

September 14, 2006

**NEW YORK STATE GIS COORDINATING BODY
CADASTRAL DATA WORK GROUP (CDWG)**

NYS Cadastral Data Standard Recommendation

Background

Several years ago, the Coordinating Body (CB) identified three framework data sets that they believed were necessary for governments to effectively use and benefit from Geographic Information System (GIS) technology. Those framework data sets are:

- an accurate base map layer that can be used as a spatial reference for all other GIS layers
- an accurate road centerline layer with address information
- a tax parcel layer with land ownership information

Since that time, the State has been able to plan and implement a statewide digital orthophotography program to meet the accurate base map requirement. More recently, the State completed the ALIS project, providing statewide road centerlines with address information to provide that framework data set for all New York governments.

The challenge of the third framework element has been that counties, and sometimes cities and towns, have the legal obligation to maintain accurate tax maps meeting specifications set by NYS ORPS. While those specifications are clear on the information required to be maintained by local governments, they do not provide any direction for digital tax maps regarding data format.

The counties in New York have been gradually transitioning from hard copy tax maps to digital tax maps since the early '90s. Over those 15 years, the county tax maps have been converted to a variety of data structures using at least 4 different software packages. There have been some efforts at consistency, notably by NYC DEP in the watershed counties, but generally, the sharing of data between counties or with other levels of government has required some level of translation – every time data is shared. This is almost always time consuming, and frequently means that other levels of government are using outdated data. It has become increasingly evident in these days of global threats, even unintentional ones such as West Nile Virus and Avian Flu, that other levels of government need reasonably current spatial land ownership information.

The CDWG was established in early 2004 by the CB. The mission was emphasized during the CB planning session that summer, when consistent cadastral data was identified as one of the two primary needs for GIS users in New York. The CDWG has been meeting since that time with the goal of developing a digital tax parcel standard that meets the needs of GIS users in the State and can be recommended to the counties as a model for possible adoption.

The Proposed Tax Parcel Standard

A great deal of research was undertaken, reviewing efforts at standards made by other states as well as national guidelines. After much discussion, it was decided that the level of voluntary participation by local governments would be significantly affected by the complexity of the Parcel Standard. We decided to keep it simple. While many of the features represented on tax maps vary from county to county, the actual mapped tax parcels are the basic building blocks. Tax parcels are also the most important data layer from the tax map that other agencies and levels of government need for effective GIS analysis.

Once we decided on our focus, the discussion centered on the attribute information that GIS users sharing data would want to always be included with the mapped tax parcels. The discussions were very enlightening, and we all learned a lot about the ways that others on the work group use GIS data. In the end, we identified a list of minimum attributes that we all felt should be included with a tax parcel layer being shared. We also identified some additional attributes that would be helpful, but not necessarily essential. It is our belief that the combination of the minimum and additional attributes will meet the ORPS requirements for information that must be maintained with the tax maps as specified in Part 189 of the Rules and Regulations. This should allow the counties, towns and cities maintaining tax maps to adopt the parcel standard without any additional maintenance effort required, once a conversion is completed.

We are proposing the attached Parcel Standard. We have also provided a draft metadata standard to accompany parcel data being shared. The proposed Parcel Standard has received an initial review by both CSCIC and ORPS. The second phase of the review process will solicit feedback from the Standards & Coordination Workgroup and advisory groups to the Coordinating Body; as well as input from the other state agencies, The County Tax Director's Association, The County Planner's Association and the New York Assessor's Association.

NYS Standard Tax Parcel Feature Dataset

Feature Class: *Parcel*
 Type: *Polygon*

Sub Type	Attributes	Description
1 = Parcel	Minimum Attributes	
	Parcel ID	<i>SWIS/SBL to match RPS, one ID per parcel (unique)</i>
	x-coordinate	<i>Parcel centroid, to nearest foot, NAD83, NY State Plane Coordinate System (feet)</i>
	y-coordinate	<i>Parcel centroid, to nearest foot, NAD83, NY State Plane Coordinate System (feet)</i>
	Area	<i>Calculated in acres from polygon, to nearest hundredth of an acre</i>
	Jurisdiction Name	<i>Should correspond with SWIS code</i>
	Jurisdiction Type	<i>City, Town, Village, Indian Reservation</i>
	Current owner(s)	<i>With deed references, deed date if available</i>
	Owner Maintenance Date	<i>date of last change to owner record</i>
	Spatial Maintenance Date	<i>date of last change to polygon geometry</i>
	Original SBL	<i>Alternate tax map number or other ID to link to assessment data.</i>
	Suggested Additional Attributes	
	Parcel Location	<i>recommend 911 address</i>
	U.S. National Grid Reference	<i>Calculated from parcel centroid x and y coordinate to nearest meter</i>
	Prior owner(s)	<i>With deed references (ORPS minimum prior owner history is 5 years per Part 189)</i>
Survey reference(s)	<i>Case map and lot numbers</i>	
2 = Road Right-of-Way	Suggested Attributes	
	Area	<i>Calculated in acres from polygon, to nearest hundredth of an acre</i>

FGDC Metadata

Category	Item	Description	Example(s)
Identification Information	Name of Data Set	Standardized name of data set in following form: county, municipality (or all)	Ulster_Denning; Greene_all
	Subject or theme of data	"Digital Parcel Data"	
	Scale(s) of source mapping	Ratio Scale	1:4800, 1:1200, etc.
	Attributes and definitions	See parcel file layout above	
	Spatial Data Maintained By	Name of organization (county, town, private entity), department (IT, RPS, Engineering, etc.)	Delaware County Real Property Tax Service Agency (DCRPTSA)
	Assessment Data Maintained By	If present - Name of organization (town), department (Assessors Offices)	Town of Denning; Assessor's Office
	Currency Date of Spatial Data	Date of last update to spatial data	
	Date of Assessment Data	(If present)	
	Date of Last Reconciliation	Date of most recent spatial to assessment data reconciliation	
	Restrictions on Usage	Description of data sharing policy	Contact DCRPTSA
Data Quality Information	External files associated with data set	File name and location for any files required to interpret data	Property Use Codes see http://www.orps.state.ny.us/assessor/manuals/vol6/ref/prclas.htm
	Limitations	Tax parcels, as part of tax maps, are prepared for tax purposes only and are not to be reproduced or used for surveying or conveyancing.	
	Positional Accuracy	(If available)	
	Data Completeness	Match rate of spatial data to attribute data [many-to-one, one-to-many, many-to-many issues]	As of the last reconciliation, 98.4% of map parcels matched assessment data
	Spatial QA/QC Contact	Name of individual responsible, with Address, Phone and/or email	
Spatial Data Organization	Source Data Location	County or Town Real Property Offices	DCRPTSA
	Spatial Data Model	Name of our data model once adopted	
Spatial Reference	Object Type	"Polygon"	
	Coordinate System	Name of Coordinate System	New York State Plane (East Zone)
	Map Projection	Include all specifics necessary to identify projection	Transverse Mercator, Lambert
	Datum	Datum of Coordinate System	NAD83
Distribution	Units	Units of Coordinate System	feet
	Contact Information to acquire data	Contact name, phone, web site, etc.	
	Format	Describe data format	ESRI Geodatabase
	Media	Describe media	
	Online location	URL of site where Parcel data can be down-loaded	
Metadata Reference	Price	Cost of Acquiring Data	\$xxx per town per year; \$yyy for entire county
	Compiled By	County, Town or Organization which prepared the metadata	
	Creation Date	Date of metadata	