

A Proposed Vermont Statewide Parcel Data Maintenance Program:

Return on Investment Report

February 2014



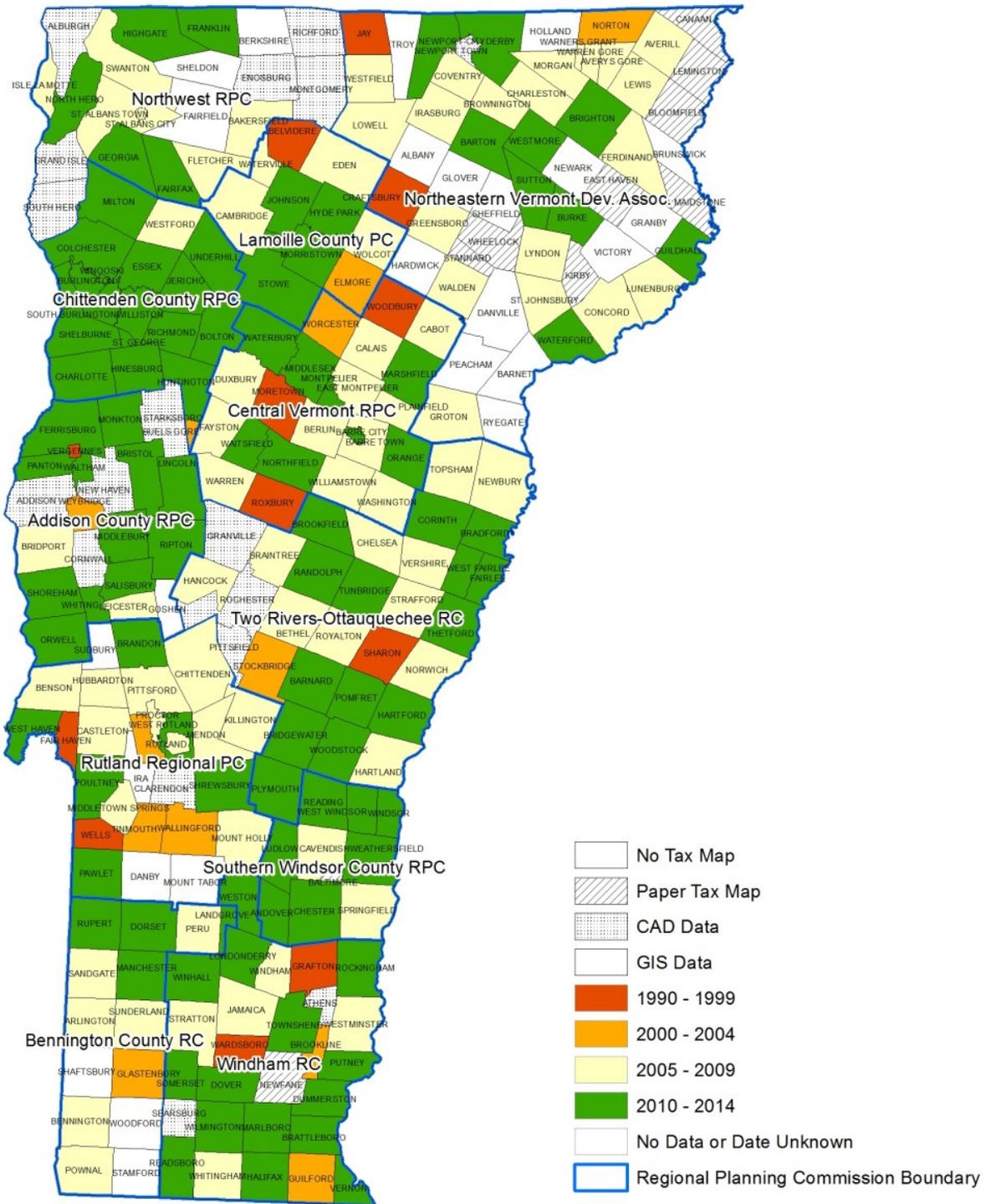
Written For:

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Information collected from the Regional Planning Commissions

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Introduction

Overview:

The information used to represent property ownership boundaries (often called parcel data) is fundamental to many activities in the public and private sectors:

- Economic development
- Community planning
- Natural resource planning
- Transportation planning and construction
- Land Taxation

The current state of Vermont's parcel data is fragmented, inconsistent, and variable in quality because the responsibility for developing and maintaining this essential map layer has been left to the towns. The towns' varying levels of wealth and technical awareness/ability have led to unfortunate variety in the availability and quality of parcel data. 16 towns have no tax maps, and 10 more towns have maps, but no digital data to represent those boundaries. The remaining towns have either CAD data or GIS data to represent their parcel boundaries, but the age and quality of the data vary a great deal.

Future Benefits:

When a statewide, consistent, and up to date parcel data layer exists, it will have the following impacts:

- Economic Development Corporations could target properties at the parcel level for inclusion in their strategic investment applications
- Community planners could analyze how land ownership, land use, natural resource distribution, utility availability and settlement patterns intersect
- Natural Resource managers could analyze patterns of natural resources health, distribution, and vulnerability
- Transportation planning and construction professionals could more efficiently prepare for projects and communicate with land owners.
- Realtors, Surveyors, Foresters, and other private sector consultants would be able to offer better quality services for a lower price.
- Land would be more accurately and equitably taxed

Current Effort:

A group of state agencies and interest groups began meeting during the fall of 2013 to discuss the idea of a statewide project or program to bring all of Vermont's parcel data up to a consistent standard and level of currency. The group that met was made up largely of state agency and department representatives, but also included Regional Planning Commissions, VT League of Cities and Towns representatives, VT Association of Listers and Assessors representatives, and VCGI staff. It was agreed that the tentative goal identified was worth pursuing over the course of years if necessary and that a program of some sort would need to be created in order to address funding, process, and legislative issues. The group agreed to consider itself a "workgroup" of the existing VT Enterprise Geospatial Consortium (whose members include state agency and dept. representatives, a Regional Planning Commission representative, and federal agencies representatives).

In addition, VCGI had applied for a grant from the Northern Border Regional Commission in order to address a limited number of towns' parcel data (with a very similar goal to that identified by the group) and was awarded \$169,100 to do so (\$160,000 of which is specifically designated to pay contractors to create or update data). This project will serve as a "pilot" of sorts from which this workgroup and the state of Vermont can gain valuable insight into best practices for achieving the outcome identified below.

Desired Outcome

A program that financially and administratively supports the annual update of digital, geo-referenced parcel data for every town in Vermont that meets the VT GIS Parcel Data Standard (VCGI, 2012), includes available VTrans Right of Way boundary data, and has been annually updated to reflect grand list and boundary change information. An additional outcome being considered is edge-matching each town's data to create a seamless statewide data layer (no gaps or overlaps between towns).

A Statewide Parcel Data Maintenance Program will:

- Facilitate the inventorying and management of taxed parcels to create a single authoritative source for tax parcel information
- Help keep track of tax parcel boundaries, to help streamline project scoping and delivery

- Facilitate mapping parcel data to other layers of information from other sources, such as towns, VCGI, utility companies, other state agencies (e.g. Agency of Natural Resources), and federal agencies (e.g. USDOT, USEPA)
- Enable more complete attribution of parcel data via linkage to other databases, such as the grand list
- Support creation of reports and maps requiring parcel data throughout the state
- Help confirm and quantify existing property rights
- Resolve existing parcel boundary inconsistencies and errors with more accurate data

Scope of This ROI

- Reports from various state agency and department contacts as well as some non-profits re: value of statewide, consistent, high quality, up-to-date parcel data in GIS format
- Estimates of cost savings if Parcel Program existed

Purpose

- Assess and document the value to various state entities of statewide, consistent, high quality, up-to-date, GIS parcel data in qualitative and quantitative terms
- Use the results to provide business value and cost justification to decision-makers considering a proposed Statewide Parcel Data Maintenance Program

Approach

- Compile benefit descriptions and quantification estimates from primarily state, regional, nonprofit, and municipal sources (excluding VTrans as they are performing their own ROI study on this topic).

Benefits and Savings Identified

Please consider all of the bullets below to conclude the statement: “Statewide, consistent, high-quality, up-to-date parcel data would allow our program to more efficiently and accurately....”

Agency of Natural Resources:

- Administer the Use Value Appraisal Program (County Foresters)
- Scope out regulatory enforcement cases (DEP)
- Determine impervious surface area by parcel analysis (Stormwater Program)
- Perform land use/land cover analysis by parcel type/ownership (Forest and Parks Dept.)
- Respond to toxic spills and other emergencies (DEP)
- Identify land acquisition candidates
- Improve shoreline protection
- Perform recreation planning
- Protect urban forests
- Perform flooding analysis and planning
- Provide wetland determination notifications (notify adjacent land owners)
- Protect rare, threatened and endangered species and significant natural communities
- Identify opportunities for protecting wildlife corridors
- Perform spatial analysis and reporting using all the existing ANR GIS data

Agency of Commerce and Community Development

- Inform a commercial, industrial site locator – mapping accurate parcels with orthophotography and grand list allowing for a more informed discussion in moving a business to Vermont.
- Perform assessment of growth trends across the State – identify whether subdivisions are occurring in accordance with State land use goals.
- Measure program effectiveness of designation programs - data could allow detailed analyses over the past 30 years.
- Create return on investment data for areas where historic tax credits have been allocated
- Perform district mapping – digital submittal requirements for TIF program, truthfully depicting district boundaries. (historic, downtown, growth centers, neighborhood, village, and TIF districts currently supported by the agency)

- Power customer online systems – providing accurate information to the public. E.g. “Are you in or outside of this program incentive area?” (smartgrowthmapper and Vtmapptool.)
- Support the environmental review program – allows analysis of impacted areas in relation to parcel ownership.
- Perform an archaeological Inventory - collection and impact in relation to parcel ownership.
- Support the Historic Sites and Structures program – identification of Historic places in relation to parcel ownership.
- Support the Barn Census Program - identification of Historic places in relation to parcel ownership.
- Support the National and State Register - identification of Historic places in relation to parcel ownership.
- Support flooding analysis and planning - Irene recovery efforts accurately depicting impacted areas assessing funding opportunities through grant programs.
- Perform population analysis – economic impacts and HUD accountability
- Perform spatial analysis and reporting using all the existing GIS datasets

Vermont League of Cities and Towns (benefits to member municipalities)

- Define and identify owned properties in a municipality which are recorded in each municipality's grand list
- Perform accurate property tax assessment
- Implement and clarify planning and zoning goals
- Identify and implement natural resource conservation goals
- Link their parcel maps to their electronic municipal grand list data and display local information
- Show tax-payers how proposed development or changes in municipal services and regulations will affect them and their neighbors.
- Plan bus routes
- Provide public notices, etc.

VT Dept. of Forests, Parks, and Recreation

- Link spatial information with UVA tax application information
- Show a statewide map of the impact of UVA enrollment in protecting natural resources for policy, grants or legislative purposes
- Support Forest Management Plan maps
- Evaluate UVA property forest treatments as compared to management plans.
- Perform UVA Forest Management Plan review. That might be 1,000 hours worth of County Forester time in plan review and another 1,000 hours in map work for inspections (easier and more efficient to locate and travel to points on the ground)
- Bullet above equates to approximately \$40,000 (assuming \$20/hour wage)

VT Agency of Agriculture, Food, and Markets

- Regulate farms and follow up on complaints. It would be much easier to map whole farms
- Respond to requests, reduce fieldwork, leading to less disruption to constituents (farmers)
- Map farms and farm resources. Agency mapping staff would save at least one hundred hours of time spent mapping and other staff would save dozens of hours of preparation for fieldwork
- Bullet above equates to approximately \$3000 (assuming \$20/hour wage)

VT Department of Public Safety

Please see the attached document for more detail regarding benefits to the following Public Safety organizations:

- Emergency Management
 - Situational awareness
 - Needs assessment
 - Damage assessment
 - Site selection
 - Grant application
- Fire Safety
 - Retrieval of land ownership information
 - Access planning
- Law Enforcement
 - Situational awareness
 - Access planning

- Crime analysis
- Enhanced 911
 - Call takers screens include geospatial display
 - Helps responders plan access

Vermont's 11 Regional Planning Commissions

- RPC Transportation Planning Studies typically include an abutting land owner list and map for the intersection or road way we are studying. With current parcel/grant list links the RPC's could save about 3 hours per study at \$60 per hour. Each RPC does about four studies per year times the 11 RPC's. So we would be looking at a ROI of \$7920 per year for all the RPC's.
- Geomorphic stream assessment and corridor planning work includes a land owner outreach for all the land owner that abut the streams reaches we are looking at. Our consultants spend about 5 hours generating that mailing list at \$55 per hour for the study area. So that would save \$275.00 per study. Not sure what the total number of studies is state wide but if each RPC did one geomorphic/stream corridor related assessment per year that is 11. So the ROI would be \$3025.00

Benefits Summary

Tangible Benefits

- Increased efficiency of state, municipal, and nonprofit staff engaged in work that involves assessing and acting on information about land, land treatments, and landowners in Vermont.
- VT Dept. of Forests, Parks, and Recreation estimates that 2000 hours of time currently spend by County Foresters and support staff could be saved and put to other uses. This has a value of at least \$40,000 (assuming \$20/hour wage, most likely a low estimate).
- VT Agency of Agriculture, Food and Markets staff estimate a savings of approximately 150 hours of time spent responding to requests for information and preparing for field work. This has a value of at least \$3000 (assuming \$20/hour wage, most likely a low estimate).
- VT's Regional Planning Commissions perform Transportation Planning Studies and Geomorphic Stream Assessments each year and estimate that they could save at least \$11,000 per year if they had consistent, high quality, and up-to-date parcel data for all of their member towns.

Intangible Benefits

Many of the benefits identified above relate to be able to do more in the way of analysis, or better information management. Increased efficiency or increased effectiveness are explicitly described in these benefits.

In much the same way that publicly funded roads facilitate commerce, public safety, and a higher standard of living, improved statewide parcel data is information infrastructure that can support a multitude of public and private activities that contribute to the public good.