J Community Development Committee Environment Committee

For the Metropolitan Council meeting of August 25, 2010

ADVISORY INFORMATION

Date Prepared: August 17, 2010

Subject: City of Orono 2008-2030 Comprehensive Plan Update Review File No. 20637-1 Tier II Comprehensive Sewer Plan

Proposed Action:

That the Metropolitan Council adopt the attached Advisory Comments and Review Record, and the following:

- 1. Authorize the City of Orono to put its 2008-2030 Comprehensive Plan Update into effect.
- 2. Adopt the advisory comments for transportation and surface water management presented in those sections of the review record.
- 3. Advise the City:
 - a. To continue to participate in the Council's Plat Monitoring Program; and,
 - b. To work with Long Lake to resolve the intercommunity infrastructure agreements.
- 4. Accept the revised forecasts as shown in Table 1 of this report.
- 5. Approve changing the Regional Development Framework planning area designation for portions of the City of Orono from Diversified Rural Area to Rural Residential as shown on Figure 5 of the attached review record.
- 6. Approve the City of Orono's Tier II Comprehensive Sewer Plan.

Summary of Committee Discussion / Questions:

Community Development Committee

Jim Uttley, planning analyst in Local Planning Assistance, introduced Orono Mayor Jim White, City Administrator Jessica Loftus, Assistant City Administrator Michael Gaffron, and planning consultant Steve Grittman. Long Lake representatives attending included Mayor Randy Gilbert, City Administrator Terry Post, and City Engineer Dan Boxrud.

Uttley presented an overview of the staff review and conclusions that the Update is in conformance with the Council's regional system plans and all Council policies. He indicated that Long Lake had expressed concerns about water supply for a 4.6-acre guided multiple family residential site.

Uttley handed out copies of a letter from Long Lake city administrator Terry Post sent to Chair Bell and Council Member McFarlin on August 12, 2010 and an accompanying memorandum from city engineer Dan Boxrud dated June 18, 2010 related to "water service to Orono."

Long Lake representatives spoke of their concern as the potential source of water to any development in this location in Orono and Mayor Jim White of Orono responded. Long Lake Mayor Randy Gilbert advised the CDC that Long Lake only wanted to express their concern with the potential issue but not was suggesting that Orono's Update by rejected or that any changes

to it be required by the Council. Chris Elvrum, the Council's Water Supply manager confirmed that Council staff found that the Long Lake and Orono Updates' water supply plans were consistent with Council policy and that water supply is not a regional system.

The Committee voted to recommend that the Council adopt the attached Advisory Comments and Review Record, and proposed actions noted above.

Environment Committee

Kyle Colvin, Assistant Manager, Engineering Services, provided members of the Environment Committee a summary of the discussions that occurred during the Community Development Committee on August 16th regarding Long Lake's expressed concerns over the multifamily land use proposed by Orono and located adjacent to Long Lake. Colvin explained through the use of a map that identified the location of the proposed multifamily land use, how water service to this general area of Orono is provided by Long Lake. The focus of Long Lake's concern over the proposed multifamily land use is one of fire suppression for this type of use. The City has adequate water supply to provide for the daily use for this area at this development type, but lacks system capacity to provide fire protection. Colvin stated that the provision of water service for these uses will be negotiated between the two communities.

Council Member Wittsack asked if Long Lake was satisfied with the Orono's response to their concern over water supply as it relates to fire protection. Colvin explained that the existing agreement between the two communities would need to be either amended or a new agreement drafted to resolve the water supply capacity issue. Council Member Lepik asked whether Orono could provide water service to the area. Mike Gaffron, Assistant City Administrator, stated that extending water service to this area from areas within the City that currently have water would be a cost prohibited project. He thought that an amendment to the agreement would be the more likely process. Council Member Leppik asked whether today's approval was conditioned on the two communities reaching an agreement over the water supply issue. Staff stated that no, today's action is to approve Orono's Tier II sewer plan and that the water supply issue is separate and is highlighted in the report as an advisory comment. Council Member Leppik also asked if the multifamily use was required for Orono to meet its 3 units per acre residential density. Staff stated that it was not. If this area was to develop at a low density residential level, the City's overall residential density would still be above 3 units per acre. Motion to approve the City of Orono's Tier II Comprehensive Sewer Plan was made, seconded, and passed unanimously.

C Community Development Committee Meeting date: July 13, 2010

F

Environment Committee

Meeting date: July 19, 2010

| ADVISORY INFORMATION |
|-----------------------------|
|-----------------------------|

| Subject: | City of Orono 2008-2030 Comprehensive Plan Update Review File No. 20637-1 Tier II Comprehensive Sewer Plan |
|-------------------------|------------------------------------------------------------------------------------------------------------------|
| District(s), Member(s): | District 3, Councilmember Bob McFarlin |
| Policy/Legal Reference: | Minnesota Statute Section 473.175 |
| Staff | Jim Uttley, Principal Reviewer (651-602-1361) |
| Prepared/Presented: | Phyllis Hanson, Manager, Local Plng Assistance (651-602-1566) |
| | Kyle Colvin, Engineering Services Asst. Manager (651-602-1151) |
| Division/Department: | Community Development / Planning and Growth Management |
| | Environmental Services / Engineering Services |

Proposed Action

That the Metropolitan Council adopts the attached Advisory Comments and Review Record, and the following:

Recommendations of the Community Development Committee

- 1. Authorize the City of Orono to put its 2008-2030 Comprehensive Plan Update into effect.
- 2. Adopt the advisory comments for transportation and surface water management presented in those sections of the review record.
- 3. Advise the City:
 - a. To continue to participate in the Council's Plat Monitoring Program; and,
 - b. To work with Long Lake to resolve the intercommunity infrastructure agreements.
- 4. Accept the revised forecasts as shown in Table 1 of this report.
- 5. Approve changing the Regional Development Framework planning area designation for portions of the City of Orono from Diversified Rural Area to Rural Residential as shown on Figure 5 of the attached review record.

Recommendations of the Environment Committee:

Approve the City of Orono's Tier II Comprehensive Sewer Plan.

ADVISORY COMMENTS

City of Orono 2008-2030 Comprehensive Plan Update and Tier II Comprehensive Sewer Plan

Review File No. 20637-1 - Council Business Item No. 2010-281

The following Advisory Comments are part of the Council action authorizing the City to implement its 2008 Comprehensive Plan Update ("Update") and approving the City's Tier II Comprehensive Sewer Plan:

Community Development Committee

- 1. The City is reminded that Minnesota Statutes 473.864 requires the City to:
 - (a) Formally adopt the Update within nine months following Council action
 - (b) Submit two copies to the Council, and
 - (c) Submit a copy of the City Council Resolution adopting the Update following final action to the Metropolitan Council.
- Local governmental units must adopt official controls as described in their adopted comprehensive plans and must submit copies of the official controls to the Council within 30 days after official controls are adopted. (Minn. Stat. § 473.865, subd. 1).
- 3. Local governmental units cannot adopt any official controls or fiscal devices that conflict with their comprehensive plans or which permit activities in conflict with the Council's metropolitan system plans. (Minn. Stat. §§ 473.864, subd. 2; 473.865, subd. 2). If official controls conflict with comprehensive plans, the official controls must be amended within nine months following amendments to comprehensive plans. (Minn. Stat. § 473.865, subd. 3).

Environment Committee

- 1. The Council-approved Tier II Comprehensive Sewer Plan becomes effective after the Update receives final approval by the City Council. After the Tier II Sewer Plan becomes effective, the City may alter, expand or improve its sewage disposal system consistent with the Council-approved Tier II Sewer Plan and the Update.
- 2. A copy of the City Council Resolution adopting its Update, including the Tier II Sewer Plan, must be submitted to the Council.

Background

The City of Orono (City) is located in west central Hennepin County, bounded by Independence, Long Lake, Medina, Minnetonka Beach, Minnetrista, Mound, Plymouth, Spring Park, Tonka Bay and Wayzata. Figure 1 shows the general location of Orono and surrounding communities on the northern side of Lake Minnetonka, and the Council's *2030 Regional Development Framework* (RDF) designations of Orono, as both a "developing" and a "diversified rural" community. The RDF says that developing communities should accommodate growth forecasts through reinvestment at appropriate densities of 3-5 units plus per acre overall targeting higher density in locations with convenient access to transportation corridors and with adequate sewer capacity; and that rural diversified communities should accommodate growth not to exceed forecasts and clustered development not to exceed 1 unit per 10 acres. Figure 2 shows existing and planned regional systems in Orono and the surrounding area.

The Council and the City of Orono have a long and complex history with respect to land uses, lifecycle and affordable housing, sewered residential densities and regional wastewater service issues and agreements. In 1996, Orono submitted a comprehensive plan amendment (Review File #15690-3, Business Item #96-21) that was reviewed and acted on by the Council (see attachments). The action allowed Orono to incorporate 399 acres of development area into the MUSA, and created a pool of 50 residential equivalent connections (RECs) to accommodate future connection of existing residences adjacent to existing sewer lines. Figure 3 is a map that shows the 1996/1998 existing and proposed MUSA, as well as 1995-2008 residential and commercial SAC units in the city. This review of the City's 2008-2030 Comprehensive Plan Update will have the effect of setting aside all earlier agreements and documenting the locations of the 50 RECs. The Update also fully addresses and provides land use guiding and opportunities to meet the housing policies on the Council. Both Council and City staff met numerous times to facilitate an Update that meets both the City's visions and the Council's policies.

Rationale – Standard of Review & Findings

- 1. Does the proposed Plan conform to Regional Systems Plans?
- 2. Is the Plan consistent with Metropolitan Council policies?
- 3. Is the Plan compatible with plans of adjacent governmental units and plans of affected special districts and school districts?

Conformance with Regional Systems Plans:

| 1. | Regional Parks | Yes |
|------------|----------------------------------------------------|-----|
| 2. | Transportation including Aviation | Yes |
| 3. | Water Resources Management | Yes |
| | (Wastewater Services and Surface Water Management) | |
| ^ - | weistent with Coursell Deline Demoissmenter | |

Consistent with Council Policy Requirements:

| 1. | Forecasts | Yes |
|----|----------------------------------------------------|-----|
| 2. | Housing | Yes |
| 3. | 2030 Regional Development Framework and Land Use | Yes |
| 4 | Individual Sewage Treatment Systems (ISTS) Program | Yes |
| 5. | Water Supply | Yes |

Compatible with Plans of Adjacent Governmental Units and Plans of Affected Special Districts and School Districts

| 1. | Compatible with other plans | Yes |
|----|-----------------------------|-----|
| | | |

Funding

None

Known Support / Opposition

There is no known opposition.

REVIEW RECORD Review of the City of Orono 2008-2030 Comprehensive Plan Update

STATUTORY AUTHORITY

The Metropolitan Land Planning Act (MLPA) requires local units of government to submit comprehensive plans (plans) and plan amendments to the Council for review and comment (Minn. Stat. § 473.864, Subd. 2). The Council reviews plans to determine:

- Conformance with metropolitan system plans,
- Consistency with other adopted Plans of the Council, and
- Compatibility with the Plans of other local jurisdictions in the Metropolitan Area.

The Council may require a local governmental unit to modify any plan or part thereof if, upon the adoption of findings and a resolution, the Council concludes that the Plan is more likely than not to have a substantial impact on or contain a substantial departure from metropolitan system plans (Minn. Stat. § 473.175, Subd. 1).

Each local government unit shall adopt a policy plan for the collection, treatment and disposal of sewage for which the local government unit is responsible, coordinated with the Metropolitan Council's plan, and may revise the same as often as it deems necessary. Each such plan shall be submitted to the Council for review and shall be subject to the approval of the Council as to those features affecting the Council's responsibilities as determined by the Council. Any such features disapproved by the Council shall be modified in accordance with the Council's recommendations (Minn. Stat. § 473.513).

CONFORMANCE WITH REGIONAL SYSTEMS

Regional Parks

Parks and Trails

Reviewer: Jan Youngquist, CD – Regional Parks System Planning, (651-602-1029)

The Update is in conformance with the 2030 Regional Parks Policy Plan. The Update acknowledges the regional parks system facilities in Orono, which include Morris T. Baker Park Reserve, Noerenberg Gardens, Big Island Regional Park, Lake Independence Regional Trail, Dakota Rail Regional Trail and Luce Line State Trail. The Update also facilitates long range planning for Baker Park Reserve and Big Island Regional Park by guiding the future land use of inholding parcels as "Park, Recreational and Open Space."

Transportation

Roads and Transit

Reviewer: Ann Braden, MTS – Systems Planning, (651-602-1705)

The Update is in conformance with the *Transportation Policy Plan* (TPP) adopted in 2004, and addresses all the applicable transportation and transit requirements of a comprehensive plan.

Orono is served by one principal arterial, TH 12 that has recently been expanded, as well as several "A" Minor arterials.

Orono is within the Metropolitan Transit Taxing District and is in Transit Market Area III. Service options for Market Area III include peak-only express, small vehicle circulators, midday circulators, special needs paratransit (ADA, seniors), and ridesharing

Advisory Comment:

The TAZ-allocation table (Table 4A-2) on page 4A-14 of the CPU shows employment totals that reflect <u>sewered</u> areas and are, therefore, slightly less than the actual city totals as identified in Table 2-2 on page 2-6. MTS staff will modify this TAZ-allocation table for use in its travel demand modeling.

Aviation

Reviewer: Chauncey Case, MTS – Systems Planning (651-602-1724)

The Update is in conformance with the TPP and is consistent with Council aviation policy.

Water Resources Management

Wastewater Service

Reviewer: Kyle Colvin, ES – Engineering Services, (651-602-1151)

The Update is in conformance with the *Water Resources Management Policy Plan (WRMPP*). The Update summarizes the City's vision for the next 20 years or to year 2030. It includes growth forecasts that are consistent with the Council's recommended forecasts for population, households, and employment.

Current wastewater treatment services are provided to the City by the Council. Wastewater generated within the City is conveyed to and treated at the Council's Blue Lake Wastewater Treatment Plant located in Shakopee. The City is provided wastewater conveyance service through interceptors 7113, 7113A, 8567, 6-OR-641, and 8352. The City's Update projects it will have 3,020 sewered households and 1,595 sewered employees by 2030. The Metropolitan Disposal System with its scheduled improvements has or will have adequate capacity to serve the City's growth needs.

The Update provides sanitary flow projections in 10-year increments. The rationale, for the projections, is given in the Update and determined appropriate for planning for local services.

The RDF identifies the City as having two land use planning designations, one as developing and the other as diversified rural. The Update reflects a change in the diversified rural area to rural residential area. This change allows residential development to occur at lot size minimums of 2 Acres in the rural residential area and 5 acres in the rural area. These residential densities, by themselves, preclude the efficient and economical future service of centralized wastewater services. Before any extension of wastewater services in the rural and rural residential areas could occur, the City would need to submit to the Council, for approval, a plan amendment outlining the proposed extension of service. The extension of metropolitan wastewater services to serve the rural and rural residential areas within the City would need to be consistent with the Metropolitan Urban Service Area (MUSA) Implementation Guidelines in effect at the time of the proposed amendment.

Current MUSA Implementation Guidelines adopted by the Council on September 12, 2007 says that existing developments that are part of townships or areas being annexed from townships, or areas that were developed prior to 1985 with failing septic systems and no on site alternative septic locations will not be counted against a city's density calculation.

Orono has been identified as a community impacted by wet weather occurrences. The City is currently on the Council's list of communities having an I/I reduction goal. The City has committed to mitigate excessive I/I at levels equal to the Council's Surcharge amount. The Update includes a description of a reduction plan which includes televised inspections, repair and replacement of the City's system as well as sump pump inspections. The City also has adopted an ordinance which prohibits the discharge of sump pumps into the sanitary sewer system.

Tier II Comments

Reviewer: Kyle Colvin, ES – Engineering Services, (651-602-1151)

The Tier II Sewer Element of the Update has been reviewed against the requirements for Tier II Comprehensive Sewer Plans for developing (urban reserve, diversified rural) communities. It was found to be complete and consistent with Council polices. Upon adoption of the Update by the City, the action of the Council to approve the Tier II Plan becomes effective. At that time, the City may implement its Update to alter, expand or improve its sewage disposal system consistent with the approved Tier II Sewer Plan. A copy of the City Council Resolution adopting its Plan needs to be submitted to the Metropolitan Council for its records.

Surface Water Management

Reviewer: Judy Sventek, ES – Water Resources Assessment (651-602-1156)

The Update is in conformance with the WRMPP for local surface water management. Orono lies within the Minnehaha Creek watershed. The Minnehaha Creek Watershed District's watershed management plan was approved by the Board of Water and Soil Resources (BWSR) in 2007.

The city of Orono submitted its SWMP to the Council for review in June 2010. Council staff found the plan to be consistent with its WRMPP. Council staff also found the plan to provide an excellent framework for the city to successfully manage its water resources. Finally, the plan was found to do an excellent job of integrating the many diverse storm water programs and requirements such as impaired waters, non-degradation, quantifiable water quality goals and wetland management.

Advisory Comment

The city needs to send the Council a copy of the final adopted SWMP along with the date the watershed district approves the plan and the date the city adopts the final plan.

CONSISTENCY WITH COUNCIL POLICY

Forecasts

Reviewer: Todd Graham, CD - Research, (651-602-1322)

The Update is consistent with Council's forecast expectations and consistent with regional policy. Forecasts are consistently presented in several sections of the Update. The City's uses the Metropolitan Council's System Statement forecasts of population and households.

The Update uses revised employment forecasts, discussed with Council staff in 2009: 135-140 jobs are added to each of the 2010, 2020 and 2030 forecasts. Council staff finds the employment forecast revisions to be reasonable and acceptable. The Council's employment forecasts will be officially revised, as shown below, effective upon Council action on the Update.

| | Census | Previous | Council F | orecasts | Revised Council Forecasts | | | |
|------------|--------|----------|-----------|----------|----------------------------------|-------|-------|--|
| | 2000 | 2010 | 2020 | 2030 | 2010 | 2020 | 2030 | |
| Population | 7,538 | 8,300 | 9,500 | 9,800 | 8,300 | 9,500 | 9,800 | |
| Households | 2,766 | 3,200 | 3,950 | 4,100 | 3,200 | 3,950 | 4,100 | |
| Employment | 1,110 | 1,230 | 1,420 | 1,500 | 1,370 | 1,555 | 1,635 | |

Table 1 - Council Forecast – City of Orono

| | Census | Revised Council Forecasts | | | | |
|---------------|--------|---------------------------|-------|-------|--|--|
| | 2000 | 2010 | 2020 | 2030 | | |
| Population | 7,538 | 8,300 | 9,500 | 9,800 | | |
| Unsewered | 2,453 | 2,500 | 2,500 | 2,500 | | |
| Metro Sewered | 5,085 | 5,800 | 7,000 | 7,300 | | |
| Households | 2,766 | 3,200 | 3,950 | 4,100 | | |
| Unsewered | 900 | 944 | 1,000 | 1,080 | | |
| Metro Sewered | 1,866 | 2,256 | 2,950 | 3,020 | | |
| Employment | 1,110 | 1,370 | 1,555 | 1,635 | | |
| Unsewered | 0 | 35 | 40 | 40 | | |
| Metro Sewered | 1,110 | 1,335 | 1,515 | 1,595 | | |

 Table 2 - Council Forecast Segmented by Sewer Service – City of Orono

2030 Regional Development Framework and Land Use

Reviewer: Lisa Barajas, CD – Local Planning Assistance, (651-602-1895)

The Update is consistent with the RDF planning area designation of a portion of the community as "Developing" (in the south along the lake). The RDF designates the remainder of the community as a "Diversified Rural" area (in the northern portion). The Update proposes that the "Diversified Rural" area be re-designated as "Rural Residential" Staff finds the proposal acceptable and recommends that the Council accept the proposed change in the planning designation and find the Update is consistent with the RDF, as amended.

Developing Area Policies

Developing communities are expected to accommodate growth, support centers along centers, and encourage the development of communities where shopping, jobs, and a variety of housing choices co-existing by design. Developing communities are expected to accommodate sanitary sewered residential growth at a net density of 3 to 5 units per acre.

The Update identifies policies to integrate future urban development into existing neighborhoods, maintain diversity in housing and shopping opportunities, encourage commercial facilities and social centers that complement existing development, and carefully plan for environmental protection in urban areas to reduce impacts on Lake Minnetonka.

The Update plans to accommodate forecasted growth within the City's existing MUSA boundary with a few small additions to the existing MUSA. Much of this land is already developed or encumbered with natural resource constraints; however, the City has identified approximately 223 net acres of land available for residential development within the MUSA. As shown in the Update's Map 3B-6a and in Table 3B-4c (supplemental materials received June 1, 2010), the City is guiding 123 acres of these planned development areas for Low Density Residential at 0.5 to 2 units per acre, about 53 acres at Medium-High Residential at 7 to 10 unit per acre, about 20 acres for High Density Residential at 10 to 15 units per acre, and another 27.5 acres for Mixed Use at 4 to 15 units per acre. The existing and approved 2008-2030 MUSA includes all of the City of Orono shown in Figure 5 of this report except areas designated as "Rural (1 unit/5 ac)" and "Rural Residential (1 unit/2 ac)" or as "Park, Recreational, and Open Space."

As shown in Table 3 below, planned residential land uses for these areas will result in a minimum net density of 3.31 units per acre, consistent with the Council's minimum density policy for sewered residential development.

| Table 5 – Plaineu Residential Net Density | | | | | |
|-------------------------------------------|------------------|-------|--------------|-------|-------|
| | Density Range | | | Min | Max |
| Category | Min | Max | Net Acres | Units | Units |
| Low Density (D, E) | 0.5 | 2 | 123.16 | 62 | 246 |
| Med-High (A) | 7 | 10 | 52.85 | 370 | 529 |
| High Density (A, B, C) | 10 | 15 | 19.79 | 198 | 297 |
| Mixed Use (F) | 4 | 15 | 27.52 | 110 | 413 |
| | Т | OTALS | 223.32 | 740 | 1484 |
| | | Ove | rall Densitv | 3.31 | 6.65 |

Table 3 – Planned Residential Net Density

Information found in supplemental materials received June 1, 2010. Adapted from text and information in Table 3B-4c, with specific locations identified on Map 3B-6a.

The City also participates in the Council's Plat Monitoring Program, with data on sewered residential development dating back to the year 2000. Since 2000, the City has approved 9 subdivisions encompassing 272 housing units on 79.64 net acres, resulting in a net density of 3.4 units per acre.

Diversified Rural Area Policies

The RDF directs Diversified Rural areas to accommodate forecasted growth without requiring the provision of regional urban services. In addition, Diversified Rural areas are expected to protect natural resources, to prevent scattered rural residential development, and to adopt conservation subdivision, cluster, or other environmental protection provisions in their ordinances. The RDF indicates that densities in the Diversified Rural Area are not to exceed one unit per 10 acres.

The City focuses its development efforts within the proposed 2030 MUSA in the southern portion of the community where MUSA is in place. The Update describes the existing development pattern in the northern portion of the City (outside of the MUSA) as being predominantly 2- and 5-acre lots, with zoning established as such. As discussed in the Update, the northern portion of the City is also home to an abundance of wetlands, steep slopes, and sensitive natural resources and habitats, further limiting urban development patterns in this area.

The Update continues to guide the areas outside of the MUSA in the Diversified Rural Area as Rural at 1 unit per 5 acres, and as Rural Residential at 1 unit per 2 acres, as established in the City's comprehensive plan in 2000. The existing development pattern and continued guiding are not consistent with the Diversified Rural area maximum density policy of 1 unit per 10 acres. According to the RDF, Rural Residential areas are those that are currently developed at one unit per 2.5 acres or lesser densities and do not have plans to provide urban infrastructure, such as centralized wastewater treatment. The City does not have plans to extend urban services into areas outside of the MUSA.

Recommendation

Change the planning area designation for that portion of the City designated as Diversified Rural to Rural Residential in the *RDF*.

Housing

Reviewer: Linda Milashius, CD – Livable Communities, (651-602-1541)

The Update fulfills the affordable housing planning requirements of the MLPA. The Update acknowledges the city's share of the region's affordable housing need for 2011-2020 of 311 units. To provide opportunities to meet this need the Update indicates that approximately 53 acres of land will be available for medium-high density residential development, at 7-10 units per acre, and 20 acres of land for high density residential development, at 10-15 units per acre. The Update provides the implementation tools and programs the city will use to promote opportunities to address its share of the region's housing need. The Update indicates the city is committed to developing, maintaining and preserving affordable and life-

cycle housing, and will continue to use a variety of local fiscal tools to address housing needs, including CDBG, TIF, city funding of site improvements, deferral or forgiveness of development fees, and PUDs. The city will continue to partner with county, state and federal agencies to address affordable housing needs within the community, and will continue to participate as a member of the Lake Minnetonka Area Cooperating Cities that partner on a sub-regional approach to addressing housing needs in the area. Orono is a participant in the Local Housing Incentives Program of the Livable Communities Act, and has applied for and received a \$32,000 grant through the LCA program.

Individual Sewage Treatment Systems (ISTS) Program

Reviewer: Jim Larsen, CD – Local Planning Assistance, (651-602-1159)

The Update is consistent with the Water Resources Management Policy Plan for ISTS. The Update indicates that there are currently 1046 ISTS in operation in the City. The City has an exemplary ISTS maintenance management program in place. City staff inspects all existing systems for consistency with MPCA Rules and City Ordinances at least once every three years. The City's ISTS Ordinance and maintenance management program are consistent with MPCA Rules and Council policy requirements.

Water Supply

Reviewer: Christopher Elvrum, ES – Water Supply Planning, (651-602-1066)

The City's water supply plan (WSP) part of the Update is complete and consistent with the WRMPP. The Council recommends the city implement conservation education programs described in the plan targeted at lowering demand in all categories and implement programs to reduce the amount of unaccounted for water.

Resource Protection

Historic Preservation

Reviewer: Jim Uttley, CD – Local Planning Assistance, (651-602-1361)

The Update contains a section on Historic Preservation as required by the MLPA. The Update acknowledges that the City has many historic properties that have been lost or significantly changed by development or redevelopment "because no formal plan [for historic preservation] has been in place. The Update does not, however, contain a plan for historic preservation and says only that the City will "consider" development of such a plan.

Solar Access Protection

Reviewer: Jim Uttley, CD – Local Planning Assistance, (651-602-1361)

The Update addresses the subject of solar access protection as required by the MLPA.

Aggregate Resources Protection

Reviewer: Jim Larsen, CD – Local Planning Assistance, (651-602-1159)

The Update indicates, consistent with *Minnesota Geological Survey Information Circular* 46, that there are no viable aggregate resource deposits within the community.

Plan Implementation

Reviewer: Jim Uttley, CD – Local Planning Assistance, (651-602-1361)

The Update includes a description of:

| • | Capital Improvement Program | Yes |
|---|--------------------------------|-----|
| | Zoning Code | Yes |
| • | Subdivision Code | Yes |
| • | ISTS Codes | Yes |
| • | Housing Implementation Program | Yes |
| | | |

COMPATIBILITY WITH PLANS OF ADJACENT GOVERNMENTAL UNITS AND PLANS OF AFFECTED SPECIAL DISTRICTS AND SCHOOL DISTRICTS

The City submitted the 2008 Comprehensive Plan Update to 17 adjacent local units of government, school districts, counties and special districts for comment on June 10, 2009. The City received 14 communications including 7 "no comment." Only Long Lake, raised issues of compatibility with its plans. A copy of the Long Lake letter is attached. Council staff requested that Orono respond to the issues raised by the City of Long Lake.

The City of Long Lake objects a site that the "fire station site" proposed for multiple family (MF) residential. Council staff has examined Long Lake's position and finds that they do not rise to the level of metropolitan significance.

Council Environmental Services (ES) staff re-examined the Orono and Long Lake water supply plans in light of Long Lake's letter and found that both cities have adequate water supply wells. The Council staff does not analyze or comment on local water supply distribution systems.

Historically Orono and Long Lake have agreed to allow Orono to access sanitary sewer mains and water supply in Long Lake. Recently the cities have been negotiating updating the intercommunity agreements. It is recommended that the two cities consider requesting assistance from the Minnesota Office of Dispute Resolution or some other third party mediation service as a way to address and resolve their disagreements.

DOCUMENTS SUBMITTED FOR REVIEW:

The submittal is a total of 615 pages and includes the following:

- Orono cover letter of July 23, 2009 for submittal of Update (2 pages)
- 2008 Comprehensive Plan Update Transmittal Form (5 pages)
- Sample Review Letter, List of 25 Communities, Special Districts & Agencies sent a copy of the Update on June 10, 2009, Sample Response Form and 6 responses received as of July 23, 2009 from MnDOT, Wayzata Public Schools, Hennepin Conservation District and the cities of Minnetrista, Minnetonka Beach, Spring Park, and Tonka Bay. (10 pages)
- City of Orono Community Management Plan 2008-2030 (Comprehensive Guide Plan Update) May 2009 edition (598 pages), which contains:

ATTACHMENTS

Figure 1 - Location Map with 2030 Regional Development Framework Planning Areas

- Figure 2 Regional Systems Map
- Figure 3 Existing Land Use Map

Figure 4 - 2030Land Use Plan Map

Table 2 - Existing and Planned Land Use Table in 5-year Stages

Long Lake Letter of April 26, 2010 to Orono

Orono memorandum of June 30, 2010 to Uttley (copied to Long Lake)

Long Lake Letter of August 10, 2010 to Chair Bell with attached memo June 18, 2010 from S.E.H.

Katrina Wolsfeld Medina Mooney Dickeys Classen Lydiard Long Long Lake Hadley Hennepin Co. Wayzata Peavey Orono French Minnetonka Woodland Marion Mound Minnetonka Beach Deephaven Spring Park **Tonka Bay** Shorewood William Greenwood 0.25 0.5 1.5 1 3 2.5 Θ ANOKA Miles 1 **Regional Framework Planning Areas** Extent of Agricultural Area Main Map ON NEPH Developed Area 40 Developing Area **Diversified Rural** ARVER 2 Non-Council Area Rural Center PAKOTA SCOTT **Rural Residential** 0 C 20 Ncompass Street Centerlines, 2010

Figure 1 - Location Map and 2030 Regional Development Framework Planning Area, City of Orono

Figure 2 - Regional Systems, City of Orono





Figure 3 – 1996-2008 MUSA and SAC Activity in the City of Orono

Figure 4 - Existing Land Use, City of Orono



Existing Land Use

City of Orono Minnesota



Source: Bonestroo, Northwest Associated Consultants. Date: May 19, 2010.

Figure 5 - 2030 Land Use Plan, City of Orono



Table 2 - LAND USE TABLE IN 5-YEAR STAGES, CITY OF ORONO

| Table 3B-2: Orono Existing Land Use Summary (2008) | | | |
|----------------------------------------------------|---------|-----------|--|
| Land Use Category | Acreage | % of City | |
| Rural Residential | 2,709 | 17.6% | |
| Single Family Rural Residential | 1,214 | 7.9% | |
| Low Density Residential | 1,965 | 12.9% | |
| Single Family Medium Density Residential | 1,214 | 7.9% | |
| High Density Residential | 67 | 0.4% | |
| Commercial | 44 | 0.3% | |
| Office | 31 | 0.2% | |
| Industrial | 42 | 0.3% | |
| Institutional | 234 | 1.5% | |
| Park/Open Space | 1,796 | 11.7% | |
| Open Water | 5,244 | 34.1% | |
| Railroad | 114 | 0.7% | |
| Right-of-Way | 682 | 4.5% | |
| TOTAL | 15,356 | 100% | |
| Source: Existing Land Use Map | | • | |

| Table 3B-3: Orono 2030 Pla | nned Land Use S | ummary | | | | |
|------------------------------------|------------------|--------|--------|---------|--------|--------|
| 2030 Land Use Categories | | 2010 | 2015 | 2020 | 2025 | 2030 |
| | | | | Acreage | | |
| Rural (1 u | mit per 5 acres) | 1,214 | 1,214 | 1,214 | 1,214 | 1,214 |
| Rural Residential (1 u | nit per 2 acres) | 2,677 | 2,677 | 2,677 | 2,677 | 2,677 |
| Low Density Residential | (0.5-2 units/ac) | 1,921 | 1,921 | 1,921 | 1,921 | 1,921 |
| Low-Medium Density Residential | (2-3 units/ac) | 1,209 | 1,209 | 1,209 | 1,209 | 1,209 |
| Medium Density Residential | (3-7 units/ac) | 52 | 52 | 52 | 52 | 52 |
| Medium-High Density Residential | (7-10 units/ac) | 102 | 102 | 102 | 102 | 102 |
| High Density Residential | (10-15 units/ac) | 23 | 23 | 23 | 23 | 23 |
| Mixed Use | (4-15 units/ac) | 33 | 33 | 33 | 33 | 33 |
| Commercial | | 34 | 34 | 34 | 34 | 34 |
| Office | | 20 | 20 | 20 | 20 | 20 |
| Industrial | | 42 | 42 | 42 | 42 | 42 |
| Park, Recreational, and Open Space | | 1,785 | 1,785 | 1,785 | 1,785 | 1,785 |
| Institutional | | 227 | 227 | 227 | 227 | 227 |
| Open Water | | 5,244 | 5,244 | 5,244 | 5,244 | 5,244 |
| Railroad | | 114 | 114 | 114 | 114 | 114 |
| Right-of-Way | | 659 | 659 | 659 | 659 | 659 |
| TOTAL | | 15,356 | 15,356 | 15,356 | 15,356 | 15,356 |

April 26, 2010



City of Orono 2750 Kelley Parkway Crystal Bay, MN 55323

RE: Comments Regarding Orono 2030 Comprehensive Plan

To Whom it May Concern,

The City of Long Lake would like to make the following formal comments regarding the City of Orono 2030 Comprehensive Plan:

- We object to the re-guiding of the properties that immediately abut the City of Long Lake western border area immediately south of the TH 12 Bypass to Watertown Road from the previous single family residential use at a density of 2-3 dwelling units to up to 15 units per acre of medium and high density multifamily use. We believe that there is *no effective transition* from the City of Long Lake R-1 single family residential zoning to the proposed higher density multifamily housing re-guiding.
- 2. We question the availability of water to this higher density area. The supply of City of Long Lake municipal water to the re-guided higher density housing units is contingent upon the City of Long Lake making a determination that there is *sufficient capacity* in the City of Long Lake water system to expand in this area.
- Holbrook Park is a City of Long Lake public facility. We believe the proximity of reguided additional housing units to the park will impact the park with expanded use and greater maintenance costs. We are not aware of any methods being discussed in the 2030 Comprehensive Plan to *mitigate such impact*.
- Finally, a housing buildout of Outlet A, Wildfire Addition, would preclude any sort of expanded institutional use immediately adjacent to the existing Willow Fire Station No.
 We are not aware of any planned expanded use at this time, just making the observation that it would not even be a future consideration with this 2030 Comprehensive Plan Update.

Sincerely

Terrance R. Post Long Lake City Administrator cc: Metropolitan Council

MEMORANDUM

| To: | Jim Uttley, Metropolitan Council |
|----------|----------------------------------------------------------------------|
| From: | Mike Gaffron, City of Orono |
| Date: | June 30, 2010 |
| Subject: | City of Orono Position Statement - Long Lake CPU Comments of 4-26-10 |

Pursuant to your request the following is Orono's response to the comments made by the City of Long Lake regarding Orono's CPU. I would first note that although the City of Orono has not formally responded in writing to Long Lake's comment letter, it has responded in variety of ways to address their noted concerns.

First, the action of the City Council to approve the CPU for submittal was not taken lightly nor in a vacuum. After receiving public comments regarding the CPU at multiple public meetings, including comments from the City of Long Lake and many Long Lake and Orono residents, the City Council voted 4-1 to approve the CPU for submittal as delivered to Met Council for review on May 25, 2010.

Secondly, I would offer the following as representative of the City of Orono's position regarding the four Long Lake comments in their April 26 letter:

<u>LL</u>: "1. We object to the re-guiding of the properties that immediately abut the City of Long Lake western border area immediately south of the TH 12 Bypass to Watertown Road from the previous single family residential use at a density of 2-3 dwelling units to up to 15 units per acre of medium and high density multifamily use. We believe there is **no effective transition** from the City of Long Lake R-1 single family residential zoning to the proposed higher density multi-family housing re-guiding."

<u>Orono position</u>: It is not uncommon to have higher-density residential uses such as townhomes as a transition between single family residential uses and institutional, commercial or industrial uses. Further, the fact that the three parcels being reguided are bordered by a freeway corridor to the north; a public road and fire station to the west; a public road, one single family residence and a church to the south; and 3-4 single family homes and a public park on the east; suggests that the higher density housing for which these properties are being guided will itself act as the appropriate transition area between Long Lake's R-1 District and the surrounding non-residential uses. Orono believes that no additional transition between Long Lake's R-1 housing and Orono's higher-density housing is warranted.

<u>LL</u>: "2. We question the availability of water to this higher density area. The supply of City of Long Lake municipal water to the re-guided higher density housing units is contingent upon the City of Long Lake making a determination that there is sufficient capacity in the City of Long Lake water system to expand in this area."

<u>Orono position</u>: In 2002 Orono and Long Lake executed an Agreement with respect to the joint development of a fire station situated in Orono. This Agreement states that Long Lake will provide water service to Outlot A, Willowfire Addition (owned by the City of Orono)

and if there is sufficient capacity will provide water service to other defined parcels in the immediate area if so requested. The Agreement does not say that Long Lake has the sole right to determine whether or not there is capacity in the Long Lake water system. It is our position that Long Lake will have to prove to Orono's satisfaction that there is insufficient capacity, in order to deny service to the other defined parcels. As of the date the CPU was submitted to Met Council, Long Lake had provided Orono absolutely no data supporting a determination of insufficient capacity.

In a spirit of cooperation and at Orono's request, the respective mayors, city administrators and city engineers of Orono and Long Lake met in late May 2010 and agreed that Long Lake's engineer would complete a study of Long Lake's water capacity and forward it to the City of Orono by June 16th. That report has not been received as of today (June 30).

<u>LL</u>: "3. Holbrook Park is a City of Long Lake public facility. We believe the proximity of re-guided additional housing units to the park will impact the park with expanded use and greater maintenance costs. We are not aware of any methods being discussed in 2030 Comprehensive Plan to **mitigate such impact**."

<u>Orono position</u>: Holbrook Park is a public park, and is open to the general public, just as Hackberry Park in Orono just 500' away from the properties being reguided is a public park open to the general public. Orono does not suggest that Long Lake should mitigate any 'impacts' that Long Lake residents might have on Hackberry Park. We don't believe that development of higher density residential uses between the fire station and Holbrook Park will inherently require City of Long Lake expenditures for additional maintenance of, or improvements to, Holbrook Park. We also don't believe that the public safety responsibilities borne by Long Lake will be increased or changed simply by the development of higher-density residential development on the adjacent property in Orono.

<u>LL</u>: "4. Finally, a housing buildout of Outlot A, Wildfire(sic) Addition, would preclude any sort of expanded institutional use immediately adjacent to the existing Willow Fire Station No. 1. We are not aware of any planned expanded use at this time, just making the observation that it would not even be a future consideration with this 2030 Comprehensive Plan Update."

<u>Orono position</u>: The use of Outlot A, Willowfire Addition was never guided for institutional use in the 2000-2020 Comprehensive Plan; was not guided for institutional use in the June 2009 Draft Plan; and is not proposed to be guided for institutional use at this time. The City of Orono has never indicated intent to use this site for expanded institutional use.

The City had considered the possibility of high density housing at the fire station site as early as 2002, but took no formal action other than acknowledging the Outlot had the capability for development of housing at the guided density of 2-3 units per acre. During the fire station

approval process in 2002 it was clearly indicated on numerous occasions and documented in numerous memos, minutes and resolutions that the Outlot was intended for future residential use; there was absolutely no indication that this was intended as an expansion area for the fire station.

Finally, I would like to provide some background regarding the process which resulted in the subject properties being reguided from 2-3 units per acre SFR to 10-15 units per acre MFR.

Orono had guided this site and other properties east of Willow Drive (from the new Highway 12 corridor down to Watertown Road) for single-family housing at a density of 2-3 units per acre in the 2000 Comprehensive Plan. This density was consistent with existing neighborhoods in adjacent Long Lake and the Hackberry neighborhood of Orono.

When the fire station was developed in 2002, the property behind the fire station was not designated for future public use. Plat approvals granted in 2002 indicated that the property "would be retained by the City of Orono for potential future residential use". The property contains sewer lines, wetlands, and areas used for wetland mitigation and stormwater ponding for the fire station, all subject to platted easements, leaving the northerly portion of the site further developable.

The City received inquiries through the years as to whether high density housing was possible at this location. An adjacent vacant privately-owned parcel to the immediate north was partially taken for the new Highway 12, leaving that parcel with poorly-located access to Willow Drive. In combination, these two parcels are approximately 3-1/2 acres in developable area. The City staff and Council in recent years had informally contemplated that this combined site might be a good location for senior housing or other higher density housing.

The June 2009 Draft CPU submitted to adjacent jurisdictions for the 6-month review process and submitted informally to Met Council for comment did not re-guide the properties surrounding the fire station on Willow Drive. In August 2009 the Met Council staff in preliminary comments to Orono indicated that the City must guide additional land for higher density housing. About the same time, CommonBond approached the City and suggested they would like to develop affordable/workforce housing at the fire station site. City staff and Council took a closer look, and concluded there are a number of compelling reasons why this site is a good fit for higher density, and a better fit than most other potential locations in Orono. They include:

- 1) The location is not centered in rural Orono, but is mostly surrounded by public/institutional uses abutting the Highway 12 corridor to the immediate north, the fire station to the immediate west, Long Lake's Holbrook Park to the immediate east, and 3-4 adjacent single family residences to the southeast. On the south, the property abuts an Orono residence whose owner specifically asked that his property be guided at a similar high density, and further south across Glendale Drive is a church property.
- 2) The proximity to Holbrook Park is considered by Orono as a positive aspect of the site.

Metropolitan Council June 30, 2010 Page 4

- The proximity to public transportation (about 6 blocks to Metro Transit Bus Route 674) is a positive aspect of the site.
- 4) The proximity to Long Lake and Orono businesses is a positive aspect of the site, for both the businesses and the future residents of the site.
- 5) An additional positive aspect is that vehicle access to the site is via Willow Drive, an Orono collector road, and not directly through any local streets.

Revisions to the Draft Comprehensive Plan to re-guide a number of selected properties throughout Orono for higher density (including the properties that are the subject of Long Lake's comments) were formulated early in 2010, as a direct result of two interrelated factors:

a) Metropolitan Council requirement that future sewered development in Orono must meet an overall average of at least 3 units per acre. Consequently, Orono is proposing to reguide a number of areas to medium-high and high densities (7-10 and 10-15 units per acre respectively) as an offset in order to allow future sewered Shoreland development at the low densities historically planned for rural Orono; and

b) Metropolitan Council's determination that Orono's share of the metro-wide need for affordable housing is 311 additional units by 2020. Higher density is necessary in order for Orono to make progress towards achieving Met Council's affordability goals.

Other sites being reguided for higher density housing in northern Orono are west of Old Crystal Bay Road or near the Wayzata border, being quite remote from the services and amenities that make the fire station site immediately attractive for higher density housing.

The City reviewed the availability of sewer and water to the fire station site in early 2010 before CommonBond made its formal application for rezoning and development approvals. The Agreement noted earlier in this memo guarantees up to 350 units of sewer capacity in the sewer line that actually crosses the City-owned Outlot in question. The Agreement also guarantees water service availability to the Outlot, and indicates that if sufficient capacity is available, water service will also be provided to Orono properties south of the new freeway corridor, east of Willow Drive, and north of Watertown Road. The additional parcel CommonBond intended to acquire from a private party to accommodate a portion of their proposed development is within this designated area.

On June 14, 2010 at the direction of the Orono City Council a letter was sent by the City Administrator to CommonBond indicating that the City was not interested at this point in time in selling the Outlot per the conditions outlined by CommonBond in a proposed purchase agreement. The letter indicated there is a desire by the City Council to take a step back and study the site to determine what would be the best use for the site and whether that use should be furthered by a developer or by the City. In addition, it indicated that the City is taking a hard look at the financial circumstances surrounding the site and whether it makes sense to proceed with a proposal for deferred payment as opposed to a more traditional sale. Metropolitan Council June 30, 2010 Page 5

CommonBond subsequently formally withdrew its application. There are no applications pending for development of this site. The proposed re-guiding of this site to high density residential use remains an integral part of Orono's CPU.



Mr. Peter Bell, Chair Mr. Bob McFarlin, Council Member District 3 Metropolitan Council 390 Robert Street North Saint Paul, MN 55101-1805

Re: City of Long Lake Comment on City of Orono Draft Comp Plan Update

Gentlemen:

Mr. Uttley of Met Council staff has suggested that the City of Long Lake has the opportunity to both comment by letter, and in person, relative to the above subject. This letter response is intended to supplement an in person appearance by City of Long Lake representatives at the August 16, 2010 Community Development Committee meeting.

City of Orono Assistant City Administrator Mike Gaffron responded to a Metropolitan Council request to respond to City of Long Lake April 26, 2010 Orono Comprehensive Plan Update (CPU) comments in a June 30, 2010 memorandum to Jim Uttley. Following are City of Long Lake comments to City of Orono position statements:

- Long Lake continues to believe that guiding higher density Orono development against the western jurisdictional border of Long Lake is not effectively transitioned.
- 2. Regarding capacity in the Long Lake water system, a June 18, 2010 memorandum (enclosed) authored by City Engineer Dan Boxrud concludes that there is inadequate water storage to satisfy fire demand for a period of three hours assuming the base of Orono residents existing in the year 2000. Metropolitan Council Environmental Services Division has documented the number of new SAC units added in the last decade served by the Orono "east" water system that have only exasperated the ability of the Long Lake water system to deliver the required fire demand flow.
- Regarding Holbrook Park, it essentially functions as a neighborhood park. The City is very familiar with increased maintenance costs associated with its more central Nelson Lakeside Park that includes wider population amenity use including a swimming beach, fishing pier, boat launch, and well used park pavilion.

 The comment regarding housing redevelopment on Outlet A precluding further institutional use (fire station) was intended to just be an observation – not an objection.

As a neighboring community, we appreciate the chance to publicly comment during this review process.

Sincerely,

Terrance R. Post City Administrator

enc: SEH 06/18/10 Water Service to Orono Memorandum

cc: Long Lake City Council Jim Uttley, Metropolitan Council Ann Perry, Resource Strategies Corp. Don Boxrud, Short Elliott Hendrickson (SEH) .:

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TO: Terry Post

FROM: Dan Boxrud

DATE: June 18, 2010

RE: Water Service to Orono SEH No. ALONGL000301 14

This memorandum is submitted in response to your request at the conclusion of the meeting between representatives of the City of Long Lake and the City of Orono on May 26, 2010. The purpose of this memo is to briefly give the background on the reasons Long Lake's water system cannot provide service to additional water customers in the City of Orono. The background information goes back more than 10 years.

In September of 2000 SEH completed a *Report on Feasibility for Replacement of Sanitary Sewer and Water Facilities in Proposed Trunk Highway 12 Corridor* to address how to accommodate new TH 12. MnDOT was committed to reimburse Long Lake for the costs of relocating utilities in advance of construction of new TH 12. They would not pay for "betterment" of facilities, such as to serve demands due to future growth. Our study of the water system included the following:

- 1. The existing water systems in Long Lake and the area of Orono near Long Lake were reviewed together. This is because neither community was believed to have adequate water storage capacity to fight a "design" fire demand without using the interconnect between the two systems at Wayzata Boulevard and Willow Drive. For example, Long Lake has enough water storage capacity and a back up well for normal domestic peak flows, but a "design" fire demand placed on the system assumes the largest well is out of service and there would likely be a shortage with only one well and the storage available. Conversely, Orono had a lot of water storage but no back up well, so if a fire occurred when the well was down, they would likely run out of water. The water systems existing at the time are shown on Drawing No. 14 in an appendix of the report.
- 2. The existing average daily water use of 240,000 gallons per day (gpd) from Long Lake (1915 people) was included in the analysis.
- The existing average daily water use in Orono of 44,000 gpd (350 people) was included in the analysis.
- A Water Supply System Preferred Equivalent Replacement (Option 2) was developed to accommodate new TH 12 without degradation of the distribution of water to both communities (see Drawing No. 16).
- 5. Drawing No. 17 lays out a complete trunk water system that can ultimately deliver a design fire flow throughout both communities.
- 6. As far as water storage is concerned, without the interconnect considered open, it was found that, for a design 3 hour 3,500 gallons per minute (gpm) fire demand, Long Lake would be short of fire flow storage in the amount of 610,000 gallons (see Table No. 5 from the report).
- 7. Without the interconnect considered open, it was found that Orono would be short of fire flow storage in the amount of 280,000 gallons for the same fire demand (see Table No. 5 from the report).
- The water systems, even when the interconnect was considered open, were jointly short in delivering the design fire demand, indicating a need for an additional 170,000 gallons of elevated storage (see Table No. 10). However, the "merged" system significantly reduces the water storage shortage during a fire.

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Water Service to Orono June 18, 2010 Page 2

In summary, a watermain configuration was arrived at that replaced portions of Long Lake's water system in a manner that functioned as well as before new TH 12 was constructed, but water storage was lacking in both communities for the level of development at that time (1915 people in Long Lake, 350 people in Orono).

Long Lake has subsequently constructed most of the trunk distribution system improvements recommended on Drawing No. 17, including many not subject to reimbursement by MnDOT. This makes it possible to deliver the necessary fire flow rate to where it is needed in Long Lake, and it will be easier to deliver the necessary fire flow rate to Orono, but that does not improve storage which would still be short to satisfy the entire fire demand period of 3 hours.

When new Long Lake Well No 1 was built as part of the MnDOT reimbursed replacements, the available capacity came in at 1,000 gpm instead of its former capacity of 500 gpm. Long Lake opted to pay the additional cost to pump and treat 1,000 gpm. Therefore, when Long Lake's water tower was up for recoating, it was decided to examine whether it should be recoated or replaced with a new tower with more capacity to address the joint water storage issue. A study in March of 2003 included the following:

- 1. Two new water main interconnects were proposed between Long Lake and Orono across Wayzata Boulevard, generally consistent with the recommendations on Drawing No. 17.
- The average daily flows from Long Lake and Orono were assumed to be the same as in 2000 (44,000 gpd from 350 people served in Orono, 240,000 gpd from 1915 people in Long Lake).
- Because more and more buildings have fire sprinklers, a fire demand of 3,000 gpm for 3 hours was considered tolerable.
- 4. The result of the analysis showed that no additional storage was required to meet a fire demand of 3,000 gpm for 3 hours considering Long Lake's larger Well No 1.
- The interconnects were jointly paid for by Long Lake and Orono with this understanding that additional storage was no longer required.

A population of 350 people in Orono (44,000 gpd) connected to the system (Orono or Long Lake watermains) has always been assumed. Anything beyond that would require additional well capacity to avoid the available water storage running dry during a design fire demand. It is believed that quite a few additional water connections have already been made in Orono over the last decade, detracting from the ability of the system to deliver the required fire demand.

DRB

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