



Distribution Planning Process in Michigan

Joy Wang

Manager

Distribution Planning Section

Michigan Public Service Commission

September 28, 2023



Disclaimer

- All views expressed are solely my own and do not express the views of the Michigan Public Service Commission.
- The Commission speaks through its orders.



Agenda

- Background
- Reviewing distribution plans
 - Staff reports
 - Challenges
 - Alignment with rate cases
- Current and Next Steps



Mackinac Bridge
connecting the lower
and upper peninsulas.

The Start of Distribution Plans

- To provide better visibility into:
 - Investments long into the future
 - Strategies to address aging infrastructure
- First ordered 5 year investment and maintenance distribution plans in rate case orders for:
 - U-18014 DTE Electric January 31, 2017
 - U-17990 Consumers Energy February 28, 2017
- Rate case dockets had:
 - Draft plans filed in June and August 2017
 - Stakeholder comments
 - Final plans
 - DTE Electric January 31, 2018
 - Consumers Energy March 1, 2018

Rate Case Dockets to Dedicated Docket

- Guiding principles in Oct. 11, 2017, order in Case No. U-17990 and U-18014:
 - Safety
 - Reliability and resiliency
 - Cost effectiveness and affordability
 - Accessibility
- Commission order on April 12, 2018, in Case No. U-20147.
 - Created single repository for distribution plans
 - Indiana Michigan Power ordered to file distribution plans in rate case (U-18370), but to file to Case No. U-20147 docket.
 - Prior plans from DTE Electric and Consumers Energy also refiled to the Case No. U-20147 docket
 - Solicited stakeholder comments on final DTE Electric and Consumers Energy distribution plans
 - Ordered staff led technical conference on distribution planning

Stakeholder Informed Improvements

- Stakeholder comments received on rough drafts of distribution plans
- Technical conference held on August 7, 2018
 - Focused on stakeholder concerns regarding first set of plans
- MI Power Grid [Electric Distribution Planning workgroup](#)
 - Five stakeholder sessions from June-November 2019
 - One Benefit-Cost Analysis focused session in November 2021
- Staff report and recommendations after each



1st Staff Report and Recommendations

- Michigan Distribution Planning Framework (Sept 2018)
 - Review after first distribution plans, stakeholder comments, and technical conference
 - Recommended path forward for open, transparent, and integrated electric distribution system process
 - Reduce uncertainty:
 - In future distribution plans, include workforce adequacy and development plan
 - Ensure proposed spending plans feasible
 - Dynamic load forecasting approach due to distributed energy resource (DER) penetration uncertainty
 - Improve data access
 - Develop with stakeholders a cost-effective approach to public hosting capacity information
 - Provide customer and 3rd party access to customer usage data (utilities with AMI)
 - Improve data and information in future distribution plans
 - Develop with Staff a common cost-benefit methodology
 - Provide suitable criteria for non-wires alternatives
 - Provide clear cost information for nontraditional approaches to capacity investments

2nd Staff Report and Recommendations

- [Electric Distribution Planning Stakeholder Process](#) (April 2020)
 - Staff recommendations based on stakeholder & utility feedback
 - Provide clarity to distribution planning process
 - Reiterate distribution planning objectives
 - Define terms for common understanding:
 - DERs, Hosting Capacity Analysis (HCA), Non-Wires Alternatives (NWA), and Locational Value Assessment
 - Standardize components for future distribution plans
 - Recommend Commission identify resiliency events electric system should handle instead of adopting a definition
 - Improve data access
 - Adopt phased implementation of HCA, with zonal go/no-go map, at DTE Electric and Consumers Energy
 - Improve data and information in future distribution plans
 - Utilities articulate vision/roadmap with measurable goals and objectives
 - Stakeholder process to explore and propose specific BCA criteria for Commission consideration and adoption
 - Recommend questions utilities should answer prior to refining and implementing additional NWA pilots
 - Assessment of energy waste reduction (EWR) options
 - Evaluate EWR forecasts and NWA analyses

2nd Staff Report and Recommendations

- [Electric Distribution Planning Stakeholder Process](#) (April 2020), cont.
 - Staff recommendations based on stakeholder & utility feedback
 - Recommend exploring alternative regulatory approaches, like emerging alternatives to cost of service regulation
 - MI Power Grid Financial Incentives/Disincentives workgroup
 - Coordinate distribution planning efforts with the Michigan Infrastructure Council for more efficient and effective planning



Tahquamenon Falls
Upper Peninsula

3rd Staff Report and Recommendations

- Brief comments filed October 2021
 - Observations regarding each of the three distribution plans
 - Items covered
 - Challenges (abbreviations and terms)
- Request more time to review and comment on distribution plans
- Request more time to file responses to Commission's questions
 - Are the measures focused on improving distribution system reliability identified in the respective distribution plans commensurate with the scale of the challenge?
 - Are the metrics identified by the utilities to reduce the number and duration of outages and the number of customers experiencing multiple outages appropriate?
 - Do the financial incentives and penalties identified by the utilities align the respective utility's financial goals with the goals of this Commission in reducing outages and improving distribution performance?
 - Do the distribution plans filed reflect the appropriate balance between needed investments and customer affordability? Are there alternatives that would better strike this balance?
 - Do the distribution plans sufficiently incorporate considerations involving equity, including efforts to avoid further marginalization of vulnerable customers and communities?
 - Are there potential utility pilots or industry best practices that can improve customer safety and reliability by moving overhead lines on specific circuits or in segments of the electric distribution system underground at reasonable costs?

4th Staff Report and Recommendations

- Staff comments on 2nd distribution plans and response to Commission questions (May 2022)
 - Responds to Commission questions
 - General comments on:
 - Measures to improve reliability and scale of challenge
 - Reliability metrics, storm events, and proactive asset management
 - Financial incentives and penalties
 - Balance between needed investments and affordability
 - Equity and environmental justice
 - Community engagement



Detroit

4th Staff Report and Recommendations, cont.

- Recommendations
 - Improve data and information in future distribution plans
 - Request problem description, goals, and possible solutions determined through community and 3rd party engagement
 - Summarize full set of alternatives before determining selected solution
 - Relay desired utility learnings or system outcomes
 - Discuss process to identify/utilize market-based solutions and/or external funding to reduce ratepayer impacts
 - Identify investment locations overlaid with:
 - Socioeconomic context, like MiEJScreen
 - Electric distribution system information
 - Identify asset management approaches applied
 - Go beyond asset age by providing condition-based assessments via monitoring and inspections
 - Detail efforts to proactively reduce risk and prevent outages from occurring
 - Encourage utility learning in quantifying reductions in ratepayer burdens with technology deployment for grid reliability, resiliency, and customer safety

Longer Time Frame & More Required Plans

- Time horizon: 5, 10, and 15 year horizons
- Filed in MPSC Case No. [U-20147](#) by three IOUs
 - Consumers Energy [Mar 1, 2018](#) [June 30, 2021](#) by Sept 29, 2023
 - DTE Electric [Jan 31, 2018](#) [Sept 30, 2021](#) by Sept 29, 2023
 - Indiana Michigan Power [Apr 3, 2019](#) [Sept 30, 2021](#) by Sept 29, 2023
- Future distribution plans to be filed by:
 - Alpena Power Company by Sept 30, 2024
 - Northern States Power Company by Sept 30, 2024
 - Upper Peninsula Power Company by January 31, 2025

Challenges of Reviewing Distribution Plans

- Distribution plans can be lengthy

Utility	1 st Plan Page #	2 nd Plan Page #
Consumers Energy	317	373
DTE Electric	232	734
Indiana Michigan Power	141	171

- *Solution: Requested more concise and focused reports*
- Data provided may be limited or not formatted for ease
 - *Solution: Requested clearer data and visuals supporting report.*
- No uniform benefit-cost analysis guidance
 - *Solution: Developing jurisdictional specific BCA*
- Understanding holistic impacts is difficult
 - Individual projects/programs; Limited socioeconomic data/analyses
 - *Solution: Ask for geographic detail. Conducting analyses for holistic understanding.*
- Staff bandwidth (*Solution: Dedicated section and longer review period.*)

Cost Recovery Decisions in Rate Cases

- Distribution plans are informational only
 - Reasonableness and prudence review in rate cases which have:
 - Forecasted costs
 - Short outlook (~12 month test year)
 - Utilities with distribution plans largely file distribution plan as rate case exhibit
 - Reference distribution plan as further motivation for proposed investments



Mackinac Island

Current & Next Steps

- Distribution Planning section started in December 2022
 - Close coordination with Electric Operations section
 - Seek alignment between distribution plan and rate cases
- Improve understanding of utility investments and customer experiences
 - Meeting with utilities on current and future grid investments/performance
 - Site visits to communities to understand their experiences
 - Significant reliability concerns
 - Customer and community perspective different from utility
- Interest and Commission requests for improved analyses in future rate cases and distribution plans, such as:
 - Geographic detail on reliability performance
 - Socioeconomic and environmental justice

Current & Next Steps

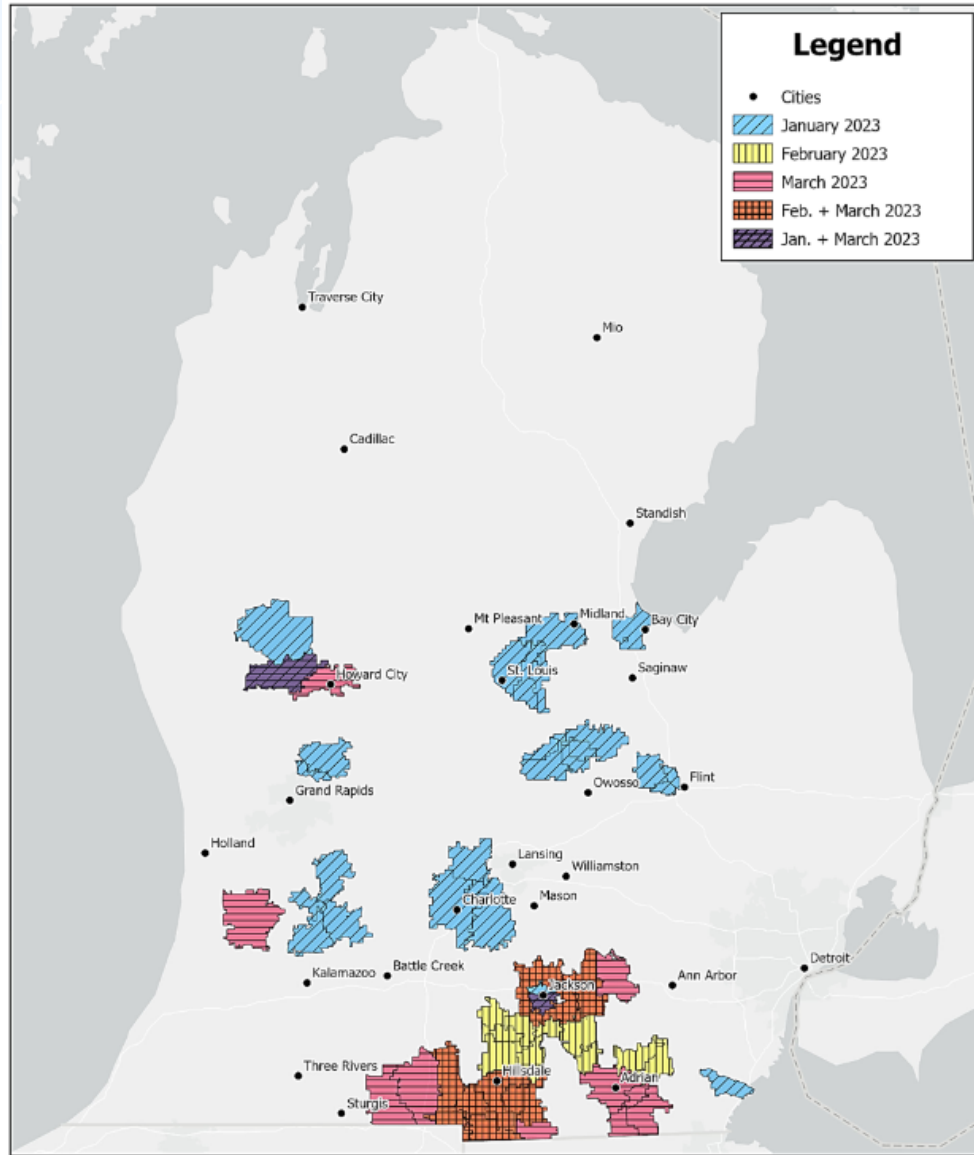


Figure 1. SAIDI Worst Performing Circuit Locations from January – March 2023 by Zip Code

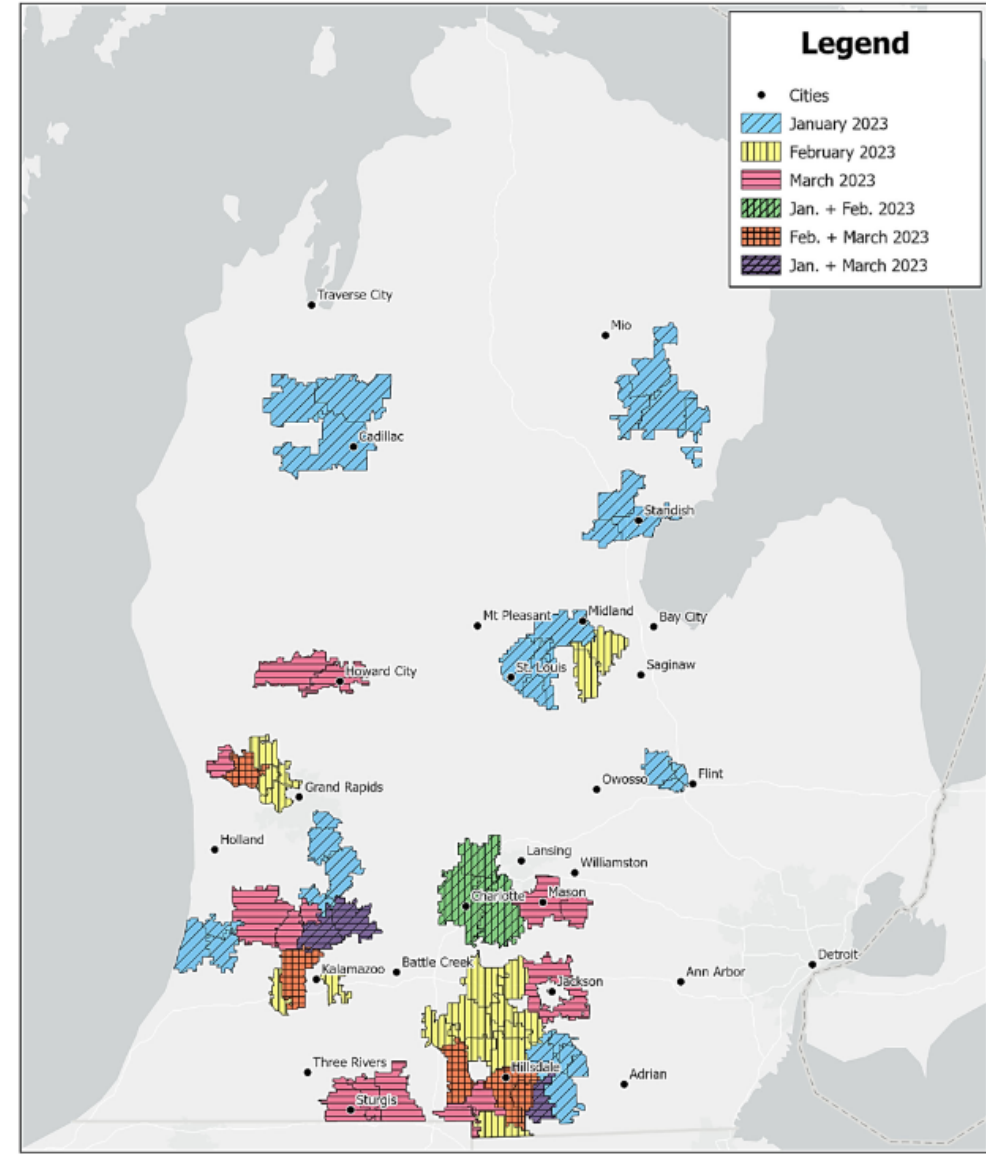


Figure 2. SAIFI Worst Performing Circuit Locations from January – March 2023 by Zip Code

Current & Next Steps

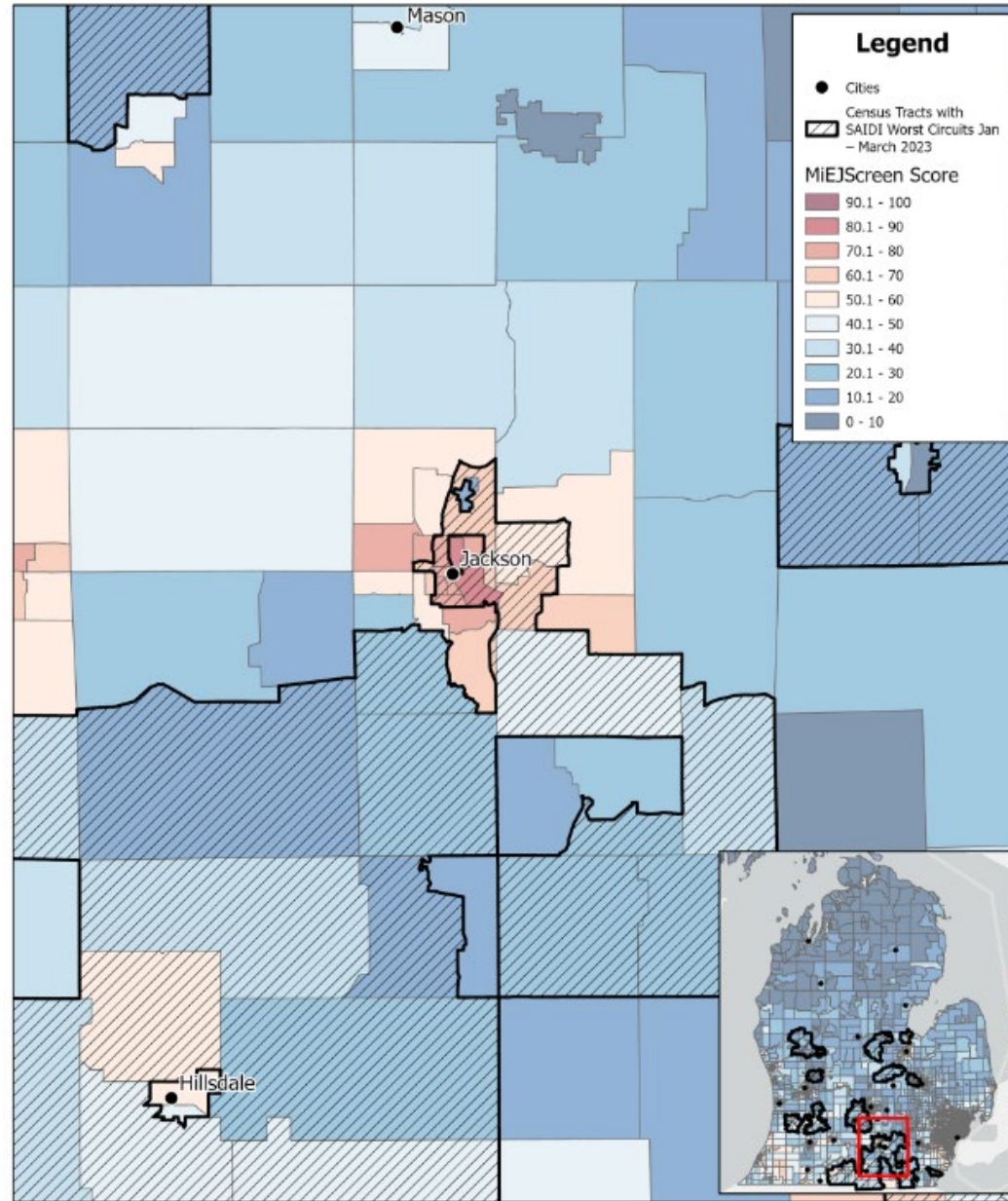


Figure 13. MiEJScreen Scores and SAIDI Worst Circuits during January - March 2023, Jackson Area

Current & Next Steps

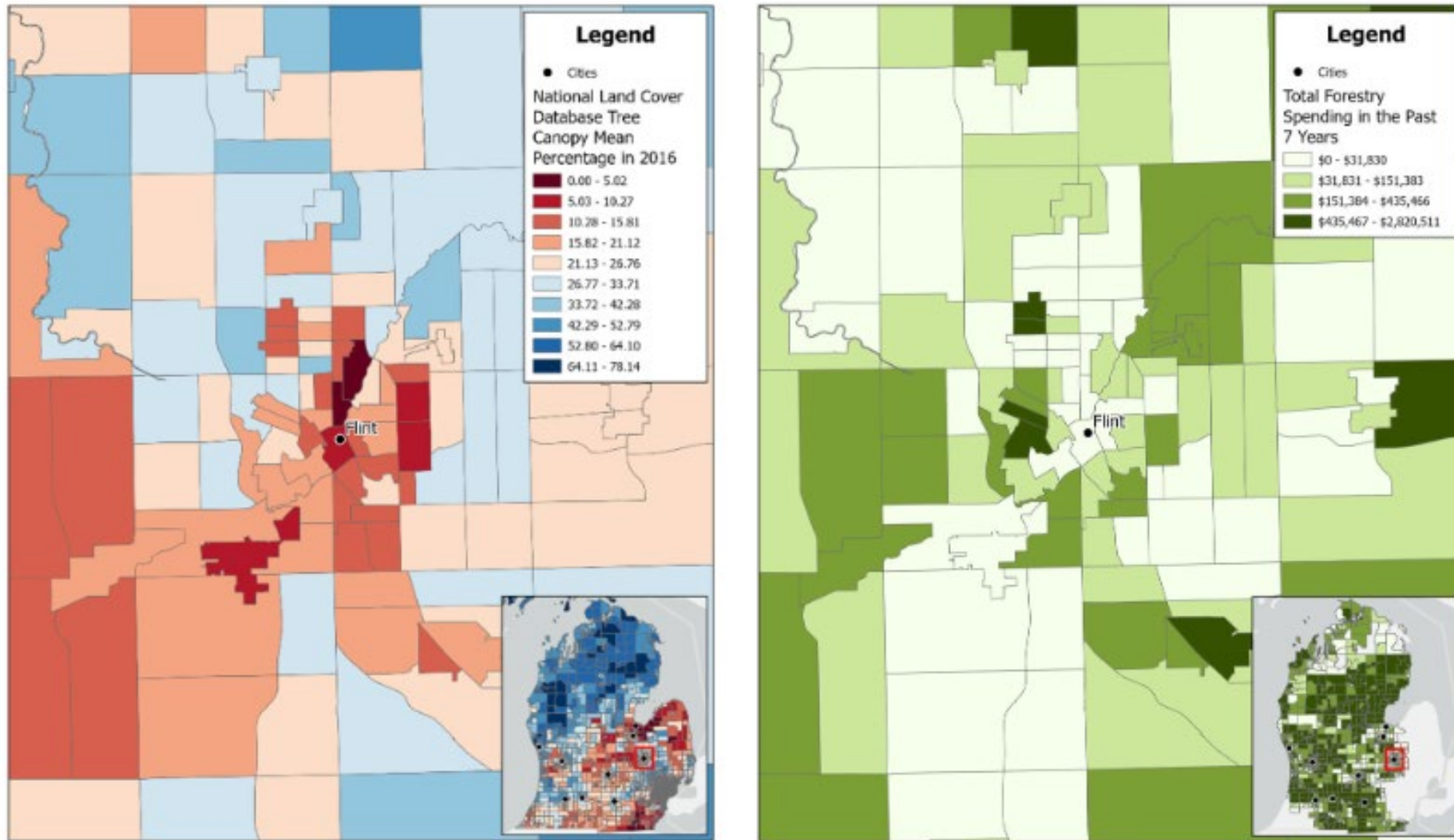


Figure 2. Flint – Comparison of 2016 Canopy Cover and Company Forestry Spending from 2017-2023.

Current & Next Steps

- Received utility proposals on Michigan-specific uniform benefit-cost analysis requirements (including societal cost test) for evaluating pilot proposals ([U-20898](#))
 - Comments from interested parties
 - Commission decision on next steps expected soon.
 - Example of pilots seen in distribution plans: Non-wires alternative pilots.
- Work towards integrated distribution planning
 - Understand holistic impacts of electric distribution infrastructure in the near and long term
 - Seek alignment between rate cases, forecasting and distribution system limitations, and integrated resource plans

Questions?

Joy Wang

wangj3@michigan.gov



Big Sable Point
Lighthouse in
Ludington State Park