



DIMP Overview

at

Montana Dakota Utility Company

Great Plains Natural Gas Company



Distribution Integrity Management Program

History of MDU/GPNG DIMP Plan

- A review of “Off-the Shelf” products out on the market was completed. It was decided to pursue an internal option to create a plan and risk model.
- Looking around at Guidance Information and the different Organization Support for DIMP, the company decided to structure the written plan around the Midwest Energy Association DIMP Framework Document.
- For the DIMP Risk Model as decision was made to start with ESRI’s DIMP Risk Model program and modify it for the company’s use.
- Today, after the MDU Utility Group DIM Plan inspections in seven of our operating states both the written plan and the ESRI’s DIMP Risk Model are heavily modified to meet current DOT 192 language and further guidance.

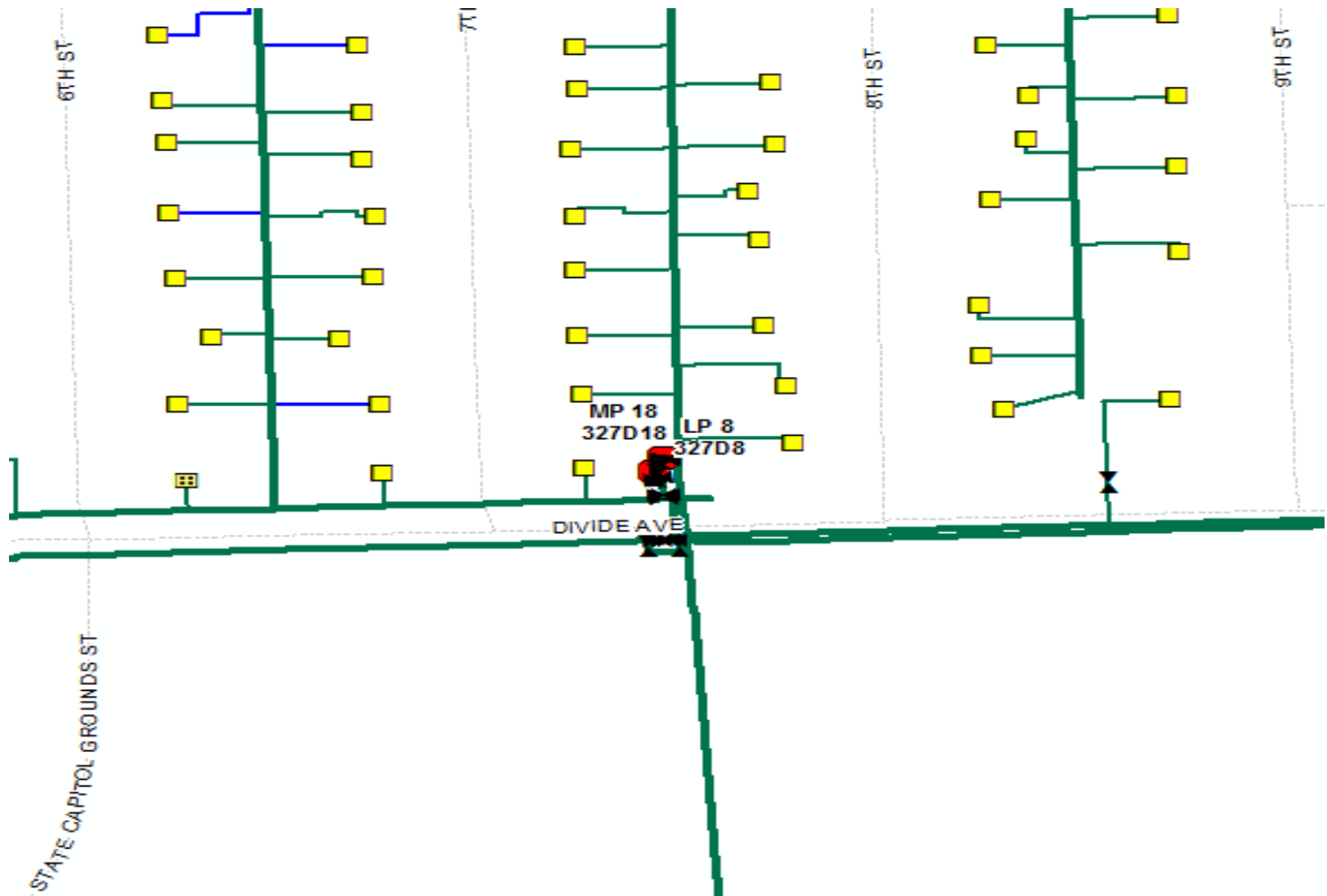


Distribution Integrity Management Program

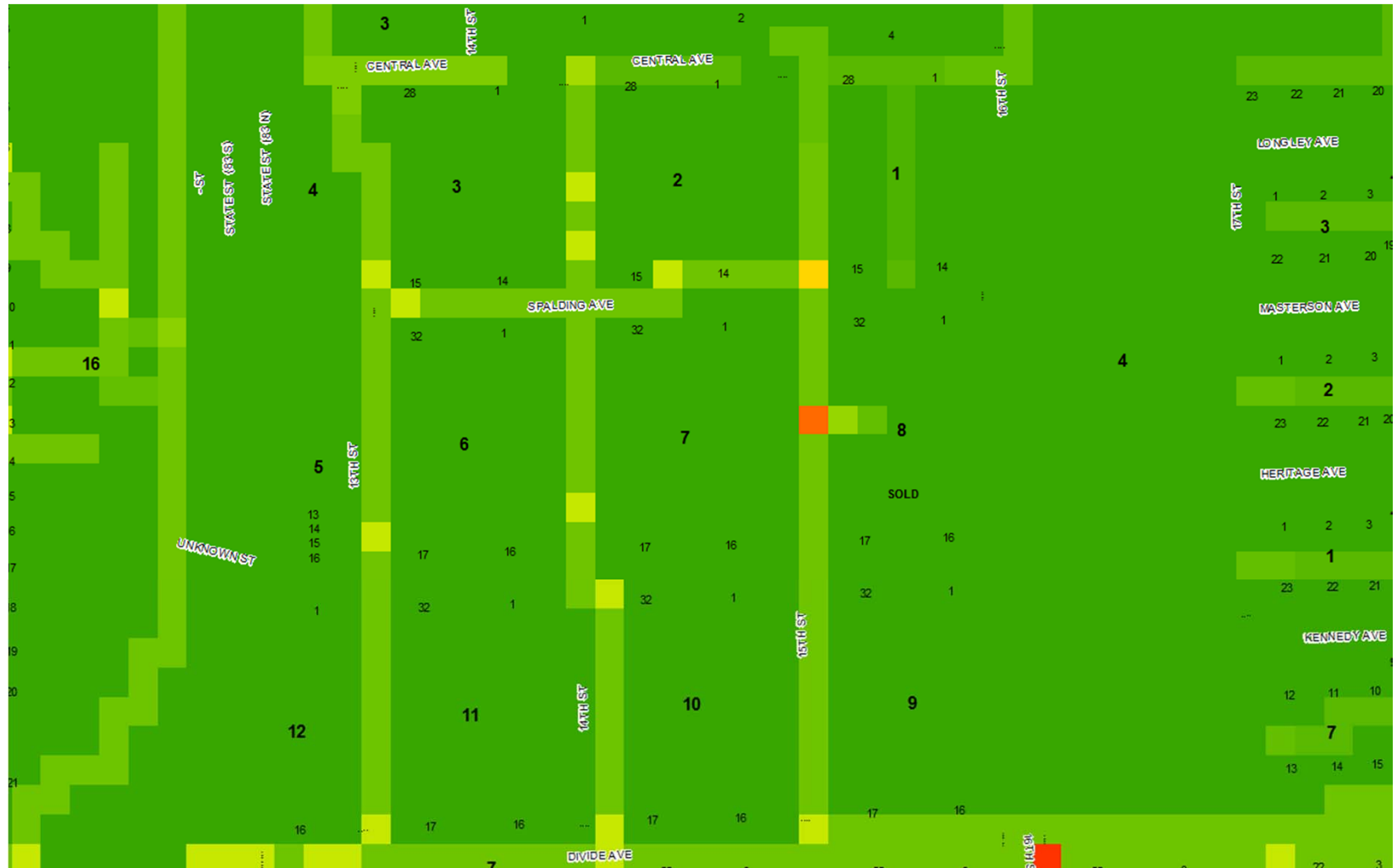
- A comprehensive analysis of a gas distribution system to assess the applicable threats and risks associated with the facilities. Each component is analyzed for 10 different threats.
 - Corrosion
 - Outside Forces
 - Natural Forces
 - Excavation Damages
 - Material Failure
 - Incorrect Operation
 - Equipment Failure
 - Other Outside Forces
 - Joint or Weld Failure
 - Missing Data
- The model starts at a baseline score of zero and adds for each threat occurring on each component within the system. This allows each component to get equal consideration against the other components throughout the system and highlights the areas or components that have the most risk.
- Our model uses a 50' by 50' grid and analyzes each component within each grid square on 10 different categories. This sum of the risks from each category, which may be zero, creates a risk factor. This factor is unique to both mains and services. The model then looks at each block, and uses census data to analyze the amount of people that may be affected in the event of a failure. The Consequence Factor is then multiplied by the Risk Factor to get a Total Score.



The valves, regulator stations and the meters at each home.



The model then analyzes each grid square for each of the 10 threats to calculate a Risk Factor.



The model then reanalyzes those same grid squares to calculate a Consequence Factor



The final results are the Risk Scores.





Questions?