

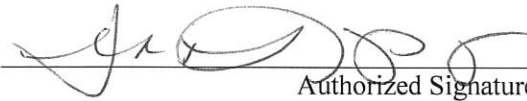
## PROPOSAL SUBMISSION

*Note: Please return this page as a cover sheet with each copy of your submittal.*

The undersigned, an authorized agent of his/her company, hereby certifies:

- (X) familiarization with all terms, conditions, and specifications herein stated;
- (X) vendor is qualified to perform work and services as included;
- (X) That the pricing contained in this submittal is valid until 12/31/2020 (date).

Respectfully submitted



Authorized Signature

Strafford Regional Planning Commission  
Company Name

Jennifer Czysz  
Printed Name of Individual Signing Proposal

150 Wakefield St  
Address 1

Executive Director  
Title

Suite 12  
Address 2

603-994-3500  
Telephone

Rochester, NH 03867  
City, State and Zip Code

603-994-3504  
Fax Number

April 5, 2019  
Date Submitted

jcysz@strafford.org  
E-Mail Address

*Person signing proposal must be a person in your company authorized to sign a contract with the Town of Durham.*

- We are not submitting a proposal for this project, however, please retain our company information listed above in your vendor database and continue to send us bids and proposals in the future.

RECEIVED  
Town of Durham  
APR 05 2019  
Planning, Assessing  
and Zoning

BARRINGTON  
BROOKFIELD  
DOVER  
DURHAM  
FARMINGTON  
LEE  
MADBURY  
MIDDLETON  
MILTON



NEW DURHAM  
NEWMARKET  
NORTHWOOD  
NOTTINGHAM  
ROCHESTER  
ROLLINSFORD  
SOMERSWORTH  
STRAFFORD  
WAKEFIELD

April 5, 2019

Jim Rice, CNHA  
Assessor's Office  
8 Newmarket Road  
Durham, NH 03824

**Town of Durham Request for Proposals – TAX PARCEL MAP PROJECT**

Dear Mr. Rice:

Strafford Regional Planning Commission requests an exception from the REQUIREMENTS of a LETTER OF CREDIT on page three of the Request for Proposals for the Tax Parcel Mapping Project.

Strafford Regional Planning Commission is a political subdivision of the state of New Hampshire per RSA36:49-a Status as a Political Subdivision.

*Regional planning commissions are political subdivisions of the state.*

Additionally, per RSA 36:49 Finances

*.....municipalities or counties are hereby authorized to enter into contracts with a regional planning commission for the furnishing of funds or services in connection with the preparation of a comprehensive regional master plan and any special planning work to be done by a regional planning commission for any member municipality or county.*

In over 45 years of providing contract planning services to municipalities in the Strafford Region we have successfully met all project objectives without a need for a letter of credit. Our status as a political subdivision of the state and our specified status regarding the municipalities with the Strafford Region as called out in RSA 36:45-58 covers the financial concerns of the Town of Durham and renders a letter of credit unnecessary.

Sincerely,

Jennifer Czysz, AICP  
Executive Director  
Strafford Regional Planning Commission  
150 Wakefield Street, Suite 12  
Rochester, NH 03867  
603-994-3500  
jczysz@strafford.org



## CERTIFICATE OF COVERAGE

The New Hampshire Public Risk Management Exchange (Primex<sup>3</sup>) is organized under the New Hampshire Revised Statutes Annotated, Chapter 5-B, Pooled Risk Management Programs. In accordance with those statutes, its Trust Agreement and bylaws, Primex<sup>3</sup> is authorized to provide pooled risk management programs established for the benefit of political subdivisions in the State of New Hampshire.

Each member of Primex<sup>3</sup> is entitled to the categories of coverage set forth below. In addition, Primex<sup>3</sup> may extend the same coverage to non-members. However, any coverage extended to a non-member is subject to all of the terms, conditions, exclusions, amendments, rules, policies and procedures that are applicable to the members of Primex<sup>3</sup>, including but not limited to the final and binding resolution of all claims and coverage disputes before the Primex<sup>3</sup> Board of Trustees. The Additional Covered Party's per occurrence limit shall be deemed included in the Member's per occurrence limit, and therefore shall reduce the Member's limit of liability as set forth by the Coverage Documents and Declarations. The limit shown may have been reduced by claims paid on behalf of the member. General Liability coverage is limited to Coverage A (Personal Injury Liability) and Coverage B (Property Damage Liability) only, Coverage's C (Public Officials Errors and Omissions), D (Unfair Employment Practices), E (Employee Benefit Liability) and F (Educator's Legal Liability Claims-Made Coverage) are excluded from this provision of coverage.

The below named entity is a member in good standing of the New Hampshire Public Risk Management Exchange. The coverage provided may, however, be revised at any time by the actions of Primex<sup>3</sup>. As of the date this certificate is issued, the information set out below accurately reflects the categories of coverage established for the current coverage year.

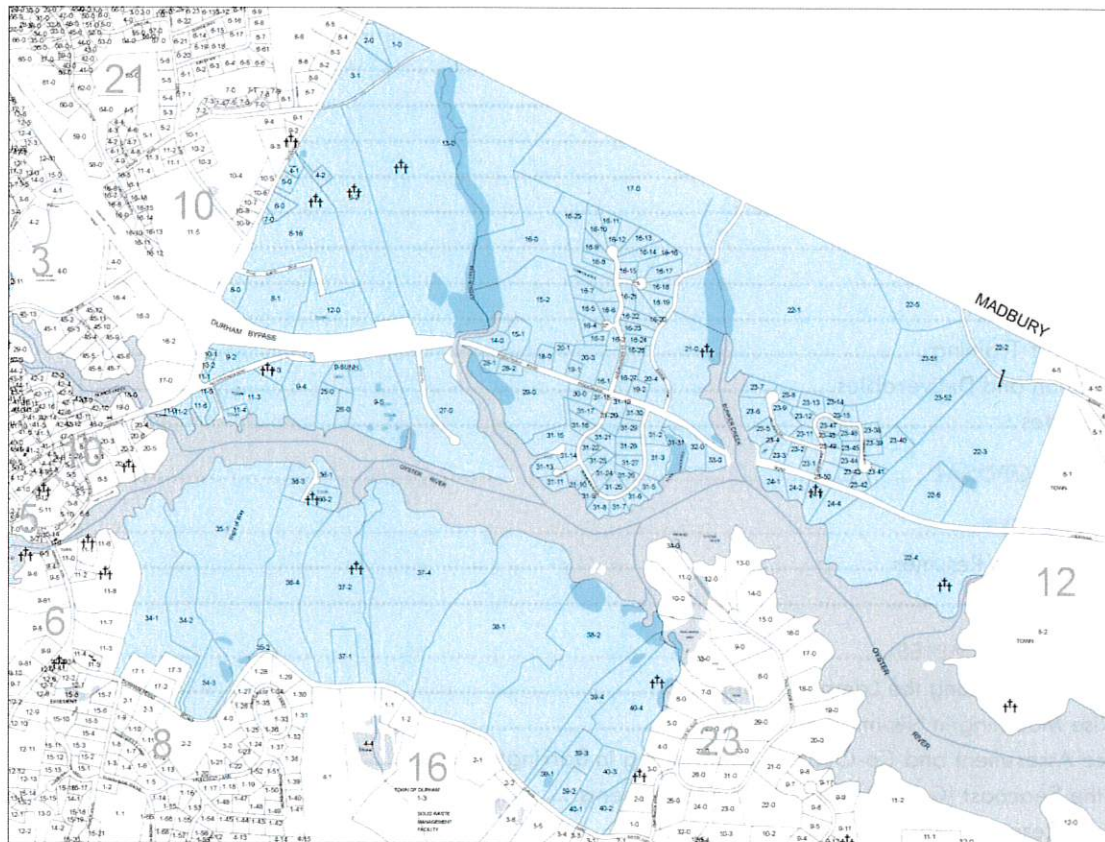
This Certificate is issued as a matter of information only and confers no rights upon the certificate holder. This certificate does not amend, extend, or alter the coverage afforded by the coverage categories listed below.

<i>Participating Member:</i> Strafford Regional Planning Commission 150 Wakefield Street, Suite 12 Rochester, NH 03867		<i>Member Number:</i> 562	<i>Company Affording Coverage:</i> NH Public Risk Management Exchange - Primex <sup>3</sup> Bow Brook Place 46 Donovan Street Concord, NH 03301-2624		
Type of Coverage	Effective Date (mm/dd/yyyy)	Expiration Date (mm/dd/yyyy)	Limits - NH Statutory Limits May Apply, If Not:		
<input checked="" type="checkbox"/> <b>General Liability (Occurrence Form)</b> <b>Professional Liability (describe)</b> <input type="checkbox"/> Claims Made <input type="checkbox"/> Occurrence	7/1/2018	7/1/2019	Each Occurrence		\$ 5,000,000
			General Aggregate		\$ 5,000,000
			Fire Damage (Any one fire)		
			Med Exp (Any one person)		
<input checked="" type="checkbox"/> <b>Automobile Liability</b> Deductible    Comp and Coll: \$1,000  <input type="checkbox"/> Any auto	7/1/2018	7/1/2019	Combined Single Limit (Each Accident)		\$5,000,000
			Aggregate		\$5,000,000
<input checked="" type="checkbox"/> <b>Workers' Compensation &amp; Employers' Liability</b>	1/1/2019	1/1/2020	<input checked="" type="checkbox"/> Statutory		
			Each Accident		\$2,000,000
			Disease – Each Employee		\$2,000,000
			Disease – Policy Limit		
<input checked="" type="checkbox"/> <b>Property (Special Risk includes Fire and Theft)</b>	7/1/2018	7/1/2019	Blanket Limit, Replacement Cost (unless otherwise stated)		Deductible: \$1,000
<b>Description:</b> Proof of Primex Member coverage only.					

<b>CERTIFICATE HOLDER:</b>	<b>Additional Covered Party</b>	<b>Loss Payee</b>	<b>Primex<sup>3</sup> – NH Public Risk Management Exchange</b>
Strafford Regional Planning Commission 150 Wakefield Street, Suite 12 Rochester, NH 03867			By: <i>Mary Beth Purcell</i>
			Date: 4/5/2019    mpurcell@nhprimex.org
			Please direct inquires to: <b>Primex<sup>3</sup> Claims/Coverage Services</b> 603-225-2841 phone 603-228-3833 fax

# Request for Proposal

## Consultant for Tax Parcel Map Project



Submitted to:  
The Town of Durham, NH

Submitted by:  
Stafford Regional Planning Commission



## SECTION 1 – LETTER OF INTEREST

BARRINGTON  
BROOKFIELD  
DOVER  
DURHAM  
FARMINGTON  
LEE  
MADBURY  
MIDDLETON  
MILTON



NEW DURHAM  
NEWMARKET  
NORTHWOOD  
NOTTINGHAM  
ROCHESTER  
ROLLINSFORD  
SOMERSWORTH  
STRAFFORD  
WAKEFIELD

Jim Rice, CNHA  
Assessor's Office  
8 Newmarket Road  
Durham, NH 03824

April 5, 2019

### Town of Durham Request for Proposals – TAX PARCEL MAP PROJECT

Dear Mr. Rice:

I am responding on behalf of Strafford Regional Planning Commission (SRPC) to the Town of Durham's RFP for a Tax Parcel Map Project. SRPC has 50 years of experience working with municipalities and citizens to improve quality of life in our region. With considerable knowledge of land use and planning topics, we help the public relate to complex planning ideas and foster strong relationships with those we serve.

Working as a team, we will address your requirements and create a high-quality product that meets your specifications. Each key member of the project team possesses specific skills which together lead to an efficient process and superior outcomes. We have a proven ability to create high quality products that will fulfill the Town's goal of developing digital tax maps and a GIS-based parcel fabric.

I certify that all of the information provided in this cover letter and in the proposal as a whole is accurate. SRPC is excited about the opportunity to work with the Town of Durham providing this important service. We hope to hear from you soon.

Sincerely,

Jennifer Czysz, AICP  
Executive Director  
Strafford Regional Planning Commission  
150 Wakefield Street, Suite 12  
Rochester, NH 03867  
603-994-3500  
jczysz@strafford.org

2. Dataset Development: we can use existing datasets or plan for future data collection and relational database schema design.
3. Online Maps: we can advise on any project on how to design and create online digital maps.
4. Development of Spatial Analysis Tools: we can provide or develop tools that fulfill the needs of the organization or municipality.
5. Scenario modeling: we can assist with many different modeling planning tools using dedicated software and methods.
6. Local/Municipal Support: we can assist on providing support on:
  - a. Master Plans: SRPC maintains extensive, detailed databases of spatial information that enable us to produce quality maps for community master plans, including water resources, conservation lands, land use, historic and cultural/recreational features, and community infrastructure.
  - b. Project Specific Requests: SRPC provides support for specific requests related to any type of GIS support, particularly in spatial data management and analysis.
7. GIS and GPS Technical Support: Our knowledgeable staff can help troubleshoot GIS and GPS quandaries and conundrums and advise a course of action to get efforts back on track.
8. Data Collection: With staff experienced in a wide variety of data collection efforts, we can provide support to select the best approach for data collection. We currently gather traffic and culvert data, and we map hiking and walking trails among others.

Over the past several years, we have been actively involved with the Town of Durham in numerous initiatives and projects including the development of eleven master plan chapters, zoning amendments, hazard mitigation and climate adaptation planning, transportation technical assistance, stormwater and watershed-based planning efforts, and GIS mapping requests. We also have an excellent resource for engaging the public on municipal-wide initiatives. SRPC's experience working with partners on small or large-scale projects reflects an entrenched ability for management and coordination with many different stakeholders holding often conflicting or mutually challenging objectives. When beginning a new project, SRPC is very purposeful about ensuring that all team members and partners are clear on the goals. For example, during the master plan update process we developed collaborative approaches, which included key stakeholder interviews, surveys, and public presentations, to reconcile existing conflicts between each of the chapters, and to achieve consensus based on feedback from residents. SRPC is a strong collaborator with the University of New Hampshire (UNH), which will be important for the success of this proposal. Our experience and close ties with the Town, will help to establish a project plan with milestones while recognizing that Durham is a unique community with a highly active and engaged citizenry.

To ensure that the project timeline will be met efficiently and with ease, the SRPC team includes overlap in roles to accommodate the requirements of the project. The relatively small team size affords efficient internal project management. The team hierarchy allows for individuals to drive deliverables for which they are most experienced and proficient, and effective task sharing when necessary.

## SECTION 4 – APPROACH

The main goal of this project is to provide an accurate parcel fabric from which new digital tax maps will be created. In a nutshell, our approach will be to maximize the experience we have working with tax maps in the region to pursue the best quality of data along with a process for reviewing, adjusting and updating Durham's parcel data, and migrating the information into a new parcel fabric contained in a new database scheme. We will use GIS ArcGIS Pro ESRI to process the data and integrate all analog and digital information such as orthophotos. The definition of a new relational database scheme will be coordinated with the town of Durham. We will work in close collaboration with the Town Assessing Department and appropriate staff to strategize some of the activities such as determining an area for a pilot project and defining an effective system for assigning a unique identification number to tax maps. A series of strategies to publicly verify the data and maps generated throughout the process will be established. Finally, a workshop to guide municipal staff on best parcel and tax data and management will be held. This will be an opportunity to continue collaborating with the Town of Durham and providing a service in the future for maintaining and publishing the Tax Maps.

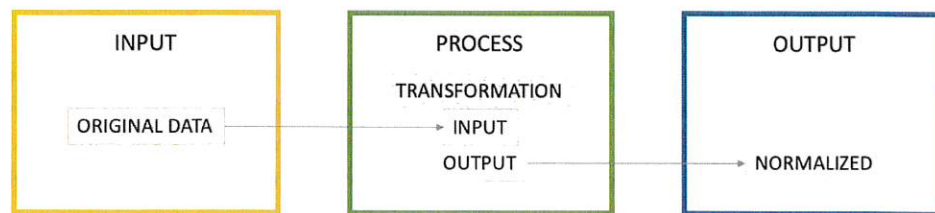
### DETAILED METHODOLOGY

#### I. Current Dataset Assessment

- i. Rapid Assessment: We will perform a rapid assessment of the current parcel data for Durham. The assessment will include: 1) identifying the common attributes needed for each parcel (i.e., value, ownership, land use, zoning, etc.); 2) visually identify the areas with less accurate spatial composition; 3) identify the non-spatial problems associated with the data; and 4) identify and integrate additional thematic, topographic and imagery for support. This Assessment will provide with a clear idea of the current problems in terms of the spatial and tabular data, the location of those groups of parcels that are need critical adjustment, and a general idea of how other thematic maps and information might provide support in the process.
- ii. Kickoff Meeting: As one of the early steps in the process, SRPC will facilitate a kick-off meeting to present results of the rapid assessment, touch based on define the gaps of information, confirm methodology for renumbering parcel data, review a preliminary proposal for the database, brainstorm potential pilot areas, and discuss some of the strategies to effectively coordinate efforts throughout the process. This will become the basis for establishing priorities in terms of allocating resources and ensuring that SRPC will be working effectively towards the main goal for this project.
- iii. Pilot Area Identification and Selection: Using the rapid assessment and input from the Kickoff Meeting, we will determine together with the town staff a pilot study area for the project. Based on priorities and the evaluation procedures, we will determine how many pilot sites are needed. This may include the following criteria: 1) site consensus; 2) agreement with pilot site requirements; 3) any specific context desired (i.e., close to the coastline, residential, etc.); and 4) evidence of ability to go through the process, from A-to-Z. A brainstorm of all potential benefits and challenges will be considered to clearly understand the incentives or reduce the scope or requirements of the process. Previous collaboration with the Town of Durham's parcels has provided us with the knowledge of the most pressing problems in the parcel data. We will have the opportunity to utilize this knowledge to determine priorities.

#### II. Analog and Digital Data Sources

delivered. The data will be renamed, added, removed, and modified as needed. All processes will be documented. The image below is a simplified, hypothetical, workspace example.



#### IV. Parcel Fabric

- i. **Original Data Review:** We will use the rapid assessment and the pilot project area to determine a testing and adjustment strategy the process. All boundaries will be reviewed thoroughly using the most recent survey and deed information.
- ii. **Parcel Fabric Development:** The current tax parcel data will be 1) analyzed and prepared for conversion using the ESRI/ArcGIS Parcel Fabric environment; 2) a staging geodatabase and attributes will be created to go through the process of importing the data into it; 3) control points will be imported, geometries will be prepared and used to test the imported data for completeness and consistency; and 4) any missing attribution or features will be added. This will be followed by the integration of supporting data and adjustment (described in the next section). A geodatabase using most appropriated and documented settings (proper projection) will be used to store all datasets (points, lines, polygons, tables and annotations). A metadata (HTML, XML, ascii) that is compliant with the Federal Geographic Data Committee (FGDC), will be included. The dataset will be properly evaluated. Data from property descriptions, deeds, various plats and surveys will be entered into GIS using trigonometry, coordinate geometry and cadastral mapping standards. The ESRI ArcGIS provides with a set of documentation, tools and guidance to perform this migration orderly. We will follow the most updated standards to maintain a solid and documented methodology.
- iii. **Parcel adjustment:** A process to digitize the current parcel data will be performed in two phases:
  - a. **Phase 1:** The adjustment will be performed in the defined pilot area first. A series of steps will be applied to this area ensuring that all parcels have a continuous lines and closed polygons with no overlap, gaps or dangles to the extent the parcel fabric allows. Parcels will be added to the layer in accordance with the parcel fabric data model and will represent the source documents (i.e., deed or survey). COGO<sup>1</sup> ground-to -grid correction tools will be used. We will make sure to account for accuracy by performing QA/QC (see section V. Quality Control and Assurance for details) and the process will be discussed with the Town's Staff. All features corresponding to the parcel pilot area will reflect the most accurate dimensions of record based on the research that we will perform, including the orthophoto verification. This phase includes a first public review (see section VII. Public Review).
  - b. **Phase 2:** Once the methodology is tested in phase one, we will make any adjustments needed in the process and continue with the revision and adjustment when needed for the entire town of Durham. By now, all standards should be well defined in order to be

<sup>1</sup> COGO also refers to automated mapping software used in land surveying that calculates locations using distances and bearings from known reference points. COGO is also an acronym for the Coalition of Geospatial Organizations, a consortium of organizations involved in geospatial data and policy issues.



staff to allay potential positive or negative outcomes such as possible fear from change (e.g., perceived loss of value, increase in annual tax bill, etc.). In general, the approach will entail designing a couple of venues to access and review the information: 1) printed Tax Maps available in the Town Hall; and, 2) a Digital Tax Maps available online. Advertisement for public review opportunities will be discussed as a potential strategy.

- ii. Tax Maps Review: The printed Tax Maps with associated information (see section IX. Map Creation and Deliverables) will be available through the Town Hall in Durham. Review sessions will be organized such that the public have the option of visiting the Town Hall to review the maps and provide feedback when necessary. Also, we will provide the option of doing so through a website with credentials, guiding the user on how the review and allowing the feedback or comments to the Tax Maps through an online tool. In order to be transparent in the process, we will incorporate the option to record and broadcast on cable access the process when the public is present. These review sessions will be guided and facilitated by the staff. We anticipate active involvement particularly from owners that have encounter irregularities in their parcels. Throughout this process, access to the information (digital and analog) will be limited and controlled for review purposes only. All information will include disclaimer to clearly inform the public about the purpose, process, problems associated with past and future outputs, and potential outcomes.
- iii. Validation: Following the public review process, we will have a validation process to incorporate in additional data provided by the public through the review process. To ensure data validity, we will select a series of criteria that will be use to validate the information and avoid errors or invalid comments. The selected criteria will be available to the public before they participate in the process.

### VIII. Municipal Staff Training

- i. Guideline Development of Tax Map Best Practices: A document with a clear process and best practices on how to integrate, manage, change and maintain the Tax Parcel Data database will be developed. We will include information about how to integrate secondary information, how to create reports and how to prepare maps. The document will be designed to specifically meet the needs of the Town of Durham. The level of detail of this document will be determined together with key personnel from the town's assessing department, and any identified frequent municipal staff data users, throughout the time the project is being developed.
- ii. Workshop: We will organize a two to three-days' workshop to provide support on the use of the guidelines. We will include two tiers of users:
  - a. Tier 1: Database managers, which include the Assessing Department and Town Staff. This tier will need to attend 100% of the training. Previous experience in GIS will be required otherwise, GIS courses such as "Introduction to ArcGIS" organized by UNH CE are recommended (also see: <https://extension.unh.edu/tags/desktop-mapping-technology>). We will include some background on how the Tax Map Model was developed, techniques and best practices to efficiently store, edit, and ensure the accuracy of land-records data. Additional information about tools and what's needed to maintain the Tax Map Model will be provided. We will also include how to use the ArcGIS parcel fabric to apply recommended workflows to perform and automate many common parcel-editing tasks.
  - b. Tier 2: Planning, public works staff and participants from Tier 1. For this part of the training we will focus on the "how to use, explore and find" information, covering specific

- ii. Parcel Fabric Updates: The parcel fabric updates will record subdivisions, lot merges, lot line adjustments, corresponding annotation, and other miscellaneous edits requested by the town. All typographical errors or other changes will be recorded.
  - a. Deliverables: We will create final maps (PDF) for the won, a file parcel fabric updated, and a series printed maps with dimensions of 11x17" and 24x36" map sheets.
  - b. MapGeo parcel update: Yearly updates will be developed accordingly.

This proposal assumes an eighteen-month timeframe beginning on July 1, 2019. SRPC can adjust the timeline to match the town's preferred start date.

Task	Dates		Staff Assignments
	From	To	
<b>I. Current Dataset Assessment</b>			
i. Rapid assessment	Jul-19	Aug-19	Principal Planner (5%), GIS planner (30%), data analyst (30%), and the GIS technician (30%) will be involved in the rapid assessment. The principal planner and GIS planner will lead the kick-off meeting. The GIS planner will oversee the plot area identification selection together with the Town's staff.
ii. Kickoff meeting			
iii. Pilot area identification and selection			
<b>II. Analog and Digital Data Sources</b>			
i. Assessing data	Jul-19	Aug-19	This task will be mainly performed by the GIS technician (55%) and the GIS planner (30%) however, the data analyst and the principal planner (10%) will be involved to provide additional support and assistance throughout the process.
ii. Other Sources			
<b>III. Database Design</b>			
i. Schema design	Jul-19	Sep-19	The data analyst (50%) will provide guidance on relational database design. The GIS planner (30%) and GIS technician (30%) will be actively involved throughout the process.
ii. Parcel renumbering			
iii. Normalization process			
<b>IV. Parcel Fabric</b>			
i. Original data review	Jul-19	Dec-20	This will be a continuous process throughout the course of the project. A thorough review will be performed initially by the GIS planner (7%) and data analyst (3%) to establish a protocol. The GIS technician (90%) will be involved throughout the whole process and perform most of the parcel fabric review, development and adjustment. The GIS technician will be supervised by the GIS planner.
ii. Parcel fabric development			
iii. Parcel adjustment			
<b>V. Quality Control and Assurance</b>			
i. Aerial vs. non-aerial data	Dec-19	Nov-20	This is a continuous process that will be applied first to the pilot site and later to the rest of the data. The QA/QC will be established and supervised by the GIS Planner (30%) and the GIS technician (50%) will be applying the methodology. The data analyst (5%) will provide support when needed.
ii. Parcel visual analysis			
iii. Follow up and errata list			
<b>VI. Indexes and Reports</b>			
i. Indexes	Aug-19	Oct-20	Indexes and reports will be designed relatively early in the process to be reviewed with the Assessing Department staff. Most of this work will be designed and supervised by the GIS Planner (45%). The implementation will be supported by the GIS technician (45%) and the data analyst and principal planner will provide support (10%).
ii. Reports			
<b>VII. Public Review</b>			
i. Organization and outreach	Aug-20	Dec-20	The organization and outreach for the public review will be organized in coordination with the Town's staff. The GIS Planner (45%) will oversee designing the tools to be used for this process and the GIS technician will be providing support on the
ii. Tax maps review			

## SECTION 6 – APPENDICES

### Appendix I. Project Team Resumes

Jennifer Czysz

Executive Director



#### EDUCATION

Massachusetts of Technology,  
Masters of City Planning and  
Urban Design Certificate

Norwich University,  
Bachelor of Architecture

Ms. Czysz has 19 years of experience in municipal, regional and state planning, community development, and architectural design. As Executive Director she manages the daily operations of the agency by providing administrative and managerial direction in the areas of policy formation, budget maintenance, staff resource allocation, and management of complex planning projects.

Prior to joining SRPC in May of 2018, she served as the Assistant Director at Nashua Regional Planning Commission where she managed the office's land use programs including local technical assistance. While at NRPC, she served as the Program Manager for the statewide Granite State Future efforts and supported the many program partners and committees to engage stakeholders and coordinated efforts of the regional planning commissions. The end results of this extensive planning process included statewide core data and a snapshot of regional priorities. Previously, she served as a Senior Planner at the NH Office of Energy and Planning and a Regional Planner at Southern NH Planning Commission working in the areas of land use policy, municipal and regional planning assistance, water resources, housing, natural hazard mitigation, and emergency management planning.

#### LEADERSHIP

NeighborWorks Southern New Hampshire Board of Directors, March 2015-present

American Institute of Certified Planners, Member, 2012-present.

American Planning Association, Member, 2005-present.

Northern New England Chapter of the American Planning Association, Member, 2005-present, State Director (2012).

City of Concord, NH, Architectural Design Review Committee, Member, January 2010-present.

NH Planners Association, Member (current), Vice President (2010-2011), President (2007-2010), Public Information Officer (2005-2007).

#### AWARDS AND PUBLICATIONS

Northern New England Chapter of the American Planning Association, 2015, Plan of the Year for [Granite State Future](#).

New Hampshire Planners Association, 2015, Plan of the Year for [NRPC's Story Worth Telling Regional Comprehensive Plan](#).

National Association of Development Organizations, 2015, Innovation Award for [Granite State Future](#).

Northern New England Chapter of the American Planning Association, 2008, Project of the Year for the [Innovative Land Use and Planning Techniques: A Handbook for Sustainable Development](#).

MIT Department of Urban Studies and Planning, 2006, Excellence in Public Service Award.

## Marcia Moreno-Báez

GIS Planner/Analyst



### EDUCATION

University of Arizona, PhD in Spatial Analysis and Remote Sensing, Natural Resources Management

Marcia has more than 15 years of experience in spatial planning with extensive knowledge on data collection, management, analysis and visualization. She also has experience on integrating participatory processes using cooperative and collaborative research for mapping and spatial decision-making. Her experience focuses on environmental sciences and resources management and planning, and she has worked within multidisciplinary groups incorporating spatial methods, techniques and analysis to bringing collaboration between different stakeholders. Prior to joining SRPC in September of 2018, she was a research associate and adjunct professor at the University of New England. Over the course of her career, Marcia has taught numerous GIS courses and provided geospatial support to numerous organizations (e.g., World Wildlife Fund and TNC) and initiatives where the use of spatial technology is crucial for sound decision-making.

### TECHNICAL EXPERIENCE

Proficient with geospatial technology ArcGIS ESRI, Erdas Image, QGIS, Tableau, AutoCAD and other visualization software. Experience in participatory mapping processes with stakeholders and community members.

### LEADERSHIP

Active participant and member of the following organizations and/or groups:

NH Planners Association,

Member Society for Conservation GIS

Exeter Planning Board member

### PUBLICATIONS

NHARPC CORNER: How GIS is Transforming Data into Actionable Solutions. 2019. New Hampshire Town and City, March/April 2019

Poor fisheries data, many fishers, and increasing tourism development: Interdisciplinary views on past and current small-scale fisheries exploitation on Holbox Island. *Marine Policy*, 100, 8-20. 2019.

Biodiversity hotspots are not congruent with conservation areas in the Gulf of California. *Biodiversity and conservation*, 27(14), 3819-3842. 2018.

Water quality of inlets' water bodies in a growing touristic barrier reef Island "Isla Holbox" at the Yucatan Peninsula. *Regional Studies in Marine Science*, 22, 112-124. 2018.

A spatial method to calculate small-scale fisheries effort in data poor scenarios. *PLoS one*, 12(4), e0174064. 2017

## Appendix II. References

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Kelly Heon

Assessing Clerk

Town of Farmington

356 Main Street

Farmington, NH 03835

Tel. 603.755.2208

[farmassessing@metrocast.net](mailto:farmassessing@metrocast.net)

Tax Parcel Updates

GIS Expertise and Services

---

Caren Rossi

Planning/Zoning and Health Administrator

Town of Lee

7 Mast Road

Lee, NH 03861

Tel. 603.659.6783

[crossi@leenh.org](mailto:crossi@leenh.org)

Tax Parcel Updates

GIS Expertise and Services

Project Management

Community Outreach

---

Diane Hardy

Town Planner

Town of Newmarket

186 Main Street

Newmarket, NH 03857

Tel: 603.659.8501 (ext.1315)

[dhardy@newmarketnh.gov](mailto:dhardy@newmarketnh.gov)

Tax Parcel Updates

GIS Expertise and Services

Project Management

Community Outreach

Master Plan Development

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John Wallace

Chair, Conservation Commission

Town of Barrington

[crawford@myfairpoint.net](mailto:crawford@myfairpoint.net)

Natural Resource Assessment (Co-occurrence Mapping)

GIS Expertise and Services

Community Outreach

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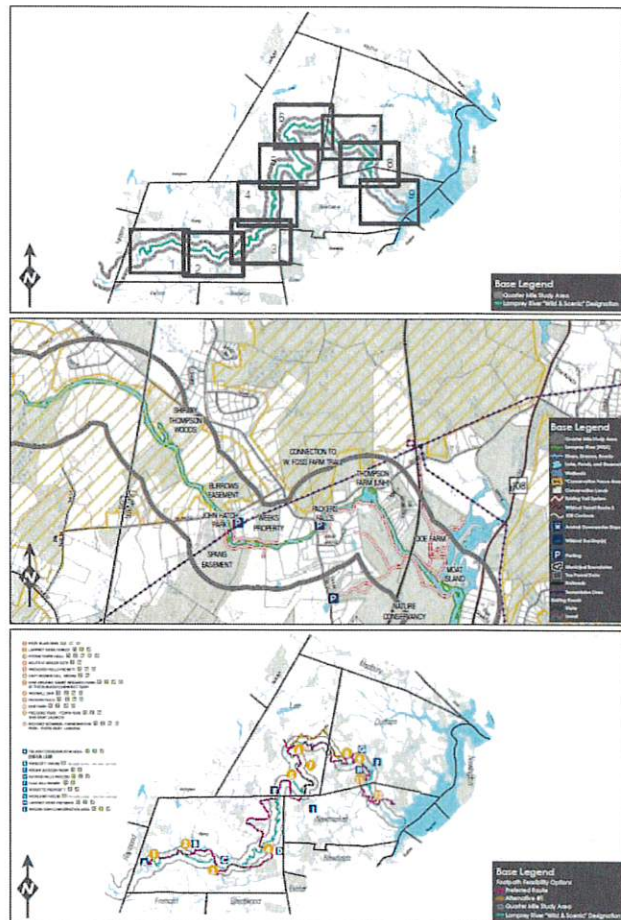
## Feasibility of a Footpath along the Lamprey River

The project “Feasibility of a Footpath along the Lamprey River in the Wild and Scenic Corridor” was developed to understand the feasibility of creating the best experience for people who enjoy outdoors activities along the banks of the Lamprey River and promote stewardship of lands, even where they are not formally protected by conservation easements.

Our approach was to define geographic characteristics and limitations and select a preferred location of a trail around GIS-mapped natural features such as wetlands and other spatial thematic layers. Those were selected based on the best available knowledge and well-defined criteria (e.g., avoid residential subdivisions, wetlands, state arterial roads, etc.) that supported the approach of avoiding any impacts in our footpath selection. For example, we selected short trails to appeal to a broader portion of the population in the area and interesting routes that had the potential for interconnection within the Lamprey River corridor.

The use of GIS allowed us to consider the existing development patterns and the natural features of the land for the best selection of a footpath, while understanding the appropriate networks needed for defining the guidelines for preferred locations in the corridor.

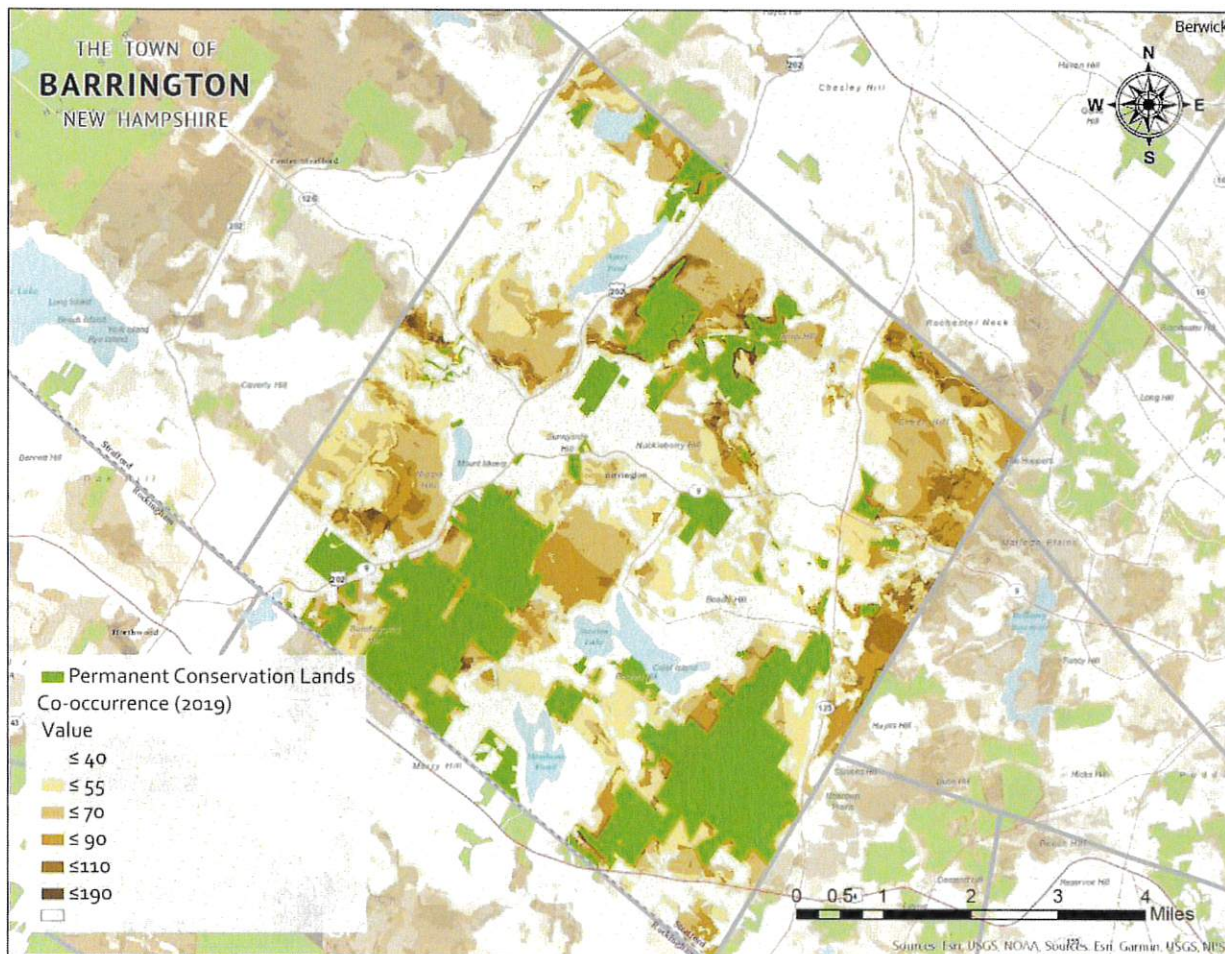
 **TAKE A HIKE!**   
 DETERMINING THE FEASIBILITY OF A REGIONAL WALKING TRAIL ALONG THE LAMPREY RIVER



PROJECT RESULT MAP FOCUS WORKING MAP REFERENCE EXTENT MAP

## Natural Resource Assessment and Co-Occurrence Mapping in Barrington

SRPC staff is in the process of completing a natural resources assessment for the town of Barrington, where we worked with a map-based GIS inventory of the town's natural resources. A total of six primary natural resource maps are being developed to display and analyze topography, agricultural resources, water resources, conservation and unfragmented lands, habitats identified in the NH Wildlife Action Plan (WAP). We integrated a participatory spatial planning process to value these natural resources to spatially define conservation priorities. The criteria was selected based on their importance for conservation and they were weighted based on input from members of the Barrington's Conservation Commission. The analysis was performed for the entire southeastern region of NH using model builder in ArcGIS ESRI 10.5. These hotspots represent the richest and most important ecosystems based on local values. This effort can be replicated in other regions where communities and planners can integrate the local values for conservation and use the spatial query and mapping functions of GIS to analyze the existing situation in the town or city. Hotspots for conservation can help prioritize conservation investment and inform local land use planning efforts to protect ecosystem environmental services and support economic development and conservation efforts.





## Isinglass River LAC Resource Maps

Maps were produced for IRLAC by Strafford Regional Planning Commission as part of the Updated River Management Plan and provided up-to-date resources and information within the one-quarter mile river corridor and watershed.

