



**Willamina City Council
Regular Meeting
Tuesday, October 10, 2023 at 6:00 p.m.**

West Valley Fire Station
825 NE Main Street
Willamina, OR 97396

In-person attendance is allowed at the City Council meeting. The City also provides access via the Zoom platform. Zoom access information is available at the end of this Agenda.

AGENDA

CALL TO ORDER

ROLL CALL

FLAG SALUTE

AGENDA ADDITIONS, DELETIONS, AND CORRECTIONS

PUBLIC INPUT – BUSINESS FOR THE AUDIENCE

Public Input: Presentations not scheduled on the Agenda are limited to three (3) minutes. Longer presentations should be submitted to the City Recorder prior to the meeting.

CORRESPONDENCE – None

PRESENTATIONS –

1. Dan Blue Recology Western Oregon - Recycling depot proposal
2. Jennifer Eckles – Electric Cars
3. Finance Manager, Scott Clark

Financial reports are now available in the City Council Financial Reports binder which will be present at each City Council meeting. Financial Reports will also be available via email upon request from Deputy City Recorder Krystal Stevens.

CONSENT AGENDA

("A listing of routine business items, which are adopted with one motion, without discussion. However, any Councilor may request that an item be pulled from the Consent Agenda for discussion and separate action. The item is then not considered after the Consent Agenda items have been voted upon.")

1. Minutes from the September 12, 2023 City Council Regular Meeting.

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411 N.E. "C" Street, Willamina, Oregon 97396-2783 Telephone: (503) 876-2242 / Fax: (503) 876-1121

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REGULAR AGENDA

1. Keller Recommendation – Stop Sign Discussion
2. Pond Discussion
3. December TMDL Work Session

INFORMATIONAL REPORTS (Items that require no Council action)

1. Chamber Liaison – Mayor Skyberg
2. Yamhill County Transit Authority Board Member – Councilor Johnson
3. Library Board Liaison – Councilor Hernandez

MAYOR'S REPORT

INFORMATIONAL REPORTS FROM CITY OFFICERS

1. City Manager
2. Library Director
3. Public Works Director
4. Sheriff's Report (provided in Agenda packet)
5. Code Enforcement (provided in Agenda packet)

COUNCIL COMMENTS

ADJOURN

Next Council Meeting

City Council Regular Meeting on November 14, 2023 at 6:00 p.m.

Information regarding the above meeting(s) and Zoom access information can be found on the City of Willamina website at <https://www.willamina.oregon.gov>

Persons with hearing, visual or manual impairments who wish to participate in the meeting should contact the City of Willamina at least 48 hours prior to the meeting date in order that appropriate communication assistance can be arranged. The City of Willamina Council meetings are accessible to the disabled. Please let us know if you need any special accommodations to attend this meeting.

Join Zoom Meeting

<https://us02web.zoom.us/j/83222724642?pwd=T2ISTGRDY2ZBVnBYcHhHQ2M1eG9oUT09>

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Meeting ID: 832 2272 4642

Passcode: 003968

Find your local number: <https://us02web.zoom.us/j/83222724642?pwd=QkRlTGpja2ZC>

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Consent Agenda



**Willamina City Council
Regular Meeting
Meeting Minutes
Tuesday, September 12, 2023 at 6:00 p.m.**

Minutes taken by Deputy City Recorder Krystal Stevens

Location of Meeting:

West Valley Fire Station
825 NE Main Street
Willamina, OR 97396

Present at Meeting:

Mayor Ila Skyberg
Council President Rita Baller
Councilor Barry Wilson
Councilor Craig Johnson
Councilor Jennifer Pederson
Councilor Karl Klym
Public Works Director Jeff Brown
City Manager Bridget Meneley
Deputy City Recorder Krystal Stevens
Library Director Sarah Frost

Absent from the Meeting:

Councilor Vickie Hernandez excused absence
Finance Manager Scott Clark excused absence

Guests Not Limited to:

Public Works Jeff Rosenberry
Community Members Greg & Debbie Poupard
Community Member Kristine Neese
Community Member Nicole Pugh
Yamhill County Commissioner Kit Johnston
Joel Boyce - Green Crest Memorial / Adamson's Inc.
Elizabeth Sagmiller - E and S Consulting via Zoom
Wendy Veliz – PGE via Zoom

Mayor Skyberg called the meeting of the City of Willamina City Council to order at 6:00 p.m.
September 12, 2023.

Deputy City Recorder Stevens took the roll and a quorum was present.

Flag Salute

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AGENDA ADDITIONS, DELETIONS, AND CORRECTIONS – None

PUBLIC INPUT - None

CORRESPONDENCE -

1. Railroad Articles from the News Register

City Manager Meneley handed out thank you cards to be signed by the council for the individuals that helped with the railroad crossing repairs. Mayor Skyberg drew attention to the articles that were published by the News Register regarding the need and the repairs that took place on the railroad crossing in downtown Willamina. She and City Manager Meneley extended thanks to everyone involved in the effort including the community, City Council, and the Bulletin Board.

2. Letter from Ms. Sarah-John Hitchcock

City Manager Meneley explained that the letter was from community member Sarah-John Hitchcock regarding some items that she had placed on someone else's property and she had been asked to remove. City Manager Meneley stipulated that according to the City's code she is required to remove the items.

3. Email from Thao Tu

Mayor Skyberg explained that she had received the email from Thao Tu requesting that Willamina resolve to display the flag of the Vietnamese American Community.

There was discussion that other groups might request that other flags are displayed in the community if the City starts displaying this flag. There was discussion that Willamina needs only to fly two flags, that of the United States of America and that of the State of Oregon.

Mayor Skyberg concluded with the statement that although the council wishes them well and respects their culture, the council declines to sign a resolution to display the flag of the Vietnamese American Community.

PRESENTATIONS –

1. Joel Boyce – Cemetery proposal -

The cemetery proposal stipulates that Adamson's Incorporated would take over the management and landscaping care of the Willamina Cemetery. It further stipulates that Joel Boyce would perform a complete audit and create a database for all of the cemetery records. His company would also complete larger projects and repairs in the cemetery as needed and approved by council.

2. Elizabeth Sagmiller – TMDL proposal

Elizabeth Sagmiller explained her background in working with stormwater and the DEQ. She gave a presentation explaining what a Total Maximum Daily Load (TMDL) is and what it means for Willamina.

The Department of Environmental Quality (DEQ) is an agent for the United States Environmental Protection Agency (EPA). The final Willamette Basin Mercury TMDL and Water Quality Management Plan (WQMP) states mercury reductions which can be achieved through planned implementation of permits, best management practices, conservation practices and other management strategies to help reduce mercury entering waterways. The DEQ has determined Willamina to be a Designated Management Agent (DMA) for the Willamette Basin. This means that Willamina has been determined to have legal authority over a sector or source contributing to pollutants. DMAs are responsible for implementing strategies and DMA specific TMDL Implementation Plans. In 2022 Elizabeth was hired to create and assist with a TMDL implementation plan specific to the City of Willamina.

Elizabeth went through a presentation describing DEQ's requirements of the City of Willamina moving forward in implementing the plan and what her role is to help Willamina achieve these goals. She will plan on returning for the November City Council meeting to review the annual report she has prepared to submit to DEQ reviewing the City of Willamina's progress during the first year of implementing the approved TMDL plan.

This year, Willamina has accomplished these goals from our TMDL plan:

1. Developed a TMDL implementation plan- submitted to DEQ on time and DEQ approved.
2. Educational material has been completed and posted to the website.
3. Good housekeeping manual has been completed, a requirement in the plan.
4. Staff has received the required training for the year.
5. Erosion control certification has been obtained by city staff.

These are the goals for the upcoming report year starting November 1, 2023:

1. Evaluate the City's financial needs to implement the TMDL plan.
- 2- Implement our second-year activities based on what we did the year before. Similar to the year before but fine-tuned based on the previous year's progress.
- 3- Start the development of our Illicit Discharge and Detection Program, including an Ordinance.
- 4- City staff will continue with training.
- 5- Expand our public education efforts- we have material but haven't addressed target audiences appropriately.
- 6- Annual report at the end of the year.

3. Finance Manager, Scott Clark

City Manager Meneley reported that Finance Manager Scott Clark was on an excused absence due to attending another seminar. She said he had nothing abnormal to update and everything looks as it should.

CONSENT AGENDA

Mayor Skyberg called for a motion to approve the items on the Consent Agenda.

MOTION: Council President Baller moved to approve the Meeting Minutes from the July 25, 2023 City Council Work Session and the Meeting Minutes from the August 8, 2023 City Council Regular Meeting. Councilor Pederson seconded the motion. Motion carried with a unanimous vote.

REGULAR AGENDA

1. PGE Franchise Agreement – Wendy Veliz via Zoom

City Manager Meneley reported that the PGE franchise agreement that was presented to the Council in August of 2023 has been sent to the City's legal team for review. The City is requesting a six month extension to go through March of 2024 to allow time for the review. Each extension must be accompanied by a new Ordinance. Ordinance 23-693 will accompany this extension. The final draft of the PGE franchise agreement will be presented to council for approval.

MOTION: Council President Baller made a motion to approve and enact Ordinance 23-693. Councilor Johnson seconded the motion. Motion carried with a unanimous vote.

City Manager Meneley read the first two pages of Ordinance 23-693 aloud. It was noted that the Ordinance contained the wrong date and it will be corrected to say September 12, 2023. She specified that the City did receive written authorization from Wendy Veliz as a representative of PGE accepting the extension as indicating in the Ordinance.

2. Cemetery Management

City Manager Meneley explained the current situation for dealing with the cemetery. She showed the physical files, folders, documents, and notebooks which contain the only records for the cemetery. She stressed the difficulty, possible inaccuracy, and the amount of time it takes to find an accurate record of plots. She reviewed the proposal given by Joel Boyce and what services the costs are associated.

Joel received questions from the Council. There was discussion concerning original documents being sent to the Willamina Museum, making all records searchable and orderly, what kind of maintenance they will be performing, facilitating the memorial day service at the cemetery, grave space inventory and the inputting of all the physical documents into a searchable database.

Joel clarified that most of the work for the cemetery will be locating records and grave sites, cemetery maintenance, and updating and keeping records accurately. It was stipulated that

the current landscaper would receive notice and Adamson's Incorporated would take over on November 1, 2023.

MOTION: Council President Baller moved to authorize City Staff to enter into an agreement for one year with Green Crest Memorial Park/Adamson's incorporated for City of Willamina Cemetery Management, authorize payment to update the database and appoint an appropriate individual to act as point of accountability. Councilor Pederson seconded the motion.

There was discussion regarding the two contracts City Manager Meneley suggested an amendment the motion to reflect one year contract of the monthly cemetery management starting November 1, 2023 with a motion to accept the proposal of the database creation and audit for up to 50 hours and then consult the council as needed.

MOTION: Council President Baller amended motion to reflect what City Manager Meneley said for amending the first motion. Councilor Wilson seconded the motion.

Mayor Skyberg asked if there is a new motion to be made.

MOTION: Councilor Wilson made a motion that the contract is made into two parts- to accept the terms of the monthly contract for the services and as a separate item to contract the services to create the database and audit. Councilor Johnson seconded the motion. Motion carried with a unanimous vote.

Council President Baller volunteered to be the council accountability representative for the first year to stay in communication with Joel Boyce and the progress with the cemetery.

3. TMDL Status Update

Mayor Skyberg called for a motion to authorize additional funding for the 2022/2023 TMDL Implementation Plan as presented and included in Exhibit A: Addendum #1 for submittal to DEQ by December 1, 2023. Authorize an onsite visit between City Stagg and Elizabeth Sagmiller, E and S Consulting, LLC, Authorize the request for a return visit un upcoming months to provide a comprehensive view of the projected activities and costs for TMDL year two (November 1, 2023 to October, 2024).

MOTION: Councilor Johnson moved to accept the suggested motion for TMDL. Council President Baller seconded the motion.

There was discussion about whether testing for mercury is done to verify progress on the TMDL implementation plan. Elizabeth stipulated that there is no testing done to our waterways, DEQ tests water ways in bigger cities such as Salem and Portland. The City of Willamina's progress is based on how we implement our plan and comply with the requirements. It is based on the plan not the testing. The DMA's are assumed to reduce mercury entering our local waterways by 75% with our Best Management Practices.

Motion carried with a unanimous vote.

4. Rules of Council Procedures

Mayor Skyberg presented the last section of the revised Council Rules of Procedure. There were no critiques offered. City Manager Meneley said that the entire document will be sent to the City's legal team for review and the Council will be provided with a copy of finished document.

5. Backflow Documents (per request of council, no staff report)

The Council was provided with the requested packet of the papers that were sent out to 267 homes and businesses in Willamina requiring the testing of their backflow devices. Public Works Director Brown said that the City is making a decision on which contractor to choose for those that returned their Contractor Test Option Form.

INFORMATIONAL REPORTS (Items that require no Council action)

1. Chamber Liaison – Mayor Skyberg

Mayor Skyberg reported that the Chamber has been discussing the topics of the upcoming Art Tour in November, the downtown painting of windows with fall décor, and hanging of the Christmas lights on Main Street.

City Manager Meneley reported that she had to share with Chamber that the West Valley Community Campus (WVCC) has been limited on it's usage until the type of occupancy for building is changed with Yamhill County. She said they are working with Fire Marshall Damon Shultz and the State Fire Marshall and have been allowed to use the auditorium for special events only, but the other rooms have been placed on restriction. She said as long as progress is being made they will continue to allow a special permit to allow events such as the Wet Season Music Series to be held in the auditorium. City Manager Meneley expressed that the WVCC Director Amanda Widemark has been very cooperative in working with the plan.

2. Yamhill County Transit Authority Board Member – Councilor Johnson - reported that fares are still free but didn't have anything new to report to the Council.

3. Library Board Liaison – Councilor Hernandez – Out for an excused absence.

MAYOR'S REPORT

Mayor Skyberg reported that she had attended a League of Oregon Cities gathering at the Sheridan Library, "Coffee and Conversation" with representative Lucetta Elmer, a "Meet and Greet" for the first day of school for CTGR, the Rotary Club's annual event at WVCC, a Sheridan/Willamina Chamber event at Navarra Gardens, and she, City Manager Meneley, and Council President Baller met with Beth Wytoski from the Governor's Office.

INFORMATIONAL REPORTS FROM CITY OFFICERS

1. **City Manager** – City Manager Meneley said she, the Mayor, and Council President Baller met with Beth Wytoksi, she gave them some good ideas and resources. She told them about Oregon Pathways, which could offer funding for the pond levy and walkways. They discussed Oregon Emergency Management for funding opportunities for getting permanent generators for the booster pumps. City Manager Meneley has also spoken with Chief Warden about getting federal funding for generators. She also mentioned the upcoming Trunk or Treat event and the Noise Parade.

She said that there was a meeting with the city engineers about completing the grants for the lift station and the Huddleston Pond levy's geo-tech. She and Deputy City Recorder Stevens will be attending two conferences, the Oregon Association of Municipal Records conference, and the League of Oregon Cities conference.

2. **Library Director** – Library Director Frost talked about their transition of the employee kitchen into a community kitchen and pantry. They will track usage of the community kitchen, they had 9 individuals use it on the first day of the soft opening. Local people and gardeners have been donating to it. The hard launch will be in November.

The library has a new Youth Programs Committee, which was formed out of demand for programs and enrichment activities. She also held a meeting with the library directors from Sheridan and Grand Ronde and formed a West Valley collaborative. She will be virtually attending a conference for rural and small libraries in Wichita, Kansas. September and October is library administrative season with a lot of reports, data, and statistics due. The astronomy club is still meeting as well.

4. **Public Works Director Brown** – Public Works Director Brown passed around a piece of a welded joint of the heavy-duty pipe that is being installed in the new waterline. It is more resistant to earthquakes than the usual joints that are used. The intake structure cement has been poured. They are focusing on the in-water work that must be done by the September 30 deadline.

The restrooms at Oaken Hills Park are finished and the long-awaited fixtures are being put in, the Council needs to choose colors to paint the building. Hampton Lumber donated the wood for the ramps for the first part of the pump track and they are scheduled to begin construction on October 16th.

The radar signs are activated and running off a Cloud based system. The first place they will be installed is on Oaken Hills above 3rd Street. They will generate reports for the Sheriffs and keep track of how many cars go up and down the hill and how many are speeding.

There was discussion regarding the depth of the waterline pipes, the date of completion of the waterline, the piping material being new to the west coast and the engineers speak about Willamina and our water intake project around the country because of the contractors choice

of piping material and the amount of funding.

There was also discussion about the pond algae being tested and looking for possible alternative options. Deputy City Recorder Stevens will be getting more information about other options for treatment of the plants and algae in the pond.

5. **Sheriff's Report (provided in Agenda packet)**
6. **Code Enforcement (provided in Agenda packet)**

ADJOURN

MOTION: Councilor Pederson motioned to adjourn the meeting at 8:20 p.m. Council President Baller seconded the motion. Motion carried with a unanimous vote.

The meeting was adjourned by Mayor Skyberg at 8:20 p.m.

Time and Date of Next Council Meeting

The next City Council Regular Meeting will be held on October 10, 2023 at 6:00 p.m.
West Valley Fire Station
825 NE Main Street
Willamina, OR. 97396

Information regarding the above meeting(s) and Zoom access information can be found on the City of Willamina website at <https://www.willamina.oregon.gov>

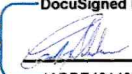
Minutes submitted by Deputy City Recorder Krystal Stevens

Minutes Approved by Mayor Ila Skyberg

Regular Agenda



Technical Memorandum

TO: City of Willamina
FROM: Keller Associates, Inc.
Eric Hulslander, PE
DocuSigned by:

4ADDE40148BD426...
DATE: August 31, 2023
SUBJECT: Barber & Fir Intersection Traffic Control

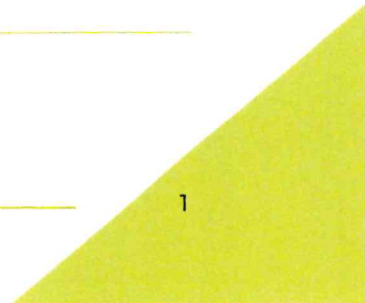
1. EXISTING CONDITIONS

The intersection of SW Barber Ave & SW Fir St is located in the southern half of the City of Willamina. The existing intersection is a four-leg, three-way stop-controlled intersection with a free-flowing westbound movement. The intersection east of Barber & Fir is SW Barber Ave & SW Walnut St. From Barber & Walnut to Barber & Fir, the average grade is approximately 7-8 percent.

The City believes the most frequent turning movement is the westbound left-turn based on their field observations. This is due to the residential subdivision located southwest of Barber & Fir (Figure 1). Since there is a free-flowing movement, drivers are not required to stop when in the westbound direction.



FIGURE 1. AERIAL





2. INTERSECTION CONCERNS

Residents and City staff have concerns regarding this intersection. City staff have expressed concern over high speeds at the intersection, specifically, the westbound left-turn from Barber onto Fir. In addition, residents expressed concerns regarding the safety of the intersection after a child on a bike was allegedly hit by a vehicle. Keller Associates does not have verification of this incident other than verbal confirmation by the residents. The residents reiterated the City staff's concerns regarding high speeds on the roadway.

The westbound approach has sight distance concerns due to the crest vertical curve centered in the intersection with the eastbound approach.

Lastly, four-leg, three-way stop intersections are not common practice. Generally, driver expectation is for either an all-way stop controlled (AWSC) or a two-way stop controlled (TWSC) intersection.

3. RECOMMENDATION

The intersection has an alleged injury crash, sight distance concerns, and is not a standardized intersection. Keller Associates recommends the addition of the following traffic control devices on the intersection of Barber & Fir:

1. MUTCD R1-1 "Stop" sign
2. MUTCD R1-3P "All Way" plaque
3. MUTCD W3-1 "Stop Ahead" sign
4. Temporary MUTCD W23-2 "New Traffic Pattern Ahead" sign

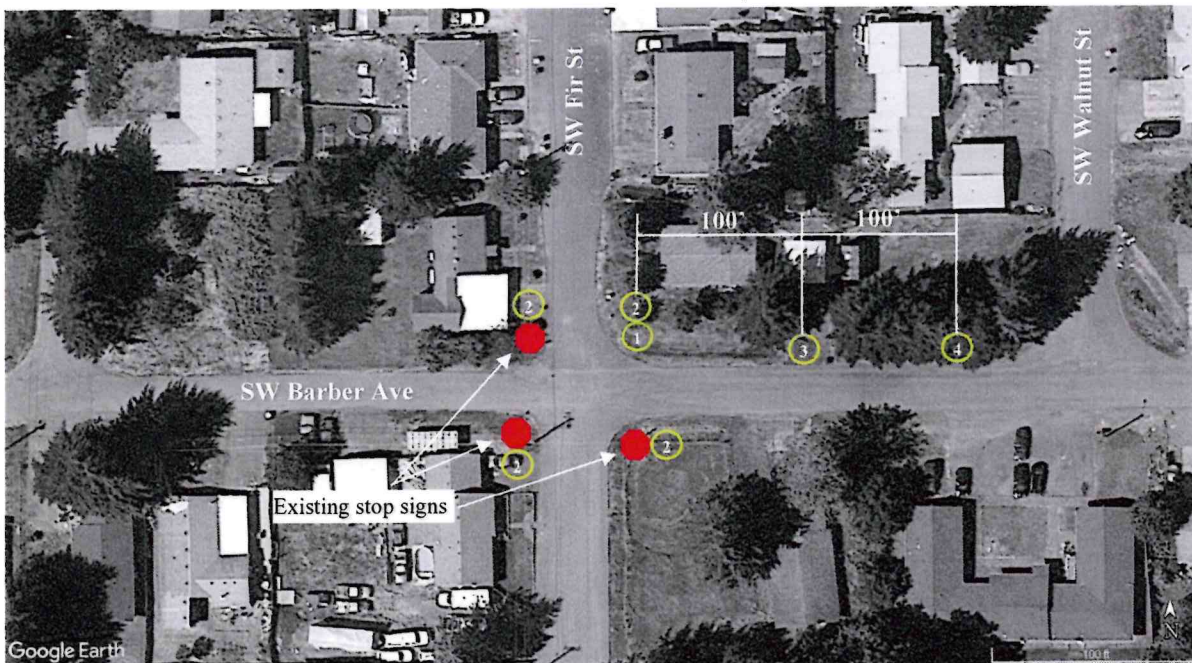


FIGURE 2. TRAFFIC CONTROL DEVICE PLACEMENT

----- Forwarded message -----

From: **Jordan Anderson** <jordan@yamhillswcd.org>

Date: Fri, Jul 14, 2023 at 12:02 PM

Subject: Algae remediation options

To: karlklymm@gmail.com <karlklymm@gmail.com>

Hi Karl,

Nice to speak with you yesterday. As a follow up here are the options we discussed for algae remediation:

- Chemicals, the standard approach. But there is concern about these chemical bio-accumulating into fish and could be harmful to human consumption. Here is one company i found that provides biological approaches <https://clean-flo.com/>
- Aeration systems - having some movement in the pond will help with keeping oxygen levels higher and limit algae growth
- Sterile carp - after doing more research, while the carp may eat the algae, they are a type of fish that can produce a lot of nitrogen rich waste, which would keep the pond unbalanced and provide more nutrients for algae to keep growing. This is where we get into considering the full ecosystem and how we can balance inputs, outputs and all the organisms that might be affected.

One thing we didn't discuss. I just got a great idea from my boss, which is very cheap. Adding barley straw bales to the pond during the winter time. The straw bales will create a nice environment for bacteria to develop, and then the bacteria will consume a lot of the nutrients during the springtime. By the time summer rolls around, there are not many nutrients left for bacteria to grow. My boss had experience doing this in a 1 acre pond, and only added 4, 50 lb straw bales. It worked very well and within a year or two they stopped needing to use any chemicals.

Here is an article from Rutgers University
<https://njaes.rutgers.edu/fs1171/>

So the moral of the story is you want to create a balanced environment. You may never get rid of all the algae, but if you keep nutrient levels in check, have a diversity of bacteria, fish, plant life and some type of aeration this will help with keeping things balanced.

Let me know if there's anything else I missed.

Thanks,

Jordan Anderson (he/him)
Resource Conservationist
Yamhill Soil & Water Conservation District
2200 SW 2nd St, McMinnville, OR 97128
503-437-5747

Fluridone Chemical Fact Sheet

Formulations

Fluridone is an aquatic herbicide that was initially registered with the EPA in 1986. The active ingredient is 1-methyl-3-phenyl-5-3-(trifluoromethyl)phenyl-4H-pyridinone. Both liquid and slow-release granular formulations are available. Fluridone is sold under the brand names Avast!, Sonar, and Whitecap (product names are provided solely for your reference and should not be considered endorsements).

Aquatic Use and Considerations

Fluridone is an herbicide that stops the plant from making a protective pigment that keeps chlorophyll from breaking down in the sun. Treated plants will turn white or pink at the growing tips after a week and will die in one to two months after treatment as it is unable to make food for itself. It is only effective if plants are growing at the time of treatment.

Fluridone is used at very low concentrations, but a very long contact time is required (45-90 days). If the fluridone is removed before the plants die, they will once again be able to produce chlorophyll and grow.

Fluridone moves rapidly through water, so it is usually applied as a whole-lake treatment to an entire waterbody or basin. There are pellet slow-release formulations that may be used as spot treatments, but the efficacy of this is undetermined. Fluridone has been applied to rivers through a drip system to maintain the concentration for the required contact time.

Plants vary in their susceptibility to fluridone, so typically some species will not be affected even though the entire waterbody is treated.

Plants have been shown to develop resistance to repeated fluridone use, so it is recommended to rotate herbicides with different modes of action when using fluridone as a control.

Fluridone is effective at treating the invasive Eurasian watermilfoil (*Myriophyllum spicatum*). It also is commonly used for control of invasive hydrilla (*Hydrilla verticillata*) and water hyacinth (*Eichhornia crassipes*), neither of which are present in Wisconsin yet. Desirable native species that are usually affected at concentrations used to treat the invasives include native milfoils, coontail (*Ceratophyllum demersum*), naiads (*Najas* spp.), elodea (*Elodea canadensis*) and duckweeds (*Lemna* spp.). Lilies (*Nymphaea* spp. and *Nuphar* spp.) and bladderworts (*Utricularia* spp.) also can be affected.

Post-Treatment Water Use Restrictions

There are no restrictions on swimming, eating fish from treated water bodies, human drinking water or pet/livestock drinking water. Depending on the type of waterbody treated and the type of plant being watered, irrigation restrictions may apply for up to 30 days. Certain plants, such as tomatoes and peppers and newly seeded lawn, should not be watered with treated water until the concentration is less than 5 parts per billion (ppb).

Herbicide Degradation, Persistence and Trace Contaminants

The half-life of fluridone (the time it takes for half of the active ingredient to degrade) ranges from 4 to 97 days depending on water conditions. After treatment, the fluridone concentration in the water is reduced through dilution due to water movement, uptake by plants, adsorption to the sediments, and break down from light and microbial action.

There are two major degradation products from fluridone: n-methyl formamide (NMF) and 3-trifluoromethyl benzoic acid. NMF has not been detected in studies of field conditions, including those at the maximum label rate.

Fluridone residues in sediments reach a maximum in one to four weeks after treatment and decline in four months to a year depending on environmental conditions. Fluridone adsorbs to clay and soils with high organic matter, especially in pellet form, and can reduce the concentration of fluridone in the water. Adsorption to the sediments is reversible; fluridone gradually dissipates back into the water where it is subject to chemical breakdown.

Impacts on Fish and Other Aquatic Organisms

Fluridone does not appear to have any apparent short-term or long-term effects on fish at application rates.

Fish exposed to water treated with fluridone absorb fluridone into their tissues. Residues of fluridone in fish decrease as the herbicide disappears from the water. The EPA has established a tolerance for fluridone residues in fish of 0.5 parts per million (ppm).

Studies on Fluridone's effects on aquatic invertebrates (i.e. midge and water flea) have shown increased mortality at label application rates.

Studies on birds indicate that fluridone would not pose an acute or chronic risk to birds. No studies have been conducted on amphibians or reptiles.

Human Health

The risk of acute exposure to fluridone would be primarily to chemical applicators. The acute toxicity risk from oral and inhalation routes is minimal. Concentrated fluridone may cause some eye or skin irritation. No personal protective equipment is required on the label to mix or apply fluridone.

Fluridone does not show evidence of causing birth defects, reproductive toxicity, or genetic mutations in mammals tested. It is not considered to be carcinogenic nor does it impair immune or endocrine function.

There is some evidence that the degradation product NMF causes birth defects. However, since NMF has only been detected in the lab and not following actual fluridone treatments, the manufacturer and EPA have indicated that fluridone use should not result in NMF

concentrations that would adversely affect the health of water users. In the re-registration assessment that is currently underway for fluridone, the EPA has requested additional studies on both NMF and 3-trifluoromethyl benzoic acid.

For Additional Information

Environmental Protection Agency
Office of Pesticide Programs
www.epa.gov/pesticides

Wisconsin Department of Agriculture, Trade,
and Consumer Protection
<http://datcp.wi.gov/Plants/Pesticides/>

Wisconsin Department of Natural Resources
608-266-2621
<http://dnr.wi.gov/lakes/plants/>

Wisconsin Department of Health Services
<http://www.dhs.wisconsin.gov/>

National Pesticide Information Center
1-800-858-7378
<http://npic.orst.edu/>

Hamelink, J.L., D.R. Buckler, F.L. Mayer, D.U. Palawski, and H.O. Sanders. 1986. Toxicity of Fluridone to Aquatic Invertebrates and Fish. *Environmental Toxicology and Chemistry* 5:87-94.

Fluridone ecological risk assessment by the Bureau of Land Management, Reno Nevada:
http://www.blm.gov/pgdata/etc/medialib/blm/wo/Planning_and_Renewable_Resources/veis.Par.91082.File.tmp/Fluridone%20Ecological%20Risk%20Assessment.pdf



Pond and Lake Management

Part VI: Using Barley Straw to Control Algae

*Salvatore S. Mangiafico, County Agent II, Agriculture and Natural Resources,
Cumberland and Salem Counties*

*Michael Haberland, Environmental and Resource Management Agent,
Burlington and Camden Counties*

One common difficulty in lake management is controlling algae, which can become problematic in summer months in both small ponds and larger lakes. Algae and other aquatic plants provide food and oxygen for fish and other aquatic life. However, excess algae in a pond can interfere with fishing or swimming, and cause aesthetic problems such as mats of algae on the water surface and unpleasant odors.



Figure 1. Filamentous algae forming mats on the surface of a small lake. (Courtesy of Sal Mangiafico)

While algae produce oxygen during the day through photosynthesis, oxygen production ceases at night. Because algae continue to use oxygen at night, however, large populations of algae in a pond can deplete the oxygen supply in the water overnight, causing a low-oxygen

condition that can be harmful or even fatal to fish and other aquatic life. Compounding this problem is that when large populations of algae die, their decay can further deplete the water's oxygen.

Barley Straw for Algae Control

The use of barley straw for controlling algae in ponds is becoming more common. Its use dates from England in the 1990's, where studies found it to be effective for this purpose. Since then its use has spread throughout the United States both by pond owners looking for easy and effective ways to combat algae, and by scientists trying to assess how effective it is. Other types of straw, such as wheat or rye, have not been shown to be effective for this purpose.

Identifying Algae and Higher Plants

Barley straw is effective in controlling only algae. It is not effective against higher plants, or vascular plants, such as duckweed, watermilfoil, or pondweed. Algae come in many different shapes. One common form is called *planktic*, which are single cells that float in the water column and give the water a soupy-green appearance when abundant. Another form is *filamentous*, which grows in hair-like strands, often forming mats at the water surface. Some algae form relatively complex shapes that may appear to be higher plants, but in no case do algae have specialized tissues such as leaf veins or roots.

How Does Barley Straw Work?

Barley straw prevents the growth of algae. It does not kill existing algae. Because of this action, it is sometimes called an *algistat* as opposed to an *algicide*.

It is not understood how barley straw prevents the growth of algae. It is believed that the decaying straw releases chemicals that inhibit the growth of algae. There are some suggestions as to what these chemicals may be, but the exact mechanism has not been determined. Other theories suggest that the decaying straw feeds microbes or algae predators.



Figure 2. Planktonic algae in the water column can give the water a soupy green appearance. (Courtesy of Sal Mangiafico)

How Effective Is Barley Straw?

There is some very positive anecdotal and research-based evidence that barley straw is effective in controlling at least some kinds of algae, but results are mixed as to which kinds are controlled. In general, research and anecdotal evidence suggest that barley straw is effective in controlling planktic algae, and will clarify water that is green from algae. But results

are mixed about its control of filamentous algae, mat-forming algae, and blue-green algae¹ while some trials report positive results for these types of algae, others do not. One such trial at a commercial nursery in southern New Jersey found that barley straw used at the recommended rate did not impede the growth of filamentous algae in a ¼-acre farm pond. However, another trial at a Rutgers University Research and Extension Farm found that using barley straw reduced, but did not eliminate, filamentous algae in an irrigation pond. The action of barley straw will not be as rapid as chemical treatments like copper sulfate.

Using barley straw in ponds is not known to cause harm to people or to any higher plants or animals. However, one reported problem is that by reducing the population of algae, using barley straw may allow for the increase of other pond weeds.

Where Can Barley Straw Be Purchased?

Barley straw can be purchased in full-size square bales from farm-supply or feed stores. This is usually the most economical approach, especially when purchasing quantities sufficient to treat larger ponds. The availability of bales in farm stores may be seasonal or depend upon location, however. Full bales can also be ordered from retailers online, though the cost is typically considerably more than from a

local farm store. Contacting someone who works with the farm community—such as the county Cooperative Extension office—may be helpful to locate retailers where barley straw bales can be purchased locally.

There are also a variety of barley straw products available for use in smaller ponds, including miniature bales, pellets, and liquid extracts. While the cost of straw in small quantities is typically considerably more per pound than when purchased in full bales, these products may be appropriate to use in small ponds such as koi ponds and water gardens. These products can often be purchased from pond-supply stores, garden centers, and from a variety of online retailers.



Figure 3. Excessive algae or weeds in lakes or ponds may indicate that the water is enriched with nutrients. (Courtesy of Sal Mangiafico)

How Should It Be Used?

Only dry straw should be used. Fresh material should be avoided.

The usual recommended quantity to use is 225 pounds (or 4–5 bales) per surface acre of water. Reported recommended rates range from as low as 110 pounds per acre, and higher rates are recommended for water that has a high percentage of suspended sediment or appears muddy. But it has been recommended that a rate of 450 pounds per acre never be exceeded to avoid the decaying straw from depleting the water of oxygen.

A typical recommended rate for small ponds is 1 pound of straw per 2000 gallons of water, though manufacturers of packaged barley straw products vary on their recommended rates.

The bales need to be broken up and fluffed so that there will be a good flow of oxygenated water around the decaying straw in the pond. It is recommended that the loose straw be placed in woven sacks such as onion sacks, bird netting, Christmas tree netting, or jute netting. The sacks should be tied to something buoyant so that they stay within a few feet of the pond surface, and can be anchored in place. Securing the sacks in this manner will allow for easier retrieval when it is time to remove them. The sacks should be evenly spaced across the pond if practical, or placed in the center of small ponds.

It is generally recommended that the straw be placed in ponds in the spring, before the algae begins to grow. The appropriate date will depend upon local weather conditions, the temperature of the water, and when algae typically begin to grow in the specific pond. For the barley straw to have an effect, the water will need to warm enough to begin the decay of the straw. However, because there may be a lag of several weeks for the decay process to develop, deploying the straw early is recommended. Appropriate dates may range from April to as early as February depending on location, local weather, and water conditions. The straw is generally said to be effective for four to six months. If straw is placed out in April, it may then be wise to replace it in mid-July to obtain season-long control.

Barley Straw Is Not a Pesticide

Barley is not considered a pesticide by the U.S. Environmental Protection Agency or by the state of New Jersey. This allows it to be used in ponds without a permit or license. For a private land owner, it is considered a home remedy, not a pesticide, though there may also be limitations on its use in public or shared lakes. A second implication, however, is that it cannot be sold with the claim that it controls algae. Likewise commercial applicators or lake managers would not be allowed to use it with the claim that it controls algae. Readers in other states should consult state and local laws and regulations regarding barley straw use.

Other Strategies to Control Algae in Lakes and Ponds

Excess algae growth in ponds and lakes may be promoted by increased concentrations of nutrients in the water, particularly of phosphorus. These nutrients can come from a variety of sources including runoff from lawns, farms, pastures, and roads, malfunctioning septic systems, or from wildlife excrement. Several options to reduce the amount of algae in a waterbody may be available depending on the cause of the algae bloom and resources available. These include:

- physically removing filamentous algae with rakes or nets
- diverting nutrient-laden runoff from entering the waterbody
- treating runoff with buffer strips of grass or other vegetation before it enters the lake or pond
- reducing phosphorus fertilizer use and soil erosion from adjacent lawn areas
- discouraging geese and other wildlife from frequenting the waterbody
- avoiding disturbing pond sediments
- using an aerator to disperse algae and minimize the effects of algal blooms and die-offs

Registered herbicides are available for the control of algae and weeds in ponds. However, herbicide applications to water bodies in New Jersey can be done only by someone possessing a pesticide applicators license. Furthermore, an Aquatic Pesticide Permit must be obtained from the New Jersey Department of Environmental Protection (NJDEP, 2010). These stipulations—among other considerations—may make registered herbicide applications an unattractive option for homeowners and some businesses. Copper products for algae control are also considered herbicides by the state.

More information about these and other strategies can be found in Obropta and Althouse (2008) and Ochterski and Schneider (2003).

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¹ Blue-green algae are not true algae, but are instead classified with bacteria.

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News > News Archive > Herbicide Study Finds Good News, Bad News For Use Of Fluridone In Lakes

Herbicide study finds good news, bad news for use of fluridone in lakes

[Listen to the podcast](#)

In a study recently published in the journal, “[Aquatic Toxicology](#),” researchers found that while concentrations of the herbicide fluridone similar to those used when it’s applied to lakes to control Eurasian watermilfoil and hydrilla did not kill fathead minnows, it can impact fish health in more subtle ways.

“The good news for fluridone is that it didn’t really have any impacts on survivorship or even on fish growth, which was to be expected. But when we looked at some of the more sensitive endpoints, particularly prey capture and endocrine disruption, we see that at certain concentrations there seems to be an impact,” said Gavin Dehnert, research team member and Wisconsin Sea Grant’s emerging contaminants scientist.

Fluridone is one of the major active ingredients in commercial aquatic herbicides. It affects the entire plant by inhibiting its ability to photosynthesize, which eventually leads to death. The Wisconsin Department of Natural Resources (DNR) is interested in using herbicides containing fluridone as an alternative to those containing 2,4-D, which [preliminary research has found can be toxic to fish](#).

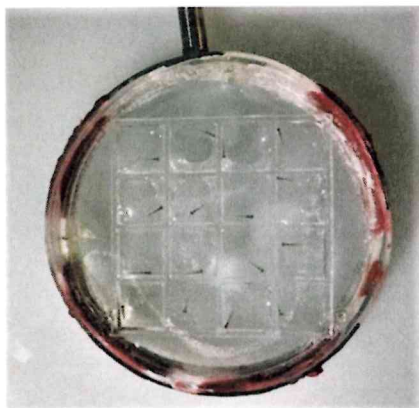
Dehnert said that before commercial use, the Environmental Protection Agency (EPA) mandates testing of fluridone to ensure it does not impact fish survival and growth parameters such as length and weight. This testing is done with very high concentrations and recommendations are derived.

“The problem is, they (the EPA) rarely test the actual lower concentrations that they say are safe for the lake,” Dehnert said. “That’s usually a big question mark. It’s like, well, they just said it was safe, but is it actually?”

The research team, led by William Karasov with the Department of Forest and Wildlife Ecology at the University of Wisconsin-Madison, exposed fathead minnows (*Pimephales promelas*) to concentrations of fluridone that would be found in a lake during treatment. Unlike 2,4-D, which only needs to be applied once, fluridone herbicides could require several applications to a lake to be effective over a minimum of 45 days but usually 90 days. The minnows were exposed to the chemical in the lab for 35 days and then a subsequent generation of larval minnows from the original test group was exposed for 65 days.



Eurasian watermilfoil is an invasive water plant that grows so densely it can make boating, fishing and swimming unpleasant and difficult. Image credit: Gavin Dehnert, Wisconsin Sea Grant



Larval fathead minnows were tested for impacts from the aquatic herbicide fluridone. Image credit: Gavin Dehnert, Wisconsin Sea Grant.

After 30 days of fluridone exposure, the adult male fish showed an increased number of nuptial tubercles, which can indicate endocrine disruption. Dehnert explained that some herbicides, especially when they are used at low concentrations, can mimic fish hormones. The tubercles are found near the minnows’ noses and increase or decrease in number depending on how much androgen and estrogen a fish produces. “That’s really important because it could have major impacts on reproduction,” Dehnert said.

The researchers also found that the fishes’ livers were enlarged and that their ability to catch prey decreased significantly when exposed to fluridone, which could be because it impairs their ability to move. Previous studies suggest fluridone can act as a neurotoxin.

The DNR funded the study because, as Dehnert said, “In the state of Wisconsin, everybody likes to fish. So, we’re trying to make sure we protect them as much as possible.”

Other members of the team included Angelo Cozzola and Amber White, all with UW-Madison.



Library September 2023 Monthly Report, Sarah Frost, Library Director

With new families, homeschool hangouts, and weekly visits from the Transitional Studies class from WHS, we have maintained a very steady September.

In September we welcomed Richard Guscott back to the City as the ½ time Office Coordinator and ½ time Library Clerk.

I welcome any feedback or questions. If there is library information you would like to see more regularly, please let me know.

Library Patron Visits: 624

*this does not include programs held outside operational hours and/or that are held off-site

Programs/Events Held: 4

Book Club

Astronomy Club

Passive Take-home crafts

Passive Scavenger Hunt

Circulation: 1321

*number of item checkouts and renewals

Hold Item Pull: 898

*number of items pulled from our shelves to fill holds within CCRLS

*CCRLS: Chemeketa Cooperative Library Service

Friends of the Library, Love our Library

501c3 Friends of the Library: a board has been established and they are writing a mission statement and bylaws. Next meeting is Oct 3, 2023 at 6PM.

Love our Library Fundraising: Next meeting is Oct 8, 2023 at 2PM.

Next Fundraiser: Art Tour, November 10 & 11 - library featured artists will include Tyler Crook, Linda Voeks, and youth Rhyne Nelson.

Library Board:

The Library Board met September 19.

Sarah shared updates including the Summer Program, West Valley Libraries collaboration, community kitchen, Library Youth Program Committee, the Library Clerk position, and the OCF grant application.

Agenda business included the Collection Development Policy review, the Library Board Charter ordinance, a library code of conduct, and a library photography policy. The October Library Board meeting will be via Zoom only to accommodate Sarah's time off.

Meeting minutes are available upon request.

The next board meeting will be held October 17, 6:00 PM via Zoom only.

Tyler Crook, Chair

Jennifer Eckels, Co-Chair

Current Library Board:

NAME	Appointment	Current Term Start	Term End	Current Term
Tyler Crook	Full 2021	September 2021	September 2025	1st
Tracy Dillon	Full 2017	September 2021	September 2025	2nd
Jennifer Eckels	Partial 2023	September 2020	September 2024	partial
Katherine Ljungqvist	Partial 2023	September 2020	September 2024	partial
Kepola Napoleon	Partial 2019	September 2021	September 2025	1st
Emily Sims	Full 2021	September 2021	September 2025	1st
Willamina School District	Partial 2021	September 2022	September 2026	N/A



**Yamhill County Sheriff's Office
Crime Summary for WILLAMINA
From 7/1/2023 to 7/31/2023**

City	UCR Description	7/1/2022 to 7/31/2022	7/1/2023 to 7/31/2023	Percentage Change	YTD	Prior Year
WILLAMINA						
Part 1						
	Aggravated Assault	1	0		1	7
	Arson	0	1		1	1
	Burglary-Business	0	0			4
	Burglary-Residence	0	1		1	5
	Larceny	3	1	-66.67 %	17	37
	Motor Vehicle Theft-Auto	0	0		1	10
	Rape	0	0		1	
	Robbery	0	0		1	1
	Part 1 Total	4	3	-25.00 %	23	65
Part 2						
	All Other	0	1		11	19
	Animal Problems	0	0		2	1
	Disorderly Conduct	1	1		2	8
	Drug Laws	3	1	-66.67 %	22	66
	DUII	3	0		2	23
	Forgery	0	1		2	1
	Fraud	0	0		2	5
	Sex Offenses	0	1		4	6
	Simple Assault	0	3		12	21
	Stolen Property	0	0			5
	Tresspass/Prowler	0	0		6	17
	Vandalism	2	2		7	25
	Weapons	0	1		5	17
	Part 2 Total	9	11	22.22 %	77	214
Part 3						
	All Other	10	2	-80.00 %	43	144
	Non-Reportable Offenses	10	11	10.00 %	70	131
	Part 3 Total	20	13	-35.00 %	113	275
	Total For WILLAMINA	33	27	-18.18 %	213	554

September 2023 Code Enforcement Daily Log

Date	Location	Code Enforcement	Concern	Correction	Follow-up
9/5/23	HIGHLANDS LOOP		WHITE FORD F-250 TRUCK OR LIC # 999 FX EXP TAGS #122 PARKED LONGER THAN 72 HRS AND HAD EXPIRED TAGS	THE OWNER OF THE VEHICLE NEEDS TO MOVE IT INTO THERE DRIVEWAY AND GET CURRENT TAGS ON IT TO BE PARKED OUT ON THE PUBLIC STREET. LEFT MY CARD AT THE FRONT DOOR TO CALL ME.	TALKED TO THE OWNER OF THE RESIDENCE AND SHE SAID IT WAS HER BOYFRIENDS TRUCK. I ASKED HER TO PLEASE MOVE IT INTO THE DRIVEWAY AND GAVE HER TILL 9/11/23 TO GET IT MOVED. THE TRUCK HAS BEEN MOVED INTO THE DRIVEWAY. NOTHING FURTHER ON MY END.
9/5/23	CONASTOGA		WHITE CHEVY 1500 TRUCK NO LICENSE PLATES AND PARKED LONGER THAN 72 HRS	TALKED TO THE OWNER OF THE VEHICLE. SHE IS FLYING OUT OF TOWN AND WILL BE BACK ON THURSDAY 9/7/23. I TOLD HER WHEN SHE GETS BACK TO PLEASE MOVE IT INTO HER DRIVEWAY AND GET LICENSE PLATES ON IT. I GAVE HER UNTIL MONDAY 9/11/23 TO GET MOVED. WILL CHECK BACK IN THEN.	CHECKED IN ON TRUCK IT IS STILL IN SAME SPOT. WILL TAG THE TRUCK IF IT IS STILL THERE WHEN I GET BACK FROM VACATION ON 9/25/23. CHECKED BACK ON 9/25/23 AND TRUCK HAS BEEN MOVED. NOTHING FURTHER
9/11/23	BALES ST	COMMUNITY SUPPORT			HAD A COMPLAINT ON A ROOSTER FROM AUG. FINALLY FOUND IT A HOME AND IS NOW GONE AS OF 9/7/23.
9/11/23		COMMUNITY SUPPORT			CYLE OREGON IS HAVING THERE BIKE RIDING EVENT AND A GENTLEMAN GOT LOST AND ENDED UP AT CITY HALL. HIS DESTINATION WAS CLOVERDALE SO I TOOK HIM OVER TO CLOVERDALE TO MEET UP WITH THE OTHER CYCLISTS. TANNER ONE OF OUR TEMP PUBLIC WORKS GUYS WENT WITH ME
9/13/23		ON VACATION			ON THE WAY BACK FROM DROPPING THE CYCLE RIDER OFF IN CLOVERDALE I CAME UPON A STRANDED MOTORIST WHO RAN OUT OF GAS. TANNER AND I TOOK HER TO SEAWAY MKRT IN GRAND RONDE TO GET SOME GAS AND TOOK HER BACK OUT TO HER VAN.
9/25/23	NE MAIN	BACK FROM VACATION	IF BUILDING IS VACANT	I WENT BY TODAY TO LOOK AT THE TRUCK. IT HAS NO LICENSE PLATES. THE GUY WHO OWNS THE TRUCK WAS AT THE RESIDENCE OF THE PERSON COMPLAINING PARENTS HOUSE AND HE WAS GOING TO MOVE THE TRUCK OFF THE STREET TODAY. WILL CHECK BACK ON 9/26/23 TO SEE IF IT HAS BEEN MOVED IF NOT I WILL TAG IT.	WENT BY TO SEE IF BUILDING EMPTY BUT IT IS CURRENTLY BEING USED FOR A PERSONAL HOBBY AREA WILL LET THE OFFICE STAFF KNOW. TRUCK HAS BEEN MOVED ELSEWHERE. NOTHING FURTHER.
9/25/23	OAKEN HILLS		TOYOTA TRUCK LEFT FOR 3 WEEKS AND NOBODY KNOWS WHO IT BELONGS TO	TALKED TO THE RENTER OF THIS PROPERTY AND HE JUST GOT A DOG WHO IS A HOUND DOG AND IS 1 YEARS OLD. HE IS TRYING TO KEEP HIM FROM BARKING BUT HE IS NEW TO HAVING A DOG. HE HAS ORDERED A BARK COLLAR FOR HIM AND IS WAITING FOR IT TO COME IN THE MAIL. ALSO I TALKED TO HIM ABOUT HIS YARD AND THAT IT NEEDS TO BE CLEANED UP. HE SAID HE WILL GET WORKING ON CLEANING IT UP AND WILL GET BACK WITH ME ON A MEETING SO WE CAN GO OVER ALL THE CLEAN UP HE NEEDS TO GET DONE. WILL CHECK BACK IN NEXT WEEK IF I HAVEN'T HEARD FROM HIM.	
9/25/23	SW MAIN ST		DOG BARKING AT ALL HOURS/ CONSTANT AND YARD IS A MESS		

