

HOUSING CONDITIONS SURVEY USING ARCPAD



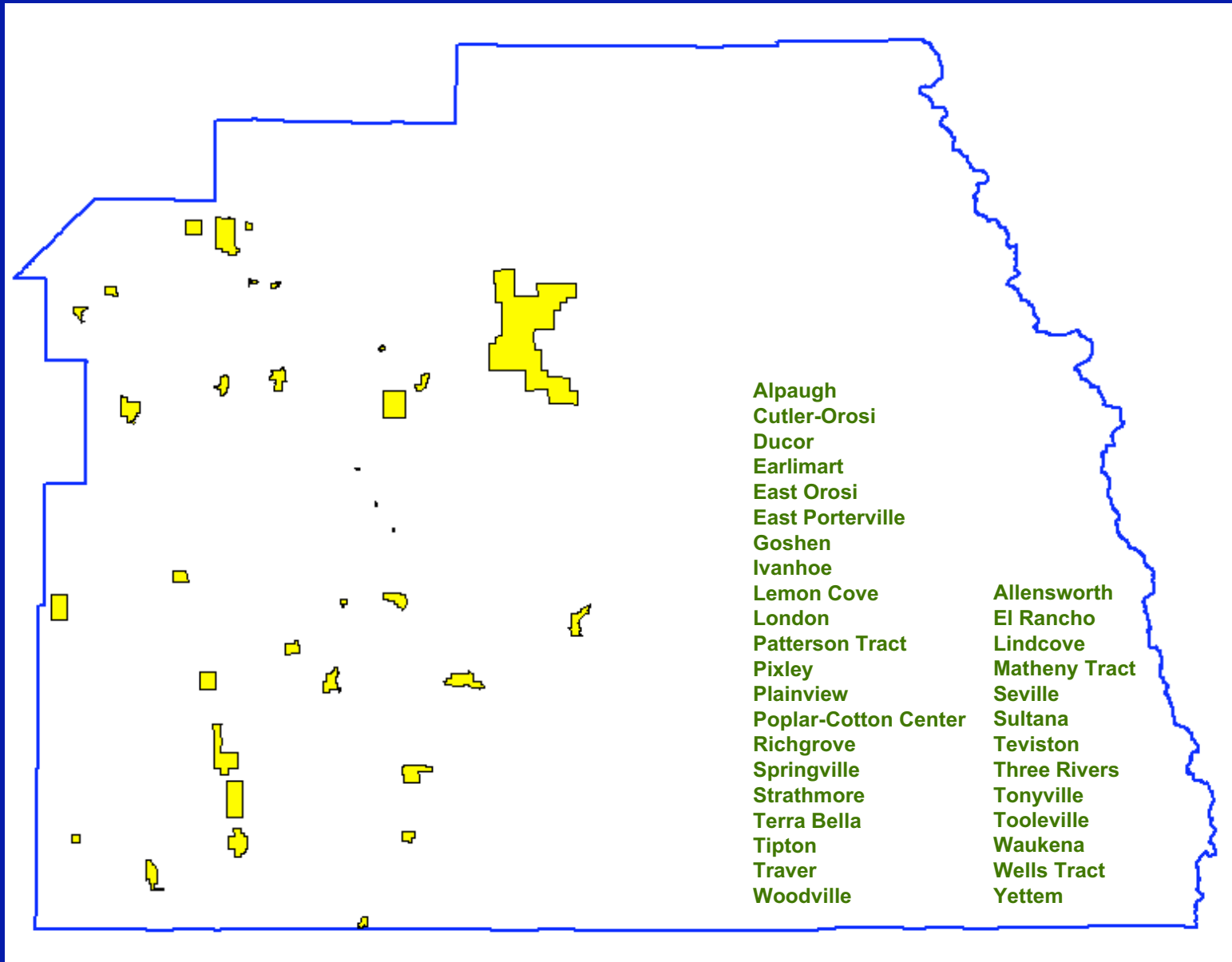
W. Tracy Lenocker

Lenocker & Associates

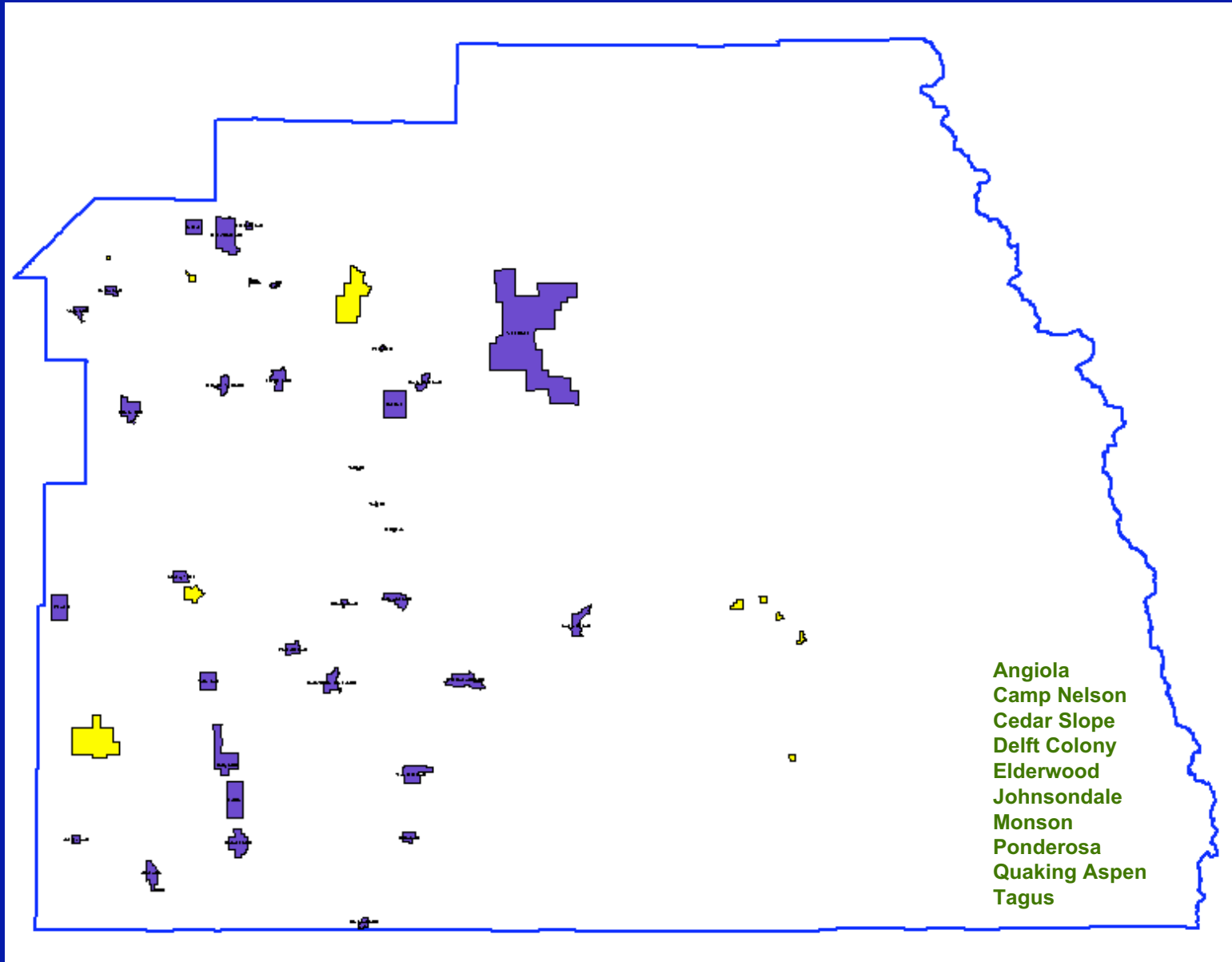
Background

1. Survey randomly selected housing units in:
 - Communities (1 in 6)
 - Sparsely populated areas (1 in 6)
 - County islands in cities (1 in 7)
 - _ mile buffer around each city (1 in 7)
2. Identify
 - Illegal non-conforming secondary units

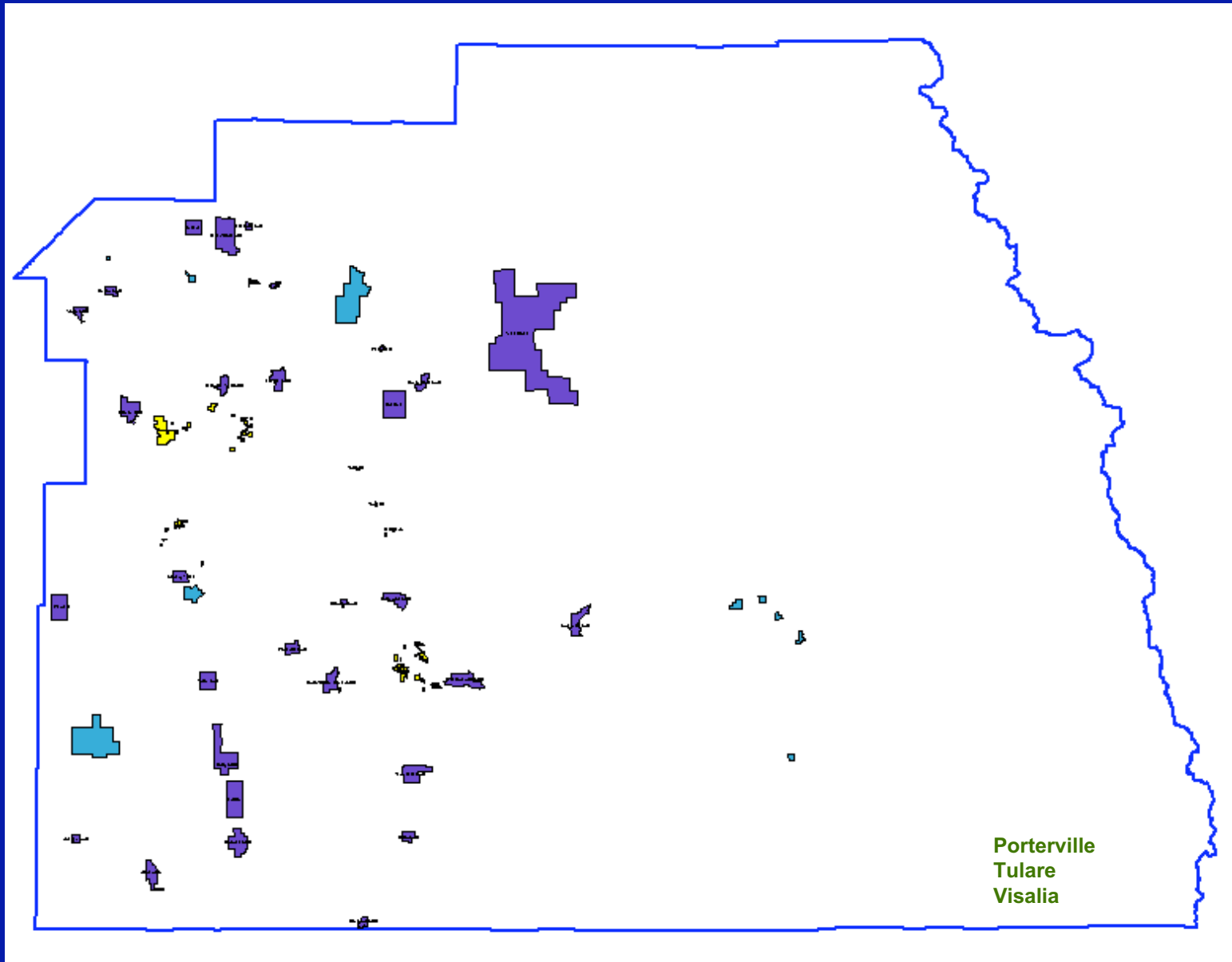
Communities



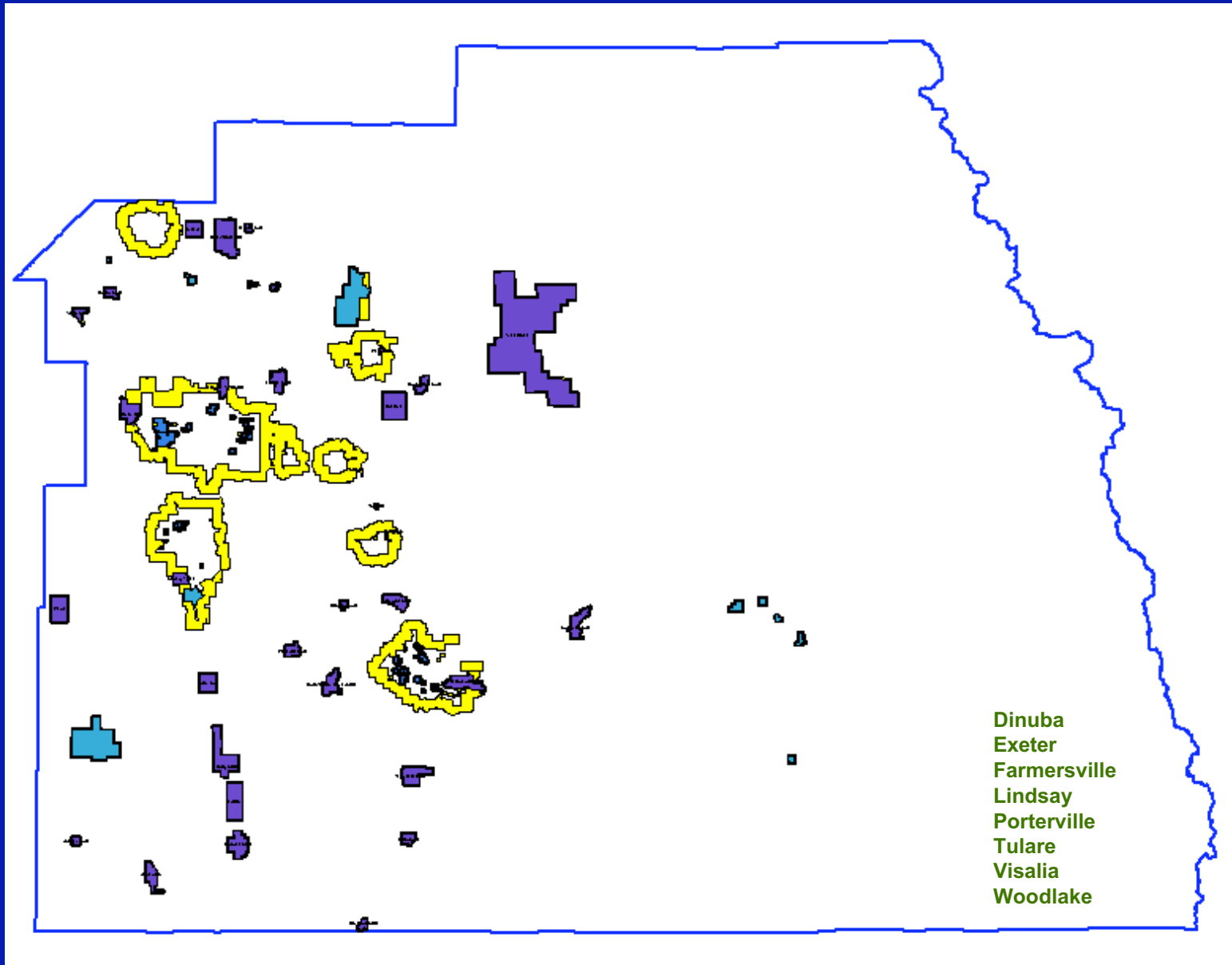
Sparsely Populated Areas



County Areas Inside Cities



County Areas Bordering Cities



Parcel Selection

Area	Total Parcels	Selection Ratio	Random Number Selected
Communities	18,398	1/6	3680
Sparsely Populated Areas	1,653	1/6	330
County Area Inside Cities	3,218	1/7	536
County Area Bordering Cities	5,747	1/7	958
Totals	29,016	21%	5504 (required) 6122 (actual)

Background

3. Final parcel data to include:

Housing Condition

Address

Assessor's parcel number

Community name

2000 Census tract with block group

Geographic coordinates

Market Area

Approach

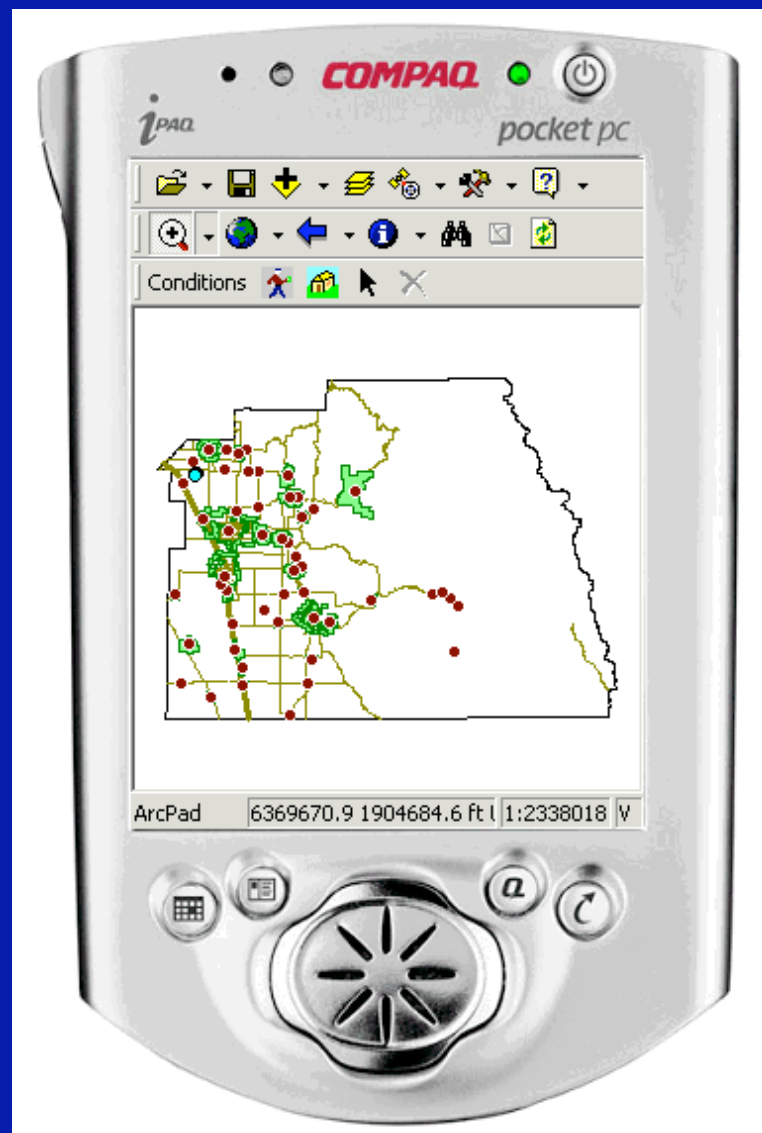
Automate prior processes

Eliminate paper maps in the field

Eliminate paper forms used in the field

Eliminate transcription errors

Produce quality maps, statistical analyses, and reports



Requirements

1. Handheld field device
2. Minimum basemap data (73 mb)
 - Street centerlines
 - Major street names
 - Area parcels
 - Randomly selected parcels
 - Community and area boundaries
 - City and community names
2. Easy to use application
 - Written using ArcPad Studio
 - Pop-up table values in external database
 - Redundant data capture
 - Ability to edit errors
3. Quality control and evaluation of the data

Issues

- Would the approach save time and increase accuracy
- Data backup
- Transmitting the data to the office
- Training field staff
- Battery life

Data Collection

Housing Conditions

<u>Category</u>	<u>Rating Score</u>
Sound	Less than 10
Deteriorated	
Minor	10 – 15
Moderate	16 – 39
Substantial	40 – 55
Dilapidated	56 and over

Housing Condition Point Ratings

Foundations

- 0 Good condition
- 10 Repairs needed
- 15 Needs partial foundation
- 25 No foundation or needs new

Windows

- 0 Good condition
- 1 Broken panes
- 5 In need of repair
- 10 In need of replacement

Roofing

- 0 Good condition
- 5 Shingles missing
- 5 Chimney needs repair
- 10 Needs reroofing
- 25 Replace roof structure and re-roof

Electrical

- 0 Good condition
- 5 Minor repair
- 10 Replace main panel

Siding / Stucco

- 0 Good condition
- 1 Needs re-painting
- 5 Needs patching and re-painting
- 10 Needs replacement and re-painting
- 10 Asbestos/Lead based

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31 points → Moderate Deterioration

Sound Condition



In this example, team surveyors assessed this residence to be in sound condition. The roof structure appears to be in excellent condition and the wood siding, painted and maintained. The foundation is considered to be in sound condition since there is no visible cracks or other signs of damage. The windows of the structure absent of cracks or missing panes. No obvious electrical repairs have been noted. Therefore, this residential structure would be given a cumulative condition score of 0.

Sound Condition



Deteriorated Condition

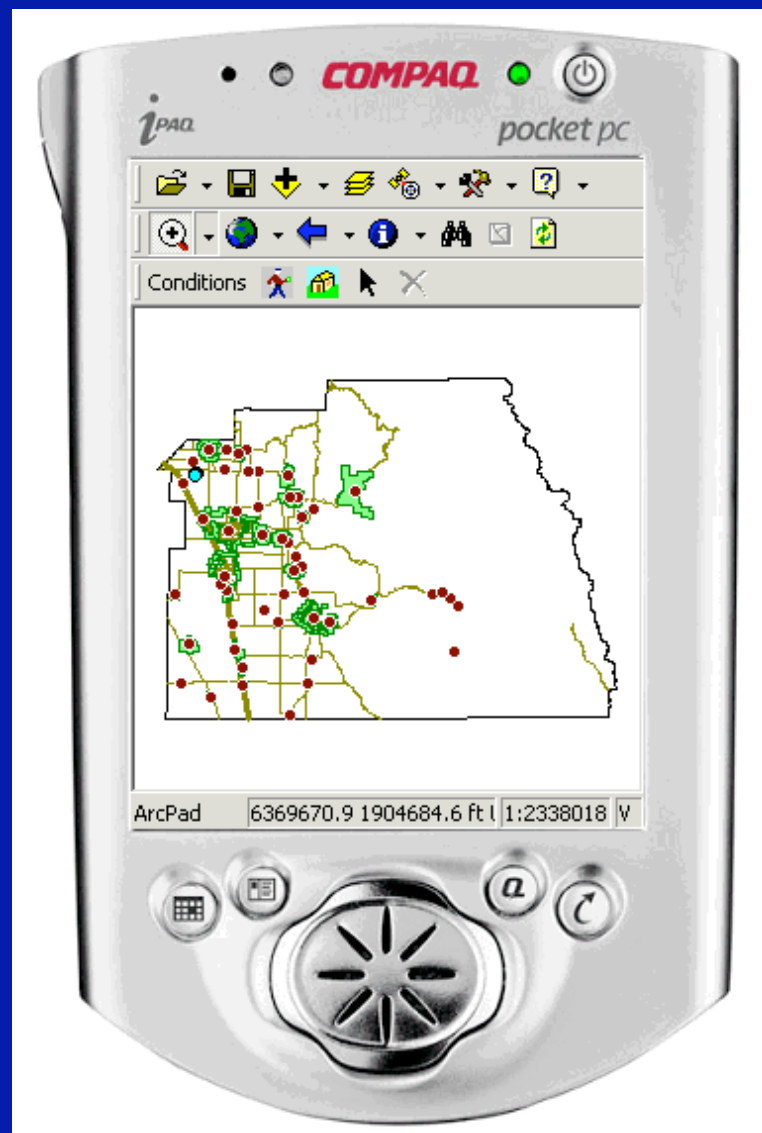


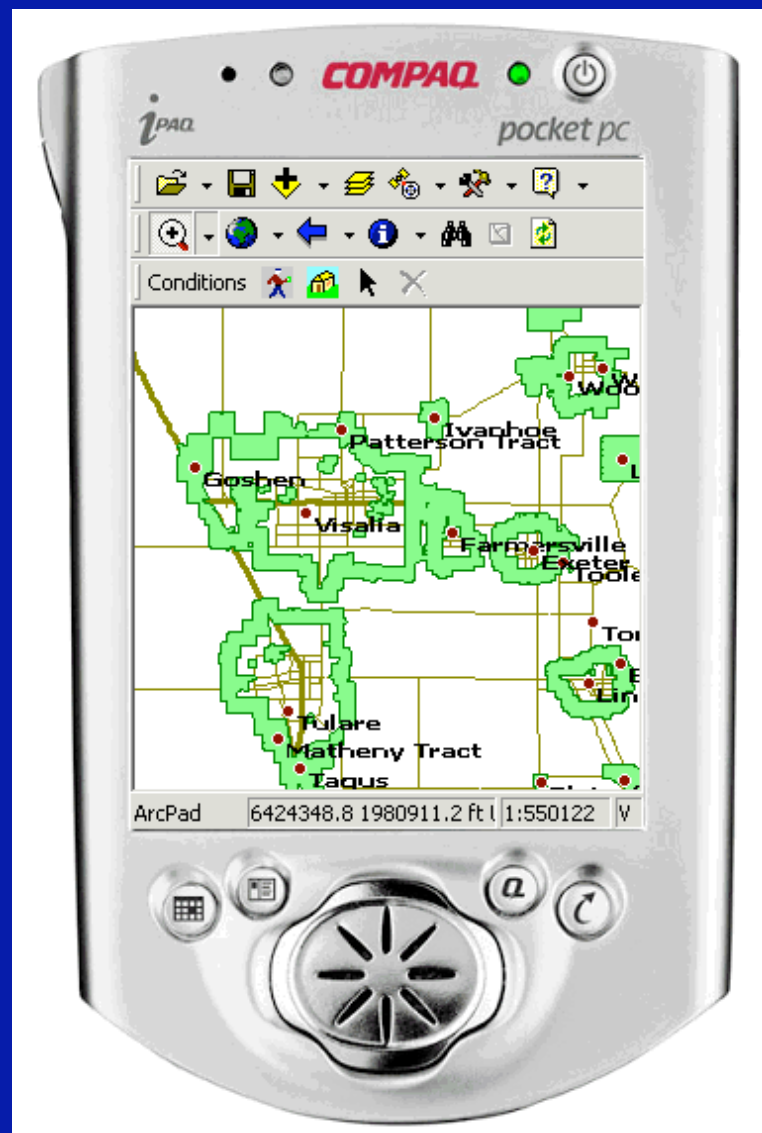
Deteriorated Condition



Dilapidated Condition

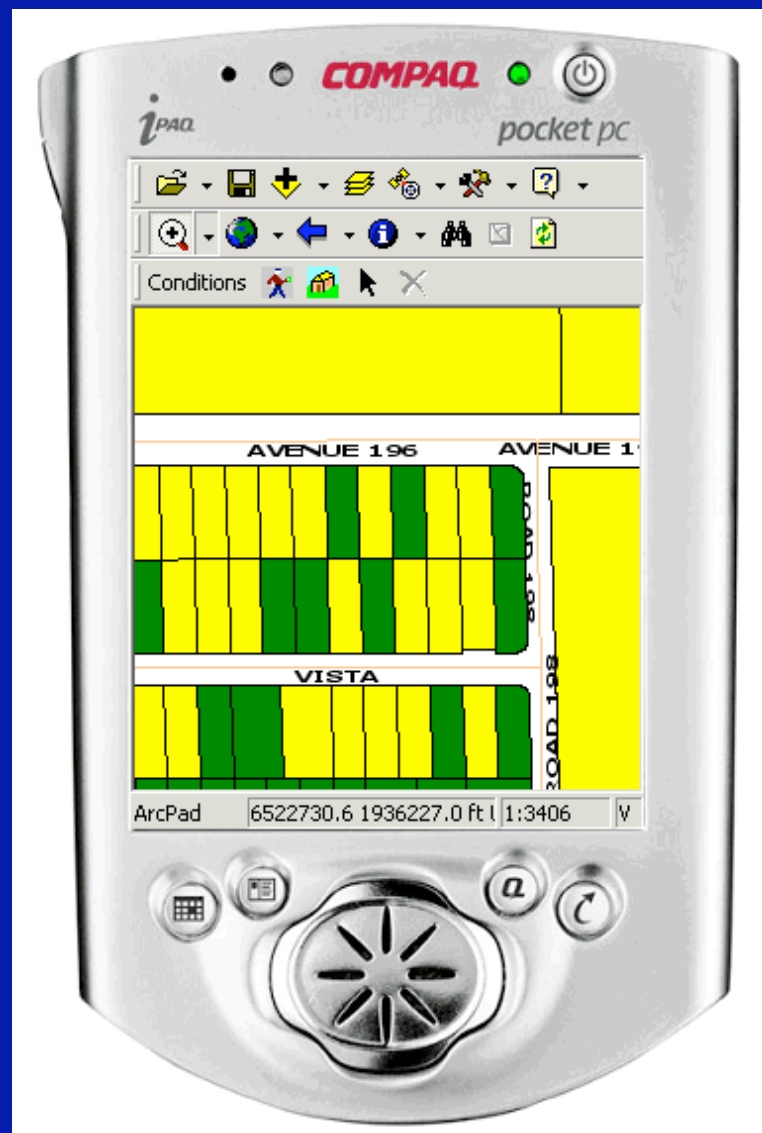




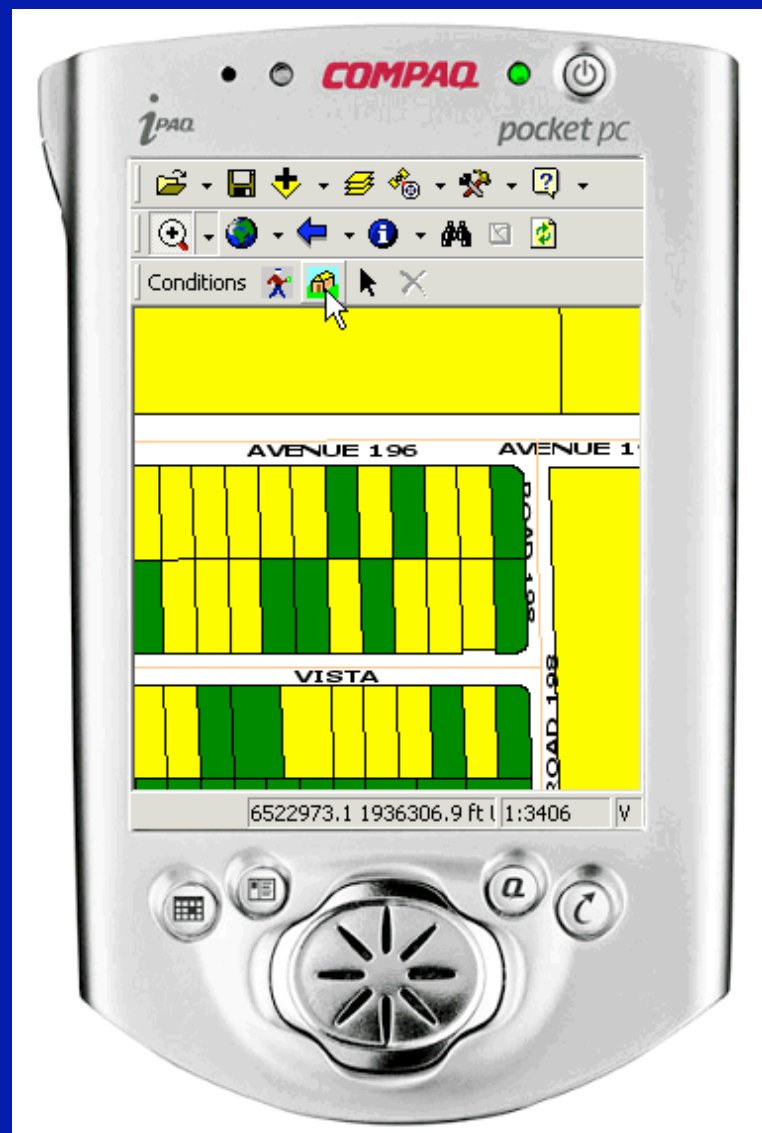




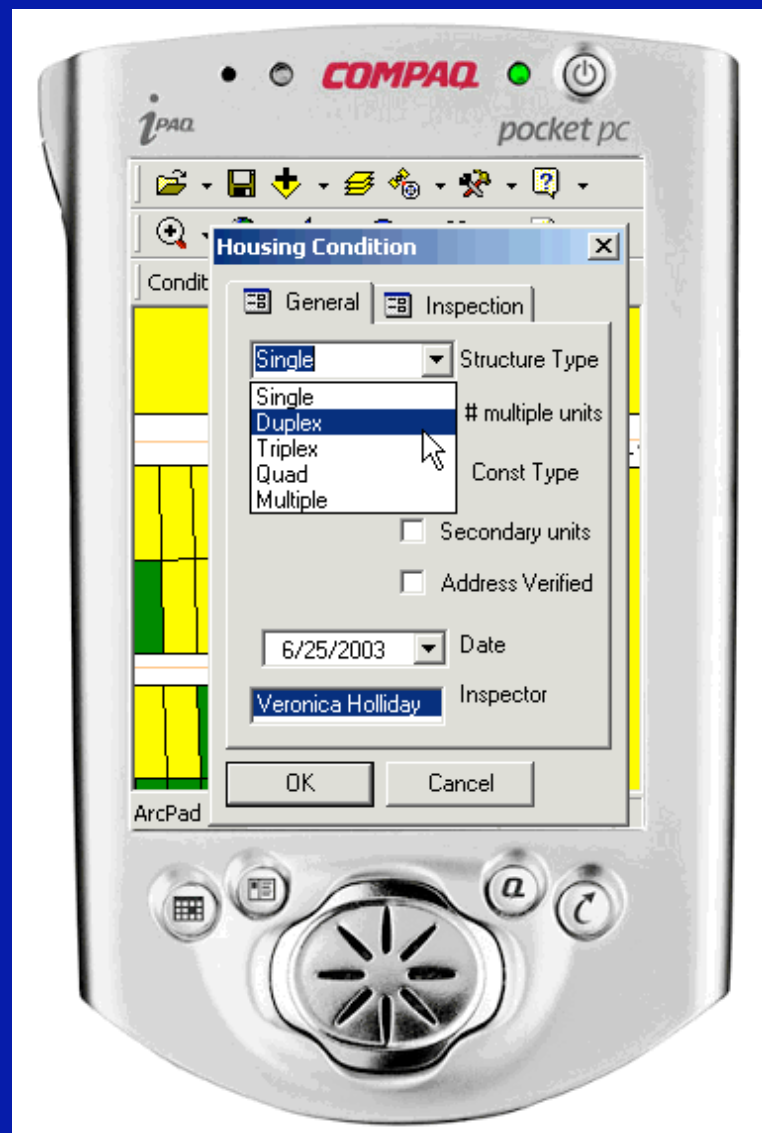














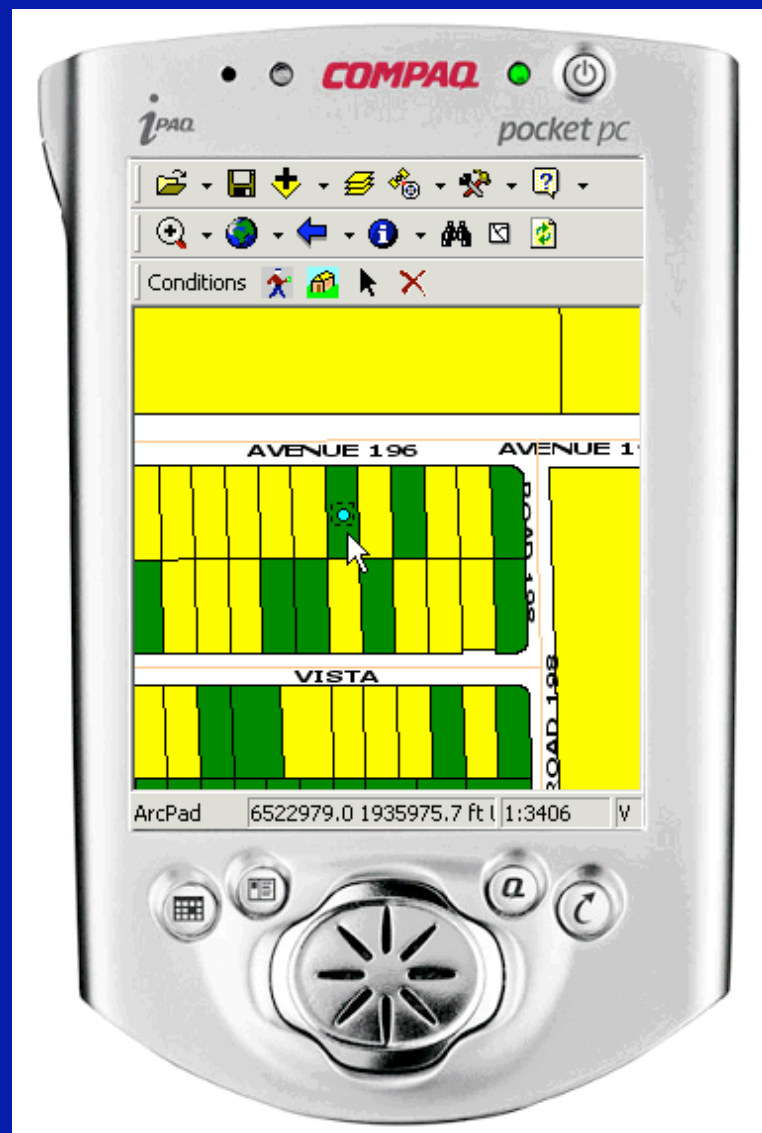






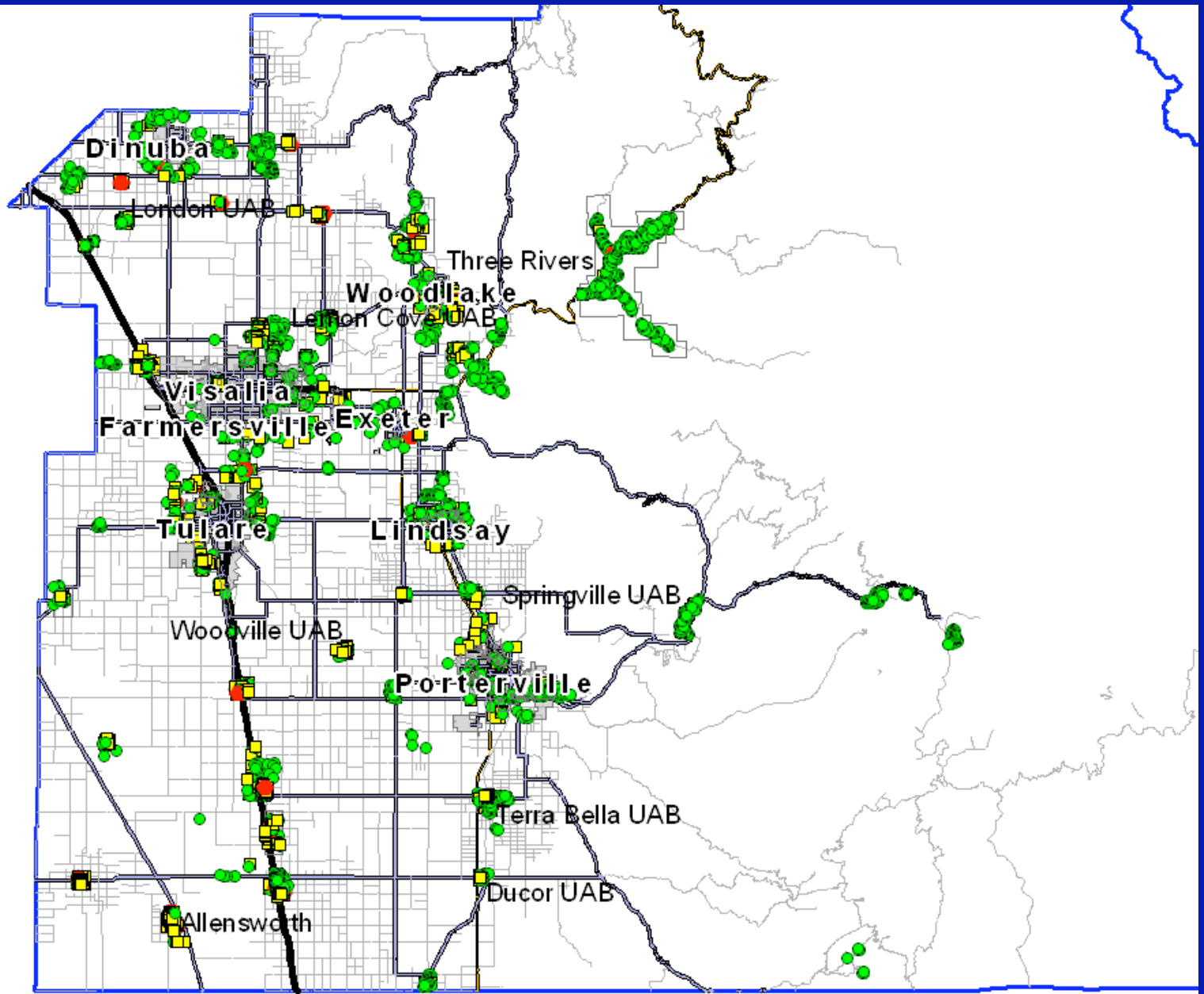






Processing the Data

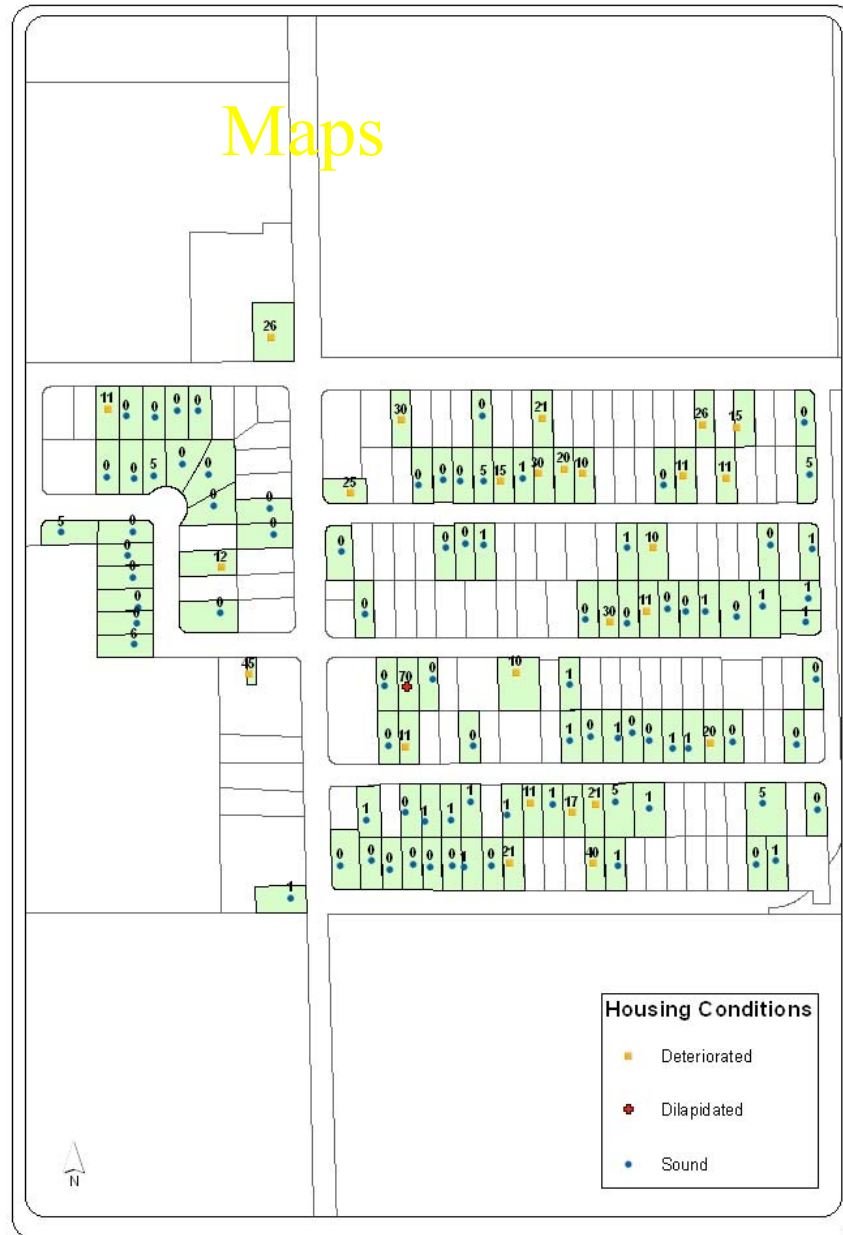
STR_TYPE	CONST_TYPE	CONDITION	DATE	VERIFYADDR	MULTIPLE	SEC_UNITS	COND_FNDN	COND_ROOF	COND_SIDE	COND_WIND	COND_ELEC
Single	Wood Frame	30	1/30/2003	TRUE	1	FALSE	Good Condition	Needs Re-Roofing	Replace and Paint	Needs Repair	Minor Repair
Single	Wood Frame	0	1/30/2003	FALSE	1	FALSE	Good Condition	No Repair Needed	No Repair Needed	No Repair Needed	No Repair Needed
Multiple	Wood Frame	0	1/30/2003	FALSE	56	FALSE	Good Condition	No Repair Needed	No Repair Needed	No Repair Needed	No Repair Needed
Multiple	Wood Frame	21	1/30/2003	FALSE	8	FALSE	Repairs Needed	Needs Re-Roofing	Needs Painting	No Repair Needed	No Repair Needed
Triplex	Wood Frame	30	1/30/2003	FALSE	3	FALSE	Repairs Needed	Needs Re-Roofing	Patch and Repaint	Needs Repair	No Repair Needed
Triplex	Wood Frame	55	1/30/2003	FALSE	3	FALSE	Repairs Needed	Replace Roof Structure	Replace and Paint	Needs Repair	Minor Repair
Single	Wood Frame	0	1/30/2003	FALSE	8	FALSE	Good Condition	No Repair Needed	No Repair Needed	No Repair Needed	No Repair Needed
Quad	Modular	31	1/30/2003	FALSE	4	FALSE	Need Partial Foundation	Needs Re-Roofing	Needs Painting	No Repair Needed	Minor Repair
Single	Mobile	17	1/30/2003	FALSE	3	FALSE	Repairs Needed	Chimney Repair	Needs Painting	Broken Panes	No Repair Needed
Single	Modular	21	1/30/2003	FALSE	1	FALSE	Repairs Needed	Needs Re-Roofing	Needs Painting	No Repair Needed	No Repair Needed
Multiple	Mobile	10	1/30/2003	FALSE	54	FALSE	Repairs Needed	No Repair Needed	No Repair Needed	No Repair Needed	No Repair Needed
Single	Wood Frame	0	1/30/2003	FALSE	1	FALSE	Good Condition	No Repair Needed	No Repair Needed	No Repair Needed	No Repair Needed
Single	Wood Frame	11	1/30/2003	FALSE	1	FALSE	Good Condition	Needs Re-Roofing	Needs Painting	No Repair Needed	No Repair Needed
Single	Wood Frame	0	1/30/2003	FALSE	1	FALSE	Good Condition	No Repair Needed	No Repair Needed	No Repair Needed	No Repair Needed
Single	Wood Frame	0	1/30/2003	FALSE	1	FALSE	Good Condition	No Repair Needed	No Repair Needed	No Repair Needed	No Repair Needed
Single	Wood Frame	15	1/30/2003	FALSE	1	FALSE	Good Condition	Needs Re-Roofing	Patch and Repaint	No Repair Needed	No Repair Needed
Single	Wood Frame	6	1/30/2003	FALSE	1	FALSE	Good Condition	Shingles Missing	Needs Painting	No Repair Needed	No Repair Needed
Single	Wood Frame	0	1/30/2003	FALSE	1	FALSE	Good Condition	No Repair Needed	No Repair Needed	No Repair Needed	No Repair Needed
Single	Wood Frame	0	1/30/2003	FALSE	1	FALSE	Good Condition	No Repair Needed	No Repair Needed	No Repair Needed	No Repair Needed
Single	Wood Frame	11	1/30/2003	FALSE	1	FALSE	Good Condition	Needs Re-Roofing	Needs Painting	No Repair Needed	No Repair Needed
Single	Wood Frame	0	1/30/2003	FALSE	1	FALSE	Good Condition	No Repair Needed	No Repair Needed	No Repair Needed	No Repair Needed



Maps



Maps



Tulare County Housing Condition Study

Plainview

Housing Condition Study Community Results

Sheet 9



Legend



- Good
- Deteriorated
- Dilapidated

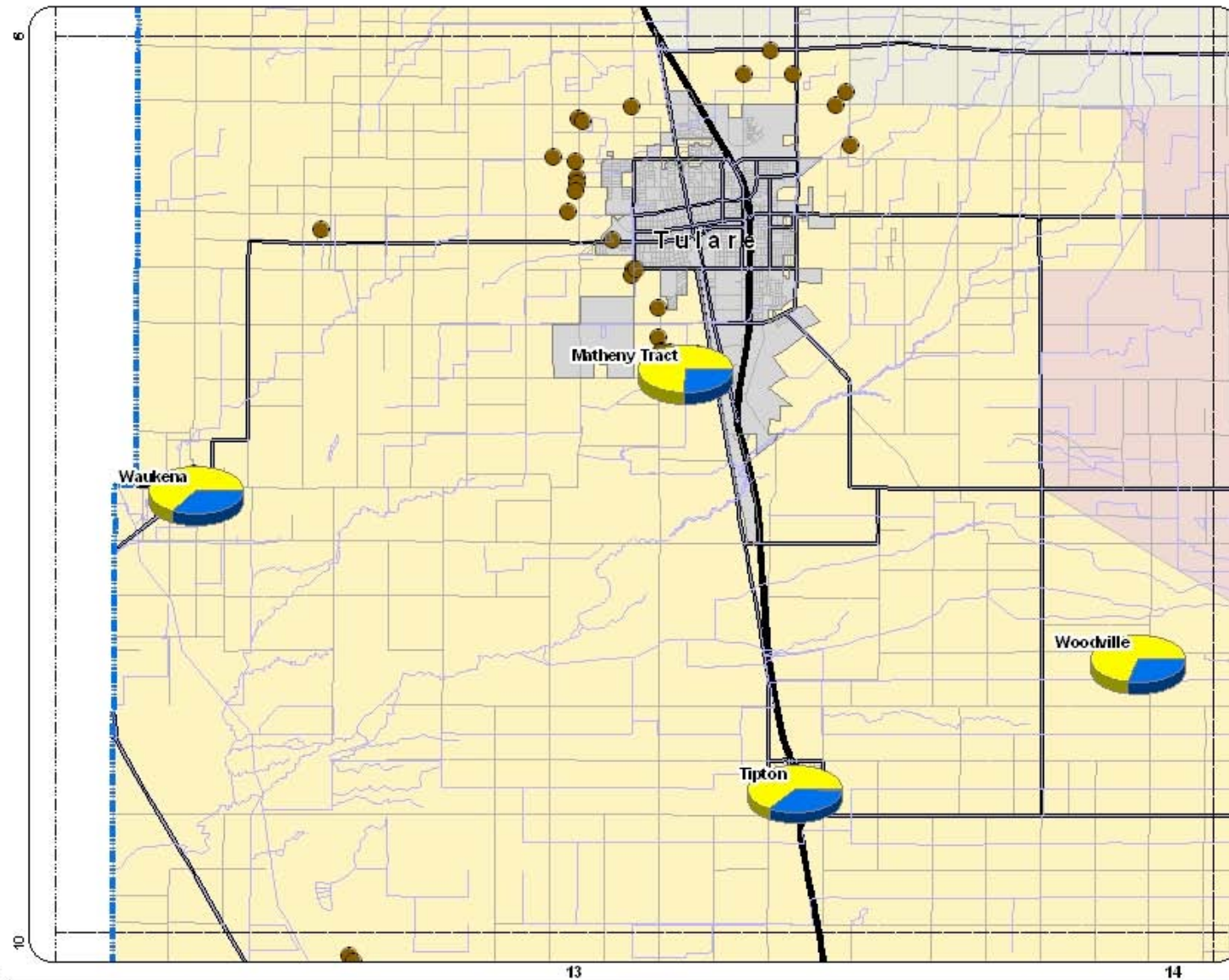
- Secondary Unit
- Lindsay/Strathmore
- Tula/Southwest
- Vista/Farmville
- City Boundaries

1	2	3	4
5	6	7	8
9	10	11	12
13	14	15	16

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March 14, 2003



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