



Missouri's VCP: Looking Back to Look Forward

Chris Cady, Ph.D

Brownfields/Voluntary Cleanup Program

MWCC July 10, 2023

Wayback Machine: 1994

- Netscape Navigator browser released
- O.J. Simpson goes for a drive
- Bill Clinton was President
- Gas: \$1.09/gal

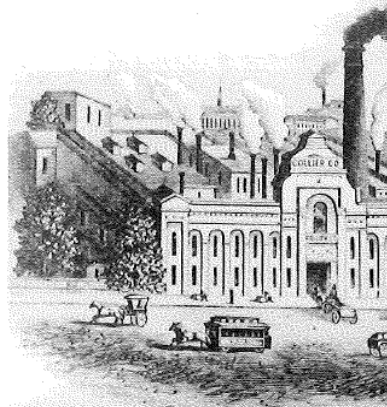
ALSO...

- MO Voluntary Cleanup Law
- Created path for cleanup and redevelopment of contaminated property previously inhibited by Superfund liability
- Place for sites that didn't fit into other programs
- New section created within MDNR's Hazardous Waste Program
- First site enrolled June 1995

First BVCP Application: June 1994

St. Louis City Block 195

- City block in Cupples Station/Busch Stadium area of STL
- White lead manufacturer (mid-1800s)
- Old gas stations (ca. 1930s)
- Large qty of soil classified as haz waste due to lead
- 3 months later, adjacent block added
- Lead Contaminated Soil
 - 1,850 tons Haz Waste
 - 11,200 tons treated onsite to render non-hazardous -> Special Waste
 - 55,000 tons non-haz lead-contaminated soil -> Special Waste



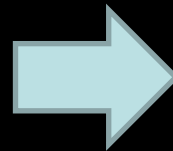
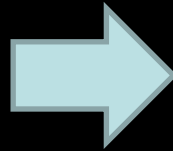
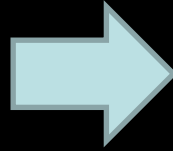
Idle, Vacant Land



Outdated/Unusable Buildings



Buildings With Potential!



Properties in Great Locations



Doe Run Herculaneum Smelter

- Miss River, Rail and Interstate access
- Ideal location for a port
- Yes, it's *slightly* contaminated!

Jordan Valley Park, Springfield

- Trafficway & JQH Pkwy.
- Next to Hammons Field, Creamery Arts Ctr, Ice Park
- Former Tri-States Service Co. Laundry
- PCE plume in karst



Productive Land



Jordan Valley Innovation Center,
Springfield

- Former seed/grain elevator
- Now a business incubator

Walgreens, Lebanon

- Former Car Dealer
- Unregulated tanks



Wait...Operating Businesses? Yes!



BVCP Stats '94-'23

Completed

Sites: 1027

Acres: 8815

Active

Sites: 196

Acres: 2256

Brownfield Assessments

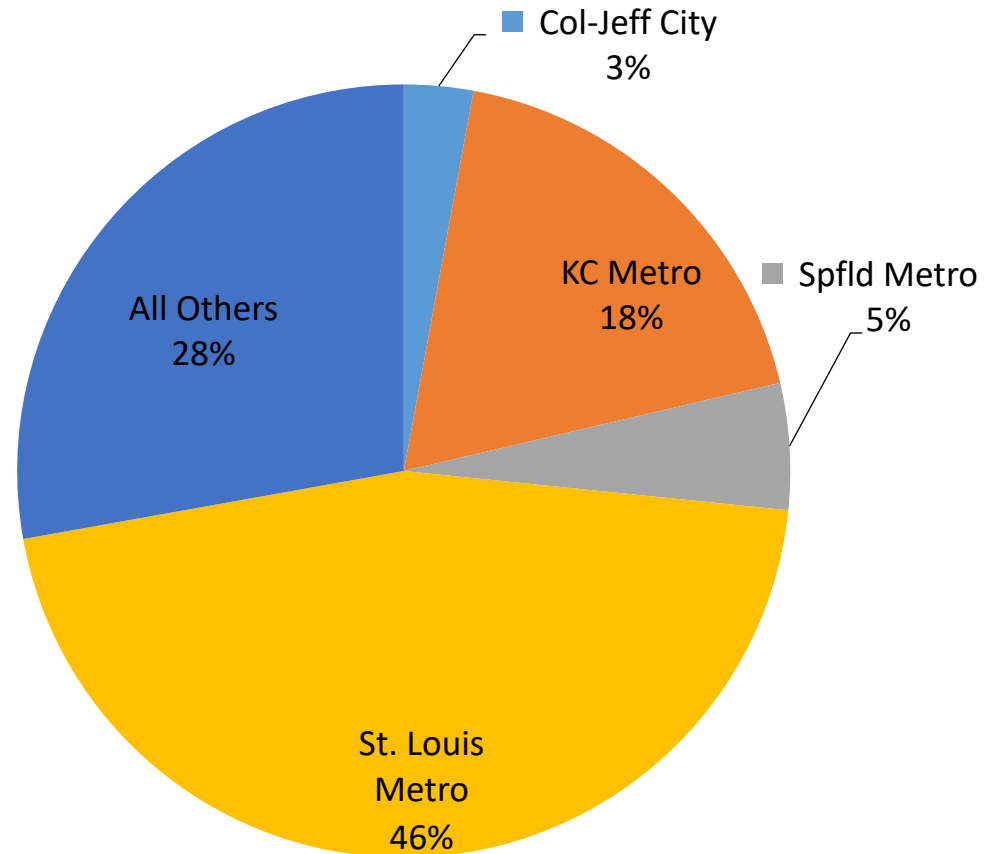
(As of 2022)

Phase I's and II's

Completed: 1213

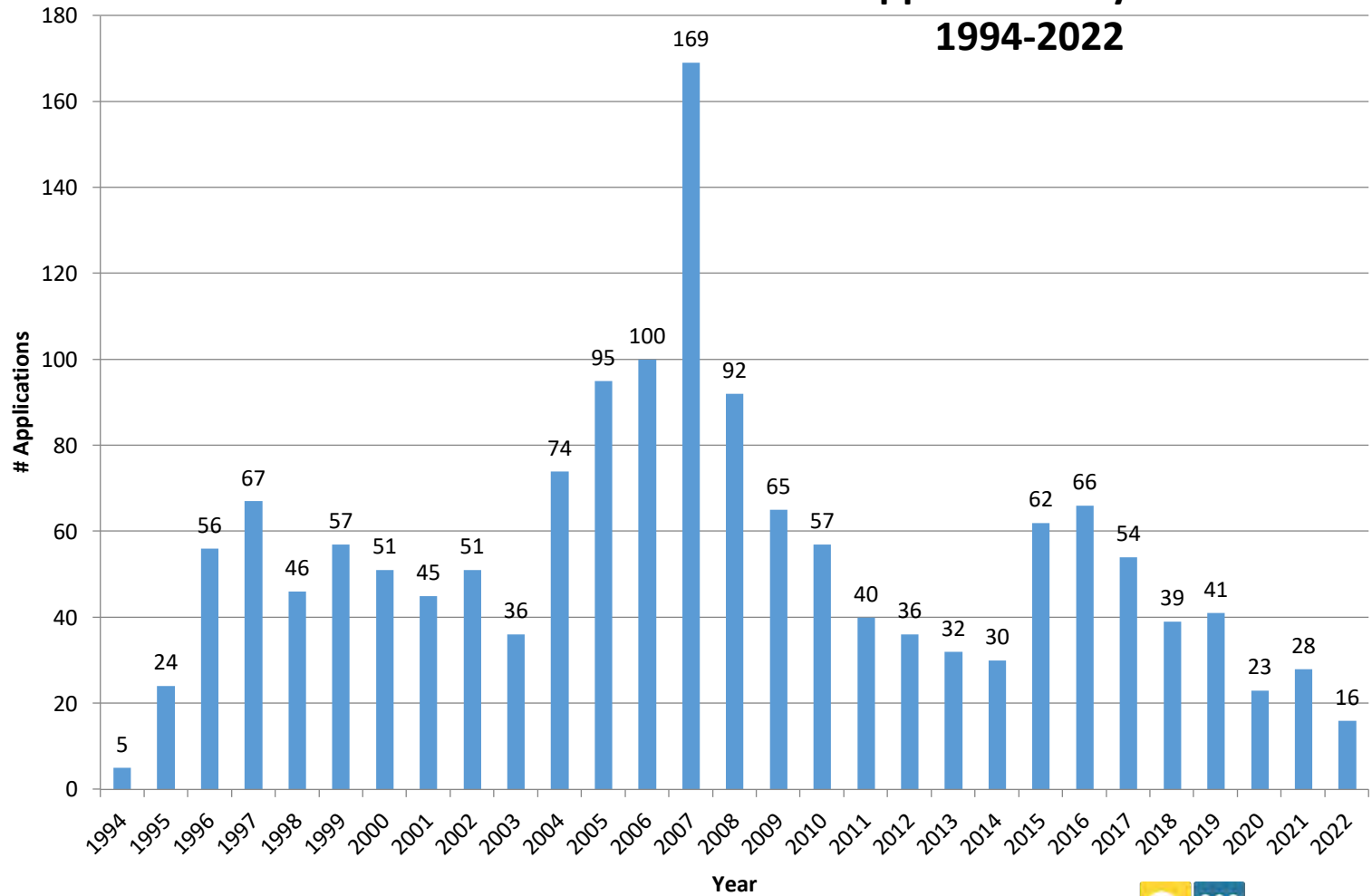
Active: 25

Completed Sites By Location



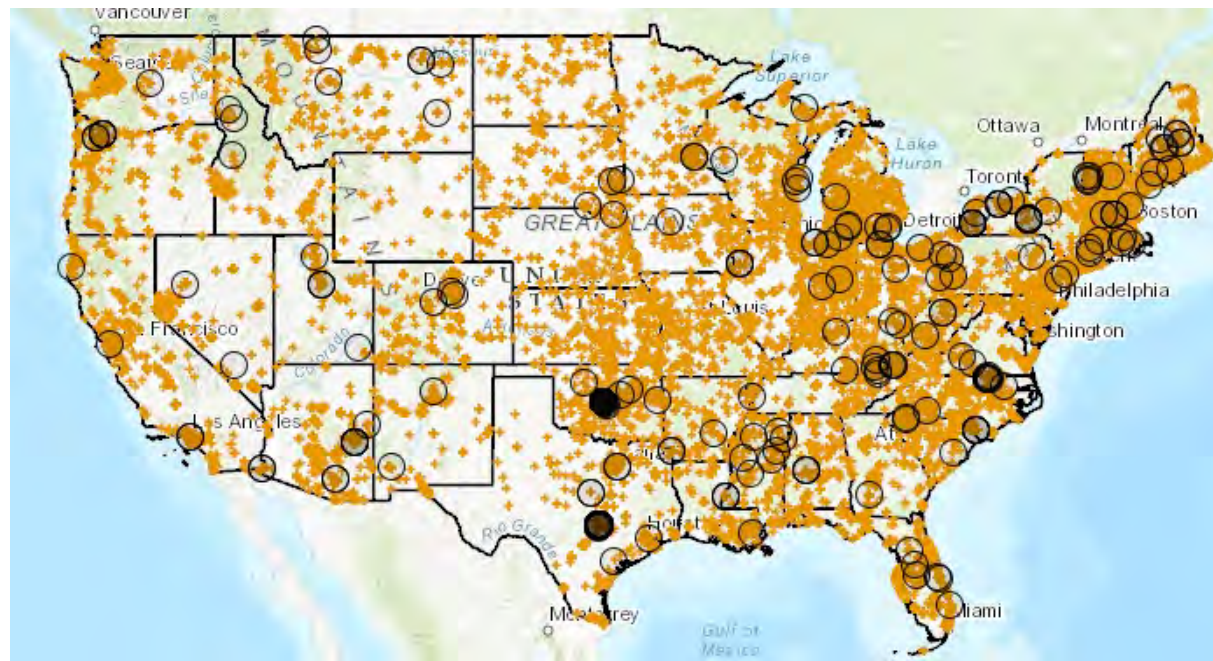
Economic Cycles

MO BVCP Applications By Calendar Year 1994-2022



National Perspective: States and Tribes

- Almost every state has a Voluntary Cleanup Program
- Since 2006, states and tribes have:
 - Enrolled an average of 33,727 properties annually
 - Completed 216,362 cleanups
 - Made over 364,599,000 acres ready for reuse



Source:
EPA.gov/brownfields

National Perspective: Maturing of Brownfields Program Infrastructure

Development of tools, techniques, resources for

- Site Assessment
- Remediation Technologies
- Reuse Options
- Funding and Technical Assistance

Cleanup and reuse is more possible now
than ever before.

Who uses the BVCP?

Industry

Advantage Metals

Americraft Carton

Beazer East, Inc.

Bunge Corporation

Cargill Clorox

Cummins Diesel

DST Systems

Energizer Battery

General Electric

Hussmann Corporation

Kop-Coat

J. W. Aluminum

Air Products

Baker-Hughes Corp.

Buckman Laboratories

Carter-Waters Corp.

Chrysler Corp.

Deffenbaugh Industries

Emerson Electric

Faultless Starch/Bon Ami Co.

H.B. Fuller

IXL Manufacturing

Kerr McGee

Customers – cont'd

Energy

AmerenUE ANR Pipeline BP Amoco
Casey's General Stores Conoco-Phillips
Enbridge Pipelines Explorer Pipeline
Jump Oil Laclede Gas/Spire Missouri Gas Energy
MFA Mid-America Precision Products
Nooter Corporation Quik Trip Sinclair Oil
Williams Pipeline Co.

Transportation

American Airlines BNSF RR Canadian Pacific RR

Cities, Counties and Regional Authorities

Boonville

Branson

Cameron

Columbia

Dellwood

Excelsior Springs

Farmington

Ferguson

Hannibal

Herculaneum

Iberia

Laff City

Jennings

Joplin

Lake of the Ozarks Local Council

Maryville

Mayview

MOKAN Reg. Council (NW MO)

Shelbyville

St. Charles

St. Joseph

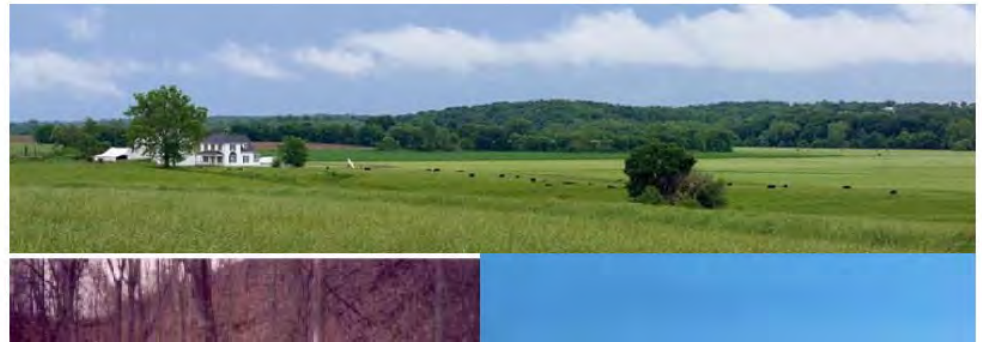
Viburnum/Iron Co. R-III Sch. District

Warsaw

Innovations & Improvements

- LTS Study
- ESTART
- Hidden Treasures
- Hidden Treasures:
Rural Roots
- MRBCA
- Land Use Options

Missouri Long Term Stewardship: Current Practices & Future Recommendations



Regulatory Streamlining

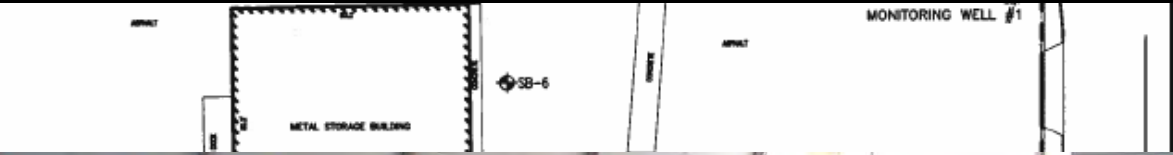
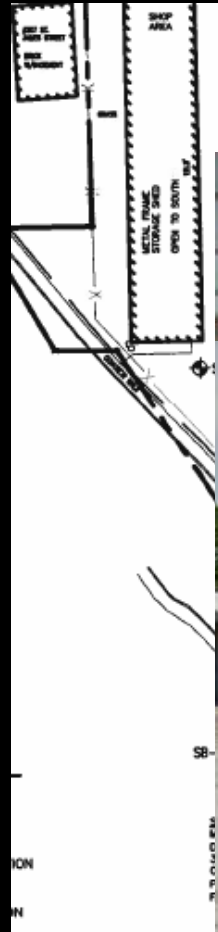
- Petroleum Storage Tanks
- Underground Injection
- Clean Fill
- Landfills
- Red Tape Reduction



Managing Vapor Intrusion Risk for Unknown Future Buildings

- Env. Covenants used to say simply “No buildings”
- Now: What you would need to make sure it’s safe.
- Location, depth, contam’s actually remaining - each plays a role
- Guinea pig: Ameren Columbia FMGP Site





Recorded in Boone County, Missouri
Date and Time: 09/07/2018 at 08:09:52 AM
Instrument #: 2018017543 Book: 4941 Page: 45
Instrument Type: COV
Recording Fee: \$144.00 S
No. of Pages: 41

Nora Dietzel
Nora Dietzel, Recorder of Deeds



(ABOVE SPACE RESERVED FOR RECORDER'S USE)

Document Title: Environmental Covenant
Document Date: *SEPTEMBER 7, 2018*
Grantor: Union Electric Co. d/b/a Ameren Missouri, Real Estate Dept., 1901 Chouteau Avenue, St. Louis, MO 63103-3003
Grantee: Union Electric Co. d/b/a Ameren Missouri, Real Estate Dept., 1901 Chouteau Avenue, St. Louis, MO 63103-3003



ASH STREET

NOVEMBER 18, 2022

ORR STREET PARK PROPERTY

PROPOSED PARK DEVELOPMENT PLAN

Columbia Parks and Recreation
Creating Community

Green Spaces, Parks and Urban Streams Give Revitalization A Boost

- Numerous sites have used the BA and BVCP programs for:
 - Playgrounds
 - Trails
 - Natural Areas
 - Stream Improvement
- Array of funding sources
- Many benefits:
 - Quality of life
 - Attract new development
 - Transportation
 - Flood Control
 - Stream Health
 - Wildlife Habitat











FBI? CIA?

What Have We Learned?

- No site is too big or too small
- Some sites are not nearly as much of a problem as they are perceived to be
- Huge array of support available
- Constant maintenance and development required for DNR keep up
- Majority of brownfields are still out there!

Successes And Challenges

- Consistent throughput of sites
- Oversight cost remains low
- LTS Program
- Staffing in the age of 'churnover'
- Emerging Contaminants bring new sites without cleanup standards
- Cleanup Guidance (MRBCA)

Things We're Working On

- Databases & Mapping
 - Replacement for ca. 1999 site database
 - New layers for ESTART map
- MO Risk Based Corrective Action Guidance Revision and Update
 - 2006 guidance & 2009 rule in need of updates
 - Draft revision ready for public comment
 - Cleanup standards (Tier 1 RBTLs) will also be updated - working on this now
 - Expect public notice in coming weeks





Make your site one of the next 1000

Chris Cady, Ph.D.

BVCP

573-526-8916

chris.cady@dnr.mo.gov

Website

www.missouribrownfields.com

E-START Map

www.dnr.mo.gov/ESTART