

ENVIRONMENTAL ASSESSMENT WORKSHEET

Rose Hill Senior Living Facility

Lindstrom, Minnesota

April 16, 2018



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Preface

The Rose Hill Senior Living project located in Lindstrom Minnesota is being proposed to serve a strong need for senior housing in the community. The location is on the hillside of the north shore of South Lindstrom Lake providing a serene setting for future residents to live their lives enjoying the views with access to the lake.

This is a redevelopment project repurposing an old rundown resort that has failing septic systems and dilapidated buildings and an unchecked boat access and runoff from the existing parcel to the lake. The proposed hookup to city sewer and water will eliminate the potential for future septic sewer issues and eliminate the existing wells on the property also allowing adjoining properties to hookup to the proposed water and sewer system. The site's unchecked runoff will now be managed with proposed rain gardens and underground storage system to clean, control and treat the water prior to entering the lake where no treatment exists today. The greatest environmental impact reduction for the site is the closing of the boat ramp and boat house facilities. This will be an immediate impact that the residents of the lake will benefit.

Many hours have been spent on locating and designing the proposed structure to mitigate the impact to surrounding residential homes without limiting the best view for the future residents. Our hope is to provide the City of Lindstrom's current aging population a respectful and beautiful home to live in while staying in the community they belong to.

Following is the question/answer portion of the EAW worksheet providing the necessary documentation needed to make a clear determination for the project. We look forward to working with the governmental agencies, City and its residents to provide the best setting for the future residents of Rose Hill.



ENVIRONMENTAL ASSESSMENT WORKSHEET

Rose Hill Senior Living Facility Lindstrom, Minnesota

April 16, 2018

The City Council of the City of Lindström found the EAW to be complete and authorized its distribution on January 18, 2018. The City distributed the EAW to the official EQB mailing list and published a press release on January 22, 2018. The EAW was filed with the EQB and notice of its availability for public review and comment was published in the EQB Monitor on January 29, 2018. The 30-day comment period started on January 29, 2018 and ended on February 28, 2018. A total of six comments were received regarding the EAW. The Planning Commission also held a public meeting to consider the EAW on February 7, 2018. Public comments received at the meeting included the following:

-) Visual impacts– concerns include the preservation of trees on the site, landscaping/screening for single family neighbors, and reducing the bulk of the building and the retaining wall
-) Request for appropriate construction practices to safely remove top soil
-) Concern about potential noise and visual impacts of heating/cooling units for the building
-) Concern about how the cabins and docks will be managed such that they do not impact the year-round residential neighbors

I. COMMENTS RECEIVED AND RESPONSES TO THE COMMENTS

The City of Lindström received five agency letters and comments at the Planning Commission meeting. The following subsections provide a summary of these comments and a response to them. The comment letters in their entirety are provided as attachments at the end of this document.

1. Minnesota Department of Administration – State Archaeologist, dated January 29, 2018

Comment: Due to the proximity to two cemetery/archaeological sites, it is recommended that a qualified archaeologist conduct survey to determine if the project could impact unrecorded archaeological or cemetery sites.

Response: A qualified archaeologist will be hired to review the site and at our request will provide documentation for our contractor for items to be aware of during excavation of the site.

2. Minnesota Historical Society, dated February 7, 2018

Comment 1: Due to nature of proposed project, it is recommended that a Phase I archaeological survey be completed.

Response: A survey will be completed as soon as weather cooperates and personnel are available to review the site.

3. Department of Army – Corps of Engineers, dated February 7, 2018

Comment 1: There will be a need for a permit if there is any activity within a navigable water of the U.S. This includes construction, excavation or deposition of materials (Section 10), as well as discharge of dredged or fill material (Section 404).

Response: The project will not involve the discharging or dredging within the water of the United States.

4. Minnesota Pollution Control Agency, dated February 28, 2018

Comment 1: Removal of existing structures must comply with state and federal regulations regarding hazardous materials.

Response 1: Proper remediation was conducted by the proper county inspectors with removal of hazardous materials being brought to a certified landfill.

Comment 2: A Sanitary Sewer Extension Permit from the MPCA may be needed.

Response 2: Do to the additional homes the City and this project is adding to the service line and the waste water treatment facility it is our opinion that a MPCA Sanitary Sewer Extension Permit will be required at the time the construction plans are complete.

Comment 3: Construction equipment shall be fitted with appropriate mufflers during operation and that construction hours be limited to 7 a.m. to 10 p.m.

Response 3: Construction plans and the contract will include hours of operation and the need for original factory installed mufflers to be required for equipment that is used on the site in compliance with city noise ordinances.

Comment 4: Cumulative potential effects need to be evaluated as part of Item 19 of the EAW.

Response 4: Our project will not significantly add to the

5. Minnesota Department of Natural Resources, dated February 28, 2018

Comment 1: DNR Water Appropriations Permit will be needed if dewatering in volumes that exceed 10,000 gallons per day or one million gallons per year.

Response 1: The site and all proposed construction is above an water table and no dewatering activities are expected except for rain water that may flood trenches if an unexpected storm were to occur. This

volume of water would not exceed the DNR threshold and would be removed in accordance with the MPCA Storm Water Permit through a dandy bag or similar approved BMP.

Comment 2: DNR requests that wildlife-friendly erosion control mesh be used if a mesh is needed.

Response 2: Wildlife-friendly erosion control materials will be used for the project.

Comment 3: Recommend that native species be used in landscaping within planned raingardens, property boundary screening, and other landscaped areas.

Response 3: The rain gardens will be planted with native species of shrubs and trees. The proposed plan will incorporate perennial plants, native dogwoods and river birch to help in removal of the water from each of the basins.

6. Public Comments at February 7, 2018 Planning Commission Meeting

Comment 1: Visual impacts– concerns include the preservation of trees on the site, landscaping/screening for single family neighbors, and reducing the bulk of the building and the retaining wall

Response 1: The mass of the building will be mitigated by preserving as much of the tree cover/vegetation on the perimeter of the site as possible. Where possible, trees, bushes, and shrubs will be used to lessen the visual impact of the retaining walls on the site.

A landscape plan has been prepared that shows the screening of the property on the west and east with evergreens and a mixture of deciduous trees on the north and south and internally to replace the trees that will be required to be removed to construct the utilities and building foundation.

A number of trees will remain outside of our construction limits between the lake edge and the ordinary high water level. Additional trees will also be saved along the eastern border.

A line of spruce are shown to be planted on the south portion of the proposed right of way that will visually block the view of the retaining wall from neighbors to the south.

Comment 2: Request for appropriate construction practices to safely remove top soil.

Response 2: Prior to construction, erosion control measures will be fully established to mitigate off-site contamination. Silt fences and bio-logs will be utilized before and during construction to help with sediment movement. These soil control methods will be maintained throughout the course of construction and removed once permanent vegetation has been established.

Comment 3: Concern about potential noise and visual impacts of heating/cooling units for the building.

Response 3: Boiler systems are used in the building reducing the need for large mechanical equipment sitting outside of the building. AC Units will be installed with city required screening and fencing to direct any noise upwards and to be as respectful to existing neighbors as possible.

Comment 4: Concern about how the cabins and docks will be managed such that they do not impact the year-round residential neighbors.

Response 4: Cabins and docks will have the same usage as other properties on the lake and will provide a reduced impact on the neighboring properties and the overall usage of the lake. The cabins are not a commercial components and will be utilized on a limited as requested basis only.

II. DECISION ON THE NEED FOR AN ENVIRONMENTAL IMPACT STATEMENT

Based on the information contained in the Environmental Assessment Worksheet and the written comments received and the responses to those comments, the City of Lindström has reached the following conclusions:

1. The Environmental Assessment Worksheet, this *Findings of Fact and Record of Decision* document, and related documentation for the project were prepared in compliance with the procedures set forth by Minnesota Rules 4410.1000 to 4410.1700 and the Minnesota Environmental Quality Board.
2. The Environmental Assessment Worksheet, this *Findings of Fact and Record of Decision* document and related documentation for the project have satisfactorily addressed all of the issues for which existing information could have been reasonably obtained.
3. The project proposed does not meet any of the mandatory EIS thresholds contained in Minnesota Rules 4410.4400.
4. The project does not have the potential for significant environmental effects based upon the above findings and the evaluation of the following four criteria per Minnesota Rules 4410.1700, subpart 7:

- a. The type, extent, and reversibility of environmental effects have been considered and they do not contain the potential for significant environmental effects.
 - b. The cumulative potential of environmental effects has been considered and the project does not contain the potential for significant environmental effects.
 - c. The extent to which the environmental effects are subject to mitigation by ongoing public regulatory authority indicates that this proposed project does not have the potential for significant environmental effects. The mitigation of environmental impacts will be designed and implemented in coordination with regulatory agencies and will be subject to the plan approval and permitting processes as outlined in Question 8 of the EAW.
 - d. The extent to which environmental effects can be anticipated and controlled as a result of other environmental studies undertaken by public agencies and the project proposed has been considered and it indicates that this project does not have the potential for significant environmental effects.
5. Pursuant to Minnesota Rules 4410.1700, subpart 5, a copy of *this Findings of Fact and Record of Decision* is being provided, within 5 days to all persons on the Minnesota Environmental Quality Board List, the persons commenting, and to persons who requested a copy. *This Findings of Fact and Record of Decision* will also be made available on the City of Lindstrom's website.

The City makes a Negative Declaration and does not require the development of an Environmental Impact Statement (EIS) for this project. City Council Resolution _____ declaring a negative need for an Environmental Impact Statement is attached as part of this document.

All responses to information request(s) are shown in *italic and blue*

EAW form provides information about a project that may have the potential for significant environmental effects. The EAW Guidelines provide additional detail and resources for completing the EAW form.

Cumulative potential effects can either be addressed under each applicable EAW Item, or can be addresses collectively under EAW Item 19.

Note to reviewers: Comments must be submitted to the RGU during the 30-day comment period following notice of the EAW in the *EQB Monitor*. Comments should address the accuracy and completeness of information, potential impacts that warrant further investigation and the need for an EIS.

1. Project title: Rose Hill Senior Living

2. Proposer:

*Contact person: Greg Johnson
Title: Developer
Address: 3300 Rice Street
City, State, ZIP: Little Canada, MN 55126
Phone: 651-383-4850
Fax:
Email: greg@nottinghamconstruction.net*

3. RGU

*Contact person: John Olinger
Title: City Administrator
Address: 13292 Sylvan Avenue
City, State, ZIP: Lindstrom, MN 55045
Phone: 651-257-0620
Fax:
Email: jolinger@cityoflindstrom.us*

4. Reason for EAW Preparation: (check one)

Required:

- EIS Scoping
- *Mandatory EA W*

Discretionary:

- Citizen petition
- RGU discretion
- Proposer initiated

If EAW or EIS is mandatory give EQB rule category subpart number(s) and name(s):

5. Project Location:

*County: Chisago
City/Township: Lindstrom
PLS Location (1/4, 1/4, Section, Township, Range): NE1/4, SE1/4, Sec. 32, R20W, T34N
Watershed (81 major watershed scale): Chisago Lakes Chain of Lakes Watershed
GPS Coordinates: 45°23'22.4"N 92°51'35.9"W
Tax Parcel Number: 02.01584.00, 02.01586.10, 02.01586.00*

Attachments to Worksheet:

- County map showing the general location of the project;
- U.S. Geological Survey 7.5 minute, 1:24,000 scale map indicating project boundaries (photocopy acceptable) (*Exhibit A*); and

- Site plans showing all significant project and natural features. Pre-construction site plan and post-construction site plan.

Exhibit A – USGS Map

Exhibit B - Existing Conditions Plan

Exhibit C - Proposed Layout Plan

Exhibit D - Wetland Inventory Map

Exhibit E – DNR Bio-Diversity Map

Exhibit F – Soils Report

Exhibit G – DNR Natural Heritage Review Letter

Exhibit H – SHPO Response Letter, SHPO No. 2018-0562

Exhibit I – County Location Map

Exhibit J – Impaired Water Map

Exhibit K - Chisago Lake Chain of Lakes Watershed Info

6. Project Description:

a. Project Summary:

The Rose Hill Senior Living project is proposed as an 89 Unit Senior Housing Project, located at 30455 Lehigh Avenue, Lindstrom, MN 55045, on the north shore of South Lindstrom Lake. The proposed project will provide housing and memory care services for the senior population of Lindstrom.

b. Project Description:

This project is proposed as an 89 Unit Senior Housing Project, located at 30455 Lehigh Avenue, Lindstrom, MN 55045. The entire project encompasses approximately 5.12 acres. The proposed facility will provide housing and memory care services for the senior population of Lindstrom. The proposed plan includes an 87 Unit full service senior care facility, with food and nursing service. A memory care unit will be part of the care system for the facility as well. Two cabins are proposed to offer a location for families of the residents to stay while visiting the residents of the facility. The existing boat house along with all of the existing structures will be removed as part of this project.

The immediate environmental benefit to the natural resource of the lake is the removal of the existing failing septic systems and wells and the connection to City sewer and water systems. This is a major improvement over the existing facility which was cited for failing septic systems. Also, the existing facility was a resort with a high level of impact on the lake resource. With the closing of the existing boat ramp and boat house facility, the existing lake residents will see this as an immediate reduction in use. The other major improvement is the proposed design of the storm water treatment that will filter and control the runoff of the site, whereas today storm water runs uncontrolled and untreated to the lake.

The timing for this project, once approved will take roughly one year to fully complete the facility. All MPCA guidelines will be followed during construction as related to storm water runoff. MPCA NPDES and DOLI Permits will also be acquired prior to the start of construction.

The senior apartments will provide for one and two-bedroom options with full kitchen and laundry facilities for independent living as well as on staff nursing to provide assisted living and to provide for

memory care residents. A dining room with planned meals and staff will also be available at the facility for the residents.

The two proposed cabins will allow an option for visiting families to stay at the facility for extended visits and to take advantage of the lake setting during the summer months. The cabins will be designed to meet the current city code for height, location and materials. The cabins, 2,100 Sq. Ft. footprint and 1,600 Sq. Ft. footprint will be built with pour foundation walls, wood frame and with natural tone siding. Height of the structures will be limited to a maximum of 35-ft from the lake side, keeping with city ordinances.

The proposed access to the facility includes the design of a city street conforming to city standards, with asphalt surface, curb and gutter and storm sewer to control the runoff from the site. This is an improvement from the existing non-conforming gravel road access.

Many hours have been spent on the layout and design of the main building to decrease the visual impacts for existing residents and to reduce site excavation and impact to existing vegetation, while providing the future senior residents to live out the rest of their days with the best view of the lake from the proposed facility.

c. Project magnitude:

Total Project Acreage	5.12 Acres
Linear project length	970 feet
Number and type of residential units	87 Apartments, 2 cabins
Commercial building area (in square feet)	N/A
Industrial building area (in square feet)	N/A
Institutional building area (in square feet)	30,985 Sq. Ft.
Other uses – specify (in square feet)	3,700 Sq. Ft. (guest cabins)
Structure height(s)	35ft - 45ft / Cabins 35-ft

d. Project Purpose:

To provide senior housing and memory care facilities for the aging population of Lindstrom.

e. Are future stages of this development including development on any other property planned or likely to happen? Yes • No

Due to access needs for neighboring properties, the site is required to be platted with two lots separated by a public road. The northernmost lot, which is along the frontage road for US Highway 8, is anticipated for future commercial, though no site plan or layout have been identified.

f. Is this project a subsequent stage of an earlier project? • Yes No

If yes, briefly describe the past development, timeline and any past environmental review.

7. Cover types: Estimate the acreage of the site with each of the following cover types before and after development:

	Before	After		Before Acres	After Acres
Wetlands	<i>N/A (1)</i>	<i>N/A</i>	Lawn/landscaping	<i>4.23</i>	<i>2.84</i>
Deep water/streams	<i>N/A</i>	<i>N/A</i>	Impervious surface	<i>0.89</i>	<i>2.28</i>
Wooded/forest	<i>N/A</i>	<i>N/A</i>	Storm water Pond	<i>0.0</i>	<i>(2)</i>
Brush/Grassland	<i>N/A</i>	<i>N/A</i>	Other (describe)		
Cropland	<i>N/A</i>	<i>N/A</i>			
			TOTAL	<i>5.12</i>	<i>5.12</i>

*Note: 1) The property's boundary is the lakeshore of South Lindstrom Lake. No other wetlands exist on the parcel(s).
 2) The proposed storm water system includes a filtration basin and underground storage chamber to reduce the rate of runoff to below that of the existing conditions. The site soils are mostly clay and will not be suitable for infiltration.*

8. Permits and approvals required:

<u>Unit of government</u>	<u>Type of application</u>	<u>Status</u>
<i>City of Lindstrom</i>	<i>Concept</i>	<i>In Process</i>
<i>City of Lindstrom</i>	<i>Rezone</i>	<i>Not Yet Applied</i>
<i>City of Lindstrom</i>	<i>Annexation</i>	<i>Completed</i>
<i>City of Lindstrom</i>	<i>Street Vacation</i>	<i>Not Yet Applied</i>
<i>City of Lindstrom</i>	<i>Conditional Use Permit / PUD</i>	<i>Not Yet Applied</i>
<i>City of Lindstrom</i>	<i>Subdivision</i>	<i>Not Yet Applied</i>
<i>City of Lindstrom</i>	<i>Preliminary Plat</i>	<i>Not Yet Applied</i>
<i>MPCA</i>	<i>NPDES Storm Water Permit</i>	<i>Not Yet Applied</i>
<i>DOLI</i>	<i>Commercial Review</i>	<i>Not Yet Applied</i>
<i>City of Lindstrom</i>	<i>Building Permit</i>	<i>Not Yet Applied</i>
<i>Chisago Lakes Chain of Lakes Watershed</i>	<i>Watershed Permit</i>	<i>Not Yet Applied</i>
<i>Department of Health</i>	<i>Well Abandonment</i>	<i>Not Yet Applied</i>
<i>DOLI</i>	<i>Building and Utilities</i>	<i>Not Yet Applied</i>

9. Land use:

a. Describe:

i. Existing land use:

The site was a previous fishing resort. The site contained 13 structures consisting of cabins, garages and sheds to support the business. The surrounding property is mainly homes and cabins surrounding South Lindstrom Lake. Land use to north of the parcel is commercial. Permanent residential homes border to the east and west of the property.

No vulnerable populations (nursing homes, schools, day care centers) are near (within one mile) of the proposed facility.

The site is located on the north shore of South Lindstrom Lake and approximately ½ mile from Twin Oaks Park.

A number of commercial businesses are located on Highway 8, near to the site.

- ii. Plans. Describe planned land use as identified in comprehensive plan (if available) and any other applicable plan for land use, water, or resources management by a local, regional, state, or federal agency.

The City of Lindstrom adopted a Comprehensive Plan in December of 2017. The Comprehensive Plan designates this site for multi-family residential. Multi-family residential is described in the Comprehensive Plan as intended for development with predominately townhomes, rowhouses, apartments, and manufactured home parks. This site was guided for multi-family residential given that it is a redevelopment site.

- iii. Zoning, including special districts or overlays such as shore land, floodplain, wild and scenic rivers, critical area, agricultural preserves, etc.

Zoning for this site will be compatible with the recently adopted comp plan and will follow the conditional use and plan unit development path for city approvals.

- b. Discuss the project's compatibility with nearby land uses, zoning, and plans listed in Item 9a above, concentrating on implications for environmental effects.

There are currently no senior housing facilities within the City of Lindstrom. This is needed asset for the community to keep the current residents in the city they currently belong to. The City recently adopted a Comprehensive Plan in December of 2017 and has designated this site as multi-family residential given that it is a redevelopment site.

The location near to Highway 8 and commercial zoning acts as a typical density increase planning method from single family housing, multi-family housing and then to commercial uses. The site is also close to compatible facilities including a medical clinic, dental office and chiropractor.

- c. Identify measures incorporated into the proposed project to mitigate any potential incompatibility as discussed in Item 9b above.

The proposed location and orientation of the building has been designed to limit the impact to the existing residents. The proposed structure will also reduce the amount of impervious surface with the installation of an underground parking garage. The majority of the daily traffic will be kept at the front of the building, away from the lake and the adjoining residents.

Tree plantings are proposed to offer screening of the proposed structure to that of the properties on the side lot lines of the parcel to minimize the visual impacts of the structure. Lighting for the site will be designed to not spill onto adjoining properties.

10. Geology, soils and topography/land forms:

- a. Geology:

There are no known karst conditions or bedrock within the confines of the proposed construction as defined by the Geologic Atlas for Chisago County. The soils found on the site were predominately heavy clayey soils, not conducive to infiltration, which would explain the failing septic systems. The depth to bedrock was not found in the 20-foot deep borings that were completed on the site during our initial investigation. The well boring log for the well closet to the site, unique well ID 196813, from the State Department of Health gis data bank, indicates the following types and depth from the surface to bedrock were encountered:

	<i>Start Depth</i>	<i>End Depth</i>
<i>SANDSTONE</i>	<i>185</i>	<i>200</i>
<i>SANDSTONE & SHALE GRY/BLUE/RED/GRN</i>	<i>200</i>	<i>226</i>
<i>SHALE & SANDSTONE</i>	<i>226</i>	<i>240</i>
<i>SANDSTONE</i>	<i>240</i>	<i>262</i>

b. Soils and topography:

The site soil is predominately clayey (CL) in nature as shown in the soil boring report as supplied by CVT and attached as Exhibit F to this application.

Soil stabilization during construction will be maintained with the use of a double row of perimeter silt fencing and temporary seeding and mulching of soils left more than a seven day time period. Additional measures such as erosion blanket and hydroseeding may also be utilized for soil stabilization.

The proposed project will be hooked up to City Sewer, greatly reducing the impact on the Lake from septic runoff. The storm water for the site will be filtered and the rate of runoff maintained to that of existing conditions or below. It cannot be emphasize enough that the soils on the site are heavy and do not allow for proper percolation of septic waste water and the proposed installation of the sewer system will improve this site and also allow for the hookup of adjoining parcels to further reduce the impact this has on the lake.

The erodibility of the soils is low due to the clayey nature of the soils. Measures will be taken to implement Best Management Practices to insure soil does not leave the site during construction. Approximately 4.5 acres will be disturbed from construction activities. Approximately 9,500 cu. yds. of soil will be excavated and placed during construction.

The final surface treatment of the proposed facility will include turf and paved surfaces, with sump catch basins and rain gardens that will eliminate soil erosion to the lake. A maintenance plan will also be in place for bi-annual review and maintenance of the final operating storm water facilities.

11. Water resources:

- a. Describe surface water and groundwater features on or near the site in a.i. and a.ii. below.
 - i. Surface water - lakes, streams, wetlands, intermittent channels, and county/judicial ditches.

Include any special designations such as public waters, trout stream/lake, wildlife lakes, migratory waterfowl feeding/resting lake, and outstanding resource value water. Include water quality impairments or special designations listed on the current MPCA 303d Impaired Waters List that are within 1 mile of the project. Include DNR Public Waters Inventory number(s), if any.

The site is located on the north shore of South Lindstrom Lake:

*ID: 13002800
County: Chisago
Border Water: No
Size: 499 Acres
Wetland Designation: Type 5 (Open Fresh Water)
Protection Status: Protected (Public)
Historical Water Clarity: Between 3 to 6 feet in depth
Invasive species: Eurasian watermilfoil*

Fish Species: black bullhead, black crappie, bluegill, brown bullhead, green sunfish, hybrid sunfish, largemouth bass, northern pike, pumpkinseed, walleye, yellow bullhead, yellow perch, bowfin (dogfish), common carp, white sucker, bluntnose minnow, common shiner, golden shiner, Johnny darter, minnows.

Special Fishing Regulations: This lake has special fishing regulations that differ from statewide or border water regulations for those species identified below and take precedence. Largemouth Bass: All 12" and larger must be immediately released.

Surrounding Non-Impaired Water Bodies:

*Lake: North Lindstrom (Not Impaired)
AUID: 13-0035-00*

*Lake: Unnamed
AUID: 13-0141-00*

*Lake: Unnamed
AUID: 13-0155-00*

*Lake: Unnamed
AUID: 13-0154-00*

*Lake: Unnamed
AUID: 13-0106-00*

Impaired Waters List Within 1 Mile of Project

*Impaired lake: Chisago (north portion)
AUID: 13-0012-01
Use class: 2B, 3C
Impaired use: AQC
TMDL needed for: None
TMDL approved for: Hg-F
TMDL not required for: None*

Impaired lake: Wallmark

*AUID: 13-0029-00
Use class: 2B, 3C
Impaired use: AQR
TMDL needed for: None
TMDL approved for: Nutrients
TMDL not required for: None*

*Impaired lake: Chisago (south portion)
AUID: 13-0012-02
Use class: 2B, 3C
Impaired use: AQC
TMDL needed for: None
TMDL approved for: Hg-F
TMDL not required for: None*

Sources: <https://www.pca.state.mn.us/water/impaired-waters-viewer-iwav>

Surface Water Drainage:

The site drains entirely to the South Lindstrom Lake. Currently the site runoff is uncontrolled and flows directly to the lake. The proposed conditions storm water management plan will improve water quality with the installation of rain gardens and sump basins.

- ii. Groundwater – aquifers, springs, seeps. Include: 1) depth to groundwater; 2) if project is within a MDH wellhead protection area; 3) identification of any onsite and/or nearby wells, including unique numbers and well logs if available. If there are no wells known on site or nearby, explain the methodology used to determine this.

The Site is Located within the Wellhead Protection and Well Supply Management Area:

<i>WHPA ID</i>	<i>DWSMA ID</i>
<i>69601</i>	<i>696</i>

*As found on the Department of Agriculture GIS Mapping Website:
<https://app.gisdata.mn.gov/mda-source/>*

Documented Nearby Wells:

*Unique Well ID: 136756
Well Name: BRANDENBURG, WAYNE
Elevation(ft): 927 (7.5 minute topographic map (+/- 5 feet))
Aquifer: QBAA
Well Depth(ft): 171
Well Use: domestic*

Unique Well ID: 196813

Well Name: BACON, DAVID
Elevation(ft): 925 (7.5 minute topographic map (+/- 5 feet))
Aquifer: CTCW
Well Depth(ft): 262
Well Use: domestic

Unique Well ID: 460658
Well Name: GABERT, JOHN
Elevation(ft): 921 (7.5 minute topographic map (+/- 5 feet))
Aquifer: CTCG
Well Depth(ft): 220
Well Use: domestic

Unique Well ID: 701583
Well Name: WOODSEND, DEAN
Elevation(ft): 926 (7.5 minute topographic map (+/- 5 feet))
Aquifer: QBUA
Well Depth(ft): 76
Well Use: domestic

Unique Well ID: 626903
Well Name: SMITH, T.
Elevation(ft): 926 (7.5 minute topographic map (+/- 5 feet))
Aquifer: QBUA
Well Depth(ft): 80
Well Use: domestic

Unique Well ID: 660155
Well Name: SHERWOOD, MARTHA
Elevation(ft): 922 (7.5 minute topographic map (+/- 5 feet))
Aquifer: QBAA
Well Depth(ft): 180
Well Use: domestic

Unique Well ID: 636089
Well Name: ZWEMKE, FAITH
Elevation(ft): 922 (7.5 minute topographic map (+/- 5 feet))
Aquifer: QBAA
Well Depth(ft): 181
Well Use: domestic

Unique Well ID: 415217
Well Name: LARSON, GERALD

Elevation(ft): 914 (7.5 minute topographic map (+/- 5 feet))

Aquifer: QBAA

Well Depth(ft): 184

Well Use: domestic

Ground water was found present at elevation 891 in Site Boring Log #8 in the soil borings that were completed on the site. In review of the well logs, it appears that this is the fluctuating groundwater table. This is approximately 13 feet below the lowest floor elevation of the proposed cabin structures and 7.5 feet below that of the lowest sanitary sewer structure.

- b. Describe effects from project activities on water resources and measures to minimize or mitigate the effects in Item b.i. through Item b.iv. below.

- i. Wastewater - For each of the following, describe the sources, quantities and composition of all sanitary, municipal/domestic and industrial wastewater produced or treated at the site.

The previous operation treated waste water with conventional drain fields. The drain fields were known to have failed and were an on-going issue. The proposed plan includes the installation of a lift station that would allow this facility and other nearby residents to drain to this lift station and have their waste pumped to the regional facility. This will substantially benefit the lake with reduction in nutrient loading.

- 1) If the wastewater discharge is to a publicly owned treatment facility, identify any pretreatment measures and the ability of the facility to handle the added water and waste loadings, including any effects on, or required expansion of, municipal wastewater infrastructure.

According to the City, the existing facility is capable of handling the additional flow along with the flow from the nearby residents. This facility will not be required to pre-treat its waste prior to discharging to this system, except for state required grease traps located in the kitchen facilities.

- 2) If the wastewater discharge is to a subsurface sewage treatment systems (SSTS), describe the system used, the design flow, and suitability of site conditions for such a system.

N/A

- 3) If the wastewater discharge is to surface water, identify the wastewater treatment methods and identify discharge points and proposed effluent limitations to mitigate impacts. Discuss any effects to surface or groundwater from wastewater discharges.

N/A

- ii. Stormwater - Describe the quantity and quality of stormwater runoff at the site prior to and post construction. Include the routes and receiving water bodies for runoff from the site (major downstream water bodies as well as the immediate receiving waters). Discuss any

environmental effects from stormwater discharges. Describe stormwater pollution prevention plans including temporary and permanent runoff controls and potential BMP site locations to manage or treat stormwater runoff. Identify specific erosion control, sedimentation control or stabilization measures to address soil limitations during and after project construction.

The site is located within the Chisago Lake Chain of Lakes Watershed. This watershed encompasses 19 lakes and 7,000 acres of surface water. South Lindstrom Lake is entirely within the watershed. See Exhibit K which includes information concerning the watershed.

Currently storm water flows overland from the site with no pretreatment or rate control directly to South Lindstrom Lake, which is not an impaired water. The proposed plan includes measures to capture the runoff, pretreat the water, filter and provide sediment removal with sump catch basins. The rate of runoff will be maintained to that or less than that of the existing conditions with the use of rain gardens/ponding areas.

Infiltration at this site is not feasibly due to the heavy clay found on site and the same volume of water that is required to be infiltrated will be filtered through sand media that will filter the 1.1 Inch Event and allow for a slow release of water to maintain the rate of runoff from the site.

In addition to the installation of the rain gardens a proposed native grass vegetative buffer is planned along the lake shore, where none existed before.

An erosion control plan and SWPPP will be developed as part of this project, in accordance with the NPDES Permit Requirements and in accordance with the City of Lindstrom MS4 Permit and Minimum Impact Design Standard Ordinance (Chapter 151). Practices including but not limited to the following: Prepared SWPPP, Maintenance Agreement, Erosion Control Plan, Minimum Impact Design Features.

- iii. Water appropriation - Describe if the project proposes to appropriate surface or groundwater (including dewatering). Describe the source, quantity, duration, use and purpose of the water use and if a DNR water appropriation permit is required. Describe any well abandonment. If connecting to an existing municipal water supply, identify the wells to be used as a water source and any effects on, or required expansion of, municipal water infrastructure. Discuss environmental effects from water appropriation, including an assessment of the water resources available for appropriation. Identify any measures to avoid, minimize, or mitigate environmental effects from the water appropriation.

No ground water is expected to be encountered during construction of this facility, with the existing ground water elevation 7.5 below that of our lowest proposed structure. But with clayey type soils it has been our experience that veins of sand can be encountered that may channel and fill in trenches for utilities and for foundation. If and when ground water is encountered, it will be pumped out into a dandy bag, or other approved MPCA silt stopping apparatus before being allowed to enter the lake. The dandy bag allows for any water being pumped to be directed into a nylon bag that removes the silt from the water, to the level found acceptable for depositing the water to the surface for runoff. This would be done behind the site's already in place erosion control measures if it were to occur.

- iv. Surface Waters
- a) Wetlands - Describe any anticipated physical effects or alterations to wetland features such as draining, filling, permanent inundation, dredging and vegetative removal.

Discuss direct and indirect environmental effects from physical modification of wetlands, including the anticipated effects that any proposed wetland alterations may have to the host watershed. Identify measures to avoid (e.g., available alternatives that were considered), minimize, or mitigate environmental effects to wetlands. Discuss whether any required compensatory wetland mitigation for unavoidable wetland impacts will occur in the same minor or major watershed, and identify those probable locations.

All work will be performed above the Ordinary High Water Level of the lake and no impacts to wetlands will occur as part of this project.

Please note that this site was previously an unpermitted commercial marina and this project proposes to eliminate the boat ramp and boat house that was in the 100 year HWL elevation area, greatly reducing the impact to the lake from use and from failed septic systems.

- b) Other surface waters- Describe any anticipated physical effects or alterations to surface water features (lakes, streams, ponds, intermittent channels, county/judicial ditches) such as draining, filling, permanent inundation, dredging, diking, stream diversion, impoundment, aquatic plant removal and riparian alteration. Discuss direct and indirect environmental effects from physical modification of water features. Identify measures to avoid, minimize, or mitigate environmental effects to surface water features, including in-water Best Management Practices that are proposed to avoid or minimize turbidity/sedimentation while physically altering the water features. Discuss how the project will change the number or type of watercraft on any water body, including current and projected watercraft usage.

This project is expected to have a net loss of watercraft use. Historic aerial imagery indicates 7 or more docks present on this site with the potential for at least four boats per dock, netting 28 boats. The project is proposed to maintain docks for residents use for three boats, resulting in an estimated reduction of 25 boats moored at this location.

As stated previously, the proposed plan includes measures to capture the runoff, pretreat the water, filter and provide sediment removal with sump catch basins. The rate of runoff will be maintained to that or less than that of the existing conditions with the use of an underground storage system and rate control.

Infiltration at this site is not feasibly due to the heavy clay found on site and the same volume of water that is required to be infiltrated will be filtered through sand media before entering the storage and rate control structure.

In addition to the installation of the storm sewer structure a proposed native grass vegetative buffer is planned along the lake shore, where none existed before.

An erosion control plan and SWPPP will be developed as part of this project, in accordance with the NPDES General Storm Water Permit Requirements.

12. Contamination/Hazardous Materials/Wastes:

- a. Pre-project site conditions - Describe existing contamination or potential environmental hazards on or in close proximity to the project site such as soil or ground water contamination, abandoned dumps, closed landfills, existing or abandoned storage tanks, and hazardous liquid or gas pipelines. Discuss any potential environmental effects from pre-project site conditions that would be caused or exacerbated by project construction and operation. Identify measures to avoid, minimize or mitigate adverse effects from existing contamination or potential environmental hazards. Include development of a Contingency Plan or Response Action Plan.

Clean up of debris, old tires and the removal of all existing structures is underway at the site. No known hazardous waste exists on the site.

The Storm Water Pollution Prevention Plan will contain Material Safety Data Sheets defining hazard identification and first aid measures to deal with construction materials and for potential spills from construction equipment that will be utilized for the site. No on site storage of fuel will be allowed during construction.

Hazardous waste as generated from the care facility will be dealt with in accordance with State and Local laws pertaining to disposal of the waste. A Response Action Plan will be in place for situations that may arise during operation of the facility.

There are two known wells with access to the groundwater table that exists directly below that of the site at an elevation of 891, potential for contamination from the existing septic systems is a real concern. This project will help to eliminate the immediate need of hooking up the remaining septic systems in the area and help to provide city water to the area as well. This will also eliminate the potential for harmful human waste water from entering South Lindstrom Lake, which is a highly valued recreational lake.

- b. Project related generation/storage of solid wastes - Describe solid wastes generated/stored during construction and/or operation of the project. Indicate method of disposal. Discuss potential environmental effects from solid waste handling, storage and disposal. Identify measures to avoid, minimize or mitigate adverse effects from the generation/storage of solid waste including source reduction and recycling.

Concrete trucks will be required to take any waste with them from the site, no dumping will be allowed. Dumpsters for trash will be available and maintained during construction.

Ongoing operations of the facility will include both indoor waste and recycling containers for the waste generated. Pickup of materials would be once per week by the local waste hauler.

- c. Project related use/storage of hazardous materials - Describe chemicals/hazardous materials used/stored during construction and/or operation of the project including method of storage. Indicate the number, location and size of any above or below ground tanks to store petroleum or other materials. Discuss potential environmental effects from accidental spill or release of hazardous materials. Identify measures to avoid, minimize or mitigate adverse effects from the use/storage of chemicals/hazardous materials including source reduction and recycling. Include development of a spill prevention plan.

No storage of hazardous products will be allowed during construction of this project.

The ongoing operation will have requirements for typical cleaning products and materials needed for the care of the residents, all that carry Material Safety Data Sheets that will be kept on hand in order to provide for first aid measures if an accident were to occur.

- d. Project related generation/storage of hazardous wastes - Describe hazardous wastes generated/stored during construction and/or operation of the project. Indicate method of disposal. Discuss potential environmental effects from hazardous waste handling, storage, and disposal. Identify measures to avoid, minimize or mitigate adverse effects from the generation/storage of hazardous waste including source reduction and recycling.

Generation of hazardous waste will not be a part of the construction of this facility.

Ongoing operations of the facility will include both indoor waste and recycling containers for the waste generated. Pickup of materials would be once per week by the local waste hauler.

13. Fish, wildlife, plant communities, and sensitive ecological resources (rare features):

- a. Describe fish and wildlife resources as well as habitats and vegetation on or in near the site.

Status of the Fishery (as of 07/28/2014) as provided by the MnDNR Website:

South Lindstrom Lake is a moderately hard water and moderately fertile 499 acre lake located in southern Chisago County bordering Chisago City. The lake is broadly connected to Chisago Lake by a natural channel. The two lakes are somewhat physically different with South Lindstrom having a smaller percentage of littoral (less than 15 feet depth) acreage (42%) than Chisago (80%). The channel allows fish to migrate freely between the two lakes. Because past surveys and assessments dating back to 1956 indicate similar fish composition and abundance, the two lakes are considered one for management purposes. Currently, the primary management species are Walleye and Largemouth Bass.

The Chisago chain of lakes, which also includes Chisago, North Lindstrom, North Center, and South Center, has a history of extreme water level fluctuations. These fluctuations, up to 7 vertical feet, are believed to be due to a net loss of water to groundwater in the system, making the lakes dependent on long term cycles in precipitation. The water levels in 2009 were the lowest they have been in 40 years.

Chisago-South Lindstrom Lake was selected for a special Largemouth Bass regulation due to a 1995 survey that found a high abundance of small bass in both basins. A 12-inch maximum size limit for Largemouth Bass was implemented in March 1997 and was based on the premise that angler harvest was limiting the size structure of the Largemouth Bass population. Post regulation surveys have indicated that the overall population size structure of Largemouth Bass has improved. Nighttime spring electrofishing was conducted on May 27, 2014 to assess the current Largemouth Bass population. A catch rate of 244 fish per hour was the highest catch rate observed in South Lindstrom Lake. The modal length group of Largemouth Bass observed in the electrofishing assessment was 13 inches, and lengths ranged from 7.3 to 17.8 inches. Currently, the Largemouth Bass population is meeting the objectives of the special regulation.

Walleye catch rates were above average at 7.0 fish per net, which is similar to levels observed in the 2000 and 2005 assessments. Mean weight of Walleye was similar to the past two surveys at almost 2.4 pounds. Walleye lengths ranged from 12.8 to 25.6 inches with a mean length of 18.5 inches. Otolith data sorted the thirty aged Walleye into seven year classes, with all but one fish corresponding to years with fall fingerling stockings. The 2009 year class (stocked) accounted for 53% of the catch. The Walleye catch rate of 7 per net is within the long range goal of 3 to 8 per net.

The Northern Pike gill net catch of 4.8 per net was above average when compared to similar lakes in Minnesota. Northern Pike catch rates have been similar in all surveys since 1995, when catch rates peaked at just over 6 fish per net. Previous to the 1995 assessment, catch rates were less than 2 per net. Mean weight was similar to the last assessment at 3.1 pounds and remained above average. Northern Pike lengths ranged from 12.8 to 30.2 inches with a mean length of 23.9 inches. The oldest Northern Pike sampled was age-8 and 7 year-classes were represented.

Trap nets sampled Bluegill at above average rates. The mean weight, 0.22 pounds, was also above average. Bluegill lengths ranged from 3.3 to 8.1 inches with a 6.4 inch mean length. Bluegill 7 inches and greater represented 44% of the catch, a good ratio for the Chisago Lakes Area. However, not many Bluegill exceeded 8 inches.

Black Crappie gill net catch rates declined to 8.0 per net and the trap net catch rates also declined to below average. Mean weight, based on the trap net catch declined to well below average, while the mean weight of Black Crappie caught in the gill nets also declined but remained above average. Sampled Black Crappie lengths ranged from 5.3 to 10.5 inches and had a mean length of 7.0 inches, however only a few fish over 8 inches were observed.

Yellow Perch numbers continue to decline and catch rates are at the lowest levels ever observed. Now at 1.3 per gill net, they are well below average when compared to similar lakes. White Sucker catch rates are also at the lowest point ever observed and no Golden Shiners were caught during the assessment.

Quality fishing opportunities exist for most species in South Lindstrom Lake. At times fishing pressure can be high and anglers are encouraged to practice selective harvest to help maintain and improve the quality of South Lindstrom Lake's fishery. Selective harvest encourages releasing larger fish while allowing the harvest of more abundant smaller fish. Releasing medium to large fish will help restore and maintain fish community balance, as well as increase opportunities to catch large fish in the future. The current Largemouth Bass regulation is a great example of this. This regulation protects larger fish, which has created excellent catch-and-release angling opportunities for Largemouth Bass larger than 12 inches, while still allowing for harvest of the smaller fish.

Non-native invasive species of vegetation are present in South Lindstrom Lake. Eurasian Watermilfoil was first documented in South Lindstrom Lake in the fall of 2009 and Curlyleaf Pondweed has been present since at least 1969. Anglers and boaters should take necessary precautions to prevent the further spread of invasive species.

Some shorelines of South Lindstrom Lake are highly developed, which can put stress on the lake's aquatic habitat and ecosystem integrity. Environmentally friendly development practices, such as shoreline buffer strips of natural vegetation, are encouraged to help maintain and improve the water quality of South Lindstrom Lake. Water level fluctuations in the Chisago chain of lakes can leave exposed sediments and if left alone, these areas will naturally vegetate and stabilize the shorelines on their own. Also, if trees and branches have fallen in the water, consider leaving them where they are to provide important habitat for fish and wildlife that is often missing in highly developed lakes.

- b. Describe rare features such as state-listed (endangered, threatened or special concern) species, native plant communities, Minnesota County Biological Survey Sites of Biodiversity Significance, and other sensitive ecological resources on or within close proximity to the site. Provide the license agreement number (LA-____) and/or correspondence number (ERDB 20160449) from which the data were obtained and attach the Natural Heritage letter from the DNR. Indicate if any

additional habitat or species survey work has been conducted within the site and describe the results.

This site and immediate area are not indicated to include any biodiversity significance as listed on the Natural Communities and Rare Species Map of Chisago County, see Exhibit E in the Appendix. See also the DNR Natural Heritage Review Letter, Exhibit G in the Appendix.

The US Fish and Wildlife Service list the following endangered species listed for Chisago County:

<i>Group</i>	<i>Common Name</i>
<i>Clams</i>	<i>Higgins eye (pearly mussel)</i>
<i>Clams</i>	<i>Winged Mapleleaf</i>
<i>Clams</i>	<i>Spectaclecase (mussel)</i>
<i>Clams</i>	<i>Snuffbox mussel</i>
<i>Mammals</i>	<i>Northern Long-Eared Bat</i>

According to the NHIS database no endangered species have been documented in the immediate project area.

ERDB 20160449

Blanding’s turtles (Emydoidea blandingii), a state-listed threatened species, have been reported from the vicinity of the proposed project and may be encountered on site. Blanding’s turtles use wetlands as well as upland areas up to and over a mile distant from wetlands. Uplands are used for nesting, basking, periods of dormancy, and traveling between wetlands. Because of the tendency to travel long distances over land, Blanding’s turtles regularly travel across roads and are therefore susceptible to collisions with vehicles. Any added mortality can be detrimental to populations of Blanding’s turtles, as these turtles have a low reproduction rate that depends upon a high survival rate to maintain population levels. Other factors believed to contribute to the decline of this species include wetland drainage and degradation, and the development of upland habitat. If the turtles are encountered they are to be removed by hand. A handout is to be provided to the contractors working on site. The handout is included in the Appendix of the report.

The northern long-eared bat (Myotis septentrionalis), federally listed as threatened and state-listed as special concern, can be found throughout Minnesota. During the winter this species hibernates in caves and mines, and during the active season (approximately April-October) it roosts underneath bark, in cavities, or in crevices of both live and dead trees. Pup rearing is during June and July. Activities that may impact this species include, but are not limited to, wind farm operation, any disturbance to hibernacula, and destruction/degradation of habitat (including tree removal).

- c. Discuss how the identified fish, wildlife, plant communities, rare features and ecosystems may be affected by the project. Include a discussion on introduction and spread of invasive species from the project construction and operation. Separately discuss effects to known threatened and endangered species.

This project net effect will provide better water quality and less impact on the ecosystem of South Lindstrom Lake based on the elimination of failing septic systems and the implementation of storm water treatment facilities where none existed before.

The introduction of evasive species introduction to the lake will be eliminated with the closing of the boat ramp.

Any Blanding's turtles if found will be handled with care and relocated as required and with the method described by the DNR.

To enhance the habitat for the northern long-eared bat, bat houses will be erected in the existing trees to promote a safe haven for the bats once construction has been completed, which will also assist in flying insect control around the site during the summer months.

- d. Identify measures that will be taken to avoid, minimize, or mitigate adverse effects to fish, wildlife, plant communities, and sensitive ecological resources.

The only potential for harm from this project will be during the construction phase and potential sediment leaving the site. This will be mitigated with the use of temporary sediment basins, silt fencing, filter logs, temporary seeding and erosion control blankets to prevent this from occurring.

14. Historic properties:

Describe any historic structures, archeological sites, and/or traditional cultural properties on or in close proximity to the site. Include: 1) historic designations, 2) known artifact areas, and 3) architectural features. Attach letter received from the State Historic Preservation Office (SHPO). Discuss any anticipated effects to historic properties during project construction and operation. Identify measures that will be taken to avoid, minimize, or mitigate adverse effects to historic properties.

The original parcel was purchased in 1952, based on county records. The existing buildings are assumed to have been constructed shortly after this date. Air photos were obtained and reviewed from 1938, which show no improvements on the property.

All buildings have been or will be removed as part of this project.

The State Historic Preservation Office has provided an initial review, but has requested additional information at this time before issuing a final determination (Reference SHPO No. 2018-1562). We are expecting a final determination in January of 2018. The current letter is attached as Exhibit H.

15. Visual:

Describe any scenic views or vistas on or near the project site. Describe any project related visual effects such as vapor plumes or glare from intense lights. Discuss the potential visual effects from the project. Identify any measures to avoid, minimize, or mitigate visual effects.

The proposed structure will be constructed as a three story building with parking below. The apartment will have the south third of the building exposed for access to the parking garage. The building will be placed above an eleven foot wall retaining wall.

The multi-story structure will be a change from the existing conditions with its size and mass, but with the layout and orientation, every effort has been made to minimize this effect and still provide the future residents a tranquil view of the lake to live out their remaining years. We always strive as a company to provide our residents with a view of a natural setting to provide the best surroundings, comfort and respect for our honored residents.

To minimize the visual impact, vines will be planted that will obscure the retaining wall and trees will be planted on the lot lines and in front of the retaining wall and on top of the wall as well as along

the lot lines. Preservation of existing trees near the existing boathouse will also help in mitigating the main building from the view of the lake.

Visual impact from lights from deliveries and the majority of the traffic will be handled in the upper first floor area of the property in the front and east parking lot areas. Lights turning into park on the east parking lot will be directed towards the new facility, away from existing residents as well as the cars parking in the upper parking lot, where plantings will be used on the front lot to screen these lights.

Traffic from the residents entering and exiting the garage will most likely have the most noticeable impact on the residents, but this will be mitigated with the use of a resident van for assisting residents in going to locale businesses, churches and other events. Screening for exiting lights will be provided as part of the landscape plan.

Trip generation for the facility will be different for that of the surrounding streets, with the peak hours of commuters different than that of the senior housing residents, helping to offset the traffic increase.

The existing traffic, based on the ITE 8th Addition, for a Marina and Resort, the traffic during the summer months is calculated to be 2.96 cars/day per boat berth, which equates to 83 cars per day, plus 74.96 cars/acre/day for the resort itself, equating to an additional 300 cars per day, for a total of 383 cars per day during the summer months.

Traffic will be more regular during the year and not as intensive as during the summer resort business operation, with a total trip generation of 238 cars per day (an overall reduction) as described in Section 18 of this report. Which should provide for quieter summer for the existing residents during the time the lake would be utilized the most.

16. Air:

- a. Stationary source emissions - Describe the type, sources, quantities and compositions of any emissions from stationary sources such as boilers or exhaust stacks. Include any hazardous air pollutants, criteria pollutants, and any greenhouse gases. Discuss effects to air quality including any sensitive receptors, human health or applicable regulatory criteria. Include a discussion of any methods used assess the project's effect on air quality and the results of that assessment. Identify pollution control equipment and other measures that will be taken to avoid, minimize, or mitigate adverse effects from stationary source emissions.

Two boilers will be installed to provide the heat source for the building. As new equipment they would be of the highest standard available concerning environmental impacts allowed.

Dust control during construction will be handled with the use of water trucks for temporary relief from dry conditions prior to the installation of the final hard and lawn surfaces. Due to the heavy soil nature of the site, little dust is expected during construction, but will be planned for.

- b. Vehicle emissions - Describe the effect of the project's traffic generation on air emissions. Discuss the project's vehicle-related emissions effect on air quality. Identify measures (e.g. traffic operational improvements, diesel idling minimization plan) that will be taken to minimize or mitigate vehicle-related emissions.

Vehicle traffic to the site will be limited to workers, visitors, residents, deliveries, garbage pickup and snow plowing. Traffic would be expected to increase during the winter months, when the previous resort use was closed for the season. No diesel idling is expected as part of the operations for the

proposed use. The majority of the traffic will be screened from area residents with vegetation and the proposed building itself.

- c. Dust and odors - Describe sources, characteristics, duration, quantities, and intensity of dust and odors generated during project construction and operation. (Fugitive dust may be discussed under item 16a). Discuss the effect of dust and odors in the vicinity of the project including nearby sensitive receptors and quality of life. Identify measures that will be taken to minimize or mitigate the effects of dust and odors.

The proposed use does not have any source or fugitive emissions and should prove to reduce the overall dust emission level with the elimination of gravel roadways and parking areas that exist on the property and the access to the site.

17. Noise

Describe sources, characteristics, duration, quantities, and intensity of noise generated during project construction and operation. Discuss the effect of noise in the vicinity of the project including 1) existing noise levels/sources in the area, 2) nearby sensitive receptors, 3) conformance to state noise standards, and 4) quality of life. Identify measures that will be taken to minimize or mitigate the effects of noise.

Existing noise sources for the area include Highway 8, which abuts the property, noise from lake activity (boats and jet skis) and residential traffic.

Nearby sensitive receptors are the adjacent residents to the facility.

Throughout construction it is expected that the decibel level of the construction equipment will be held to MCPA guidelines for construction and the future use will have no adverse noise impacts on the adjoining properties.

During construction, hours will be limited to that of City ordinances to help in mitigating the hours that the expected construction noise may occur.

Existing noise sources are similar to that of what is proposed, with a number of commercial building within less than a block of the site as well as State Highway 8 which also generates a good amount of existing noise, that can be heard at the site.

18. Transportation

- a. Describe traffic-related aspects of project construction and operation. Include: 1) existing and proposed additional parking spaces, 2) estimated total average daily traffic generated, 3) estimated maximum peak hour traffic generated and time of occurrence, 4) indicate source of trip generation rates used in the estimates, and 5) availability of transit and/or other alternative transportation modes.

An off street parking area will be created for workers to access the site. Operationally, the proposed 48 surface stalls and 35 underground stalls will provide more than adequate parking for residents and visitors to the facility.

Based on the Institute of Transportation Engineers Trip Generation Manual, Land Use #254, for Assisted Living Land Use, the estimated total traffic is estimated at 2.74 trips per unit or 238 trips per day.

This facility will utilize a resident bus to allow residents trips to local churches, and other events and locations to help mitigate the traffic generated from this location.

- b. Discuss the effect on traffic congestion on affected roads and describe any traffic improvements necessary. The analysis must discuss the project's impact on the regional transportation system. *If the peak hour traffic generated exceeds 250 vehicles or the total daily trips exceeds 2,500, a traffic impact study must be prepared as part of the EAW.* Use the format and procedures described in the Minnesota Department of Transportation's Access Management Manual, Chapter 5 (available at: <http://www.dot.state.mn.us/accessmanagement/resources.html>) or a similar local guidance,

The peak hour generator typically does not coincide with the peak hour of the adjacent streets. The estimated am peak is $87 \times 0.18 = 16$ units. The estimated pm peak is $87 \times 0.35 = 30$ units.

Both the total daily traffic (238 < 2,500 adt) and the peak hour (30 < 250 ph) are less than the threshold(s) requiring a traffic study.

- c. Identify measures that will be taken to minimize or mitigate project related transportation effects.

To mitigate traffic, all deliveries will be directed during normal business hours outside of the typical peak hour traffic that the residents would experience.

19. Cumulative potential effects: (Preparers can leave this item blank if cumulative potential effects are addressed under the applicable EAW Items)

- a. Describe the geographic scales and timeframes of the project related environmental effects that could combine with other environmental effects resulting in cumulative potential effects. *The only potential for environmental effects are during construction that would potentially cause erosion control issues. This is planned to be mitigated with best management practices as required by the MPCA permitting process. After the site is constructed and stabilized this effect will be eliminated.*
- b. Describe any reasonably foreseeable future projects (for which a basis of expectation has been laid) that may interact with environmental effects of the proposed project within the geographic scales and timeframes identified above.
N/A
- c. Discuss the nature of the cumulative potential effects and summarize any other available information relevant to determining whether there is potential for significant environmental effects due to these cumulative effects.
N/A

20. Other potential environmental effects: If the project may cause any additional environmental effects not addressed by items 1 to 19, describe the effects here, discuss the how the environment will be affected, and identify measures that will be taken to minimize and mitigate these effects.

RGU CERTIFICATION. *(The Environmental Quality Board will only accept **SIGNED** Environmental Assessment Worksheets for public notice in the EQB Monitor.)*

I hereby certify that:

- The information contained in this document is accurate and complete to the best of my knowledge.
- The EAW describes the complete project; there are no other projects, stages or components other than those described in this document, which are related to the project as connected actions or phased actions, as defined at Minnesota Rules, parts 4410.0200, subparts 9c and 60, respectively.
- Copies of this EAW are being sent to the entire EQB distribution list.

Signature _____

Date _____

Title _____