Scott County
Planning Advisory Commission
December 9, 2019
6:30PM

Scott County Government Center
County Board Room
200 Fourth Avenue West
Shakopee, MN
Table of Contents

Planning Advisory Cover and Agenda .................................................. 1
Draft of 11/12/19 PAC Minutes for Approval .................................... 2
Consent Agenda ............................................................................. 3
  PUBLIC HEARING: Dahlke - Chard RZ (PL#2018-086) ....................... 3
Timed Agenda
  PUBLIC HEARING: Douglas Schieffer Rezone (PL#2018-085) ............. 4
  PUBLIC HEARING: Douglas Schieffer CUP (PL#2018-084) ................ 5
AGENDA

I. ROLL CALL AND INTRODUCTIONS

II. APPROVAL OF NOVEMBER 12, 2019 MINUTES

III. CONSENT AGENDA
(All items listed are considered by the Planning Commission to be routine and will be enacted by one motion. There will be no separate discussion of these items unless a Planning Commission Board member or public member so requests, in which event the item will be removed from the Consent Agenda to be considered separately.)

3.1 PUBLIC HEARING – 6:30 PM DAHLKE – CHARD REZONE (PL#2019-086)
A. Request to Rezone 62.43 Acres From Urban Expansion Reserve District, UER to Urban Expansion Reserve Cluster District, UER-C.

   Location: Section 32
   Township: St. Lawrence
   Current Zoning: UER

IV. PUBLIC HEARING – 6:35 PM DOUGLAS SCHIEFFER REZONE (PL#2019-085) and CONDITIONAL USE PERMIT (PL#2019-084)
A. Request to Rezone 35.12 Acres From Rural Residential Cluster District, RR-1C, to Rural Residential Reserve District, RR-1.

   Location: Section 26
   Township: Cedar Lake
   Current Zoning: RR-1C

B. Request for a Conditional Use Permit to operate a private heliport

   Location: Section 26
   Township: Cedar Lake
   Current Zoning: RR-1C

V. PLANNING MANAGER UPDATE

VI. GENERAL & ADJOURN
I. ROLL CALL AND INTRODUCTIONS

Chair Vonhof opened the meeting at 6:40 pm with the following members present, Gary Hartmann, Donna Hentges, Ed Hrabe, Barbara Johnson, Lee Watson and Ray Huber.

County Staff Present: Brad Davis, Planning Manager; Marty Schmitz, Zoning Administrator; Greg Wagner, Principal Planner; Nathan Hall, Associate Planner, Deb Brazil, Administration; Tom Wolf, County Board Commissioner; and Barb Simonson, Deputy Clerk to the Board

II. APPROVAL OF OCTOBER 14, 2019 MINUTES

Commissioner Hentges noted an amendment to the minutes needed on page 4 paragraph 3 in Nathan Hall’s comments. The amendment was approved by all the Commissioners.

Motion by Commissioner Watson; second by Commissioner Hrabe to approve the minutes, including the noted amendment, of the October 14, 2019 Planning Advisory Commission meeting. The motion carried unanimously.

III. PUBLIC HEARING 6:35 PM NORDLING WOODS ADDITION (PL#2019-081)

A. Request to Rezone 10.02 Acres from Rural Residential Reserve District (RR-1) to Rural Residential Single Family District (RR-2).

B. Request for Approval of the Preliminary and Final Plat of Nordling Woods Addition Consisting of 2 lots on 10.02 Acres.

Staff Greg Wagner presented the staff report for this application. The specific details within the staff report and a video are available on the Scott County Website link: November 12, 2019 Planning Advisory Commission Agenda Packet. (To view the staff report on the county website using the link, click on the download arrow and click on Agenda, then Save and then Open. Next open the bookmark at the top of the page and click on the Nordling Woods project name.)

Commissioners Comments and Questions:

Commissioner Johnson asked about grading for the driveway as noted in the memo from Environmental Services. Mr. Wagner explained and outlined on the plan, the septic systems and driveway locations have been adjusted with the alternate septic drainfield moving further north, which allowed for the driveway to move away from the wetland area. This alleviated the grading concern that staff had with the initial submittal.
Chair Vonhof opened the meeting to the public. No one approached the podium.

Motion by Commissioner Hartmann to close the public hearing; second by Commissioner Hentges. The motion carried unanimously.

Motion by Commissioner Watson; second by Commissioner Johnson, noting the approval of the New Market Town Board, based on the criteria for approval listed in the staff report, to recommend approval of the Rezoning, Preliminary Plat and Final Plat of Nordling Woods, consisting of 2 lots on 10.02 acres, noting that this recommendation is subject to approval of conditions listed in the staff report that must be satisfactorily addressed prior to County Board consideration of the project. The motion carried unanimously.

Criteria for CUP Approval (Chapter 2-6-1):

1. Adequate Drainage – the proposed plat will meet all storm water drainage requirements as identified in Chapter 6 of the zoning ordinance.

2. Adequate Potable Water Supply – the proposed plat, utilizing individual wells, meets the requirements of the zoning and subdivision ordinances.

3. Adequate Roads or Highways to Serve the Subdivision – The proposed lots will have frontage and driveway access on Logan Avenue, a local township road.

4. Adequate Waste Disposal Systems – the proposed lots will meet all requirements of the individual sewage treatment system ordinance prior to County Board action.

5. Consistency with the Comprehensive Plan – the proposed plat conforms to the goals and policies contained in the 2040 Comprehensive Plan for the development in the Rural Residential Growth Area.

6. Public Service Capacity – the proposed development does not adversely impact the public service capacity of local service providers as the lots will utilize the existing Township road for access.

7. Consistency with the Minnesota Environmental Quality Board’s Policies - the proposal does not require any environmental review and is therefore consistent with the policies of the Minnesota Environmental Quality Board.

8. Consistency with Capital Improvement Plans – the proposed plat is not requiring any county funded road improvements; therefore it is consistent with the County’s capital improvement plan.

IV. PUBLIC HEARING 6:50 PM MULLENMEISTER ADDITION (PL#2019-079)

A. Request for Approval of Preliminary Plat and Final Plat of Mullenmeister Addition Consisting of 2 Lots on 6.34 Acres.

| Location: | Section 9 |
| Township: | Spring Lake |
| Current Zoning: | RR-2 |

Staff Greg Wagner presented the staff report for this application. The specific details within the staff report and a video are available on the Scott County Website link: November 12, 2019 Planning Advisory Commission Agenda Packet. (To view the staff report on the county website using the link, click on the download arrow and click on Agenda, then Save and then Open. Next open the bookmark at the top of the page and click on the Mullenmeister project name.)
Commissioners Comments and Questions:
Commissioner Hartmann asked whether a shared driveway was considered in this project. Mr. Wagner reported the applicant discussed driveway access and spacing with the Township since 180th Street is a township road. To his understanding, they are not doing a shared driveway because the existing home already shares an access with another property to the west, so the Town Board has given approval for a separate access for the new lot.

Chair Vonhof opened the meeting to the public. No one approached the podium.

Motion by Commissioner Huber to close the public hearing; second by Commissioner Hartmann. The motion carried unanimously.

Motion by Commissioner Hartmann; second by Commissioner Hrabe, based on the criteria for approval listed in the staff report, I recommend approval of the Preliminary Plat and Final Plat of Mullenmeister Addition, consisting of 2 lots on 6.34 acres, noting that this recommendation is subject to approval of the conditions listed in the staff report that must be satisfactorily addressed prior to County Board consideration of the project. And noting the Spring Lake Town Board recommended approval. The motion carried unanimously.

V. PLANNING MANAGER UPDATE REPORT-Presented by Brad Davis

VI. GENERAL & ADJOURN

Motion by Commissioner Watson; second by Commissioner Johnson to adjourn the meeting at 7:05 PM. The motion carried unanimously.

VII. WORKSHOP FOR ORDINANCE TRAINING WAS HELD WITH THE COMMISSIONERS AFTER ADJOURNMENT.

__________________________________________________________
Tom Vonhoff
Chair, Planning Advisory Commission

__________________________________________________________
Barbara Simonson
Deputy Clerk to the Board
Rezoning – LeRoy Chard – PL2019-086

Request:

A) Rezoning of 62.43 acres from UER, Urban Expansion Reserve District, to UER-C, Urban Expansion Reserve Cluster District

Nathan Hall, Associate Planner, is the project manager and is available for questions at 952-496-8892.

General Information:

Applicant:    LeRoy R. Chard    Site Location:    345 1st St NE
Property Owners:    LeRoy R. Chard    Township:    Section 32, St. Lawrence
Public Hearing Date:    December 9, 2019    Action Deadline:    December 27, 2019 (60 Day)

Zoning/Comprehensive Plan Information:

Zoning District:    UER, Urban Expansion Reserve    Comprehensive Land Use Plan:    Urban Expansion
Overlay Zoning District:    Shoreland, Bluff    School District:    Belle Plaine #716
Watershed District:    Scott WMO    Fire District:    Belle Plaine
Ordinance Sections:    Chapters 2 & 31    Ambulance District:    Ridgeview

Report Attachments:
1. Site Location Map
2. Aerial Photo
3. Certificate of Survey dated June 6, 2019
4. Township Recommendation
Comprehensive Plan- The property is located within the 2040 Comprehensive Plan's Urban Expansion Area for the City of Belle Plaine.

Adjacent Land Use/Zoning- *North* – Union Pacific Railroad & 86 acre undeveloped, DNR parcel, zoned UER
*South* – 17 acre agricultural parcel, zoned UER
*West* – City of Belle Plaine
*East* – 83 acre residential parcel, zoned UER

Existing Conditions- The property consists of an existing farmstead and fields in agricultural production. The property borders the City of Belle Plaine, DNR property, and other large parcels in agricultural production.

Ordinance Requirements- *Density* – 1 dwelling unit per 40 acres or quarter-quarter section.

*Lot Size* – The minimum lot size for an existing farmstead shall be determined by the topography of the property, the ability to locate the principal dwelling, any accessory structures, and two (2) individual sewage treatment systems, which all meet applicable setback requirements.

*Lot Width* – 300 feet for existing farmstead from the front setback line maintained to the primary building site

*Structure Setbacks:*
Front Yard: One hundred (100) feet from the centerline of a local public street, or sixty-seven (67) feet from the local public street right-of-way, whichever is greater.
Side Yard: 30 feet

Proposed Development- *Density* – 1 dwelling unit per 62.43 acres.

*Lot Size* – 6.23 acres for existing farmstead; The remaining agricultural parcel is 56.20 acres.

*Lot Width* – Minimum proposed is 100 feet

*Setbacks* – The existing home and buildings meet required setbacks.

Existing Roads- The property has frontage on 1st Street NE

Proposed Roads- No new roads are proposed for this project.

Public Hearing Notice- Required public hearing notices were mailed to all adjacent property owners within ½ mile of the project.
Site Photo:
View of the existing farmstead property and adjacent agricultural land.

Background & Analysis
LeRoy Chard is requesting to rezone 62.43 acres from UER, Urban Expansion Reserve District, to UER-C, Urban Expansion Reserve Cluster District. The property is owned by the applicant. The rezoning will allow the owner to separate the farmstead from the surrounding productive land. The County Subdivision Ordinance allows for existing farmsteads to be separated from agricultural land on parcels 40 acres or greater through an Administrative Subdivision.

The property is located in Section 32 of St. Lawrence Township at the end of 1st St. NE and adjacent to the City of Belle Plaine. The rezoning to UER-C will allow for creation of a parcel less than 40 acres but also will leave the agricultural land zoned at a 1 home per 40 acre density required to remain eligible for agricultural tax benefit programs. The UER-C District is intended to preserve land in those areas fo Scott County identified in the Comprehensive Plan for logical future extension of urban land uses served by public utilities.

Environmental: The applicant has provided a new septic design within the boundaries of the proposed 6.23 acre parcel. There are no records related to the current system. Environmental Services requires that the system be replaced by 9/30/2020. A septic design is under review and a self disclosure form will be needed prior to approval of the Administrative Subdivision.

Natural Resources: The property does include area of bluff and shoreland associated with the Minnesota River. No grading or other land disturbing activities are proposed for this rezoning request. In the event that a new driveway is constructed to the farmstead, a grading permit will be required.

City Recommendation:
The City of Belle Plaine provided comment regarding the request. The City noted that 1st Street NE, which is currently maintained in partnership with the Township, will be closed when Provence Lane is extended but had no other comments or recommendations.
Township Recommendation:
The St. Lawrence Town Board recommended approval of the request at their November monthly meeting. Their recommendation form is attached to this report.

Staff Recommendation:
Based on the project information submitted by the applicant and subject to the conditions of approval, the proposed rezoning conforms to the Zoning and Subdivision Ordinances; therefore, staff recommends approval of the Rezoning based on the criteria for approval listed below.

Criteria for Approval:
1. *The proposed action has been considered in relation to the specific policies and provisions of and has been found to be consistent with the official County Comprehensive Plan.*

   The proposed rezoning conforms to the goals and policies contained in the 2040 Comprehensive Plan for Urban Expansion Areas.

2. *The proposed use is or will be compatible with present and future land uses of the area.*

   The use is not changing and while the lot size is being reduced the overall density will remain at one unit per 62.43 acres.

3. *The proposed use conforms to all performance standards contained in this Ordinance.*

   The use of the property is not changing; the majority of the property will remain in agricultural production.

4. *The proposed use can be accommodated with existing and planned public services and will not overburden the County or Township’s service capacity.*

   The use is not changing and therefore will not adversely impact public service capacity for local service providers.

5. *Traffic generation by the proposed use is within capabilities of streets serving the property.*

   The farmstead has access from 1st St. NE. until Provence Ln. is improved. No increase in traffic generation is anticipated.

Planning Advisory Commission/Township Alternatives:
1. Approve the request as recommended by Zoning Administration staff with the specified conditions.

2. Approve the request as recommended by the Zoning Administration staff with amendments to the conditions.

3. Table the request for a specific reason.
4. Deny the request for a specific reason.

_Suggested Motion for Planning Advisory Commission or Township Board:_
Based on the criteria for approval listed in the staff report, I recommend approval of the rezoning of 62.43 acres from UER, Urban Expansion Reserve District, to UER-C, Urban Expansion Reserve Cluster District.
ADMINISTRATIVE SUBDIVISION IN SECTION 32, T114N, R24W

DESCRIPTION OF RECORD
The West Half of the Southwest Quarter, Section 32, Township 114 North, Range 24 West, lying southerly of railroad right of way, Scott County, Minnesota.

PROPOSED DESCRIPTION PARCEL 1
That part of the West Half of the Southwest Quarter, Section 32, Township 114 North, Range 24 West, lying southerly of railroad right of way, Scott County, Minnesota, described as follows:
Commencing at the southwest corner of said Section 32; thence North 02 degrees 49 minutes 28 seconds West along said southwest line, a distance of 881.31 feet to the point of beginning; thence continuing North 02 degrees 49 minutes 28 seconds West along said west line, a distance of 788.82 feet to the south line of the Union Pacific Railroad Company right-of-way; thence North 71 degrees 03 minutes 50 seconds East along said right-of-way line, a distance of 600.00 feet; thence North 18 degrees 51 minutes 18 seconds West along said right-of-way line, a distance of 50.00 feet; thence North 71 degrees 03 minutes 26 seconds East along said right-of-way line, a distance of 122.03 feet; thence South 13 degrees 53 minutes 20 seconds East, a distance of 505.98 feet; thence South 82 degrees 36 minutes 22 seconds West, a distance of 186.03 feet; thence South 70 degrees 29 minutes 33 seconds West, a distance of 104.40 feet; thence South 03 degrees 28 minutes 28 seconds East, a distance of 424.46 feet; thence South 87 degrees 10 minutes 32 seconds West, a distance of 100.00 feet to the point of beginning.

Contains 6.23 acres of land.

PROPOSED DESCRIPTION PARCEL 2
That part of the West Half of the Southwest Quarter, Section 32, Township 114 North, Range 24 West, lying southerly of railroad right of way, Scott County, Minnesota, EXCEPT that part thereof described as follows:
Commencing at the southwest corner of said Section 32; thence North 02 degrees 49 minutes 28 seconds West (Minnesota County Coordinate System, Scott County, 1996 Adjustment) along the west line of said Southwest Quarter, a distance of 881.31 feet to the point of beginning; thence continuing North 02 degrees 49 minutes 28 seconds West along said west line, a distance of 788.82 feet to the south line of the Union Pacific Railroad Company right-of-way; thence North 71 degrees 03 minutes 50 seconds East along said right-of-way line, a distance of 600.00 feet; thence North 18 degrees 51 minutes 18 seconds West along said right-of-way line, a distance of 50.00 feet; thence North 71 degrees 03 minutes 26 seconds East along said right-of-way line, a distance of 122.03 feet; thence South 13 degrees 53 minutes 20 seconds East, a distance of 505.98 feet; thence South 82 degrees 36 minutes 22 seconds West, a distance of 186.03 feet; thence South 70 degrees 29 minutes 33 seconds West, a distance of 104.40 feet; thence South 03 degrees 28 minutes 28 seconds East, a distance of 424.46 feet; thence South 87 degrees 10 minutes 32 seconds West, a distance of 100.00 feet to the point of beginning.

Contains 56.20 acres of land.

OWNER INFORMATION
Per Scott County Website
Owners: Leroy Chard
Property Address: 345 1st St NE
Belle Plaine, MN 56011
Mailing Address: 10650 Old Hwy 169 Blvd
Belle Plaine, MN 56011
Parcel Number: 10930201

SURVEYOR'S CERTIFICATION
I hereby certify that this survey, plan, or report was prepared by me or under my direct supervision and that I am a duly licensed land surveyor under the laws of the State of Minnesota.

[Signature]
Scanned: 6/25/2015

LEONARD & MENK

PART OF THE WEST HALF OF THE SOUTHWEST QUARTER OF SECTION 32, T114N, R24W.

ST. LAWRENCE TOWNSHIP

JOB NUMBER: M1/13894
FIELD BOOK: A
DRAWN BY: AIL

BOLTON & MENK

LEGEND
0.75" = 1'-0" MONUMENT SET
0.75" = 1'-0" MONUMENT POIN

JOHN B. MENK

SCALE 1" = 200'
TOWNSHIP RECOMMENDATION FORM

On Nov 14, 2019, the Town Board of St. Lawrence discussed with Randy Kubes the request to rezone 62.43 acres zone U.E.R. to U.E.R-C to create a 6.23 acre lot 345 1st St, N.E Belle Plaine P10# 109330021 containing the existing Home Site.

After reviewing the Request, the Town Board:

X RECOMMENDS APPROVAL WITH THE FOLLOWING CONDITIONS:

Meet Scott County Ordinances.

All permits needed for Home Remodeling in progress will be applied for and that will validate this Recommendation.

_____ RECOMMENDS APPROVAL WITH THE FOLLOWING REASONS:

_____ HAS NO RECOMMENDATION, BUT WILL FORWARD THE REQUEST TO THE PLANNING COMMISSION OR BOARD OF ADJUSTMENT.

SIGNED:

Ramona Bickel CLERK

 supervisor

 supervisor

White - County Yellow - Township Copy Pink - Applicant's Copy

Form#1910
Douglas Schieffer Request for Rezoning & CUP
for the Operation of a Private Heliport

Request:

A) Rezone 35.12 acres from RR-1C, Rural Residential Reserve Cluster District, to RR-1, Rural Residential Reserve District.
B) Conditional Use Permit (CUP) for the operation of a private heliport on 35.12 acres.

Marty Schmitz, Zoning Administrator, is the project manager and is available for questions at 952-496-8653.

Report Attachments:
1. Site Location Map
2. Aerial Photo
3. Wyldewood Ponds Plat Drawings
4. Site Survey
5. Tax Parcel Information
6. Application Narrative (including sound data and jet fuel information)
7. Zoning Map
8. Additional Aerial Photos

General Information:

Applicant: David Turnberg
Property Owner: Douglas Schieffer
Public Hearing Date: December 9, 2019
Site Location: 26456 Wyldewood Drive
Township: Section 26, Cedar Lake
Action Deadline: December 24, 2019 (60 Day)

Zoning/Comprehensive Plan Information:

Zoning District: RR-1C, Rural Residential Reserve Cluster District
Comprehensive Land Use Plan: Rural Residential Reserve Area
Overlay Zoning District: Shoreland
School District: New Prague District 721
Watershed District: Scott WMO
Fire District: New Market Fire Department
Ordinance Sections: Chapter 2, 41 & 70
Ambulance Dist: New Prague Ambulance
Request-
Rezone 35.12 acres from RR-1C, Rural Residential Reserve Cluster District, to RR-1, Rural Residential Reserve District & Conditional Use Permit (CUP) for the operation of a private heliport on 35.12 acres.

Comprehensive Plan-
The property is guided Rural Residential Reserve in the 2040 Comprehensive Plan. Both the RR-1 and RR-1C zoning districts are suitable in this land use category.

Adjacent Land Use/Zoning- **North** – Four vacant 2.5 to 3.0 acre rural residential lots in the Wyldewood Pond 3rd Addition zoned RR-1C
**South** – 3.8 acre rural residential parcel in the Wyldewood Pond 2nd Addition Zoned RR-1C and a 26.9 acre rural residential parcel zoned RR-1
**East** – 4.4 to 11.6 acre rural residential parcels that are part of the Wyldewood Pond Plat zoned RR-1C.
**West** – Rural residential cluster subdivision of Hunters Crest consisting of nine 2.5 to 3.5 acre rural residential parcels and a 45.2 acre outlot, zoned RR-1C

Existing Conditions-
The 35.12 acres consists primarily of the applicant’s home, yard, accessory buildings, wetlands and agricultural area. The property consists of two parcels Lot 5, Block 1, Wyldewood Pond 2nd addition (4.9 acres) and Lot 5 Block 1 Wyldewood Pond 3rd addition (30.22 acres). The applicant subdivided the two parcels administratively in 2016 to the current configuration of a 20.11 and 15.01 acre parcels.

Ordinance Requirements- **Density** – The development density in the RR-1C district is dwelling unit per 8 acres when 50% of the non-hydric land is preserved as open space for future development. The minimum lot size is 2.5 acres. The development density in the requested RR-1 district is one dwelling unit per 10 acres with a 10 acre minimum lot size.

**Lot Size** – minimum lot size in the RR-1C district 2.5 acres. The minimum lot size in the RR1 district is 10 acres.

**Lot Width** – minimum lot width in the RR-1C district is 150 feet measured at the front setback line. The minimum lot width in the RR-1 district is 300 feet measured at the front setback line (parcels do not meet the 300 lot width).

**Structure Setbacks:** Are the same for RR-1C & RR-1 districts.
Front Yard: 67’ from the R.O.W or 100’ from the centerline of all township roads
Side Yard: 30 feet
Rear Yard: 60 feet
Shoreland: 100' from the OHWL of Porter Creek, a Tributary River

**Proposed Development:**

- **Density** – see later in staff report the impact the requested rezoning has on density requirements.

- **Lot Size** – The lots are 20.11 & 15.01 acres.

- **Lot Width** – The minimum lot width on the two parcels is between 175 and 190 feet.

- **Setbacks** – All building meet the required front, side, and rear yard setbacks as set forth in the Scott County Zoning Ordinance.

**Existing Roads:**

The parcels have access to Wyldewood Drive and Wyldewood Court paved township roads. Mr. Schieffer's residence and is accessed from Wyldewood Drive.

**Proposed Roads:**

No new roads or road improvements are proposed.

**Site Photos:**

![Proposed Rezoning and Helipad](image-url)
Request:
Douglas Schieffer is requesting to rezone 35.12 acres from RR-1C, Rural Residential Reserve Cluster District, to RR-1, Rural Residential Reserve District. Mr. Schieffer is making the request to permit him to make application for a CUP for the operation of a private heliport on his property. Private heliports are permitted with a CUP in the RR-1 zoning district, but are prohibited in the RR-1C zoning district. The property is located on the south side of County Road 2 off of Wyldewood Drive in Section 26 of Cedar Lake Township.

From the applicant’s submitted information, the applicant states that the requested rezoning is consistent with the 2040 Comprehensive Plan because both zoning districts contemplate similar uses under the plan. They also state that no change in residential character or density will occur as a result of the rezone.

Also from the applicant submitted information, the applicant states that the RR-1 zoning district allows small-parcel farms and institutional uses. These uses frequently involve the use of diesel truck traffic and fuel storage which generate similar noise levels to the helicopter that is being proposed for use if the rezone and CUP are approved. From the information submitted, the helicopter (Bell 206 L4) generates minimal noise levels and does not exceed that of a garbage truck, lawnmower, or tractor—all of which are already found in residential and agricultural areas. However, unlike the garbage truck, lawnmower or tractor the noise from the helicopter lasts less than three minutes. The applicant has provided noise data for the Bell 206 L4 helicopter and information on the jet fuel used.

Rezone Analysis:
The County zoning ordinance defines Private Airports or Heliports as “any land or structure which is used or intended for use, for the landing and take-off of aircraft, and for appurtenant land or structures used or intended for use for port buildings or other port structures.” Private airports or heliports have been permitted as conditional uses since the 1996 ordinance in the A-1, A-2, A-3 and RR-1 zoning districts and more recently in the UTR zoning district—all generally agricultural or large-lot zoning districts. There have been a handful of private airports permitted over the years, but to staff’s knowledge there has never been a private heliport permitted as a conditional use.

Density Impacts of Rezoning
The property was originally zoned RR-1. But back in 2000, the property was rezoned to RR-1C and platted as part of the Wyldewood Pond residential cluster subdivision. Wyldewood Pond is a residential cluster subdivision of 21 lots on 170 acres (1 unit per 8 acres). The lot sizes within this development varied from 2.5 acres to 30.22 acres. Rezoning (and thereby removing the applicant’s parcels) from the Wyldewood Pond residential cluster subdivision would increase the density of the subdivision to 19 lots on 135 acres (resulting in a density 1 unit per 7 acres). This request would result in an increase to the overall density of the remaining RR-1C property in the Wyldewood Pond development above 1 unit per 8 acres required in the zoning ordinance.

Lot Size Impacts of Rezoning
The property owner’s two lots requested for rezoning do not conform to the minimum lot width in the RR-1 district. The RR-1 district requires a minimum 300 foot lot width be
maintained from the front setback line extending through to the location of the principal building. The lot width of Mr. Scheiffer's lots is less than 190 feet at the front setback line.

**Conditional Use Permit Analysis:**
From the submitted information, the applicant states that the proposed use involves adding a concrete helipad on the property and the use of an adjacent shed to store a helicopter (both of which have already been built). The use of the helipad will be private only. The applicant states that the helipad has been inspected and approved by MnDOT Aeronautics and Aviation, which issues licenses for heliports. Staff has requested a copy of the issued license, but at the time of preparing this staff report no issued license has been provided. Staff will attempt to get more information on the state licensing process and requirements prior to the Planning Commission meeting.

Staff has been contacted by some of the surrounding residents that have expressed concern with the operation of a helipad. The concerns relate to safety of residents with a helicopter flying so close to their homes, privacy, noise, impacts to pets, livestock and wildlife and impacts on property values. With the exception of noise the applicant has not address these items with their submittal. Additionally the applicant has not provided staff with the extent of the use of the helipad including hours of operation, number of takeoffs and landings per day to fully understand the impact of the helipad.

**Township Recommendation:**
The Cedar Lake Town Board informed staff that because they are not the zoning authority they will not be making a recommendation on the request.

**Staff Recommendation:**
Staff is not supportive of rezoning Mr. Scheiffer’s parcels to RR-1. The lots are part of the original Wyldewood Pond development and are served by the same streets and stormwater systems as other lots in the subdivision. Rezoning (and thereby removing the applicant’s parcels) from the original Wyldewood Pond residential cluster subdivision would increase the overall density of the subdivision to 19 lots on 135 acres (resulting in a density 1 unit per 7 acres). Staff is not aware of another time when land within a fully developed residential cluster subdivision was rezoned back to rural residential. In addition, the rezoned lots would fail to meet the minimum lot width in the RR-1 district.

If the Planning Commission recommends approval of the rezoning, staff recommends continuing the request for a CUP to operate a private helipad to the January Planning Commission meeting to allow staff time to draft conditions for the permit.

Based on the criteria of approval/denial below staff recommends denial of the requested Rezoning and Conditional Use Permit:

**Rezoning Criteria for Approval/Denial:**
Any amendment to the Zoning Ordinance or zoning map shall be evaluated based on, but not limited to, the following criteria:

1. The proposed action has been considered in relation to the specific policies and provisions of and has been found to be consistent with the official County Comprehensive Plan.
The property is guided Rural Residential Reserve in the 2040 Comprehensive Plan. Both the RR-1 and RR-1C zoning districts are suitable in this land use category.

2. The proposed use is or will be compatible with present and future land uses of the area.

The proposed helipad has the potential to create compatibility issues with surrounding rural residential uses including safety of residents with a helicopter flying so close to their homes, privacy, noise, impacts to pets, livestock and wildlife and impacts on property values.

In addition the rezoning is not compatible with the proposed zoning district standards. This request will increase the density of the RR-1C property in the Wyldewood Pond development above 1 unit per 8 acres required in the zoning ordinance. In addition the applicant’s lots do not conform to the minimum lot width in the RR-1 district. The RR-1 district requires a minimum 300 foot lot width be maintained from the front setback line extending through to the location of the principal building. The lot width of the applicant’s lots is less than 190 feet at the front setback line.

3. The proposed use conforms to all performance standards contained in this Ordinance.

The proposed rezoning is not compatible with the proposed zoning district standards. This request will increase the density of the RR-1C property in the Wyldewood Pond development above 1 unit per 8 acres required in the zoning ordinance. In addition the applicant’s lots do not conform to the minimum lot width in the RR-1 district. The RR-1 district requires a minimum 300 foot lot width be maintained from the front setback line extending through to the location of the principal building. The lot width of the applicant’s lots is less than 190 feet at the front setback line.

4. The proposed use can be accommodated with existing and planned public services and will not overburden the County or Township’s service capacity.

The proposed rezoning can be accommodated with existing service capacity.

5. Traffic generation by the proposed use is within capabilities of streets serving the property.

Traffic generated by the proposed use is within the capabilities of existing streets.
CUP Criteria for Approval/Denial:

1. The use will not create an excessive burden on public facilities and utilities which serve or are proposed to serve the area.

   Traffic generated by the proposed use is within the capabilities of existing streets.

2. The use will be sufficiently compatible with, or separated by sufficient distance from, or screened from adjacent agricultural or residential land uses so that there will be no deterrence to the use or development of adjacent land and uses.

   The applicant has not provided staff with the extent of the use of the helipad including hours of operation, number of takeoffs and landings per day to fully understand the impact of the helipad or to assess any deterrence to the use or development of adjacent land and uses.

3. Each structure or improvement is so designed and constructed that it is not unsightly in appearance to the extent that it will hinder the orderly and harmonious development of the district wherein proposed.

   The existing and proposed structures are not unsightly in appearance to the extent that it will hinder the orderly and harmonious development of the district wherein proposed.

4. The use is consistent with the purposes of the Ordinance and the purposes of the zoning district in which the applicant intends to locate the proposed use.

   The requested private helipad is not permitted as a conditional use within the RR-1C zoning District.

5. The use is not in conflict with the Comprehensive Plan of Scott County.

   The use is in conflict with the Comprehensive Plan as the use is prohibited in the RR-1C district.

6. Adequate measures have been taken to provide ingress and egress so designed as to minimize traffic congestion, provide adequate access to public roads, and provide sufficient on-site parking.

   The use will not create traffic congestion on public roads. However, the helicopter will create ingress, egress and compatibility issues with surrounding rural residential uses including potential safety of residents with a helicopter flying so close to their homes, privacy, noise, impacts to pets, livestock and wildlife and impacts on property values.

7. Adequate water supply, individual sewage treatment system facilities, erosion control and stormwater management are provided in accordance with applicable standards.
The well and septic system on the property are capable of supporting the use.

8. All buildings/structures must meet the intent of the State Building Code and/or fire codes.

   All structures on the property will need to be shown to meet the State Building Code prior to use of the site for a helipad.

Planning Advisory Commission Alternatives:
1. Deny the request as recommended by Planning Staff with the specified conditions.

2. Deny the request as recommended by the Planning Staff with amendments to the conditions.

3. Table the request for a specific reason.

4. Approve the request for a specific reason.

Suggested Planning Commission Motion:
Mr. Chairman, based on the criteria for denial listed in the staff report, I recommend denial of the rezoning of 35.12 acres from RR-1C to RR-1 and, furthermore, I recommend denial of the requested CUP for the operation of a helipad on the property addressed at 26456 Wyldewood Drive.
CEDAR LAKE TOWNSHIP
SECTION 26
DOUGLAS SCHIEFFER
REQUEST FOR REZONING &
CONDITIONAL USE PERMIT
### Property Card

**Taxpayer Information**
Taxpayer Name: SCHIEFFER DOUGLAS D

**Mailing Address**
26456 WYDEWOOD DR
WEBSTER, MN 55088

**Property Address**
Address: 26456 WYDEWOOD DR
City: Webster, MN 55088

**Parcel Information**
- **Parcel ID Number**: 038010040
- **Calculated Acres**: 20.11
- **Deeded Acres**: 20.11
- **Plat**: WYDEWOOD PONDS 3RD ADDN
- **Lot**: 006
- **Block**: 001

**Uses**: 100 Res 1 unit

**Legal Description**: Section 26 Township 113 Range 022
Block 001 Lot 005 SubdivisionCd 03037 SubdivisionName WYDEWOOD PONDS 2ND ADDN

<table>
<thead>
<tr>
<th>Building Style</th>
<th>AGLA (Sq Ft)</th>
<th>Bedrooms</th>
<th>Bathrooms</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2 STRY</td>
<td>4,265</td>
<td>4</td>
<td>6.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year Built</th>
<th>Garage Size (Sq Ft)</th>
<th>Basement Finish (Sq Ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2004</td>
<td>1,796</td>
<td>2,743</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Basement Size (Sq Ft)</th>
<th>2,743</th>
</tr>
</thead>
</table>

**School District**: ISD 0721 NEW PRAGUE
**Taxing District Code**: 0306
**Homestead Status**: Y
**Green Acres**: N
**Ag Preserve**: N

### Assessor Information
- **2018 Values (Payable 2019)**
  - Land: $236,900.00
  - Improvement: $1,628,400.00
  - Total: $1,865,300.00
- **Date of Sale**: 04/29/2003
- **Sale Value**: $151,000.00

Disclaimer: The information is to be used for reference purposes only. Scott County does not guarantee accuracy of the material contained herein and is not responsible for misuse or misinterpretation. The preceding disclaimer is provided pursuant to Minnesota Statutes 466.03, Subd. 21 (2000), and the user of this service acknowledges that the County shall not be liable for any damages and expressly waives all claims and agrees to defend, indemnify, and hold harmless the County from any and all claims brought by User, its employees or agents, or third parties which arise out of the User's access or use of data provided.

Monday, October 14, 2019
Scott County, MN
Page 1 of 1
Property Card

Parcel ID Number 030730052

Taxpayer Information
Taxpayer Name
SCHIEFFER DOUGLAS D

Mailing Address
26456 WYLDEWOOD DR
WEBSTER, MN 55088

Property Address
Address

City

Uses
140 Res V Land

Parcel Information
Calculated Acres 15.01
Deeded Acres 15.01
Plat WYLDEWOOD PCNDS 3RD ADDN
Lot 005
Block 001

Legal Description
Section 26 Township 113 Range 022
SubdivisionName WYLDEWOOD PONDS 3RD ADDN Lot 005 Block 001 SubdivisionCd 03073

Building Information
AGLA (Sq Ft) 0
Garage Size (Sq Ft) 0
Basement Size (Sq Ft) 0
Bedrooms 0
Bathrooms 0.00
Basement Finish (Sq Ft) 0

Miscellaneous Information
School District ISD 0721 NEW PRAGUE
Taxing District Code 0305
Homestead Status N
Green Acres N
Ag Preserve N

Assessor Information
Estimated Market Value
Land $194,000.00
Improvement $0.00
Total $194,000.00

2018 Values (Payable 2019)
Date of Sale 01/01/1900
Sale Value $0.00

Disclaimer: This information is to be used for reference purposes only. Scott County does not guarantee accuracy of the material contained herein and is not responsible for misuse or misapplication. The preceding disclaimer is provided pursuant to Minnesota Statutes 469.03, Subd. 21 (2003), and the user of this service acknowledges that the County shall not be liable for any damages, and expressly waives all claims and agrees to defend, indemnify, and hold harmless the County from any and all claims brought by User, its employees or agents, or third parties which arise out of the user’s access or use of data provided.

Monday, October 14, 2019
Scott County, MN
Rezoning Application

Mr. Schieffer proposes rezoning the properties bearing ID Numbers 038010040 and 030730052 (collectively, the “Property”) from RR-1C to RR-1, in order to allow for a private helipad on the Property by conditional use permit under the Scott County Zoning Ordinance.

The proposed zoning amendment is consistent with the criteria set out in Section 2-5-1, as described in more detail below:

1. *The proposed action has been considered in relation to the specific policies and provisions of and has been found to be consistent with the official County Comprehensive Plan.*

The proposed action consists of rezoning the Property from RR-1C to RR-1. Because both of these zoning areas are contemplated to include similar uses under the 2040 Comprehensive Plan, the proposed action raises no inconsistency with the plan. Under Chapter V, relating to land use, both RR-1 and RR-1C are part of the same general category, namely, Rural Residential Reserve. See V-42-43. The Plan reflects the same goals and future treatment of these zoning categories, and they are almost identical as far as the plan is concerned. Hence, because the Property is currently consistent with the Comprehensive Plan’s treatment of and goals for RR-1C, it is also consistent with RR-1.

The re-designation of the Property from RR-1C to RR-1 will not jeopardize any of the uses contemplated for Rural Residential Reserve property. Rural Residential Reserve property is planned to be reserved for additional rural residential development when the planning infrastructure has been planned and developed. It is contemplated to be used for:

- Single-family detached dwellings, small-parcel farms for local food production, cluster residential developments; institutional uses; limited recreational open space uses (golf courses, public parks, conservation areas, natural preserves, stables and riding academies); and smaller-scale agricultural and related uses.

2040 Comprehensive Plan, at V-42. These purposes are better accommodated by the more permissive RR-1 designation than the RR-1C designation currently in effect.

It is notable that Rural Residential Reserve property contemplates small-parcel farms, institutional uses, and small-scale agricultural and related uses. These uses, which frequently involve the use of diesel truck traffic and fuel storage, generate similar noise levels to the helicopter which will be used. It is also significant that this property is contemplated to be sparsely populated – one dwelling per 8-10 acres. No change in the residential character or density will occur as a result of the change. Hence, the future use and population density of the Property and surrounding area will not be affected or harmed by the proposed action.

2. *The proposed use is or will be compatible with present and future land uses of the area.*

The area is presently, and will remain, primarily residential. The current and future use of the Property is consistent with this. The Property currently contains a detached home and an associated storage facility on Parcel ID No. 038010040, and this will not change. The only change
will be to add a helipad to Parcel ID No. 030730052. The zoning ordinance expressly contemplates that helipads may be used on residential property, as shown by the fact that RR-1 property may contain a helipad by conditional use permit. Moreover, the noise level is minimal and does not exceed that of a garbage truck, lawnmower, or tractor, noises which are already found frequently in residential and agricultural areas like those which may be included in RR-1 and RR-1C properties. Unlike garbage trucks or tractors, the noise from the helicopter lasts less than three minutes.

It is also significant that the Property is currently immediately adjacent to RR-1 properties. Hence, the requested rezoning is consistent with the zoning of several properties already in the area and will not change the character of the area.

3. *The proposed use conforms to all performance standards contained in this Ordinance.*

The proposed use conforms to all performance standards contained in the Ordinance. Parcel 030730052 contains no buildings or structures and therefore does not violate any of the RR-1 performance standards in the Ordinance. Parcel 030730052 currently conforms to all performance standards for RR-1C properties. These standards are more stringent than those for RR-1 properties, and therefore, Parcel 030730052 will necessarily meet the performance standards for RR-1 properties.

4. *The proposed use can be accommodated with existing and planned public services and will not overburden the County or Township’s service capacity.*

The Property will continue to be used for residential purposes and will continue to have a single residence. The only change effected by the proposed use will be the addition of a private heliport. This will not affect the existing or planned public services consumed by the Property.

5. *Traffic generation by the proposed use is within capabilities of streets serving the property.*

The Property will continue to be used for residential purposes and will continue to have a single residence. The only change effected by the proposed use will be the addition of a private heliport. This will not affect the traffic on streets serving the Property.
Conditional Use Permit Application

Mr. Schieffer requests a conditional use permit to allow the properties bearing ID Numbers 038010040 and 030730052 (collectively, the “Property”) from RR-1C to RR-1, to contain a private heliport on the Property under the Scott County Zoning Ordinance.

1. The use will not create an excessive burden on public facilities and utilities which serve or are proposed to serve the area.

The proposed use involves adding a concrete helipad to the Property and the use of an adjacent shed to store a helicopter. The use of the helipad will be private only, and will not change the residential use of the Property. Mr. Schieffer does not intend any public use of the helipad. Therefore, the use will have no effect on the public facilities or utilities which serve or will serve the area.

2. The use will be sufficiently compatible with, or separated by sufficient distance from, or screened from adjacent agricultural or residential land uses so that there will be no deterrence to the use or development of adjacent land and uses.

The proposed use for a private heliport is compatible with any existing and future residential and agricultural uses in the area, and will not deter them. The Property is approximately 40 acres, and is more than large enough to provide a sufficient distance from neighboring properties to minimize any noise or other intrusions on other properties. The noise generated by the helicopter when taking off or landing (which happens infrequently due to the fact that the proposed use contemplates a single helicopter only) lasts for approximately 3 minutes and is similar to the noise of a garbage truck. Specifications showing the decibel levels generated by the aircraft at issue, and a chart showing the effects of that noise are attached.

Further, Mr. Schieffer has had the helipad inspected and approved by MnDOT Aeronautics and Aviation, which issues licenses for heliports (MnDOT Aeronautics Rules Chapter 8800.1400-2300). MnDOT’s manager of Aviation Safety and Enforcement Rick Braunig commented that the helipad and site were “perfect” for use as a heliport.

Finally, there is also no issue with the storage of fuel. Aviation fuel is very stable and safe, and is stored in a Certified Aviation mobile fuel tank. An article discussing the safety of the aviation fuel to be stored at the property is attached.

3. Each structure or improvement is so designed and constructed that it is not unsightly in appearance to the extent that it will hinder the orderly and harmonious development of the district wherein proposed.

The proposed use is comprised of two structures: A concrete helipad and a shed used to store the helicopter when not in use. The concrete helipad consists of a 6-inch concrete slab with a four-inch aggregate sub-base, with perimeter lighting. In physical appearance, it is indistinguishable from a patio. The shed is indistinguishable from any shed commonly used for residential purposes at larger houses. Therefore, neither of the proposed improvements are unsightly or will hinder the orderly and harmonious development of the district.
4. The use is consistent with the purposes of the Ordinance and the purposes of the zoning district in which the applicant intends to locate the proposed use.

The zoning district RR-1 is intended to be reserved for future higher-density rural residential development when support services and infrastructure can be provided. Ordinance 40-1 specifically states that "Development in this district shall maintain low rural residential densities until such time as the need for additional rural residential development . . . . is approved. The proposed use is consistent with this purpose. The proposed heliport is ancillary to the current residential use of the Property, and will not affect the suitability of the Property or surrounding properties to be used at present or in the future for low-density residential purposes.

5. The use is not in conflict with the Comprehensive Plan of Scott County.

The proposed use of the Property for a private heliport will not jeopardize any of the uses contemplated for Rural Residential Reserve property in the Comprehensive Plan. Rural Residential Property Reserve property is planned to be reserved for additional rural residential development when the planning infrastructure has been planned and developed. It is contemplated to be used for:

- Single-family detached dwellings, small-parcel farms for local food production, cluster residential developments; institutional uses; limited recreational open space uses (golf courses, public parks, conservation areas, natural preserves, stables and riding academies); and smaller-scale agricultural and related uses.

2040 Comprehensive Plan, at V-42.

Notably, Rural Residential Reserve property contemplates small-parcel farms, institutional uses, and small-scale agricultural and related uses. These uses, which frequently involve the use of truck traffic and fuel storage, generate similar noise levels to the helicopter which will be used. It is also significant that the RR-1 zoning district is contemplated to be sparsely populated – one dwelling per 8-10 acres. No change in the residential character or density will occur as a result of the change. Hence, future use and population density will not be affected or harmed by the proposed action.

6. Adequate measures have been taken to provide ingress and egress so designed as to minimize traffic congestion, provide adequate access to public roads, and provide sufficient on-site parking.

The proposed use will not require any ingress or egress beyond that already provided for the residence on which the heliport is located. Hence, it will not have any effect on traffic congestion, will not require any additional access to public roads, and will not require any additional on-site parking.

7. Adequate water supply, individual sewage treatment system facilities, erosion control and stormwater management are provided in accordance with applicable standards.

The proposed use will not require any additional water supply, individual sewage treatment system facilities, erosion control, or stormwater management.
8. *All buildings/structures must meet the intent of the State Building Code and/or fire codes.*

The proposed use is consistent with the State Building Code and Fire Code.
### GENERAL DATA

<table>
<thead>
<tr>
<th>WEIGHTS</th>
<th>BELL 206 L4 English</th>
<th>Metric</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max Gross Weight (Internal)</td>
<td>Lbs 4450</td>
<td>2018 Kg</td>
</tr>
<tr>
<td>Max Gross Weight (External)</td>
<td>4550</td>
<td>2063</td>
</tr>
<tr>
<td>Usable Fuel</td>
<td>742</td>
<td>336</td>
</tr>
<tr>
<td>Optional Fuel</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Maximum External Load</td>
<td>2000</td>
<td>907</td>
</tr>
<tr>
<td>30 Min Fuel Reserves</td>
<td>130</td>
<td>59</td>
</tr>
</tbody>
</table>

**VFR - Utility Configuration**

| Empty Operating Weight      | 2717                | 1232   |
| Useful Load                 | 1733                | 786    |
| Payload with Full Std Fuel  | 991                 | 450    |

**IFR - Corporate/EMS Configuration**

| Empty Operating Weight      | 2971                | 1347   |
| Useful Load                 | 1479                | 671    |
| Payload with Full Std Fuel  | 737                 | 334    |

### PROPULSION SYSTEM

| Engine Manufacturer         | Allison             |
| Number & Model Engines      | (1) 250-C-30P       |
| Engine Rating               | Takeoff SHP 650     |
| Max Cont                    | 557                 |
| OEI/2.5 Min                 | 415                 |
| OEI/30 Min                  |                     |
| OEI/Max Cont                |                     |

**Takeoff Rating**

| Max Cont                    | 365                 |
| OEI/2.5 Min                 | 276                 |
| OEI/30 Min                  |                     |
| OEI/Max Cont                |                     |

### FAR 36 NOISE LEVELS

| Takeoff                      | EPNdB 88.4          |
| Flyover                      | 85.2                |
| Approach                     | 90.7                |

Meets FAR 36 Noise Levels: Stage 2

### CERTIFICATION (TA)

| IFR                          | Yes                 |
| Category A                   | Yes                 |
| Minimum Crew VFR/IFR         | No                  |

### ACCOMMODATIONS

| Seats                        | 1/5                 |
| Crew/Pass (Corp)             | 1/6                 |
| Crew/Pass (Max)              | 1/2/2               |
| Crew/Litters/Attendants      |                     |
| Forward Pass Seating         | 20                  |
| Baggage Total                | 0.57                |

### PERFORMANCE

| VNE (SL, ISA)                | KTAS 127            |
| Rate of Climb (Max GW, SL, ISA) | 1320 Ft/Min |
|                               | 6.7 M/Sec          |
| Maximum Range (30 Min Res)    | NM 253             |
| Max Endurance (30 Min Res)    | Hrs 3.03           |

<table>
<thead>
<tr>
<th>Decibel Level</th>
<th>Noise Source</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>150</td>
<td>Jet take-off (at 25 meters)</td>
<td>Ear drum rupture</td>
</tr>
<tr>
<td>140</td>
<td>Aircraft carrier deck</td>
<td>Painful. 32 times as loud as 70 dB.</td>
</tr>
<tr>
<td>130</td>
<td>Thunderclap, chain saw, Oxygen torch</td>
<td>110</td>
</tr>
<tr>
<td>120</td>
<td>Military jet aircraft take-off from aircraft carrier with afterburner at 50 ft. (130 dB)</td>
<td>Average human pain threshold. 16 times as loud as 70 dB.</td>
</tr>
<tr>
<td>110</td>
<td>Turbo-fan aircraft at takeoff power at 200 ft (118 dB); Riveting machine (110 dB); live rock music (108 - 114 dB).</td>
<td>100</td>
</tr>
<tr>
<td>90</td>
<td>Jet take-off (305 meters), use of outboard motor, power lawn mower, motorcycle, farm tractor, jackhammer, garbage truck, Boeing 707 or DC-8 aircraft at one nautical mile (6080 ft) before landing (106 dB); jet flyover at 1000 feet (103 dB); Bell J-2A helicopter at 100 ft (100 dB).</td>
<td>80</td>
</tr>
<tr>
<td>80</td>
<td>Boeing 737 or DC-9 aircraft at one nautical mile (6080 ft) before landing (97 dB); power mower (96 dB); motorcycle at 25 ft (90 dB); Newspaper press (97 dB).</td>
<td>70</td>
</tr>
<tr>
<td>70</td>
<td>Garbage disposal, dishwasher, average factory, freight train (at 15 meters), Car wash at 20 ft (69 dB); propeller plane flyover at 1000 ft (68 dB); diesel train at 45 mph at 50 ft (84 dB); Food blender (88 dB); milling machine (85 dB); garbage disposal (80 dB).</td>
<td>Arbitrary base of comparison. Upper 70s are annoyingly loud to some people.</td>
</tr>
</tbody>
</table>

*a noise Comparisons*
The Differences Between Kerosene & Jet Fuel

By Chris Deziel | March 3, 2019

Depending on the grade, jet fuel is basically highly refined kerosene. What is kerosene? It is a fuel that has been around for over a thousand years and is today consumed at a worldwide rate of 1.2 million barrels per day. People use it for heating, lighting and cooking.

The word "kerosene" comes from the Greek "keros," which means wax, and kerosene is also known historically as paraffin. The kerosene and paraffin difference is that the paraffin is a component of kerosene, and when petroleum refining is complete, it remains as a waxy residue. The
nomenclature provides a clue to the connection between them and helps clarify the relationship of kerosene to jet fuel.

Petroleum Refining and Fractional Distillation

Petroleum, or crude oil, is the raw material for kerosene, gasoline and a host of other products. This highly viscous liquid is rich in aliphatic hydrocarbons, which are molecules that generally contain only hydrogen (H) and carbon (C), although they might also contain impurities such as sulfur (S).

Hydrogen and carbon combine in chains of various lengths. The lightest of these are known as naphthas, which are gases at room temperatures, while the heavier chains are liquids or solids. Each chain has a unique boiling point, so the process of refinement consists of heating petroleum progressively to separate out components. This is the process of fractional distillation.

The naphthas — methane (CH₄) to heptane (C₇H₁₅) — are the first chains to vaporize, and they get used for solvents and cleaning chemicals. The chains from C₈H₁₈ (octane) through C₁₁H₂₄ (undecane) are next, and these become gasoline. Kerosene is manufactured from the chains that vaporize next, C₁₂ to C₁₅, while diesel fuel and solids such as paraffin wax and road tar come from heavier chains.

Kerosene vs. Gasoline

Because it is composed of heavier chains of hydrocarbons, kerosene is less volatile than gasoline. Its higher flash point (100°F vs. -45°F for gasoline) means that it is safer to store and transport, which is of obvious importance in the aviation industry. Jet engines will burn almost any kind of fuel, so it doesn't have to be highly flammable gasoline.

While not as abundant as gasoline, kerosene still constitutes a large percentage of net refinement products. According to the U.S. Energy
Information Administration, a 42-gallon barrel of crude oil yields about 20 gallons of gasoline and about 16 gallons of other distillates. Of the distillates, about 4 gallons are jet fuel, while the rest are heating oil and diesel fuel.

Jet Fuel and Kerosene Are the Same — Almost

Because they contain the same classes of hydrocarbons, kerosene, jet fuel and diesel are similar products. When it comes to kerosene vs. diesel for your kerosene heater, many people report that either is suitable. They do notice a stronger odor when using diesel, which is due to the fact that it contains a wider variety of hydrocarbons.

In other words, kerosene is more highly refined than diesel, which means it has been processed at a higher temperature to remove more of the volatile compounds. The same difference exists between kerosene and jet fuel, which has been refined at even higher temperatures. The company that regulates petroleum products in India, Indian Oil, identifies jet fuel as SKF, which means "superior kerosene fuel."

Among the higher standards jet fuel has to meet are those for freezing point, flash point, viscosity, sulfur content and calorific value. In addition, it contains additives to help it burn more cleanly and efficiently as well as to prevent ice formation and corrosion.

Grades of Jet Fuel

- Jet A, which is the fuel that was widely used in Europe after World War II, is almost identical to kerosene. Its widespread use on the continent was due to the fact that it was more available than gasoline. Another grade in common use is Jet A-1. Together, these are the fuels used more commonly by commercial airliners.
Jet B and JP-4 ("JP" stands for jet propulsion) are mixtures of kerosene (30 percent) and gasoline (70 percent). They include a larger concentration of the light hydrocarbons and naphthas than Jet A, so they weigh less, which is a desirable characteristic for aviation. However, they have lower flash points and are more dangerous to handle. Because they have low freezing points, they are used for military purposes in the far north.

JP-5 is also known as high-flash-point kerosene. It is safer to handle than even Jet A and is required for aircraft aboard aircraft carriers as well as for presidential fleet aircraft. Its composition includes approximately 53 percent C_9 to C_16 liquid paraffins (hydrocarbons) with the rest made up of cycloparaffins, aromatics and olefins.

JP-8 is a 100 percent kerosene blend and is an acceptable substitute for diesel fuel. It is the fuel most widely used for military aircraft, and its use is expected to continue until 2025. Unlike JP-4, which feels like a solvent to the touch, JP-8 feels somewhat thick and oily.

Some Airplane Engines Use Avgas

Jet engines are powered by turbines, and kerosene-based fuels such as Jet A are suitable for them. Propeller-powered aircraft, on the other hand, have rod-and-piston engines for which a gasoline-type fuel is more suitable. These engines use avgas, which is a higher-octane version of the gasoline you put in your car (mogas).

The two gasoline blends are not the same. Avgas contains various concentrations of tetraethyl lead, which is banned from use in mogas because of concerns about the toxicity of lead. Even though it is toxic, lead is an
important lubricant, and it is needed to protect sensitive engine parts in airplane engines.

Apart from the inclusion of tetraethyl lead, which is being phased out, avgas is close enough to mogas to be used as a motor fuel. The converse isn't true, however, primarily because of the likely presence of ethanol in mogas, which is detrimental to airplane engines.

Can You Use Jet Fuel for Heaters and Cars?

You could use Jet A to power your kerosene heater or your diesel vehicle. It's a more refined version of kerosene and burns better than diesel fuel. Considering the fact that due to the high production levels it's less expensive than either kerosene or diesel, it would seem a no-brainer to use it as a substitute.

The main reason you wouldn't want to use jet fuel in your diesel car is that the car's engine isn't designed for it. Jet fuels lack the lubricating characteristics of diesel fuel, but you could add lubricating chemicals. However, jet fuel also lacks the cleansing additives, and without these, your diesel engine would gum up, and you'd be forced to do frequent cleanups.

Kerosene heaters are designed to run on 1-K and 2-K kerosene, the difference being that 2-K has a higher sulfur content, which means more sulfur dioxide emissions and increased residue buildup on wicks. The National Ag Safety Database cautions against using jet fuel for heaters. It burns too hot and could result in a fire or explosion.