



DEPARTMENT OF
LABOR AND INDUSTRY

Electrical Remote Virtual Inspections

ERV I

Virtual Electrical Inspections Progression

Where it all started

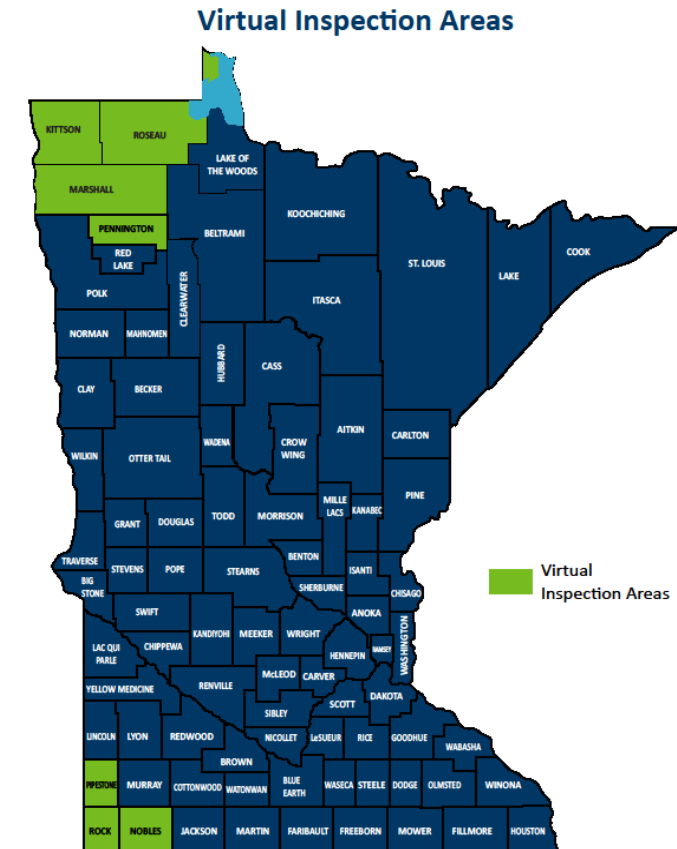
- In September of 2021, the electrical supervisory staff for the department began looking at the feasibility of performing virtual electrical inspections.
- The supervisory staff reached out to several other states and jurisdictions to help gauge the benefits of starting a virtual program and to help avoid any pitfalls that others may have experienced.
- Along with virtual inspections, it became clear that the best path forward was to transition the contract electrical inspector positions to state-employed positions, to make the virtual program more flexible.
- By early spring of 2022, the process had begun and the preliminary steps to assemble the team started.

Where do we begin?

June of 2022, John McNamara was hired as the supervisor to lead our efforts.

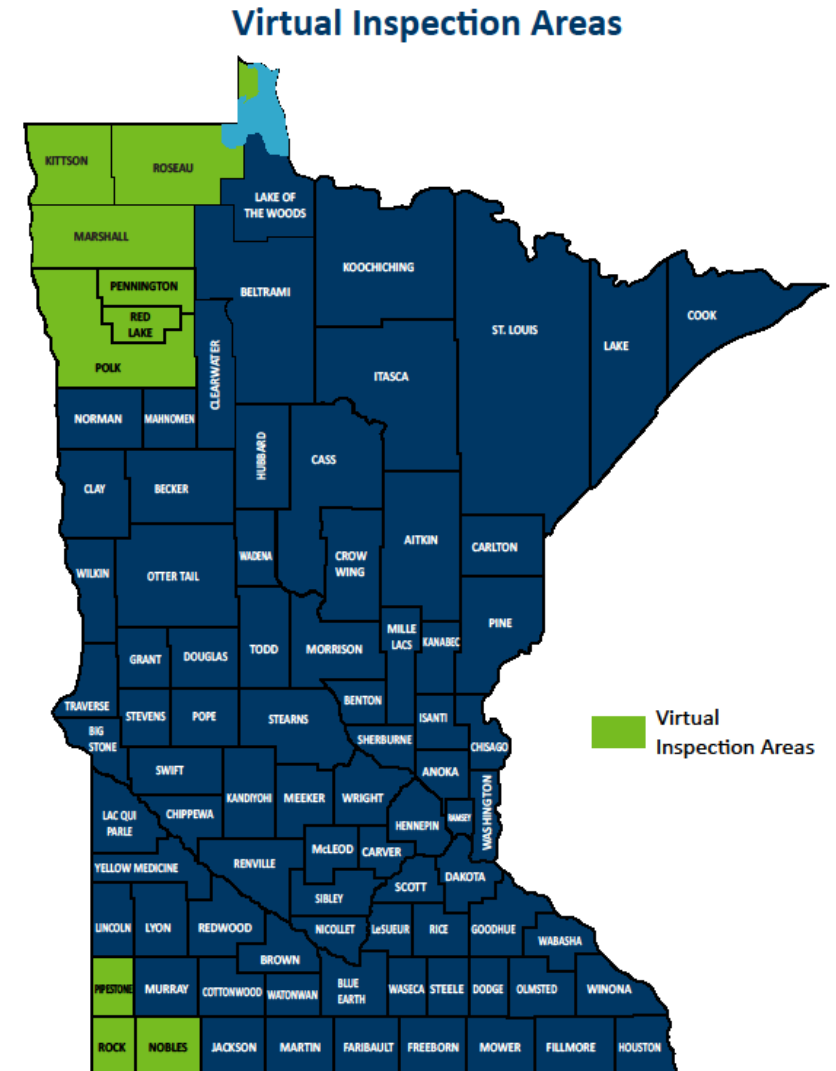
We chose the northwest and southwest corners of the state for several reasons:

- These areas have been historically difficult areas to fill with contract inspectors.
- Permit volumes were relatively lower than other areas.
- Some of the connectivity concerns would be able to be vetted prior to a larger roll out.
- The statement has always been “If we can do it here, we can do it anywhere!”



The launch of state and virtual inspections

- July of 2022, two field inspectors were hired.
- September 2022, Jason Ekholm was hired to be our virtual inspector. The first state virtual inspections were done on Sept. 19, 2022, in state inspection areas.
- November 2022, we added another field inspector in northwest Minnesota, for Polk and Red Lake counties, which further expanded our outreach and virtual inspection program.



Getting the word out

- We began working on filming with an outside vendor to complete a couple of short introductory videos.
- DLI's communications team sent out notifications to our stakeholders informing them of the virtual program start up, in designated areas.
- Marketing emails about our ERVI program were sent to electrical contractors who worked within the designated inspection areas over the past two years.



2022 ERVI was slow to start

- Initially, virtual inspections were very much a manual effort. Contractors would contact our virtual inspector to schedule a Microsoft Teams call to conduct their virtual inspection.
- The first month only about 40 inspections were completed virtually.
- By the end of 2022, we were completing over 100 virtual inspections per month.
- With the increased workload, it became clear that the manual actions that Jason was completing for each inspection was not efficient nor sustainable.
- We began discussing a scheduling component for iMS, to help automate the process.

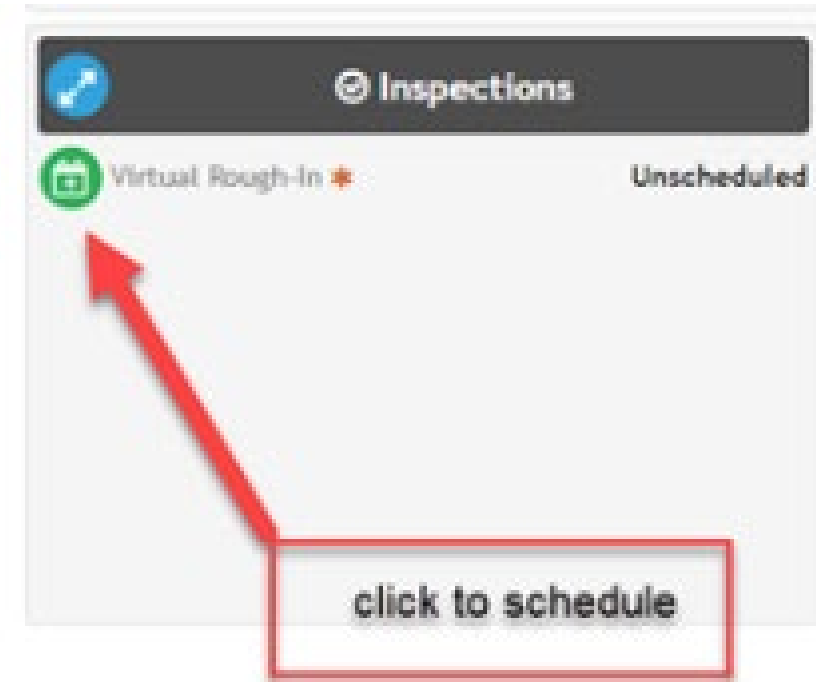
Virtual Inspections were determined and auto generated

Permit type:

- existing dwellings (one, two or multifamily)
- non-dwelling
- utility load management device

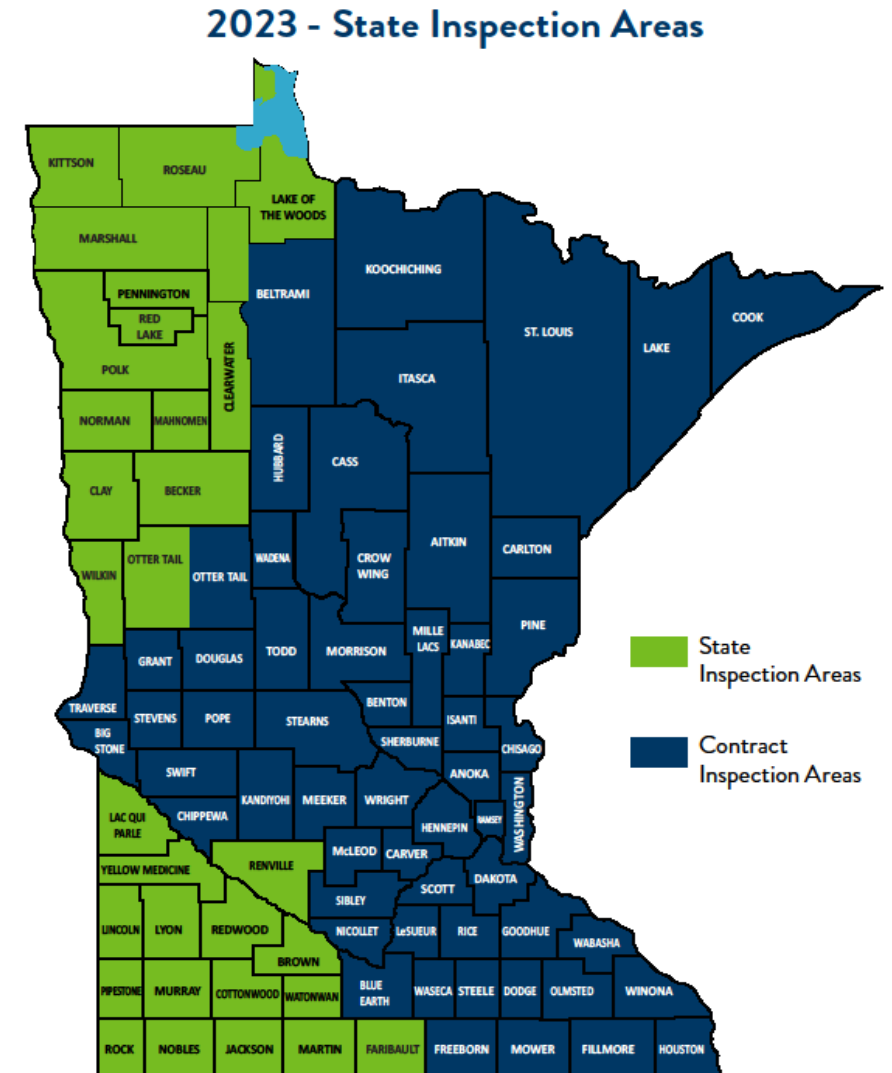
Inspection type:

- load management controllers
- equipment inspections (such as air conditioner, furnace or other utilization equipment)
- registered employer work
- rough-in inspections with a three-circuit maximum
- re-inspections
- other, single circuit, final inspections for items such as washer, dryer, electrical vehicle charger, microwave and more. This may also include inspections such as trench, temporary services and concrete-encased electrode bond connections inspections.



2023 state employee inspection area expanded

- By the spring of 2023, virtual inspections increased to approximately 200 inspections per month.
- In July 2023, the areas of state inspection increased to include northwest district 10 and southwest district 7.
- An additional virtual inspector was added.
- The number of virtual inspections increased to about 300 permits per month.
- Approximately 60% of the virtual inspections are scheduled using the iMS scheduling calendar.

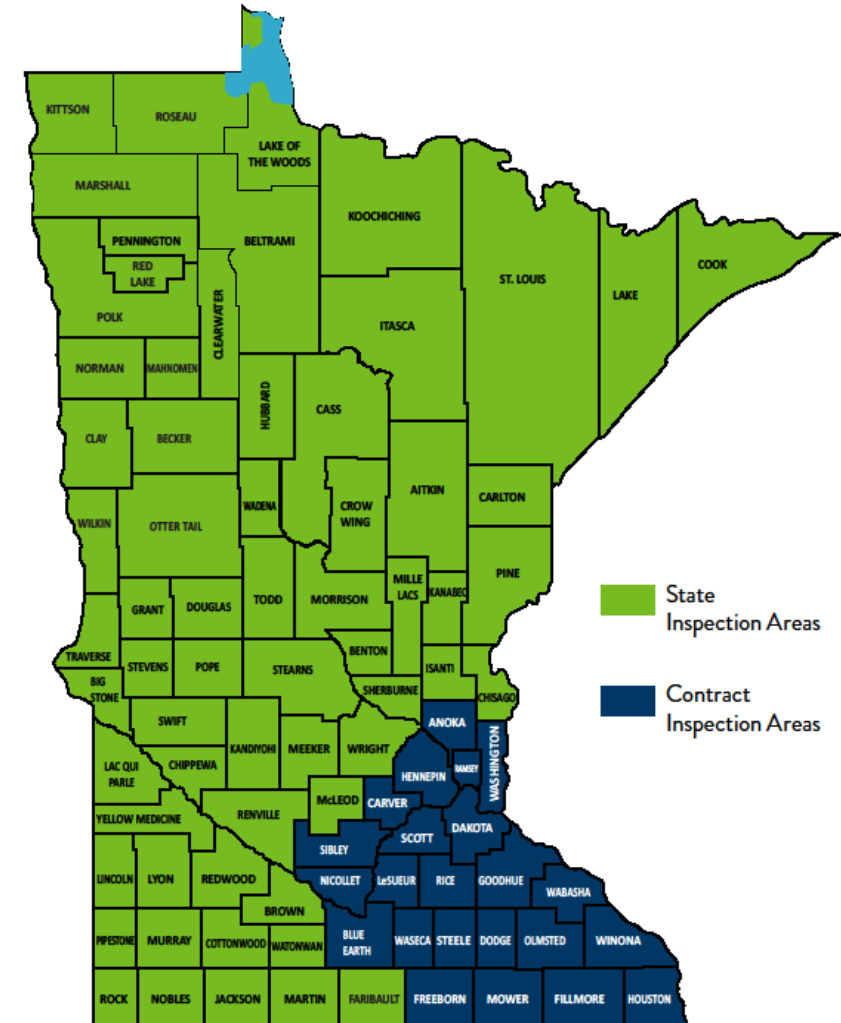


The future of the program 2024

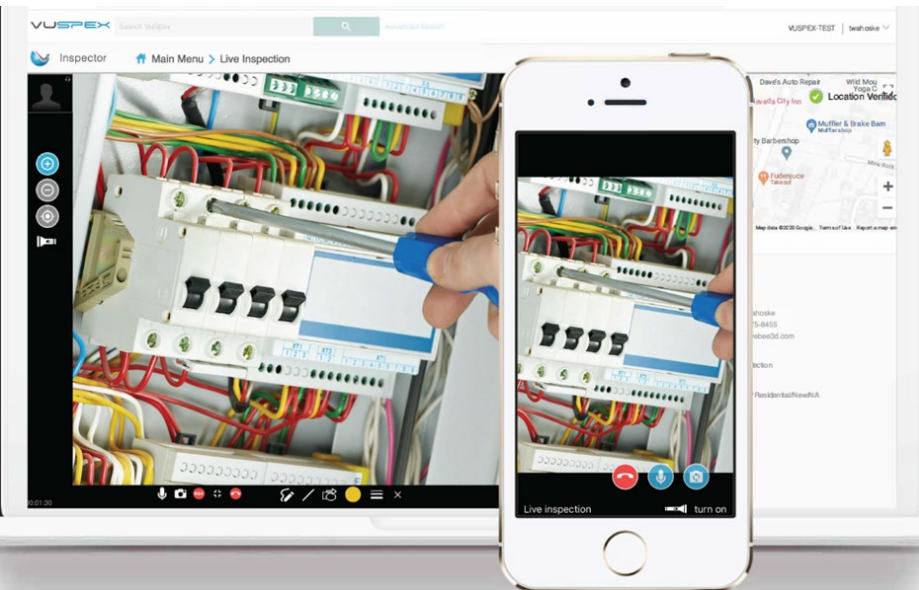
More areas will be converted to state employee inspection areas:

- By July we will convert an additional 20 areas over to state-employed inspections.
- Along with hiring additional field staff, there will be a need to increase the number of virtual inspectors.
- We looked for solutions that would allow a more user friendly and automated method of scheduling and conducting virtual inspections.

Proposed 2024 - State Inspection Areas



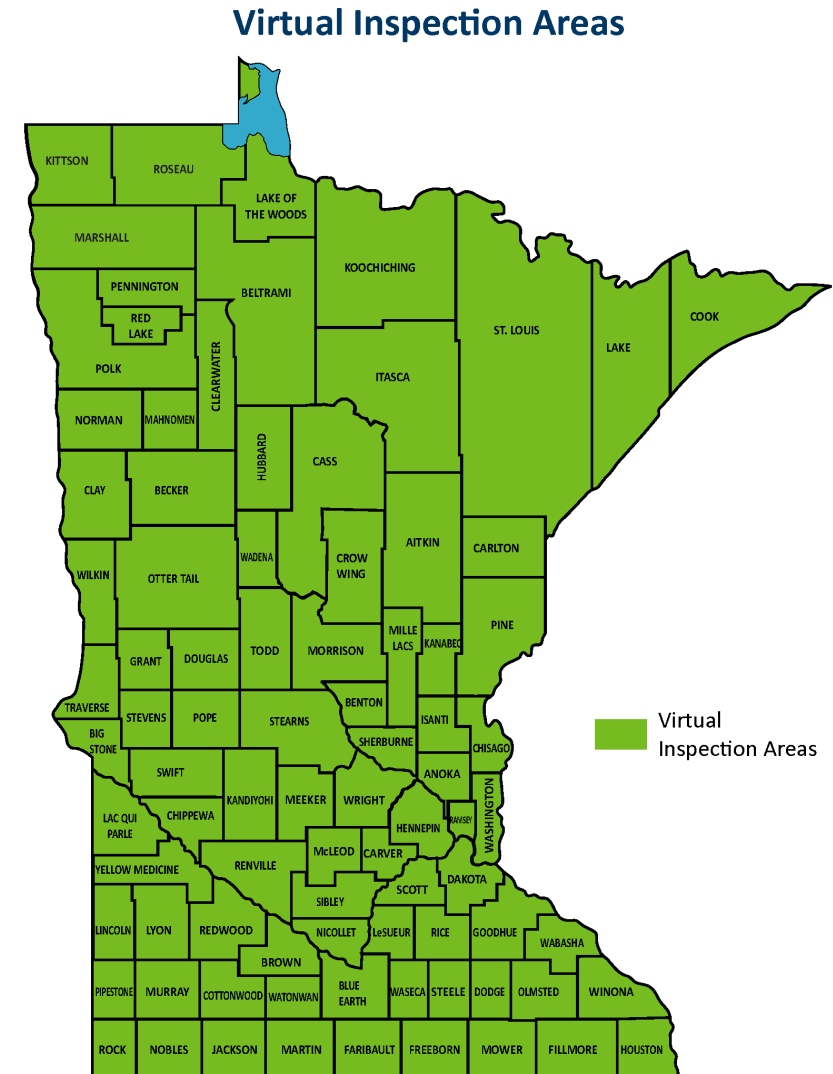
Platform Improvements for 2024



- The department is partnering with VuSpex, who specializes in integrating virtual inspections with existing data management platforms.
- The company offers to streamline our program so that much of the manual work we are doing will be automated.
- VuSpex offers additional features that may allow for virtual inspections where there is low or no cellular connectivity.

The final step in the transition

- By July of 2025, it is expected that the remaining areas will be converted to state-employed inspection and the virtual program will grow proportionally.
- The inspection transition will be complete, with all state-inspected areas being completed by state employees.
- Virtual inspections will be offered statewide.



Thank You!

John McNamara

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