



Wellesley School Redistricting School Committee Presentation

January 21, 2020

Covered Today

1. Introductions
2. Project Overview
3. Project Background
4. School Committee Guidelines
5. Redistricting Process & Workflow
6. Wellesley Context Maps
7. Map Options Presentation



Introductions

Your AppGeo Team



**Kate Hickey,
Vice President**

- 18 years experience
- School redistricting subject matter expert
- Will oversee and advice process, attend key meetings and facilitate discussion



**Priya Sankalia,
Project Manager**

- 16 years experience
- Point of contact
- Will manage team, work with technical staff, coordinate project activity



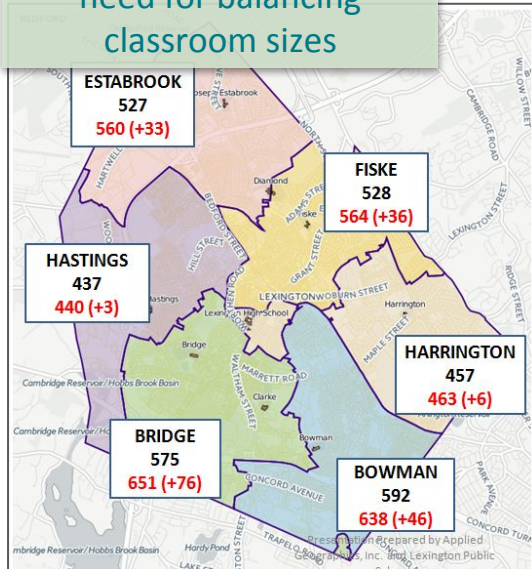
**Ashley Tardif,
Geospatial Analyst**

- Extensive experience in spatial data processing, analytics, and data visualization

Extensive experience working with MA School Districts

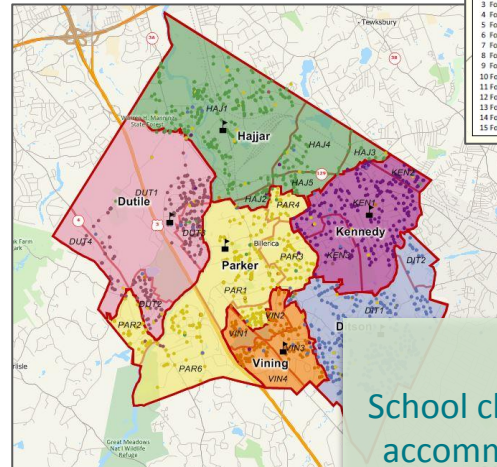
Lexington

Increased enrollment and need for balancing classroom sizes



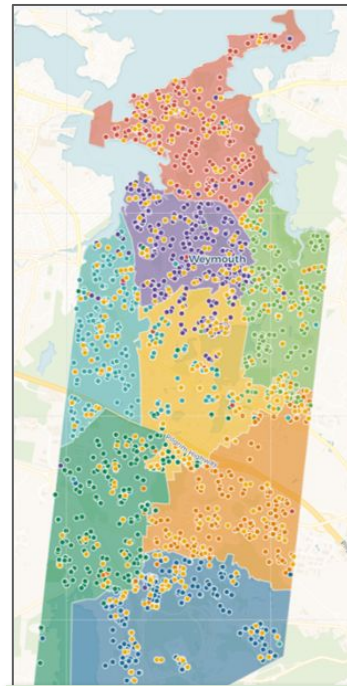
Newton

New school opening needed to balance enrollment



Billerica

School closing, needed to accommodate students



Weymouth

Low enrollment; need a strategy for elementary and middle school configurations

Redistricting Team

Wellesley Public School Staff

- David Lussier, Superintendent
- Cynthia (Cindy) Mahr, Asst Superintendent Finance and Operations
- Deane McGoldrick, Transportation Director
- Jeff Dees, Upham School Principal
- Charlene Cook, Hardy School Principal

Wellesley School Committee Representative

- Matt Kelley

AppGeo (Consultant) Staff

- Kate Hickey, VP
- Priya Sankalia, Project Manager
- Ashley Tardif, Geospatial Analyst

Redistricting Team

Parent Representatives

- Martha Rockwood, Bates
- Megan Leblanc, Fiske
- Ming Sun, Hardy
- Aimee Bellew, Hunnewell
- Dan Burke, Schofield
- Brook Rosenbaum, Sprague
- Stephanie Hubbard, Upham



Project Overview

Project Goals & Objectives

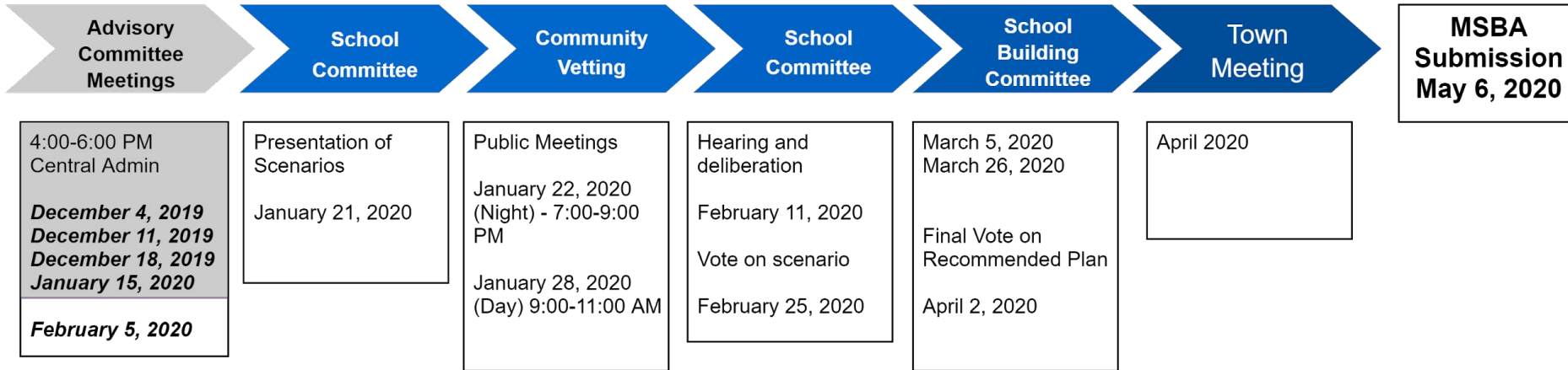
- The redistricting project is part of the larger School Building Committee Project to rebuild Hunnewell and rebuild Hardy OR Upham using MSBA funds (See <https://www.wellesleyhhu.org/>)
- The project goal is to realign districts to accommodate the impending building projects
- The project team will submit 2 redistricting plans, one each for a new Hardy or a new Upham to be included in the feasibility study
- Earliest implementation of the chosen rebuild and redistricting plan will be in 2024

Project Overview

- WPS hired AppGeo as consultants to assist in the redistricting effort
- The project was kicked off in early December 2019
- The project team was formed that developed a timeline for the project
- AppGeo processed background information and data provided by WPS
- The project team worked collaboratively on building the map options taking into consideration:
 - School Committee guidelines (neighborhood schools, travel distances etc.)
 - Enrollment projections from FutureThink
 - School capacities and targets
- Team presents to School Committee 2 maps each for building at Hardy or Upham

Timeline

Superintendent's Advisory Committee on Redistricting





Project Background

History of redistricting in Wellesley

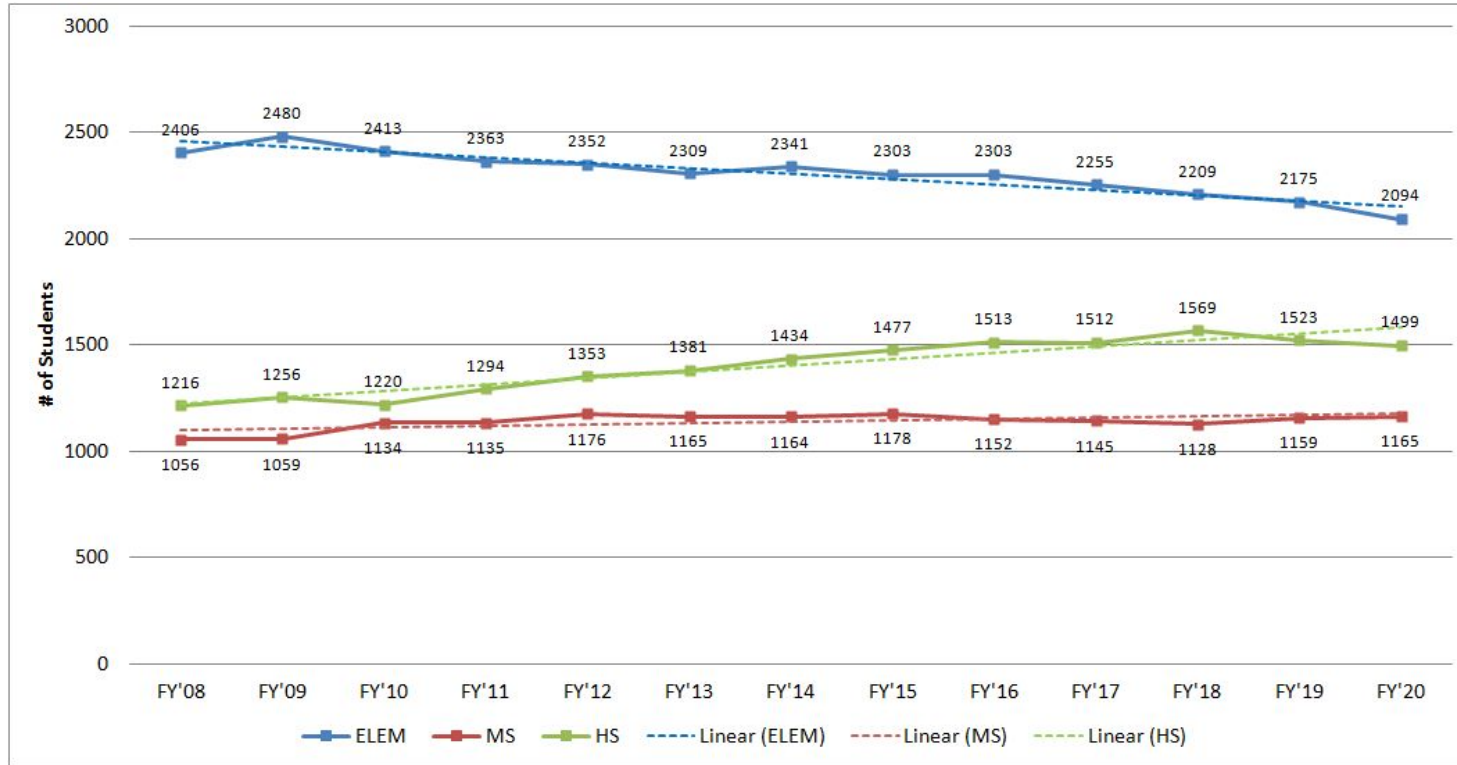
- Major redistricting efforts have coincided with opening and closure of schools
- Most recently redistricted from six to seven schools when Sprague reopened in 2002-2003
 - Drew the attendance zone lines as they are today
- Superintendent formed redistricting study committee in 2013-2014
 - Address imbalances in enrollments and class sizes across the District
 - Art/Music rooms had been repurposed
 - Ultimately decided not to redistrict at that time
 - Adopted a policy to manage enrollments through grade level closures

Why do we need a redistricting plan?

- Sustained enrollment decline
 - Over the last 12 years
- Aging schools
 - Three schools (Hunnewell, Hardy, and Upham) need to be rebuilt
- Planned new housing developments
 - Several projects expected to come on line before 2024 or 2026
- Enrollment projections
 - Town has undertaken 2 sets of enrollment projection studies and performed internal projections to inform this process
- MSBA Feasibility Study for Upham/Hardy Project

Given lower enrollment, results of the internal and external enrollment projections, and the need to rebuild - a redistricting plan with maps is needed to evaluate impact of rebuilds and lower enrollment

Enrollment over time and grade level



- Enrollment over the past 12 years has shown a steady decline at the Elementary level
- In contrast the high school enrollment has grown slightly and middle school enrollment is flat

Maps Using Projected Numbers

1. Current geo-located student counts were used to calculate percentage of students in each component
2. This percentage of students in each component was applied to the projected student count (from Future Think) to derive the projected students in a component
3. The Future Think projected student count takes into consideration the new developments expected to go online after 2024
4. Maps were built using this component projection
5. Maps were built assuming a school at Hardy OR Upham

Capacity/Target Discussion

1. Assumption is that all the schools will be 18 section schools
 - a. This takes into account art and special programming including a classroom for STEM
 - b. Assuming 22 students in grades K-2 and 24 in grades 3-5
2. MSBA Guidelines for targeted enrollment: 85%
3. Our maps have been built/evaluated against the 85% metric



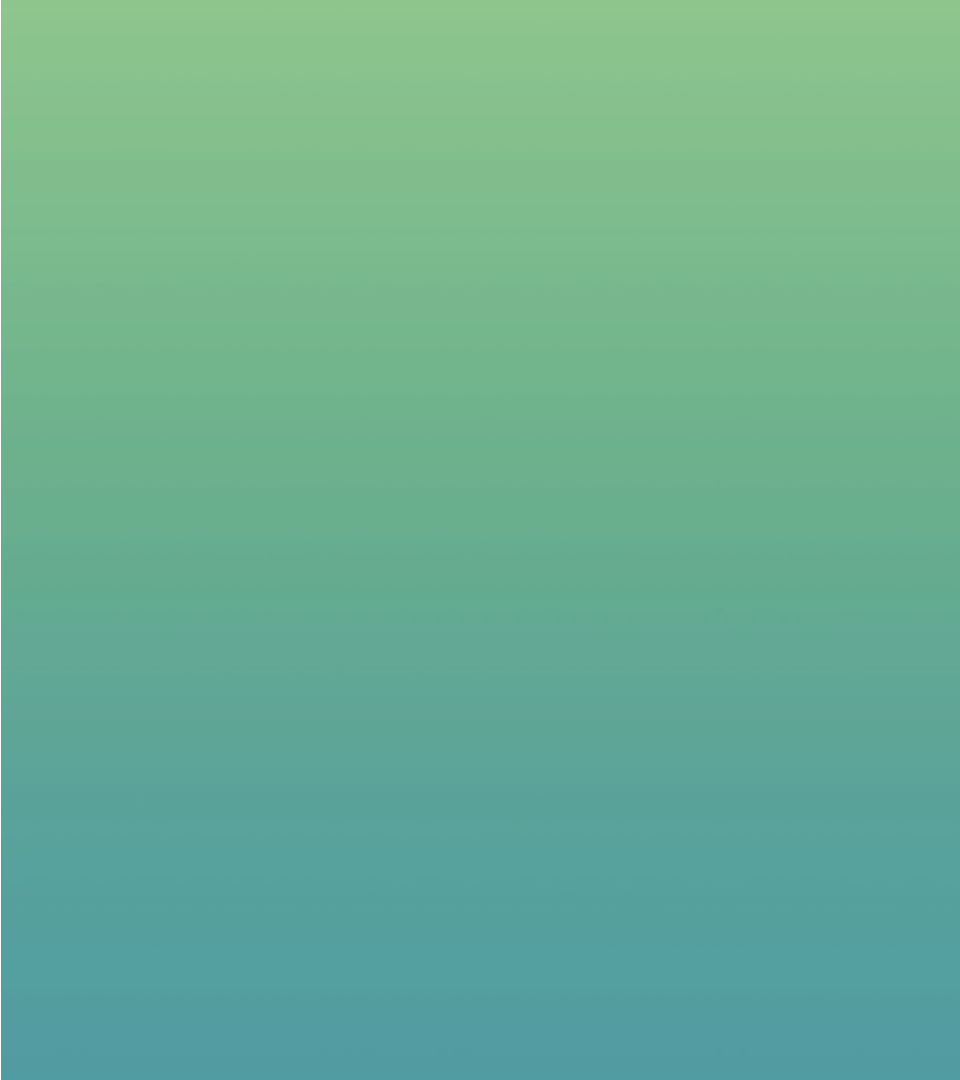
School Committee Guidelines

School Committee Guidelines

- Current class size guidelines shall be maintained
 - 18-22 in grades K-2 and 22-24 in grades 3-5.
- Appropriate dedicated space shall be maintained for art, music, English Language Learner (ELL) programs, special education programs, and other instructional interventions.
- In order to defer the need for any future redistricting as much as possible, attendance zones should be designed to provide long-term stability, by distributing excess capacity as evenly as possible across the town.

School Committee Guidelines, contd...

- Natural boundaries in town (such as Route 9, Washington St, and the train tracks), as well as traditional neighborhood boundaries, should be respected as much as possible.
- Encouraging walkability and minimizing the need for driving should be considered.



Redistricting Process & Workflow

Redistricting Analysis Workflow

1 : Data gathering and processing mapping current student locations and getting an understanding of the problem to solve

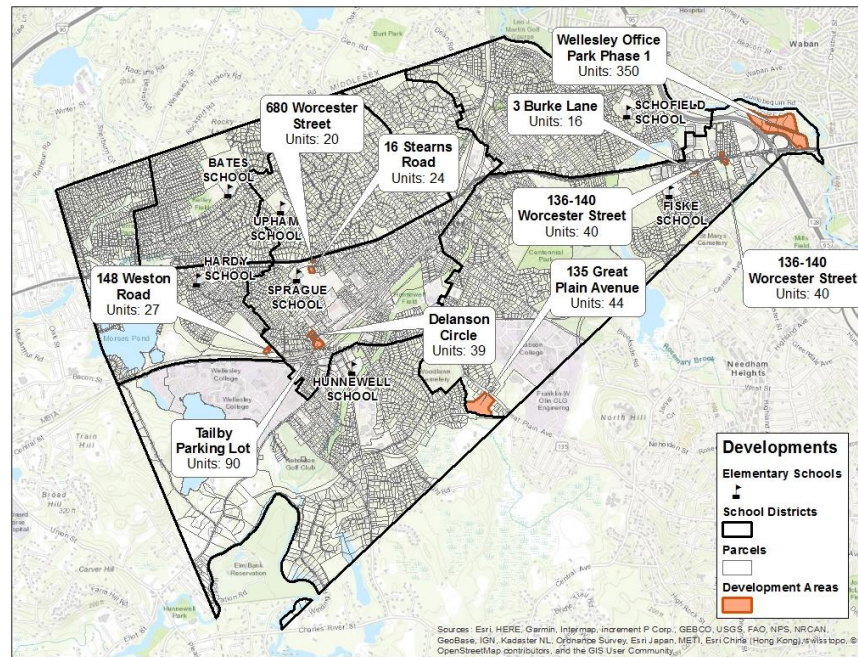
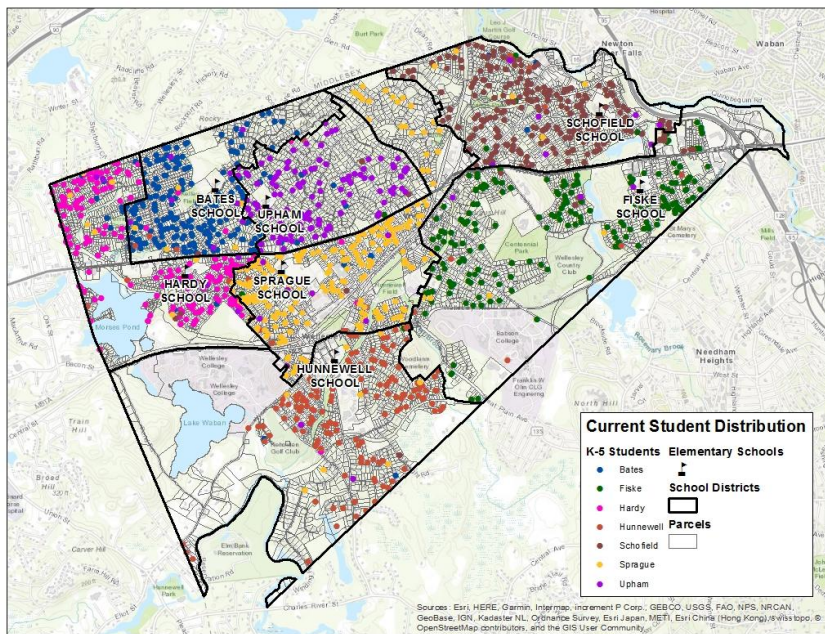
2 : Identifying discrete areas that become components or the building blocks for map options

3 : Collaboratively building maps and evaluating maps against district considerations

4 : Presenting information in the form of maps, charts and graphics to staff and community

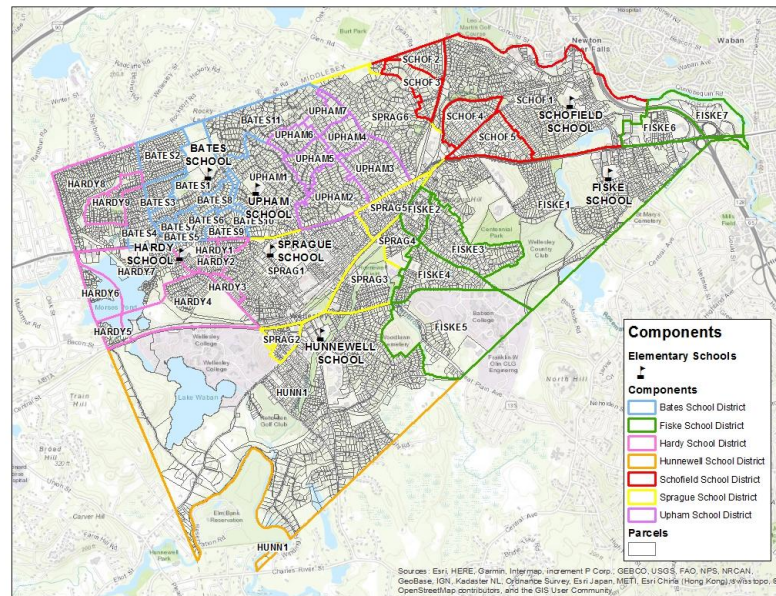
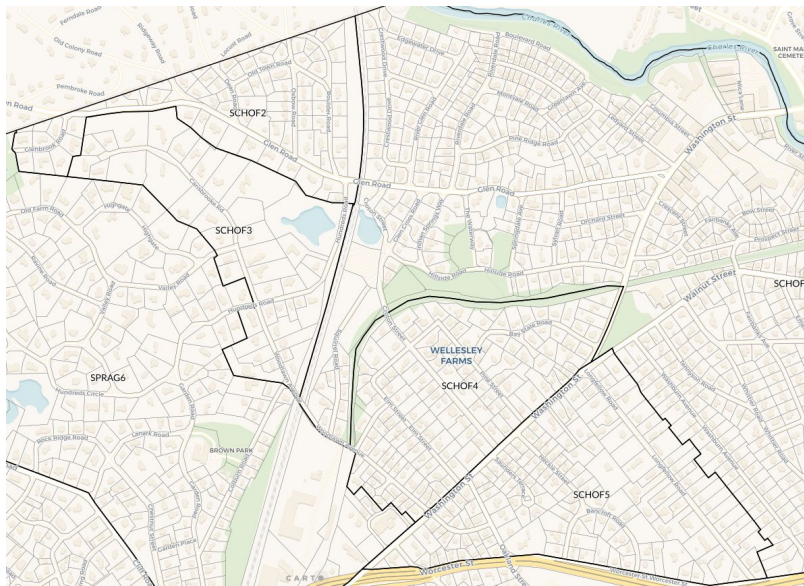
Data Gathering & Analysis

Current student locations were geocoded and conflated with component geography. Additional background information was mapped including planned developments, sale history, land use etc.



Components as Map Option Building Blocks

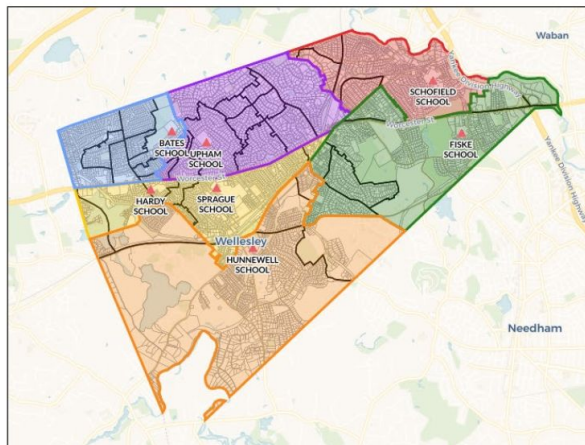
Components are building blocks or tools to build map options. These were built collaboratively with significant input from parents on the team, with intimate knowledge of the town. Close attention was paid to neighborhoods and natural boundaries when building the components.



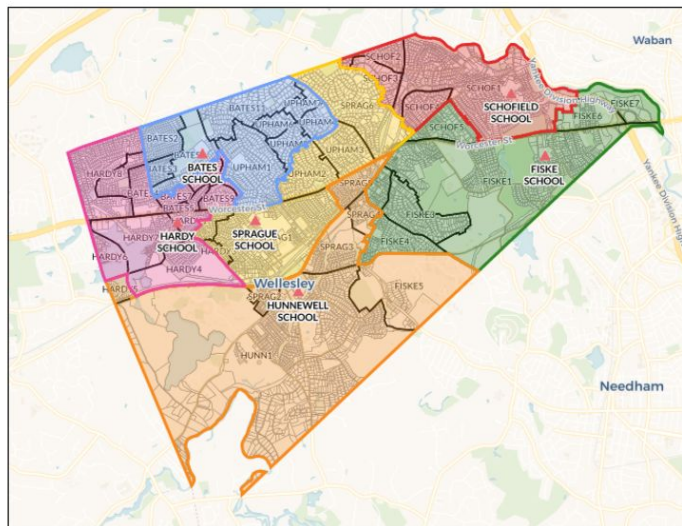
Map Option Building

Map options were built collaboratively using the components. A map option consists of new district boundaries created as a combination of components. For each option (Upham and Hardy) multiple (8-10) map options were created. Every map option was presented with projected capacity and walkability information.

Upham Map 4



Hardy Map 9



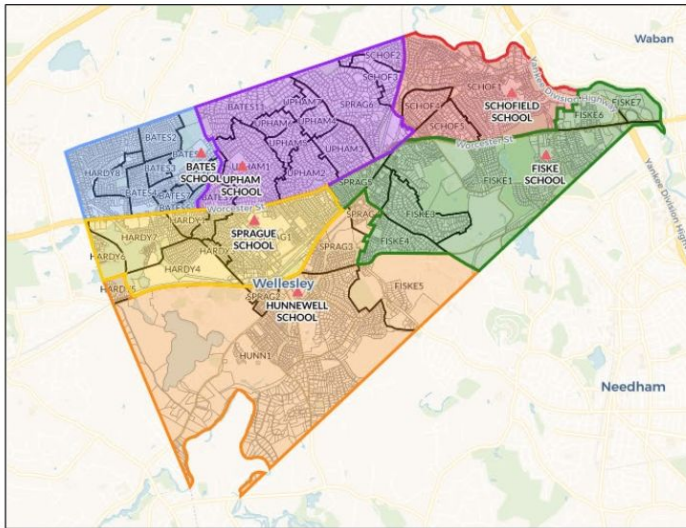
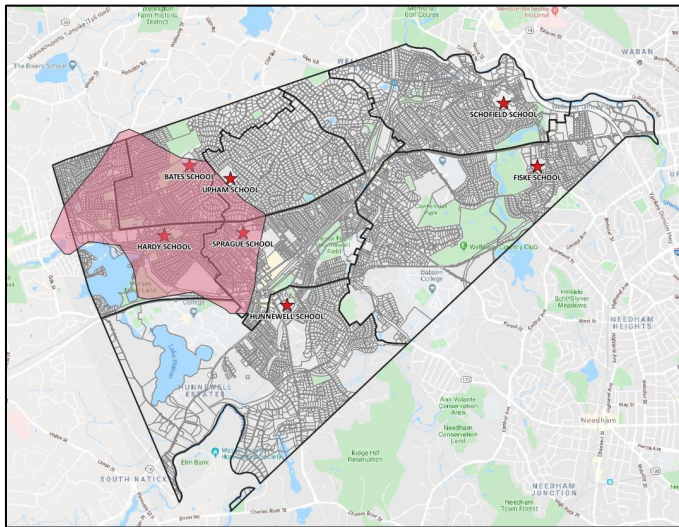
District	School Capacity (Planned)	Target Enrollment (85%)	Projected Enrollment	% Projected Enrollment Capacity
Bates	414	352	340	82%
Fiske	414	352	310	75%
Hardy	414	352	320	77%
Hunnewell	414	352	329	79%
Schofield	414	352	327	79%
Sprague	414	352	344	83%

Residential Properties in Assigned District Under, 0.5, 1, and 2 miles from School

District	% Under 1/2 Mile	% Under 1 Mile	% Under 2 Miles
Current Scenario	22%	61%	90%
Scenario 6	21%	59%	92%
Scenario 7	21%	61%	91%
Scenario 8	21%	60%	92%
Scenario 9	21%	59%	90%

Map Option Evaluating

Each map option was evaluated against the school committee guidelines, identifying pros and cons of each map. Detailed review of each map included an evaluation of walkability, drivability, and projected capacity with a strong emphasis on keeping neighborhoods intact and balancing projected enrollment across all districts.



Upham Map 7

Residential Properties in Assigned District Under, 0.5, 1, and 2 miles from School

District	% Under 1/2 Mile	% Under 1 Mile	% Under 2 Miles
Bates	15%	54%	100%
Fiske	20%	30%	58%
Hunnewell	14%	70%	98%
Schofield	29%	84%	100%
Sprague	20%	69%	96%
Upham	12%	50%	93%

District	% Under 1/2 Mile	% Under 1 Mile	% Under 2 Miles
Current Scenario	22%	61%	90%
Scenario 5	17%	56%	91%
Scenario 6	17%	57%	93%
Scenario 7	18%	58%	91%

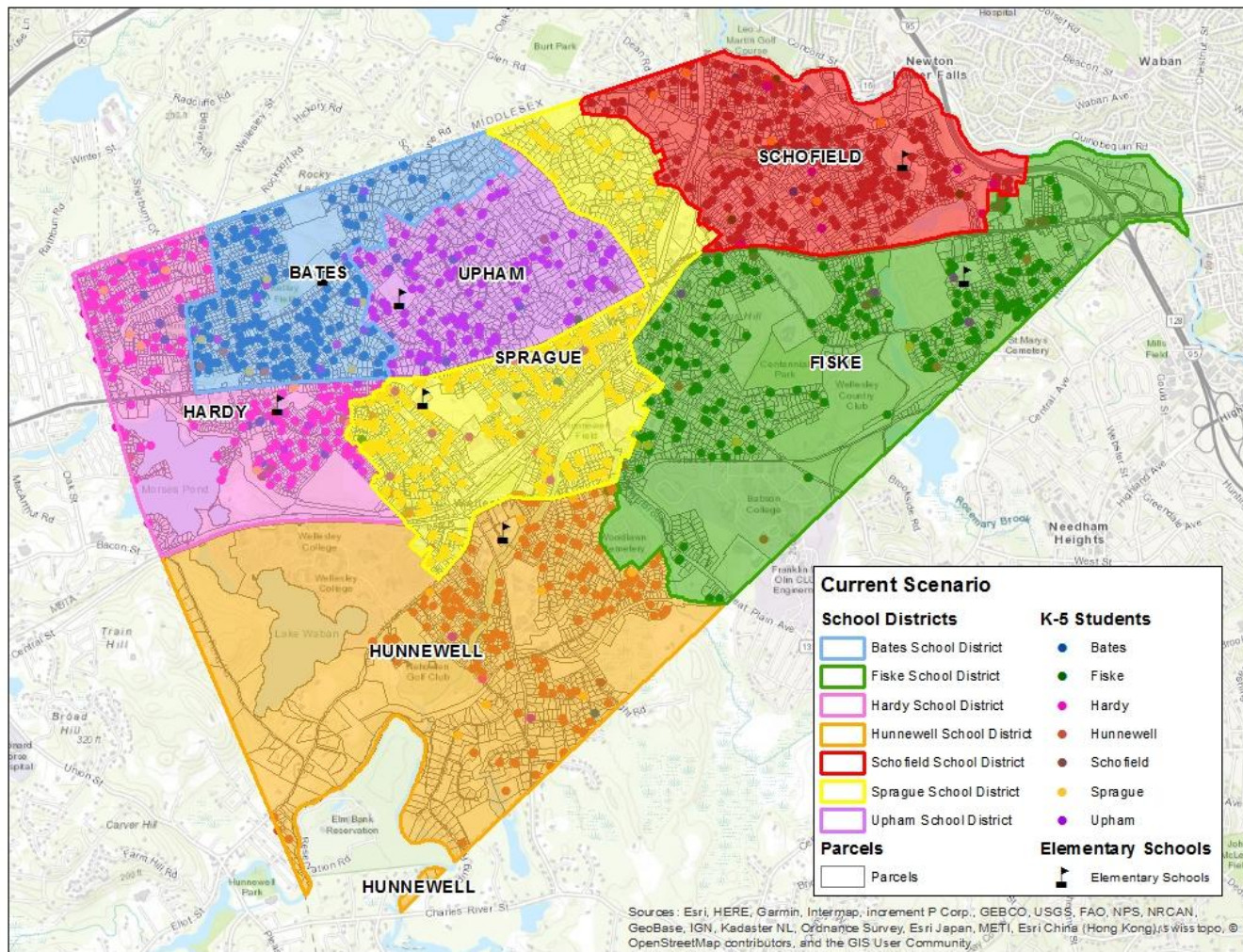


Wellesley Context Maps

Background Information

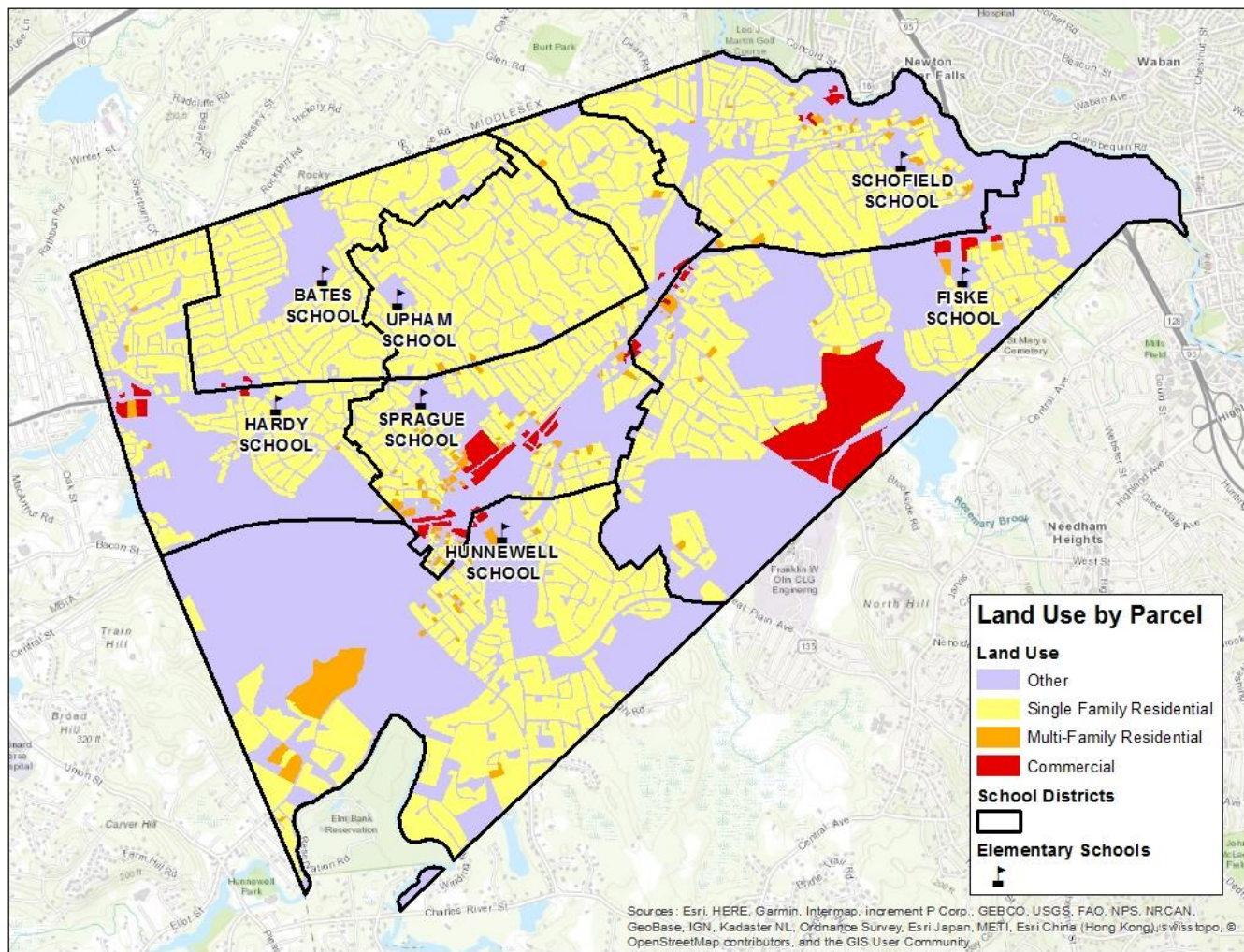
Current Districts & Enrollment

District	K Thru 5
Bates	335
Fiske	295
Hardy	256
Hunnewell	254
Schofield	374
Sprague	355
Upham	225



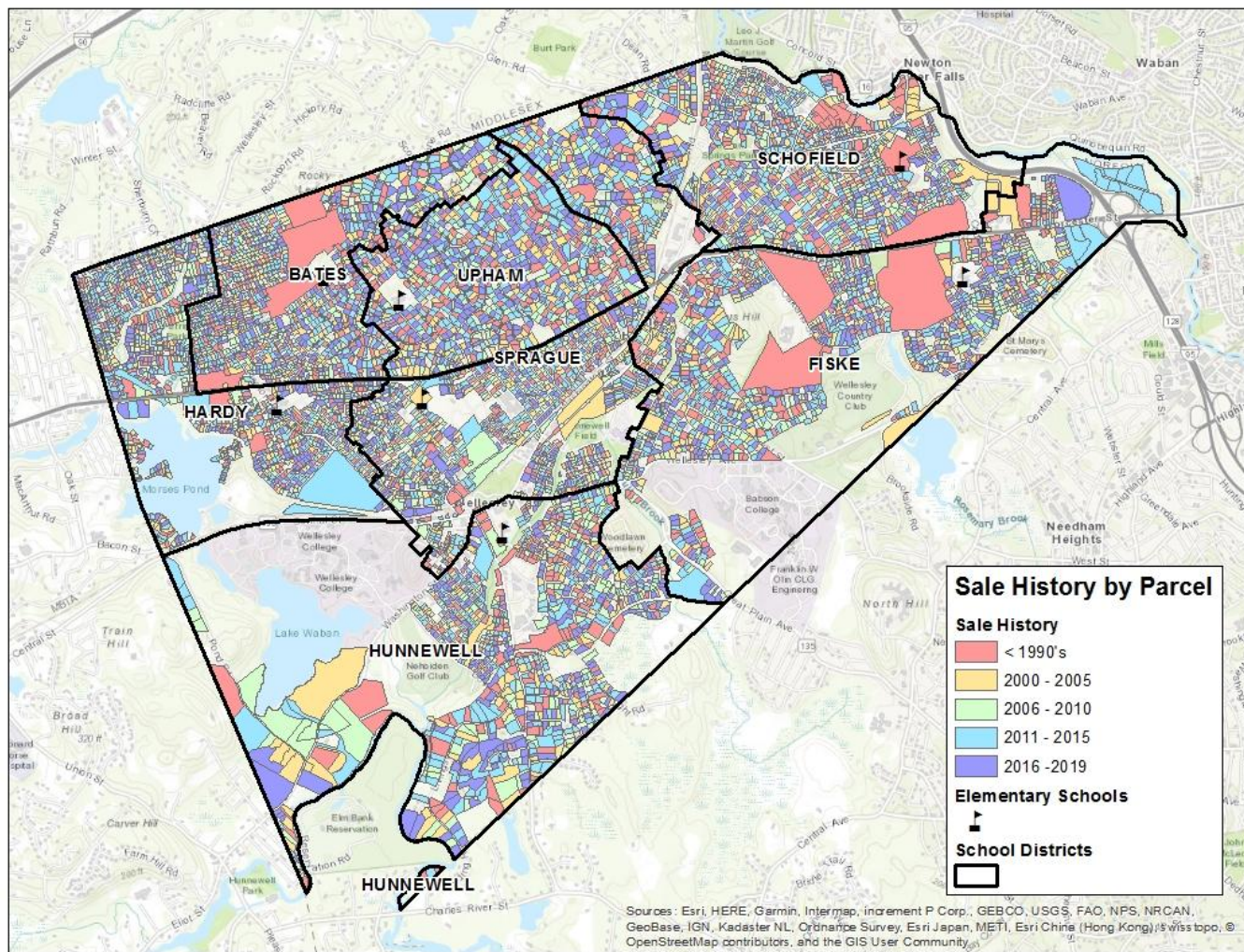
Background Information

Land Use by Parcel



Background Information

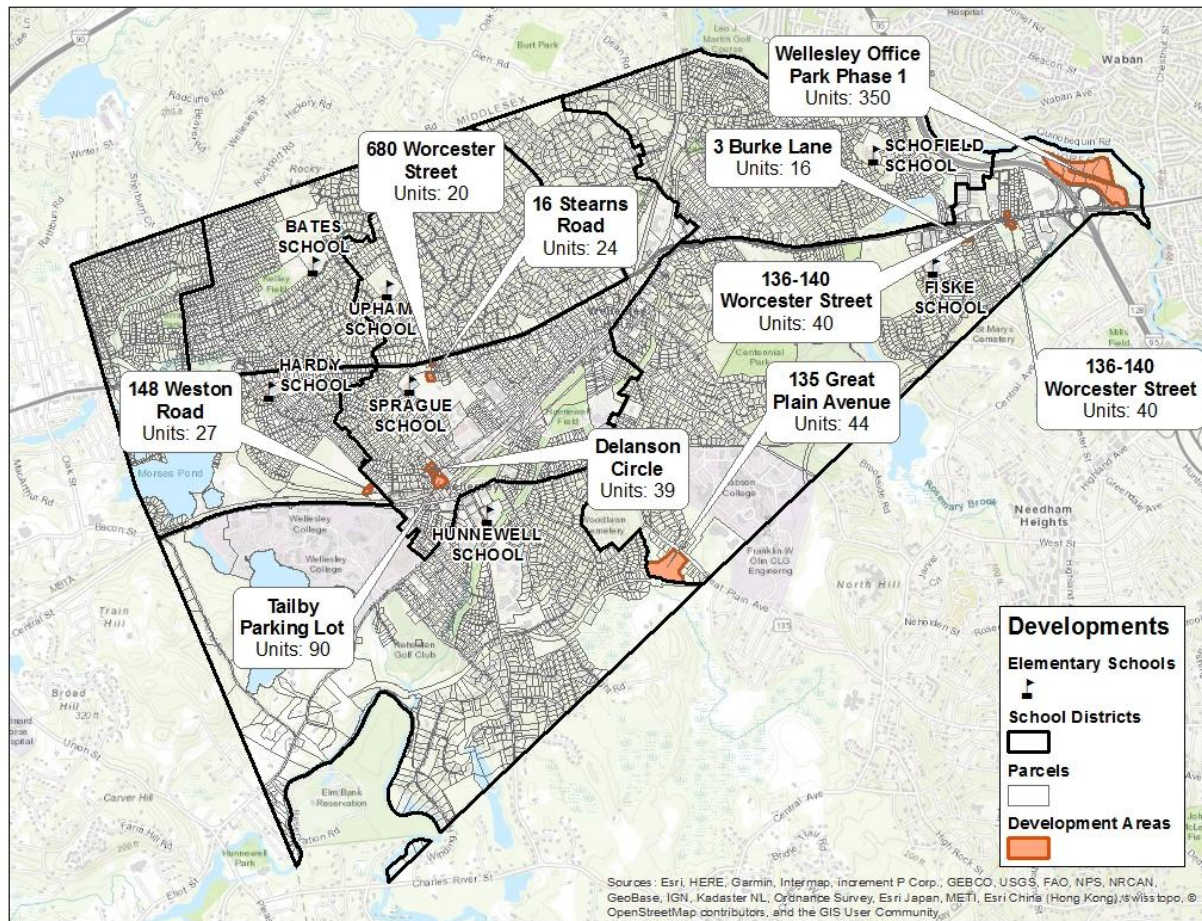
Sale History by Parcel



Background Information

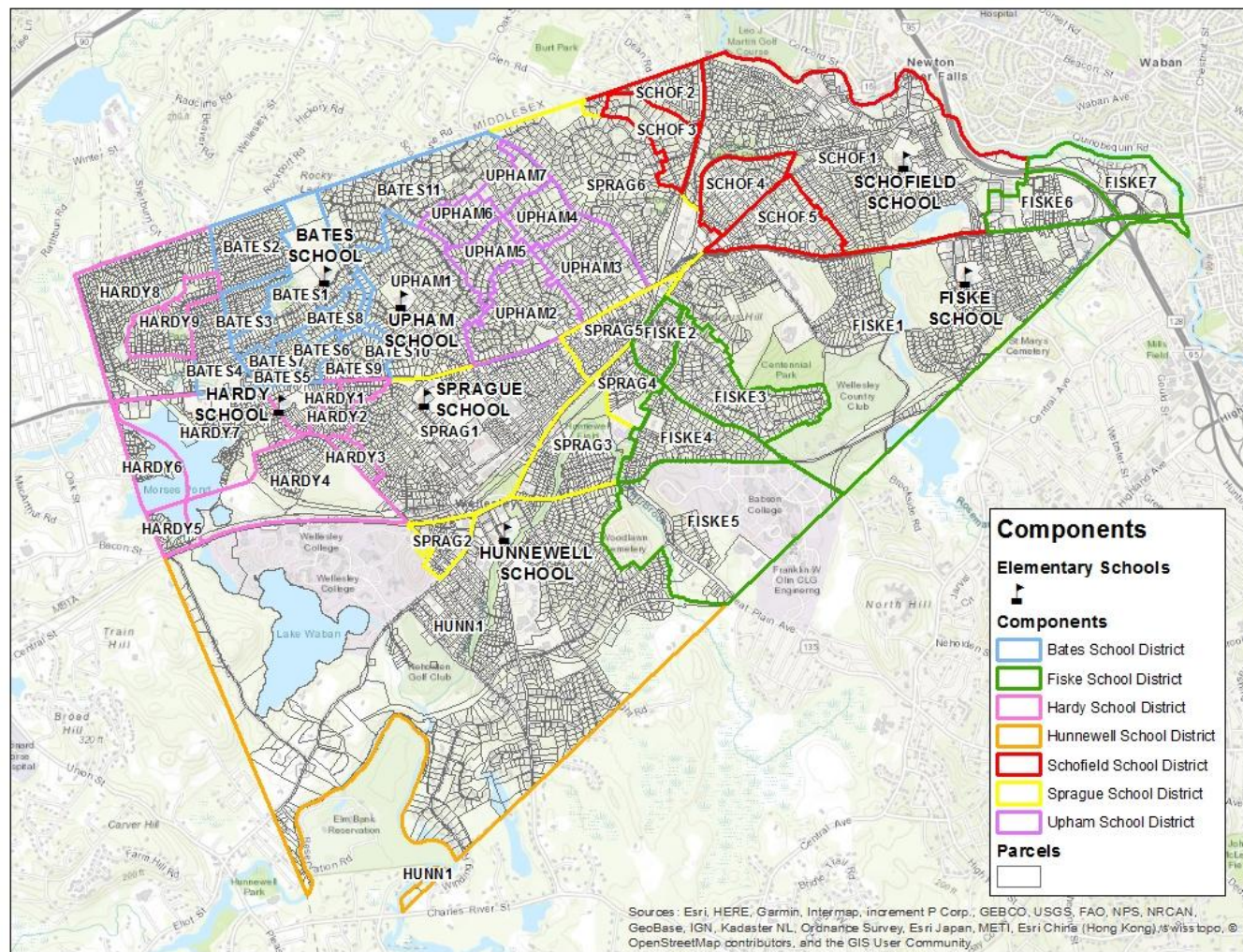
Development Projections

The Future Think projected student count used in this analysis takes into consideration the new developments expected to go online after 2024

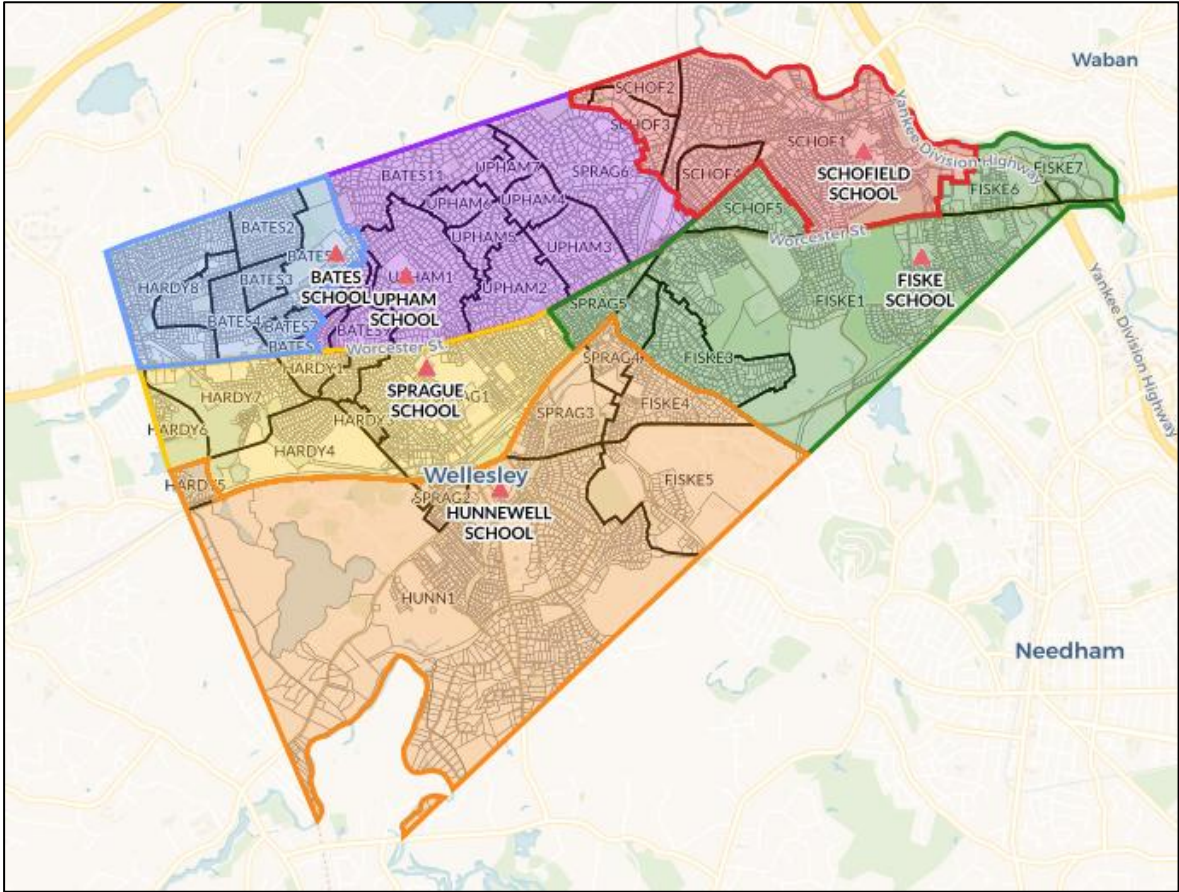


Map Options Presentation

Components



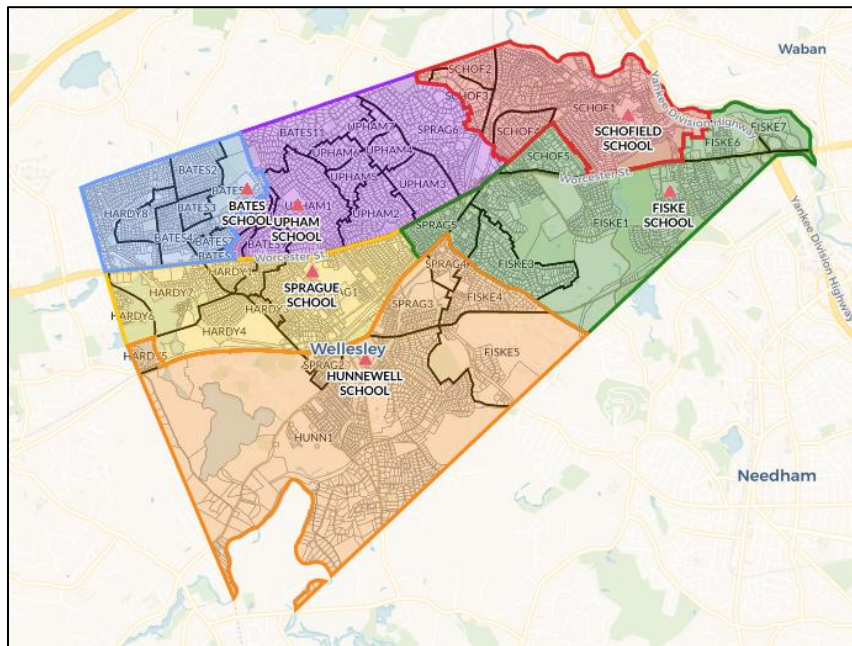
Upham Map 1



- Largely avoids district lines crossing Route 9 - Sprague and Hardy components north of Route 9 move to Upham and Bates and Hardy components south of Rte 9 to Sprague
- Moves Schofield and Sprague components to Fiske to relieve those schools while increasing utilization at Fiske
- Components from Fiske, Sprague and Hardy move to Hunnewell
- Up to 7% enrollment differences between all schools

District	School Capacity (Planned)	Target Enrollment (85%)	Projected Enrollment	% Projected Enrollment Capacity
Bates	414	352	325	79%
Fiske	414	352	311	75%
Hunnewell	414	352	328	79%
Schofield	414	352	327	79%
Sprague	414	352	340	82%
Upham	414	352	339	82%

Note: 18 students were added as Non-Residential placeholders to the projected enrollment for each school.



Upham Map 1

Residential Properties in Assigned District Under, 0.5, 1, and 2 miles from School

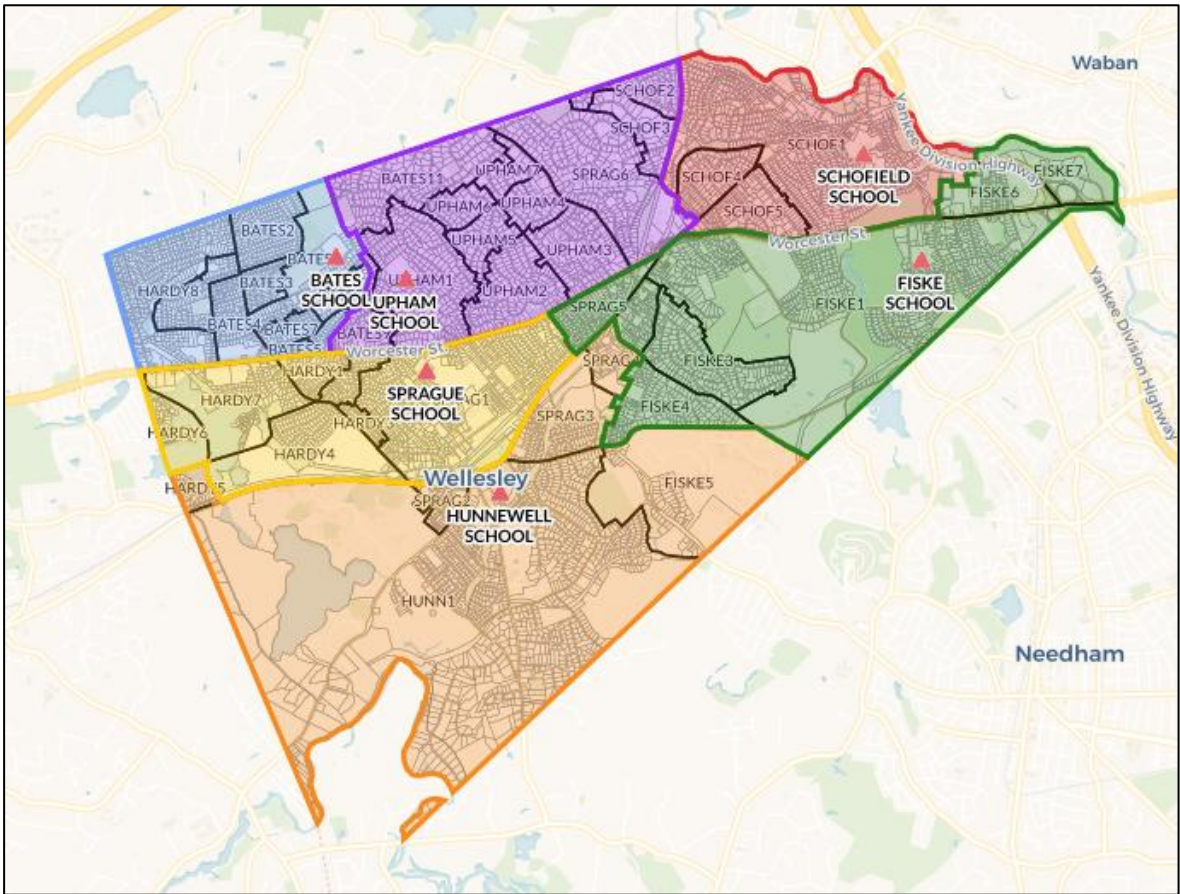
	% Under 1/2 Mile		% Under 1 Mile		% Under 2 Miles	
District	Map 1	Current Map	Map 1	Current Map	Map 1	Current Map
Bates	11%	22%	51%	79%	100%	100%
Fiske	20%	21%	31%	32%	64%	61%
Hunnewell	13%	14%	64%	72%	98%	97%
Schofield	30%	26%	75%	76%	100%	100%
Sprague	20%	15%	69%	39%	96%	82%
Upham	12%	22%	55%	76%	99%	100%

District	% Under 1/2 Mile	% Under 1 Mile	% Under 2 Miles
Current Map	22%	61%	90%
Map 1	17%	57%	93%
Map 2	18%	58%	91%

Walking distances calculated from Open Route Service, using Open Street Map roads, and based on all residential properties, not student locations.

For example: in Map 1, 20% of residential properties in Fiske are under ½ mile.

Upham Map 2

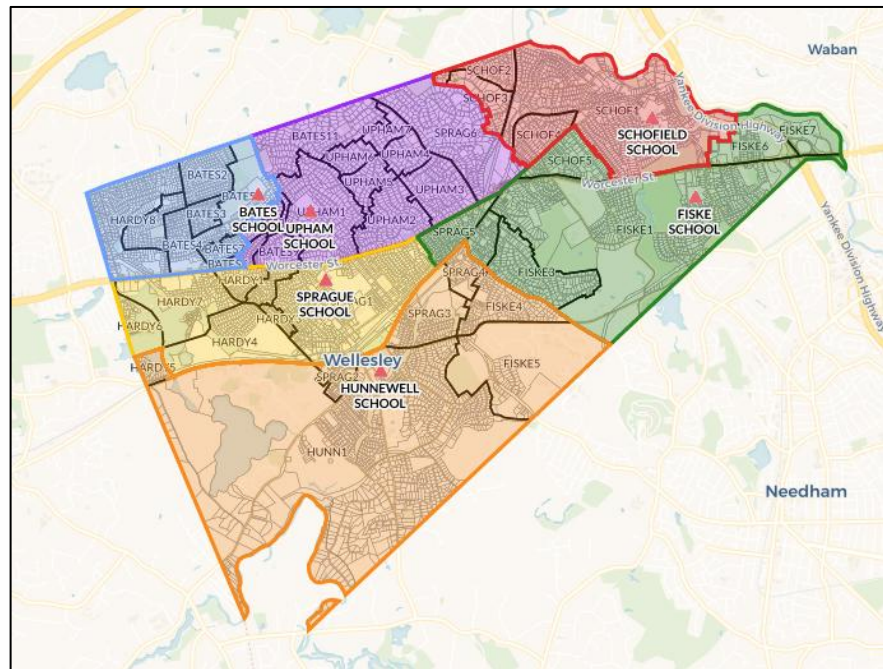


- Compared to Map 1, this option moves the Bates/Upham boundary to the east keeping areas close to Bates in Bates
- This results in a counterclockwise domino effect moving the Upham boundary to the east, the Schofield boundary to the south, and the Fiske boundary to the west.
- Up to 13% enrollment difference between all schools

District	School Capacity (Planned)	Target Enrollment (85%)	Projected Enrollment	% Projected Enrollment Capacity
Bates	414	352	352	85%
Fiske	414	352	307	74%
Hunnewell	414	352	299	72%
Schofield	414	352	333	80%
Sprague	414	352	340	82%
Upham	414	352	339	82%

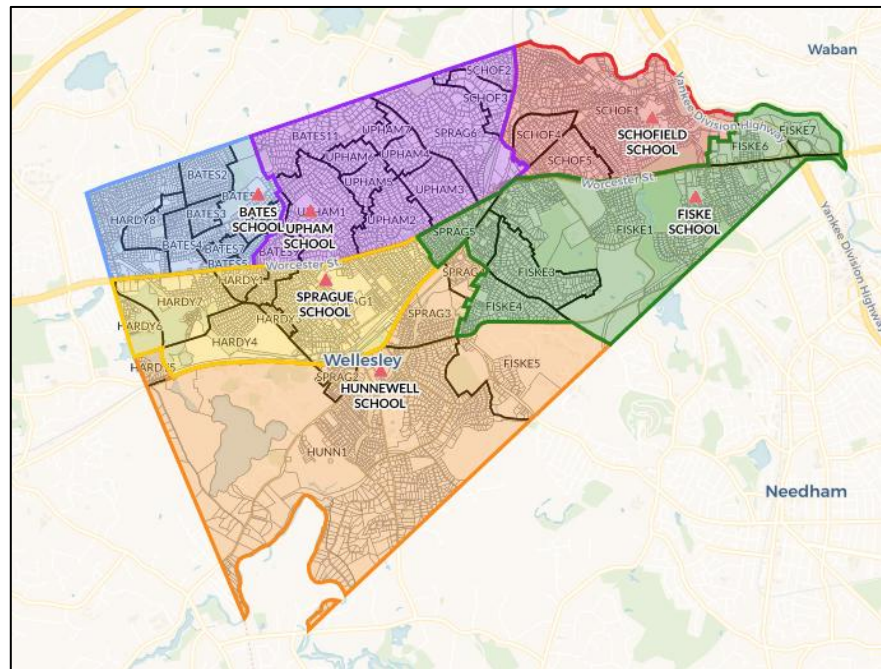
Note: 18 students were added as Non-Residential placeholders to the projected enrollment for each school.

Upham Map 1



- SCHOF 5 to Fiske
- BATES 6 & 8 to Upham
- FISKE 4 to Hunnewell

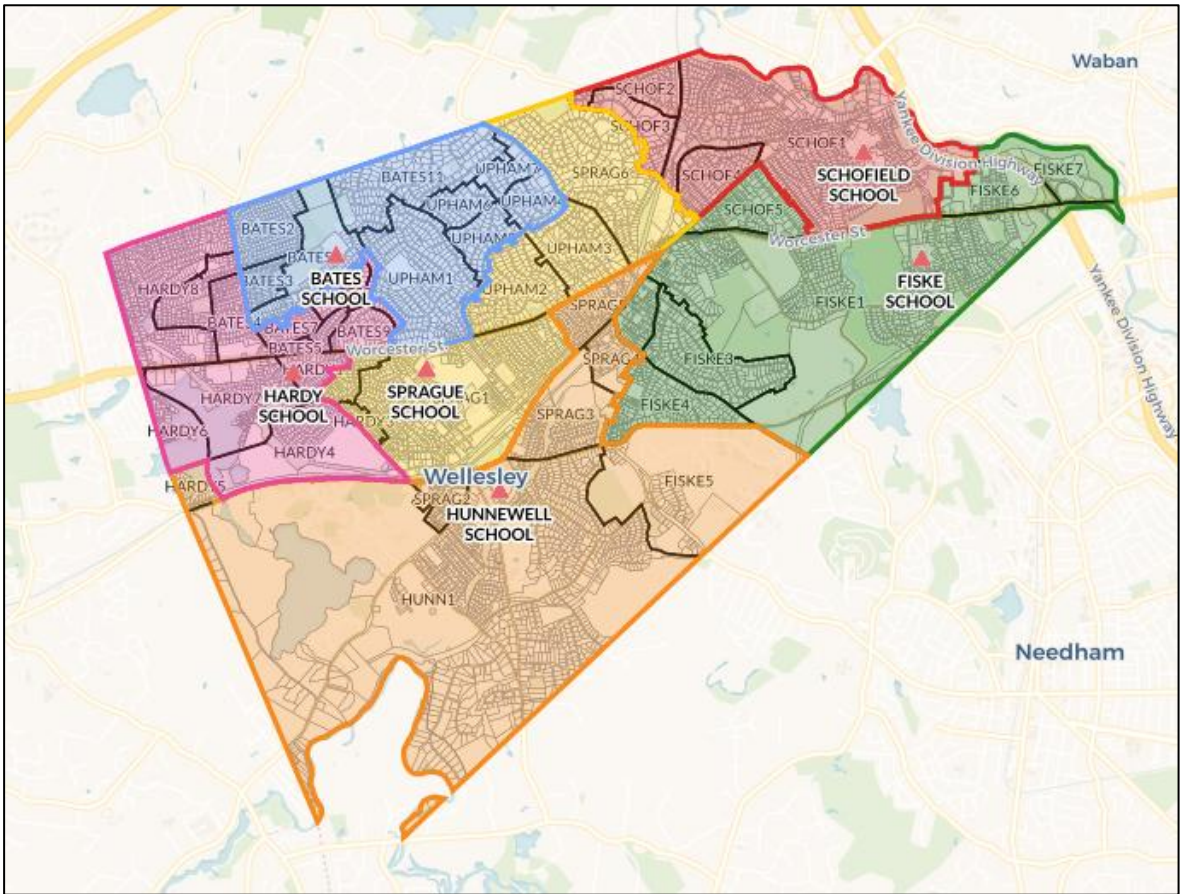
Upham Map 2



- SCHOF 2 & 3 to Upham

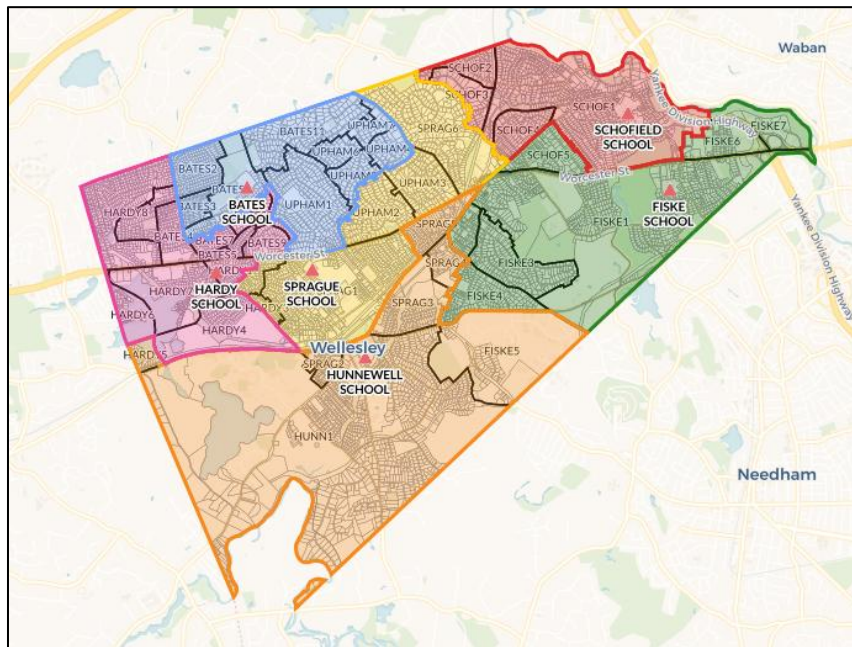
Hardy Map 1

- Largely maintains the existing Hardy district adding closest areas to the school from Bates and Sprague
- Sends areas north of Rte 9 from Upham to Sprague
- Components from Fiske, Sprague and Hardy move to Hunnewell
- Moves Schofield component to Fiske to relieve Schofield while increasing utilization at Fiske
- Up to 8% enrollment difference between all schools



District	School Capacity (Planned)	Target Enrollment (85%)	Projected Enrollment	% Projected Enrollment Capacity
Bates	414	352	340	82%
Fiske	414	352	310	75%
Hardy	414	352	320	77%
Hunnewell	414	352	329	79%
Schofield	414	352	327	79%
Sprague	414	352	344	83%

Note: 18 students were added as Non-Residential placeholders to the projected enrollment for each school.



Hardy Map 1

Residential Properties in Assigned District Under, 0.5, 1, and 2 miles from School

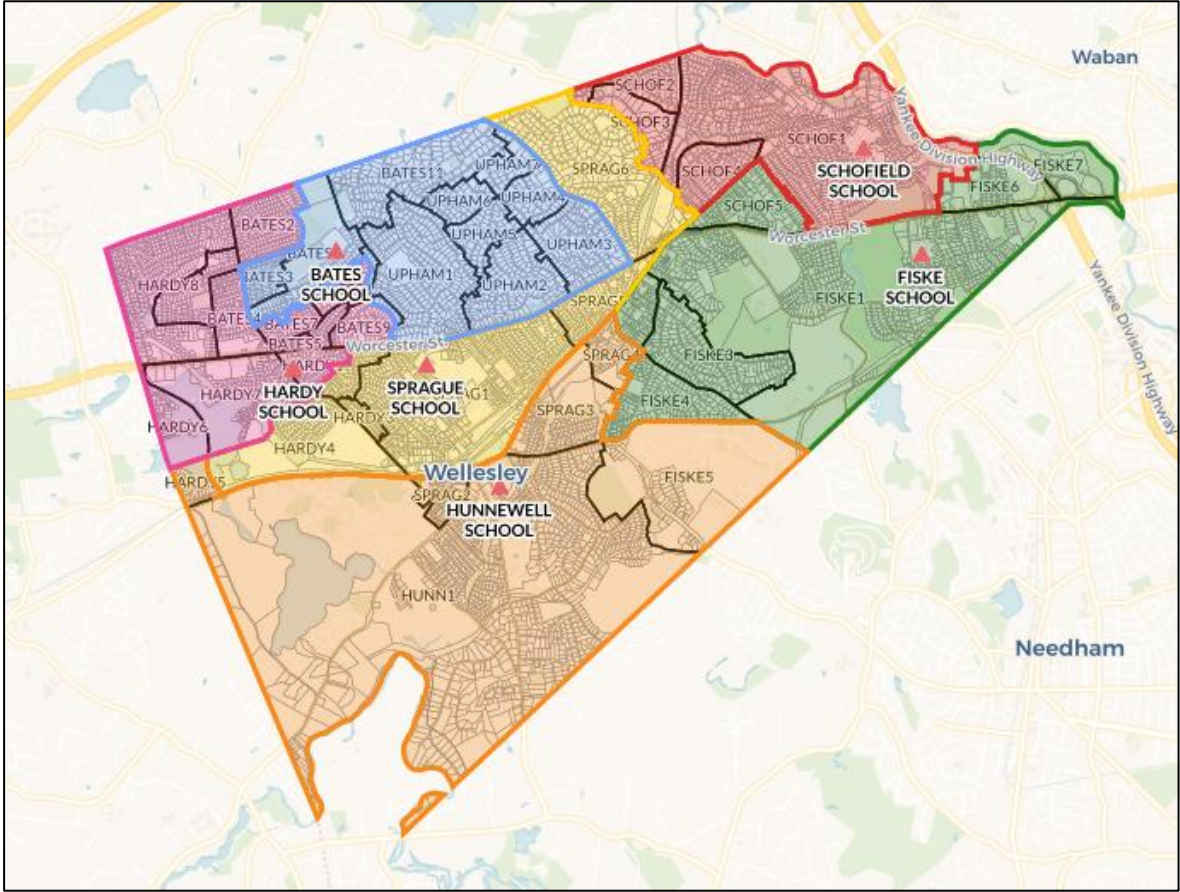
	% Under 1/2 Mile		% Under 1 Mile		% Under 2 Miles	
District	Map 1	Current Map	Map 1	Current Map	Map 1	Current Map
Bates	15%	22%	61%	79%	100%	100%
Fiske	19%	21%	29%	32%	65%	61%
Hardy	31%	32%	76%	68%	100%	98%
Hunnewell	13%	14%	64%	72%	98%	97%
Schofield	30%	26%	75%	76%	100%	100%
Sprague	17%	15%	50%	39%	81%	82%

District	% Under 1/2 Mile	% Under 1 Mile	% Under 2 Miles
Current Map	22%	61%	90%
Map 1	21%	59%	90%
Map 2	20%	59%	90%

Walking distances calculated from Open Route Service, using Open Street Map roads, and based on all residential properties, not student locations.

For example: in Map 1, 19% of residential properties in Fiske are under ½ mile.

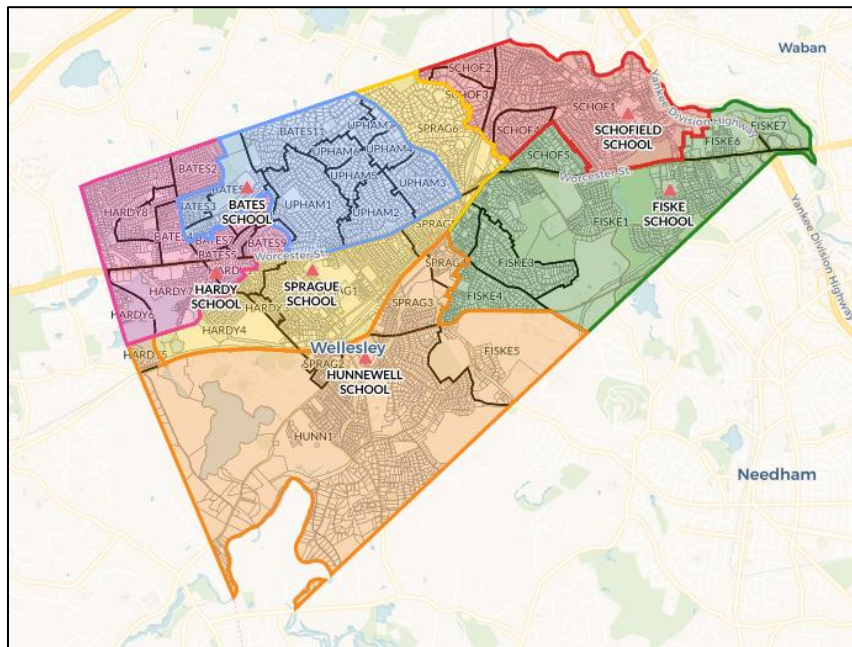
Hardy Map 2



- All of Upham incorporated into Bates reducing the northern areas moving across Rte 9
- This results in a clockwise domino effect moving southern parts of Hardy to Sprague and more areas from Bates to Hardy
- Up to 16% enrollment difference between all schools

District	School Capacity (Planned)	Target Enrollment (85%)	Projected Enrollment	% Projected Enrollment Capacity
Bates	414	352	366	88%
Fiske	414	352	310	75%
Hardy	414	352	330	80%
Hunnewell	414	352	299	72%
Schofield	414	352	327	79%
Sprague	414	352	338	82%

Note: 18 students were added as Non-Residential placeholders to the projected enrollment for each school.



Hardy Map 2

Residential Properties in Assigned District Under, 0.5, 1, and 2 miles from School

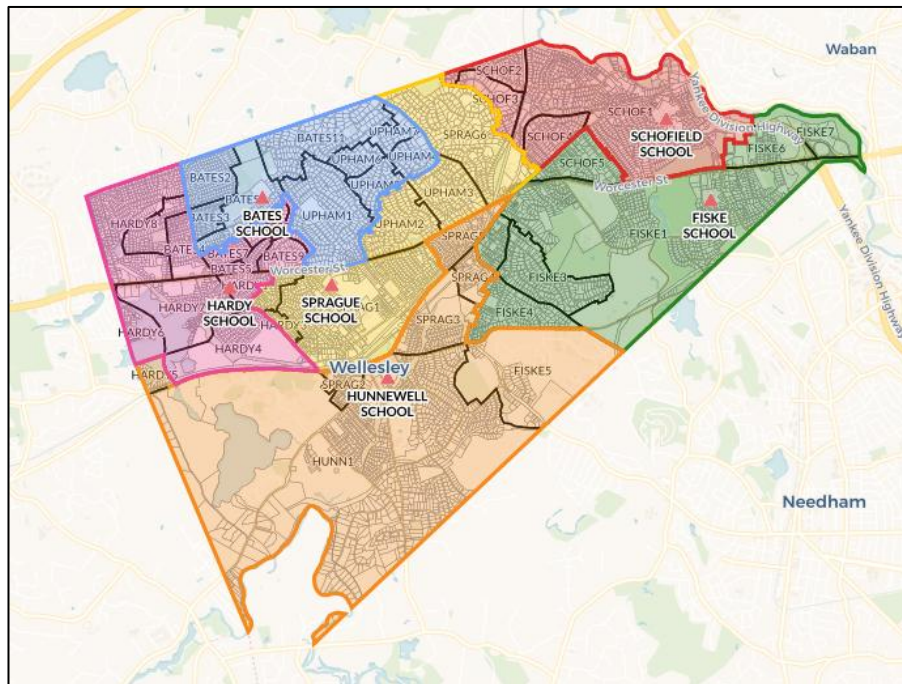
	% Under 1/2 Mile		% Under 1 Mile		% Under 2 Miles	
District	Map 2	Current Map	Map 2	Current Map	Map 2	Current Map
Bates	15%	22%	53%	79%	100%	100%
Fiske	19%	21%	29%	32%	65%	61%
Hardy	23%	32%	71%	68%	100%	98%
Hunnewell	14%	14%	70%	72%	98%	97%
Schofield	30%	26%	75%	76%	100%	100%
Sprague	18%	15%	55%	39%	82%	82%

District	% Under 1/2 Mile	% Under 1 Mile	% Under 2 Miles
Current Map	22%	61%	90%
Map 1	21%	59%	90%
Map 2	20%	59%	90%

Walking distances calculated from Open Route Service, using Open Street Map roads, and based on all residential properties, not student locations.

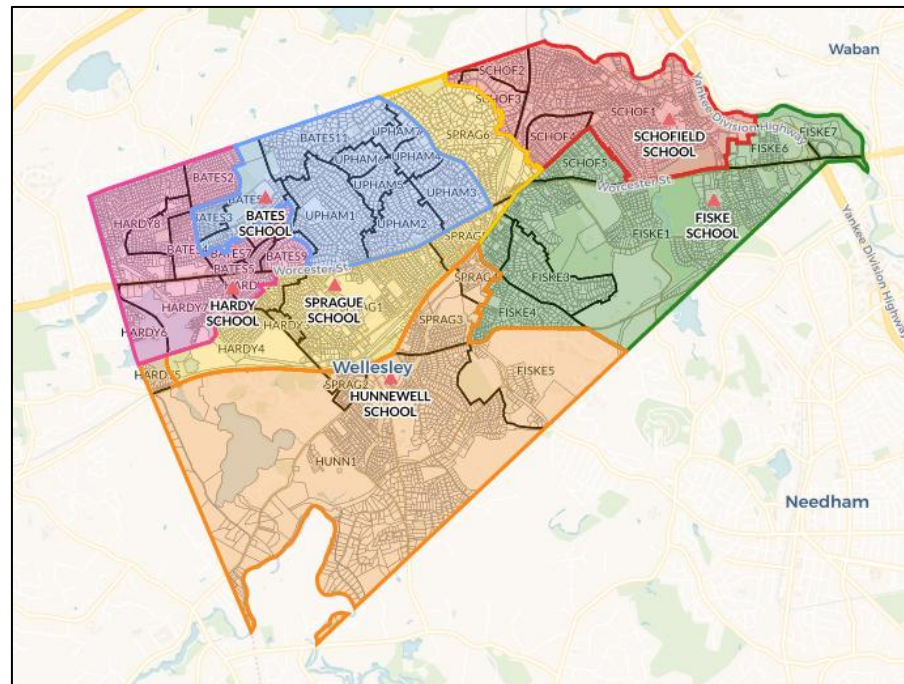
For example: in Map 2, 19% of residential properties in Fiske are under ½ mile.

Hardy Map 1



- SPRAG 5 to Hunnewell
- UPHAM 2 & 3 to Sprague
- BATES 10 to Hardy

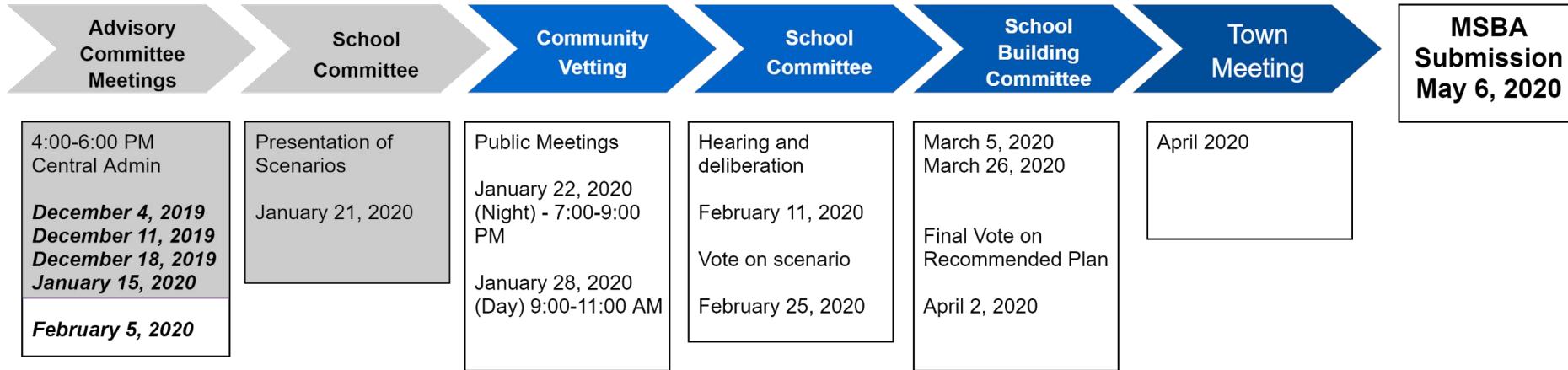
Hardy Map 2



- HARDY 4 to Sprague
- BATES 2 to Hardy

Timeline

Superintendent's Advisory Committee on Redistricting



The background of the slide is a stylized map of a city, likely San Francisco, showing a dense network of streets and a large body of water (the bay) on the right side. The map is rendered in a light green color, which transitions into a darker blue-green towards the bottom right. Overlaid on this map is a semi-transparent green rectangle that covers most of the slide area.

Thank You!

AppGeo