The United States Mortgage Crisis and Cadastral Data

Donald Buhler, Bureau of Land Management
David Cowen, University of South Carolina

What Have Americans Paid (and Maybe the Rest of the World) for Not Having a Public Property Rights Infrastructure?

Daniel ROBERGE, Canada and Bengt KJELLSON, Sweden

“... we believe that a good property rights infrastructure could have mitigated the effect of the land market crisis and thereby avoided the loss of many hundreds or even thousands of billion dollars.”

FIG Working Week 2009 Surveyors Key Role in Accelerated Development Eilat, Israel, 3-8 May 2009
Mortgages and Madness

Questionable lending practices turned a peaceful Cleveland neighborhood into a blighted slum.

Newsweek June 2, 2008

Reverse Redlining

After decades of redlining practices that starved many urban communities for credit and denied loans to racial minorities, today a growing number of financial institutions are flooding these same markets with exploitative loan products that drain residents of their wealth.

Gregory D. Squires, Predatory Lending: Redlining in Reverse, Shelter Force Magazine Issue #139, January/February 2005 National Housing Institute
Housing and Urban Development County Data Records Project

- Currently there is no national database maintaining these data for the federal government

- The data (land parcel data or cadastral data) provides geographically referenced information about the rights, interests, and ownership of land. It can also be used to provide oversight and management of mortgage and financial activities

Obstacles

- The major obstacles in the development of a multipurpose cadastre are the organizational and institutional requirements.
But, of course, we knew that in 1980

Tiger Wood’s House in Orange County, FL
Zillow – 70,000,000 parcels
Free, anonymous, in seconds

First American – 115,000,000 Parcels
Cooperation
Rapid Assessment of Values at Risk (RAVAR)

Figure 1: The May 2007 Status Map of the Wildland Fire Project
Team’s progress for acquiring parcel data in thirteen Western States.
The more southern states were contacted first because typically the
wildland fire season begins there first.

2007 National Research Council

National Land Parcel Data

VISON FOR THE FUTURE

FIG Congress 2010
Facing the Challenges – Building the Capacity
Sydney, Australia, 11-16 April 2010
Katrina

Southern California
What benefits do you perceive from having a national multipurpose cadastre?

- Parcel data is the fundamental building block for all geographic analysis and serves as the raw material for most applications – most geographic analysis is benefit from the ability to understand the result at the parcel level.
- A multipurpose cadastre enables a vast range of location-based services that will improve safety and increase efficiency of current operations.
  
  - Available, critical data for emergency response
    - Local parcel data were still being sought 8 weeks into the response to Hurricane Katrina
    - Impact from most disasters is best understood at the parcel level.
    - GIS is becoming the way disasters are managed. A common operating picture depends on an available multipurpose cadastre.
    - National response centers such as IMAAC depend on the availability of local data for accurate hazard predictions and health recommendations such as shelter in place.
- Most DHS programs depend on geographic data that is at the parcel scale
  - for example Critical Infrastructure Program

  - The ability to protect the privacy of individuals is dependent on an accurate parcel-level database.

### Proposed Organizational Model

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<tr>
<th>National System</th>
<th>Parcel Users</th>
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<tr>
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<td>National Land Parcel Coordinator</td>
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<td>Coordinators*</td>
<td>State coordinators</td>
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<td>Federal coordinator</td>
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<td>Tribal governments</td>
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*Coordinators provide a range of guidelines and resources to all primary custodians. They may also need to do the basic production work for smaller and more isolated custodians.*
CATALYSTS FOR CHANGE

- Endorsement of NRC Recommendations
  - National Geospatial Advisory Committee
  - National States Geographic Information Council
  - Council Of Geospatial Organizations
- Budget Requests by Bureau of Land Management
  - National and Federal Parcel Coordinators

CATALYSTS FOR CHANGE

Mortgage Crisis Stakeholder Meeting
May 2009
1. Add the local Parcel ID to the HMDA data.
2. Develop a Parcel Early Warning System.
3. Complete the standardization and availability of parcel data nationwide.
Michael Howell, Deputy Administrator
Office of Management & Budget

“This meeting is very timely, we are working across governments and with multiple stakeholders to develop effective responses to deal with the distressed housing and mortgage markets….I think you will see from some of the examples today the powerful capabilities that land parcel data can provide when combined with other data sets and analytical tools and technology” (Stakeholders Meeting May, 2009)

2000 – Call for Early Warning System

In April 2000, The National Task Force on Predatory Lending
Chair by Secretary Cuomo and Secretary Summers

“Curbing Predatory Home Mortgage Lending”

FHA will customize data from its Neighborhood Watch system to develop early warning indicators of emerging foreclosure "Hot Zones." … help local officials better assess real estate trends and spot possible patterns of appraisal abuse.

This public information will include performance data on individual appraisers generated by the Credit Watch for Appraisers system and posted on the HUD website.

• http://www.huduser.org/publications/hsgfin/curbing.html
What is an early warning system?

John Snow’s Cholera Map
Toxic Well

RealtyTrac’s Foreclosure Map
Toxic Real Estate

Chairman Ben S. Bernanke December 4, 2008

“Communities suffer when foreclosures are clustered, adding further to the downward pressure on property values.”

Source: Federal Reserve System Conference on Housing and Mortgage Markets, Washington, D.C.

“The Contagion Effect of Foreclosed Properties”

- The discount diminishes rapidly as the distance to the distressed properties increases.


Distance Decay Function
Just like proximity to Snow’s Contaminated Wells

Figure 8
Effect of Multiple Foreclosures

Discount of 7% with 4.5 foreclosures Within 300 Feet
Home Mortgage Disclosure Act Data Inadequate for Early Warning

- HMDA data only at Census Tract Level (54.4 square miles) and annually
- The impact of foreclosed properties - 2000 feet (3 Blocks) or ~ half a square mile
- The temporal resolution is measured in three month intervals –

Discussion with Federal Reserve Bank

Recommendations
1. Modification of Home Mortgage Disclosure Act regulations to require parcel number
2. Develop a Parcel Early Warning System.
3. Complete the standardization and availability of parcel data nationwide.
FGDC Annual Report
Places Priority on Land Parcels
Karen Siderelis, Chair of the FGDC

The feature story of this year’s report underscores the need for a coordinated system of land parcel information across the country.”

Land parcel data combined with other geographic information are essential to such functions as the management of emergency situations, development of domestic energy resources, management of private and public lands, support of business activities, and monitoring of regulatory compliance.

(FGDC Annual Report, 2009)

Congressional Research Service

Issues Regarding a National Land Parcel Database

Peter Folger
Specialist in Energy and Natural Resources Policy

July 22, 2009
The National Geospatial Advisory Committee (NGAC) observed that the federal government's land parcel data is missing an arrangement for acquiring the detailed property-related data necessary to make decisions during times of emergency.
HUD RFQ

- “an immediate need for real-time information on the conditions and trends of neighborhoods across the nation.
- Recent increases in foreclosures and devastating natural disasters have intensifed the urgency for access to up-to-date information on homes and communities.”
- The data will help to build a public, national database about American housing stock.

Neighborhood Stabilization Program (NSP)
Total $5.92 Billion

- Purchase and redevelopment of foreclosed upon homes and residential properties,
- Establish land banks for homes that have been foreclosed upon
- Demolish blighted structures and
- Redevelop demolished or vacant properties
**Congress Banking Regulations**

- House of Representatives Banking Regulations
  vote of 421-0.

  _It calls for the Secretary of the Treasury to ensure the official TARP accountability database "provides geospatial analysis capabilities."_

**Restoring American Financial Stability Act of 2010**

“(H) as the Bureau may determine to be appropriate, the parcel number that corresponds to the real property pledged or proposed to be pledged as collateral; … to permit geocoding”

Chairman Dodd statement excerpts:

“There will be shocks to our system in the future – and we need an early warning system so that, next time, our system is prepared to deal with them.”
Summary

There have calls for national multipurpose cadastre for at least 30 years.

The Bureau of Land Management is the designated steward – but never authority or resources.

2007 (Post Katrina Era) NRC Report emphasized the need for federal approach to land parcel data based largely on disaster preparation and response.

Endorsement of recommendations by many groups.

BLM – Request for coordinators.

Summary continued

2009 – Mortgage Crisis pointed out the absence of proper oversight by HUD and Federal Reserve Bank.

HUD – Request for county parcel data -

Increased awareness – by current administration on “place based” analysis.

Bank regulatory legislation – will require parcel ID.

(This is the Key – let’s keep our fingers crossed.)