

Lynnfield Technology Committee

Board of Selectmen
Roadmap Presentation
August 11th , 2008



Overview

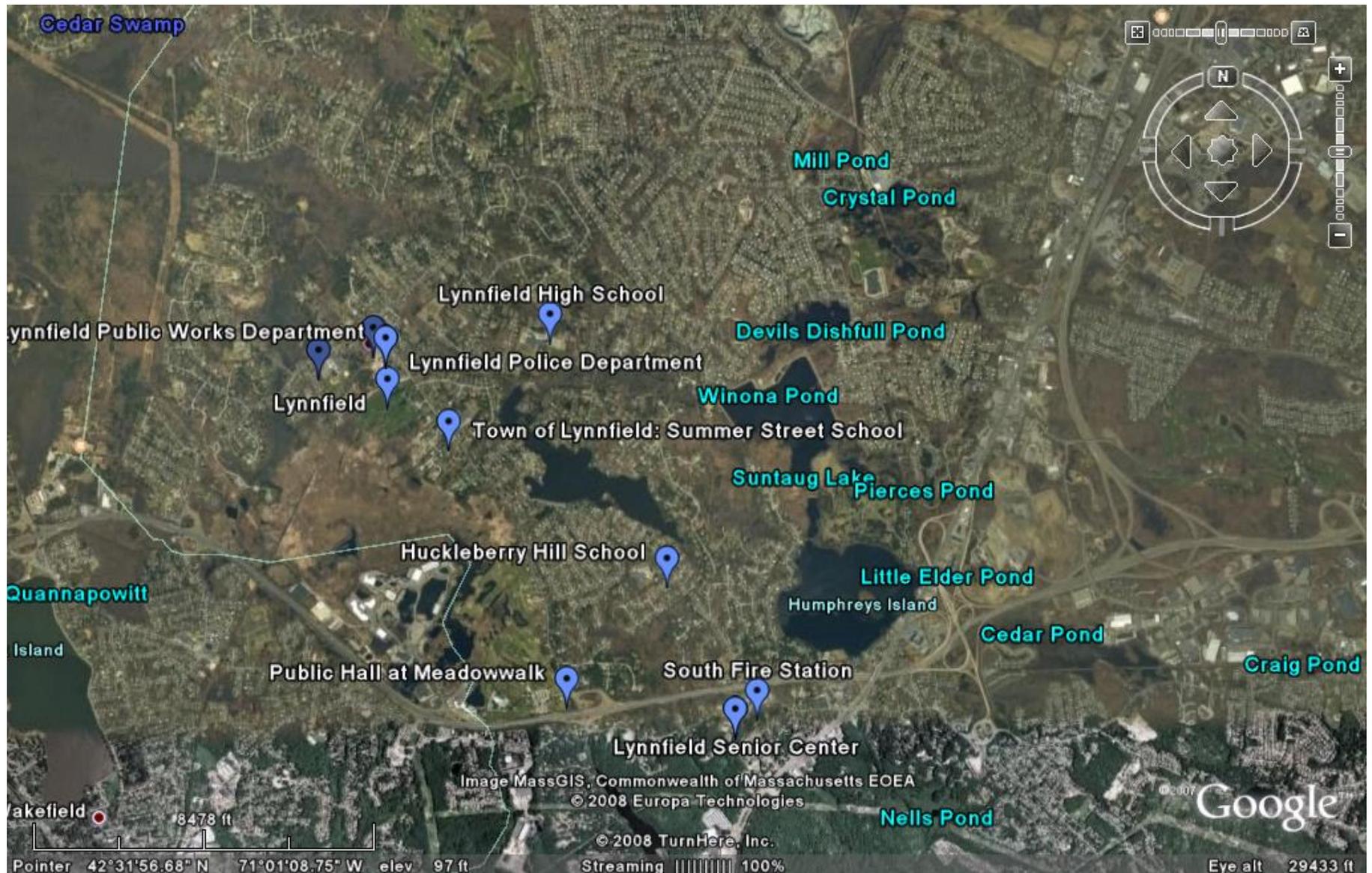
- Mission Statement
- Connectivity Map
- Infrastructure & Equipment & Software
 - 2006 and prior
 - 2007
 - 2008 and Future
- Integrated view of the Town
 - Schools
 - Town



Mission Statement

- To ensure that all Town of Lynnfield departments utilize technology in a common and cost effective manner for the betterment of the community and improvement of the citizen experience.

Building Connectivity Diagram





Current Efforts – April 08 to date

- Reviewed Hardware (PC & Notebook)
 - Current Inventory
 - (in schools 1,400 to 1,100 machines with increased enrollment)
 - Maintenance Plan
 - Replacement Standards
 - Replacement Plan (including migration to other schools)
- Reviewed Software
 - Current Employee configuration
 - Current Faculty
 - Current Student



Infrastructure & Equipment & Software - 2006 and prior

- Buildings connected via ADSL level wiring
- Schools had multiple servers and little connectivity
- Minimal connection between municipal buildings.
- School dept computers purchased in 2000 as part of school building programs
- Instructional and Administrative software client / server based



Infrastructure & Equipment & Software - 2007

- All buildings connected via fiber optic
- Municipal accounting software connected to all buildings. Rollout to continue through 2009. Will automate purchasing including schools.
- Plans made for phone replacement for Town Hall and Middle school.
- School enrollment continues to increase. No replacement of School computers.



Infrastructure & Equipment & Software - 2008

- Town implements fiber optic. Allows productivity in school department operations
- Town faces challenges of replacing 7 year old hardware and software.
- Town Meeting approves first phase of equipment replacement.
- VOIP phone replacement for Town Hall and Middle School – lower operating costs. Model for the future.
- School backups now performed with little human interaction and have greater reliability.
- Town implements new website



Focus - remainder of 2008

- **Hardware** (non PC notebook)
 - Servers
 - Routers
- **School PC replacements**
- **Software**
 - Non desktop
 - Desktop

School Population - Levels

| Level | YR00 | YR01 | YR02 | YR03 | YR04 | YR05 | YR06 | YR07 | Grand Total |
|----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------------|
| 1.Elem | 726 | 755 | 786 | 798 | 835 | 867 | 902 | 897 | 6,566 |
| 2.Middle | 618 | 622 | 648 | 674 | 664 | 708 | 704 | 715 | 5,353 |
| 3. High School | 511 | 485 | 497 | 514 | 552 | 590 | 629 | 660 | 4,438 |
| Grand Total | 1,855 | 1,862 | 1,931 | 1,986 | 2,051 | 2,165 | 2,235 | 2,272 | 16,357 |
| % Growth | | 0% | 4% | 3% | 3% | 6% | 3% | 2% | |

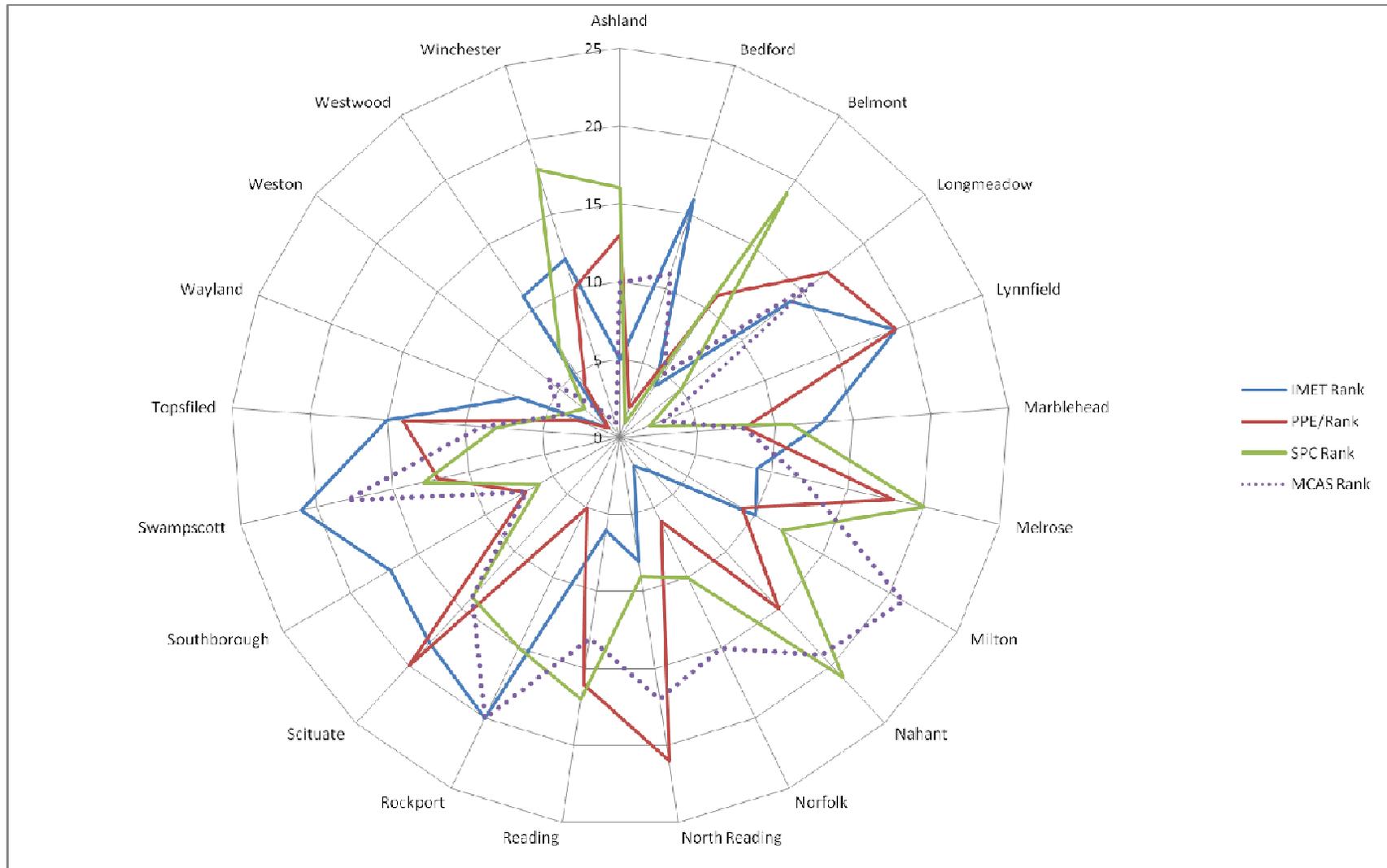
School Population – Grade Cohorts

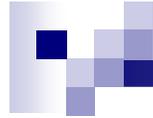
| Grade | YR00 | YR01 | YR02 | YR03 | YR04 | YR05 | YR06 | YR07 | Grand Total |
|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------------|
| O.K | 114 | 121 | 156 | 147 | 160 | 161 | 163 | 145 | 1,167 |
| Gr.1 | 152 | 150 | 149 | 174 | 174 | 177 | 189 | 189 | 1,354 |
| Gr.2 | 158 | 154 | 159 | 158 | 174 | 180 | 181 | 191 | 1,355 |
| Gr.3 | 161 | 164 | 154 | 162 | 165 | 182 | 182 | 179 | 1,349 |
| Gr.4 | 141 | 166 | 168 | 157 | 162 | 167 | 187 | 193 | 1,341 |
| Gr.5 | 170 | 149 | 171 | 173 | 161 | 182 | 170 | 189 | 1,365 |
| Gr.6 | 152 | 174 | 153 | 168 | 177 | 169 | 184 | 172 | 1,349 |
| Gr.7 | 149 | 151 | 175 | 155 | 170 | 184 | 165 | 188 | 1,337 |
| Gr.8 | 147 | 148 | 149 | 178 | 156 | 173 | 185 | 166 | 1,302 |
| Gr.9 | 127 | 131 | 131 | 132 | 168 | 162 | 185 | 184 | 1,220 |
| Gr.10 | 121 | 126 | 132 | 130 | 125 | 170 | 148 | 171 | 1,123 |
| Gr.11 | 116 | 115 | 127 | 130 | 126 | 133 | 167 | 147 | 1,061 |
| Gr.12 | 147 | 113 | 107 | 122 | 133 | 125 | 129 | 158 | 1,034 |
| Grand Total | 1,855 | 1,862 | 1,931 | 1,986 | 2,051 | 2,165 | 2,235 | 2,272 | 16,357 |

Technology ,PPE, MCAS for Peer Communities

| Towns | Instructional Materials, Equipment and Technology Function per pupil | Rank | Per Pupil Expenditure | PPE/Rank | Students per "modern" Computer (SPC) | Classrooms on the Internet (%) | SPC Rank | 10th Grade math | 10th Grade English | MCAS Rank |
|------------------|----------------------------------------------------------------------|-----------|-----------------------|-----------|--------------------------------------|--------------------------------|----------|-----------------|--------------------|-----------|
| Winchester | 294 | 12 | 10,886 | 10 | 4.8 | 100 | 18 | 8 | 8 | 1 |
| Westwood | 307 | 11 | 12,436 | 4 | 3.1 | 100 | 8 | 8 | 15 | 2 |
| Lynnfield | 184 | 19 | 9,840 | 19 | 2.3 | 100 | 2 | 23 | 12 | 3 |
| Wayland | 356 | 7 | 13,214 | 3 | 2.5 | 100 | 3 | 27 | 8 | 4 |
| Belmont | 378 | 4 | 10,764 | 11 | 5.3 | 100 | 19 | 36 | 8 | 5 |
| Weston | 662 | 1 | 16,463 | 1 | 2.5 | 100 | 4 | 12 | 45 | 6 |
| Southborough | 214 | 17 | 11,291 | 7 | 2.7 | 100 | 6 | 36 | 29 | 7 |
| Marblehead | 281 | 13 | 11,202 | 8 | 3.5 | 100 | 11 | 36 | 45 | 8 |
| Topsfield | 230 | 15 | 10,515 | 14 | 3.1 | 100 | 7 | 53 | 37 | 9 |
| Ashland | 370 | 5 | 10,599 | 13 | 3.9 | 100 | 15 | 53 | 45 | 10 |
| Bedford | 218 | 16 | 14,539 | 2 | 2.3 | 100 | 1 | 75 | 23 | 11 |
| Melrose | 336 | 9 | 9,932 | 18 | 5.4 | 100 | 20 | 63 | 76 | 12 |
| Reading | 361 | 6 | 10,149 | 16 | 4.4 | 100 | 17 | 83 | 57 | 13 |
| Scituate | 185 | 18 | 9,781 | 20 | 3.7 | 100 | 14 | 60 | 81 | 14 |
| Norfolk | 486 | 2 | 11,423 | 6 | 3.4 | 100 | 10 | 43 | 122 | 15 |
| Longmeadow | 261 | 14 | 10,140 | 17 | 2.6 | 100 | 5 | 75 | 94 | 16 |
| North Reading | 351 | 8 | 9,049 | 21 | 3.3 | 100 | 9 | 83 | 112 | 17 |
| Swampscott | 89 | 21 | 10,688 | 12 | 3.5 | 100 | 13 | 83 | 112 | 18 |
| Nahant | 467 | 3 | 10,246 | 15 | - | 100 | 21 | 83 | 112 | 19 |
| Rockport | 164 | 20 | 12,099 | 5 | 3.9 | 100 | 16 | 43 | 183 | 20 |
| Milton | 309 | 10 | 11,182 | 9 | 3.5 | 100 | 12 | 126 | 173 | 21 |
| State Avg | 356 | | 11,859 | | 3.4 | | | | | |

Technology ,PPE, MCAS for Peer Communities





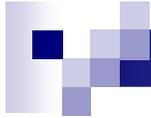
Technology Plan & Replacement Projection FY 08-FY11

| | FY '08 | FY '09 | FY '10 | FY '11 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| <u>Staffing</u> | Additional Staff: 1 Full Time Desktop Support Technician Dropped From Budget Proposal | Additional Staff: 1 Full Time Desktop Support Technician Dropped From Budget Proposal | Additional Staff: 1 Full Time Desktop Support Technician | TBD |
| <u>Server Replacements</u> (Consolidation over time dependent on Fiber Project) | Replacing Email Server Split FE-BE) Reuse Current Server(\$14,000) | Replace HS Servers Possibly Consolidate to 2 at HS with 1 High Cap. Server at TH, NAS Server and Autoloader TBU | Replace MS Servers Possibly Consolidate to 2 at MS (\$35,000) | Replace HH and SS Servers Possibly Consolidate to 2 at each site (\$35,000) |
| <u>Replacement End of Life Equipment</u> | HS: 100 Laptops **All new laptops with 5 yr cc warranty** | MS: 90 Laptops (\$100,000) **All new laptops with 5 yr cc warranty** HS : 216 Desktops (\$204,000) | SS & HH: 150 Laptops (\$170,000) **All new laptops with 5 yr cc warranty** MS: 309 Desktops (\$292,000) | SS & HH: 211 Desktops (\$204,000) |
| <u>Server & Laptop Warranties</u> (Dell considers equipment EOL at 5 years) All new laptop purchases will have 5 yr warranties to cover life of product | HH & SS: Expires \$50,000 2 yr Extended (DONE) | Server Warranties not needed until 2012 with new server purchases unless purchased with 5 year warranty. | | |
| <u>Fiber Connectivity</u> | IN PROGRESS (Funds previously encumbered) | | | |

Key:

Green: Completed

Red: Not Completed



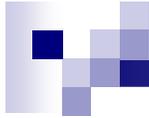
Technology
Plan & Replacement Projection FY 08-FY11

| | FY '08 | FY '09 | FY '10 | FY '11 |
|-----------------------|-------------------------------------------------------------------|-------------------------------------------------------------------|------------------------------------------|------------------------------------------|
| <u>Printers</u> | Inkjet replacement Project phase 1 55 Ink Jet Printers (\$22,000) | Inkjet Replacement Project phase 2 55 Ink Jet Printers (\$22,000) | 40 unit Replacement allotment (\$16,000) | 40 unit Replacement allotment (\$16,000) |
| <u>LCD Projectors</u> | | | | HS: 40 LCD's (9yrs old) (\$50,000) |
| <u>Smart Boards</u> | TBD | | | |

Key:

Green: Completed

Red: Not Completed



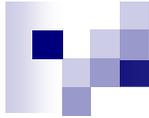
Technology Plan & Replacement Projection FY 09-FY12

| | FY '09 | FY '10 | FY '11 | FY '12 |
|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|--------|
| <u>Staffing</u> | Additional Staff: 1 Full Time Desktop Support Technician | Additional Staff: 1 Full Time Desktop Support Technician | NA | NA |
| <u>Server Replacements</u> (Consolidation over time dependent on Fiber Project) | Replace HS Servers Possibly Consolidate to 2 at HS with 1 High Cap. Server at TH, NAS Server and Autoloader TBU | Replace MS Servers Possibly Consolidate to 2 at MS (\$50,000) | Replace HH and SS Servers Possibly Consolidate to 2 at each site (\$50,000) | NA |
| <u>Replacement End of Life Equipment</u> | HS: 100 Laptops **All new laptops with 5 yr cc warranty** HS : 216 Desktops | MS: 90 Laptops (\$100,000) **All new laptops with 5 yr cc warranty** 309 Desktops (\$292,000) | SS & HH: 150 Laptops (\$170,000) **All new laptops with 5 yr cc warranty** SS & HH: 211 Desktops (\$204,000) | NA |

Key:

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Red: Not Completed



Technology Plan & Replacement Projection FY 09-FY12

| | FY '09 | FY '10 | FY '11 | FY '12 |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|---------------------------------------------|------------------------------------------------|
| <u>Printers</u> | Inkjet replacement Project phase 1 55 Ink Jet Printers (\$22,000) Funds Allocated, Printers not purchased yet | Inkjet Replacement Project phase 2 55 Ink Jet Printers (\$22,000) | 40 unit Replacement allotment (\$16,000) | 40 unit Replacement allotment (\$16,000) |
| <u>LCD Projectors</u> | Replace As Needed | Replace As Needed | HS: 40 LCD's (9yrs old) (\$50,000) | |
| <u>Smart Boards</u> | TBD (Replace as needed) | | | |

Key:

Green: Completed

Red: Not Completed

Town Website Usage

| Metric | March | April | May | June | July | August- to 8/5 |
|-----------------------------------|-----------|-----------|-----------|-----------|-----------|----------------|
| Total Sessions | 8,089 | 8,022.00 | 9,876.00 | 9,472.00 | 10,788.00 | 1,329.00 |
| Total Pageviews | 63,644 | 57,689.00 | 62,862.00 | 56,671.00 | 53,364.00 | 5,174.00 |
| Total Hits | 63,709 | 57,952.00 | 63,178.00 | 56,999.00 | 53,809.00 | 5,221.00 |
| Total Bytes Transferred | 3.74 GB | 2.89 GB | 2.50 GB | 2.70 GB | 2.50 GB | 280.74 MB |
| Average Sessions Per Day | 261 | 267.40 | 318.58 | 315.73 | 348.00 | 42.87 |
| Average Pageviews Per Day | 2,053 | 1,922.97 | 2,027.81 | 1,889.03 | 1,721.42 | 166.90 |
| Average Hits Per Day | 2,055 | 1,931.73 | 2,038.00 | 1,899.97 | 1,735.77 | 168.42 |
| Average Bytes Transferred Per Day | 123.54 MB | 98.55 MB | 82.55 MB | 92.00 MB | 82.43 MB | 9.06 MB |
| Average Pageviews Per Session | 7.87 | 7.19 | 6.37 | 5.98 | 4.95 | 3.89 |
| Average Hits Per Session | 7.88 | 7.22 | 6.40 | 6.02 | 4.99 | 3.93 |
| Average Bytes Per Session | 484.81 KB | 377.38 KB | 265.33 KB | 298.39 KB | 242.54 KB | 216.31 KB |
| Average Length of Session | 0:07:10 | 00:09:10 | 00:09:10 | 00:09:53 | 00:09:02 | 00:08:10 |



Town Website

- **CRITERIA USED FOR ALL MUNICIPAL WEBSITES by Massachusetts Campaign for Open Government**
- The following are the criteria used in determining whether a municipality has posted the key governance records online:
 - 1. Governing Body's Agenda**
 - 2. The Governing Body's Minutes**
 - 3. Fiscal Year Budget Information**
 - 4. Municipality's Bylaws, Code, or Ordinances**
 - 5. The Town Meeting Warrant**
 - 6. The Town Meeting Results**

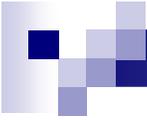
- Source - <http://www.maopengov.org/>



Town Website Superstars

- **CRITERIA FOR ALL SUPERSTAR MUNICIPAL WEBSITES**
 - **1. An archive of at least one year's worth of the governing body's agendas and minutes**
 - **2. The zoning bylaws**
 - **3. The charter or charter information**

■ Source - <http://www.maopengov.org/>



Focus - remainder of 2008 -

- Other Issues to be examined
 - Energy Management
 - Risk Assessment for technology –
 - cost vs. downtime – input from departments
 - Virtualization –
 - fewer machines
 - lower operating costs
 - Servers and desktops
 - Outsourcing
 - SAAS –
 - gradequick – use at the middle and high school – software updating required. Web based.
 - Office alternatives
 - Maintenance policies
 - Phone Systems
 - Cable TV – broadcast from each building
 - Financing Option – Should TTC examine
 - Smartboard status and usage