

Mapping for Equitable EV Charger Siting in Napa County



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Napa, CA



Agenda

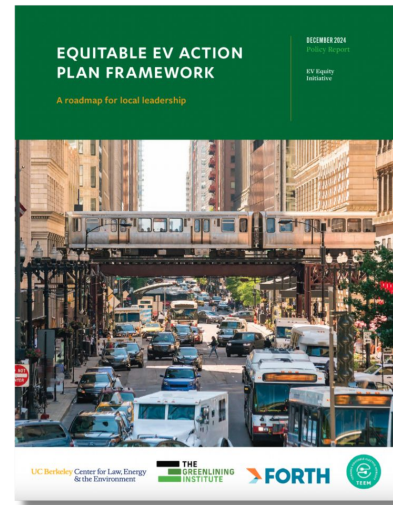
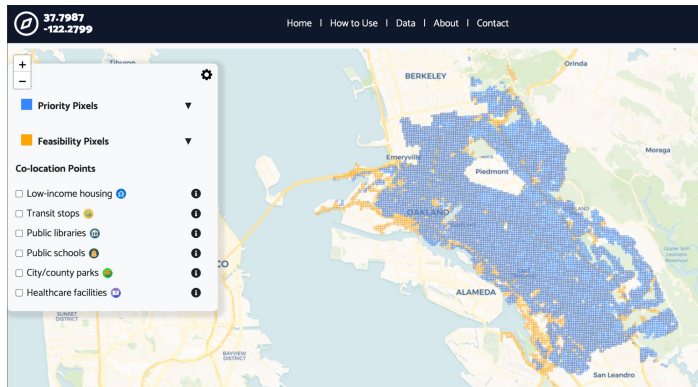
- Context: Berkeley Law CLEE's EV Equity Initiative
- Demo part 1: (public-facing tool) analysis for city of Napa
- Project extension for Napa County
- Demo part 2: bespoke analysis for granular charger siting
- Q&A

EV Equity Initiative

(law.berkeley.edu/research/cee/ev-equity/)



- UC Berkeley Law Center for Law, Energy, and the Environment (CLEE), UC Berkeley Energy and Resources Group (Renewable and Appropriate Energy Laboratory)
- Seeks to build locally tailored, community driven, and replicable approaches to the development of electric vehicle and mobility infrastructure in underserved communities in California and the US



Mapping Platform (public)



(<https://evmap.climateplans.org/>)

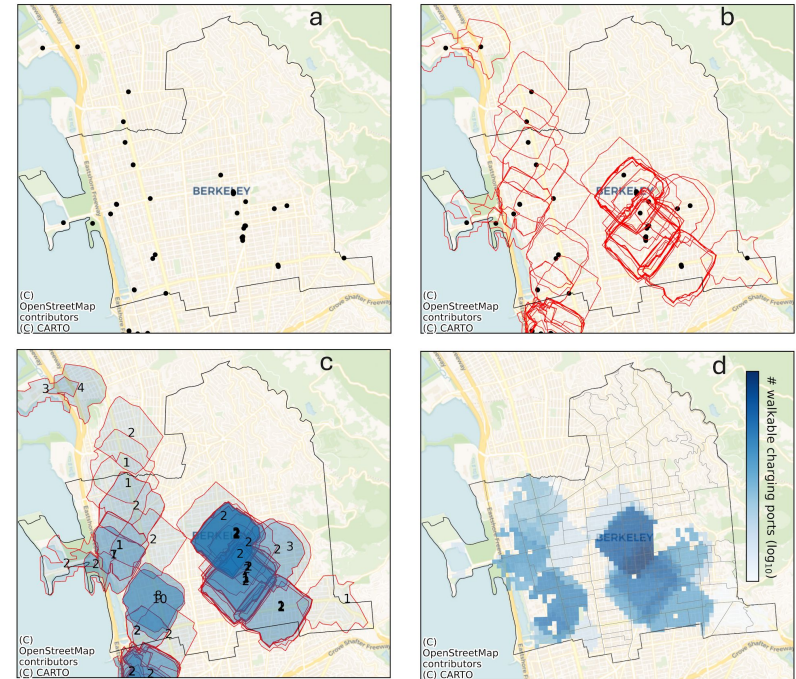
Our mapping tool (California-specific, for now) will help local governments and stakeholders make decisions around EV charger and mobility infrastructure siting while centering equity and community-informed decision-making

1. **Data-rich:** pixel-grid approach integrates diverse data layers
2. **Flexible/tailored to local context:** user selects criteria
3. **Free, publicly accessible:** for local agencies and community groups in planning, engagement, grant-seeking

Roadmap Architecture

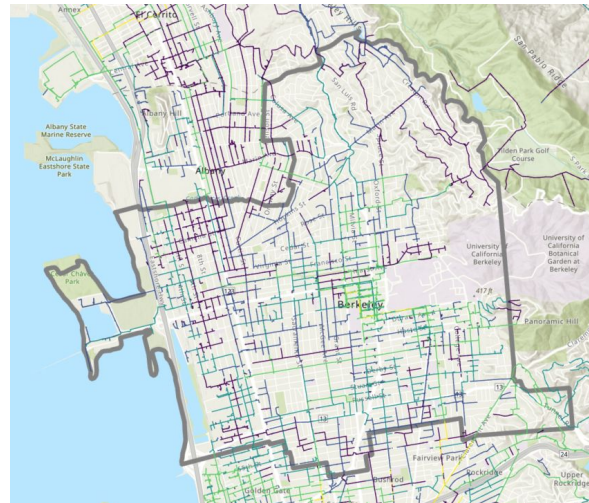
1. Priority pixels

- Help identify priority communities and areas for EV charging based on *population characteristics*
- These include (but are not limited to) population density, prevalence of renters and multifamily residents, income, disability, other demographic information, historical environmental burden, and *current access to public charging infrastructure*



Roadmap Architecture

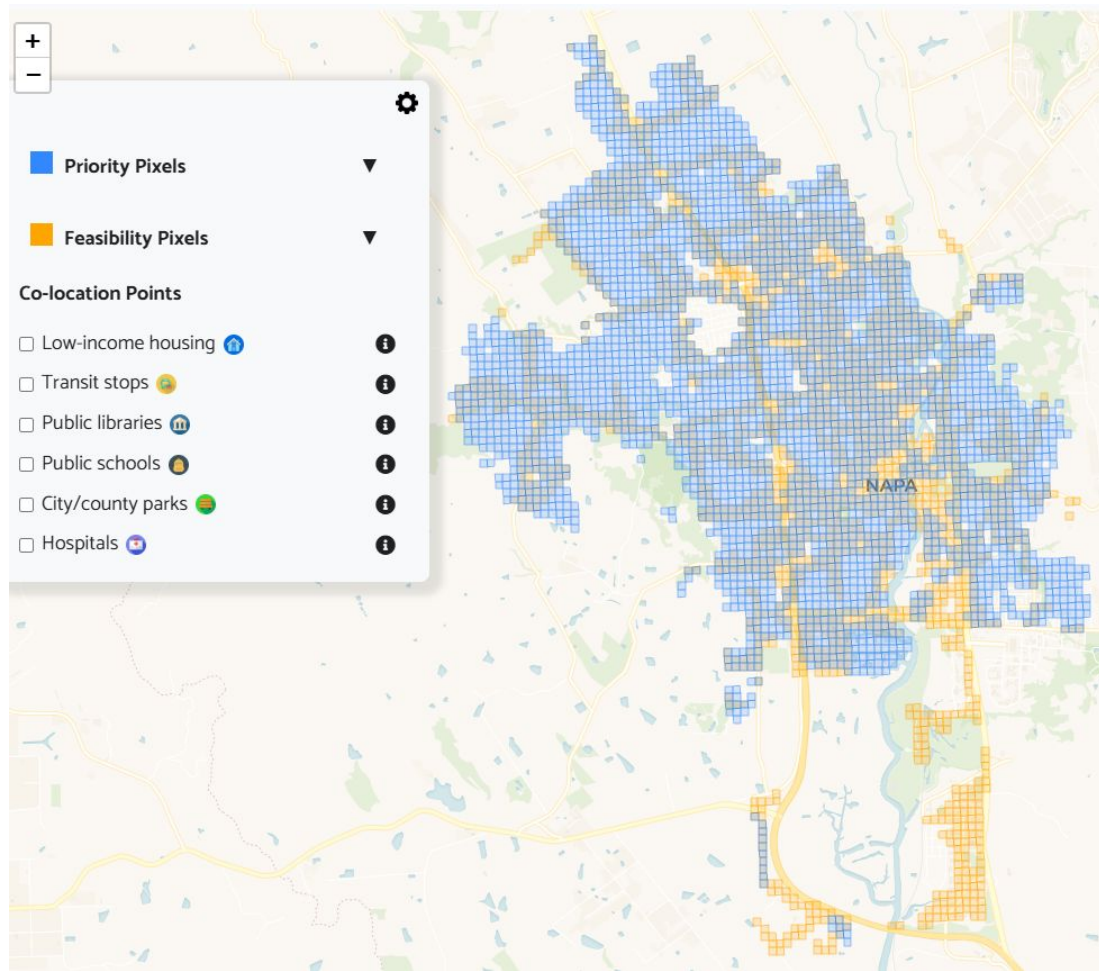
1. Priority pixels
 2. Feasibility pixels
- Depict constraints on the physical location of chargers, including *power grid constraints* and funding resources.



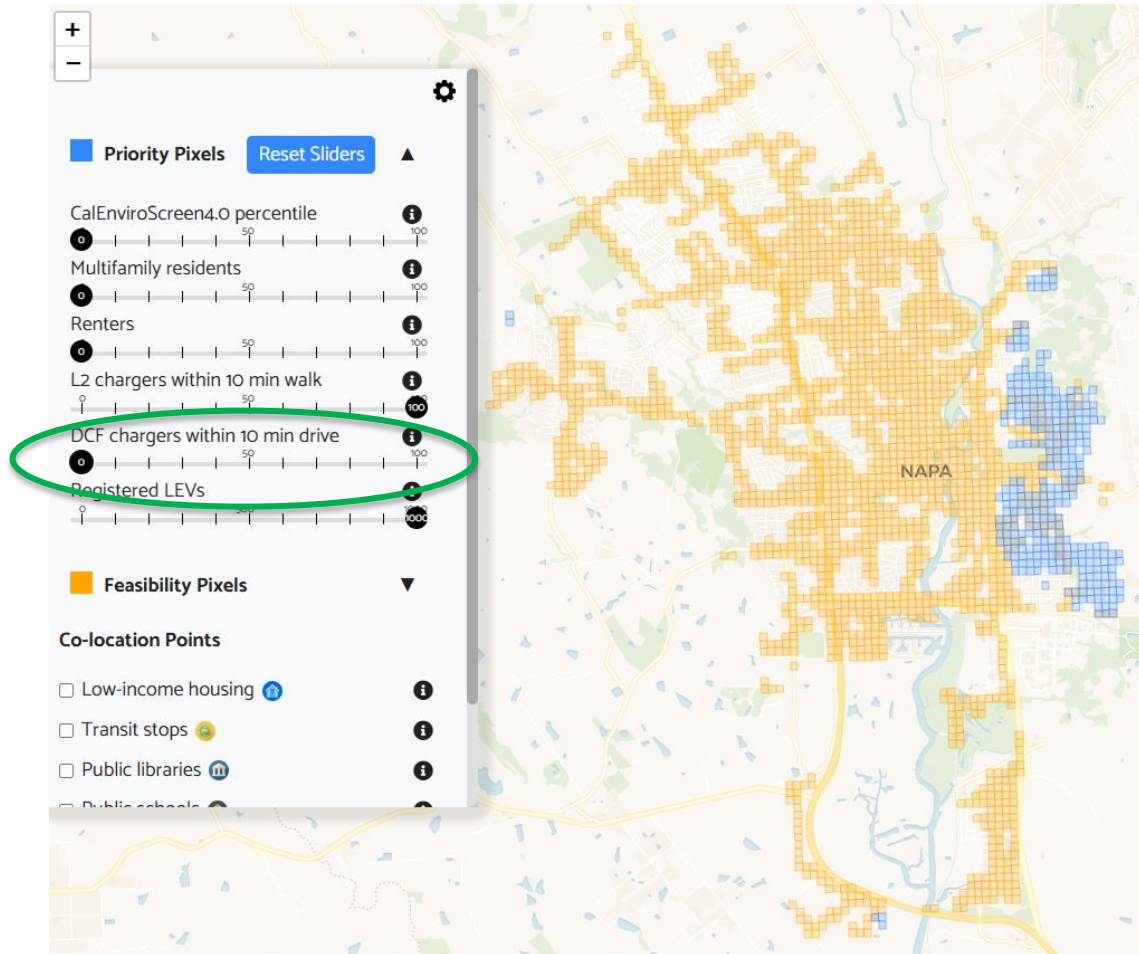
Roadmap Architecture

1. **Priority pixels**
2. **Feasibility pixels**
3. **Co-location points**
 - Additional points near which EV charging may be prioritized (i.e., public schools, healthcare facilities, parks, transit stops, libraries, and low-income housing)
 - Could also represent points near which EV charging may be *de*prioritized (i.e., existing EV charging infrastructure)

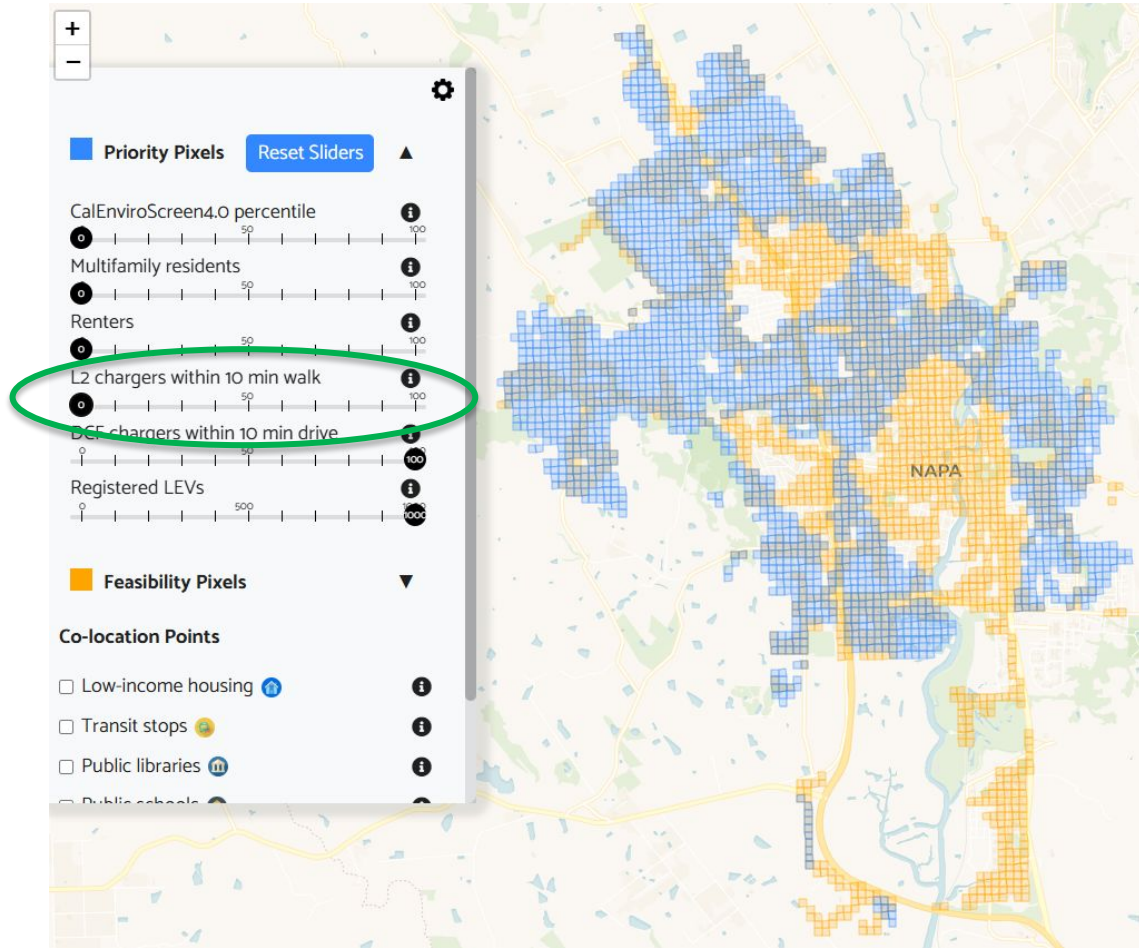
Demo: City of Napa



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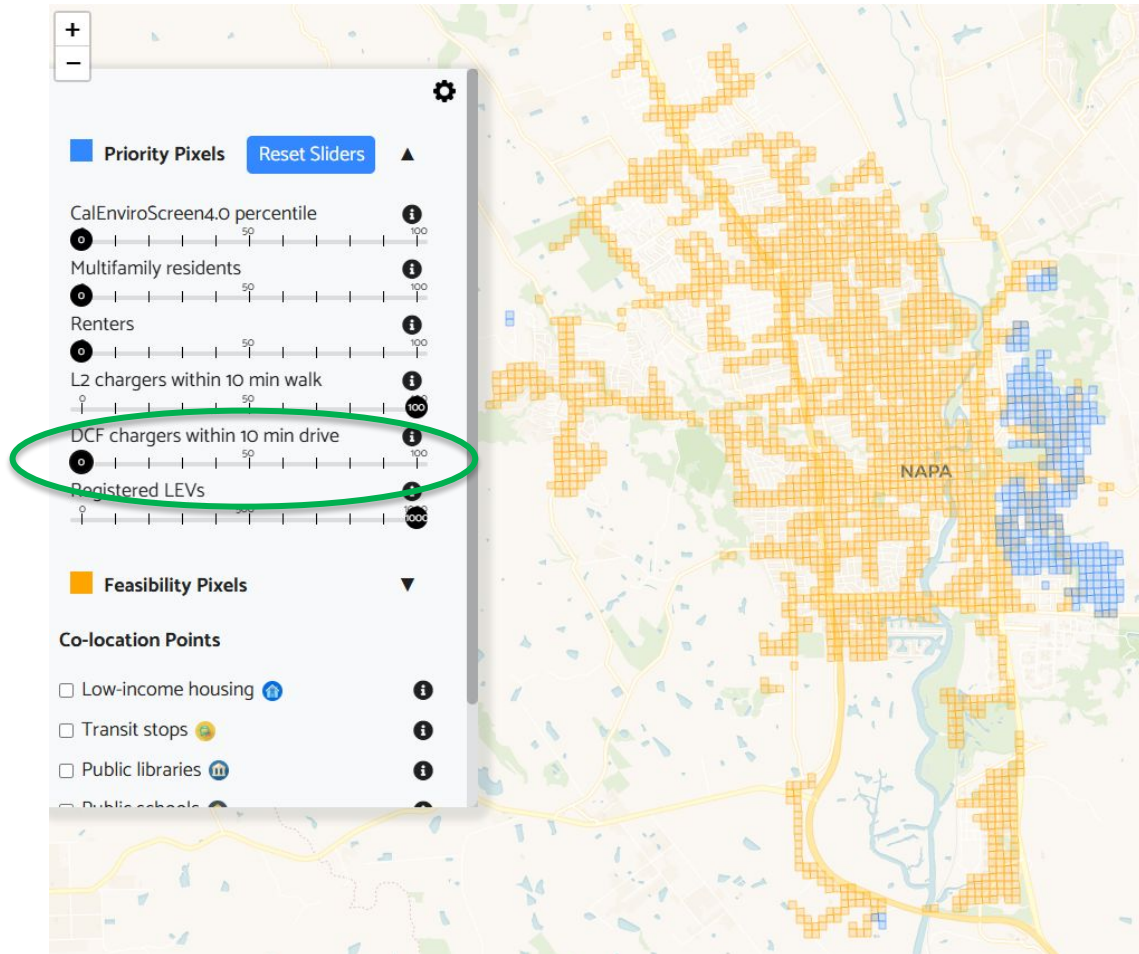


Demo: City of Napa

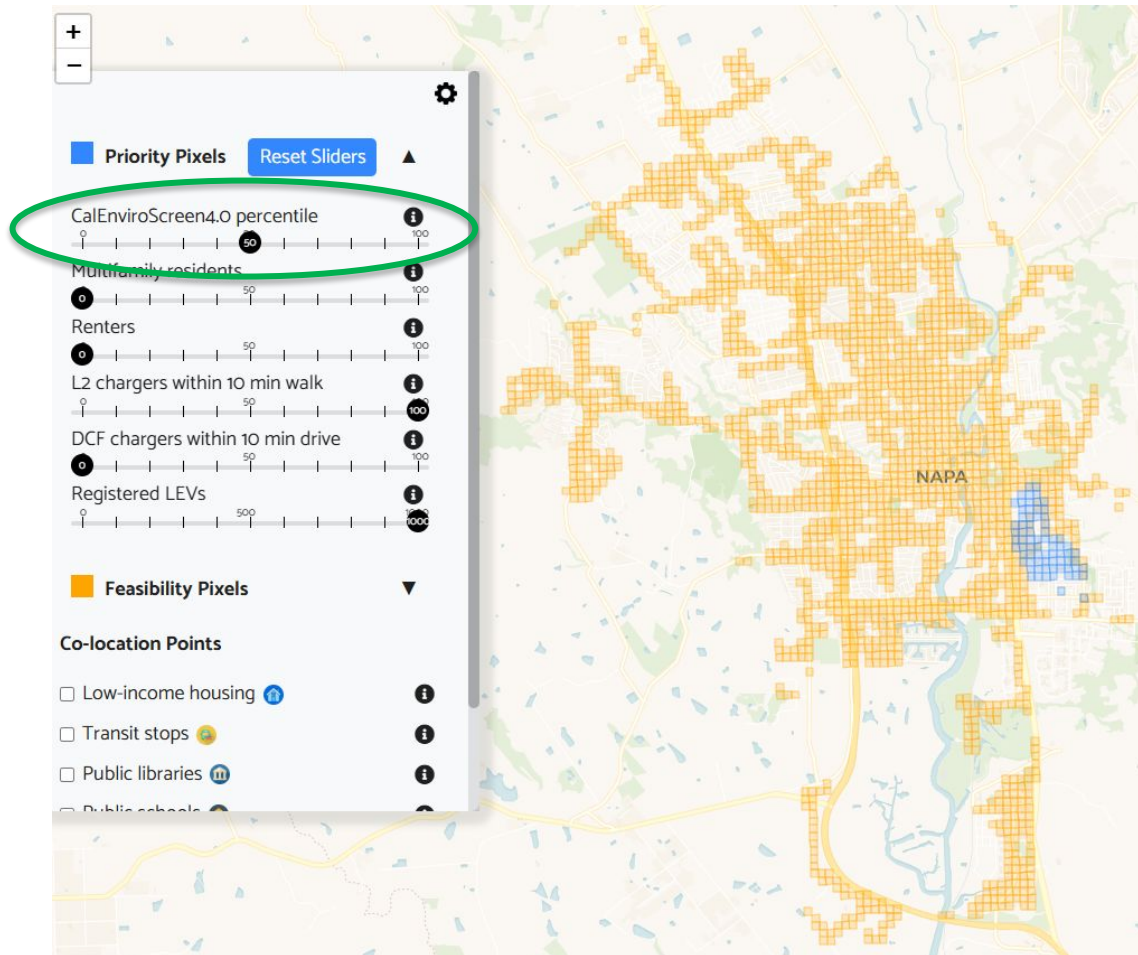


(what-if L2...)

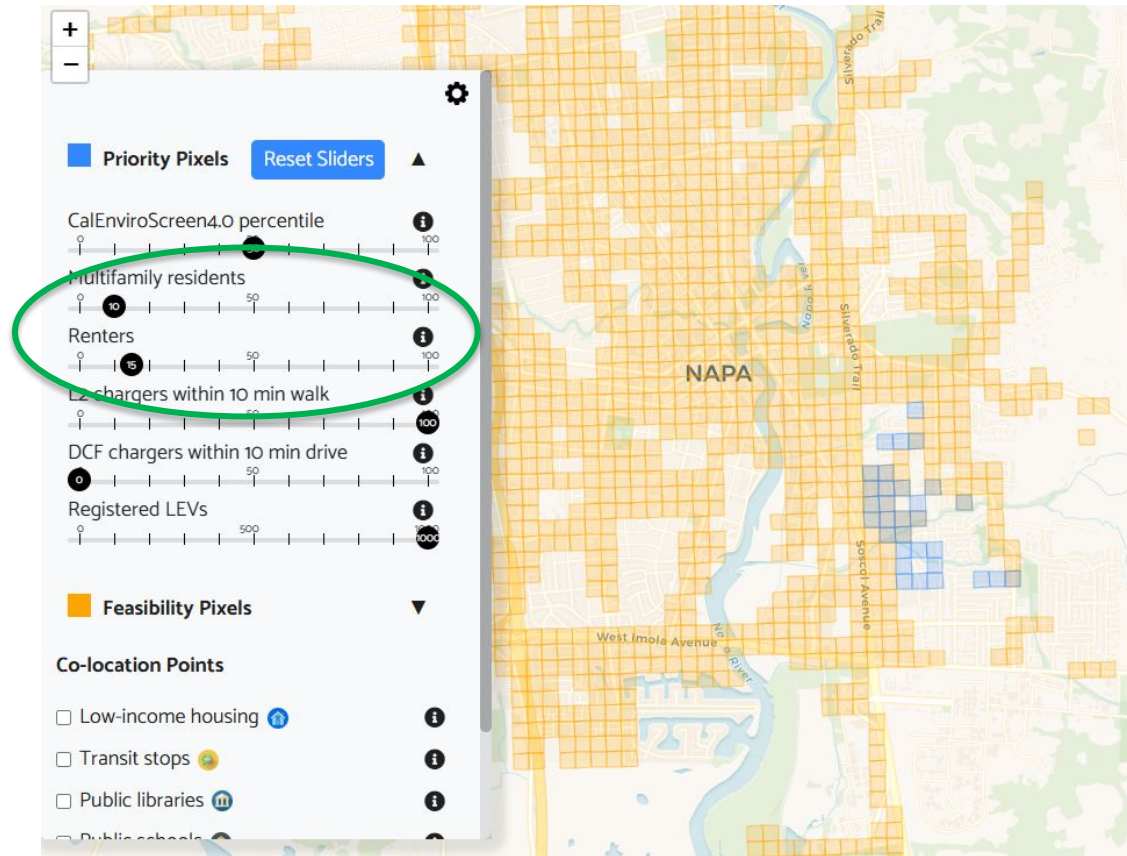
Demo: City of Napa



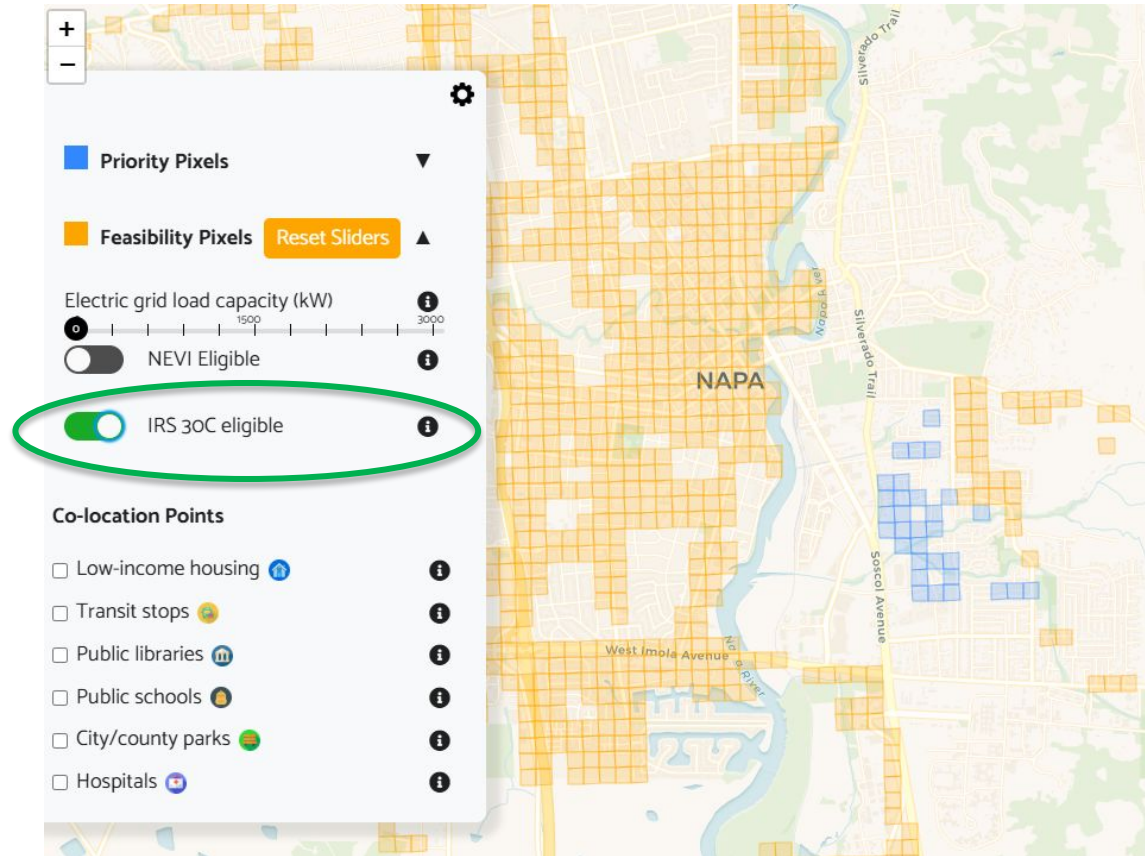
Demo: City of Napa



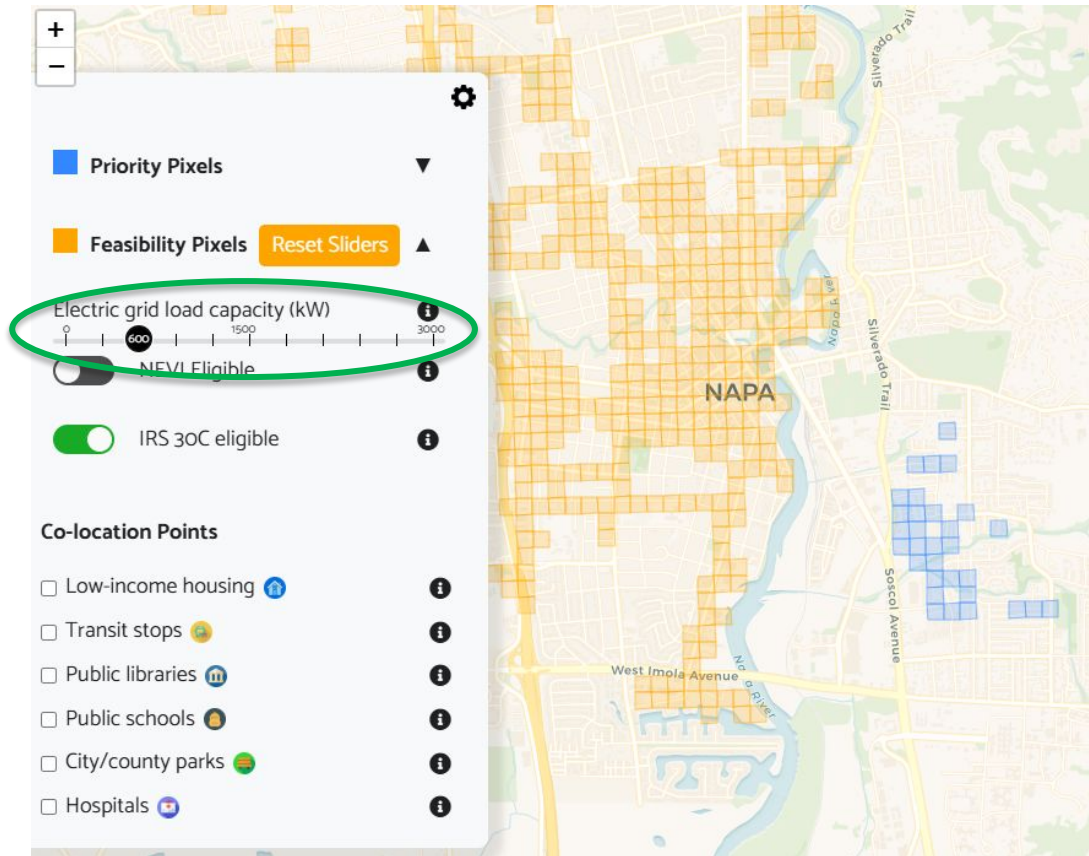
Demo: City of Napa



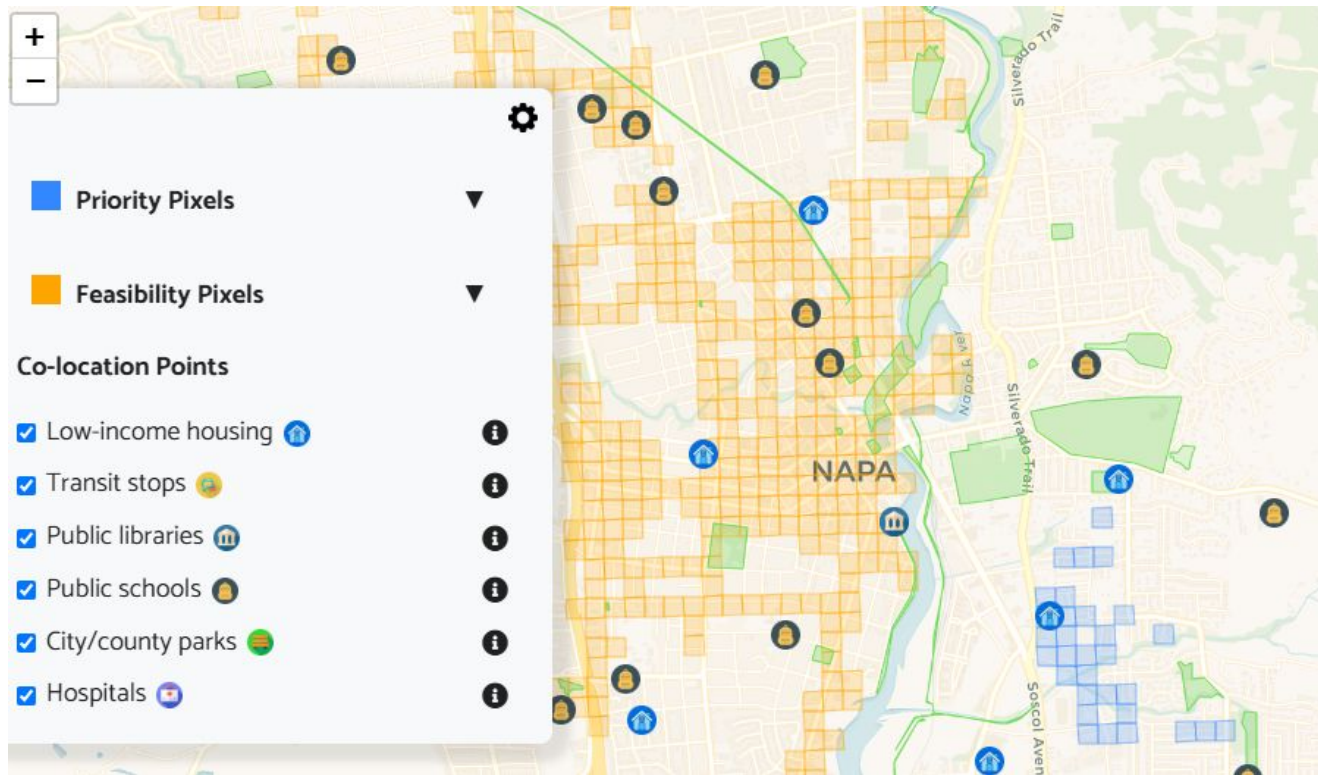
Demo: City of Napa



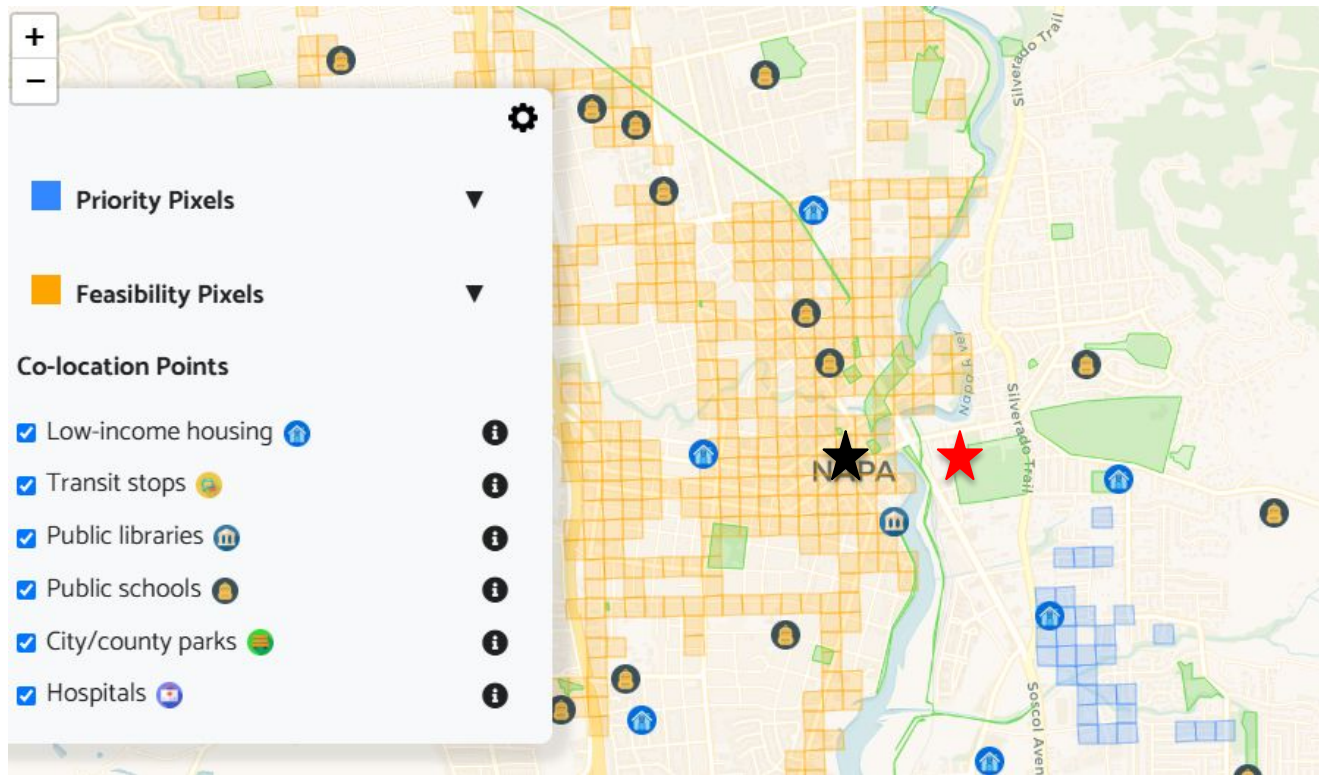
Demo: City of Napa



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Demo: City of Napa



★ = “selected” site

★ = sufficient load capacity, not 30c eligible

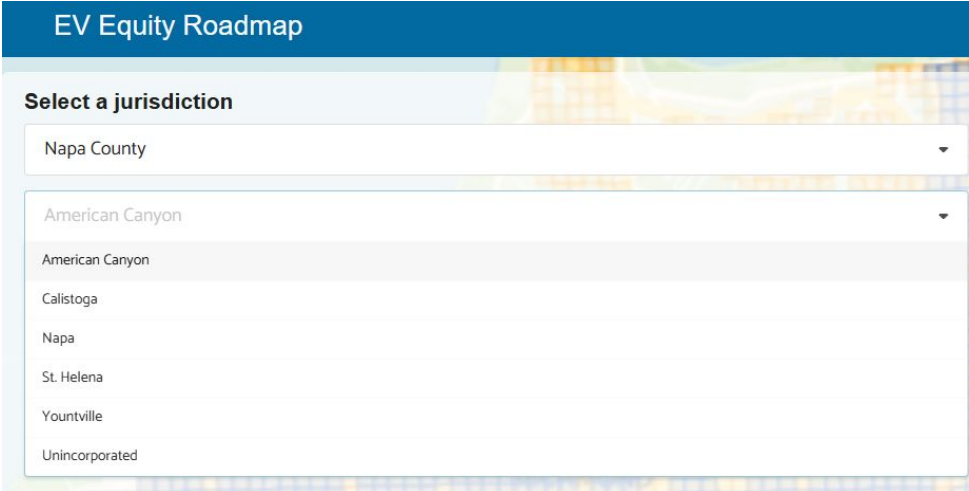
Project Extension for Napa County



Project Extension for Napa County

1. Early availability

Napa was the first county for which (standard) data were collected, compiled, and made public

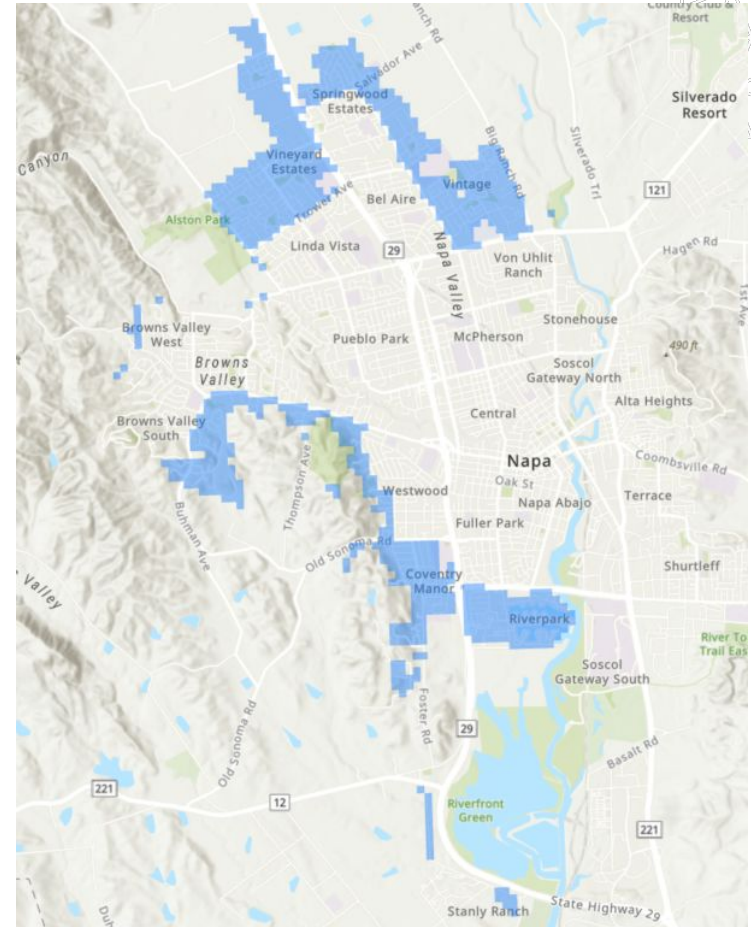


The screenshot shows a web application interface titled "EV Equity Roadmap". Below the title is a "Select a jurisdiction" dropdown menu. The menu is currently open, showing a list of jurisdictions: "Napa County", "American Canyon", "American Canyon", "Calistoga", "Napa", "St. Helena", "Yountville", and "Unincorporated". The "Napa County" option is selected and highlighted in a light blue color. The background of the application shows a map of a region with a grid overlay.

Project Extension for Napa County

1. Early availability
2. Incorporation of pesticide exposure

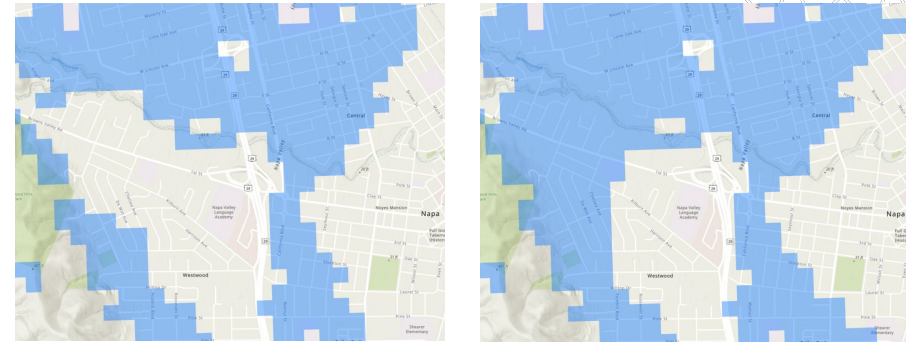
A relevant indicator for environmental justice in Napa, excluded statewide



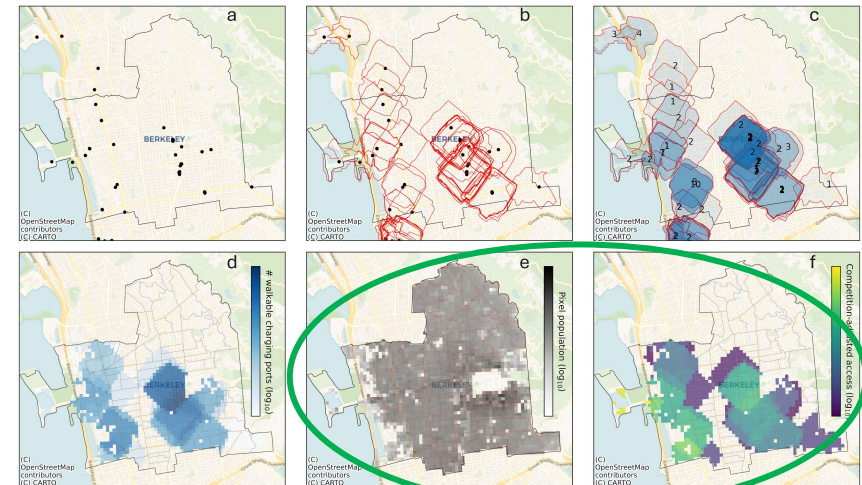
e.g., Pesticide exposure percentile ≥ 70

Project Extension for Napa County

1. Early availability
2. Incorporation of pesticide exposure
3. Richer charging access metrics



Options to exclude Tesla chargers and/or see “competition-adjusted access”



Project Extension for Napa County

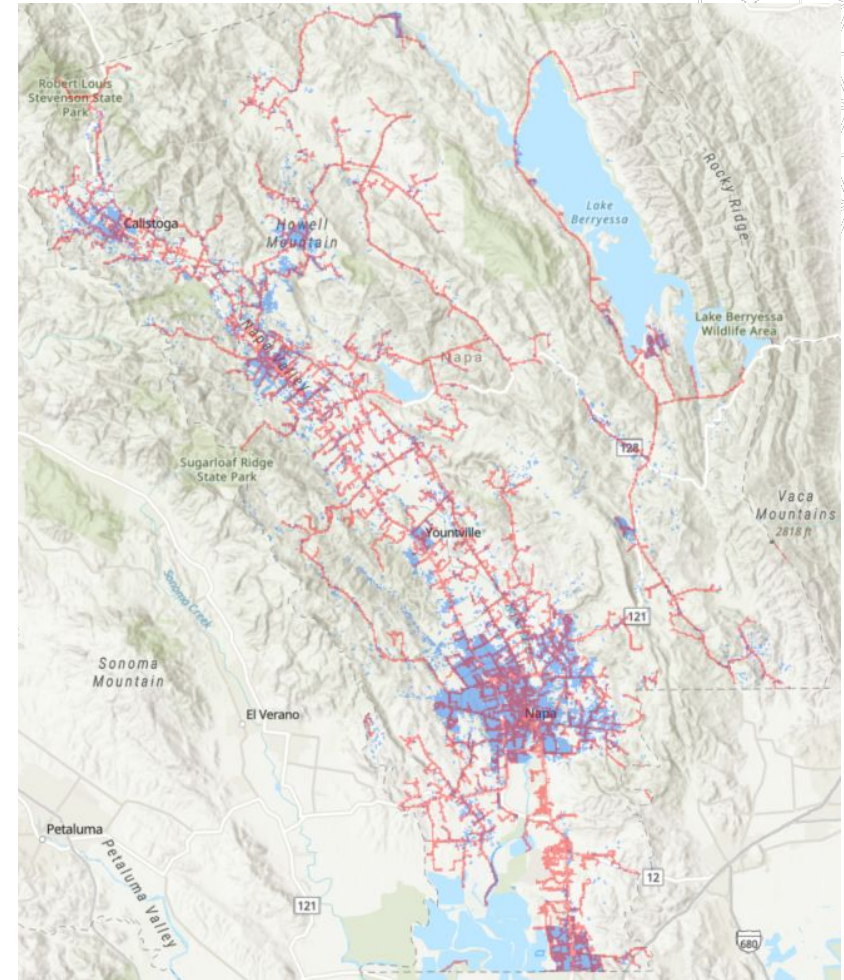
1. Early availability
2. Incorporation of pesticide exposure
3. Richer charging access metrics
4. Publicly-owned parcels

For granular analysis and streamlined site selection



Project Extension for Napa County

1. Early availability
2. Incorporation of pesticide exposure
3. Richer charging access metrics
4. Publicly-owned parcels
5. Whole-county data

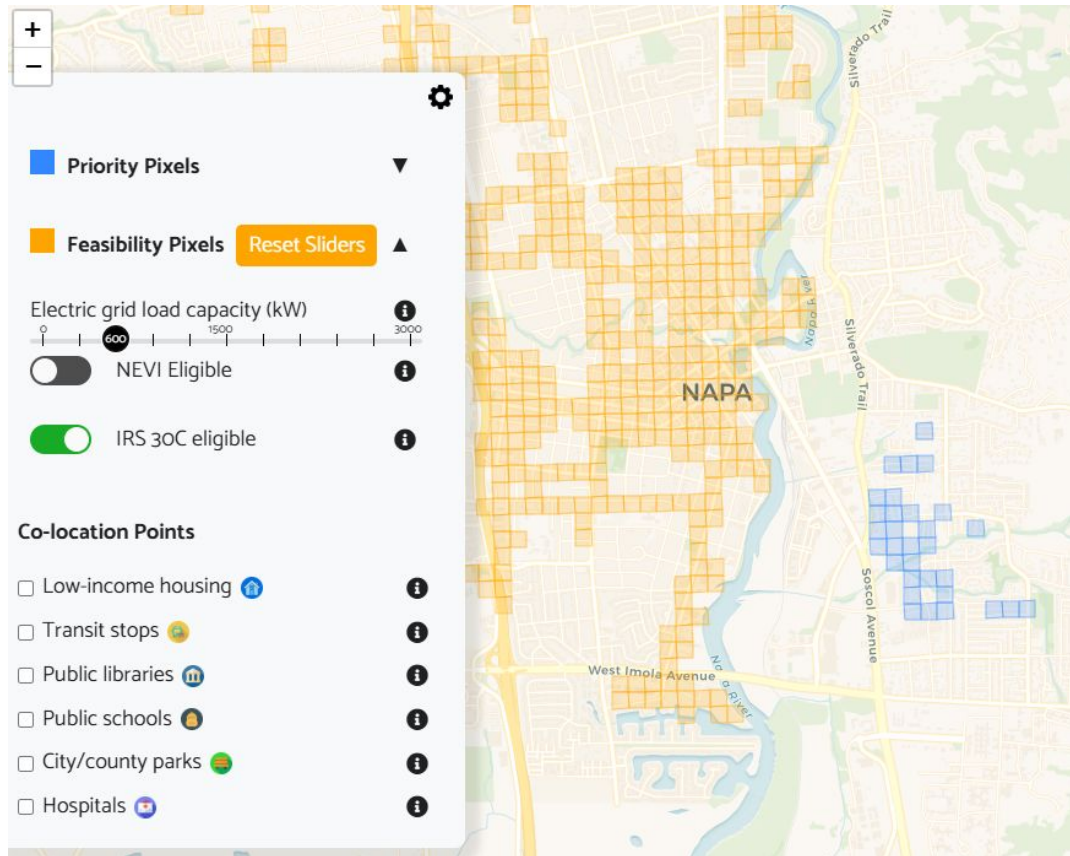


Project Extension for Napa County

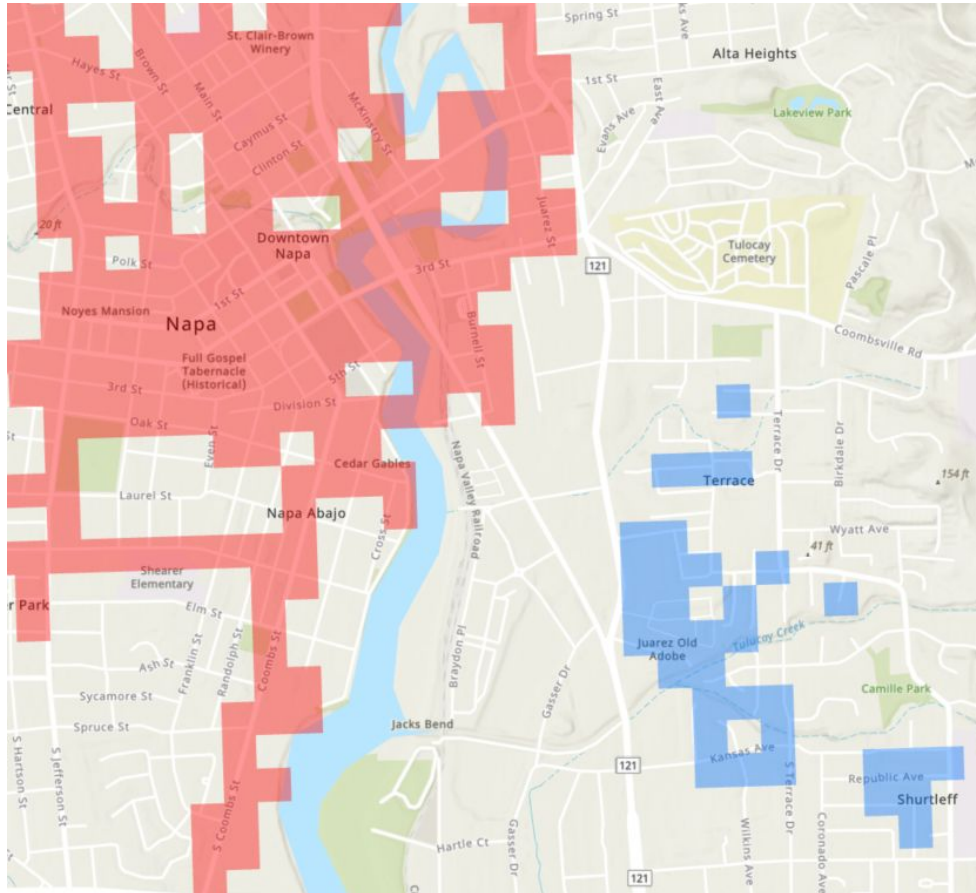


- 1. Early availability**
- 2. Incorporation of pesticide exposure**
- 3. Richer charging access metrics**
- 4. Publicly-owned parcels**
- 5. Whole-county data**
- 6. Ongoing training and support**

Demo Continued... (recall)

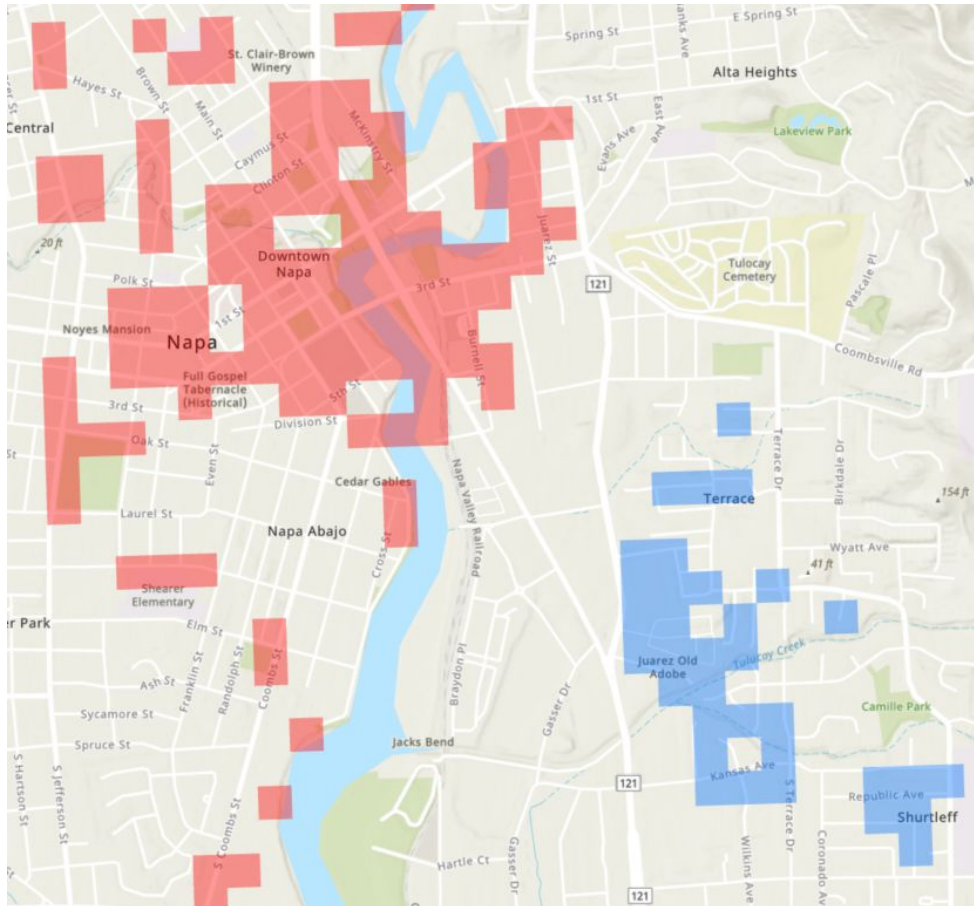


Demo Continued...



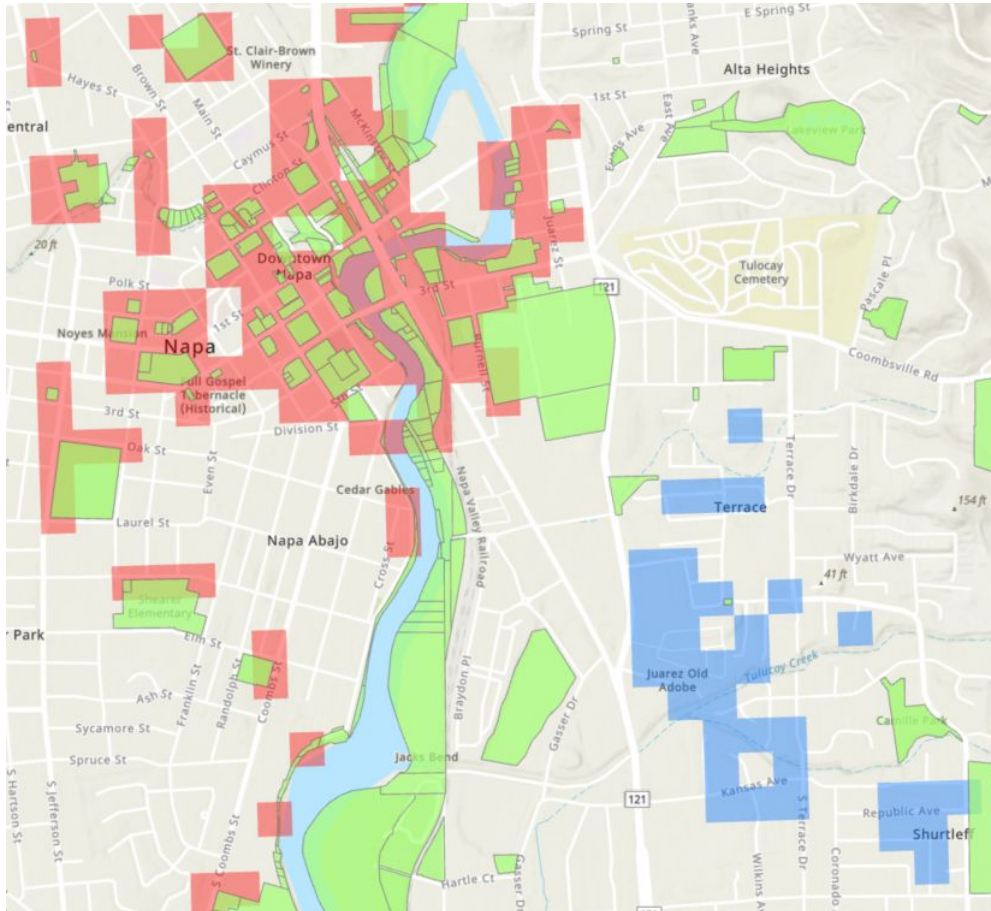
- More current charging access data

Demo Continued...



- More current charging access data
- Feasibility pixels can be filtered to show public ownership

Demo Continued...



- More current charging access data
- Feasibility pixels can be filtered to show public ownership

Thank you!

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