

SUPPLEMENTAL PACKET

Will Carlson Sketch Plan for a Preservation and Land Conservation Development Subdivision for 2018 acres of Land Located on 60th Street West of Trading Post Trail.

Feedback submitted by Annie Perkins, member Natural Resources and Groundwater Committee Member

1.3.2017

- Background/relevant context: per *Afton Natural Resources Inventory Final Report 2001* (pg. II-2) the PLCD, encompassing L28 and L29 of said report (see attached "Land Unit map"), has landscape rankings as follows:
 - **Ecological Ranking** - moderate /moderate
 - **Wildlife Habitat Rank** - moderate/moderate
 - **Rare Features Potential** - high(L28) /moderate (L29). Noteworthy Features:
 - L28 - "Interesting landscape with group of bedrock knobs containing prairie remnants. Moderate quality northern hardwood forest and mesic oak forest. This landscape unit encompasses the headwaters of trout Brook."
 - L29 - "Large area of moderate quality mesic oak forests. Good opportunity to engage local residents in stewardship activities."
 - **NOTE: criteria for a "high" ranking of Rare Features Potential is as follows: Documented endangered species and/or natural communities within site boundaries. Criteria for a "moderate" ranking of Rare Features Potential is as follows: Documented endangered species and/or natural communities adjacent to site -high potential for endangered species to be present on site due to good quality habitat (pg. IV-3).**
 - Review Table II.2 Major Management Issues - L28 and L29 have majority level of concern ranked at top two levels (medium and high). Report back with plan to address these sensitivities.
 - Review Table II.3.Stewardship Strategies outlined for L28 and L29. Report back with plan addressing these stewardship strategies.
 - L28 is listed under Table II-4 Priority Resource under "Key Natural Resources Management Recommendations" due to its ranking of highest quality/most unique landscape units within the City. Recommended action is as follows:
 - Headwaters of Trout Brook 1. Group of bedrock knobs contains prairie remnants that offer good restoration potential. Further survey should be conducted to determine management approach. 2. Evaluate headwaters pond (flood retention pond) to determine thermal impacts to brown trout survival/reproduction. If significant thermal impacts are shown to exist, work with landowner to remove structure, restore seepage wetlands and reestablish thermal/hydrologic regime to Trout Brook.
 - Provide the City with plan addressing above stated concerns.
- For reasons stated above, an Environmental Impact study of the proposed development needs to be conducted with the above report in mind, to help identify areas of concern (potential negative impact to Trout Brook and regionally significant ecological areas - terrestrial and wetlands). Additional considerations of existing steep slopes to be addressed as well. It is recommended that said impact study be conducted by reputable third party and presented to NRGW committee for review.
- Inherently, a PLCD is designed to "preserve natural resources of the site and to preserve wildlife habitat and corridors". With that in mind, all southern lots currently impede this directive.

Furthermore, a Conditional Use Permit will be required for PLCD; the CUP will be issued only if the PLCD abides by the Comprehensive Plan as well as provides for the preservation of the land's unique natural amenities (see Afton Natural Resource Inventory Final Report). Therefore, the shifting of lots, to adhere to existing PLCD language, is advised.

- Possible alternate plan options, in consideration of Afton's Natural Resources Inventory Report detailed above, as well as consideration of agreed upon Environmental Impact study, would be to extend the access road, moving the Cul de sac further west, shifting lots to northern edge of property (eliminating northern most east/west conservation sliver), and relocating Lots 1, 2, 3, 4 and 5 to the northwest section of property. The "Open Space Conservation Easement" would then shift south, abutting 60th Street. The proposed 10 acre Open Space located to the east of the Exception section, would then likely increase to 20 acres (replacing current Lots 4 and 5) and abut the access road.
 1. This alternative proposal addresses above stated concerns thereby avoiding disturbance to sensitive areas around the Trout Brook headwaters.
 2. Additionally, the preservation of land immediately adjacent to Trout Brook is imperative in ensuring adherence to Afton's Comprehensive Plan.
 3. Lastly, retaining access to Trout Brook allows for potential stewardship strategies involving the engagement of local residents as recommended in Afton Natural Resources Inventory Report as well as in Afton's Comprehensive Plan.
- Furthermore, this alternate proposal addresses Agricultural Zoning using a PLCD which states: "The City intends to provide more intensive land use planning throughout this zone so as to coordinate and link the preservation areas for maximum benefit and minimal impact to the character of the community." pg. 22, 2008 Amended Comprehensive Plan.
- Finally, the current PLCD lacks consideration for the City's Park Dedication ordinance. Leveraging this requirement in accordance to the language outlined in the ordinance, assigns land area in addition to and not in lieu of already designated conservation easement. Additionally, dedication of land under said ordinance aligns with the intent of Afton's Environmental Resources Plan as outlined in the City's Comprehensive Plan. Per its language, and the calculation of land value, the land dedication could likely equate to that of one existing 5 acre lot. The parcel of land, meeting this requirement, dedicated to the City, should strategically fit into the larger plan for preservation of Afton's natural resources. Therefore, it's recommended that this parcel be accessible from 60th and abut the Open Space Conservation Easement.

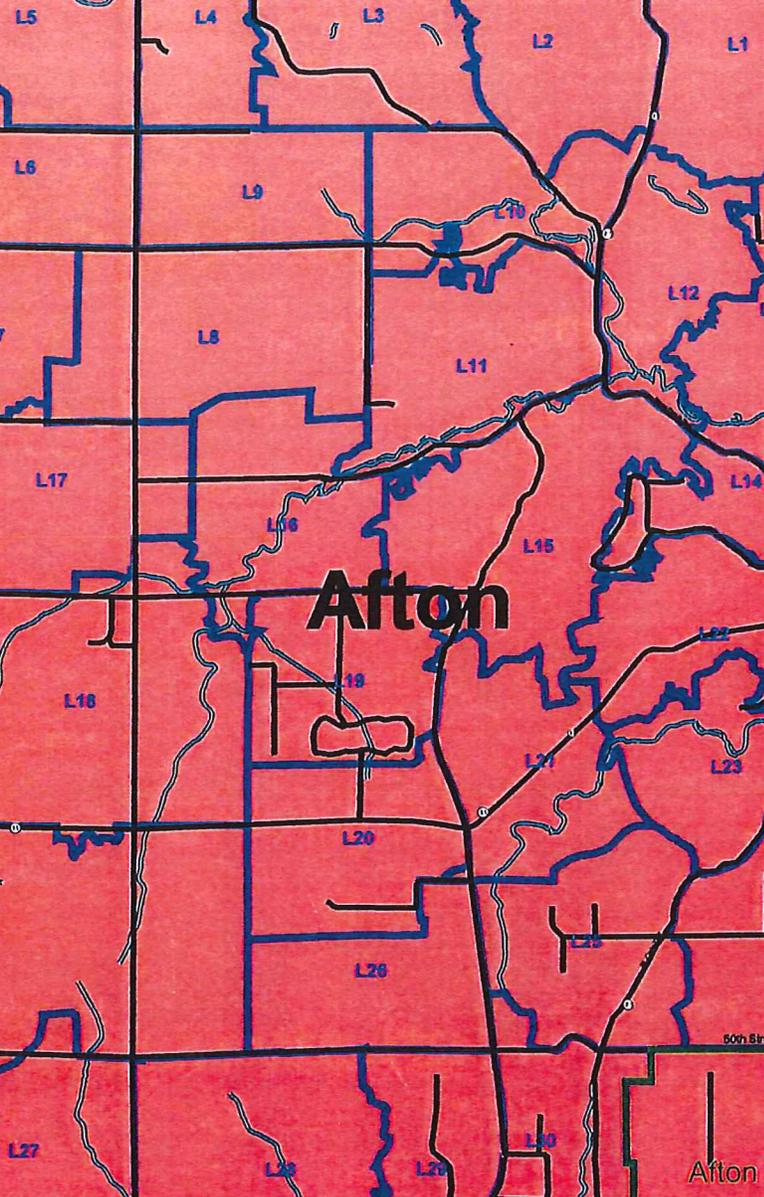
West Lakeland twp.

Denmark twp.

Afton

Afton State Park

500th Street



18

20

**Afton NRI
Figure 1.1**

- DNR State Park
- Afton boundary
- Management Units
- Roads
- NRI
- Streams

1000 0 1000 2000 3000 Feet

1:50000

Carlson PLCD feedback from Susan Winsor, NRGW committee

Concerns:

***Fragility:** A large share of proposed lots lie in Conservancy Overlay District (see Sec. 12-137) and Shoreland Management Areas. Afton Sec 12-137 says “...*the Conservancy overlay district’s purpose is to manage areas unsuitable for development due to wet soils, steep slopes, ...unique areas of natural and biological characteristics....scenic views and other physical features of unique natural and biological characteristics in need of proper land use management. Such areas shall include the following:*

**Elements of local hydrologic system in need of protection and preservation.”* (My concerns are the steep slopes and the trout stream).

***Water quality:** Lake St. Croix (St Croix River) is listed on the Federal Impaired Waters List for excess phosphorus. (See <https://www.pca.state.mn.us/sites/default/files/wq-iw6-04e.pdf>). The Mn PCA calls for a 27% reduction in phosphorus contributions (loading). The steep slopes on the Eastern and Southern part of the Carlson proposed PLCD parcels are a concern because sediment (from erosion) carries phosphorus, which creates algae blooms beyond certain thresholds (stream and St. Croix River both a concern.) Stream erosion carrying phosphorus does not support a 27% reduction in St. Croix River phosphorus loading. Also, the trout stream is already impaired. (see PCA Assessment unit 82-0001-00). The section has a PCA TMDL plan for nutrient/eutrophication biological indicators.

**Sec. 12:46: 5. “Lake or stream frontage lots. All lots having frontage on a water body or lying within a Shoreland Management Area (part of this development) shall be subject to the regulations of the Shoreland Management ordinance, Article III of this chapter.” ...”All structures shall be set back a minimum of 20 ft. from the crest of all slopes exceeding 18% as determined by Zoning Administrator.:*

...Sec 12-1329 B. “Any plat proposed in a Shoreland Management District must have approval of the MN DNR...and the watershed district.”

**Carlson lots 1, 2, 3’s drainage is to the North, toward the trout stream. This trout stream is not only ecologically valuable in and of itself, but feeding into the St. Croix River to the East, a nationally designated Wild and Scenic River and does not currently meet federal water quality standards. The Minnesota PCA designates Lake St. Croix and the river to its south (that includes the part East of this development) as impaired.*

Table 49 of the PCA report below finds that the trout brook (see unnamed) exceed federal *e. coli* standards and is PCA-designated as “Outstanding Resource Value Water,” connoting high recreational and scenic value. (See <https://www.pca.state.mn.us/sites/default/files/wq-s6-48i.pdf>)(two unnamed creeks).

South Washington Watershed District (SWWD), the local watershed, says in its 2016 management plan: “*Excess nutrients in stormwater overwhelmingly drive water quality degradation in the SWWD. The source of those nutrients in SWWD is erosion.*”

-- SWWD Management Plan, page 10

Reference: <http://www.co.chisago.mn.us/DocumentCenter/View/4314>

Afton code 12:216 and 217 re slopes.

*Under LAND USE (Afton code), section D. *“Within the Lower St. Croix River Bluffland and Shoreland Management District, no slopes of 12% or greater shall be disturbed (Section 12-70s).”*

Recommendations:

Superimpose the Conservancy Overlay District and the Shoreland District on this plat in order to fine tune these recommendations below, in order to reduce erosion and stream/river contamination:

*Remove Lots 1, 2, and 3 due to concerns about erosion into trout stream and river nutrient contamination. These appear to lie in the Conservancy Overlay District, and in part, in the Shoreland District.

*Convert Southwest corner of plat, South of stream, to Afton parkland as parkland dedication fee. Append any land that exceeds the 7.5% of land value stipulation to the Open Space Conservation Easement.

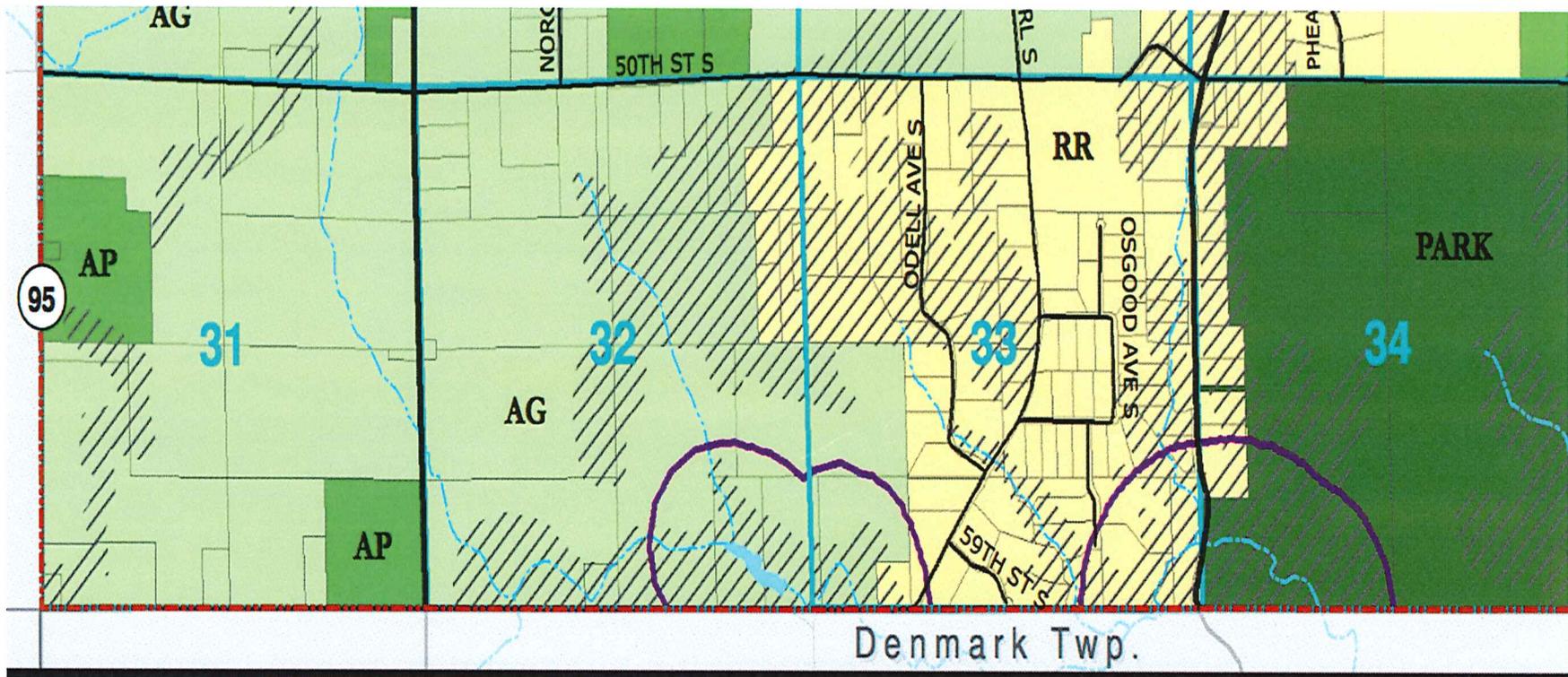
*Lots 4 & 5: Add parts with slopes above 13% to the 10-acre adjacent Open Space immediately to the West, and the remainder comprises one lot instead of two, if eligible per Afton zoning laws. These appear to lie in the Conservancy Overlay District, and in part, in the Shoreland District.

*Lots 9 and 10: Append to adjacent Open Space Conservation Easement for reasons of slopes above 13% grade.

*Lots 14, 15 and 16: Add those lot portions with slopes exceeding 13% to the adjacent Open Space to the North. Remaining portion comprises one lot, or whatever the remaining less steep landscape represents.

*Run plat past local watershed and Minn. DNR (Shoreland District part of it) for feedback on lot placement relative to slopes and trout stream.

*The revised plat map, after doing the above, is subject to review by MN DNR per Afton code pertaining to Shoreland Management District (Sec 12-1329) and relevant watershed district, especially relevant to concerns about erosion, slopes and trout stream integrity.



Zoning Districts

- Agriculture
- Ag Preserve
- Village Historic Site- Commercial
- Industrial
- Village Historic Site- Residential
- Rural Residential

- State Park
- Marina Services
- Conservancy Overlay
- St. Croix River Bluffland
- Floodplain Overlay (100 Year)
- Shoreland Management Areas

- City of Afton
- Parcel Boundaries
- Section Lines
- Major Road
- Local Road
- Lakes & Rivers



Map prepared October 2010 1000 Friends of Minnesota TRC

Data Sources: City of Afton, Metropolitan Council, MN DNR, MN DOT, Washington County