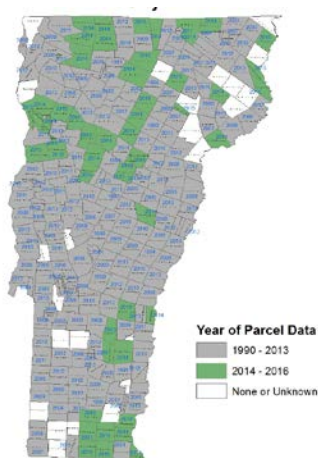


Getting On the Same Page...and Parcel

Local flair is a valued and cherished quality of small Vermont towns and cities. The Agency of Natural Resources works daily with town officials and local committee volunteers to provide the resources that allow towns to set conservation and environmental protection goals and actions that are specific to their town's land type and community voice.

Yet there are some situations where every town could benefit from slightly forgoing its own style and getting on the same page. **How towns create and update their parcel data across the state is one of those situations.**

All property boundaries, or land parcels, in a town should theoretically be documented and kept updated by each town. And though this mostly happens universally across Vermont's 255 towns, the *format in which the parcel maps are produced* varies drastically. Most towns have digital maps, yet some still use paper copies. Among the digital mappers, the data may be saved in different file types that don't make them comparable with other towns. Some data is from 1998—some is from 2015, and everywhere in between.



Check out the status of Vermont's parcel mapping data on the final page.

In other words, looking at a map of all the parcel data in Vermont looks like a patchy quilt with tiny, inconvenient holes. Because the parcel data from each town varies in age, content, and availability, there are not only holes in the quilt—the quilt squares are all mismatched and come from totally different color themes.

WHY IT MATTERS

This lack of consistent parcel data is a huge **problem for any researcher or organization that wants to evaluate project impacts, conduct feasibility studies, or create planning guides across multiple towns**—be it a region, a county, or the entire state. A conservation organization that wants to know how many individual properties border a river corridor to be conserved across multiple towns may need to visit each town to gather individual, updated data and work to merge the data together. This can exponentially increase the time it takes to complete a project—if possible—and places tough limits on information exchange and measured policy making.

A huge inter-agency project is starting to change that by making sure that State and local governments have the *same kind of parcel information* for all properties in the State. Leslie Pelch is the Outreach Coordinator for Vermont Center for Geographic Information (VCGI), a division of State government charged with assisting digital mappers across Vermont and providing datasets to help them do their work. Leslie has been charged with doing outreach and teaching about this collaborative **Statewide Parcel Mapping Project** between state agencies and towns. To explain how important this project is to our land-use decision making, we spoke with Leslie Pelch.

ANR: Every town is doing their own thing when it comes to parcel mapping. Tell us more about the situation.

PELCH: Exactly. Towns have different interests, different capacities, and different software. Which means that parcel mapping data across towns are in different uncompileable formats, or haven't been updated at the same frequency. For instance, a lot of towns have mappers that use CAD software instead of GIS, since ArcGIS is a more expensive software. CAD uses different filetypes than ArcGIS.

Some towns got excited about the idea of using digital mapping technology, yet are still very weary of the computer. Depending on resources, the idea of digital mapping data may not easily be within reach. These towns still might have paper maps updated and use them, but do not translate the recent data into digital files.

There are a small handful of towns that don't even have paper maps. Literally—no maps. And some have very old maps that they keep drawing on in pencil to reflect updates to the parcels. There are few towns in this category, maybe 2 or 3—it's very limited.

There is truly a full spectrum represented in the State. Each town makes its own decisions. It completely depends on the processes in that town, and the individual personalities in that town.

ANR: Was there an era when digital mapping technology became popular and towns started digitizing their parcel data? When did the mass transition generally happen?

PELCH: The first time the State recognized the value of having digital parcel data was in the early 1990's. It was around the same time the State was looking at digital mapping data as a statewide resource as opposed to just locally-available, isolated data. So in the early 90's, the State funded a digitization project. Pretty much any town that had a tax map could get it digitized. In that time, a lot of data was created—but there was no follow-up to the program. It was just a one time deal, and a lot of that original data never got updated, even if the town continued to update their parcel maps in a non-digital format. You'll see a lot of towns that have digital parcel data that hasn't been updated since that era in the 90's. That's over 15-20 years ago now, in some cases.

ANR: How is parcel data created in the first place?

PELCH: Parcel boundary data is not created through land surveys. It can be, but generally, it's an amalgamation of all sorts of pieces of information—land records, property deeds, etc. There are consultants that specialize in digging through historic and recent town records and translating the information into parcel boundary data. From existing paper maps, a consultant may use additional records to enhance the accuracy of the parcel boundary, and convert the information into a digital format. Once a digital format is in place, the digitized parcel data can more easily be updated and maintained.

ANR: So how did the idea start to take on a statewide project to standardize Vermont parcel data and bring all towns up to speed?

PELCH: My current boss, John Adams, was working in the Agency of Commerce and Community Development three years ago, and wanted to do a statewide analysis for a particular project. He was fairly new at his job at the time, so when he started planning the analysis, he began hearing from people, "No, you can't do that. You can't do a statewide analysis with the parcel data we have now."

John called me up at VCGI—we were not part of the Agency at that time—and said, “What’s up with this, Leslie?! Shouldn’t I be able to do this?” I said, “I know! It’s crazy.”

This was a little over three years ago. John said, “Well, let’s do a meeting and get people together and change this.” I am thankful he suggested this and brought energy to the idea because I have to admit—I was somewhat skeptical that there would be interest. As it turns out, there was a huge amount of interest at the level of State agencies and regional planning commissions to change things—to do something about it. And here we are, almost three years into the project.

ANR: You’ve been doing outreach to Vermont towns about this. Any opposition to the idea?

PELCH: Yes. There are a lot of towns that do not think that the “map” is necessary. It’s not survey quality. It’s bringing together a bunch of different pieces of information; it’s imperfect. But that’s the thing with parcel data. Even if you had high-quality land surveys for all the parcels in your town and put them together—there would be gaps. At the parcel level, those gaps aren’t significant. You can still do multi-town, regional, and statewide analyses from slightly imperfect data boundaries.

But some towns are worried that there will now be a document that landowners, banks, realtors, and officials can look at and say, “Oh, well, the line is there, and therefore...” They worry that it will be misused, misinterpreted, and that angry neighbors are going to start suing each other over the boundaries.

One of our most important goals is to educate town officials and staff about what the data means, and how it can be used.

We want to be going out there and saying, “This is how you can use it. Here are the caveats.”

One gentleman raised his doubts at a public meeting about how the map seemed useless. He said, “It’s useless because it’s not accurate and you’re admitting that there are flaws and mistakes. It’s not survey quality, so therefore it’s useless.” *It’s not that it’s useless.* You just have to find the right scale to use it at. The disclaimer for this data is that it is only appropriate to be used at the planning level.

However, towns can still uncover a lot of direct benefits from updating their parcel maps. For example the town of Woodford received funding to update its parcel maps a couple years ago. They compared the updated data the town’s grand list, and found an 80-acre parcel of land that was not on grand list. The town officials went and talked to neighbors, who found the owner of the parcel, and he plainly explained that he had never been taxed before. Plain and simple.

We’re starting to see as towns start updating their parcel datasets, they’re finding properties where acreage is off significantly.

ANR: What are the new standards that towns are being supported to meet in this new project?

PELCH: The standard itself focuses on the *format* of the parcel data layers and the *kind of information attached* to those data layers—the attributes. Two minimum requirements are that the data exists—that there is parcel data for the town—and that it has been updated within the past two years.

- **On Format:** The project leaders wanted the standard to be as friendly as possible. The standard says that both shapefiles (.shp) and file geodatabase (.gdb) are acceptable for parcel data cross-comparison. If a town can provide a file geodatabase, that's great—we encourage that. But we don't really lose that much by receiving data as shapefiles, and it allows for software flexibility among towns.
- **On Attribute Information:** Each data layer—each parcel—has information associated with it. This is one of the most inconsistent things about parcel data right now, that makes it truly painstaking to combine and compare. The new data standard requires all parcel data units be attached the following information: TOWN NAME, YEAR, SPAN #, and LOCAL TAX ID #. The standard also requires the data layers to include what's called "feature-level metadata," which captures information about who last authored or changed the data, and other information about when, why, and who created the data. There are also recommended naming conventions so that the parcel data attributes are comparable and consistent.

The value of standardized attribute data to State agencies—for folks who help plan construction projects and beyond—is huge. It costs real time and money to visit town offices during their limited hours to match up local tax ID information with parcel data sets. This is largely what has driven the business decision to get this done: do a better job on our tasks, and be more efficient doing it.

ANR: And be able to connect parcels to landowner information?

PELCH: The key is that when this project is complete, there won't be critical information being maintained in two different places. Everyone will be able to use a definitive source—which is the grand list provided by the town—to connect landowner information to the parcel data.

* * *

How the data will impact natural resource planning and policies:

Good data is critical for making sound decisions about how we use and manage lands, wildlife, and infrastructure. The parcel is a data unit that is so important to regional and statewide analyses regarding many natural resources issues, like keeping large forest blocks intact, river corridor planning, renewable energy siting, and so much more. The Agency of Natural Resources is one of the State agencies helping to fund and support the project so that staff can work more efficiently to fulfill public missions and to make data available to the public.

Once complete, updated parcel data will be reflected on popular data and mapping applications like the [Natural Resources Atlas](#). It will also be available for download via the [Agency's OpenGIS portal](#), an environmental-subset of the VCGI Open Data Warehouse where it will also be available.

To learn more about the Statewide Parcel Mapping Program and plans to keep parcels regularly updated after initial efforts, go to: <http://vcgi.vermont.gov/parcels> or contact Leslie Pelch at (802) 882-3002.

VT Parcel Mapping Data Status July 2016

