

Springfield Area Ozone Designation Meeting

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MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

Presentation Overview

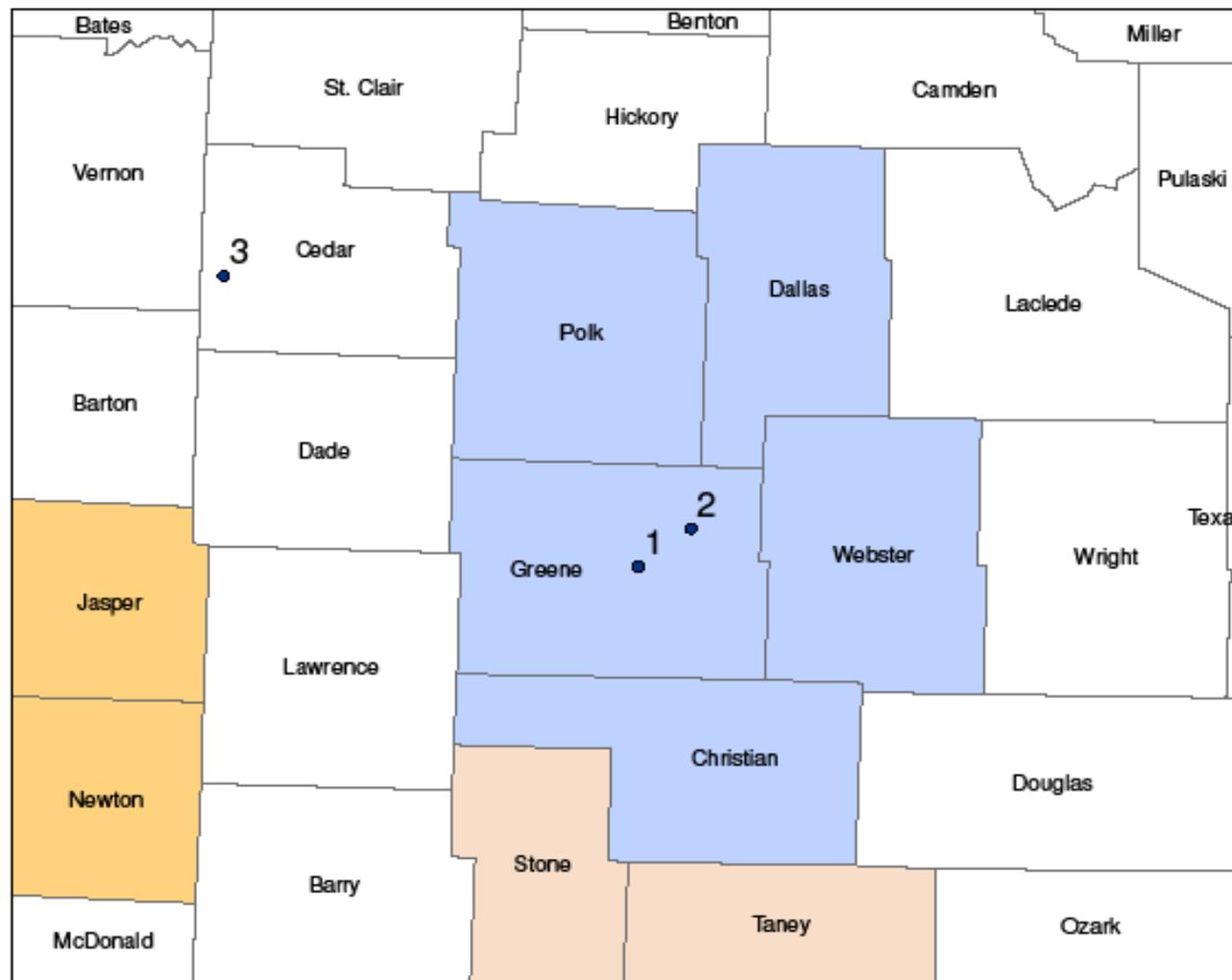
- Designation Process Review
- Summary Information for the Springfield Area
- Area-Specific Criteria Information
- Stakeholder Involvement

EPA's 2008 8-Hour Ozone Standard

- Primary standard – 75 ppb
- Secondary standard – 75 ppb
- Area meets the new standard if design value is less than or equal to 75 ppb

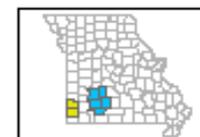
- Springfield Design Value = 77 ppb
- El Dorado Springs Design Value = 76 ppb
- Tulsa, OK Design Value = 80 ppb

2008 Springfield Ozone Sites and 05-07 Design Values



- Ozone sites
- Springfield MSA
- Joplin MSA
- Branson MSA

- # - Site Name (ppb)
 1 - Hillcrest (77)
 2 - Fellows Lake (NA)
 3 - El Dorado Springs (76)




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EPA's Guidance for 2003 Boundary Recommendation

- Test #1 – Does a monitor in the area violate the standard?
- Test #2 – Do VOC and NOx emission sources in each county contribute to ozone concentrations over the standard?
- The designation process is not optional; if a monitor violates the standard, then that county is designated nonattainment and other "upwind" counties are also considered based on contribution

EPA's 2003 Guidance for Boundary Recommendation (cont'd)

- The area determination is based on EPA's decision that includes the state's recommendation and supporting documentation
- Determinations are based on eleven (11) boundary criteria

Eleven Boundary Criteria

- Emissions and air quality in adjacent areas
- Population density and degree of urbanization (significant difference from surrounding area)
- Ozone monitoring data in surrounding area
- Locations of emission sources
- Traffic and commuting patterns
- Expected growth (extent, pattern and rate)

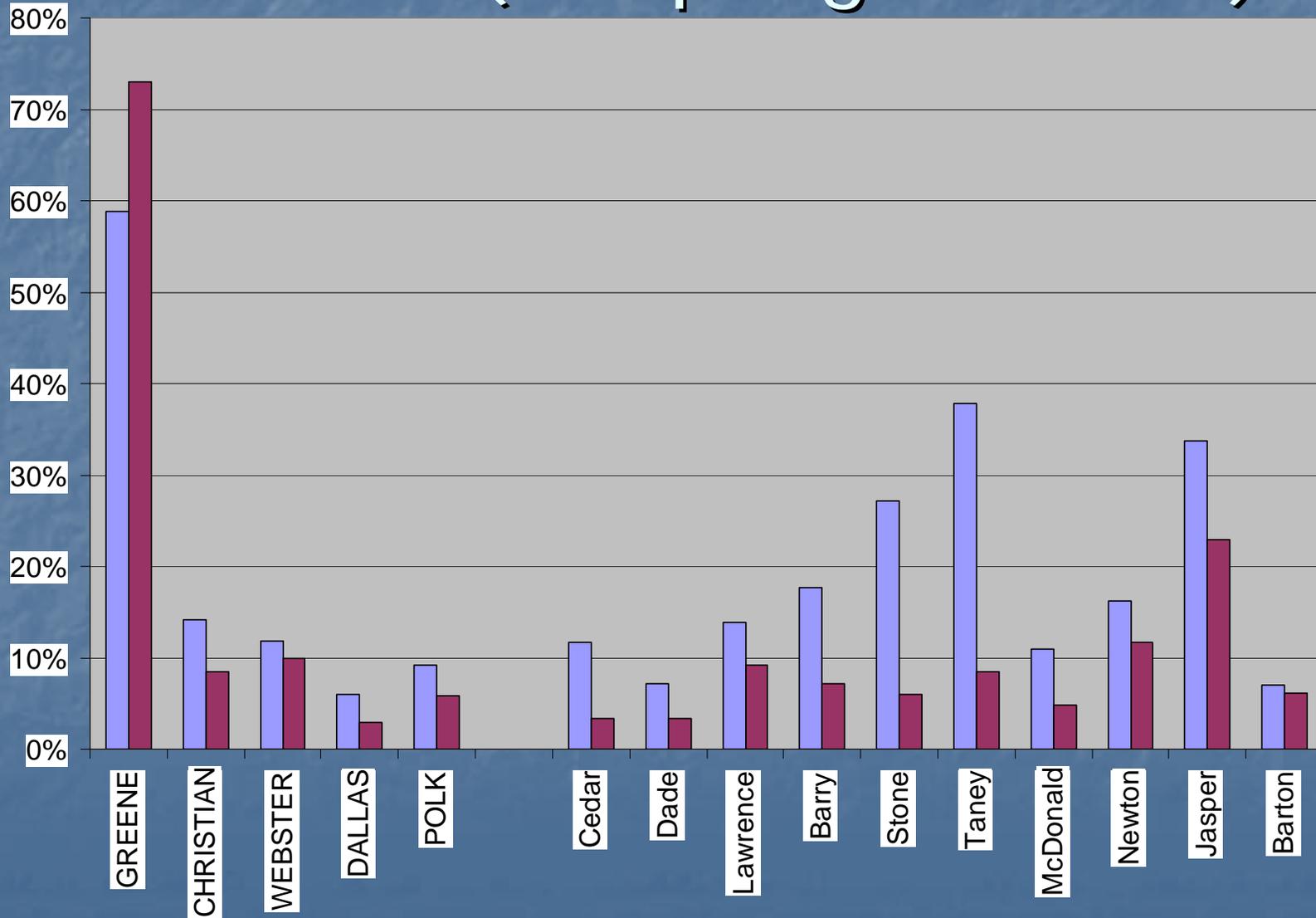
Eleven Boundary Criteria (cont.)

- Meteorology (weather and transport patterns)
- Geography/topography
- Jurisdictional boundaries (counties, air districts, current maintenance area)
- Level of control of emission sources
- Regional emission reductions

Evaluation Data

- Emission totals and percentage of overall "area" inventory for each county
- Emission density plots
- Population/Urbanization
- Connectivity
- Growth
- Meteorological

Southwest Missouri VOC/NOx Emission (% Springfield MSA)

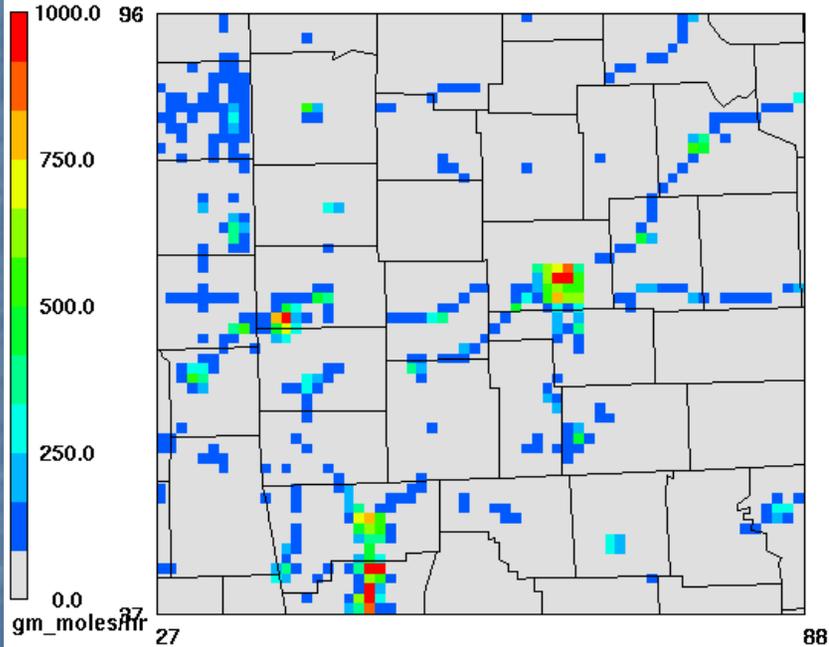


NOx Emission Density

Total Low-level NOx Emissions (2009)

Density Plot

w=emiss_low.base4T_09_OTB.stl4km.20020707.CAMx



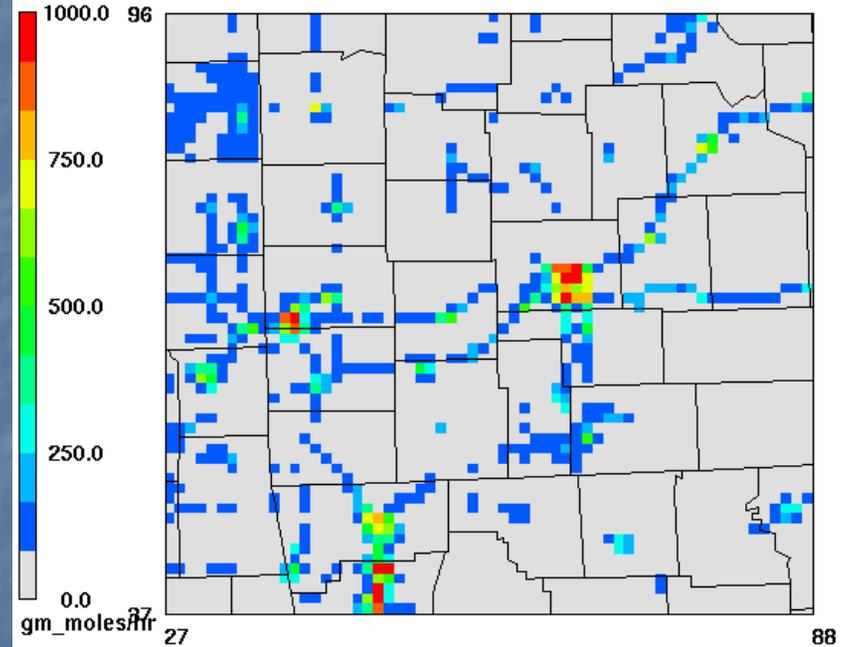
July 7, 2002 14:00:00
Min= 4.7 at (85,56), Max=1234.2 at (48,41)

July 7, 2002 – 8 AM

Total Low-level NOx Emissions (2009)

Density Plot

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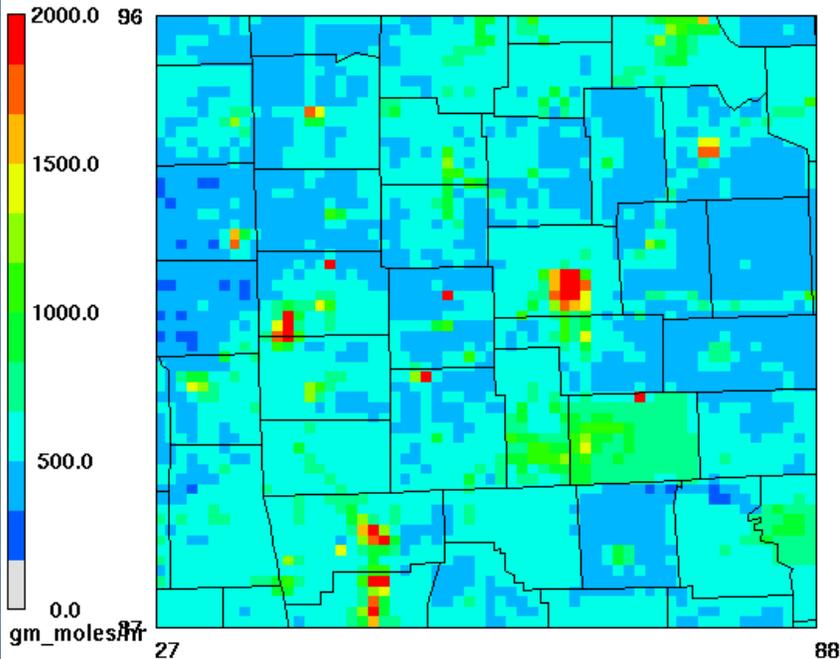
July 7, 2002 21:00:00
Min= 5.8 at (70,61), Max=1349.3 at (48,41)

July 7, 2002 – 3 PM

VOC Emission Density

Total Low-level VOC Emissions (2009)

Density Plot (minus ISOP and FORM)
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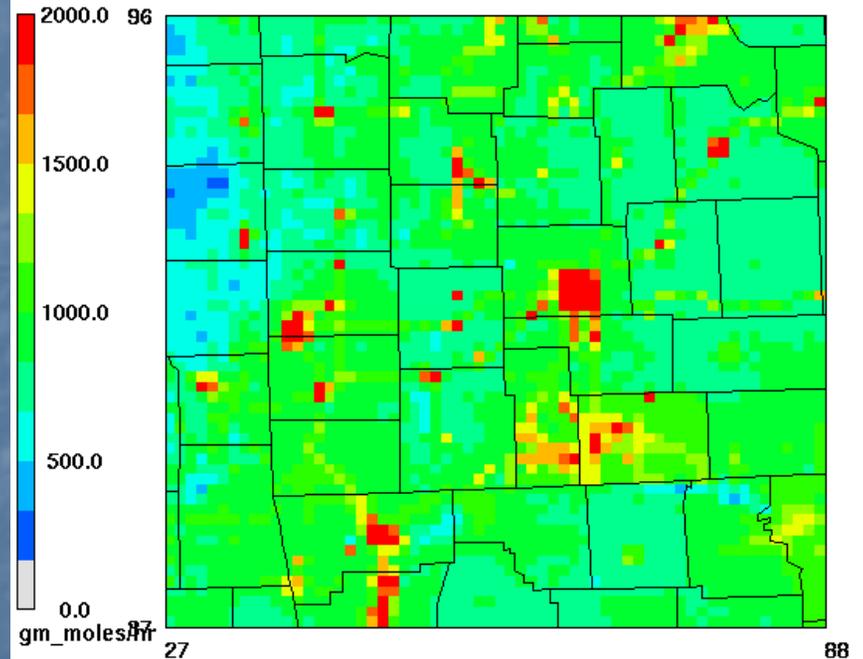


July 7, 2002 14:00:00
Min= 270.2 at (27,79), Max=12036.9 at (48,41)

July 7, 2002 – 8 AM

Total Low-level VOC Emissions (2009)

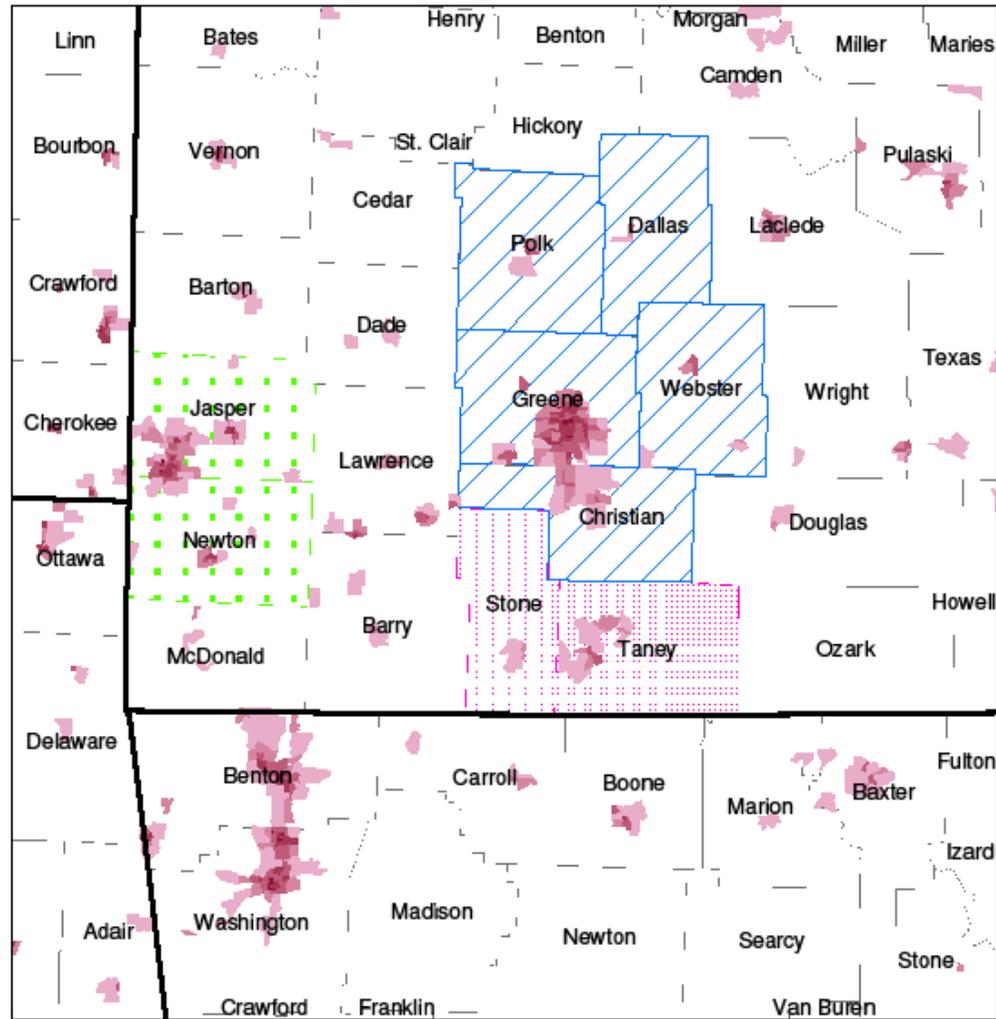
Density Plot (minus ISOP and FORM)
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July 7, 2002 21:00:00
Min= 325.1 at (27,79), Max=8466.9 at (48,41)

July 7, 2002 – 3 PM

2000 Population Density - Springfield



-  Springfield MSA
-  Joplin MSA
-  Branson MSA

Population Density

Persons / sq mile

0 - 200

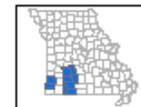
 201 - 500

 501 - 1000

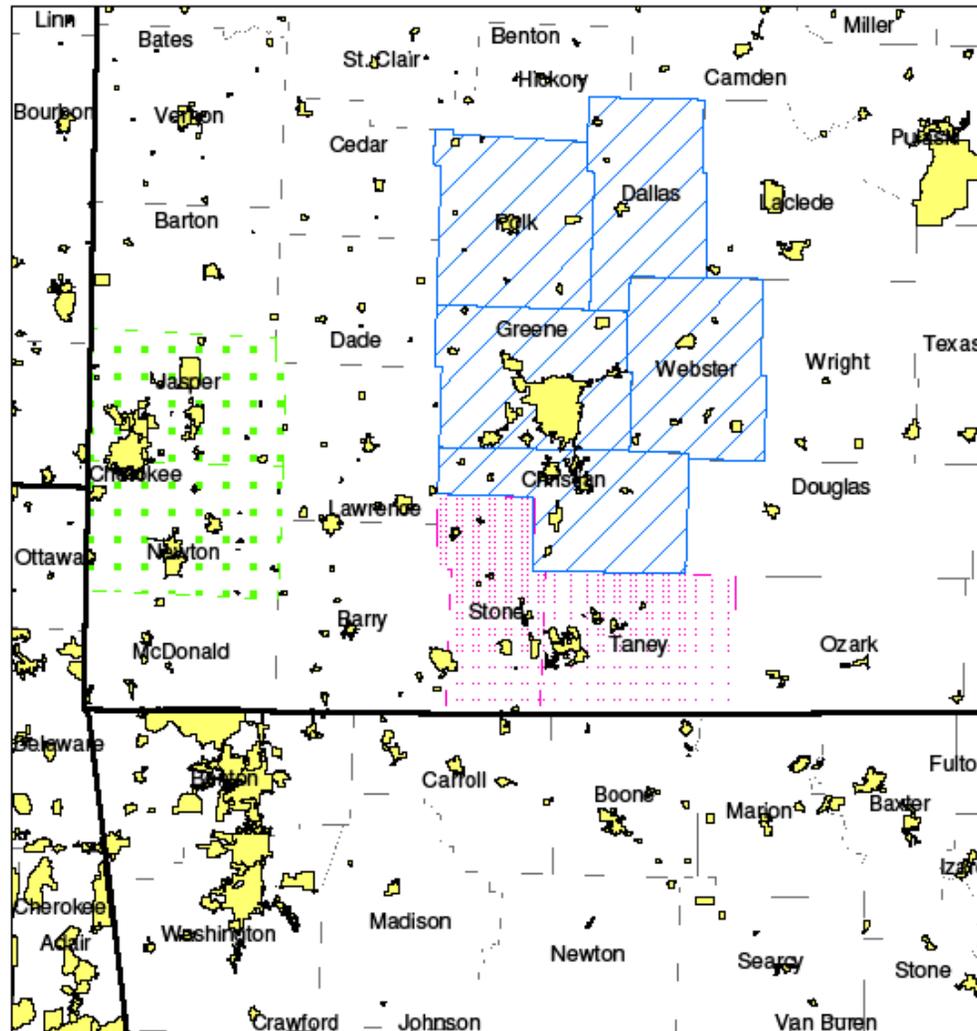
 1001 - 2500

 2501 - 5000

 5001 +



2000 Urbanization - Springfield



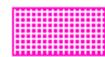
 Urban Areas

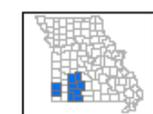
0 10 20 40 Kilometers


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 Springfield MSA

 Joplin MSA

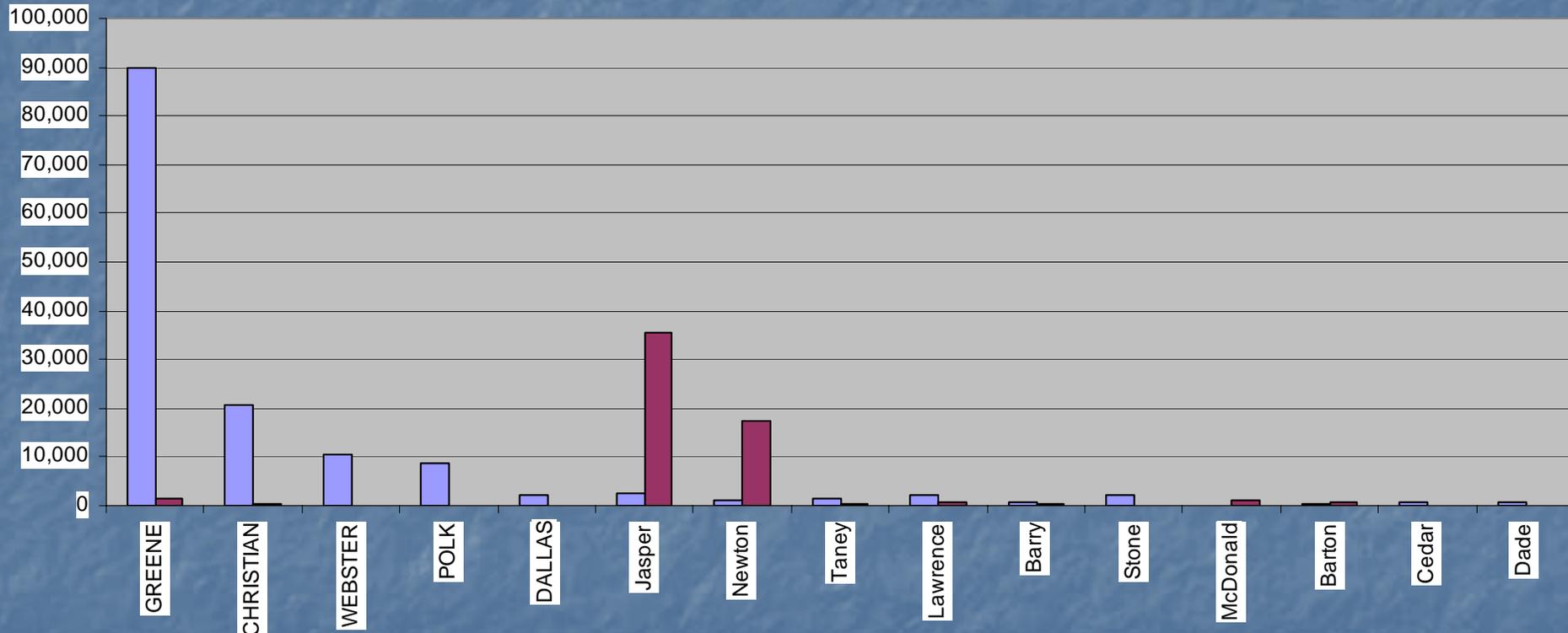
 Branson MSA



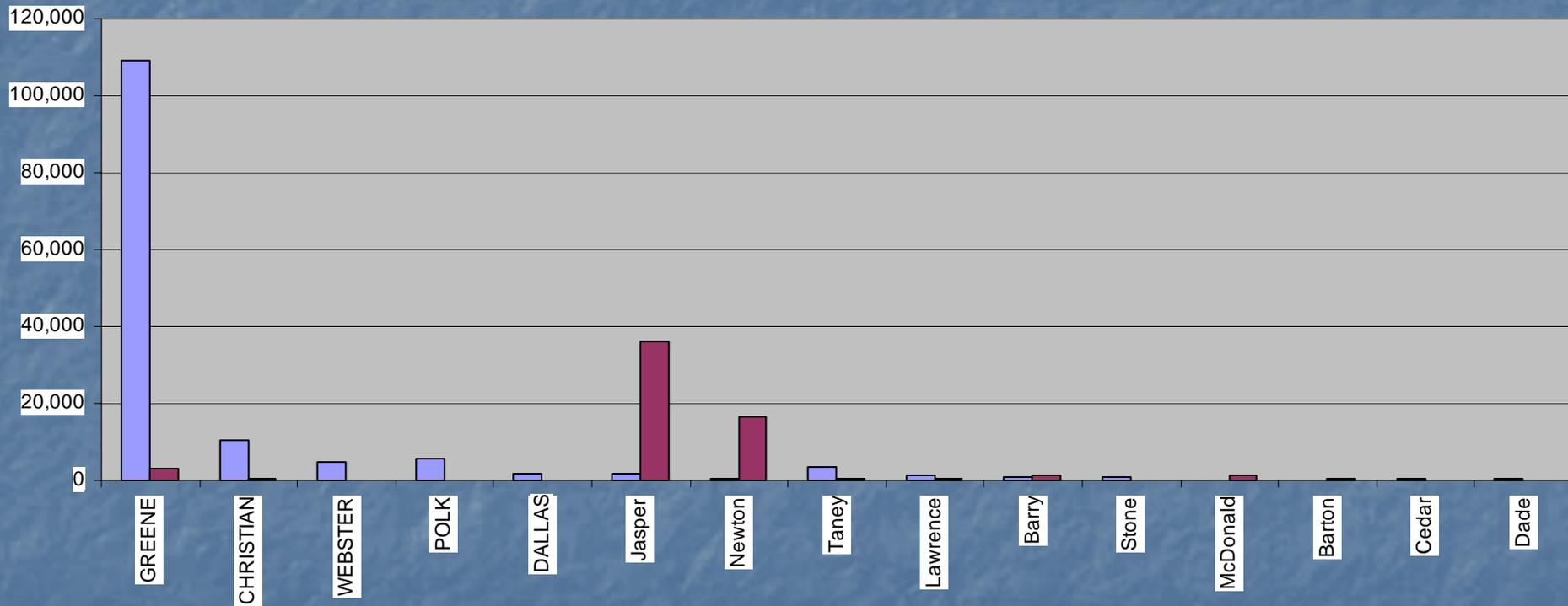
Connectivity

- Concept of commuting patterns between counties within the area of interest
- Two ways to evaluate this:
 - Number of people living in one county working in another (i.e. people living in Taney County working in Greene County)
 - Number of people working in one county living in another (i.e. people working in Taney County living in Greene County)

Working in Springfield MSA, Joplin MSA Living in this County



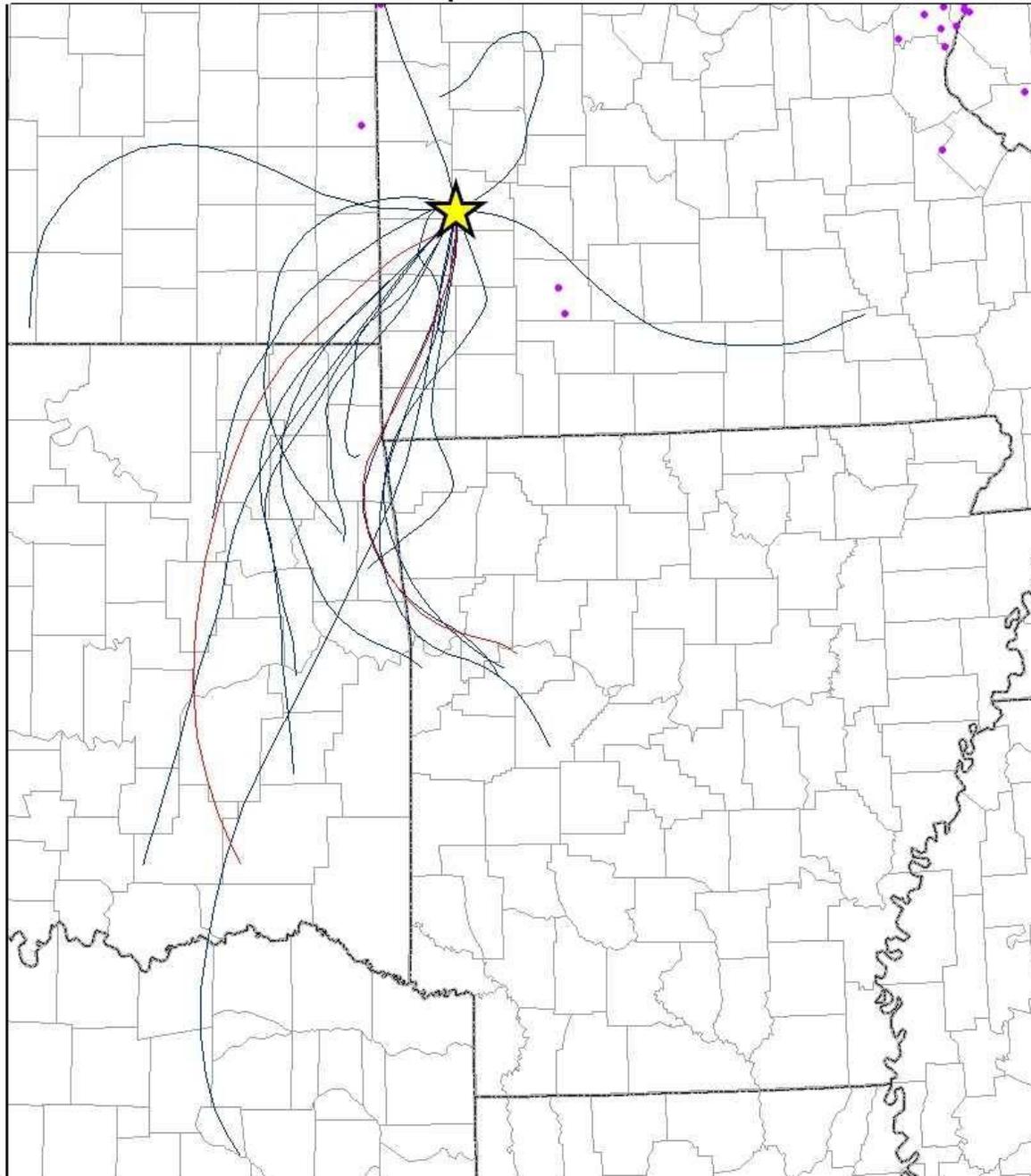
Living in Springfield MSA, Joplin MSA Working in this County



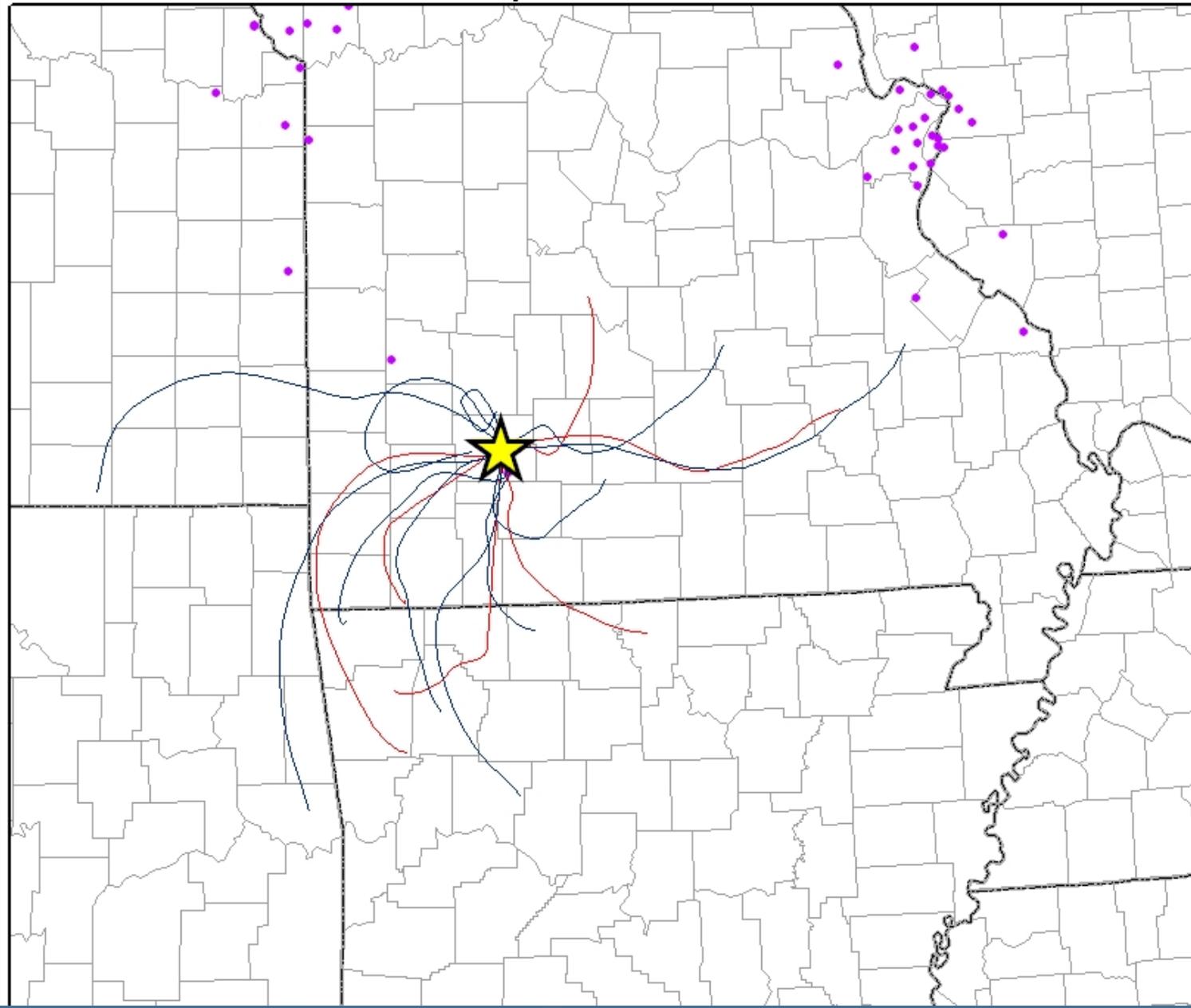
Population Growth

County	2000	2010	2020	2030	00-10 Growth %	00-20 Growth %
GREENE	240,391	272,322	305,012	329,825	13.3%	26.9%
CHRISTIAN	54,285	79,937	107,318	131,066	47.3%	97.7%
WEBSTER	31,045	37,946	45,880	53,282	22.2%	47.8%
POLK	26,992	31,470	36,172	40,139	16.6%	34.0%
DALLAS	15,661	17,432	19,984	22,172	11.3%	27.6%
<u>Jasper</u>	104,686	119,317	136,389	152,490	14.0%	30.3%
<u>Newton</u>	52,636	57,265	62,218	66,663	8.8%	18.2%
Taney	39,703	48,463	59,227	68,041	22.1%	49.2%
Lawrence	35,204	38,905	43,272	47,249	10.5%	22.9%
Barry	34,010	37,072	40,917	44,295	9.0%	20.3%
Stone	28,658	32,994	37,427	40,346	15.1%	30.6%
McDonald	21,681	23,401	25,625	28,078	7.9%	18.2%
Cedar	13,733	13,756	13,493	13,207	0.2%	-1.7%
Barton	12,541	12,910	13,173	13,730	2.9%	5.0%
Dade	7,923	7,559	7,294	6,977	-4.6%	-7.9%

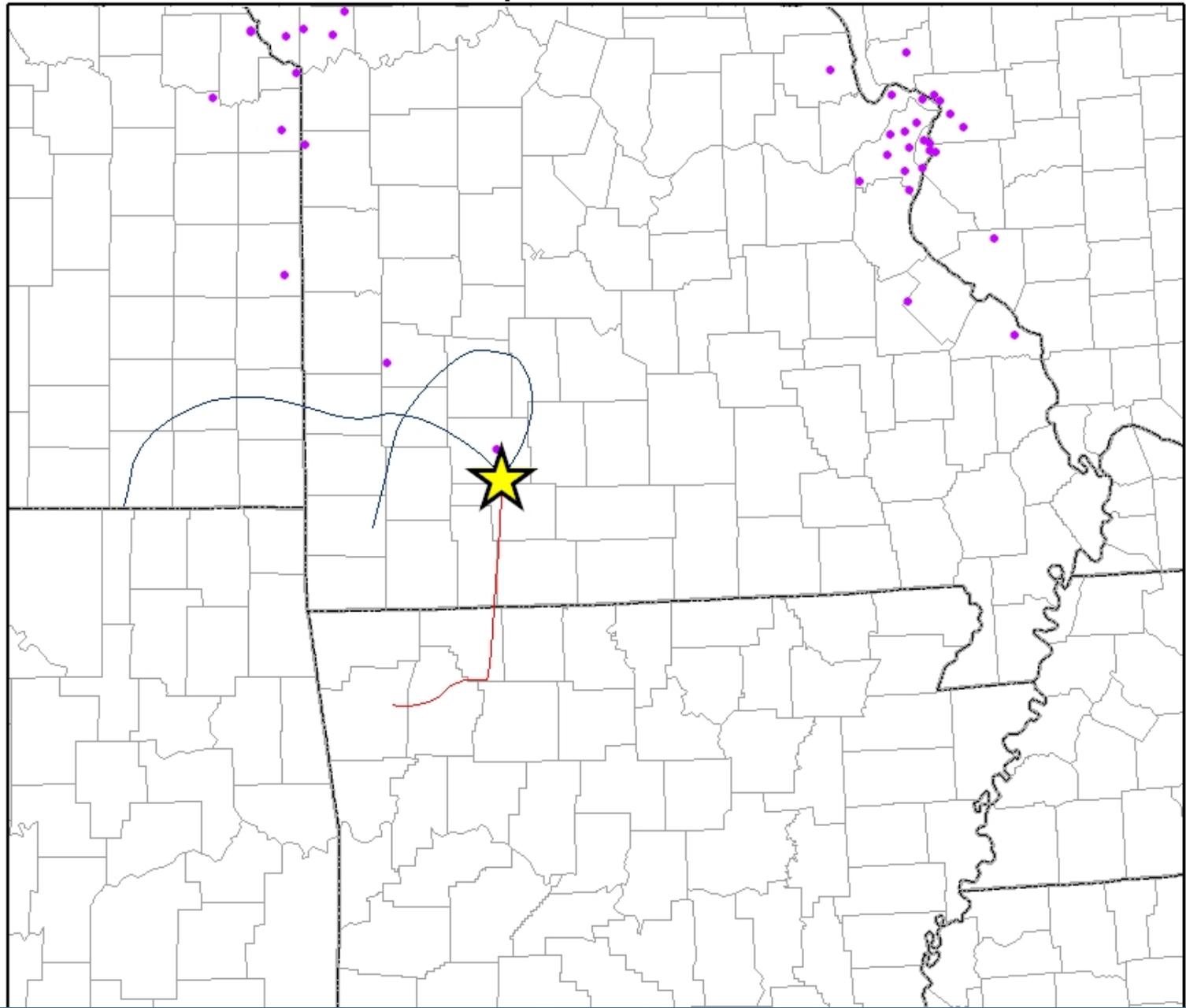
Site: El Dorado Springs
Years of Operation: 2003-2007



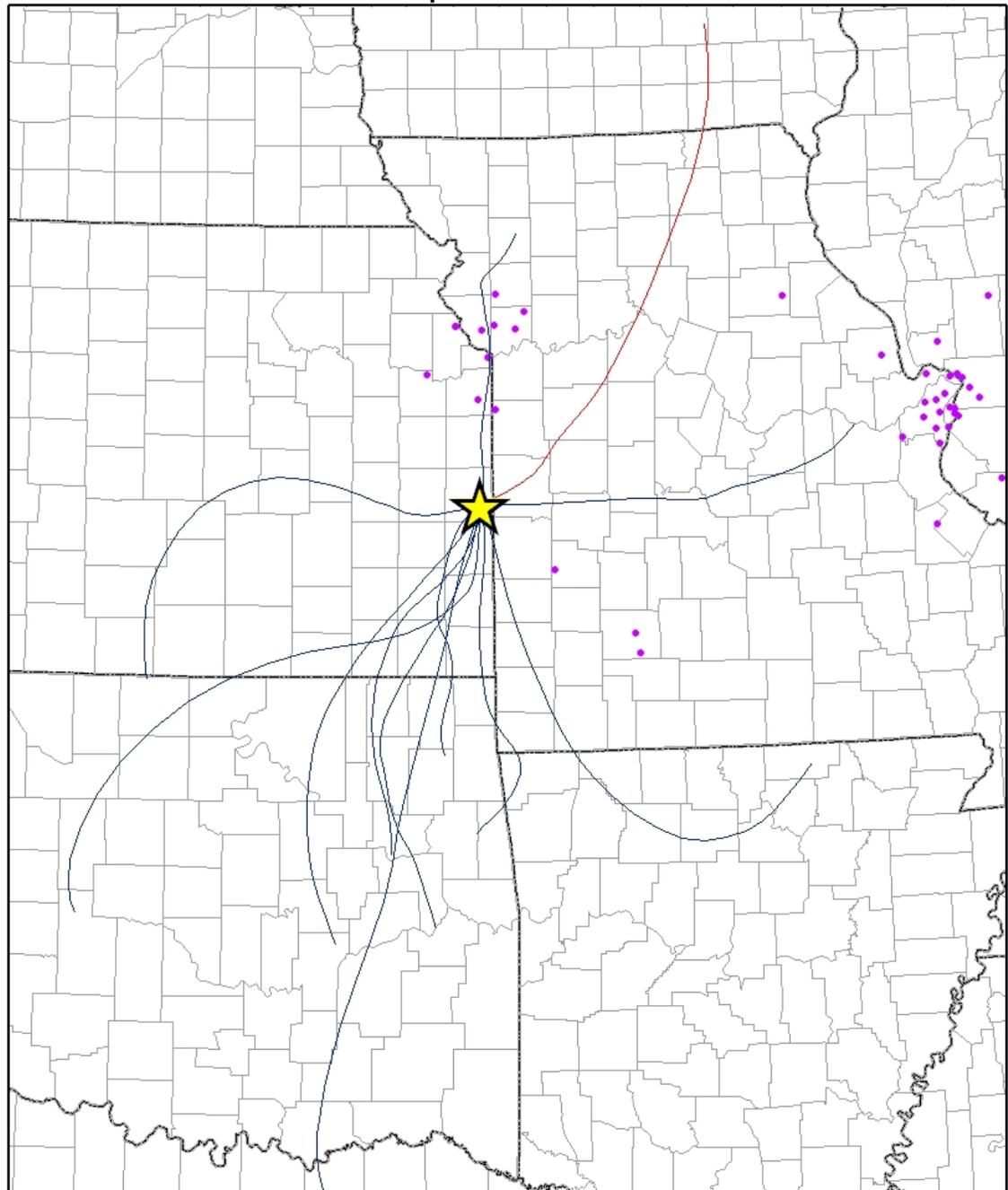
Site: Hillcrest
Years of Operation: 2003-2007



Site: S. Charleston
Years of Operation: 2003-2007



Site: Linn County
Years of Operation: 2003-2007



Timeline for Implementation

<u>Milestone</u>	<u>Date</u>
EPA Administrator signed final rule	March 12, 2008
Effective Day of final rule (60 days following the publication in the Federal Register)	June 2008
State provide recommendations on designations to EPA	March 2009 (based on 2005-2007 monitoring data)
Final Designations by EPA	March 2010
Effective Date of Designations	Summer 2010
SIPs Due	Summer 2013
Attainment Dates	2013-2030 depending on severity of problem

Opportunity for Input

- Review technical information posted on the webpage for ozone designation process
 - <http://www.dnr.mo.gov/env/apcp/ozone/8hourdesignationprocess.htm>
 - Meteorological data
 - Emission data
 - Commuter data
 - Eleven boundary criteria
 - Population / Growth data
 - Provide comments on any data, if necessary (especially on population growth, economic growth/business development)

Next Steps in Designation Process

- One additional stakeholder meeting
- Last meeting expected to be late September
 - Provide designation boundaries for area classifications as known at that time
 - Designations proposed at that time will not necessarily be final
 - Opportunity to review technical data and logic for recommendation
- Ultimately, EPA has authority to make final decision

Missouri Timeline for Boundary Designation Submission

- Missouri will follow normal MACC adoption process
- Public comment period
 - Comment period to start in late October
- Public hearing
 - December MACC meeting
- MACC adoption of boundary recommendations
 - February MACC meeting

Questions/Comments?

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