

Economic Effect of Brownfield Proximity to Branch Banking Deposit Trends

Elio Spinello, MPH, EdD

RPM Consulting LLC & California State University, Northridge

Chuck Swenson, PhD

University of Southern California



USC University of
Southern California

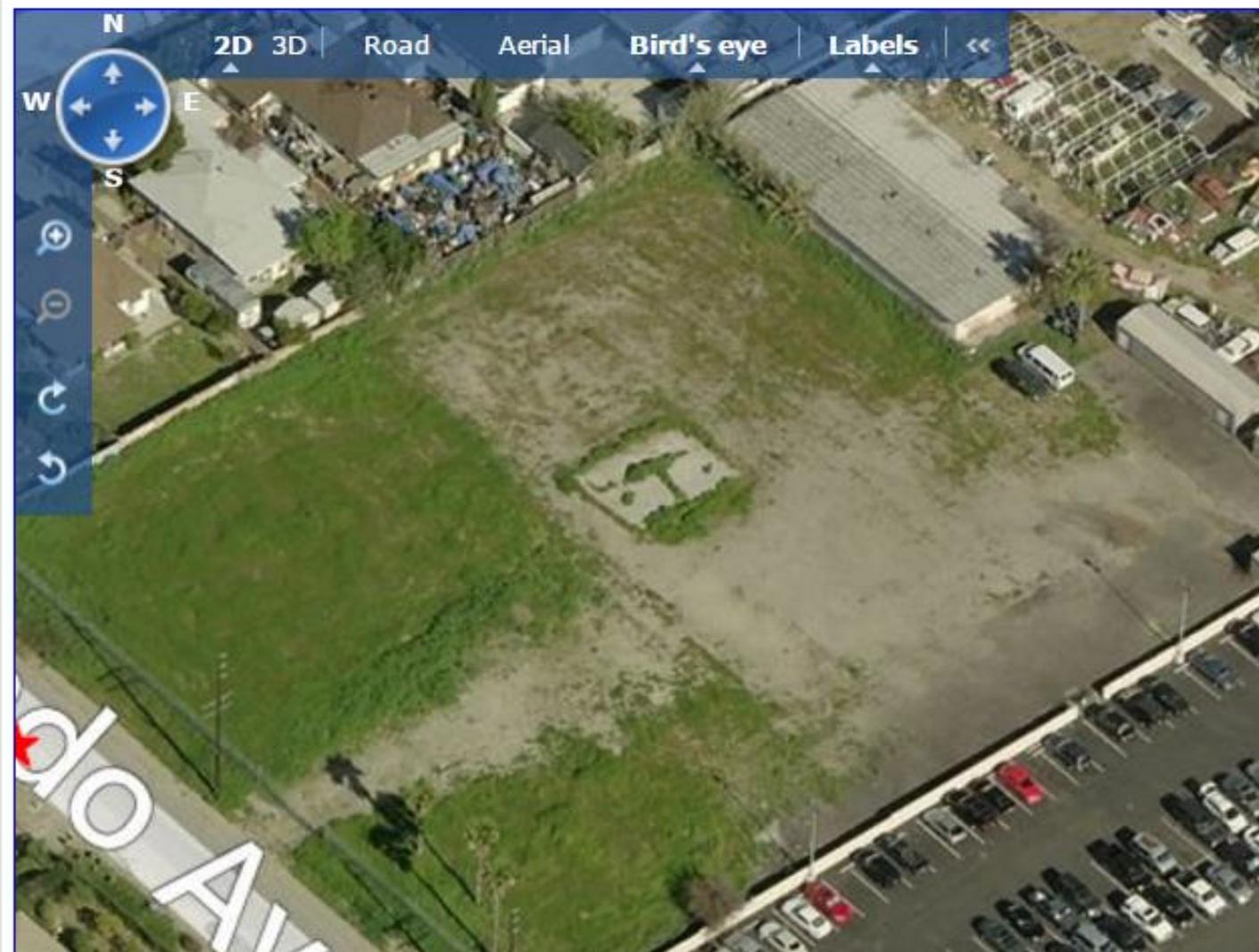


CSUN

CALIFORNIA
STATE UNIVERSITY
NORTHRIDGE

9444 N EL DORADO AVE
PACOIMA, CA 91331

Brownfield:
Real property,
the expansion,
redevelopment,
or reuse of
which may be
complicated by
the presence or
potential
presence of a
hazardous
substance,
pollutant, or
contaminant



Legend

- ★ Selected Facility
- EPA Facility of Interest
- State/Tribe Facility of Interest

The facility locations displayed come from the FRS Spatial Coordinates tables. They are the best representative locations for the displayed facilities based on the accuracy of the collection method and quality assurance checks performed against each location. The North American Datum of 1983 is used to display all coordinates.

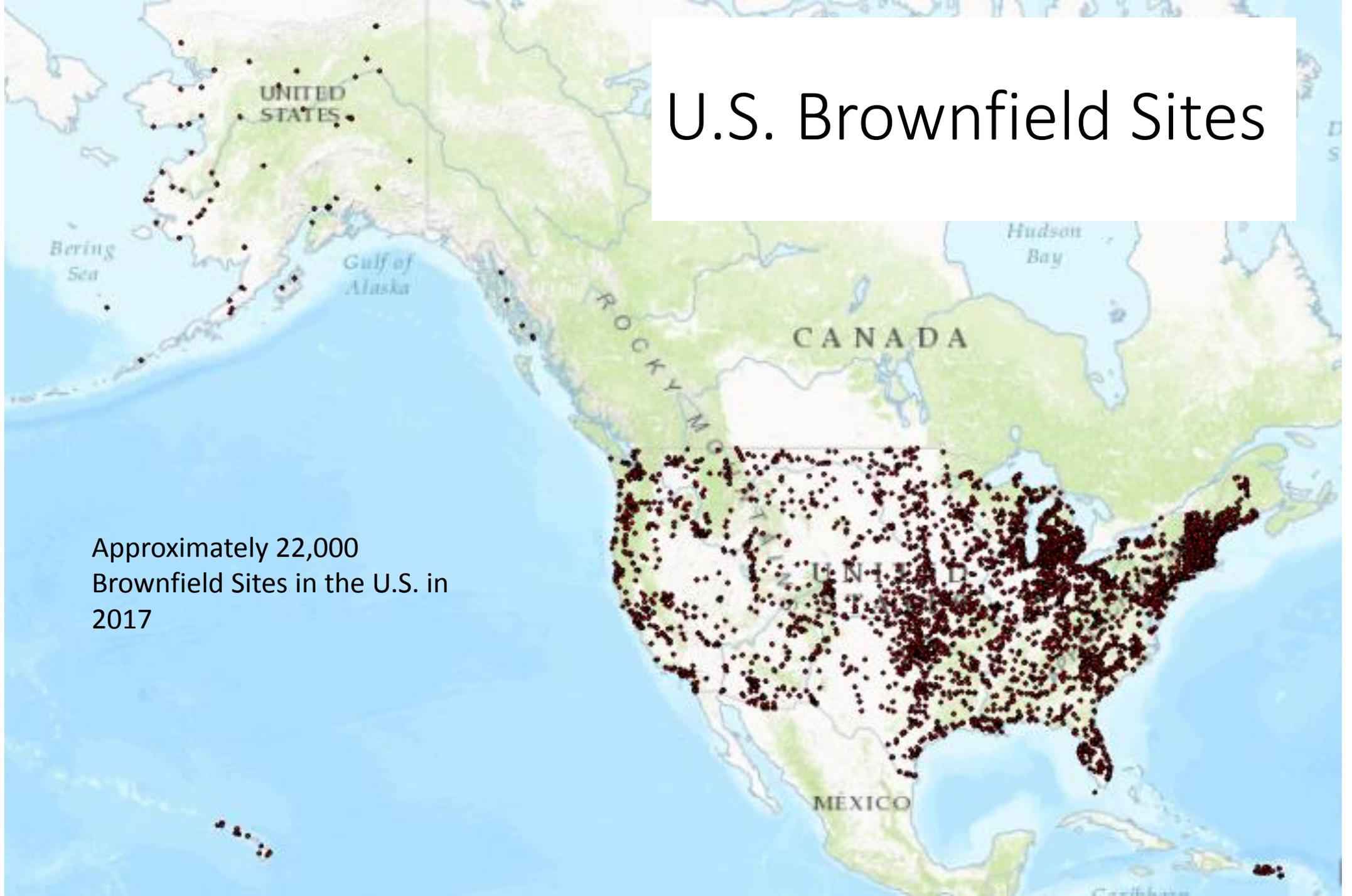


Brownfields Properties

- Considered by the EPA as lower-risk in comparison to Superfund sites, but still contain measurable contaminants requiring remediation before property can be re-used.
- Federal grant funding available for:
 - Environmental assessments
 - Revolving loans available to local communities
 - Cleanup grants for remediation

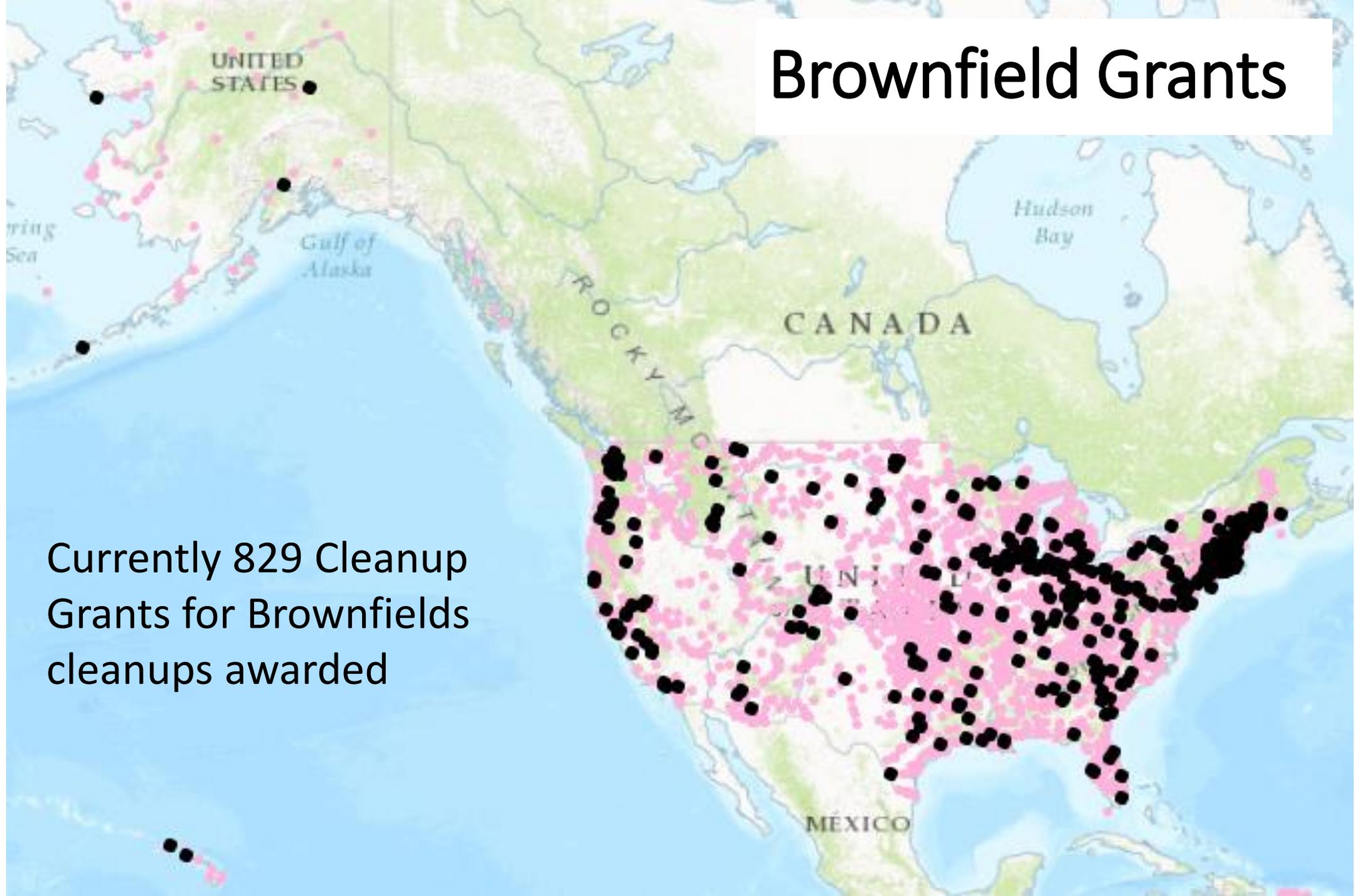
U.S. Brownfield Sites

Approximately 22,000
Brownfield Sites in the U.S. in
2017



Brownfield Grants

Currently 829 Cleanup Grants for Brownfields cleanups awarded



Measuring Grant Outcomes: Property Values

Externality effects of small-scale hazardous waste sites: evidence from urban commercial property markets

Keith R. Ihlanfeldt^a and Laura O. Taylor^{b,*}

^a*Department of Economics, Florida State University, Tallahassee, FL 32306, USA*

^b*Department of Economics, Andrew Young School of Policy Studies, Georgia State University, MSC 4A0619, Unit 4,
Atlanta, GA 30303-3083, USA*

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- Observation of changes in commercial and residential property values following cleanup funding.
- Significant reductions in value found in properties surrounding brownfields

Measuring Grant Outcomes: Property Values



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The effect of voluntary brownfields programs on nearby property values: Evidence from Illinois

Joshua Linn  

- Found a relationship between brownfield presence and surrounding property value declines
- Found up to a 1-2% increase following certification of a brownfield based upon the expectation of a future cleanup

Measuring Grant Outcomes: Employment

- **Studies have been more limited and found that:**
- **brownfield** redevelopment is complicated by the fact that many of the most seriously contaminated sites are located in the most distressed neighborhoods.
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Objective

- Measure the effects of local economic activity surrounding brownfield sites through the use of bank branch deposit changes as an indirect measure of local cash flow.

Methodology: Datasets

- Brownfield Sites

- Extracted from EPA Facility Registry Service (FRS) database of ACRES (Assessment, Cleanup and Redevelopment Exchange System) records



- Bank Branches

- RPM Consulting's BranchInfo database
- Using Federal Deposit Insurance Corporation Summary of Deposits source data, standardized for mergers and acquisitions, and linked to prior databases over a 13 year period to create a time series

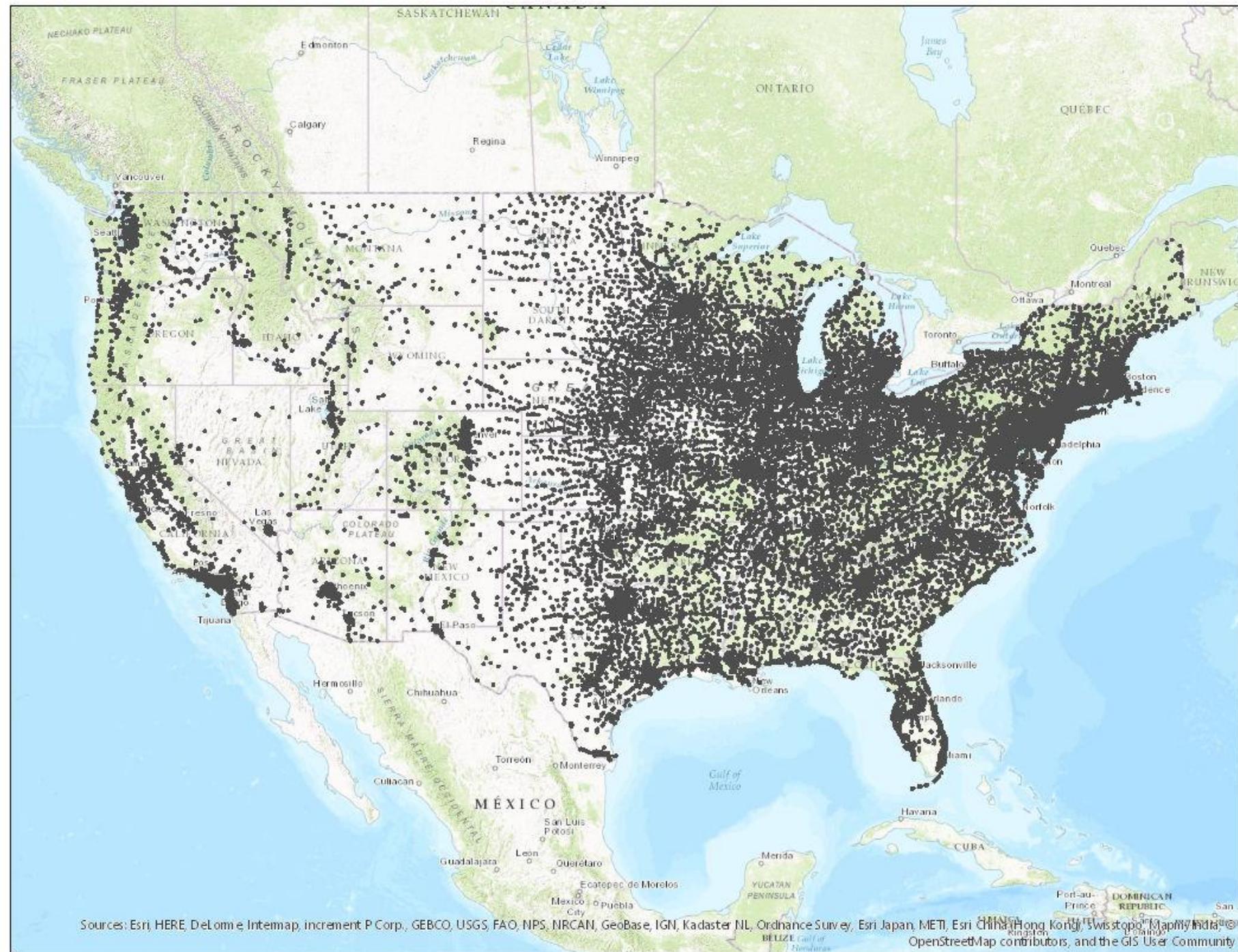


BranchInfo Bank Branches

Branch Records Nationally as
of February 2017: 91,951

Branches with full deposit
history and within 2 miles of
a brownfield: 12,188

Branches with full deposit
history and within 25 miles of
a brownfield: 80,455



Methodology: Software

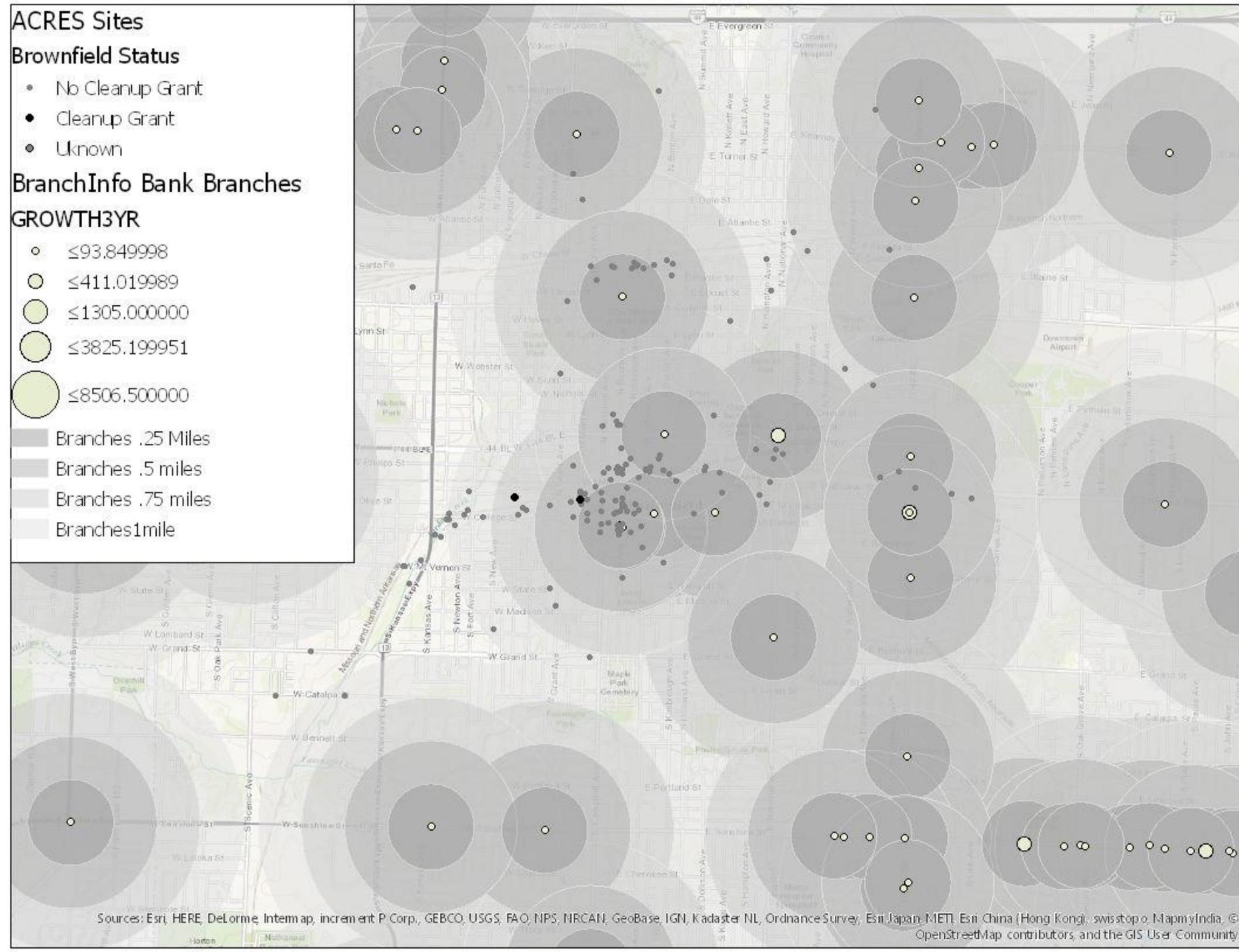


Business Analyst



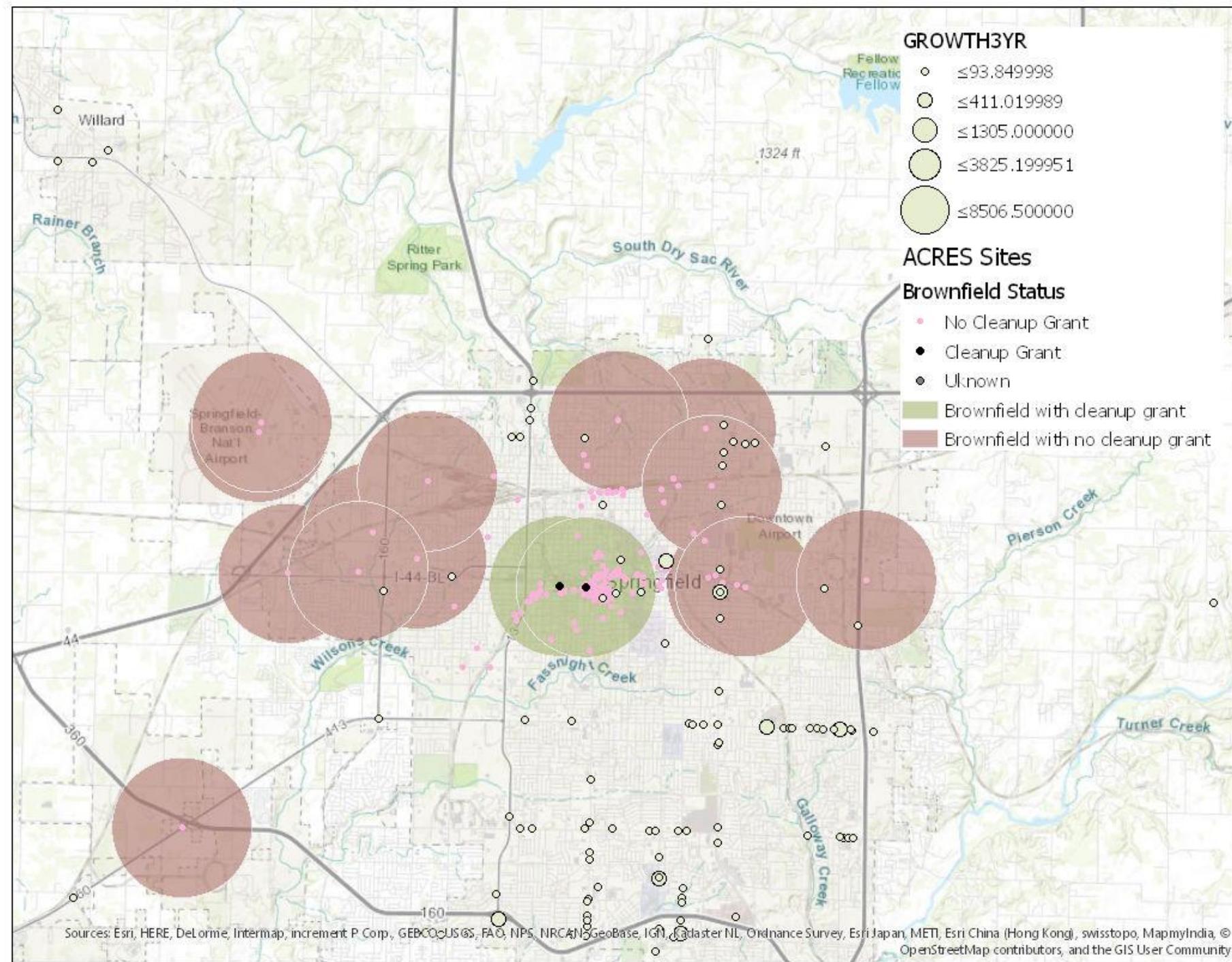
Methodology: Approach 1

- Determine distance from each branch to closest brownfield location and using ANCOVA assess relationship between 1, 3, and 5-year deposit growth and distance from closest brownfield
 - Evaluate differences between branches whose nearest brownfield has a cleanup grant and those which are not a grant recipient



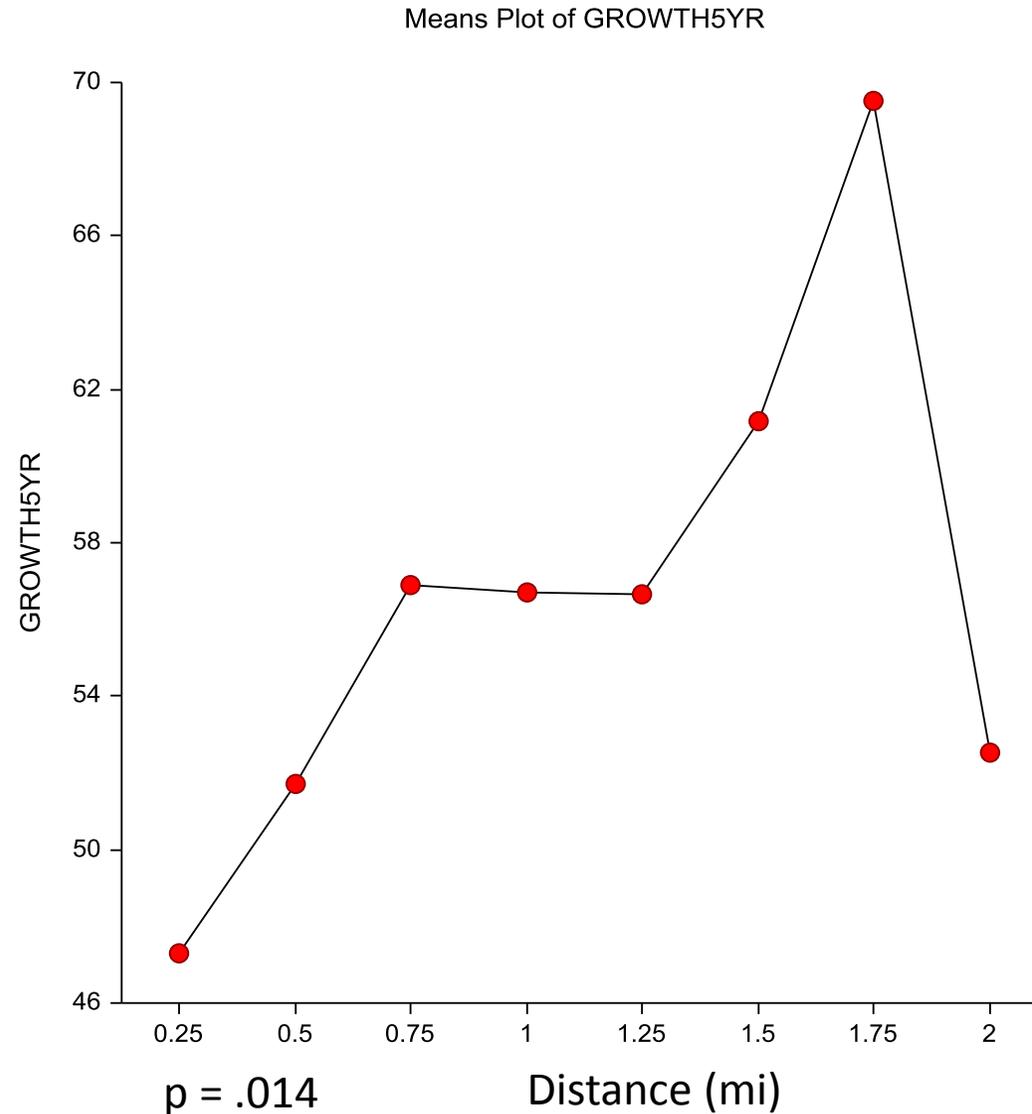
Methodology: Approach 2

- Identify bank branches within 1 mile of each brownfield site and evaluate average deposit growth comparing sites with and without cleanup grants using ANCOVA



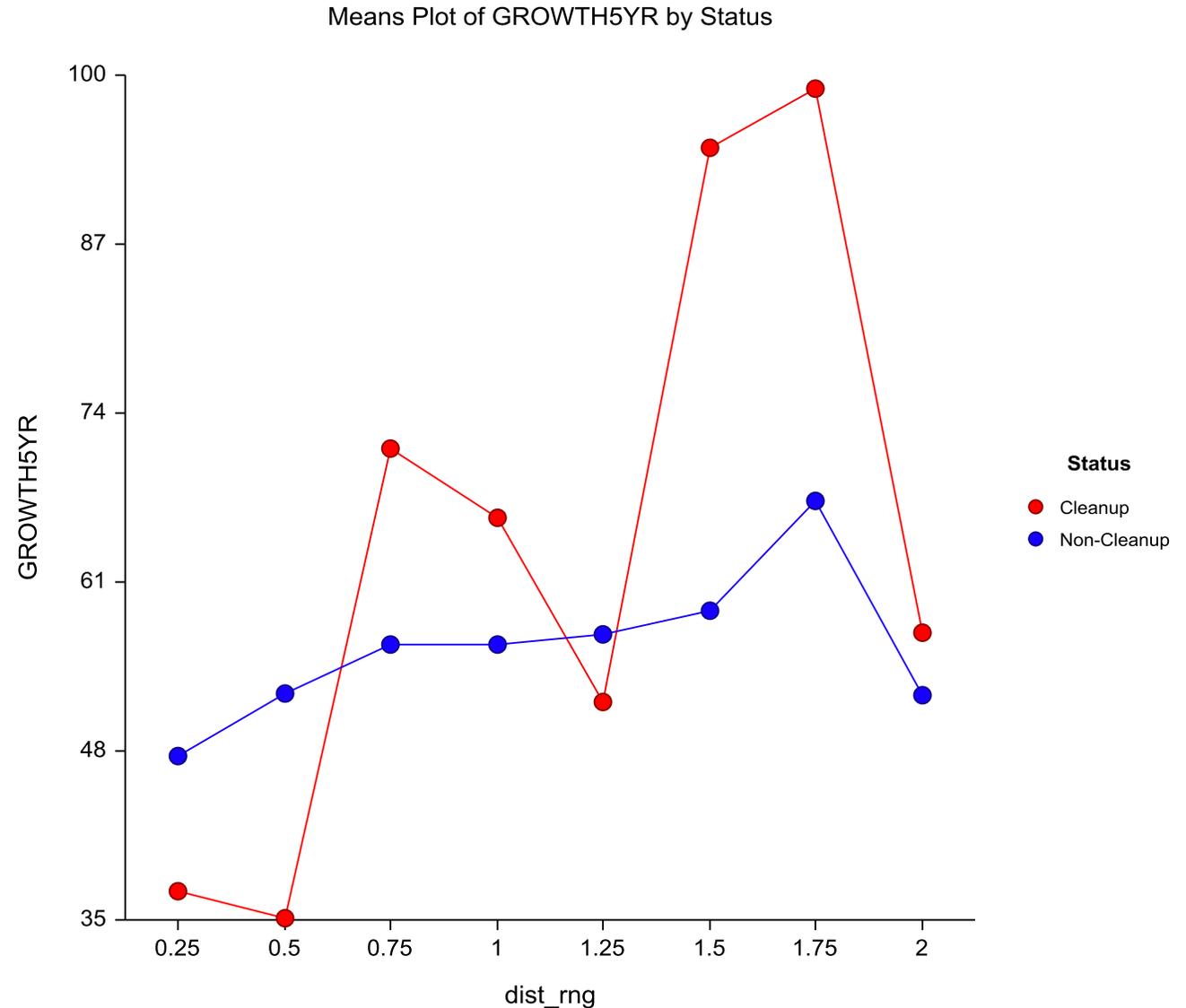
Findings: Approach 1 - Effects of Brownfield Proximity on Branch Deposits

- 5 year branch deposit growth appears to be inversely associated with proximity to the closest brownfield site, up to approximately 1.75 miles
- Branches that are located farther away from the nearest brownfield site are associated with higher deposit growth
- Similar patterns are found for 1 and 3-year growth
- Similar pattern found when controlling for urbanicity of locations



Findings: Effect of Brownfield Grant Status on Branch Deposits

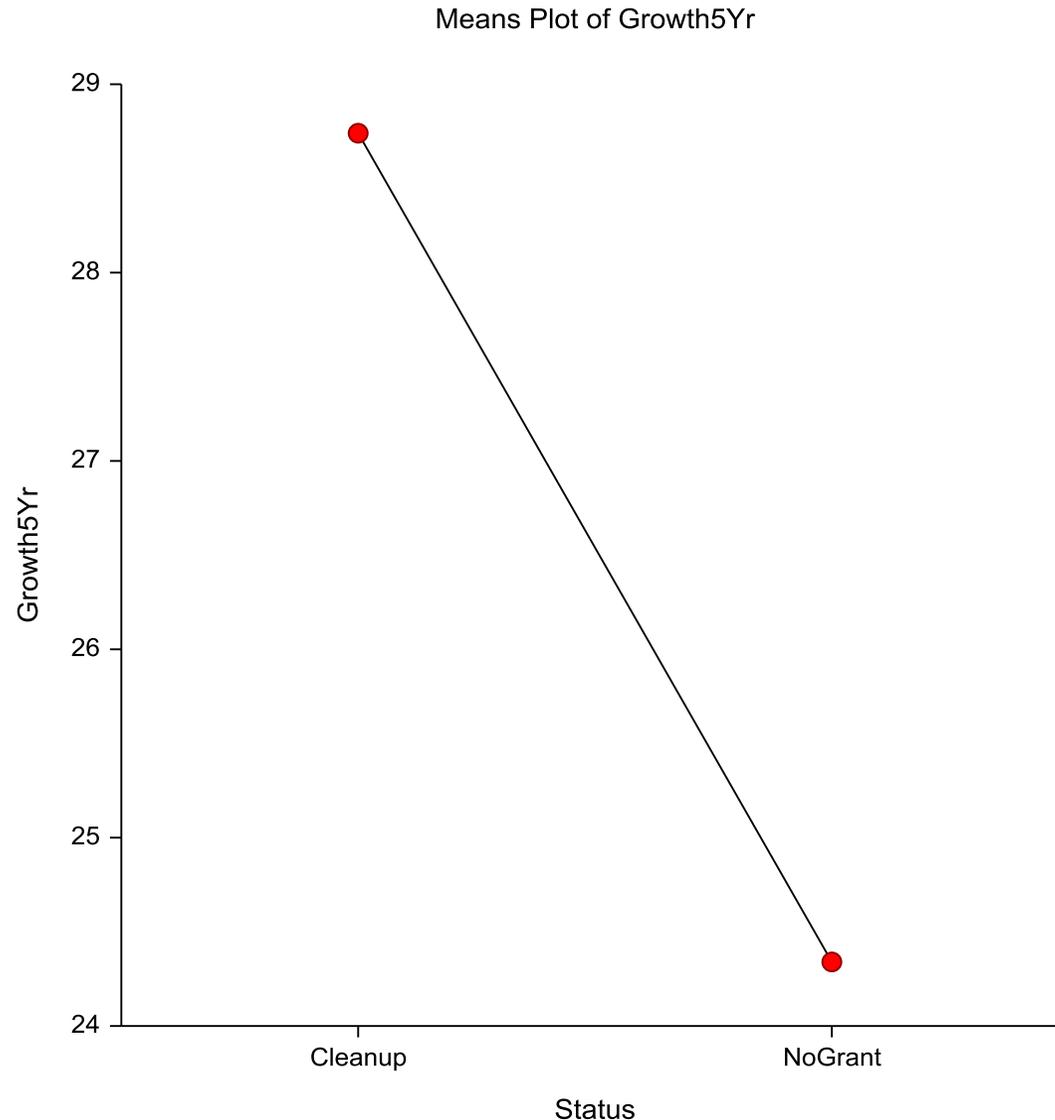
- Examining the effect of cleanup grant status becomes much less clear
- Branches within ½ mile of brownfields with cleanup grants are somewhat lower in deposit growth, although not statistically significant at $p = .24$
- Controlling for urbanicity of the site locations produces similar results with no statistical significance for the association between cleanup grant status and branch growth



Method 2 Results

Evaluation of bank branch deposits for branches located within 1 mile of a brownfield

- 5-year deposit growth is the only measure that begins to approach statistical significance at $p = .24$
- Controlling for urbanicity produces similar results with somewhat lower p-values



Conclusions

- The association between bank branch deposit growth and proximity to a brownfield site appears to be measurable, suggesting that deposit trends may be reflective of the economic effect of a brownfield on the local community
- The relationship between cleanup grants and their effect of economic activity as measured by bank branch deposit trends seems much more tenuous, most likely due to the multitude of other factors that product deposit balance volatility

Limitations

- Bank branch deposits are not only made up of retail/business deposits, but also brokered deposits and public funds.
- Deposit trends and levels do not necessarily reflect local activity
- Timing differences between observed changes, grant funding, and actual cleanup occurring.
- Effects of local cleanup efforts not reflected in federal grant funding