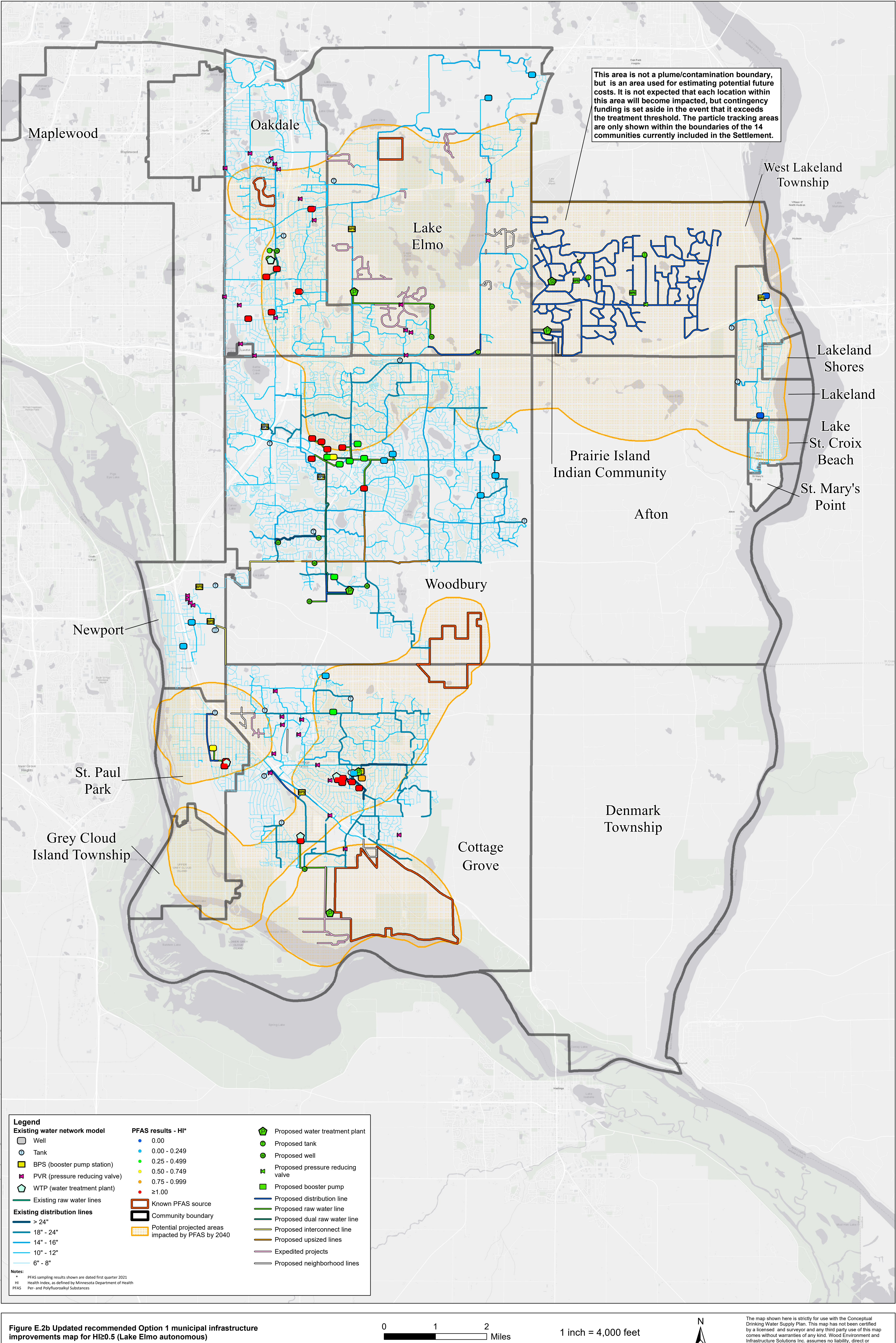


Figure E.2a Updated recommended Option 1 municipal infrastructure improvements map for HI≥0.5 (Lake Elmo interconnect)



This area is not a plume/contamination boundary, but is an area used for estimating potential future costs. It is not expected that each location within this area will become impacted, but contingency funding is set aside in the event that it exceeds the treatment threshold. The particle tracking areas are only shown within the boundaries of the 14 communities currently included in the Settlement.

Legend
Existing water network model
Well
Tank
BPS (booster pump station)
PVR (pressure reducing valve)
WTP (water treatment plant)
Existing raw water lines
Existing distribution lines
> 24"
18" - 24"
14" - 16"
10" - 12"
6" - 8"

PFAS results - HI*
0.00
0.00 - 0.249
0.25 - 0.499
0.50 - 0.749
0.75 - 0.999
≥1.00
Known PFAS source
Community boundary
Potential projected areas impacted by PFAS by 2040

Proposed water treatment plant
Proposed tank
Proposed well
Proposed pressure reducing valve
Proposed booster pump
Proposed distribution line
Proposed raw water line
Proposed dual raw water line
Proposed interconnect line
Proposed upsized lines
Expedited projects
Proposed neighborhood lines

Notes:

- PFAS sampling results shown are dated first quarter 2021
- HI Health Index, as defined by Minnesota Department of Health
- PFAS Per- and Polyfluoroalkyl Substances

Figure E.2b Updated recommended Option 1 municipal infrastructure improvements map for HI≥0.5 (Lake Elmo autonomous)

0 1 2 Miles

1 inch = 4,000 feet



The map shown here is strictly for use with the Conceptual Drinking Water Supply Plan. This map has not been certified by a licensed and surveyor and any third party use of this map comes without warranties of any kind. Wood Environment and Infrastructure Solutions Inc. assumes no liability, direct or indirect, for any such third party or unintended use.

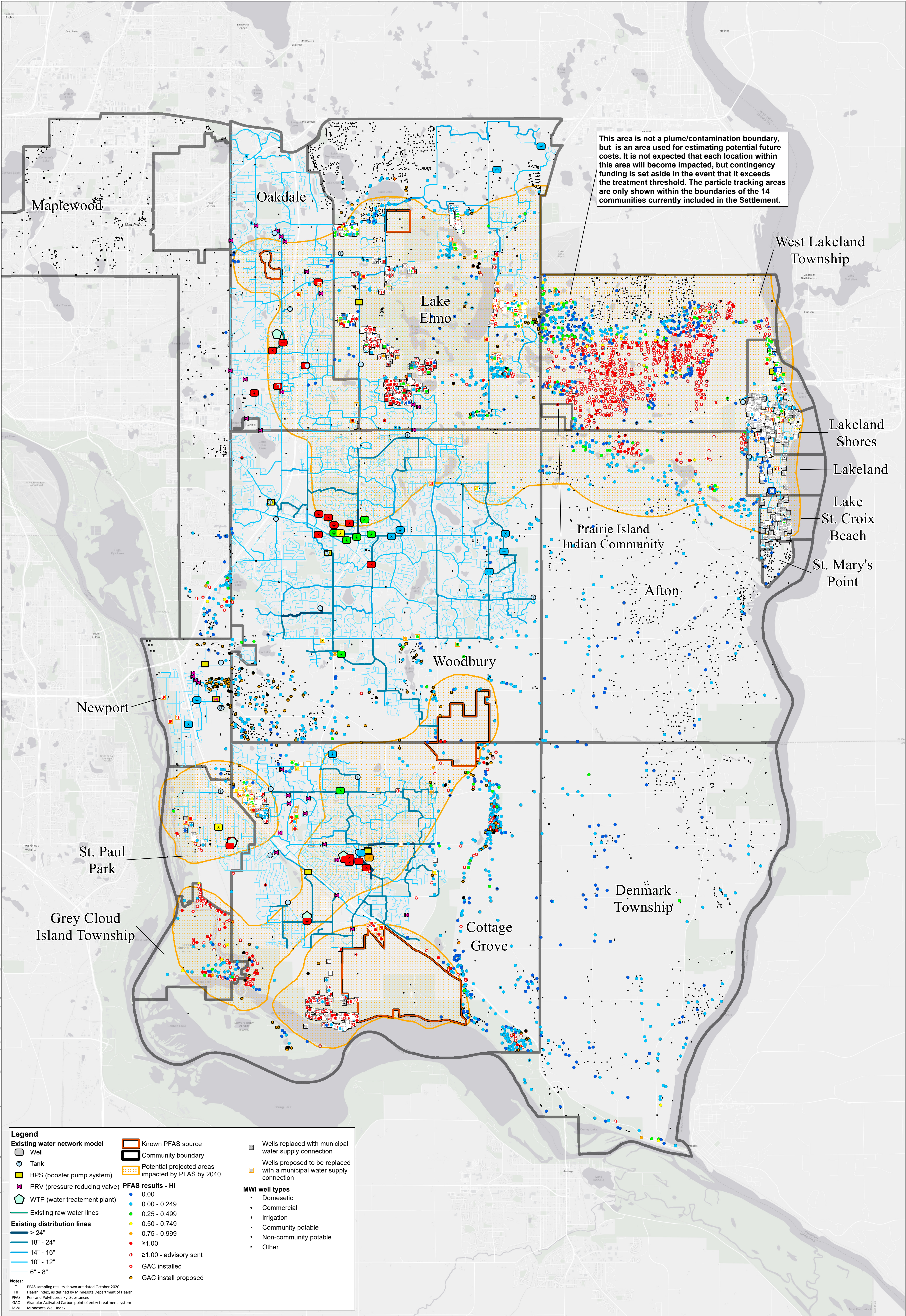


Figure E.3 Updated recommended Option 2 non-municipal well treatment map for HI≥0.3

Path: G:\Infrastructure\AWW01-Projects\018100222 MP&A East Metro MN Water Sys Study\6.0 Background Information\2 Maps & GIS Files\02 Community\FigureE4a Community\RegionalMunicipal_24432_20210713.mxd

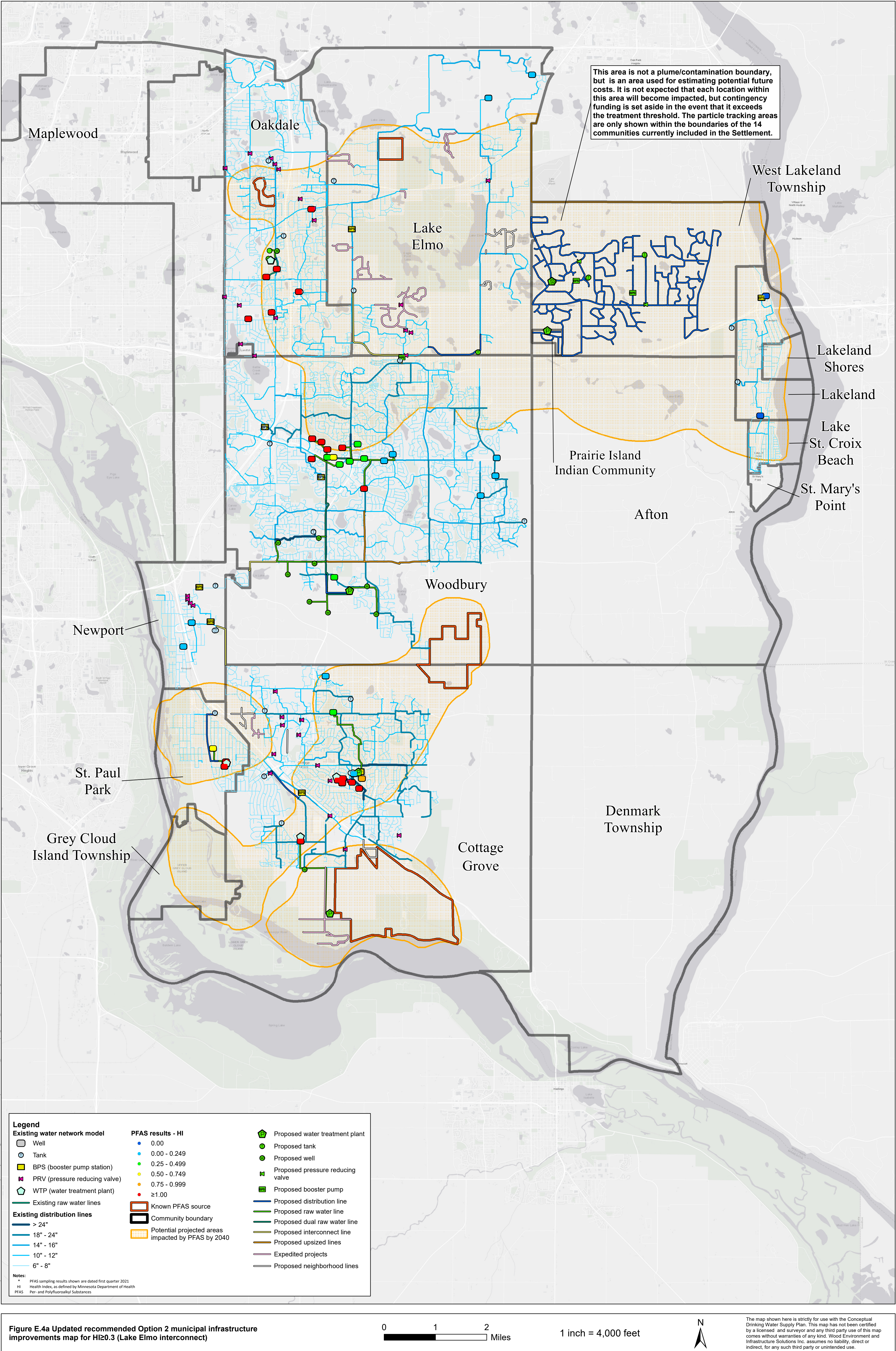


Figure E.4a Updated recommended Option 2 municipal infrastructure improvements map for HI≥0.3 (Lake Elmo interconnect)

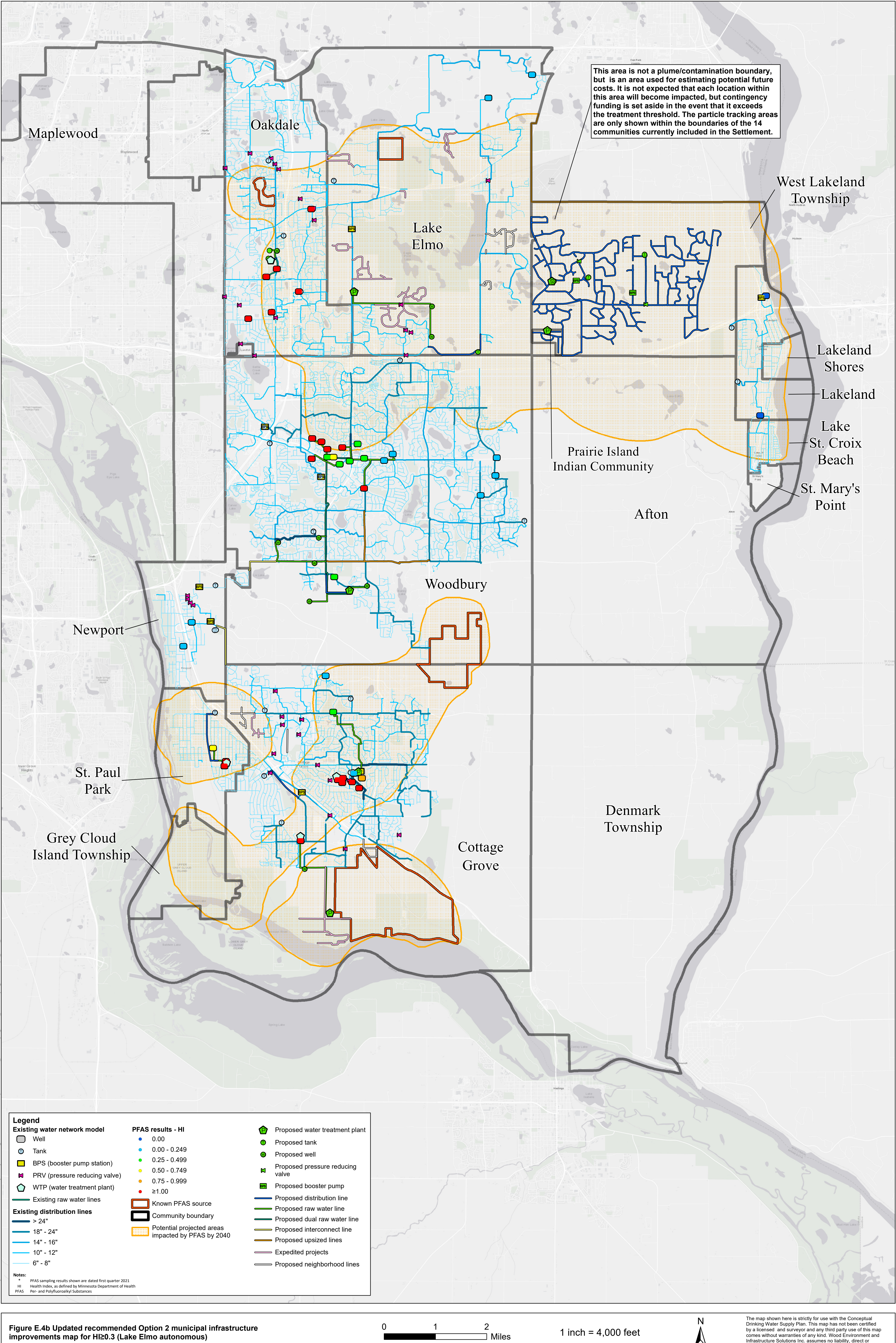
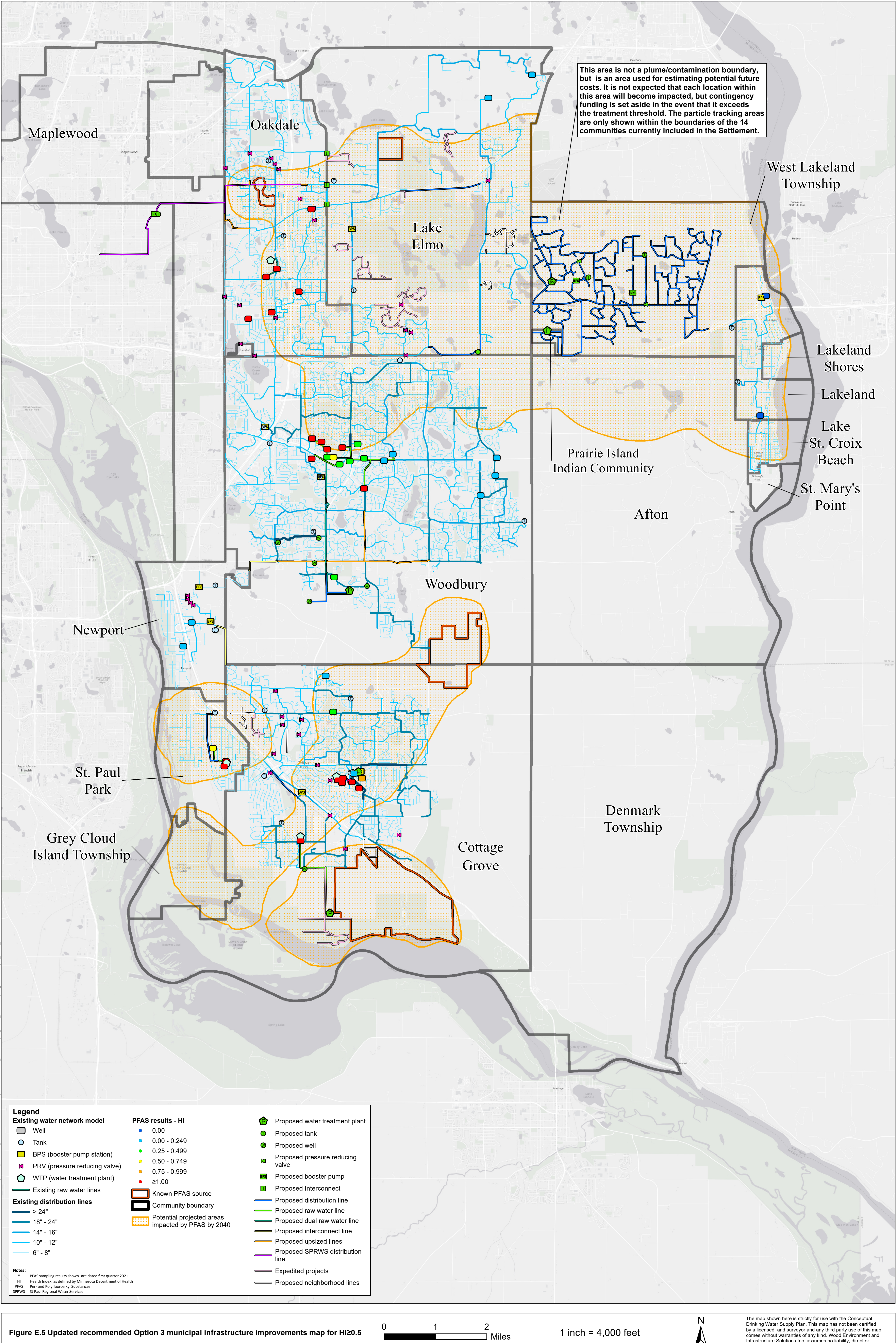


Figure E.4b Updated recommended Option 2 municipal infrastructure improvements map for HI≥0.3 (Lake Elmo autonomous)



This area is not a plume/contamination boundary, but is an area used for estimating potential future costs. It is not expected that each location within this area will become impacted, but contingency funding is set aside in the event that it exceeds the treatment threshold. The particle tracking areas are only shown within the boundaries of the 14 communities currently included in the Settlement.

Legend

Existing water network model

Well

Tank

BPS (booster pump station)

PRV (pressure reducing valve)

WTP (water treatment plant)

Existing raw water lines

Existing distribution lines

> 24"

18" - 24"

14" - 16"

10" - 12"

6" - 8"

PFAS results - HI

0.00

0.00 - 0.249

0.25 - 0.499

0.50 - 0.749

0.75 - 0.999

≥1.00

Known PFAS source

Community boundary

Potential projected areas impacted by PFAS by 2040

Proposed water treatment plant

Proposed tank

Proposed well

Proposed pressure reducing valve

Proposed booster pump

Proposed Interconnect

Proposed distribution line

Proposed raw water line

Proposed dual raw water line

Proposed interconnect line

Proposed upsized lines

Proposed SPRWS distribution line

Expedited projects

Proposed neighborhood lines

Figure E.5 Updated recommended Option 3 municipal infrastructure improvements map for HI≥0.5

0 1 2 Miles

1 inch = 4,000 feet



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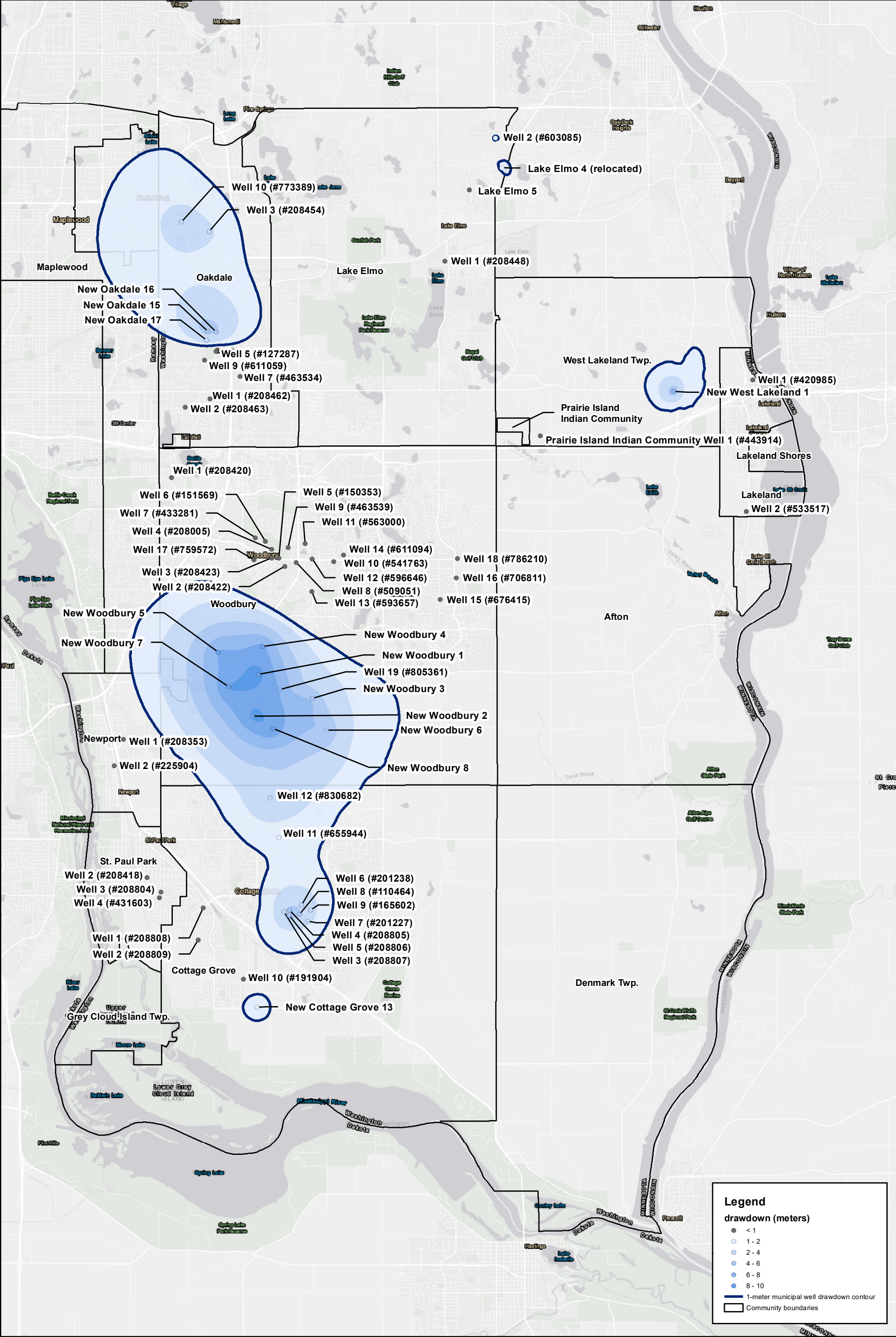


Figure E.6a Simulated drawdown for Iteration 1 (Lake Elmo interconnect) under dry conditions in the Prairie du Chien aquifer

0 1 2 Miles

1 in = 1.5 miles

N

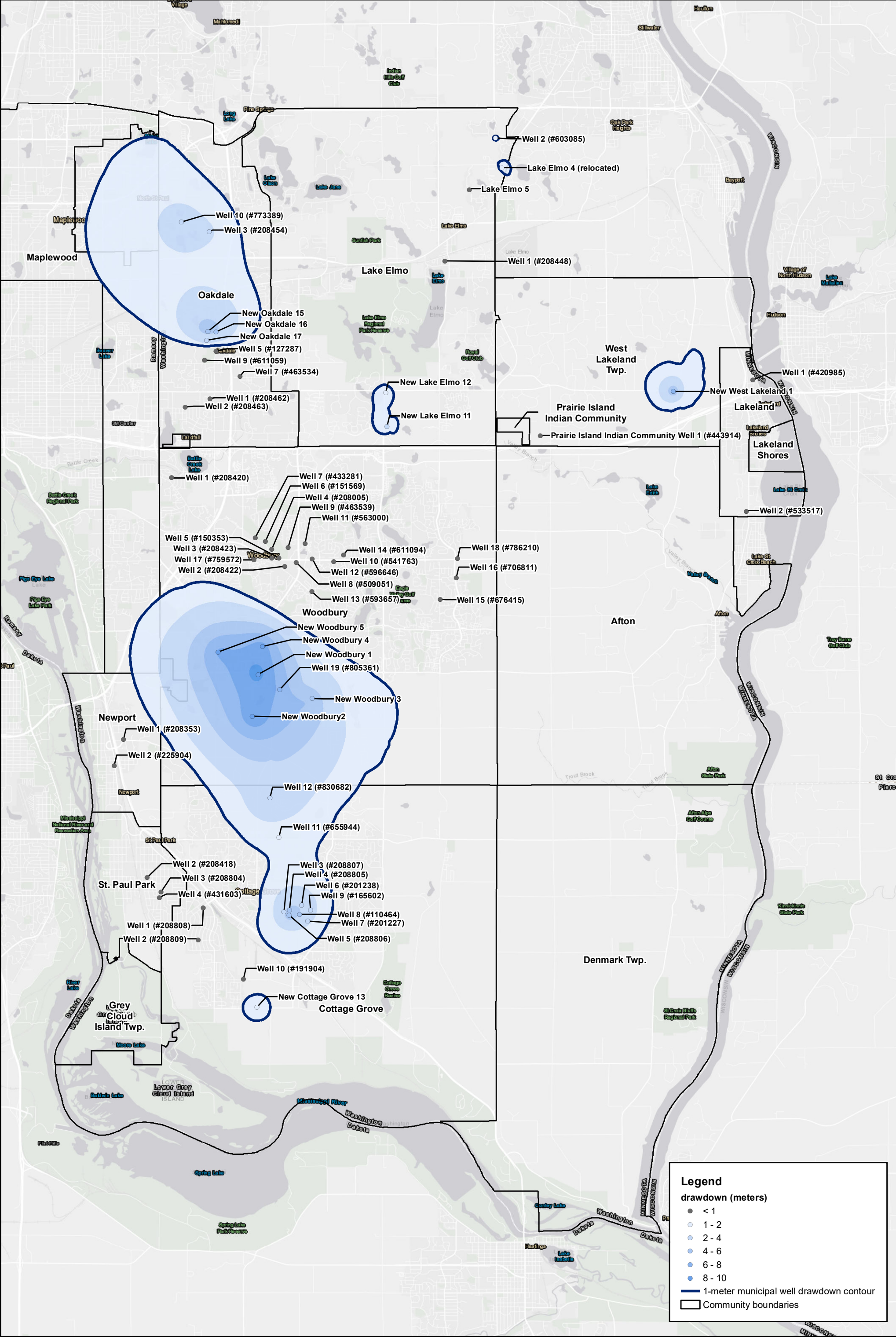


Figure E.6b Simulated drawdown for Iteration 2 (Lake Elmo autonomous) under dry conditions in the Prairie du Chien aquifer



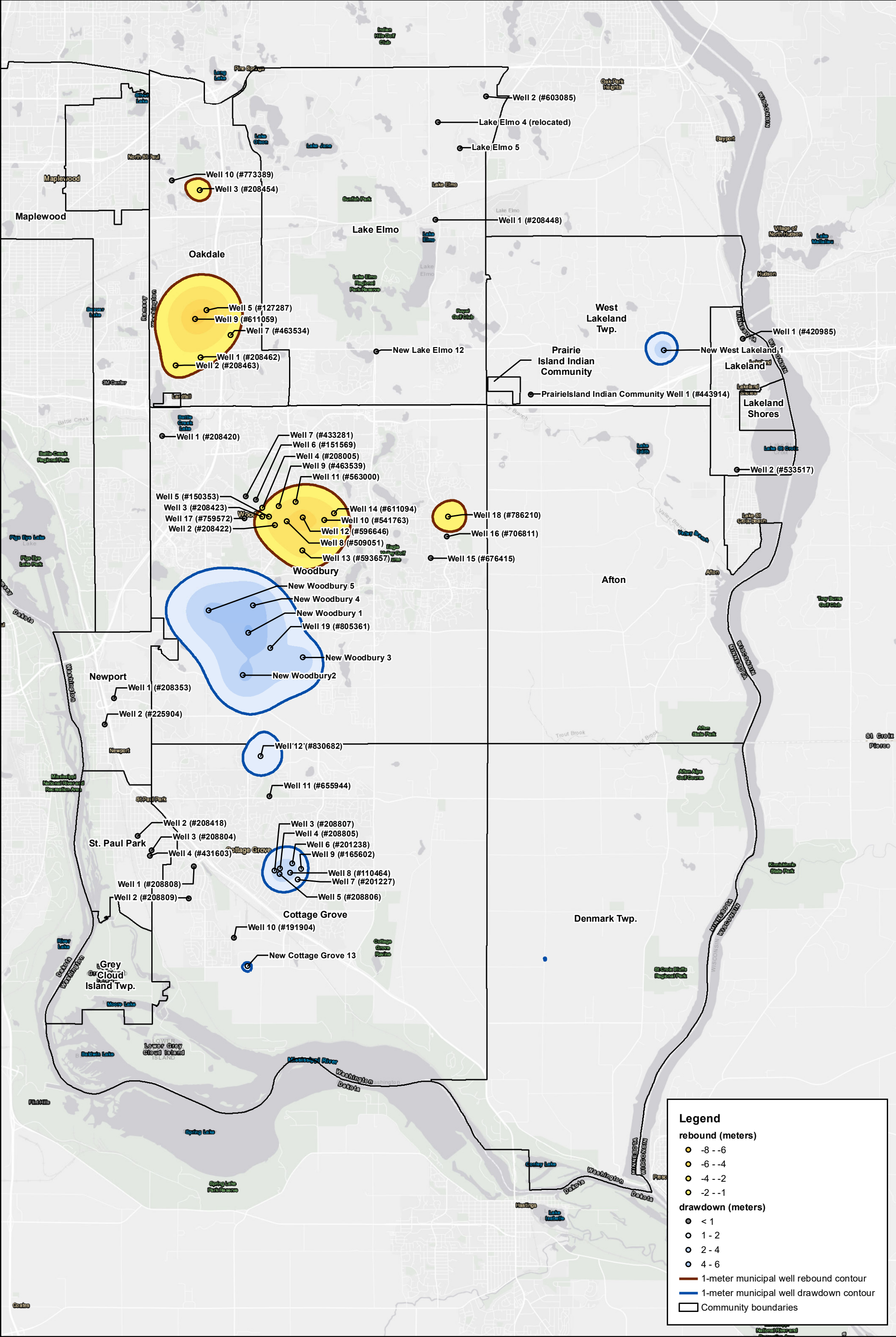


Figure E.6c Simulated drawdown for recommended Option 3 under dry conditions in the Prairie du Chien aquifer



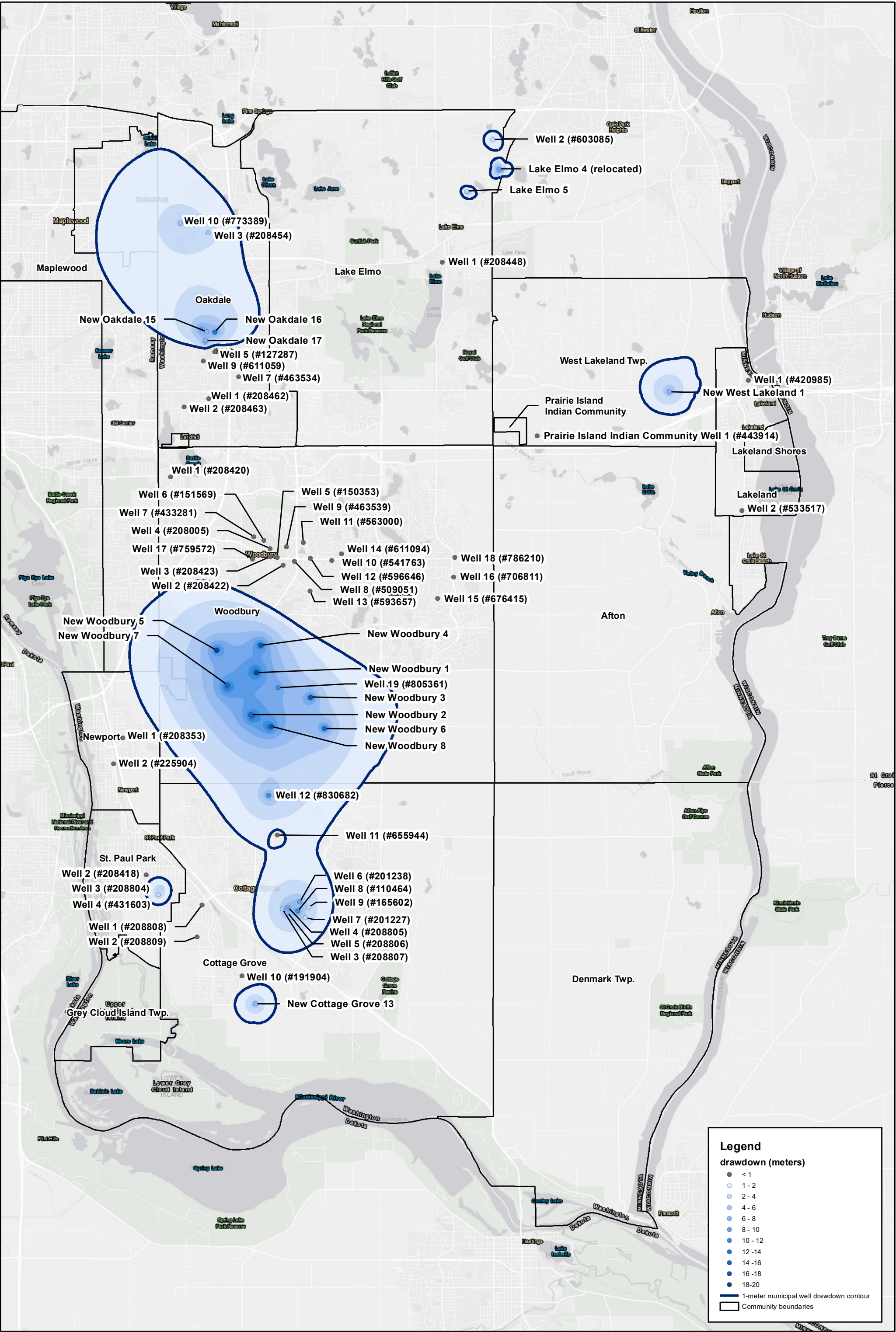


Figure E.7a Simulated drawdown for Iteration 1 (Lake Elmo interconnect) under dry conditions in the Jordan Sandstone aquifer

0 1 2 Miles 1 in = 1.5 miles

N

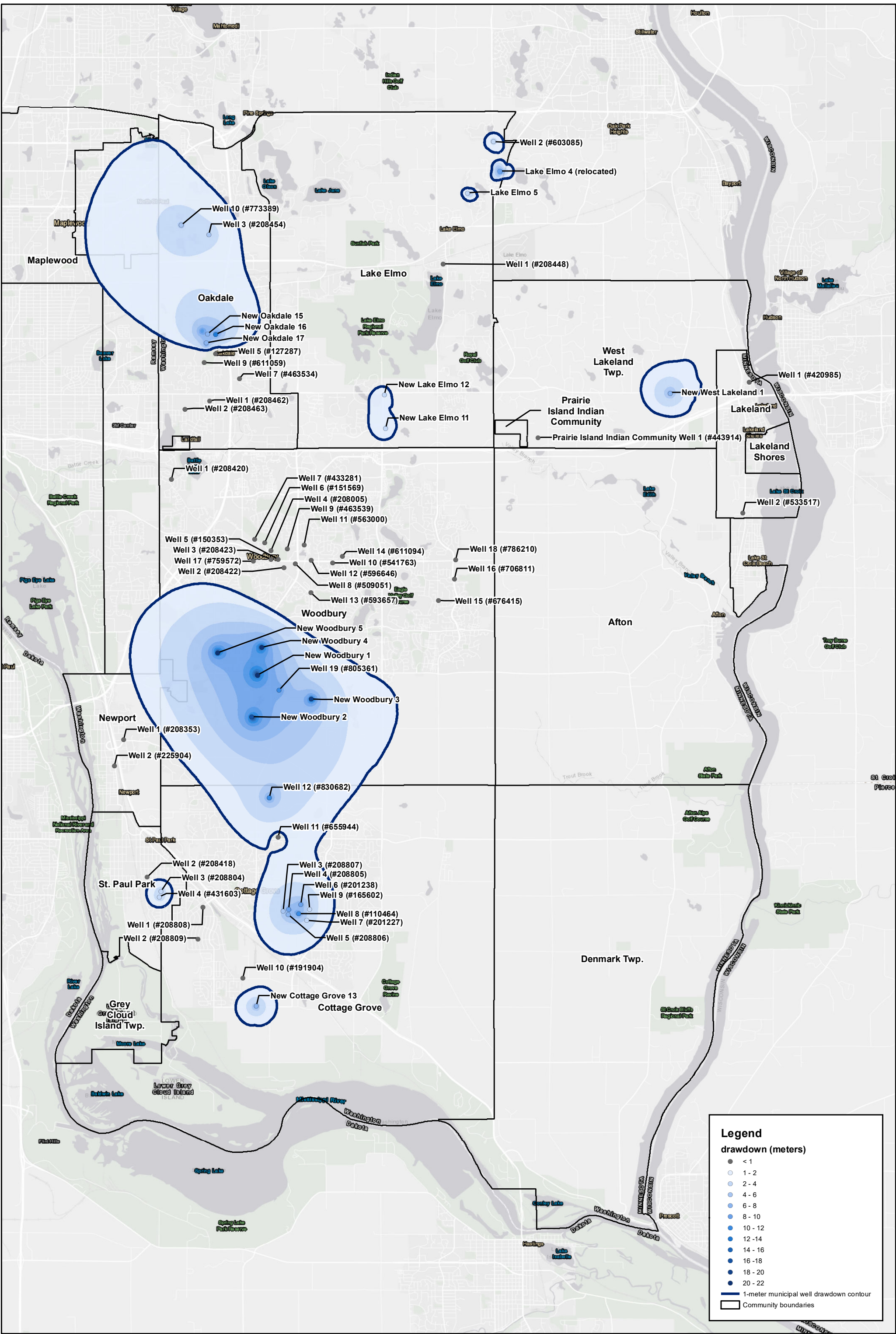


Figure E.7b Simulated drawdown for iteration 2 (Lake Elmo autonomous) under dry conditions in the Jordan Sandstone aquifer



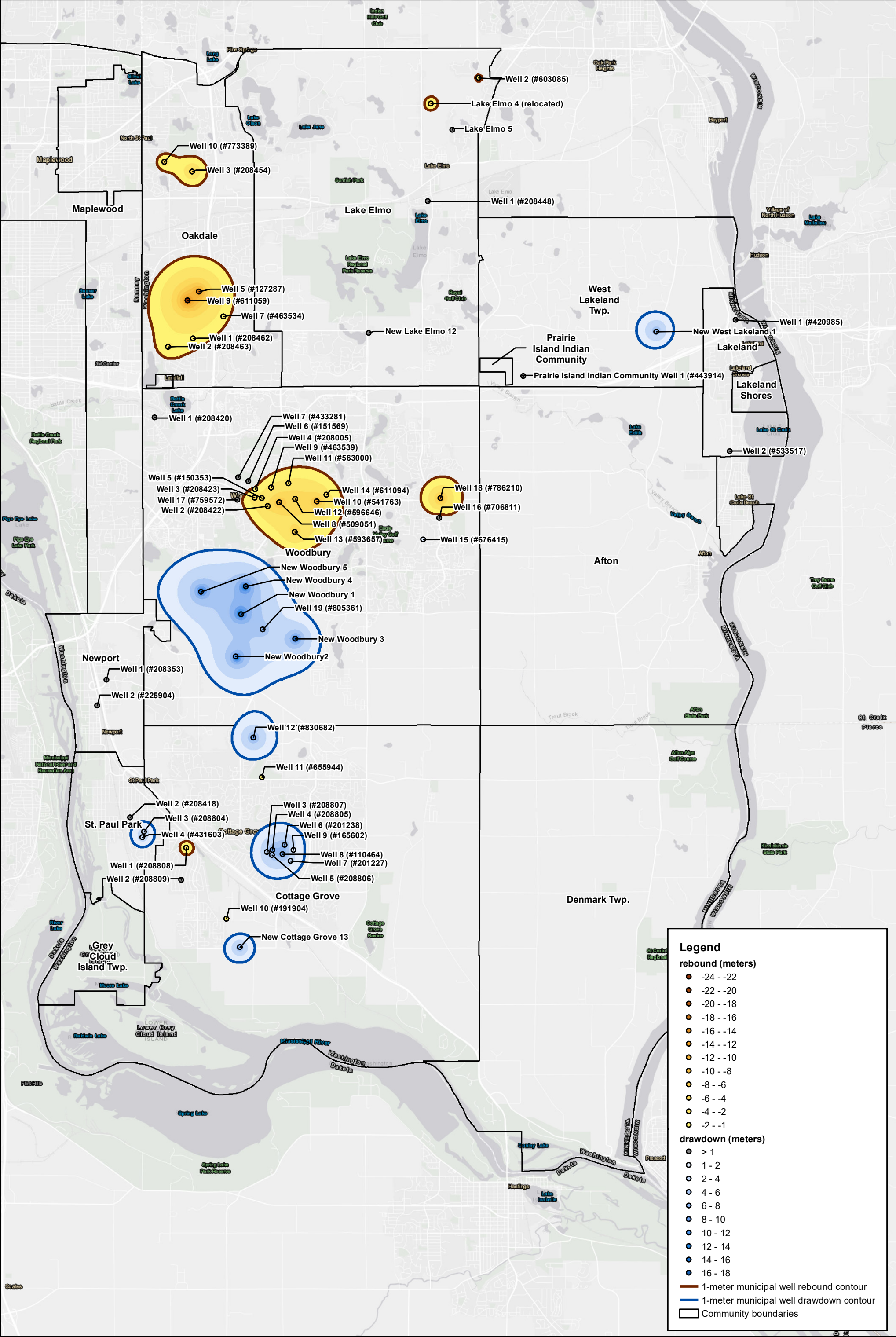


Figure E.7c Simulated drawdown for recommended Option 3 under dry conditions in the Jordan Sandstone aquifer

0 1 2 Miles

1 in = 1.5 miles



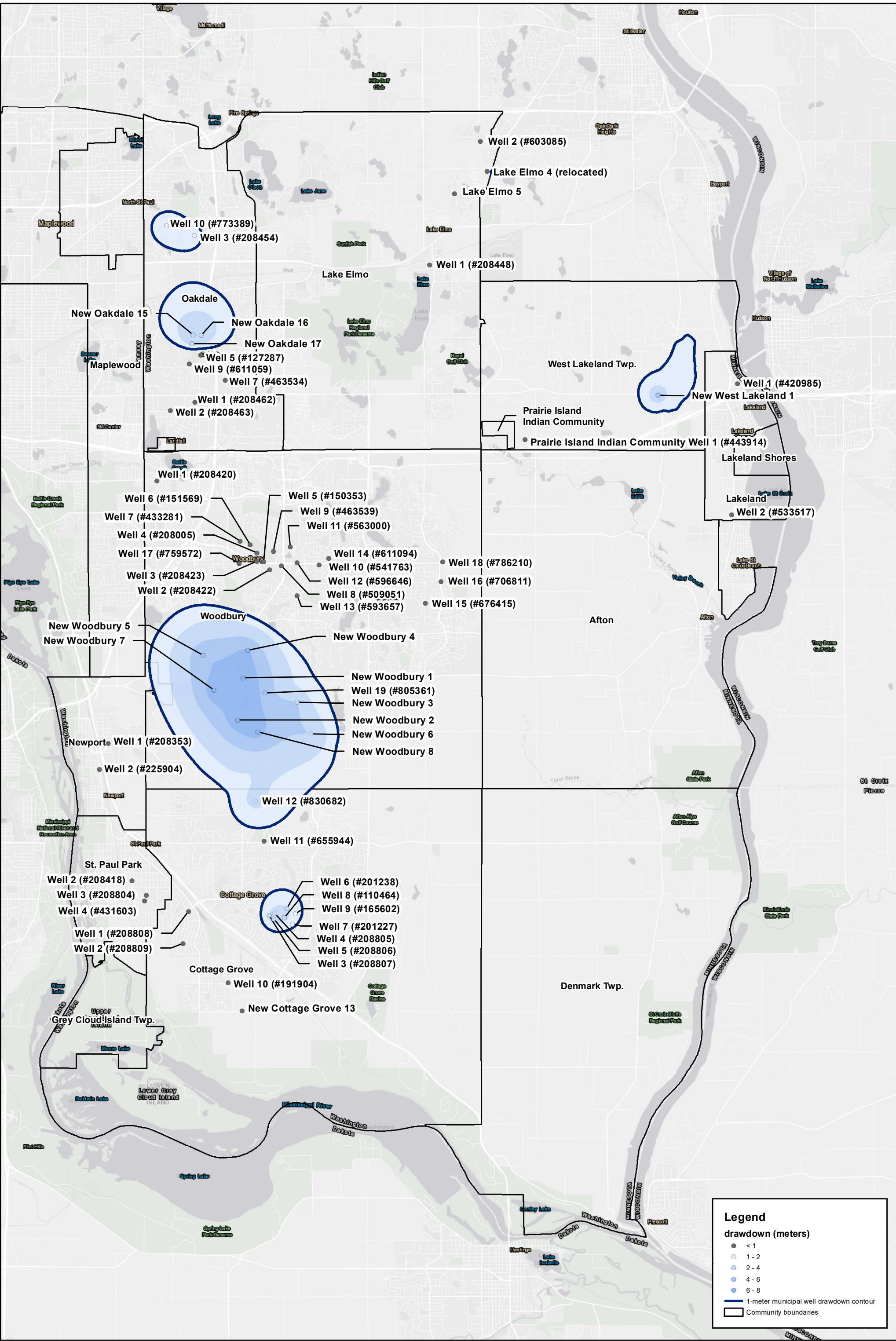


Figure E.8a Simulated drawdown for Iteration 1 (Lake Elmo interconnect) under wet conditions in the Prairie du Chien aquifer

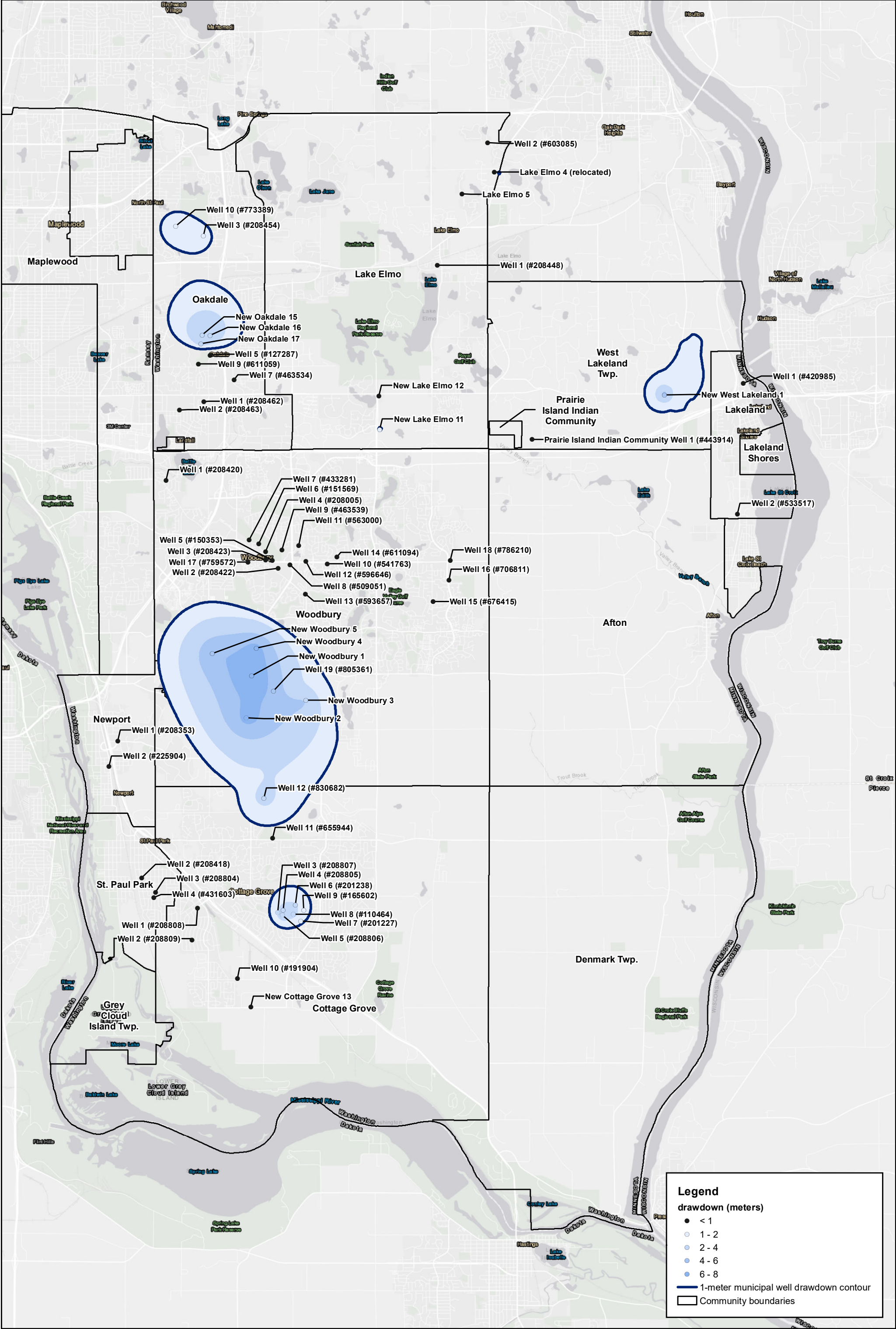


Figure E.8b Simulated drawdown for iteration 2 (Lake Elmo autonomous) under wet conditions in the Prairie du Chien aquifer



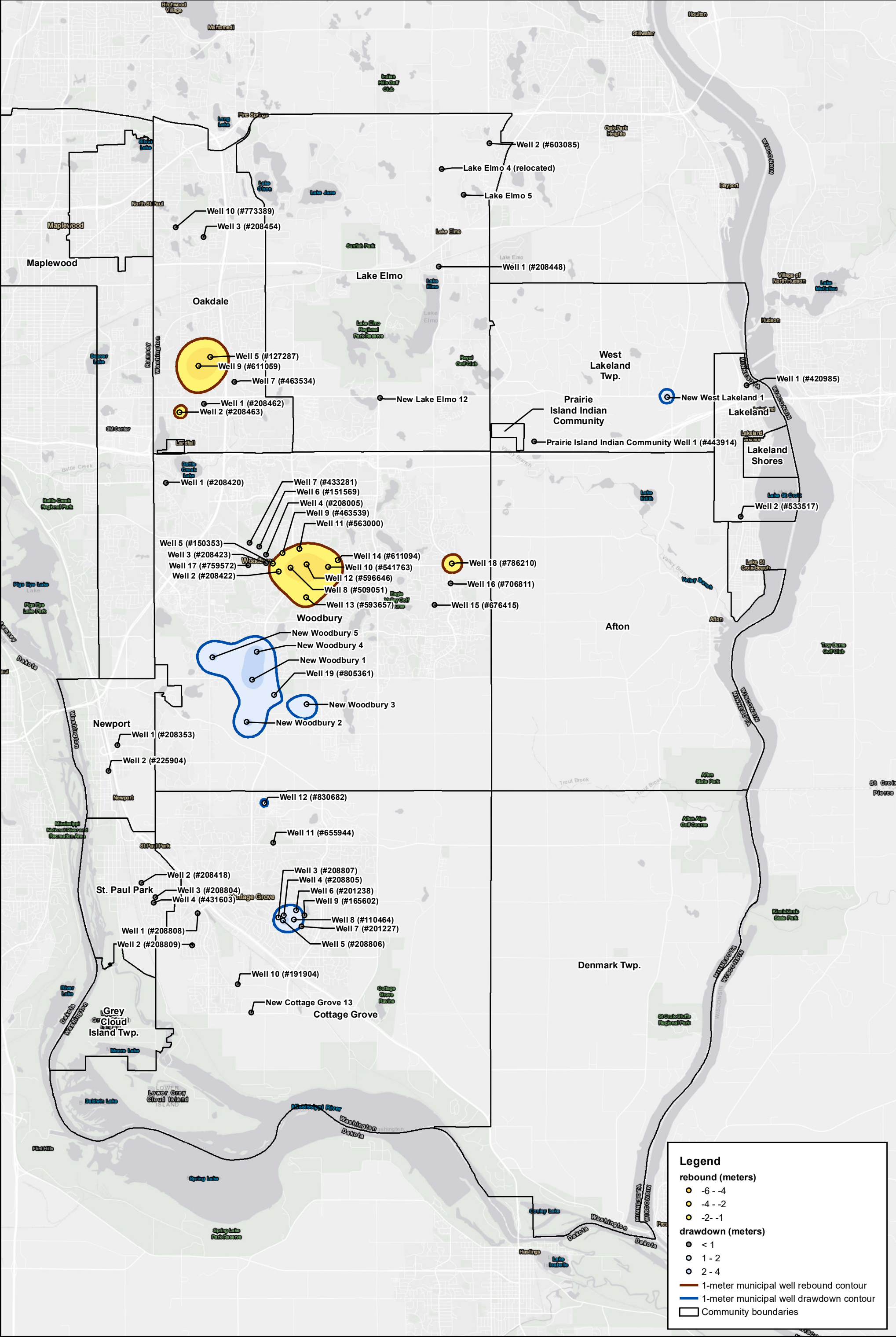


Figure E.8c Simulated drawdown for recommended Option 3 under wet conditions in the Prairie du Chien aquifer



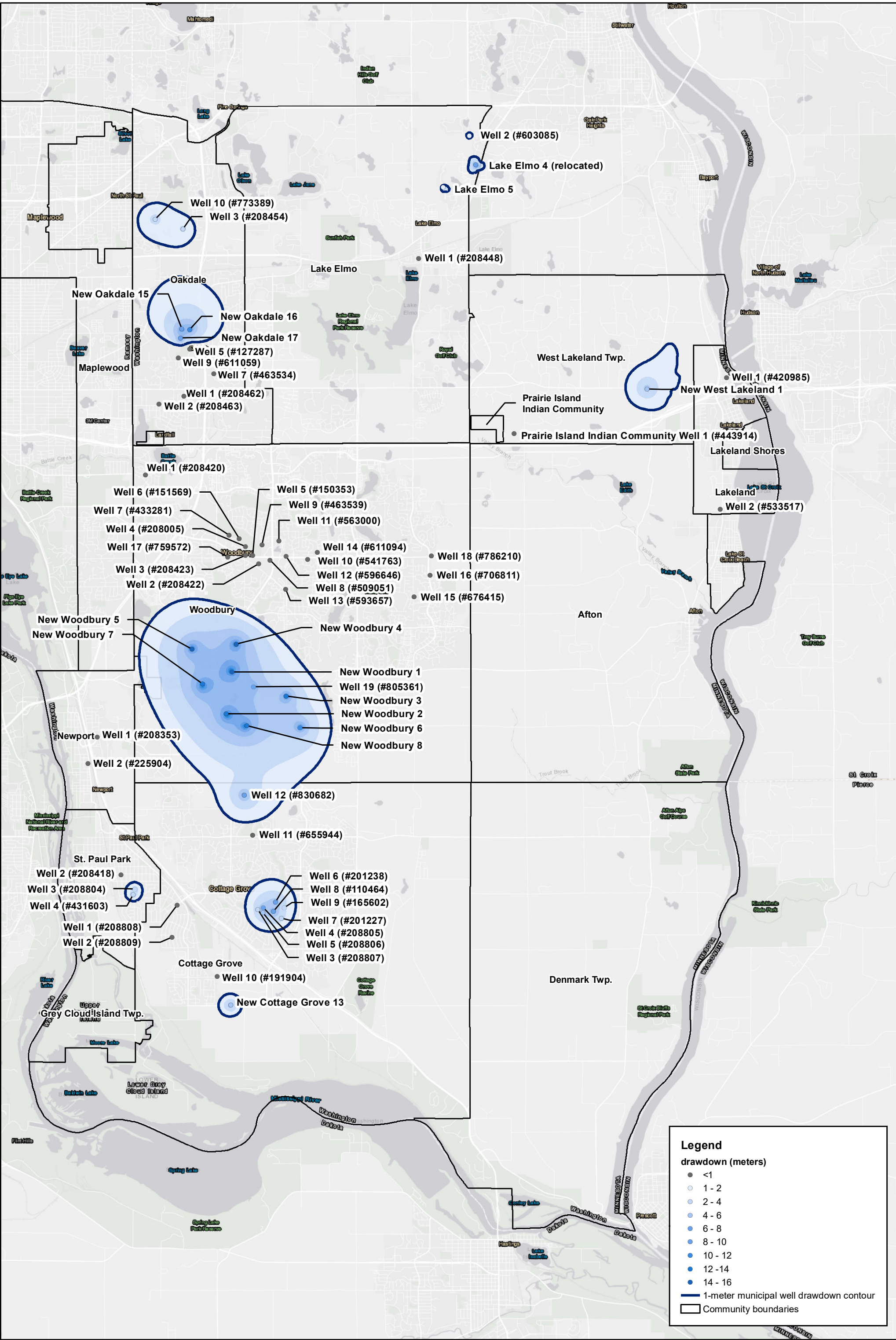
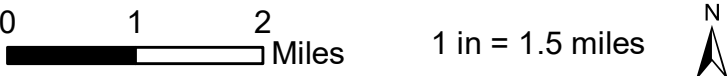


Figure E.9a Simulated drawdown for Iteration 1 (Lake Elmo interconnect) under wet conditions in the Jordan Sandstone aquifer



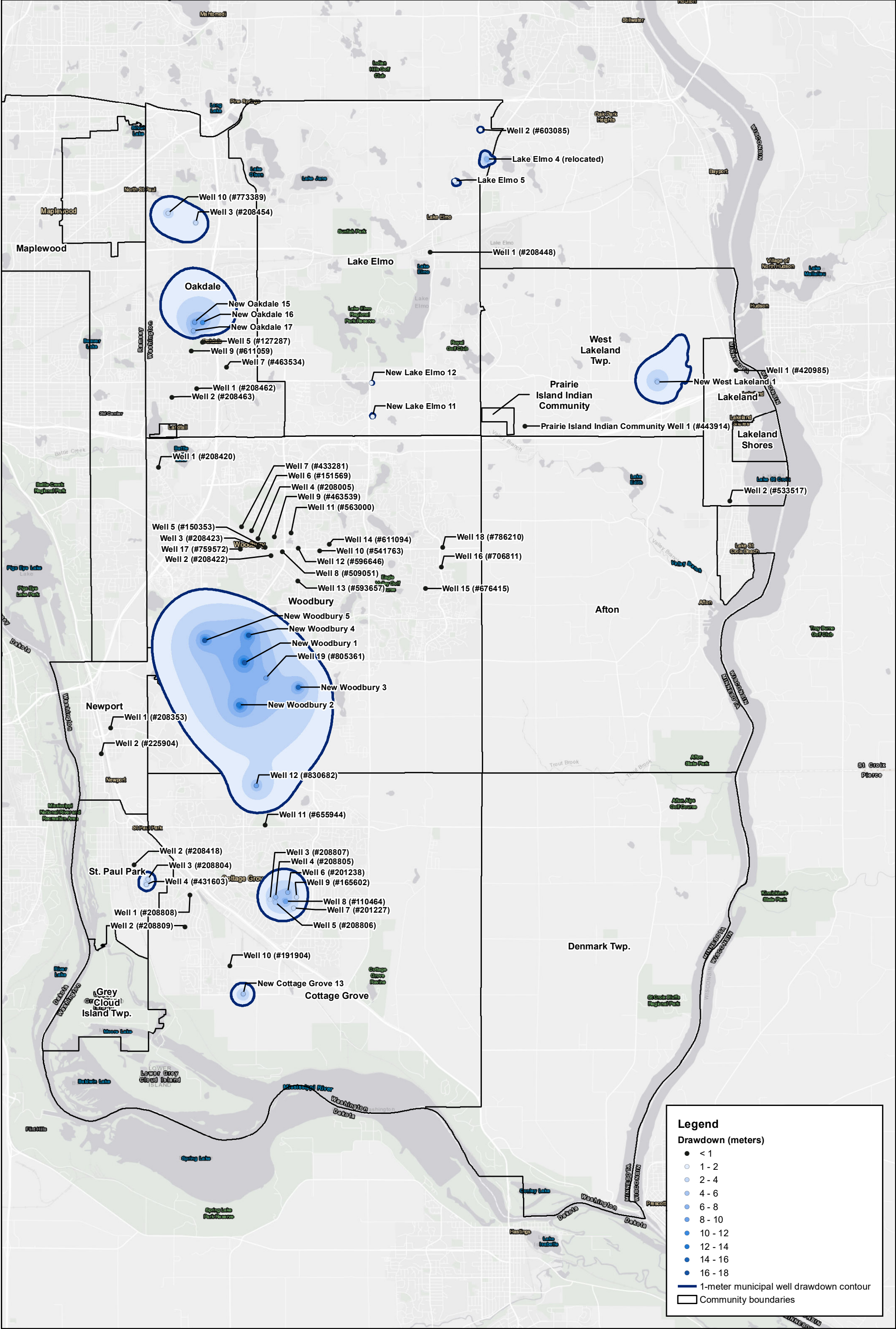


Figure E.9b Simulated drawdown for iteration 2 (Lake Elmo autonomous) under wet conditions in the Jordan Sandstone aquifer



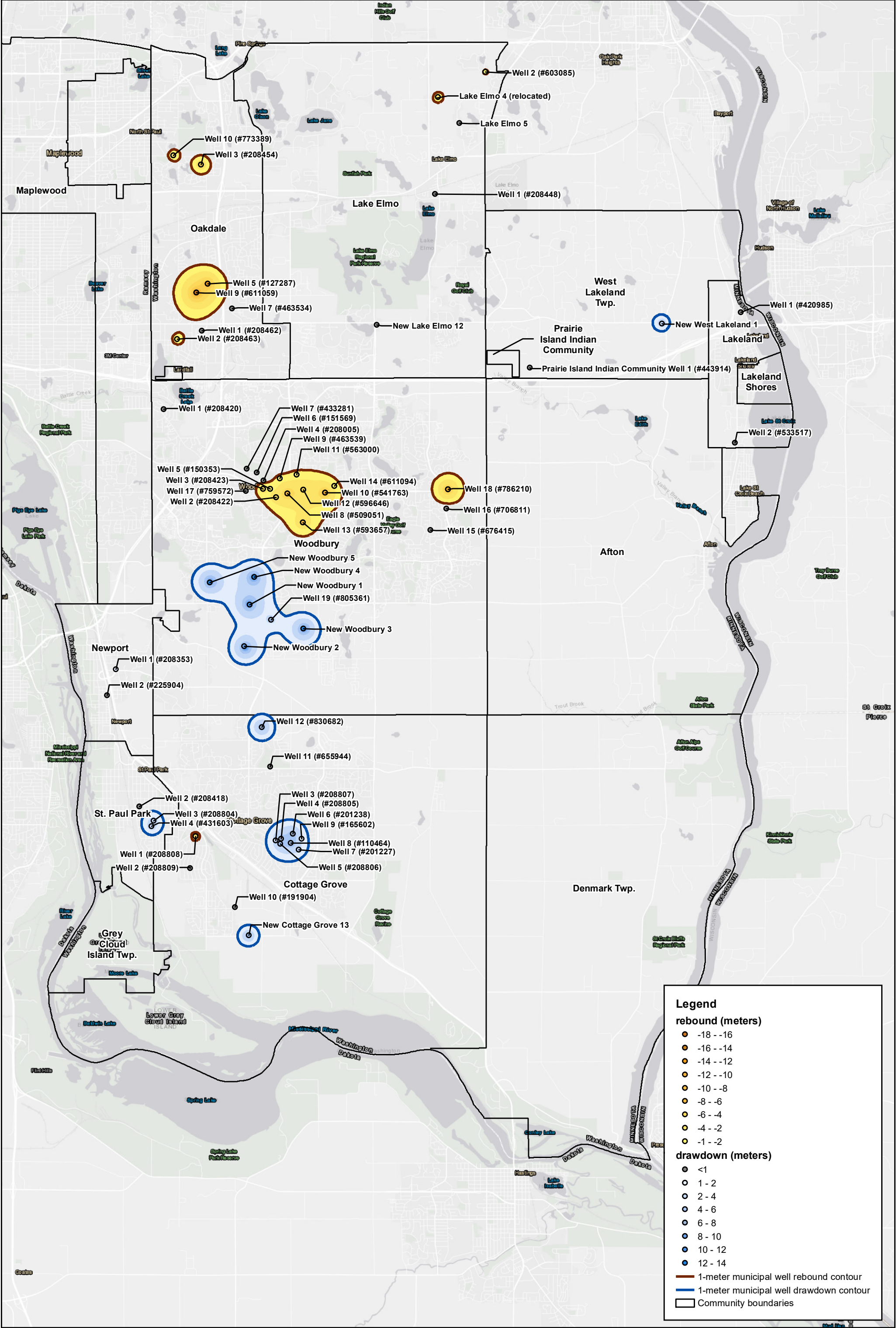


Figure E.9c Simulated drawdown for recommended Option 3 under wet conditions in the Jordan Sandstone aquifer

0 1 2 Miles 1 in = 1.5 miles

N

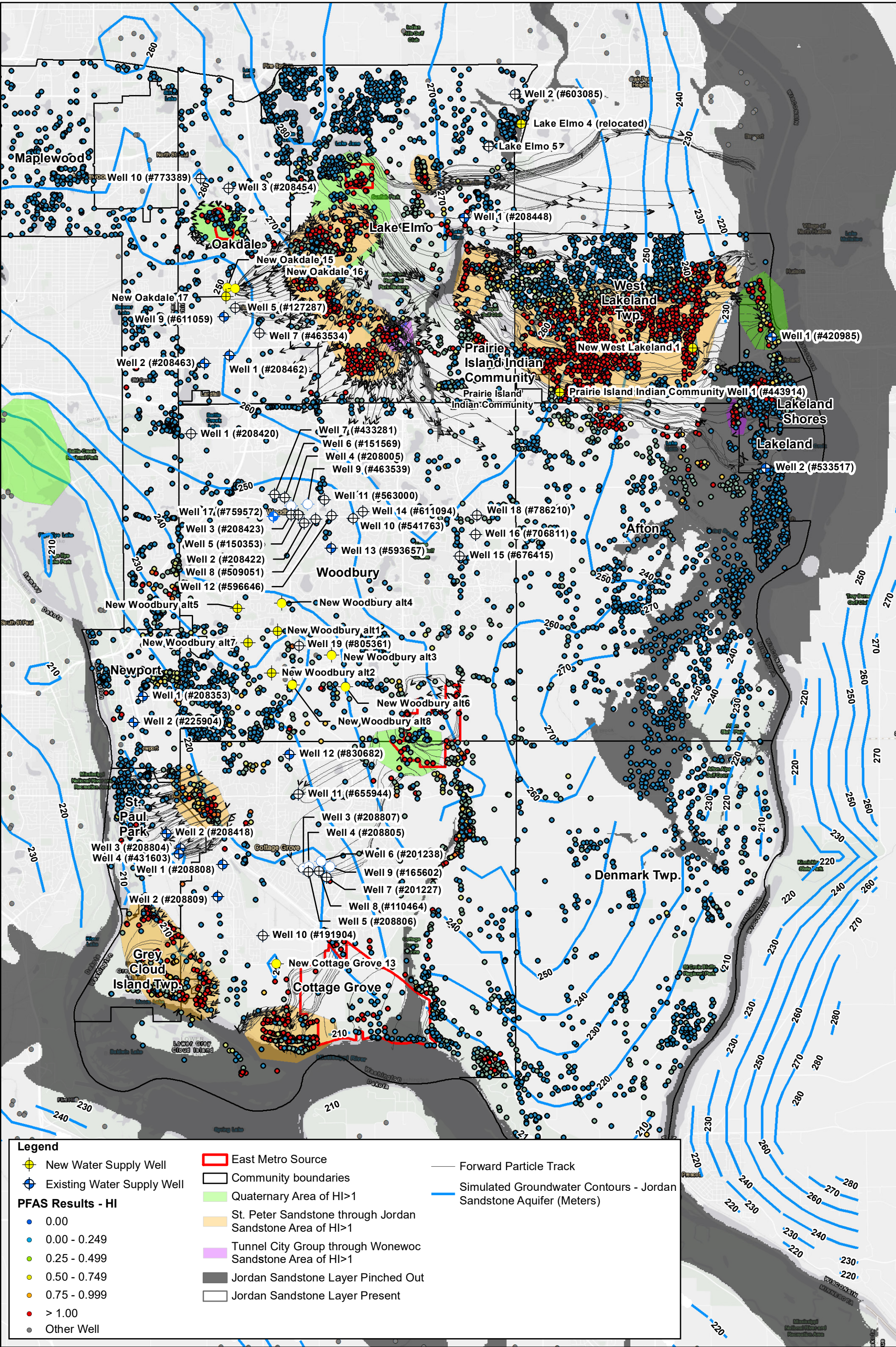


Figure E.10 Particle tracking for Iteration 1 under dry conditions

0 1 2 Miles

1 in = 1.5 miles



Background Imagery Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community

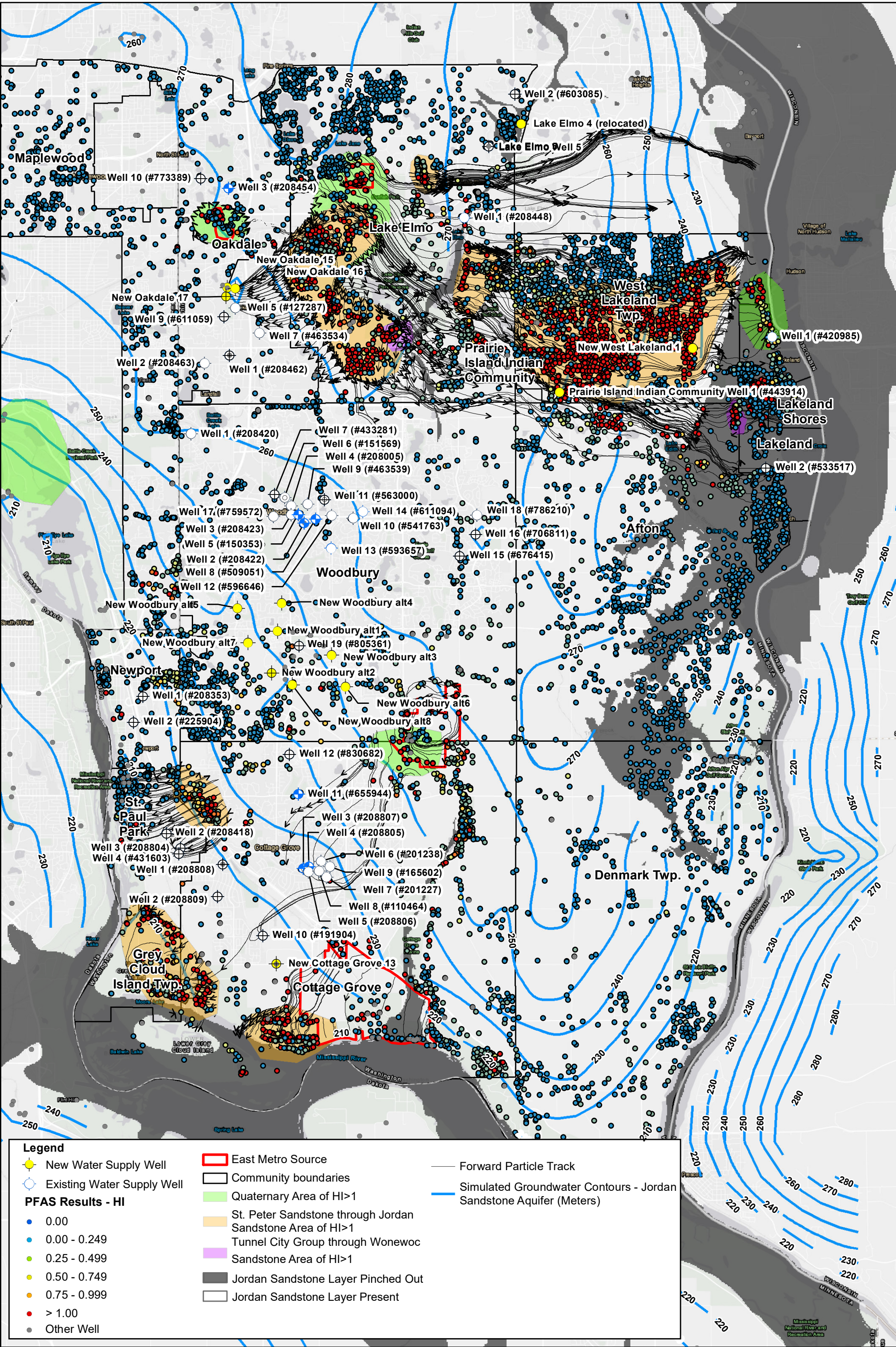


Figure E.11 Particle tracking for Iteration 1 under wet conditions

0 1 2 Miles

1 in = 1.5 miles



Background Imagery Service Layer Credits: Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community