

CommunityViz New Hampshire

Case Study: Three-Town Pilot Study (Towns of Chester, Hooksett, and Salisbury, NH)

January, 2008

Project Goal: To explore how wildlife habitat protection can be incorporated into town planning and how the alternative build-out scenario concept can inform local decision-making.

Submitted By: Vanessa Jones, New Hampshire Audubon

Background

The Towns of Chester, Hooksett, and Salisbury, New Hampshire were part of a three-town pilot study, funded in part by the New Hampshire Fish and Game Department (NHFG) to explore how wildlife habitat protection could be incorporated into town planning and how the alternative build-out scenario concept could inform local decision-making.

This project was a collaboration between the Jordan Institute (TJI) and New Hampshire Audubon (NHA). Assistance with interpreting and applying the Wildlife Action Plan was provided by NHFG. Southern New Hampshire Regional Planning Commission (SNHRPC), Central New Hampshire Regional Planning Commission (CNHRPC), town staff (Planning Board, Board of Selectmen, and the Conservation Commission), and Advisory Committees made up of town citizens supplied additional support.

There were three components to this project:

- (1) Opinion: determine what residents want the town to be like in the future. This included showing alternative build-out scenarios and surveying participants on their opinions of the build-outs and strategies for protecting town resources.
- (2) Audit: review existing zoning, land use, and subdivision regulations.
- (3) Recommendations: identify strategies that the towns could use to achieve the desired future scenario. This last component was modified for the Town of Salisbury to include producing educational materials.

These components were accomplished through a combination of Advisory Committee meetings, community meetings, and meetings with town officials.

About the towns...

Chester: Although growth is rapid, Chester is still a rural community whose residents value its quiet, undeveloped character. The town had recently revised its Master Plan and had a good record of cooperation between boards, and was therefore selected to participate in the pilot study.

Hooksett: Hooksett was chosen for this project because it has significant economic, ecological, and recreational resources that present the town with special constraints and

opportunities. The town borders Manchester to the south and its access to interstate transportation, which includes three exits off I-93, is extraordinary for the region. Hooksett is perhaps best known for its big box retail and condo developments, but – unbeknownst to most people – it also contains extensive open space and top-condition natural resources.

Salisbury: Salisbury is a rural town relatively far from the interstate highway, with little commercial development and light growth pressure. The town has a growth management ordinance, but building applications have never reached its limit. The Planning Board was just finishing the Master Plan when we asked the group to support this project. They were slightly concerned that it would interfere with plan completion, but decided that our findings and recommendations could supplement the plan and perhaps make it more useful, especially when compared to the current zoning ordinance and other planning documents.

Work Process

All GIS analyses were conducted by NHA using ArcGIS 9.0 and CommunityViz Scenario 360 3.2. Specific CommunityViz tools used for this project include the Build-Out Wizard, TimeScope, and Common Impacts.

Many of the data layers used for the analyses were provided by SNHRPC, CNHPRC, and NH GRANIT/Complex Systems Research Center (CSRC). Other layers not readily available required extensive data preparation. Creation of an accurate data layer containing current buildings was the most time consuming. The current buildings layer was generated by digitizing point locations of primary buildings based on aerial images. Attributes were populated for each point indicating building use, number of dwelling units, and commercial floor area. Up-to-date and easy to use assessment data was essential for this task.

A complete listing of data layers used for this project includes:

Layer	Source	Constraint
100-Year Floodplain	FEMA	Yes
Amenities	DES, modified by NHA	No
Buildable Land	Created by NHA using RPC data	No
Community Centers	Created by NHA using DES data	No
Current Buildings	Created by NHA	No
Conservation Land	SPNHF	Yes
Land Use	Regional Planning Commission	No
Natural Services Network	Varies, see NH GRANIT	Yes
National Wetlands Inventory	USFWS	Yes
Roads	NH DOT	No
Sewer and Water Service	Regional Planning Commission	No
Tax Parcels	Regional Planning Commission	No
Wildlife Action Plan	NHFG	Yes
Zoning	Regional Planning Commission	No

Outcomes

One focus of this project was to study the impact of the build-out scenarios on a suite of indicators. Approximately forty indicators were calculated for each build-out in six categories: Build-Out Totals, Demographics and Employment, Transportation, Water

and Energy Use, Land Use Characteristics, and Municipal Demands. Maps were produced to depict build-out results.

At the completion of the project, town officials had not used the results in support of any decision-making processes. However, we were able to show the towns how wildlife habitat could be incorporated into town planning using the build-out concept. The software helped citizens to visual where their natural resources were and what their town could potentially look like if they were/were not protected.

Lessons Learned

CommunityViz served as a very effective tool for visualizing where growth could occur and for comparison between build-out scenarios. It was challenging, however, to present the many concepts that were part of this project (Natural Services Network, Wildlife Action Plan, and CommunityViz) to those who were previously unfamiliar with them. In addition, many people had a difficult time accepting the visual results of the build-out as being realistic. If a similar project were conducted again, we would likely minimize the public presentations and instead concentrate on working with the town government.

Abundant personal communication with town officials proved to be essential, and when available, helped us more specifically meet the town's needs. We would also recommend establishing the project scope early and communicate this information to the Planning Board and other committees, and schedule several work sessions with the town throughout the project.

Funding Assistance

Funding was provided by the NH Fish & Game Department and the Jessie B. Cox Charitable Trust.

Contact Information

Vanessa Jones, GIS Specialist
New Hampshire Audubon
McLane Center
84 Silk Farm Road
Concord, NH 03301
(phone) 603.224.9909 x311
(fax) 603.226.0902
(email) vjones@nhaudubon.org

About the NH CommunityViz Technical Resource Center

Through the NH CommunityViz Technical Resource Center, NH GRANIT staff at UNH Complex Systems Research Center is available to provide guidance and technical support to CommunityViz users throughout the state. We are also working in collaboration with staff from UNH Cooperative Extension to develop and present educational resources.

<http://www.granit.unh.edu/resourcelibrary/specialtopics/cviz/cviz.html>



<http://www.granit.unh.edu>

New Hampshire CommunityViz Technical Resource Center