2018 Comprehensive Guide Plan Steering Committee

Wednesday, November 15, 2017

Minnehaha Room, Minnetonka City Hall

6:00 – 8:00 p.m.

Agenda:

6:00 – 6:15	Dinner
6:15 – 7:00	Natural Resources Discussion
7:00 – 7:45	Water Resources Discussion
7:45 – 8:00	Building Community Resilience
8:00	Adjourn

City of minnetonka

Memorandum

To: Comprehensive Guide Plan Steering Committee

From: Loren Gordon, AICP, City Planner

Date: November 15, 2017

Subject: Comprehensive Guide Plan meeting #6 – November 15, 2017

Our sixth steering committee meeting will focus on the connected topics of water and natural resources. The current 2030 comprehensive plan include natural and water resources into a single chapter – Resource Management Plan. It is anticipated these issues will be written in a similar manner for the 2040 update. The water resources section included here is a summary of issues that are included in the more technical stand alone Water Resources Management Plan document. The city is required by law to adopt this technical planning document along with the comprehensive plan.

City natural resources and water resources staff will be with us at the steering committee meeting to ground everyone and discuss the challenges faced in natural and water resource areas.

Background

It is no surprise that Minnetonka has long placed the natural environment as a priority. This passion is seen in community survey responses, use and enjoyment of these areas and people's passion for preservation of these resources during the development review process. Policies in the comprehensive plan, development regulations and stewardship by residents, businesses and city staff help protect and preserve our natural environment. Although natural resources are held in high regard, the city also recognizes that they must coexist with urban development. The following is posted on the city's natural resource division webpage that is symbolic of this difficult task:

> *The city's motto— "Minnetonka… where quality is our nature" is echoed by our residents as they year after year rank natural resources as one of the top reasons they choose to live in Minnetonka. As we work to preserve our quality neighborhoods and provide exceptional city services, we will always be aware of the delicate balance between the need for urban services and the importance of*

protecting and managing our natural surroundings.

Minnetonka's commitment to its natural resources is expressed through the vision and goals of the 2030 Comprehensive Plan, the basic guiding document of the city. It is also outlined in the city's strategic vision and goals:

- *Protect and improve our water resources and woodlands.*
- *Facilitate open space preservation.*
- *Respect the natural environment while managing growth.*

Despite having less than 1 percent of land undeveloped, the city has a large amount of natural and open space areas. Of the nearly 18,000 acres of land within the city, 4,000 acres or 22 percent is in natural or open space area with some level of protection from development. Those areas include wetlands, floodplain, water features, protected public and private open space and parks. Although development pressure may not cause these areas to change, other forces are challenging and stressing the integrity of these lands.

Staff has identified natural resource issues the city is facing our natural and water resources. Below are a few identified threats:

1. Development and impervious surface
    - Increased imperviousness equates to increased storm water run-off due to hard surface and loss of trees
    - Increased development pressure on natural park acreage areas
    - Gaps in greenway corridors
2. Considerations about the Community Forest
    - Development and tree loss
    - Shade Tree Diseases
        - Dutch elm disease - 547 diseased elms removed in 2015 and 626 in 2016
        - Oak wilt – 98 diseased oaks removed in 2015 and 51 in 2016
        - Emerald ash borer - The Emerald ash borer (EAB) is an insect that attacks and kills all species of ash trees. The adults are small, green beetles that live outside of trees during the summer months. The adults lay their eggs on branches and in bark

crevices. The eggs hatch into larvae, which tunnel underneath the bark to feed. As the tree becomes infested with EAB larvae, it begins to decline in health and die.

The Minnesota Department of Agriculture (MDA) has imposed a quarantine for several counties, including Hennepin County, prohibiting the movement of potentially infested items such as ash limbs, branches, and logs out of those counties.

3. Illicit discharges and water quality for wetlands lakes and creeks

- Pollutant loads (grass, leaves, dog feces)

  - Grass clippings, leaves, and pet waste decompose in the water. They release nutrients—nitrogen and phosphorus. At low levels, these chemicals are necessary to life. But past a certain threshold, nitrogen and phosphorus set off a cascade of events that are harmful to aquatic ecosystems. Excessive nutrients promote the overgrowth of aquatic plants. As the plants die off, they provide a food source for bacteria. These decomposing bacteria consume a lot of oxygen, depriving other aquatic organisms of that vital chemical.

  - Pet waste presents another threat. It often contains pathogens—bacteria, viruses, or parasites that can harm people, pets, and wildlife. In some areas of the country, waterways have been closed due to high pathogen levels in water.

  - People often assume that sewage is the most significant source of E. coli bacteria in water. In most cases, that's not true. During a two-week period of March 2015, two Minnetonka residents collected more than 200 pounds of pet waste along Minnetonka trails.

    - Two studies conducted in the mid-1990s showed that 90-95% of fecal matter found in urban watersheds was non-human.

    - One gram of pet waste—the size of a pea—contains 23 million fecal coliform bacteria (E. coli). Not all fecal coliforms are harmful. But their presence indicates that water has been contaminated by waste, and other pathogens may have been deposited with that waste.

- Salt - It takes just one teaspoon of salt in five gallons of water to harm fish and other aquatic life. Roads, vehicles, and buildings are also damaged by the corrosive action of salt-laden water. Once it reaches

lakes and streams (usually through the runoff of melting snow), salt is extremely difficult to remove and continues to accumulate over time.

The U.S. Geological Survey found that, in urban areas of the northern United States, salt concentrations doubled between 1990 and 2011. Minnesota's Pollution Control Agency reports that 39 streams and lakes in the metro have excessive salt; an equal number are dangerously close to that level. Salty water that trickles down through the soil can also contaminate groundwater, threatening drinking water supplies for about three-quarters of all Minnesotans.

4. Invasive species

    - Terrestrial invasives - In Minnetonka the city is the leader in terrestrial invasive species management. We have about 1500 acres of parkland, of those 1500 acres about 750 are natural (versus being mowed, maintained for ball fields or playgrounds etc.). Natural resource staff are currently restoring about 310 acres (about 40% of the natural parkland acreage) with the help of volunteers, contractors and goats.

      Primarily two species are problematic for Minnetonka woodlands, buckthorn and garlic mustard but a host of additional invasive species are on the way like narrow leaf bittercress, Japanese knotweed and Norway maple.

    - Aquatic invasive species like starry stonewort, zebra mussels, Eurasian milfoil and purple loosestrife impact the quality of our waters and create nuisance conditions. In lake treatments can be expensive and may not produce effective control. Enforcement of regulation can be difficult on public access lakes due to budgetary restrictions. People need to need to be educated (Clean, Drain and Dry) and need to care to not spread these lake invaders.

5. Protecting pollinators

    - Backyard conservation

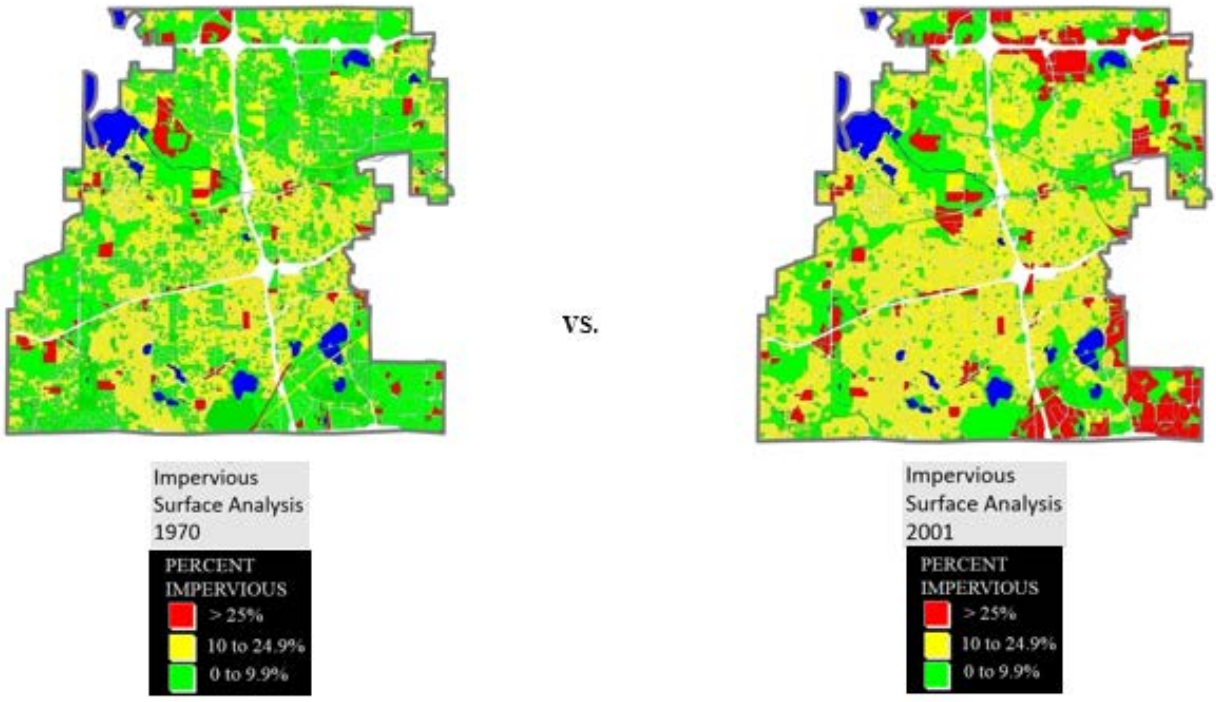
    - Habitat restoration

Water Resources Management

As a requirement of the comprehensive plan, the city must also update its water resources management plan (WRMP). The WRMP is the document that guides how these resources are managed and protected. It is based on the city's values. Policies and regulations are derivatives of those values. The WRMP is a large technical document that is updated every 10 years. It contains data and inventories of our water resources, goals, policies, and resources. Although it must be in conformance with

several different agencies, it also takes into account local issues, goals, and policies. Like other plan sections it contains an inventory of our resources, data, goals, policies, and regulation.

As a simple illustration, the graphic below shows the change of impervious surface from 1970 to 2001. During this time period the city experienced it most rapid growth adding employment and shopping areas like Ridgedale Mall and Opus 2 Business Park to complement the rapidly increasing population. Urbanization creates additional water runoff into wetlands and water features and prevents infiltration into the groundwater. Increasing urbanization creates additional flood risk and degrades water quality. Degrading water quality is an increasingly difficult issue for communities in Minnesota to address.



City engineering staff is preparing the technical WRMP document. For our meeting staff will provide an overview of the work to date on that plan including the issues and policies under development.

Building Community Resilience for a Changing Climate

Current science indicates our precipitation and temperature patterns are changing in Minnesota, and will continue to do so in the future. These changes have significant impacts on our natural resources, our built infrastructure, human health, and our societies. To address these impacts, the American Planning Association's Guide to Planning for Climate Change (2011) states, "It is at the local level of government where most climate change impacts occur. Local jurisdictions are where streets and homes

are flooded, where infrastructure is installed, where potable water is supplied, and were building permits are issued. As a result, “Main Street” is the nexus for climate change action”. The importance for adaptation planning and building resilience to climate change is also recognized in the Metropolitan Council’s regional planning initiative Thrive MSP 2040, which encourages planning for climate change and resilience as part of a community’s comprehensive plan update process.

Along with our discussion of natural and water resources issues is a focus on resiliency. At our first and second committee meetings, the committee showed great interest in pursuing this topic in greater detail to include as a theme throughout the plan. To further these interests, staff has arranged to have staff from the Freshwater Society assist with developing this resiliency theme. The Freshwater Society has recently engaged other communities and watershed districts in community planning for Minnesota’s changing climate. The Freshwater Society received a Cynthia Krieg Stewardship Grant through the Minnehaha Creek Watershed District to perform this engagement. Using a facilitated process, Freshwater Society staff will engage the steering committee in upcoming meetings to:

1. Understand climate-related changes that are already happening, what is predicted to continue, and how your community is vulnerable to these changes.

2. Begin to develop valuable information on local vulnerabilities, strengths, priorities, and strategies related to both water and natural resources, infrastructure, and human health.

3. Engage in participatory planning and mapping exercises that are designed to enhance knowledge and capacity of participants in addressing climate risk and adaptation in your community.

Discussion

In preparation for our meeting, think about the following:

1. What is your favorite natural area/feature and where is it located:

    - Water/Wetland?

    - Upland?

2. What is the largest threat that could change this natural area/feature?

3. How do you perceive the city is balancing preservation/protection of natural resources and development rights?

4. What other natural resource issues should the comprehensive plan address?

Steering Committee Roster

Steven	Adams
Colbert	Boyd
Matt	Henry
Melissa	Johnston
Brian	Kirk
Farhia	Mohamed
Jerry	Nystuen
Lance	Reschke
Zachary	Robins
Rebecca	Schack
Terry	Schneider (chair)
Tom	Scott
Madeline	Seveland
Barbara	Westmoreland
Brad	Wiersum (alternate)

Staff

Loren	Gordon (lead)
Julie	Wischnack