



Gem Lake News



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Gretchen Artig-Swomley, Newsletter Editor

Special Interest Articles:

- MPCA featured at January City Council Meeting
- Well and Water Reports
- City News, Page 4

Upcoming Recycling Dates:

- January 12
- January 26
- February 9
- February 23

MPCA to Report on Wells – January 18 Meeting

The Minnesota Pollution Control Agency (MPCA) will be providing an update at the January 18 City Council Meeting on city wells that have shown trace contamination from a chemical substance called 1,4 Dioxane. The meeting will take place at Heritage Hall starting at 7:00 p.m.

They are also hosting a time slot for individual meetings at Heritage Hall for any resident who wants to show up (no appointment needed) and discuss their own well situation. These one-on-one meeting slots are available on a first-come, first-served basis, starting at 6:00 p.m. and ending around 8:00 p.m.

For the past several months, the MPCA and MDH have conducted extensive well testing of residential wells. Please come to the meeting and hear about their results.

See also the story below for more information on the science behind Gem Lake's water supply.



Hydrology 101 and Gem Lake's Well Situation

Last fall, slight traces of the chemical 1,4 Dioxane showed up in a handful of wells in Gem Lake. After extensive testing of wells all over the city by the Minnesota Pollution Control Agency (MPCA) that number grew to a total of 22 wells. The numbers were measured in parts per billion, with most of the 22 wells coming in with a score of 1-2, and a couple coming in at 3. (More on this later).

Since that time, the MPCA and the Minnesota Department of Health have worked closely with the city to answer questions, help determine future strategies for ensuring safe water supplies, and most importantly, determining the source of the contamination.

(Continued on page 3)



Gem Lake Final Budget Passes

The final budget for Gem Lake covering 2022 was passed at the December 21 City Council Meeting following the city's first ever "Truth in Taxation" Hearing. According to Minnesota State Law, all cities must hold a "Truth in Taxation" Hearing once their population exceeds 500 people. The recently released 2020 Federal Census Figures put Gem Lake's population at 526. Prior to this, Gem Lake's City Council simply approved the final budget without a special public hearing.

The 2022 final property tax levy was set at \$558,210, which is a 4.25% increase over 2021. The 2022 property tax levy consists of a debt levy of \$87,282 (which includes \$2,505 in fiscal disparities funds) and the general operating levy of \$470,928 (which includes \$10,726 in fiscal disparities). Per the League of Minnesota Cities, fiscal disparities is a metro-wide property tax sharing program, which Gem Lake participates in. It is rather complex, but the fiscal disparities numbers listed above represent our share.

Here are a few notables for 2022:

- The police budget was increased 10.85% to \$95,000 based on the City of White Bear Lake's budget.
- The cost of fire services increased 14.40% to \$29,343.
- The road maintenance budget includes \$15,000 for trimming boulevard trees.
- The salt/sand budget reduced to \$15,000 and snow plowing contract reduced from \$18,500 to \$17,000.
- A park maintenance budget of \$5,000 for maintaining the trail area was added.
- The 2022 budget includes \$20,000 for future improvements.
- Revenue and other expenditure line items were adjusted based on past history.
- The 2022 budget includes \$25,000 for future improvements.
- Based on the 2015 Refunding Bond Schedule, the debt levy for 2022 is set for \$79,477. In addition, in 2018, the City issued bonds for the improvements on Scheuneman Road, and the 2022 debt levy for this issue is \$7,805. The two of these debt levies make up the city's 2022 debt levy of \$87,282.

These changes result in the City's final tax levy of \$558,210 for 2022. This compares to 2021 preliminary levy of \$538,308 and 2021 final levy of \$535,476.

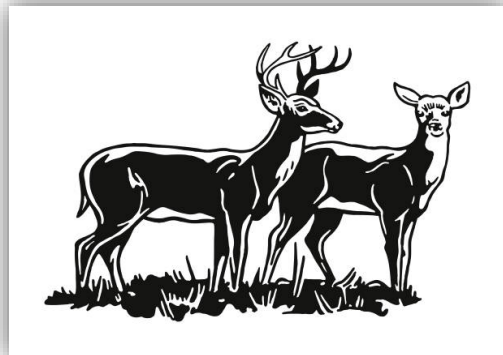
Changes Planned to Home Occupations Ordinance

Gem Lake's Planning Commission is currently reviewing the city ordinances pertaining to home occupations. This includes Home Occupations Ordinance No. 85 and language that appears in the Gem Lake Consolidated Land Use Ordinance No. 131.

A public hearing on the subject was scheduled for January 11, 2022 at 7:00 p.m. at Heritage Hall to gather further feedback. The review of this ordinance has been underway for several months. The review was prompted by massive changes that have happened in the United States over the past several years regarding remote work. Gem Lake's leadership wanted to be sure this ordinance remains relevant and up-to-date in the midst of societal change.

Archery Deer Hunting Within City

The Gem Lake City Council issued a permit for archery deer hunting to Anthony Scornavacco and Mike Garrett for hunting to take place on their property on the south side of Gem Lake last September. A primary goal was to reduce the city's large deer population. The hunt took place between mid-September and mid-November, on three weekends that were preapproved by the council. Neighbors were also notified in advance. The event was concluded safely, according to all rules and guidelines, and resulted in no complaints from nearby residents. A total of 5 deer were harvested, one doe and four bucks.



Hydrology 101 and Gem Lake's Well Situation (Continued from pg.1)

In the past few months, the MPCA and MDH have continued testing, monitoring and following up leads as to where the problem may have started. The problem is multi-dimensional, and a lot of the same questions have emerged from citizens who are trying to understand the science behind this situation. Why did the problem emerge generally in one area of the city? Is the contamination moving? Why did one neighbor have a slightly contaminated well, while another nearby did not? Is the situation stable? Can wells heal themselves, so to speak?

Following are a few general answers to these questions:

Why did the problem show up in one area of the city? 1,4 dioxane was initially detected in residential wells located in the vicinity of Haven Lane and Tessier Road as part of testing done by Water Gremlin. Based on these detections, additional testing was completed to determine the extent of the contamination in Gem Lake. As testing continued, 1,4 dioxane contamination was detected in additional wells to the southwest of the initial detections, towards Little Fox Lane and LaBore Road.

The highest concentrations of 1,4 dioxane were detected in the area around Haven Lane and Tessier Road. The groundwater contamination appears to have migrated to the southwest, based on lower 1,4 dioxane detections in residential wells in this direction. The distributions of contamination indicated that the source may be located north of Haven Lane and Tessier Road area of Gem Lake.

Is the contamination moving? At present the problem appears to be fairly stable and confined to the western portion of Gem Lake. There have been no exceedances of the HRL for 1,4 dioxane in the northern or eastern portions of Gem Lake. As the pattern of well contamination emerged, it might have seemed like the pollution was moving around with ease, but the situation is a bit more complex. The contamination is dissolved in the groundwater, and therefore moves in the same direction the groundwater is flowing beneath the surface, which is generally to the southwest in this area of Ramsey County. The rate of groundwater movement, or "flow", beneath the surface is generally much slower than water flowing in a river or stream at the surface.

Why did one neighbor have well contamination, and another nearby had none? Here is where the real complexity emerges. We tend to think of the ground beneath us in terms of north, south, east and west, as though it is two-dimensional. In reality, the ground beneath us is like a three-dimensional layer cake. It is made up of multiple layers of gravel, sand, clay, bedrock, and other materials. The bedrock is generally very deep, and other materials (sand, gravel, clay) are layers on top of the bedrock, deposited as the glaciers receded from the area.

The majority of residential wells in Gem Lake are set in the sand and gravel layers, with a few set in the deeper bedrock layers. However, the wells are not all set at the same depth, even in the sand and gravel layers. There are likely different concentrations of the 1,4 dioxane contamination in the different sand and gravel layers in the area. Therefore, the 1,4 dioxane levels may be higher in one well than another well right next door because that well is set in a different water bearing layer, that has a higher 1,4 dioxane level.

Is the situation stable? Can wells heal themselves? The ground way below us is usually a mixture of gravel, sand, clay and other material. The water beneath us finds a pathway through it and can be somewhat filtered by what it is traveling through. As contamination travels through the ground, the groundwater dilutes the contamination to a certain degree, depending on how much and what type of contamination is present. Private wells don't generally heal themselves, although contamination can become more diluted, depending upon a lot of factors. Some private well owners do extensive filtration of their well water, which can have an effect on water quality. Additional on-going testing by the MPCA will evaluate the stability of the groundwater contamination and determine if any additional wells may potentially be at risk from 1,4 dioxane.

Will the MPCA be able to determine where the pollution came from? How long will it take to find out? A generation ago, there were very few rules about what could and couldn't be buried when it came to pollution and harmful chemicals.

(story concluded on page 5)

City News

License Required for Rental Properties in City

If you are renting out your house in Gem Lake you need a rental license. If you own rental property but are not currently renting it, you still need to fill out a rental license application to keep the City updated. The application process is easy. Fill out our form located on our website, which can be found under "Permits" or contact Melissa Lawrence, City Clerk, pay a license fee (if you are actively renting), and go through a brief inspection of the property by our code enforcement officer. We check for things like smoke detectors. Call 651-747-2790 to find out more.

Changes Made to Fire Ordinances

Fire safety was discussed at length at the October Gem Lake City Council meeting. Various changes were made to the City's Ordinance No. 77, which pertains to fire safety matters. Many of these changes were updates to fire code language to keep the city in sync with State Fire Codes and the City of White Bear Lake, which provides Gem Lake with firefighting services. However, new language was added to the Outdoor Recreational Fire Section of the Ordinance. These changes were made to ensure consistency between White Bear Lake and Gem Lake, and to respond to several recent problems pertaining to unattended or unwise use of recreational fires.

If you are going to have a recreational fire in your backyard, new rules required the following conditions:

- Firewood may only be burned within a non-combustible containment less than three feet in diameter and not less than 8 inches in depth or height. The fire shall be limited to fuel such that at no time does the flame height exceed 36 inches.
- Fire pits or rings must be located a minimum of 25 feet from structures or combustibles, such as houses, garages, sheds, wood piles and wooden fences, and 15 feet from property lines.
- The fire may not be lit prior to 10 a.m. or after 11 p.m.
- The fire must be constantly attended and supervised by an adult until the fire has been completely extinguished.

- A means of controlling or extinguishing the fire must be immediately available.
- The use of flammable or combustible liquid accelerants is not permitted.
- Recreational fires are not permitted on days when wind speeds exceed 10 miles per hour.
- Any person planning to have a recreational fire must be aware of any local burning bans that are in effect. If a ban is in effect, all fires are prohibited.

After Hour Emergency Number for Public Works

In the event of a public works emergency after our normal business hours, there is a number you should call. Gem Lake's normal business hours are 7:30 a.m. to 3:30 p.m. Monday through Thursday. A public works emergency is defined as a threat to public safety or critical infrastructure. (Not a pothole, or something that can wait)

Examples of an emergency would be a water main break, (please don't call City of Vadnais Heights), a city sewer line back up or the collapse of a manhole. The phone number to call after business hours is 651-755-9828. The City of Gem Lake has a cooperative agreement with White Bear Township to handle these emergencies.

Charitable Gambling Donations

The Gem Lake City Council approved charitable donations of \$2,500 to both the White Bear Lake Emergency Food Shelf and Newtrax, a local non-profit transportation provider. These donations were made using a percentage of funds from pull-tab sales at the Country Lounge.

The funds will go to meeting increasing calls for service at the food shelf. Newtrax plans to utilize the funds to help deliver supplies from the food shelf for patrons who cannot pick up supplies on their own, due to illness, lack of transportation, or other factors.

What is “Smart Salting”?

Smart salting is a new phrase that you may be hearing these days. The concept refers to being thoughtful about your use of winter salting in order to maintain groundwater quality and help the environment.

According to the Vadnais Lake Area Water Management Organization (VLAWMO), you can keep outdoor surfaces, such as sidewalks, safe, while still keeping groundwater clean. VLAWMO points out that one teaspoon of salt permanently pollutes five gallons of freshwater. Chlorides found in road salt are harmful to wildlife, soil and groundwater. They also disrupt the seasonal lake cycles that make our lakes enjoyable, and corrode cars, bridges and streets.

Sometimes salt is needed to make sidewalks and entryways safe for everyday use. When necessary, salt can be used in a smarter way by adopting the motto:

Shovel, Select, Scatter, Sweep.

Shovel

Store shovels and tools in convenient locations before winter weather strikes. Consider both a scoop and push shovel for maximum preparedness. Use tools first: shovel, scraper or broom.

Select

Select a de-icing product carefully, depending on temperature, and allow for the expected melt time. Use sand or grit for temporary traction.

Scatter

Use salt only where it's critical, striving for 3" between crystals. Plan ahead and practice to make smart estimates quick and easy. Plan ahead for the space you expect to maintain during the winter and keep a 12-ounce cup in a convenient place with the salt storage. Cover storage buckets or store salt indoors to keep it dry.

Disperse salt and other de-icers evenly, without piles. The goal is not to form a blanket, but to break the bonds of ice/compacted snow. Once salt crystals infiltrate the ice/compacted snow, a scraper can chop and scrape the surface. Shoveling off ice chunks reduces the need to re-apply. Salt that is diluted with meltwater becomes less effective: re-freezing occurs and raises the risk for falls.

More product doesn't mean faster results. The chemical reaction depends on temperature. Excess product remains in meltwater and runoff. Never apply de-icers to dry pavement or loose snow.

Sweep

Sweep up extra salt, sand and grit. Salt and grit can be re-used, but sand will likely lose its traction and should be thrown in the trash.



Hydrology 101 and Gem Lake's Well Situation (Continued from page 3)

Then things like Love Canal happened. (Love Canal was a New York neighborhood near Niagara Falls that became highly affected by chemical contamination.) State and Federal Superfund Laws emerged in the early 1980's to hold polluters accountable for contamination they release to the environment. There are also state systems in place to address contamination if the original polluter is not able to be identified or they are no longer available to investigate and clean-up the contamination. When a situation like this happens the MPCA begins immediate testing to ensure safe drinking water, to figure out where the contamination came from and who may be responsible.

It is not uncommon to find slight contamination in water wells located in an urban area with historic or current industry present. Additional testing, monitoring and analysis of data and historical records will be needed. The process could take several years. More information will be provided on the subject by the MPCA at the Gem Lake City Council Meeting on January 18.

The City of Gem Lake

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This newsletter is also posted on the city's website under the "Documents" section and the "News and Updates" section.
www.gemlakemn.org

**After Hours Public Works
Emergency Number:**
651-755-9828

(For water main breaks, main city sewer back up, collapse of manhole, etc. Or call 911)

Meetings: January and February 2022

The following Gem Lake meeting will be held in the months of January and February. All meetings are held at Heritage Hall unless indicated.

January 18, 2022

City Council meeting at 7:00 p.m.

February 8, 2022

Planning Commission Meeting at 7:00 p.m.

February 14, 2022

City Council Workshop at 7:00 p.m. **CANCELED**

February 15, 2022

City Council meeting at 7:00 p.m.

See also the Gem Lake web-site for more information.

Please note: if meeting formats need to change due to COVID restrictions, notice will be made on the web-site and on the door of Heritage Hall.

Your Gem Lake City Council

Mayor:

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Len Cacioppo

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City Council Members:

Laurel Amlee

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Jim Lindner

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You can also reach each city council member by calling 651-747-2790. After hours you can follow the prompts for the city council directory.

CITY OF GEM LAKE
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