

Hunter's Crest Water Tower


January 17, 2017

City of Minnetrista


Comprehensive Water Plan

- ▶ Has been discussed by City dating back to 2006 when Comprehensive Water Plan (CWP) presented to the City Council; showing a water tower in the Hunter's Crest area
- ▶ Comprehensive Water Plan **Update** was made to the City Council in July 2011; again showing a Water Tower in the Hunter's Crest area

City Concerns

- ▶ From a global perspective, providing treated water for Minnetrista residents is a necessity to make the city more marketable for prospective home buyers
 - ▶ From a Public Safety perspective, Fire Suppression is a known concern and need to be addressed
 - ▶ From an Engineering perspective, concerns about water storage and overall system flow and effectiveness need to be addressed
- 
- Three parallel white lines of varying lengths are positioned diagonally in the bottom right corner of the slide, extending from the right edge towards the center.

City Concerns

- ▶ Also from an Engineering perspective, citing a 3rd water treatment plant for the future (2022-2030) is based on expected growth overall in Minnetrista
 - ▶ Water quality concerns have been an ongoing concern for many Hunter's Crest residents
- 
- Several white lines of varying lengths and orientations are positioned in the bottom right corner of the slide, creating a modern, abstract graphic element.

Comprehensive Water Plan

Minnetrista City Council on May 26, 2006

COMPREHENSIVE WATER SYSTEM PLAN

Prepared for:

City of Minnetrista
7701 County Road 110W
Minnetrista, MN 55364

May 26, 2006

Prepared by:

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Comprehensive Water Plan Minnetrista City Council on May 26, 2006

1.0 EXECUTIVE SUMMARY

This report represents a comprehensive water system plan to help the City of Minnetrista meet its short-term and long-term water demands.

The existing water distribution system consists of three separate systems, four wells, two elevated storage tanks, one hydro-pneumatic tank, limited water treatment at each well site, and approximately 23 miles of water main ranging in size from 6 to 12 inches in diameter. The three separate water systems are identified as the northern water system, central water system, and the southern water system, and serve those respective areas of Minnetrista.

The total well pumping capacity in the northern, central, and southern water systems is 500 gallons per minute (gpm), 400 gpm, and 1,000 gpm, respectively. The northern and central systems have no firm capacity (firm capacity assumes the largest well out of service in each system), and the southern system has a firm capacity of 500 gpm. Each well pump discharges into the distribution system after chlorine, fluoride, and polyphosphate addition.

System storage includes one 300,000 gallon tower in the northern system, one 400,000 gallon tower in the southern system, and a hydro-pneumatic tank in the central system. The hydro-pneumatic tank's purpose is more for maintaining system pressure than providing storage.

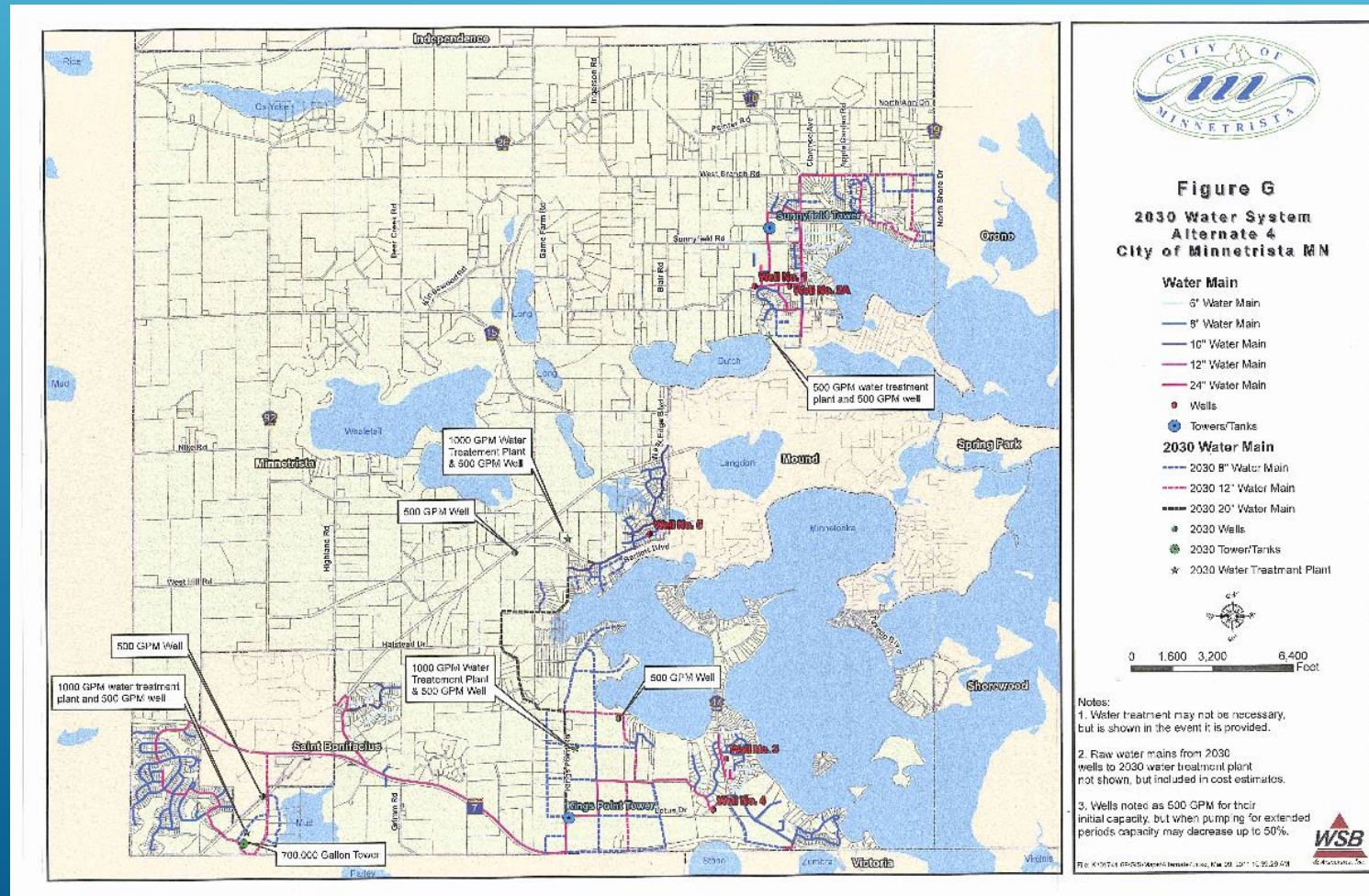
The 2005 average day water demand was approximately 336,000 gallons per day (gpd) and a maximum day demand of 3.2 million gallons per day (mgd) for all three systems combined. An extended period simulation (EPS) computer model (WaterCAD v. 7.0) was used to evaluate the existing system's operating pressures and available fire flow. The modeling results indicate the system is not functional during a fire event, with the system operating at firm capacity and the two existing towers and hydro-pneumatic tank in service. Since the system functions as three separate systems, at least two wells are necessary in each system to provide any water at firm capacity. Only the southern system has more than one well, and this well is undersized to fill the existing tower and provide maximum day demands. Evaluation of the existing water system indicated:

- All water mains are capable of delivering adequate pressure under peak hour demand.
- All water mains are capable of delivering adequate fire flows, except the 12-inch transmission main between the Kings Point tower and Turtle Creek, St. Bonifacius, and Hunter's Trail. The available fire flow through this 12-inch transmission main is less than 500 gpm, as compared to a required available fire flow of at least 1,000 gpm.
- Sunnyfield and Kings Point towers provide adequate storage for northern and southern systems.
- No storage in the central system results in no reserve for fire protection and inadequate operating pressures. Water for fire protection would need to be provided from interconnections with the City of Mound.
- No firm well capacity in the central system also results in the reliance on interconnections with the City of Mound for fire protection.

All water mains are capable of delivering adequate fire flows, except the 12-inch transmission main between the Kings Point tower and Turtle Creek, St. Bonifacius, and Hunter's Trail. The available fire flow through this 12-inch transmission main is less than 500 gpm, as compared to a required available fire flow of at least 1,000 gpm.

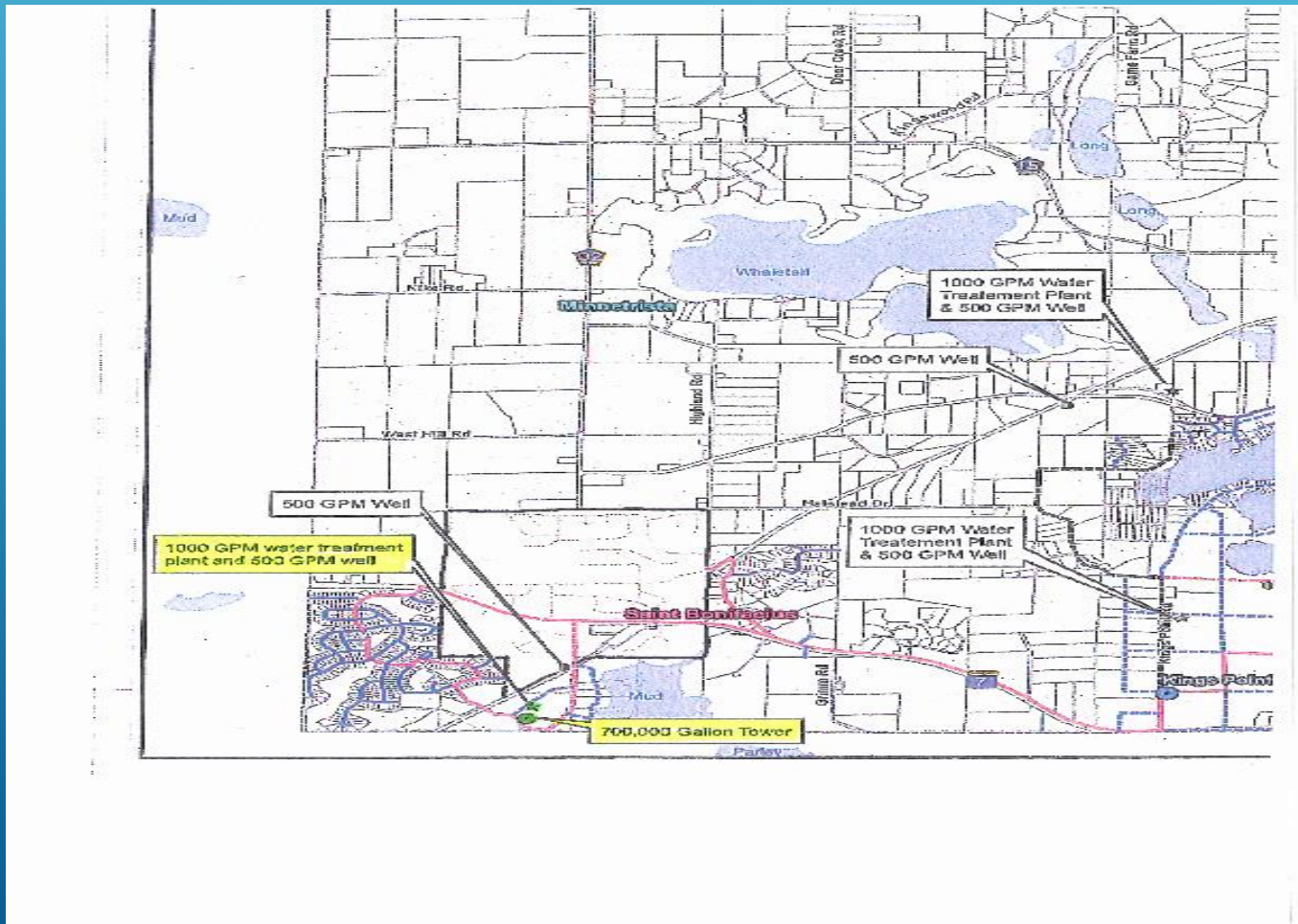
Comprehensive Water Plan **Update**

Minnetrista City Council on July 7, 2011



Comprehensive Water Plan Update

Minnetrista City Council on July 7, 2011

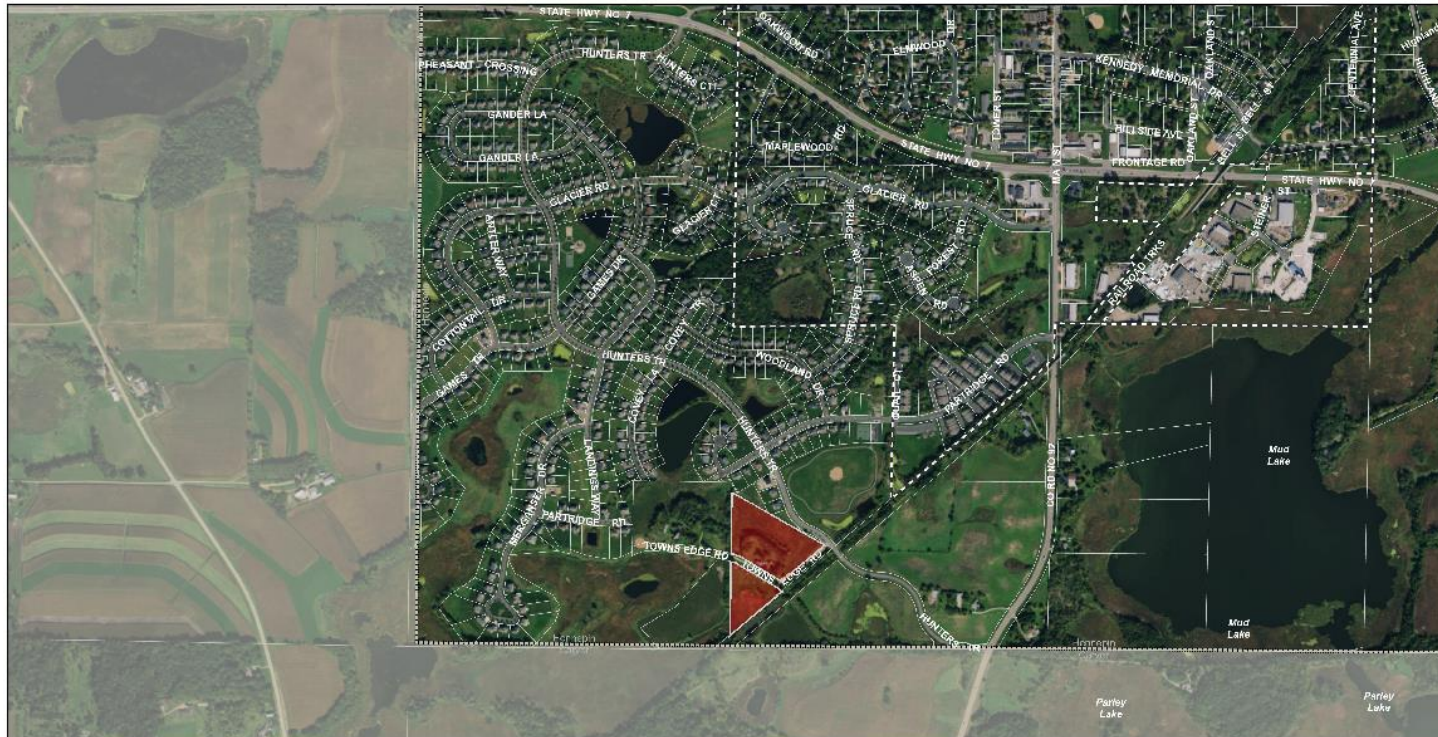


Site A: Maas Property

Maas Property
9200 Towns Edge Road

- Wanted to buy 1 acre of the approximate 10 acres; was for sale for ~\$400,000, but off market now
- Maas family has ~10 owners; all have to agree to sell part/all of the property; only would sell entire property; cost and size of property a detriment
- Very near some HC residents; especially the 'high point' of the property site where the Water Tower would work best

9200 Towns Edge Road



January 6, 2017
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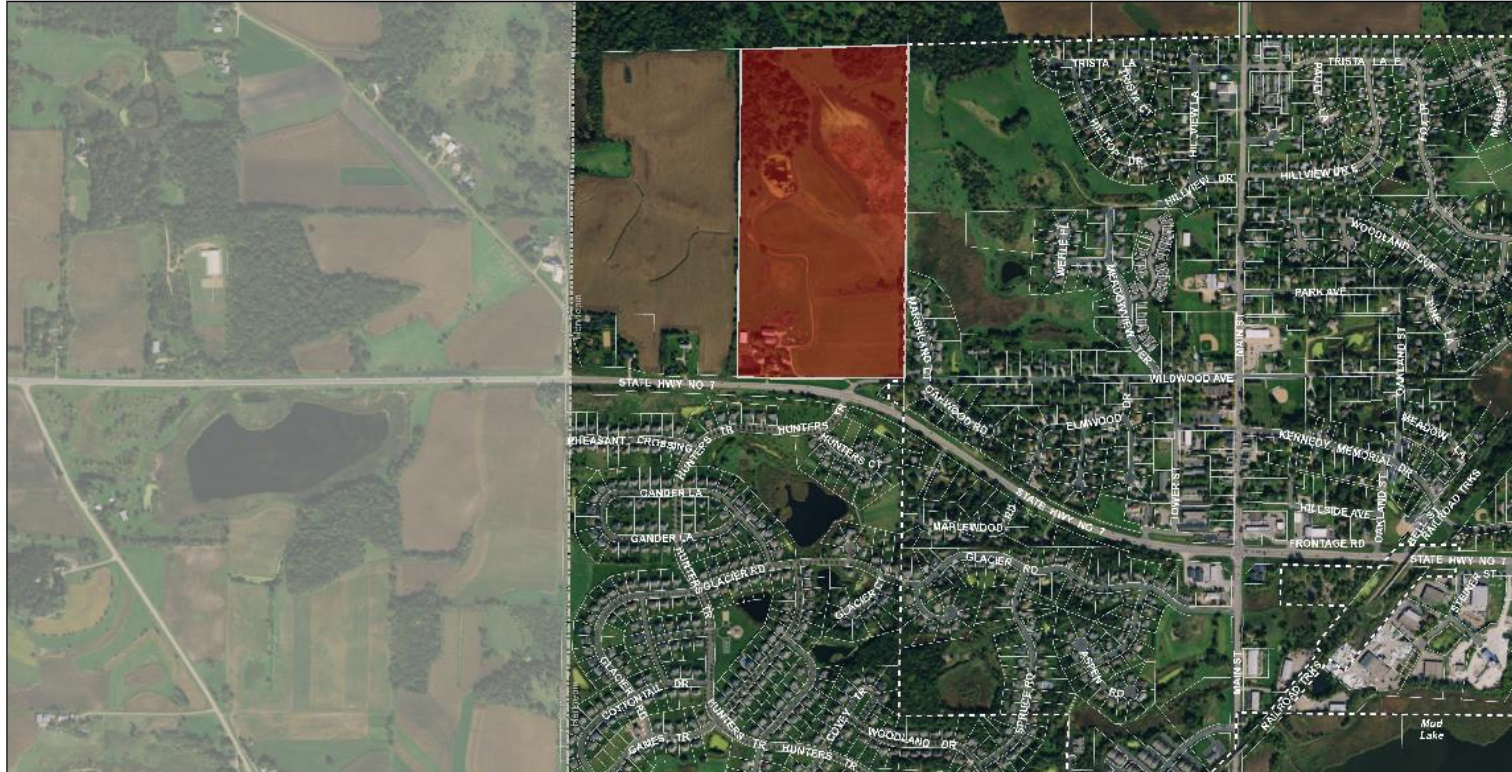
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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics,
CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User
Community

Site B: Thurk Property

Thurk Property
9300 State Highway 7

- 80 acres currently enrolled in Agriculture Preservation Program
- Unavailable for purchase while in the Ag Preserve program through 2024-25
- Unavailability plus property size and cost make it prohibitive to purchase
- Best site based on “engineering” aspects – elevation, proximity to water main, etc.

9300 State HWY NO 7



1 inch = 752 feet



January 6, 2017

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Site C: Hunter's Crest HOA

3615 Hunters Trail



1 inch = 376 feet



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Hunter's Crest HOA

3615 Hunters Trail (near
entrance of HC off Hwy 7)

- 2.76 acres in size
- Probably not a site the HC HOA would deem as desirable

Site D: Hunters Pass property

4655 CO RD NO 92



1 inch = 752 feet



January 6, 2017
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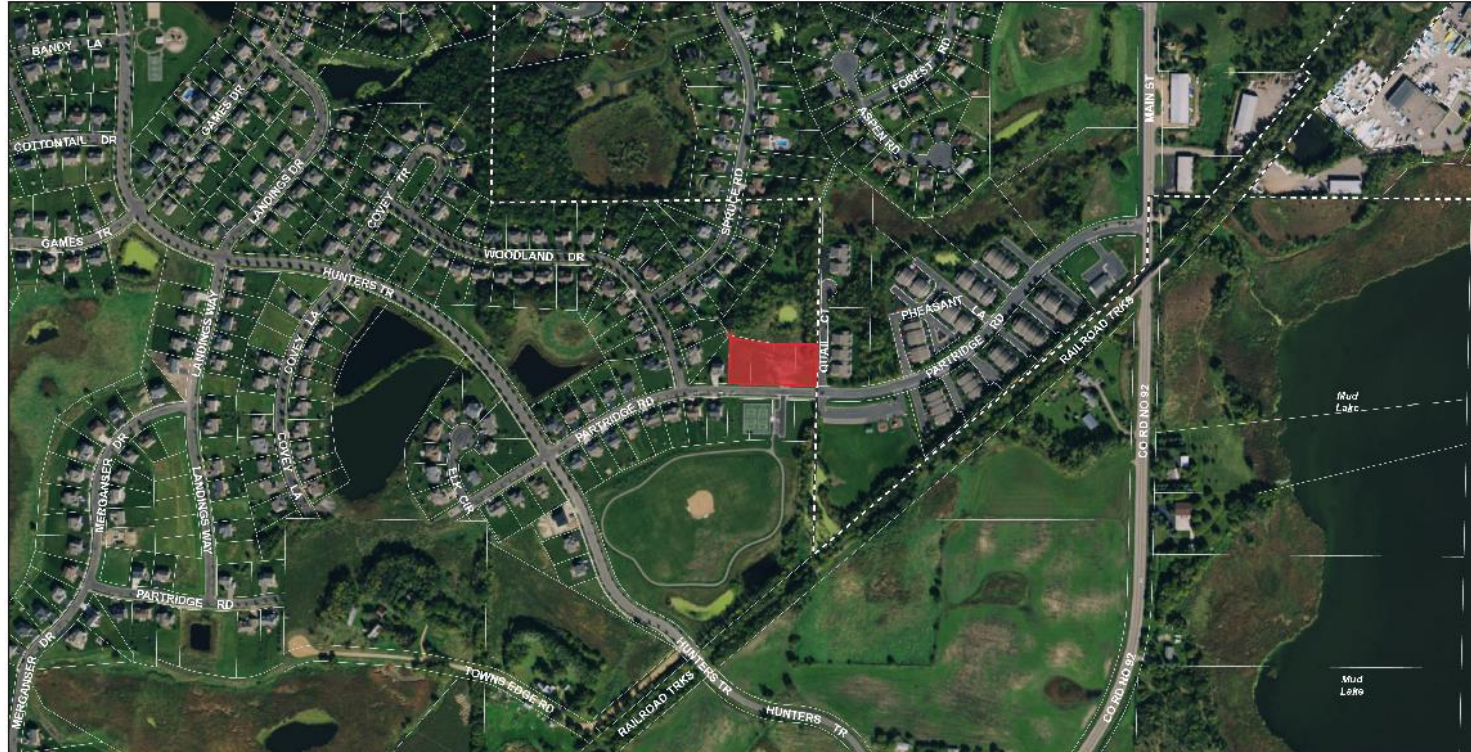
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Community

Hunters Pass property
4655 Co Rd 92 North

- 50.0 acres in size
- One of the originally thought of sites when Hunters Crest development was started
- Owned originally by Klinkner, but now is an L.L.C.
- Owner and attorney for owner would not discuss selling the property
- Zoned high-density, so value could be quite high, if purchased

Site E: Lisle Park

Lisle Park



1 inch = 376 feet



January 6, 2017
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Lisle Park property
4600 Hunters Trail

- Park is 15.5 acres in size
- Future amenities in Lisle Park may include an ice skating rink and warming house; a play structure; a splash pad
- City already owns the land, so economically beneficial to City; but in proximity to home
- Placing the Water Tower in the park may require giving up some use of park (opportunity cost is lost)

Site F: Outlot D

Outlot D

- Parcel is 7.46 acres in size
- Purchase agreement for \$220,000 between City and Commerce Bank; was a foreclosure property; covenants on property require HOA help to overcome
- Best value for city
- Compared to other properties looked at, very little impact since no homeowners directly abut the property



Two Foot Contours
2
10

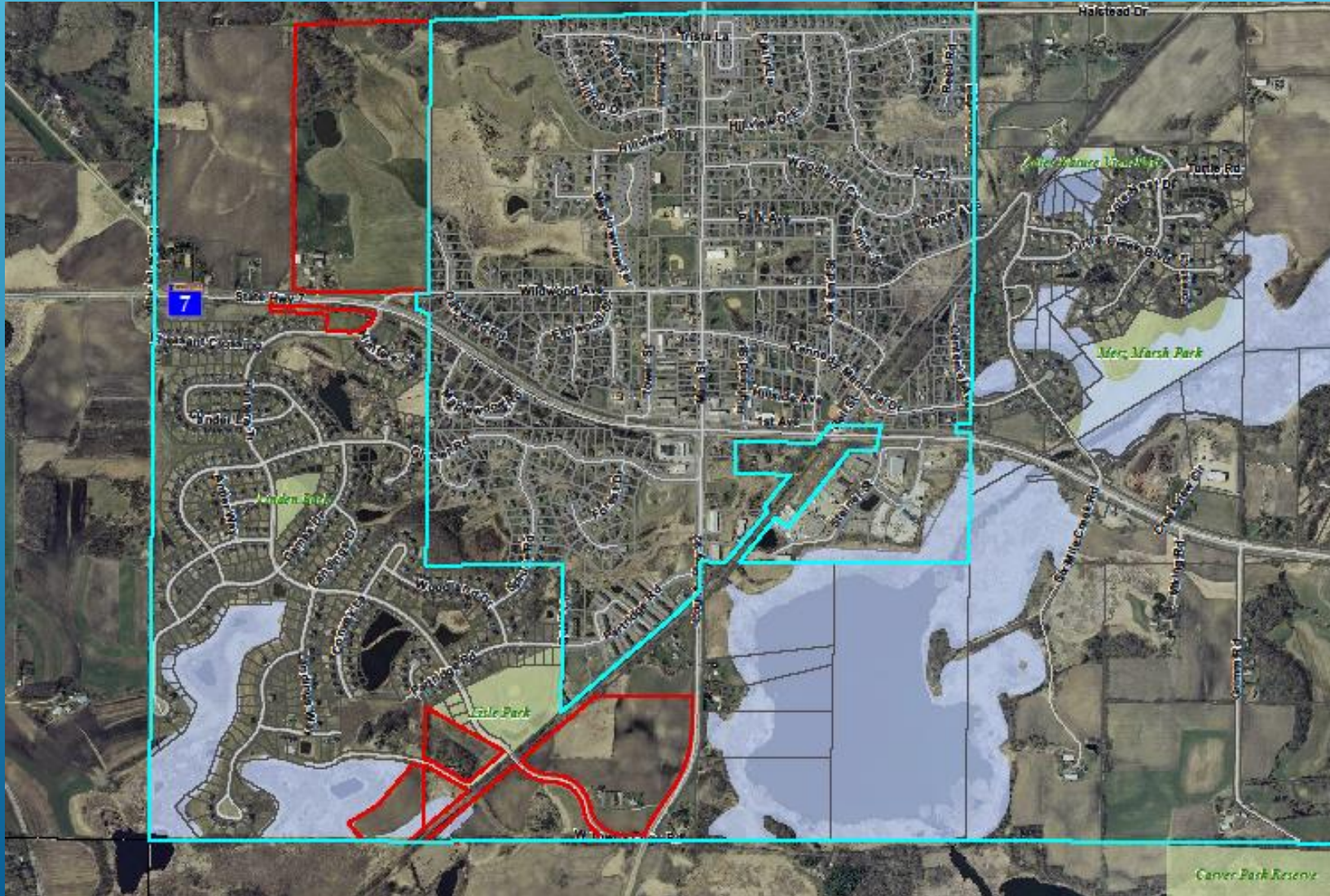
1 inch = 188 feet



June 30, 2016
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Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community
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Parcels Considered



QUESTIONS?

Hunter's Crest Water Tower Locations

January 17, 2017

City of Minnetrista