

# *Developing and Implementing Effective GIS Standards for a County PSAP*

Keith Dailey, Cowley County GIS Coordinator

Lucas Goff, Cowley County MIS/GIS Director

COWLEY COUNTY  
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# Introduction

Keith Dailey, GIS Coordinator

- **Bachelor's and Master's in Forestry from Stephen F. Austin State University**
  - Emphasis on GIS
- **Worked for Cowley County for 3 years**
- **Actively quality controlling emergency 911 data for the majority of the county**
  - Address points
  - Street Centerlines
  - Emergency Response Polygons
- **Coordinate with two municipalities to integrate data into CAD**
  - Winfield, KS & Arkansas City, KS



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# Introduction

Lucas Goff, MIS/GIS Director

- **Bachelor's and MBA from Southwestern College**
  - **Double Major in Computer Information Systems & Business Accounting**
- **Worked for Cowley County for 10 years**
  - **MIS/GIS Director for 7 years**
- **Synchronize and direct staff towards a consolidation of two PSAP's into a single PSAP that covers the entire county**

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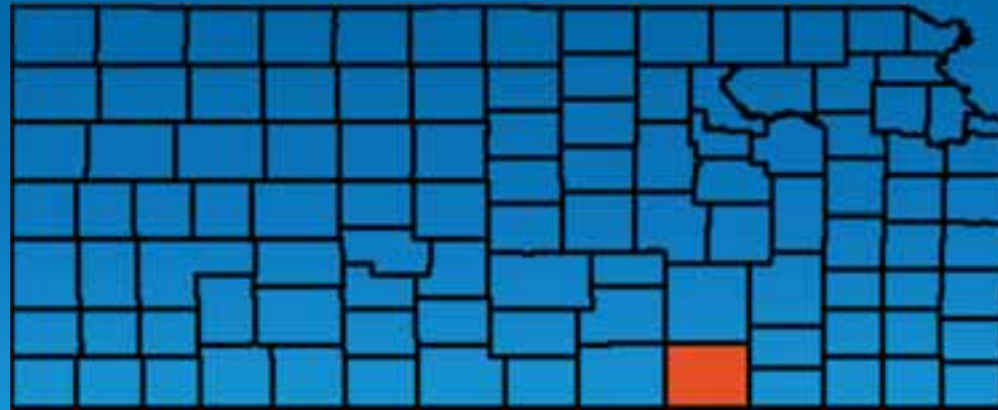


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# Introduction

## Cowley County, KS

- **Population: ~36,000**
- **Area: ~1,132 mi.<sup>2</sup>**
- **County Seat: Winfield, KS**
- **Location: South-Central Kansas, 45 mins southeast of Wichita.**



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# PSAP History

## Cowley County Consolidated PSAP

- **Historically**
  - 2 PSAP's, 15 Dispatchers
  - Winfield PD
  - Arkansas City PD
- **Consolidation**
  - July 2, 2013
- **Support**
  - 7 fire districts
  - 8 law enforcement agencies
  - 2 EMS zones
  - 2 Emergency Management departments



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# Financial Investment

## Cowley County Consolidated PSAP

- **Server Hardware**
  - \$425,000 for high availability servers to host data
- **Software**
  - CAD: \$350,000
  - RMS: \$540,000
  - Supporting software (ESRI, Hiplink, etc): 50,000 annually
- **Funding**
  - 911 funds & taxes
  - County bonds

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# Goals & Objectives

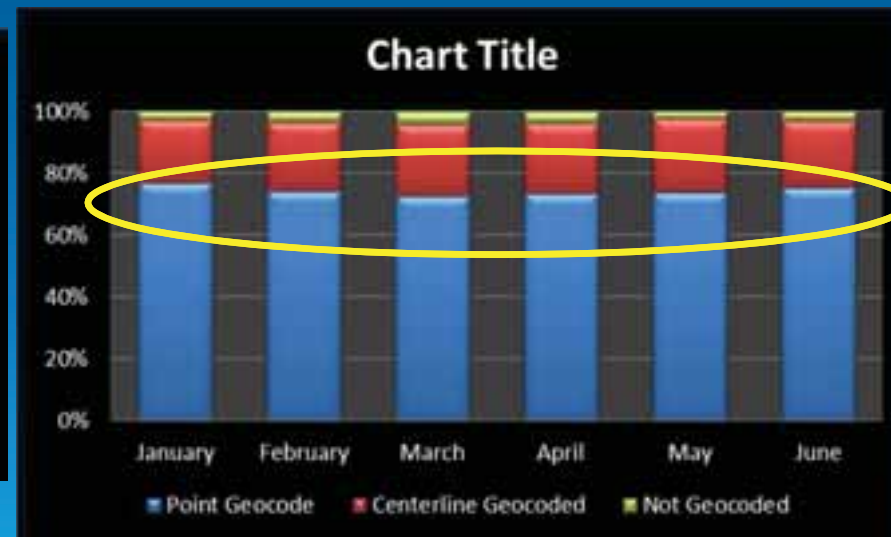
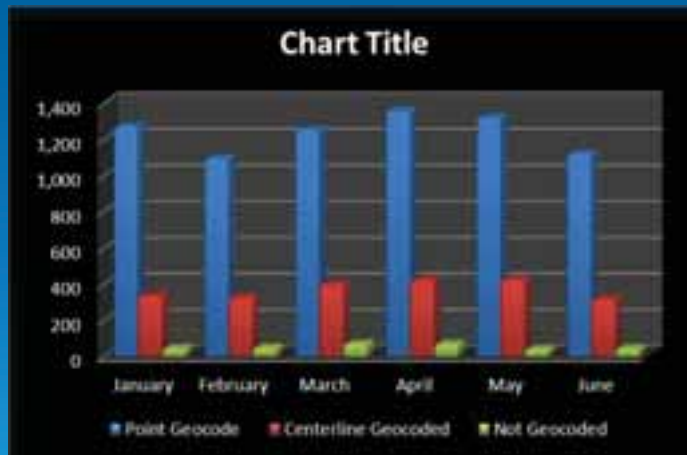
- **1. Increase accuracy and efficiency in emergency situations.**
  - Already good, can ALWAYS be better
- **2. Implement consistent data that meets county, regional, and national standards.**
  - County Administration-approved policy manual
  - AOS
  - NENA
- **3. Continually QA/QC Data**
  - Rely heavily on dispatchers and CAD exports for communication



# Practices & Procedures

## Goal 1 - Increase accuracy and efficiency in emergency situations

Month	Calls	Point Geocode	% Point Geocode	Centerline Geocoded	% Centerline Geocoded	Not Geocoded	% Not Geocoded
January	1,648	1,270	77%	333	20%	45	3%
February	1,469	1,094	74%	326	22%	49	3%
March	1,718	1,250	73%	398	23%	70	4%
April	1,847	1,359	74%	420	23%	68	4%
May	1,783	1,321	74%	421	24%	41	2%
June	1,483	1,121	76%	317	21%	45	3%
<b>TOTAL</b>	<b>9,948</b>	<b>7,415</b>	<b>75%</b>	<b>2,215</b>	<b>22%</b>	<b>318</b>	<b>3%</b>



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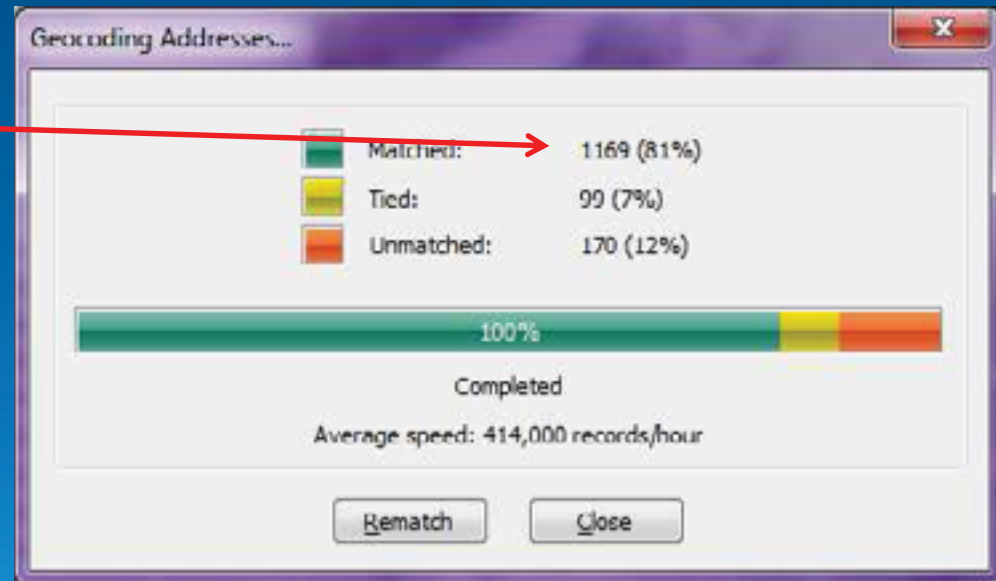


# Practices & Procedures

Goal 1 - Increase accuracy and efficiency in emergency situations

Month	Calls	Automatic	% Automati	Manual	% Manual	% Not Geocode
January	1,648	1,407	85%	196	12%	3%
February	1,469	1,235	84%	185	13%	3%
March	1,718	1,412	82%	236	14%	4%
April	1,847	1,527	83%	252	14%	4%
May	1,783	1,291	72%	451	25%	2%
June	1,483	1,088	73%	350	24%	3%
<b>TOTAL</b>	<b>9,948</b>	<b>7,960</b>	<b>80%</b>	<b>1,670</b>	<b>17%</b>	<b>3%</b>

## New Composite Locator



By studying our dispatchers call logs, we have found discrepancies with the centerline data. We have corrected this data to improve efficiency.



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# Practices & Procedures

Goal 2 - Implement consistent data that meets county, regional, & national standards.

- **Policy manual written in accordance with regional (AOS) and NENA standards**
- **Effectiveness of topology networks**
  - Gaps
  - Overlaps
  - Overhangs (incorrect / too many intersections)
  - Dangles (no intersections)

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# Practices & Procedures

## Goal 3 - Continually QA/QC Data

- We maintain open communication with the dispatchers
  - Actively: they communicate errors they are receiving
  - Passively: I find errors as I reverse geocode using the same geocoders they have.



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# Accomplishments

- Improved geocoding capabilities by 10%...and growing.
- Understand the needs of the CAD dispatchers.
- Deeper knowledge of emergency calls in Cowley County.
- Geocoded ~10,000 emergency occurrences in 6 months.
  - Can now analyze crime statistics and prevalence of emergency response in remote areas of the county
  - Online Mapping



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# Conclusions

## What has Cowley County Learned?

- **Accurate Data eases CAD geocoding**
  - However, QA/QC is dynamic NOT static!
- **Continued communication with data managers and end users is crucial**
  - We need to ask dispatchers about problems as they arise, and they need to bring them to our attention when they happen
- **Data remediation is the first and easiest step.**
  - Data integration is continual with data QA/QC and is the most intricate/crucial



# Acknowledgments

- **Cowley County Emergency Dispatch**
- **Jerred Schmidt, City of Winfield, KS**
- **Josh White, City of Arkansas City, KS**

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# Questions?

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