in late April. Apply a 30-3-3 fertilizer in late June. Apply a 10-6-4 fertilizer in later August. Aerate 4-5 times annually, adding sand each time.



**3.7.3 Slope** - A small slope (2") is present, from north to south

**3.7.4 Irrigation System** - An in ground irrigation system is in place.

**3.7.5 Drainage System** - A peripheral drainage system has been installed.

**3.7.6 Solar Orientation** - The field is oriented in the least optimal direction for an athletic field: east/west.

**3.7.7 Current Use** - The field is used for field hockey games, boys and girls soccer games and practices in the fall; boys and girls lacrosse practices and games in the spring.

**3.7.8 Maintenance Program** - The field is mowed and fertilized regularly. The field needs to be aerated four or five times annually. Sand should be added with each aeration in order to increase the permeability of the soil.

**3.7.9 Condition of Existing Infrastructure** - The fencing and spectator bleachers are in excellent condition.

**3.8 Nipmuc Regional High School Athletic Fields  
(90 Pleasant Street, Upton)  
Lacrosse/Field Hockey Practice Field**



**3.8.1 Dimensions** - The field measures 330' x 180'

**3.8.1.1 Condition When Tested:** Very Wet

**3.8.2 Soils**

- a. Knife Test: 2(lacks permeability; significant amount of surface water noted).
- b. Thatch Layer: 4 (½")
- c. Grass Coverage: 4 (some areas need over seeding).
- d. Weed Control: 5 (no evidence of weeds).
- e. Overall Description: coarse loamy sand; 65.7% sand; 28.9% silt; 5.4% clay.
- f. Suggested Improvements: Apply 124 lb of dolomitic lime/1000 sq ft. Apply one-half of the lime into the top 6 inches of soil. Mix the remaining half into the top 3 to 4 inches of soil along with recommended fertilizers. Apply a 15-25-10 starter lawn fertilizer at 15 lbs/ 1000 sq.ft. into the top 3 to 4 inches of soil.

**3.8.3 Slope** - The field is pitched in one direction ( 8'-12" in one direction). The field is very worn in the middle. Significant surface water was present the day of the testing.

**3.8.4 Irrigation System** - An in ground system is present.

**3.8.5 Drainage System** - A peripheral drainage system is in place.

**3.8.6 Solar Orientation** - The field is oriented in the optimal direction for an athletic field: north/south.

**3.8.7 Current Use** - The field is used for Varsity and Junior Varsity Field Hockey practices and games in the fall and occasional boys and girls lacrosse practices in the spring.

**3.8.8 Maintenance Program** - The field is mowed and fertilized regularly. The field needs to be aerated four to five times per year. Sand should be added each time the field is aerated and the crown of the field should be re-established in order to improve horizontal drainage.

**3.9 Nipmuc Regional High School Athletic Fields  
Practice Field B (outfield of softball field)**

**3.9.1 Dimensions** - The field measures 300' x 165'.

**3.9.1.1 Condition When Tested:** Very wet

**3.9.2 Soils**

- a. Knife Test: 4 (approximately 6" of well-draining loam).
- b. Thatch Layer: 4 (1/2")
- c. Grass Coverage: 5
- d. Weed Control: 5
- e. Overall Description: fine sandy loam: 56.3% sand; 36.7% silt; 6.9% clay. Soil pH: 5.9. The infield mix is comprised of 6" of coarse sand over fine sand.
- f. Suggested Improvements: apply 124 lb of dolomitic limestone/1000 sq.ft. Incorporate one-half the lime into the top 6 inches of soil. Split application between early spring and mid-autumn. Apply a 30-3-3 fertilizer at 3 lbs/1000 sq.ft. in late April and late June. Apply a 10-6-4 fertilizer at 10 lbs/1000 sq.ft. in very late August.



**3.9.3 Slope** - No noticeable grade was determined.

**3.9.4 Irrigation System** - An in ground system is in place.

**3.9.5 Drainage System** - A peripheral drainage system is in place.

**3.9.6 Solar Orientation** – the field is oriented north to south.

**3.9.7 Current Use** - The softball field is used for Varsity and Junior Varsity Softball practices and games. The outfield is used for Varsity and Junior Varsity Soccer teams.

**3.9.8 Maintenance Program** - The field is well maintained, with evidence of an irrigation and fertilization program.

**3.9.9 Condition of Existing Infrastructure** - The backstop and fenced dugouts are in excellent condition.

**3.10 Nipmuc Regional High School Athletic Fields  
Baseball Field**

**3.10.1 Dimensions** - 90' base paths

**3.10.1.1 Condition When Tested** - Very wet

**3.10.2 Soils**

- a. Knife Test: 3 (moderate amount of surface water observed).
- b. Thatch Layer: 4 (½")
- c. Grass Coverage: 5
- d. Weed Control: 5
- e. Overall Description: The infield mix is comprised of coarse sand over fine sand to a depth of 6".



**3.10.3 Slope** - An 8" grade differential was noted from the outfield edge of the infield to edge of the outfield.

**3.10.4 Irrigation System** - An in ground irrigation system is present.

**3.10.5 Drainage System** - A peripheral drainage system is not in place.

**3.10.6 Solar Orientation** - The field is oriented in the preferred southwest/northeast direction.

**3.10.7 Current Use** - The field is used for Varsity and Junior Varsity Baseball practices and games in the spring and football practices in the fall.

**3.10.8 Maintenance Program** - The outfield and infield are very well groomed and maintained. The outfield should be aerated at least 3 or 4 times per year.

**3.10.9 Condition of Existing Infrastructure** - The backstop, fenced dugouts, and spectator seating are in excellent condition.

### 3.11 Other Upton Facilities

#### 3.11.1 Kiwanis Basketball Court

**Dimensions** - 94' x 50'. Runoff areas: 2' on north and south ends; 4 ½" on east sideline, 5' on west sideline.

**Surface** – Asphalt

**Condition** - Large crack running north/south on west side; some depressions evident. Both basketball standards lean inwardly towards the center of the court.

**Condition of Existing Infrastructure** - Fencing: 4/5



#### 3.11.2 Kiwanis Club Tennis Courts

**Dimensions** - Two (2) full-size courts, 120' x 60'

**Surface** - Asphalt

**Overall Condition** - Many depressions. There is large crack on the east court. Also, there is a large crack running parallel to and directly under, both nets.

**Condition of Existing Infrastructure** - The fencing is in need of additional support posts. Also, the bottom of the fence “curls in” towards the playing surface, presenting a potential safety hazard. This hazard could be eliminated with the addition of a bottom rail.



#### 3.11.3 Memorial School Basketball Court

**Dimensions** - Full-size court (50' x 84'); excellent runoff space.

**Condition of Existing Infrastructure** - The fencing and backboards are in excellent condition.



#### 3.11.4 Memorial School Tennis Court

**Dimensions** - Full-size court (60' x 120'); excellent runoff space.

**Condition of Existing Infrastructure** - The fencing, posts, and netting are in excellent condition.



## **PART 4 - MOVING TOWARDS A RECREATION MASTER PLAN**

As noted in Part 2, there are some “gaps” between the existing athletic field inventory and the desired inventory for an Upton-based Recreation Program. Most notably, adding age-appropriate soccer and baseball fields are a priority, as are *three* full-size fields, one each for Pop Warner Football, boys lacrosse and girls lacrosse. Nipmuc Regional High School lacks a football field. There is an immediate need to return the Kiwanis Beach Soccer Field to “online” status, as this field is the only full-size, town-owned athletic field. This field was recently stripped of its grass surface and regraded. An in ground irrigation system was installed in November, 2005, which will help immensely in properly maintaining the field. It is suggested that a Wick drainage system be installed to improve the drainage on this field. If the work is completed in spring 2006, the field can be expected to return online in fall, 2007, allowing for the recommended three “growing seasons”, i.e. two fall seasons and one spring season or two spring seasons and one fall season. Although the focus of this study is to determine the recreation facility needs of the Town of Upton, for an exclusively Upton population, there is no strict timeline as to when such a Program would occur. Therefore, the Town has the benefit to carefully consider various cost and time estimates associated with augmenting the athletic field inventory. These cost and time considerations are described below.

### **4.1 Considerations for Adding to the Athletic Field Inventory**

1. Purchase of property and construction of new natural grass surfaces.
2. Purchase of property and construction of a synthetic, “infilled” turf field.
3. Purchase of property and construction of a combination of natural grass and synthetic turf surfaces.
4. Conversion of an existing natural grass field to a synthetic turf surface.

Each process will be discussed separately. Since the purchase price of parcels are unknown, only construction costs will be discussed.

### **4.2 Time and Cost Considerations**

#### **4.2.1 Construction of Natural Grass Surfaces**

The cost to construct a full-size (360’ x 180’) natural grass athletic field ranges between \$250K and \$300K, depending on site conditions. Site considerations which can add significantly to the cost of construction includes ledge removal; severe grades, which can result in a large amount of “cut and fill”; tree removal; wetland mitigation; the cost to bring utilities to the site, such as water and electrical power; infrastructure concerns such as parking, lighting, spectator bleachers, bathroom facilities, fencing, storage facilities and trash receptacles. This estimate includes an in ground irrigation system.

Time estimates: allow two years from the start of construction to the start of play, allowing for three growing seasons.

#### **4.2.2 Construction of a Natural Grass Baseball or Softball Diamond**

The cost to construct a natural grass baseball or softball diamond is ranges between \$280K and \$300K, depending on site conditions. These costs include site preparation (clearing, grubbing); site improvements (clay infield, stone dust warning track); backstop and fenced dugouts, spectator bleachers; irrigation system; fine grading and seeding.

### **4.2.3 Construction of a Synthetic Turf Field**

The cost to construct a full-size synthetic turf athletic field, on a new site, lined to accommodate a number of sports (soccer, football, lacrosse, field hockey), is \$600K to \$700K, depending upon the aforementioned site considerations. This includes the installation of a drainage system, the concrete curbing to which the turf is attached; fencing, the synthetic turf, and the installation of various field markings.

Time estimates: allow four to six months from the start of construction to the beginning of play, depending upon the complexity of the site work and weather conditions.

### **4.2.4 Construction of a Combination of Natural Grass Fields and a Synthetic Turf Surface**

There is some economy of scale related to site work costs when constructing a complex that includes natural grass fields and a synthetic turf field. The “rough grading” associated with both types of fields is identical. However, the drainage system for a synthetic turf field is slightly more costly than the system used in a natural grass field. The sub-surface of a natural grass field typically consists of a blend of sand and loam (70% sand) and a layer of processed stone, whereas the sub-surface of a synthetic turf field consists of different levels of processed stone and a peripheral drainage system. Therefore, the approximate cost to construct one full-size natural grass field and one synthetic turf field on the same site is \$700K to 800K.

Time estimates: allow four to six months for the installation of the synthetic turf field; allow two years for the natural grass field to become playable, allowing for the requisite three growing seasons.

### **4.2.5 Conversion of a Natural Grass Field to a Synthetic Turf Surface**

The approximate cost to convert a full-size natural grass surface to a synthetic turf surface is \$550K to \$600k. This includes stripping the top six inches of organic matter; removal of an installed irrigation system, the installation of the sub-surface drainage system, the concrete curbing; the synthetic surface and any athletic field markings.

Time estimate: allow three months for this conversion, depending upon site work complexities and weather conditions.

### **4.2.6 Cost Considerations: Natural Grass Fields and Synthetic Turf Fields**

There are many factors to be considered in the decision process related to constructing a natural grass fields and a synthetic turf field. Traditionalists may still prefer a natural grass field. As noted above, it is less costly to construct a natural grass field than a synthetic turf field. However, long-term, there may be a substantial cost savings to building a synthetic turf “infill” surface, since it is far less costly to maintain than a natural grass surface. Natural grass surfaces need to be irrigated, fertilized, aerated, mowed and constantly lined for different sports. Such a field is labor intensive to maintain. The cost to properly maintain a natural grass athletic field can easily range between \$20K-\$40K annually. As noted earlier, scheduling of natural grass fields must consider the “wear factor”, especially for “high impact sports” such as soccer, football and lacrosse. Therefore, the annual use of natural grass fields is somewhat limited.

Finally, natural grass fields should not be used in rainy or otherwise inclement weather, since the constant cutting and turning associated with athletic and recreation play can easily disturb the all-important thatch layer, exposing the sub-surface to further degradation.

Once installed, synthetic turf fields need to be “groomed” two or three times annually. The grooming process maintains the individual fibers in a vertical orientation and ensures that the rubber “infill” is evenly distributed throughout the playing surface. The grooming process includes towing a small “grooming machine”, especially designed for this purpose, with a small tractor. The process has two steps: a tine rake is pulled across the playing surface, preventing the individual fibers from “matting;” the tine rake is then raised and a brushing system is lowered to the playing surface. The brushing system distributes the rubber infill evenly throughout the entire playing surface. The cost of the grooming machine is approximately \$3,000.

Synthetic surfaces can withstand almost limitless play and can be lined for a number of different sports (soccer, lacrosse, football, field hockey) allowing great flexibility in scheduling matters. The addition of artificial lighting extends the hours of play for such a surface even further. Finally, synthetic surfaces can be used in wet and inclement weather, further demonstrating their overall usefulness. Synthetic turf surfaces will eventually need to be replaced. As schools and communities are becoming more familiar with these playing surfaces, they are budgeting up to \$50K per year towards the turf’s replacement. While the typical warranty for a synthetic turf surface is eight years, many surfaces are outliving that period of time.

## PART 5 - EVALUATION OF POTENTIAL SITES FOR RECREATION

### Overview

Several parcels have been reviewed and evaluated as to their viability for their conduciveness to active recreation. Various factors were considered, including size of the parcel, egress and access; topography, and soil content. All parcels were considered for either a single recreation facility (ball field, small playground, etc.) or a multi-purpose facility (numerous ball fields, large parking area, playground, etc). The potential cost to develop a site for active recreation was also considered. These costs include ledge removal, mitigation of severe grades, tree removal, etc. The parcels are listed alphabetically, rather than their desirability for active recreation use.

### 5.1 Site Evaluations

#### **Blackstone Valley Technical High School Properties**

1. Parcel Name: parcels were donated by Trask and Willard families, Chestnut Street
2. Parcel Size: approximately 28 + acres.
3. Map 29, Parcel 71 and Map 29, Parcel 68-68.2
4. Zoning Designation: Commercial and Industrial

#### **Comments**

A consultant has been retained to develop an engineering plan and field layout plan. Existing Wetlands on this site may limit the extent of active recreation that may be developed.

**Glen Echo** – In March 2003, the Upton Planning Board approved the Glen Echo Estates subdivision, which totals 164 acres. In lieu of approving the plan without a performance bond, the Board included a number of covenants, one of which requires that the developer, Diversified Funding, Inc., construct an “active recreation area” known as Parcel 4 of the Certificate of Approval, as well as an “associated parking lot.” The Town of Upton will be responsible for “obtaining any engineering design and construction permits and necessary approvals to build the active recreation area” within 24 months of March, 2005. The covenant requires the developer to build the active recreation area within six months of the town obtaining the various permits. Once the construction of the active recreation area is complete, the developer is required to deed the active recreation area to the Town.

The parcel is approximately 770 feet long and 170 feet wide, and is oriented in a north/south direction to the west of North Street. The soils are sandy loam, considered excellent for the construction of an athletic field. The parcel is sufficiently large enough to allow for both a full-size athletic field, as well as a suitable buffer to the abutters to the south of the parcel. However, the final configuration of the proposed athletic field and parking area will not be finalized until additional site-specific information related to the habitat of two rare salamander species could be obtained. The proposed facilities will be subject to review in accordance with MESA (Massachusetts Endangered Species Act) and the Wetlands Protection Act. Appendix 1 illustrates the proposed athletic field and accompanying parking area as of this writing.

1. Parcel Name: Glen Echo
2. Parcel Size: 164 Acres
3. Map # 5, Parcels 19 and 20.
4. Zoning Designation: Agricultural
5. Conduciveness to recreation: the large, flat open meadow is large enough for a full-size athletic field, measuring 190' x 360', oriented in a north/south direction; or, two smaller athletic fields, measuring 165' x 190', oriented in an east/west direction.
6. Access and Egress: from North Street.
7. Topography and Slopes: the large, open field is very level. The proposed driveway that would link North Street to the proposed parking lot drops in elevation from 440' to 403'.
8. Soils: sandy loam.

9. Wetlands issues: a stream runs to the east of the proposed athletic field. A stream crossing would be constructed and stream/wetland setbacks would be adhered to.
10. Adjacent Land Uses and Buffer Needs: the Conservation Commission proposes to build a trail from North Street that would connect to trails on the adjacent Warren Brook Conservation Area. There is a need for a buffer area between the proposed athletic field and the abutters to the south.
11. Off-site Visual and Aesthetic Concerns: none.
12. Site Access and Security: none.
13. Traffic Flow and Parking Issues: as of this writing, the proposed parking lot has a capacity of 66 vehicles.
14. Safety Issues: none.
15. Utilities: water and electrical service will be available as a result of the Glen Echo housing project.
16. Unique Vegetation: none.
17. Unique Habitat Areas: additional site-specific information regarding the nesting habitat of two rare salamander species will be determined.
18. Potential Costs to Develop Site: the developer is obligated to construct the athletic field, stream crossing and parking lot.

### **Comments**

The covenant that requires the developer to construct an athletic field and then deed the field to the Town of Upton should be vigorously pursued. Part 2 of this study clearly illustrates the need for three (3) full-size, multi-purpose athletic fields.

The Upton Conservation Commission advocates for a walking trail that would connect North Street to existing trails within the Warren Brook Watershed Conservation Area. Hiking enthusiasts could utilize the same parking lot that would be built in conjunction with the athletic field.

### **Guccione Property**

1. Parcel Name: Guccione Property, 18 Elm Street.
2. Parcel Size: 7.56 acres
3. Map # 21, Lots 20 & 28.
4. Zoning Designation: Single Residential B
5. Conducive to Recreation: walking trails, a boat launch, picnic area, a small tot lot and Outdoor Programs are all possible. A small Community Center would also be a possibility and would fulfill one of the most-requested facilities expressed by Upton residents in the Community Survey summarized in Part 1.
6. Access and Egress: off Elm Street, or by obtaining access through property currently owned by the Restaurant.
7. Topography and Slopes: The area between Elm Street and the mill pond is mostly level. The southwest part of the parcel is hilly.
8. Soils: sandy loam.
9. Wetlands Issues: there is a stream that meanders through the property. The mill pond would also require that the setback bylaw to be enforced.
10. Adjacent Land Uses and Buffer Needs: possible need to buffer nearby abutters.
11. Off-site Visual and Aesthetic Concerns: none
12. Site Access and Security: a Community Center would need to be appropriately secured.
13. Traffic Flow and Parking Issues: the narrowness of the front part of the lot may present a challenge to locate parking. Elm Street does not present any access problems.
14. Safety Issues: none
15. Utilities: electrical power currently available; water is also available.

16. Unique Vegetation: none
17. Unique Habitat Areas: none
18. Potential Costs to Develop the Site: minimal

### **Comments**

This is an ideal property that offers the potential to offer both active (Community Center) and passive recreation. The “astrological chamber” on the property is unique and offers the opportunity to educate the public about an interesting aspect of Upton’s history.

### **Henry J. Poirier Property**

1. Parcel Name: Henry J. Poirier Property, South Street
2. Parcel Size: 90.74 acres (approximately 20 acres considered for recreation)
3. Map #: 32-1, Parcel 25
4. Zoning Designation: Agricultural
5. Conducive to Recreation: yes
6. Access and Egress: off South Street
7. Topography and Slopes: level
8. Soils: sandy clay
9. Wetlands Issues: none
10. Adjacent Land Uses and Buffer Needs: need to buffer Green Lane
11. Off-site Visual and Aesthetic Considerations: none
12. Site access and security: remote area
13. Traffic Flow and Parking Issues: improve access road (widen)
14. Safety Issues: none
15. Utilities: electrical power off street; well water
16. Unique Vegetation: none
17. Unique habitat areas: none
18. Potential Cost to Develop the Site: (ledge, trees): minimal

### **Comments**

A much greater percentage of this property is cleared than the Jane Richard’s property. This parcel has great potential for a multi-purpose recreation facility. The soils are ideal and road access is available. This property lies within the Army Corps of Engineers West Hill Dam Flood Control Reservoir and therefore any construction would be subject to Corps review and approval at any elevation below 269. It also means that the property may be occasionally be flooded. According to the Army Corps of Engineer New England District website, the probability of any flooding reaching elevation 259 is one in 25.

### **Jane Richard Property**

1. Parcel Name: Jane Richard Property, West River Street
2. Parcel Size: 60 acres (40 acres considered for recreation)
3. Map# 31, Parcel 9
4. Zoning Designation: Agricultural
5. Conducive to Recreation: yes, several fields
6. Egress and Access: West River Street only
7. Topography and slopes: 2 levels: one level to grade
8. Soils: sandy clay
9. Wetlands Issues: any project would be subject to the 200' setback from the river
10. Adjacent land uses and buffer needs: possibly to the south
11. Off-site Visual and Aesthetic Considerations: none
12. Site Access and Security: none
13. Traffic and Parking Flow Issues: none
14. Safety Issues: none

15. Utilities: electrical power off the street
16. Unique Vegetation: none
17. Unique habitat areas: none
18. Potential Costs to Develop the Site (ledge, trees): minimal; of the property is already cleared.

**Comments**

This is a unique property, offering the opportunity to develop a large, multi-purpose recreation facility. The soils are ideal. This property also lies within the Army Corps of Engineers West Hill Dam Flood Control Reservoir and would also be subject to Corps review and approval before construction could begin.

**Kiwanis Beach Property**

1. Parcel Name: Kiwanis Beach Property
2. Parcel Size: 10.3 acres
3. Map # 16, Parcel 8
4. Zoning Designation: Agricultural
5. Conduciveness to Recreation: limited to size of level part of property and required infrastructure.
6. Access and Egress: would require access road off Cider Mill Road and a parking lot.
7. Topography and Slopes: the level area is small; the rest of the parcel slopes considerably towards the river.
8. Soils: sandy
9. Wetlands Issues: considerable wetlands to the north. Part of the property may lie within 200 feet of a River Protection zone.
10. Adjacent Land Uses and Buffer Needs: need to buffer abutter
11. Site Access and Security: site access would be difficult; a security gate would be necessary.
12. Off-site Visual and Aesthetic considerations: none
13. Traffic Flow and Parking: access road off of Cider Mill Road would be required; an additional parking lot would be required as the existing lot is filled to capacity in the summer months.
14. Safety Issues: none
15. Utilities: electrical power off of Cider Mill Road.
16. Unique Vegetation: none noted
17. Unique Habitat Areas: beaver pond noted at lower end of parcel
18. Potential Costs to Develop the Property: substantial

**Comments**

This is a least desirable property, given the costs to develop the necessary infrastructure (access road, parking lot) as well as any athletic fields. The size of the parcel that is large enough on which to build an athletic field, tennis court, etc. is very small. The town would receive very limited value from developing this parcel for active recreation. The parcel is best suited for passive recreation and conservation purposes.

**Northbridge Property**

1. Parcel Name: Northbridge Property
2. Parcel Size: 8 acres in Northbridge, one acre in Upton. The parcel is located between the Old Hartford Turnpike and Williams Road, near the Upton/Grafton town line.
3. Upton Map #19, Parcel 87; Northbridge Map #25, Parcel 103
4. Zoning Designation: Single Residential C
5. Conduciveness to Recreation: fairly large parcel, useful for active or passive recreation
6. Access and Egress: would require an access road off of Williams Road via abutter's property.
7. Topography and Slopes: fairly level in most areas
8. Soils: appear to be 1 ½' of loam; glacial till beneath that.
9. Wetlands Issues: perhaps one vernal pool noted.

10. Adjacent Land Uses and Buffer Needs: might require buffer needs to the abutter on Williams Road.
11. Off-site Visual and Aesthetic considerations: none present
12. Site Access and Security: none present
13. Traffic and Parking Flow: access road off Williams Road a possible consideration.
14. Safety Issues: none
15. Utilities: available off Williams Road or access road to water tower
16. Unique Vegetation: none noted
17. Unique habitat areas: none noted
18. Potential Cost to Develop the Property (ledge/tree removal): very wooded, but valuable oak trees could be lumbered.

### **Comments**

Although this parcel is heavily treed, most of the parcel is suitable for active recreation. Appendix 2 illustrates the parcel that is located within Upton; Appendix 3 illustrates the parcel that is located within Northbridge.

**Stefans Farm** – At a Special Town Meeting held on July 24, 2001, the Town of Upton purchased 35 acres of the Stefans Farm property for \$2.4M. The Board of Selectmen has issued a Request for Proposal (RFP) to sell four 2-acre lots at \$700,000. The Upton Land Use Committee met with the Board of Selectmen on June 15, 2005, to discuss possible uses for the remaining property.

1. Parcel Name: Stefans Farm
2. Parcel Size: 112.6 acres on west side and 8.5 acres on east side of Mechanic Street.
3. Map # 10, Lot 2.
4. Zoning Designation: Agricultural
5. Conduciveness to Recreation: passive recreation, such as walking trails; small tot lot; volleyball court; horseshoe pits.
6. Access and Egress: two rights of ways along west side of Mechanic Street; one off Orchard Street.
7. Topography and Slopes: severe slopes on east and west side parcels.
8. Soils: not tested
9. Wetlands Issues: possible vernal pool on west side; Warren Brook runs on the east side and supports brown trout.
10. Adjacent Land Uses and Buffer Needs: possible buffering necessary from town-owned lots on west side of Mechanic Street.
11. Site Access and Security: none noted
12. Off-site Visual and Aesthetic Concerns: not necessary, given the proposed uses of the property.
13. Traffic Flow and Parking: limited parking possible via two rights of ways off west side of Mechanic Street. A small parking lot along east side of Mechanic Street for buses and cars would be preferred in order to accommodate proposed uses on the east side.
14. Safety Issues: given the narrowness of Mechanic Street, off-road parking is required. The severe slopes on the east and west side of Mechanic Street would make ADA compliance issues a challenge.
15. Utilities: electrical power is available from Mechanic Street.
16. Unique Vegetation: none noted
17. Unique habitat areas: vernal pools on west side that might support breeding of salamanders and wood frogs.
18. Potential Costs to Develop the Property: substantial. Ledge removal required; severe slopes to mitigate on both the east and west side.

### **Comments**

This property is more suited to passive, rather than active, recreation. The property lies within the Miscoe Warren Whitehall ACEC. The Upton Conservation Commission intends to seek permission from the Board of Selectmen to turn a portion of the open fields into a savannah-like habitat.

### **Stockwell Property**

1. Parcel Name: Stockwell Property, Mendon Road
2. Property Size: 39.89 acres
3. Map # 25, Parcel 1
4. Zoning Designation: Agricultural
5. Conduciveness to Recreation: large enough for active and passive recreation, including athletic fields and parking.
6. Access and Egress: easily accommodated off of Mendon Road
7. Topography and Slopes: a portion of Lot 4 slopes dramatically to the southeast
8. Soils: sandy loam
9. Wetlands Issues: significant wetlands noted on Lot #3 and #4.
10. Adjacent Land Uses and Buffer Needs: not an issue
11. Off-site Visual and Aesthetic Considerations: not an issue
12. Site Access and Security: easy access
13. Traffic and Parking Flow: one main entrance and exit
14. Safety Issues: none noted
15. Utilities: electrical power off Mendon Road
16. Unique Vegetation: none noted
17. Unique Habitat Areas: none noted
18. Potential Cost to Develop the Property (ledge/tree removal): Lots 1-3 and a portion of Lot 4 are devoid of trees; significant surface ledge noted on Lot 3.

### **Comments**

At a 2005 Special Town Meeting, the Town of Upton voted to not purchase the Stockwell property. Recreation Facilities Consulting, Inc., completed a Report on the Stockwell property at the request of the Upton Open Space Committee. See Appendix 4.

These parcels have been located on a topographical map. Each red flag represents one of the parcels. See Appendix 5.

## PART 6 – Summary and Conclusions

### 6.1 Summary

The Upton Recreation Master Plan includes six parts: Assessment of Community Recreation Needs; Developing a Recreation Facilities Master Plan; Assessment of Existing Recreation Facilities; Moving Towards a Recreation Master Plan; Evaluation of Potential Sites for Recreation; and Summary and Conclusions. Each Part is summarized below.

#### **Part 1 Assessment of Community Recreation Needs**

Upton residents responded to a survey, organized by members of the Upton Recreation Commission, over the weekend of April 24, 2005. The survey provided Upton residents with the opportunity to list the type of and number of additional recreation programs and facilities most desired; to list the most-frequented recreation venues in the town; to state their level of support for new walking paths; and to indicate the level of support for any tax increases to support new “recreation opportunities.” An online version of the survey was made available on the town’s web site and hard copies were made available in the Town Clerk’s Office, the Town Library and several local businesses.

The survey concluded that the recreation venues Upton residents most desire are additional walking and bicycle trails, an indoor swimming pool, a Community Center and various athletic fields (baseball, soccer and lacrosse). Upton residents would like Nature and Outdoor Programs, Summer Camp Programs and Adventure Programs added to the current offerings. The VFW playground is the most-frequented recreation venue in Upton, followed by the Kiwanis Beach area and the Kiwanis Softball Field. Respondents expressed a concern about the cleanliness of both the Kiwanis beach area and Pratt Pond.

#### **Part 2 Developing a Recreation Facilities Master Plan**

A thorough examination of youth and adult sports programs, including historic enrollment data for all programs, as well as the various facilities used for each activity was completed. Demographic information for school-age children and the adult population was used to project the number of participants in a given activity, going forward. Next, the number of teams associated with each Program, were projected. Finally, utilizing the proven “field: team ratios” which considers the annual hours of play that a natural grass athletic field can “host” before its infrastructure is compromised, the required athletic field inventory necessary to meet the Program needs for an Upton-only population was determined.

It was concluded that such an athletic field inventory would need to be augmented with three (3) soccer fields of various age-dependent sizes; three (3) baseball fields of various sizes; and three (3) full-size football/lacrosse fields. It was also concluded that the town lacks enough basketball courts to support the Program needs of the Youth Basketball Program, the Travel Basketball Program and any “Open Gym” requirements. While the town can expect *some* use of the basketball courts at the two high school gymnasiums, the use of those facilities will not meet all the Program needs of the above-mentioned Programs.

#### **Part 3 Assessment of Existing Recreation Facilities**

A thorough examination of existing recreation facilities, including related infrastructure such as parking capacity, fencing, spectator seating, etc., was completed. Using the “Turf Report Card System” from the Ohio State University Turf Program, each athletic field was tested and graded on a scale of 1 to 5, with 5 being optimal. The fields were tested for a number of soil conditions, such as turf permeability and grass coverage; the presence or absence of an irrigation system and drainage system; the solar orientation of each field; and the overall condition of the related infrastructure

mentioned above. In addition, the specific steps required to bring the fields to optimal playing condition were described in great detail.

The physical condition of town and school-owned tennis courts and outdoor basketball courts were also detailed. The physical condition and dimensions of town and school-owned indoor basketball courts were detailed in Part 2.

#### **Part 4 Moving Towards a Recreation Master Plan**

Since Part 2 of the Recreation Master Plan clearly showed that a “gap” exists between the existing athletic field inventory and that which would support the required Program needs, cost and time estimates were detailed for both new construction and renovation of various types of athletic fields. Cost and time estimates were also provided to convert an existing natural grass athletic field to a synthetic “infilled” playing surface, as well as to construct a synthetic turf surface on a new site.

#### **Part 5 Evaluation of Potential Sites for Recreation**

A number of parcels have been identified for possible use for active recreation. Some of these parcels (Glen Echo, Stefans Farm and the Stockwell property) have been previously discussed in great detail and acted upon in various Annual or Special Town Meetings. Various town officials and residents brought other parcels to the author’s attention. All parcels were evaluated using a set of criteria that included access/egress, parcel size, the parcel’s ability to accommodate a variety of recreation facilities; the potential cost to develop the property, including road infrastructure, etc. The most promising opportunity seems to be the prospect of a full-sized athletic field being constructed on the Glen Echo property, as per the agreement between the Town of Upton and the developer. Other properties that seem to hold the most potential for the recreation facilities desired (walking trails, bicycle trails, a Community Center and athletic fields) include the Poirier and Richard properties in the south part of town. Both parcels are very large, with soils (sandy loam) suitable for recreation facilities. It is noted that there are competing interests for flat, open land, as expressed by the Conservation Commission.

The privately-owned parcel at 18 Elm Street could offer passive and active recreation in the form of walking trails, a boat launch, a picnic area, a small tot lot, and a Community Center. The Community Center could include a basketball court, an indoor swimming pool, an arts and crafts area, an outdoor programs area and an education center that would highlight the astrological chamber located on the property.

The town-owned property abutting the Kiwanis Beach property was also evaluated and it was concluded that the property offered limited value for recreation and potentially large development costs for related infrastructure (access road, parking lot, etc.).

The town-owned property in Northbridge between Old Hartford Road and Williams Road represents a better value. This site would also require the construction of an access road from Williams Road, through an abutter’s property. However, the site is fairly level and nearly the entire parcel deemed suitable for active recreation.

The Trask and Willard properties that were donated to the Blackstone Valley Regional Vocational Technical High School will allow that school to expand its athletic field inventory. As of this writing it is not known what percentage of the parcel that can be developed for active recreation, nor what access, if any, to any athletic fields built on this site.

## **Conclusions**

Part 1 of this Study, Assessment of Community Recreation Needs, revealed that Upton residents prefer additional bicycle/pedestrian paths; an indoor pool; a Community Center; additional athletic fields and more walking/hiking and cross-country trails. While the 2600-acre Upton State Forest would seem to satisfy the demand for walking/hiking/cross country skiing/bicycle trails, it is evident that Upton residents desire additional trails in other areas of town, as well as bicycle/pedestrian trails that link various sections of town to each other. Part 2 also demonstrated that the facility needs of an Upton-based recreation program include three ( 3) soccer fields of various sizes; three (3) baseball fields of various sizes and three (3) full-size fields for lacrosse and football play. It was noted that Nipmuc Regional High School lacks a football practice or game field.

It was also noted that the program needs of the Youth Basketball Program and the Travel Basketball Program could not be met with the facilities that exist in Upton (Town Hall gym, Middle School gym) and the facilities that exist at the two high schools. Therefore, given the stated desire for various types of trails, an indoor pool, a Community Center and additional athletic fields, it is concluded that the Poirier and Richards properties hold the most promise for locating most of these facilities. A Community Center could also include a basketball court, another facility need described in Part 1. A small baseball complex could also be located on either property, two small-sized soccer fields one of the two full-size athletic fields. The other full-size field can be realized at the Glen Echo property and should be pursued vigorously.

## **Additional Recommendations**

Athletic fields require a high level of maintenance, including regular irrigation, aeration, fertilization, mowing and lining. In addition to such programs, there are also policies that should be instituted that will prolong the use of these fields. They are listed below.

### **Policies**

**Rainy Day Policy** – Leading turf experts estimate that the amount of wear and tear that is placed on a natural grass athletic field as a result of playing in inclement weather is five times greater than when played in dry weather. The old adage “sow when dry, weed when wet” applies here. In wet weather the underlying dirt layer compacts, lending itself to being more easily torn, and displaced. A policy should be instituted that would prohibit play during inclement weather. A central phone number (“Hotline”) should be made available for coaches, players and parents to call, informing them of a field’s availability on a given day. This is most useful for coaches who work out of town and must often leave their place of employ early in order to arrive on time for a practice session. While it is always very tempting to allow practices and games to be held during inclement weather, the priority for long-term care of athletic fields needs to be communicated to the coaches.

**Best Use Policy** – Describes the optimal way for an athletic field to be used during practice sessions, in an attempt to prevent an uneven wear pattern. Many coaches have been trained to run a practice using a field in the same orientation as that is used for a game...goal to goal. These results in wear patterns near the goalmouths, middle of the field between the hash marks (football), etc. Coaches should be shown that an effective practice session can be run using the width of the field; the areas immediately to the fields’ periphery, etc.

### **Scheduling of Facilities**

The Town of Upton lacks a centralized system to schedule its athletic fields, basketball courts and tennis courts. Often times, a facility is scheduled based on which Program Director receives permission from a “decision maker” first, whether it is town property or school

property. In addition to causing hard feelings, this process results in an inequitable distribution of use amongst taxpayer-owned properties. There should be a central “go to” person, either a town or school employee responsible for scheduling all facilities. This person should work within a carefully-constructed Scheduling Policy.

A professional Scheduling Policy includes the following characteristics:

1. The Scheduling person is clearly defined.
2. A priority system for use for each facility, and for each season. The needs of school sports, Recreation Commission activities, club or travel teams, Adult Programs, etc. should all be carefully prioritized. Example: Recreation Commission Programs would be given priority over “travel team sports” or any sport where “cuts” are part of the process. By their very nature, “Cuts” are exclusionary and these programs satisfy a relatively small percentage of the population.
3. The starting and ending dates for each season are clearly defined.
4. Registration deadlines for spring sports, winter sports spring sports and summer sports should be clearly defined.
5. Fee structures should be considered. Often times, a different fee structure is instituted, depending on the category of user, i.e., “Town program” versus “for profit” program?
6. The rules and regulations governing the uses of all facilities should be clearly spelled out. These include the prohibition of any tobacco and alcoholic beverage use; any footwear requirements; the requirement to remove of all trash after games and practices
7. Any insurance requirements should be clearly described.
8. These policies must be clearly posted at each athletic field and gymnasium with visible signage.

**Appendix 1**

**Proposed Athletic Field at Glen Echo Estates**

(copy of plan on file at Town Clerk's Office)

**Appendix 2**

**“Northbridge Parcel” Located Within Upton**

**(copy of tax map on file at Town Clerk’s Office)**

**Appendix 3**

**Upton Parcel Located Within Northbridge**

**(copy of tax map on file in Town Clerk's Office)**

**Appendix 4**

**Stockwell Property on Mendon Road**

**(copy on file at Town Clerk's Office)**

**Appendix 5**

**Potential Recreation Sites in Upton, Massachusetts**

**(copy of file at Town Clerk's office)**