

Plume predictions from the 2007 baseball stadium "EIS"

With this note are four maps from the 2007 *"Air Dispersion Modeling and Risk Assessment for the Hennepin Energy Recovery Center...."*

The document is posted here but might be taken down at some point:

http://www.ci.minneapolis.mn.us/cped/agendas/planning-commission/2009/docs/20090622CPC_EISAirDispersionModelingandRiskAssessment.pdf

Bear in mind that the purposes of this "assessment" were to evaluate:

- potential "downwash" effect of the stadium structure on the plumes from the incinerator stacks; and
- potential health risk to ballpark users including workers, baseball players, and baseball fans from incinerator smokestack emissions.

The "assessment" did NOT evaluate risks to residents of nearby communities.

- The highest modeled concentrations were found further away from the smokestacks than the ballpark. This is not surprising considering that the stacks rise 216 feet above ground and the ballpark is very close to them.¹
- Stadium workers and baseball fans spend less time at the stadium than residents spend in their neighborhoods. For example, baseball fans were estimated to spend a maximum of six hours at each of 92 games. This amounts to 552 hours, 6.3 percent of the 8760 hours in a year.

However, the report does give some indication of "dispersion factors." These predict where emissions from the stacks will be at their highest concentrations. The numbers on the maps are "factors," not actual concentrations of anything.

The maps extend about 1.4 miles to the east and west, and about 1.6 miles to the north and south. Higher concentrations could possibly be found further away.

- The highest "one hour" concentrations were modeled about 1.1 miles to the northeast of the stacks, across the Mississippi River. See pages 2-5 and 2-6.
- The highest "five year average" concentrations were modeled about .43 miles to the southeast of the stacks, near City Hall. See pages 2-7 and 2-8.
- Downwash from the ballpark itself was predicted to cause small increases in concentrations, primarily to the northwest of the incinerator.

Increased garbage burning at the HERC would increase pollution from the smokestacks. 400 to 800 more pounds per day of health-damaging pollutants would be expected if the City of Minneapolis grants the Covanta/Hennepin county request.

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¹ This of course doe NOT mean it makes sense to build a ballpark seating 40 thousand people next to a garbage incinerator. People could be additionally exposed to dangerous pollution by unusual weather conditions, upsets or explosions, and by road dust, truck exhaust, incinerator ash, and other "fugitive" emissions released at lower levels.

Prepared for:
Hennepin County
Minnesota

Air Dispersion Modeling and Risk Assessment for the Hennepin Energy Recovery Center, Hennepin County, Minnesota (Revised)

ENSR Corporation
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Figure 2-2(a) Maximum 1-Hour Dispersion Factor without the Ballpark

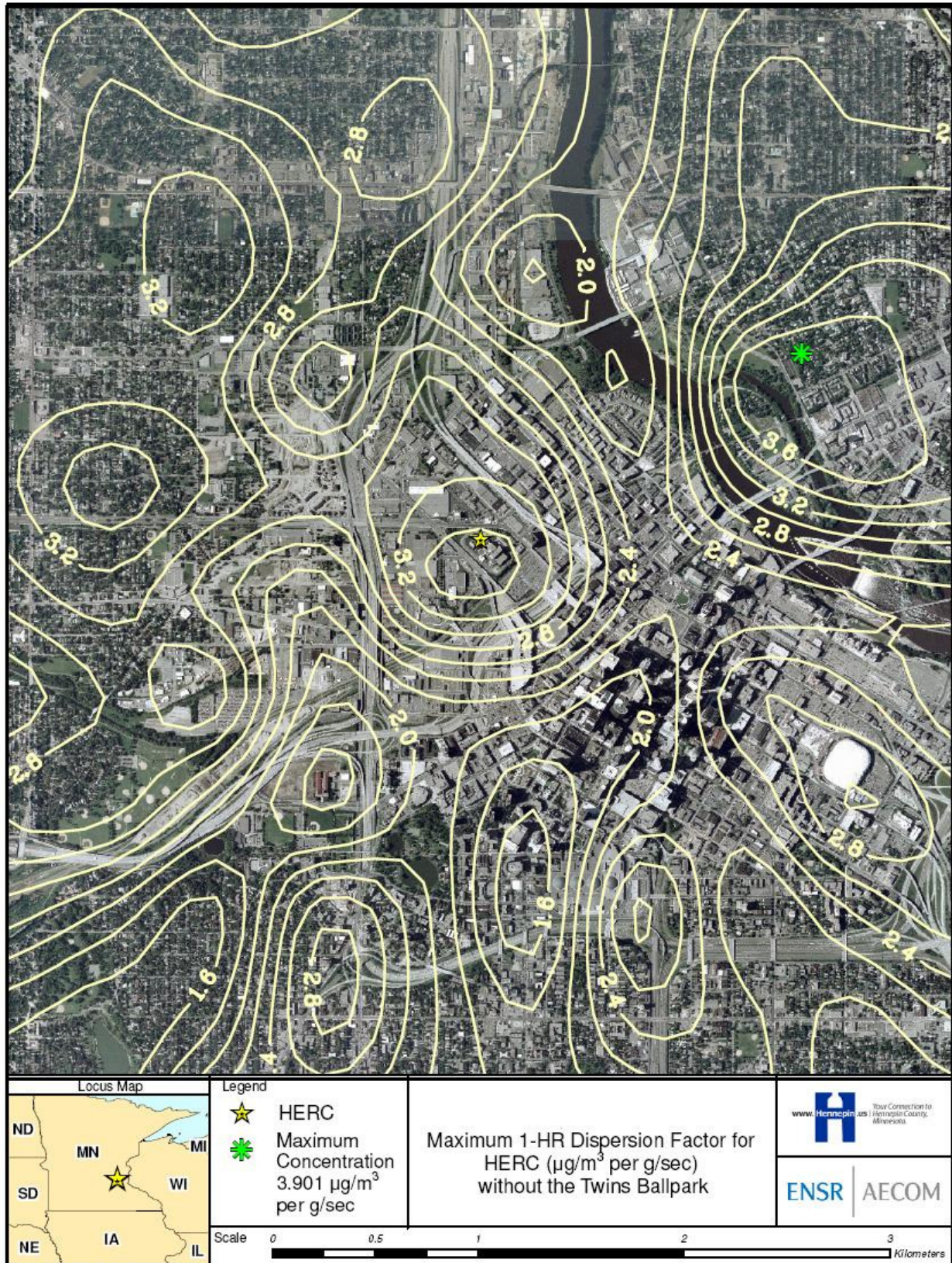


Figure 2-2(b) Maximum 1-Hour Dispersion Factor with the Ballpark

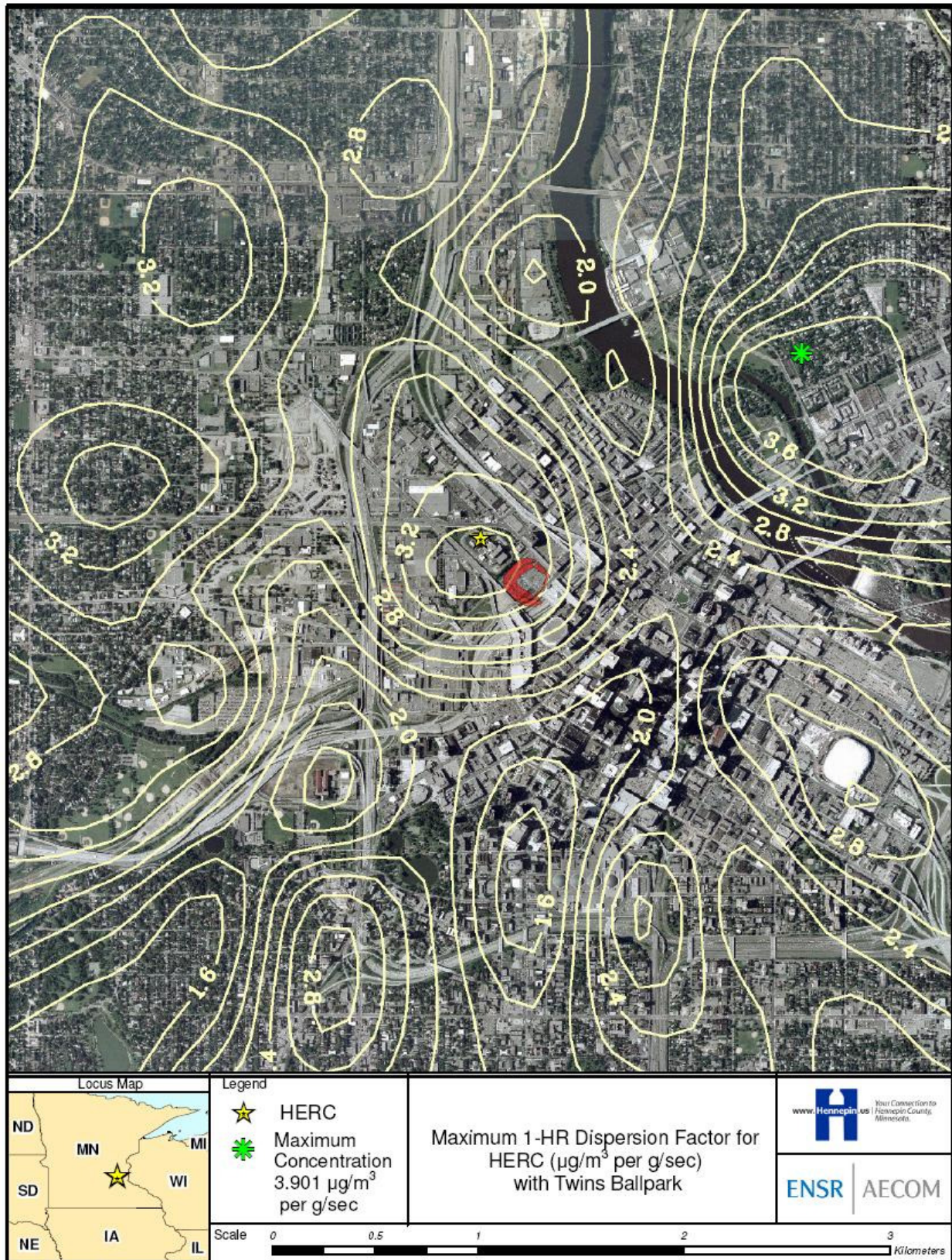


Figure 2-2(c) Five-Year Average Dispersion Factor without the Ballpark

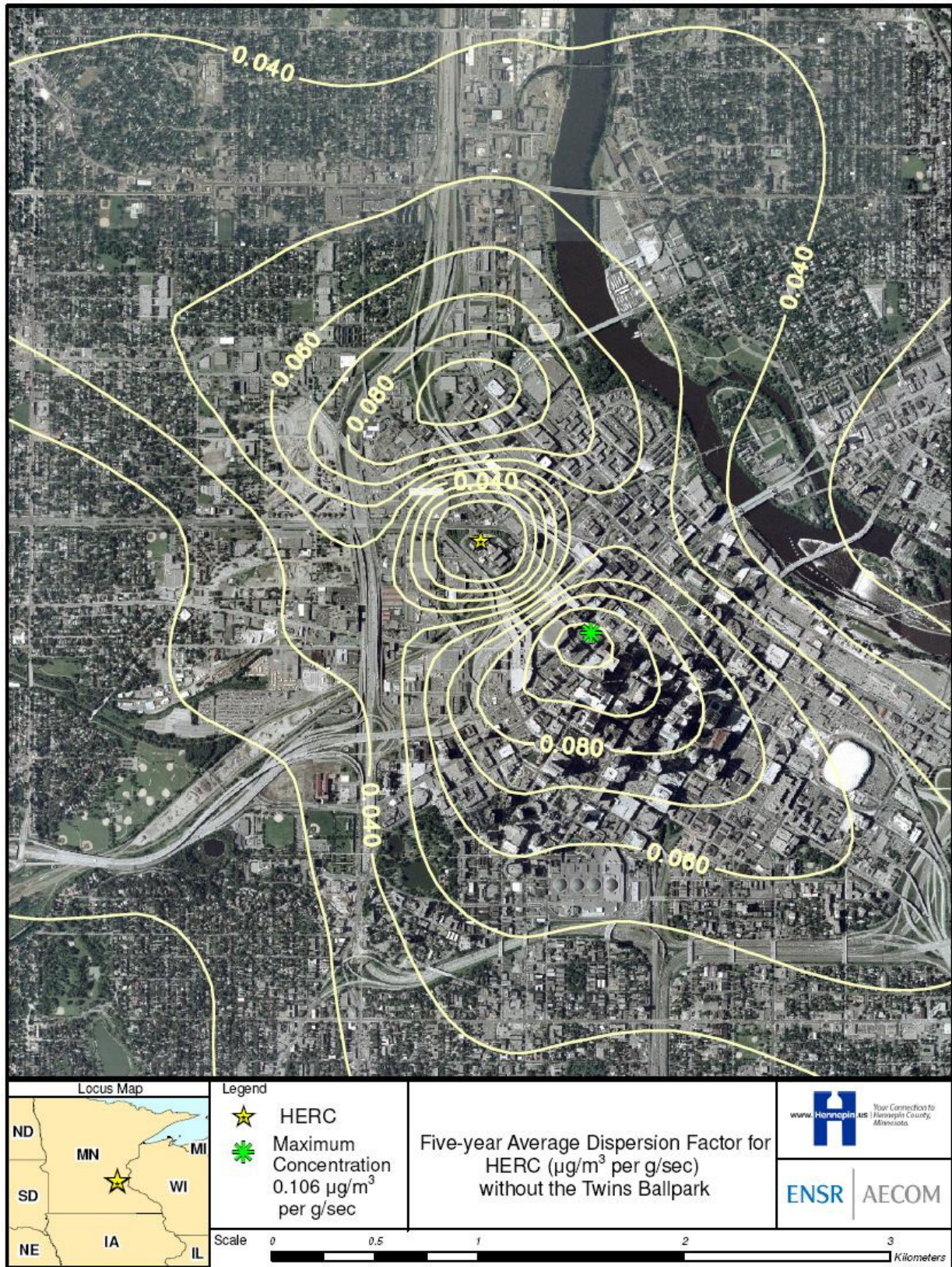


Figure 2-2(d) Five-Year Average Dispersion Factor with the Ballpark

