

## Response to Comments

### Tempo Lake (Thurston County) Application for Coverage under the Aquatic Plant and Algae Management General Permit

July 21, 2023

Ecology received 17 comments regarding the application for coverage under the Aquatic Plant and Algae Management General Permit (APAM permit) by Northwest Aquatic Management for the treatment of Tempo Lake. This treatment is sponsored by the Tempo Lake Glade Association.

Thank you to all commenters for your input. Ecology has considered each comment in its permitting decision. Ecology did not edit the comments received, other than to remove the heading, salutation, and closing.

The comments received by Ecology during the public comment period are included in this document. Many of the comments were around similar topics, and Ecology's responses are organized to address these topics. Each comment has been given a reference number. After the heading for each response topic is a list of the reference numbers for comments that included that topic.

### References

Coverages for this type of aquatic treatment are issued under the [Aquatic Plant and Algae Management NPDES general permit](#)<sup>1</sup>.

In addition, here are links to sections of state law related to water quality:

- Chapter 90.48 Revised Code of Washington. –  
WATER POLLUTION CONTROL  
<http://apps.leg.wa.gov/rcw/default.aspx?cite=90.48>
- Chapter 173-226 Washington Administrative Code –  
WASTE DISCHARGE GENERAL PERMIT PROGRAM  
<http://apps.leg.wa.gov/wac/default.aspx?cite=173-226>

### Appeal

The issuance of permit coverage may be appealed within 30-days of receiving this notice as detailed in the [Appeal of General Permit Coverage focus sheet](#)<sup>2</sup>.

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<sup>1</sup> <https://fortress.wa.gov/ecy/ezshare/wq/permits/APAMGeneralPermitFinal.pdf>

<sup>2</sup> <https://apps.ecology.wa.gov/publications/documents/1710007.pdf>

## Comments Received:

### 1. Rod Sanches

Our HOA notified the residence that they submitted an application (1) to treat the water lily concerns in our lake. The remedy that is being proposed is a chemical method. (2,3) My concern is the environmental impact that they chemicals selected for use may have an adverse impact on the animals and birds that use the lake. Tempo Lake is tributary to the Deschutes River, which eventually empties into Puget Sound.

We share this lake with a variety of animals, such as beaver, deer, raccoon, opossum, squirrel, chipmunk, coyote, rabbit, and river otter. We have eagle, osprey, king fisher, cormorants, blue heron, Canadian geese, and a variety of ducks, swallows, and redwing black birds.

How and will these animals be impacted by the chemicals? What are the long term effects of the chemicals for the residents and animals? From what I understand, the initial application of these chemicals will be made over a period of three years. After the initial three year application, there is an annual maintenance application. If the application is approved, does this mean that the application is approved in perpetuity or will a new application be required every year?

Is Northwest Aquatic Management, LLC Located at 9227 Highway 12 SW #369 Rochester WA 98579, license, bonded, and trained to perform this service within Thurston County. (3)

Lastly, our lake is tributary to the Deschutes River, which eventually empties into Puget Sound. Will the chemicals have an impact on the salmon in the Deschutes River?

I would appreciate a response confirming the receipt of my email message.

### 2. Joel C. Bird

Washington Water Service Company (WWSC) strongly opposes the issuing of a permit to Northwest Aquatic Management, LLC and the Tempo Lake Glade Association for the use of herbicides applications for the control of fragrant white-water lily or any other aquatic plant in Tempo Lake.

WWSC owns and operates River Park Water System ID# 727765 which is downstream of Tempo Lake. The groundwater well is in close proximity to the salmon (Chinook, Coho, Steelhead) spawning Deschutes River. Though the herbicides chosen for aquatic application are of probable low toxicity to fish and other aquatic life any potential preventable exposure to any of the 14 population groups of steelhead trout and Chinook, Coho, Chum and Sockeye salmon in Washington State that are listed as threatened or endangered under the Endangered Species Act should be prevented.

Any potential exposure to the River Park Water System well that provides drinking water to the our customers should be prevented. To protect public health If we were to test our drinking water during the use of the herbicides the costs of the testing for these herbicides would be several thousand dollars and this cost should not necessary nor be borne by the rate payers of WWSC. The potential liability the company and also Northwest Aquatic Management, LLC and Tempo Lake Glade Association could face if any of the herbicides are detected in the drinking water source now or later would potentially far exceed the cost of the aquatic application.

The use of these chemicals will likely make there way to the groundwater, which may not be realized for years or potentially decades. Though not clearly stated in the notice it is my understanding that the association is also planning to spray for 3 consecutive years. WWSC believes the Tempo Lake Glade Association should use an alternative mechanical removal of the aquatic plants. The association should minimize the risk of a potential chemical exposure to the citizens and endangered species of Washington by using a mechanical removal of the aquatic plants. The cost difference of mechanical removal \$13,000 versus use of a \$7,000 herbicide application is \$6,000. The permit for a chemical application should be denied and the mechanical removal which better protects the citizens and wildlife of Washington State should be used.

Again, Washington Water Service Company strongly opposes the use of any chemical application near our protected water right drinking water well.

### **3. Kerry O’Leary**

This public comment is filed against the potential approval of a permit to use chemical methods to manage aquatic plants, algae or to perform phosphorus sequestration at Tempo Lake.

Tempo Lake is a beautiful lake with an abundance of wildlife and fringe wetlands.....as one biologist from WDFW put it, it is a gem, a well-kept secret and should be protected. As it states in part of the Tempo Lake Glade Association (HOA) covenants: creation of this community ....is to provide for the propagation of fish for fishing, to promote a wildlife sanctuary and to permit any reasonable recreational activity....

The lake is also a “no gas power motors allowed” lake so it provides a very peaceful and tranquil setting.

There are deer, river otters, beavers, racoons, opossums, rabbits, squirrels, and chipmunks that frequent the lake as well as bobcats, coyotes, cougar and even a black bear that have been seen or caught on cameras at night around the neighborhood and up in the hills surrounding the area. The properties in this community back up to large tracks of private owned and/or timber forest lands that surround the HOA.

Quite a variety of fish live in Tempo Lake which include: trout (stocked and hold-overs), large-mouth bass, blue gill, perch, couple types of carp, crappie, and antidotal information that juvenile Salmon have been seen in the out-flow creek from Tempo Lake into the Deschutes River.

Many kinds of waterfowl visit or nest at Tempo Lake: geese, swans, dabbling ducks, diving ducks, upland game birds, wading birds, etc. some of the regulars are the Canada Geese, Cackling Geese, Mallard Ducks, Wood Ducks, Great Blue Herons, Green Herons, Bitterns, Swans, Ringed-Neck Ducks, Buffleheads, Goldeneyes, Mergansers (Hooded, Common, Red Breasted), Pied-Bill Grebes, Cormorants, Coots, and many more migrate through.

Bald Eagles, Ospreys and Kingfishers regularly retrieve fish out of the lake. Hawks (many kinds), owls, doves, crows, ravens, woodpeckers (3 kinds), hummingbirds (some winter over), Red Winged Black Birds, Grosbeaks, and a plethora of songbirds are just a short list of the birds that live, transit or migrate through the lake area. Tempo Lake is a bird watchers paradise!

And let us not forget all the bats, bugs (dragonflies, a favorite), snakes, lizards, bees, frogs, newts, etc. that will likely die from the chemicals whether directly sprayed on them or from where they live and what they eat that got sprayed or from some chemicals that will surely drift.

My protest against this project is that it being rushed into with little concern for the possible effects, short and long term, on the ecosystem of Tempo Lake. There has been no research by the HOA, nor consultation with private professionals or any other County or State experts. I do know a number of residents from the community have been contacting county and state agencies when they found out this was happening and what was the best way to approach the issue of the noxious lily pads. From everything I have researched and talking with numerous state and county officials, the use of the chemical approach to remove lily pads should be the last option not the first.

There has been no real planning for this project and most concerning is there is NO baseline data and NO attempt to collect any or surveys conducted for anything. How will we know without this baseline data if there is not already a problem or that we are creating one or making things worse! I have scoured Dept. of Ecology's and Thurston County's websites for information on Tempo Lake and the only that is available are for only 3 toxic algae tests: 1 from 2008 and 2 from 2018. NO other data is available.

Additionally, it should be noted that there is an outflow from Tempo Lake into a (no name) creek which flows into the Deschutes River. This outflow is near where the Chehalis Western Trail crosses Stedman Rd. Tempo Lake has a dam where the out-flow creek joins the lake and the HOA is responsible for this dam. Here are NO plans or set policies and/or procedures on how this dam should be operated or controlled or when water should be released or not. The HOA is applying to be grandfathered into current requirements based on the fact the HOA has control of the dam and lake levels but it has never established any policies or guidelines for the management of the dam, setting lake levels or when to release water or not.

Another concerning point is the community is on individual household septic systems. Some are quite old and others may not be properly taken care of. There has also been an increase in the number of homes in the neighborhood. None of that has been looked into as being a possible contributor or the root cause to the lily pad and other aquatic weed growth in the lake. From everything I have read, septic systems and increased development around a lake are usually the number one cause of increased vegetation growth in a lake. That should all be investigated, at a minimum, working with the county, before a permit issued to allow chemical applications to the lake.

In addition, the households in the community are supplied drinking water by the HOA owned community water system with about a half dozen additional houses on private wells. Approximately another 10-12 households outside the HOA have their own private wells. Not even sure the HOA wells may be OK because the Group A systems is more regulated than private wells are but what about the other people on private wells in close proximity to Tempo Lake. And the other people or communities that are downstream from the out-flow of the lake, on or near the Deschutes River? What are those people supposed to do if their wells get contaminated?

Also, the property boundary lines of the individually owned lots around the lake extend out into the lake (each lot having different dimensions). In question, does the HOA have the authority to have chemicals applied on private property without the property owner's permission? What about chemical drift or wash-off onto the private properties?

One last item: a number of the neighbors claimed they did NOT receive the public notice. The notices that were received were 2 pages of light weight paper, folded into 3rd's and stappled with numerous oversized staples. Some of the notices were quite mangled because of the staples probably caught in mail sorting equipment. This also made the notice difficult to open without ripping the pages. Additionally, part on the printing on the outside of the mailer for what it was for was covered by post office markings making that unreadable.

Hopefully history has taught us all something; just because something seems OK now doesn't mean that it will be in the future; and who wants to risk their health, the health of others and the health of our environment. Due diligence needs to be accomplished on the part of the HOA (thoroughly exploring all options) in consultation with County and State experts and other professionals. And then complete transparency of information needs to happen with the community and those others that could be impacted before this permit should be approved.

MY HOPE IS THE PERMIT WILL BE DENIED!

#### **4. Ron Johnson**

I'm going to keep this short and to the point.

I don't feel that there has been any testing that assures that the Well's, Fish and wildlife are going to be safe with the Chemicals being sprayed into the lake. I do not believe that Chemicals are the way to get rid of the lily pads, there has to be a better way to get rid of them.

## **5. Anonymous**

I am a home owner who lives on Tempo Lake and I am very concerned about the chemical spraying to kill the lily pads on our lake. My concerns are both for potential health issues and for environmental issues.

My health concerns revolve around the chemicals being used in a lake that I boat on and swim in. Also, our drinking water comes from community wells that are located less than 100 ft from the lake. What is preventing the chemicals being used from getting into our drinking water? As a cancer survivor the use of chemicals to treat the lilies is very concerning.

On the environmental side how will the spraying of the lilies effect the lake and all the wildlife we have in it. We have fish in the lake that otter, eagle, osprey and hawks eat. We have a diverse range of water fowl which make there home here both all year around and seasonally. There is even a beaver lodge at the north end of the lake. The beavers that live on the lake extensively eat the lilies as show in the attached photos of the. What happens to the beavers if we kill off their food source and what happens to them when they are eating lilies that are just sprayed. You can't just tell the beavers not to eat the sprayed lilies. Also I have been told that the removal of lilies by spraying the company doing the treatment after the lilies are gone it is likely other invasive plants can then take over such as pond weed which we already have some areas of in our lake which would then require further treatment by different chemicals. We also have floating muck island that occasionally come up from the bottom. The company treating the lake said we are likely to get a lot more of these because the dead lilies are not removed from the lake and are just left to rot. How does all this affect the lake. This seems like this would all be changing the ecosystem out here and causing irreparable damage.

Please do not approve the application to spray poison chemicals on our lake.

## **6. Kathryn A Sanford**

I am writing as a concerned citizen who has had a long term connection to Tempo Lake. My aunt and uncle owned property there from the 1980's, my father lived there from 1991 until his death in 2016, and although I finally sold his property in 2022, I remain involved in the community through close friends.

The Tempo Lake plant and wildlife ecosystems exist in a delicate balance with the human inhabitants. The many close septic systems, some aging and poorly maintained cause many challenges. The lake run-off into the Deschutes River extends the impact of any factors affecting the lake. I am concerned that adding herbicides to the situation, without proper preliminary evaluation, will cause additional problems.

It seems that a first step for mitigating the lily pads and weeds should be a mechanical clearing program rather than chemical treatment with its potential (largely unknown) long term effects.

Thank you for your consideration.

## **7. Barbara Sarhan**

As a resident of the Tempo Lake community I strongly object to the use of pesticides to remove the lily pads on the perimeter of the lake. I agree that the lily pads should be removed but NOT chemically killed and allowed to decompose. How does that damage the normal environment of the lake and it's wildlife? None of these chemicals are benign and totally harmless. I would prefer that the living plants be "harvested" by physically having them removed mechanically and not poisoned.

Have we not learned that the use of supposedly safe chemicals like DDT, RoundUp, Paraguard and others that were thought to be okay eventually turn out to be found detrimental to both wildlife and humans? Do we need to find out later that exposure to the chemicals can cause cancer and neurodegenerative diseases like Parkinson's in our neighbors? This is especially potentially dangerous if this poison being applied is going to be repeated over and over. This is a BIG NO from this resident.

Please do not favor this application to apply poison to this beautiful spot in our neighborhood.

## **8. Anonymous**

I am writing to give my opposition to the chemical treatment of Tempo Lake. My concerns are the affects the chemicals will have on both the health of people and the environmental affects to the lake.

From my understanding the HOA to even get the permit has to have lake management authority over the lake and as you can see from our attached by-laws and CC&Rs that show the HOA does not have that authority.

Another issue is where the HOA's property line for the lake is as compared to the waterfront homeowners property lines are. If you look at the attachment pulled from Thurston County GEO-Data website the waterfront property lines are well into the lake itself. In my case I measured from the corner survey marker of my property by the road down to the water line. That number is 217 feet, however my property as recorded by Thurston County on that same side is actually 262 feet meaning that I own 45 feet out into the lake. How can the HOA get a permit to spray on my property without my permission which they do not have. Also, wouldn't all owners on the lake need to apply for a permit if they want the portion that they own to be treated just as the HOA needs a permit for the portion they own? When you look at the area of the lake that is being proposed for treatment about 50% is private land owners and not the HOA's property.

I strongly urge you not to approve the permit as the HOA does not appear to have the authority nor does it even own all the area it wants to treat.

## **9. Sandra and Richard Dlugosz**

we would like to voice our strong concerns about the use of pesticides at Tempo Lake for eradicating water lilies. Though some websites make the chemicals sound harmless, there is more information being shared on negative impacts to the future health of lakes using the pesticides.

We do not want chemicals in our lake. The process of harvesting the water lilies is a safer and healthier alternative.

We hope our concerns will be considered!

## **10. Anonymous**

I live on tempo lake and our HOA is wanting to spray chemicals on our Lilly pads which I am against. I have attached three photos that you can see the beaver family which lives in our lake are eating. You can see just the stems sticking up where the Lilly pads were eaten. If they have poison on them I feel it will kill the beavers as they will not know not to eat the Lilly pads. Please do not approve the application to spray poison on this lake which supports an abundance of wildlife.

## **11. Gary E. Gallwas**

I am writing to ask that the above referenced permit review include the drainage creek which discharges into the Deschutes River via a Culvert Pond constructed to provide shelter for fingerling Salmon during high water. I own property on the river just above the discharge I am also a homeowner on Tempo Lake.

## **12. Ted Koska**

I have grave concerns about chemical weed eradication on our lake. Seems as if our current Board President and several members of the community are ramming this down our throats. We had a presentation from Kyle Steelhammer (the chosen vendor) last week. I cannot say that I was impressed. In fact, following his presentation, I'm am even more worried.

Main concerns:

- ...chemicals in drinking water system
- ...fish habitat destroyed
- ...fish kill
- ...weeds currently not in lake showing up
- ...algae bloom (like Patterson last year)
- ...shoreline vegetation destroyed
- ...how will chemicals effect swimming



...what about our wildlife populations  
...can my dog drink water from the lake  
...can we kill our lake using chemicals  
...how much chemical can a lake take  
...is harvesting weeds a better way to go  
...can you use both chemicals and harvesting  
...does Ecology monitor the process  
...what happens if there is a major FU

I'd really like folks from Ecology and/or Fish and Feathers to come out and speak with community members. I sincerely believe we went into this half-cocked and can pay a heavy price if not done right. I'd like to slow the whole process down to make sure this is the best thing we can do.

### **13. Rod Sanches**

Tempo Lake Glade Association Permit Application

I am a home owner on Tempo Lake. It was brought to my attention that the HOA is seeking approval to use chemicals to control the water lily.

I am very concerned and against the use of chemicals. This is a beautiful lake and I don't want to pollute the water that feeds into the Deschutes River with chemicals or debris that contain toxic chemicals.

I ask that you not approve the use of chemicals and instead recommend that the HOA use the eco-friendly Harvesting method to control the water lily.

Both chemical and harvesting does not eradicate the water lily problem, but the Harvesting method will removed the plants from the lake and not allow the vegetation to rot in the water. I am also concern that if the plants are left in the water to rot, that it will promote algae and other aquatic weeds that are not affected by the chemicals to grow out of control.

This is a beautiful small lake that is home to a variety of birds and animals, and I don't want chemicals to ruin this sanctuary for these creatures and the people living around the lake.

Perhaps the Clean Water Act could be referenced to prevent the use of chemicals and preserve our beautiful lake.

It is my opinion that Harvesting method be used instead of chemical treatment

#### **14. Catherine Carmel**

I have just received information about a permit granted to treat lily pads on Tempo Lake. Living just up the hill from the lake, I have serious concerns about the toxins used and how it may affect the water supply. I am writing both to express my concerns as well as to request information about the chemicals to be used and the potential hazards we may face as a result of their use. I am concerned not only for the environmental ramifications to plants and surrounding wildlife, but also to the people and pets living in the area who will be drinking the water. All information is helpful.

Thank you for your help.

#### **15. Barbara Sarhan**

This comment is filed against the potential approval of a permit to apply herbicides to vegetation in Tempo Lake.

The basis for the request is that there are some property owners on the shore of the lake that object to the lily pads near their docks, which they claim impede their being able to easily put their boats in the water. There is a simple, less costly and less potentially harmful approach to this situation. That approach is to simply physically remove the lily pads by hand raking and pulling, or mechanical harvesting. This physical raking has been done by others in the past and done a good job of not allowing a large problem to arise. This could be done again. Property owners should take advantage of the state laws that allow this. Instead, some members of the Tempo Lake Glade Association (the HOA) convinced HOA Board members to move ahead with a chemical approach to killing the lily pads and other lake vegetation. This was done impulsively with practically no inquiry as to the potential harm to other vegetation, wildlife, humans, and the potential contamination of the HOA owned drinking water supply for hundreds of people from the application of these herbicides to these waters. Instead, the plan calls for increased costs to all property owners in the form of assessments that will continue for years to come to continue to fund the application of poisons for years to come.

This whole project has moved forth in haste without adequate research on the impact on the lake. This is a lake that has gone decades without any chemical management of vegetation. Other “managed lakes” in the county seem to have suffered from the application of herbicides in these state waters and resulted in annual toxic algae blooms that restrict recreational use of the waters and even cause death to family pets that get into the water at the wrong time of year.

It is very questionable whether or not all parties who were legally required to be notified of this potential poisoning of vegetation were notified that this permit had been applied for. A number of people have said that they did not receive the required legal notification. The permit applicant must be required to certify that all relevant parties were notified, by what means and when. This list of addresses should be compared to Thurston County records of parcel ownership to determine if proper notice was provided. If notice was inadequate, then the permit should be denied.

Although it may not be within the jurisdiction of the permitting authority to act on this issue, it appears that the TLGA HOA Board of Directors may not have acted within its authority in approving the hiring of the applicant who has requested the permit. At the annual meeting in May 2023 when this issue was voted upon there were people ineligible to vote or who cast more votes than allowed by the HOA Bylaws. This leaves open the question about the appropriateness of the Board's actions and this may be challenged going forward.

Now, as to the concerns about the impact on the actual lake itself, there are a number of issues. This 32 acre lake is fed by underground springs and by a creek running into it that is fed by springs above it. There is outflow from the lake into the Upper Deschutes watershed. Previous studies by the US Geological Survey have shown that glyphosate (one of the proposed herbicides to be used here) has reached surface water due to runoff from treated plants and that contamination of water by pesticides is widespread. Of the 23 pesticides found in the Puget Sound Basin in the 1990s, 17 were herbicides. According to the April 12, 2022 Bird Call Blog of the American Bird Conservancy, glyphosate has been found in groundwater, streams and ponds and it is highly toxic to aquatic invertebrates which are relied on by many birds, especially in feeding chicks.

The HOA owned water system supplies drinking water for hundreds of people and there are nearby properties not within the HOA that have wells that also supply drinking water. Is it even possible to guarantee that pesticides will not infiltrate the aquifer of the drinking water here and that of adjacent property owners? Brief analyses of the waters here cannot guarantee that there will be no such pollution. It is likely that a detailed, expensive, geo-hydrological study would need to be undertaken to assure that there is no potential for the pollution of drinking water from the application of proposed herbicides. At present, no one even knows how deep this lake is.

In addition to the lack of reliable complete engineering studies on the hydrology of the area there is also a dearth of studies of the wildlife here that would be affected. There are no known Oregon spotted frogs in the area and no known Mazama pocket gophers in the screened area. There is however a lot of other wildlife in the area such as deer, beavers, river otters, raccoons, and numerous other mammals such as bear, elk, coyotes and bobcats. The lily pads directly provide food for the wildlife. Beaver eat lily pads, rolling them up like cigars to eat. Other animals also eat the leaves and seeds. The lake is also used by dabbling ducks, geese, osprey and bald eagles and a variety of songbirds that are protected by the Migratory Bird Treaty Act. Does the application of pesticides to a lake providing habitat and food for bald eagles violate the Bald and Golden Eagle Protection Act? Does the Washington State Department of Fish and Wildlife require a permit to operate in the area around the eagle habitat? According to the Chinook Observer website, the chemical 2,4 D is especially toxic to wild birds and the destruction of habitat where they live and feed. This can reduce the balance of species. Herbicides kill algae, insects and plants that destroy the food source for other aquatic organisms that are vital to the food chain.

This lake has at least two designated wetlands on the shoreline. Are there any safeguards in place in this permit request to protect the wetlands? These sites may have been imperiled already by previous actions taken by the property owners, including the felling of trees from the wetlands into the lake. How is the wetland vegetation protected from the application of herbicides on the lake itself? A percentage of drift is likely to occur from herbicide application and there must be restrictions imposed on the application of any approved poisons to prevent drift due to wind or wave action to avoid spread to other plants and surface waters. The applicant should be required to provide proof of adequate pollution insurance and provide the HOA with coverage as a co-insured party. The applicant should also be required to continue to provide proof of timely renewal of insurance with the Washington State Department of Labor and Industries. The L&I website shows that the applicant's insurance policy expires August 12, 2023, which would be during the period of time that would be covered by this permit.

Humans are warned to stay away from the sprayed area for 6-24 hours. How are the other "Creatures, Great and Small" protected from the chemical assault on themselves? They're not. It is so sad that another lake could be starting down the sad path of deterioration due to messing with the ecosystem without even a feeble attempt to understand what is being done and long term impacts. It would be more appropriate to use education before elimination of part of the ecosystem by man-made chemicals that will lead to an endless application of poisons and costs. Educational programs such as those offered through the Stream Team and the Thurston County Healthy Lakes Program should be offered if not required before embarking on a chemical approach to handling something as simple as some lily pads in the way of a few boat owners who won't rake around their own docks. The plan to kill the vegetation does not include removing the dead and decaying vegetation. It's not clear how that might make for a more pleasant experience when putting a boat into the lake. The dying vegetation is likely to increase the phosphorus levels in the lake. There has been no previous baseline measure of this and so it will be difficult to study the effects of the treatments on the vegetation. With the increasing phosphorus will this not necessarily lead to the need for the application of aluminum sulfates on the lake bottom? It is interesting that this cycle would likely end up going on for years.

Another issue of concern is whether or not the HOA actually has the legal authority to have herbicides spread on the properties of individual landowners. Property lines shown on county maps show the property lines extend into the lake. Can those herbicides be spread over the area that seems to belong to private property owners? It certainly would be improper and illegal to spray herbicides on the land of a neighbor, so how can it be legal to spray within the property lines that extend past the shoreline into the water? This seems to be the area where most of the lily pads are located. Does the HOA or the Department of Ecology have the legal authority to authorize this within the boundaries of a private property owner?

Again, the basic issue here is whether or not another part of the state waters should be subjected to a chemical assault rather than just raking up the offending lily pads around the docks of a few people who want to put their boats in the water. Approving this permit is not in the best interests of the local ecosystem and may cause residual harm to drinking water supplies not only for the HOA but nearby property owners with more shallow wells. There seems to be no public official or private citizen who has thought about this who doesn't cringe at the thought of subjecting another body of water with unnecessary chemicals that will lead to negative effects on wildlife, downriver effects on the Puget Sound Basin, and local drinking water that would cost thousand to remedy, if it is even possible.

Please deny this permit.

#### **16. Linda Petty**

As a Tempo Lake property owner I'm greatly concerned about the possibility the lake being chemically treated to eradicate lillipads. Furthermore I'm worried about wildlife and all the adjacent wetlands. And there is always the possibility our drinking water could be contaminated.

#### **17. Greta Nielsen**

Recommend denying permit for Northwest Aquatic Management LLC and Tempo Lake Glade Association to use chemicals to manage white-water lilies in Tempo Lake. Chemicals are not good for aquatic life in Tempo Lake. Also Tempo Lake has a connection with the Deschutes River and we certainly do not want more chemicals going into the Deschutes.

It is my understanding residents of Offet Lake put chemicals to eliminate water lilies in the water for 3 years and have decided not to do it anymore as it did not solve the water lily problem sufficiently to warrant the cost.

## Ecology's Response to Comments

### Topic 1: Impacts to Environmental Health and Wildlife

(Commentors: 1, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 17)

Summary: Many commentors expressed concerns about potential impacts to human health, fish and wildlife. Other comments stated that there have been no surveys or baseline measurements of Tempo Lake, so there is not enough information on whether chemical management is right for this lake.

### Ecology's Response to Topic 1

The questions and concerns raised in the comments above are very common when it comes to the use of aquatic herbicides. These types of treatments are regulated under the federal Clean Water Act, and numerous state laws. This regulatory framework is intended to allow the use of aquatic herbicides, while also limiting the potential risks to human health and the environment. Limiting these risks relies on compliance with permit requirements, the restrictions specific to each type of product used, and the pest professional judgement of lake managers and licensed commercial applicators.

Several types of public notification are also required, so that individuals can make informed decisions for themselves and their families when aquatic herbicides are used in an area.

To reduce the risk of environmental harm, permittees are required to follow limitations on when and where treatments can occur. The Washington Department of Fish and Wildlife provides [treatment timing windows](#)<sup>3</sup>, defining when treatments can be done on different waterbodies, to protect fish, wildlife, and habitats.

To protect rare plants and ecosystems, the Washing Department of Natural Resources provides information through their [Natural Heritage Program](#)<sup>4</sup>. This includes a [map](#)<sup>5</sup> showing where rare plants and ecosystems occur in Washington. Permittees under the APAM permit are required to follow both the WDFW treatment timing windows and the WDNR rare plant information.

Depending on the information provided by these programs, the APAM permit does require surveys for rare plants prior to treatment, or evaluations to prevent harm to wildlife. These types of studies are not required for each waterbody. Ecology relies on Washington Department of Fish and Wildlife (WDFW) and Washington Department of Natural Resources (DNR) to indicate when they are necessary. The APAM permit does require water quality monitoring that varies with the type and extent of treatments. Information about the water

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<sup>3</sup> <https://wdfw.maps.arcgis.com/apps/MapSeries/index.html?appid=34533b2dd4f84932b5fd1a46e494bde6>

<sup>4</sup> <https://www.dnr.wa.gov/natural-heritage-program>

<sup>5</sup> [https://experience.arcgis.com/experience/174566100f2a47bebe56db3f0f78b5d9/page/Rare-Plant-and-Ecosystem-Locations/?data\\_id=dataSource\\_1-1860f1593ba-layer-47%3A2497&views=P%26E-View---Legend](https://experience.arcgis.com/experience/174566100f2a47bebe56db3f0f78b5d9/page/Rare-Plant-and-Ecosystem-Locations/?data_id=dataSource_1-1860f1593ba-layer-47%3A2497&views=P%26E-View---Legend)

lilies, decisions on how to control them, and the herbicides proposed for use on Tempo Lake are provided below.

Fragrant Water Lilies are listed as class C noxious weeds by the Washington State Noxious Weed Control Board. For more information on the impacts of Fragrant Water Lily and control methods please visit: <https://www.nwcb.wa.gov/weeds/fragrant-water-lily>. The decision on whether and how to manage Fragrant Water Lilies on Tempo Lake resides with the homeowners and the Homeowner's Association (HOA). The decision to use chemicals to manage the lilies as well as which herbicide to use, within the bounds of the Aquatic Plant and Algae Management General Permit, resides with the applicant (Tempo Lake Glade Association).

Five herbicides are listed for intended use in the application for coverage received for Tempo Lake: Triclopyr TEA, endothall (dipotassium salt), fluridone, glyphosate, and diquat dibromide. Ecology has developed risk assessments for Triclopyr and diquat which can be found here: <https://fortress.wa.gov/ecy/publications/summarypages/0210046.html> and <https://fortress.wa.gov/ecy/publications/summarypages/0410015.html>.

Ecology has developed Environmental Impact Statements for glyphosate, tryclopyr and diquat which can be found here: <https://fortress.wa.gov/ecy/publications/summarypages/0010040.html>, <https://fortress.wa.gov/ecy/publications/summarypages/0210052.html> and <https://fortress.wa.gov/ecy/publications/summarypages/0410018.html>.

Ecology published a Supplemental Environmental Impact Statement (SEIS) for the Aquatic Plant and Algae Management permit in 2017, which updated the environmental impact information for all of the herbicides listed in the permit application: <https://apps.ecology.wa.gov/publications/SummaryPages/1710020.html>. The SEIS also reviews the potential environmental impacts of mechanical control methods for aquatic weeds.

The publications listed above cover both environmental and human health impacts.

Additionally, the Environmental Protection Agency (EPA) has a set of testing requirements for all chemicals when applying for a pesticide registration. The following excerpt is from EPA's 2021 NPDES Pesticide General Permit Fact Sheet and explains FIFRA:

*EPA regulates the use of pesticides under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). In general, FIFRA authorizes EPA to register each pesticide product intended for distribution or sale in the United States. To register a pesticide, the Agency must determine that its use in accordance with the label will not cause "unreasonable adverse effects on the environment." (see, e.g., FIFRA sec. 3(c)(5)). FIFRA defines that term to mean, in part, "any unreasonable risk to man or the environment, taking into account the economic, social, and environmental costs and benefits of the use of any pesticide" (FIFRA sec. 2(bb)). The "unreasonable adverse effects" standard requires EPA, in effect, to balance the human health and ecological risks of using a pesticide against its economic, social, human health, and ecological benefits. Pesticides are registered for sale and distribution only if EPA determines that the benefits outweigh the risks. In making decisions on whether to register a pesticide, EPA considers the use directions on proposed product labeling and evaluates data on product*

*chemistry, human health, ecological effects, and environmental fate to assess the potential risks associated with the use(s) proposed by the applicants for registration and expressed on the labeling. Among other things, the Agency evaluates the risks to human health and the environment (including water quality) posed by the use of the pesticide.*

*As stated above, EPA reviews and approves pesticide product labeling. EPA implements risk mitigation measures identified through the risk assessment process by placing use restrictions and warnings on labeling to ensure the use of the pesticide (under actual use circumstances and commonly accepted practice) will not cause any “unreasonable adverse effects on the environment.” It is a violation under FIFRA sec. 12(a)(2)(G) (FIFRA’s “misuse” provision) to use a registered pesticide inconsistent with its labeling.*

*After a pesticide has been registered, changes in science, public policy, and pesticide use practices will occur over time. FIFRA, as amended by the Food Quality Protection Act of 1996, mandates a registration review program, under which the Agency periodically reevaluates pesticides to ensure that as the ability to assess risk evolves and as policies and practices change, all registered pesticides continue to meet the statutory standard of no unreasonable adverse effects to human health or the environment. The Agency is implementing the registration review program pursuant to Section 3(g) of FIFRA and will review each registered pesticide every 15 years to determine whether it continues to meet the FIFRA standard for registration. Information on this program is provided at: <http://www.epa.gov/pesticide-reevaluation>.*

## **Topic 2: Glyphosate**

(Commentors: 1, 7, 8, 15)

Summary: Numerous comments expressed concerns regarding the use of glyphosate in Tempo Lake. Some comments brought up recent reports from the World Health Organization and the International Agency for Research on Cancer that indicate glyphosate may cause cancer in humans.

### **Ecology’s Response to Topic 2**

See the response to topic one for links to Ecology’s Environmental Impact Statements and Risk Assessments for glyphosate.

The EPA, Centers for Disease Control (CDC), and several other international health organizations have tested glyphosate as an isolated chemical. While it has been identified as a probable cancer-causing agent, it has not been conclusively found to be a carcinogen when applied at the rates and in the manner it is routinely used in pesticide application. The studies EPA reviewed that found glyphosate could cause cancer in animals used rates and exposure methods (injection) that are not realistic in a pesticide applicator context; these studies do not reflect how glyphosate exposure works when used as a pesticide. Other common chemicals have the same EPA cancer risk rating for the same reasons. For example, pure aerosolized gasoline may cause cancer in animals, but humans are not typically exposed to gasoline in that way.



The following is an excerpt from the October 2020 report by the Washington State Department of Agriculture (WSDA) titled *Glyphosate: Ecological Fate and Effects and Human Health Summary*:

*There is currently substantial disagreement among experts on the potential for glyphosate exposure to cause cancer in humans. In March 2015, the World Health Organization's International Agency for Research on Cancer classified glyphosate as Group 2A: probably carcinogenic to humans (International Agency for Research on Cancer 2015). However, many other groups, including EPA, have not come to the same conclusion. EPA's Cancer Assessment Review Committee (CARC) has reviewed the carcinogenicity of glyphosate three times since the early 1980s. In the most recent report published in 2015 CARC again classified glyphosate as not likely to be carcinogenic to humans based on a review of currently available studies (EPA 2016).*

To align with federal and state policy, as well as the best available science, we have continued to make glyphosate available as a potential treatment for permittees. Ecology does not direct any permittees to use specific pesticides for their treatment plans, and permittees are expected to develop a treatment plan with a licensed applicator and all interested parties (such as HOA residents).

### **Topic 3: Impacts to the Deschutes River**

(Commentors: 1, 2, 3, 7, 11, 13, 17)

Summary: Some commentors are concerned about the connectivity between Tempo Lake and the Deschutes River. How will treatments impact water that flows into this river?

### **Ecology's Response to Topic 3**

In the [Aquatic Plant and Algae Management General Permit](#)<sup>6</sup>, *Table 2: Specific Restrictions on the Application of Herbicides and Algaecides for Control Projects* lists treatment limitations for all chemicals conditionally approved for use under the permit. Some pesticides, such as endothall (dipotassium salt) have restrictions on how close they can be applied to an outlet stream. These restrictions are considered protective of downstream water quality and environments, given dilution.

### **Topic 4: Properly Licensed Applicator**

(Commentors: 1)

Summary: Is the applicator listed on the application for permit coverage licensed to work in Thurston County?

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<sup>6</sup> <https://fortress.wa.gov/ecy/ezshare/wq/permits/APAMGeneralPermitFinal.pdf>

#### **Ecology's Response to Topic 4:**

Yes, at the time of writing this response, Northwest Aquatic Management, LLC is licensed to apply aquatic pesticides in the state of Washington.

#### **Topic 5: Potential Impacts to Drinking Water Wells**

(Commentors: 2, 3, 7, 8, 14, 16)

Summary: We are concerned about the proximity of potential pesticide treatments to groundwater wells near the lake, including River Park Water System. Contamination of this and other nearby water systems should be prevented. Movement of pesticide residue from the lake into groundwater wells may not be detected for years after the treatment.

#### **Ecology's Response to Topic 5:**

To address this concern, Tempo Lake HOA requested that Northwest Water Systems analyze the interaction between water in Tempo Lake and drinking water wells in the Tempo Lake Water Company jurisdiction which are closest to the lake. The report concluded that there is no direct hydraulic connection between Tempo Lake and these two wells. While the report did not discuss wells belonging to other water companies, it appears that the lake does not directly connect to the wells in closest proximity to potential treatments. A copy of this report is available from the Tempo Lake Glade Association.

Additionally, the Aquatic Plant and Algae Management permit does not allow the use of pesticides which are expected to contaminate groundwater. Ecology believes that compliance with permit conditions and Product Label requirements is protective of groundwater.

Staff from the Washington State Department of Health, Office of Drinking Water, also looked at this issue. They concluded that while testing for aquatic herbicides is not required, if there are concerns then the drinking water systems could test for glyphosate within 1-2 months of application using EPA test method 547. This includes the shallow dug well downstream on the Deschutes River at the River Park water system (ID 72776) operated by Washington Water. DOH requested that any sample results should be submitted to the Office of Drinking Water. For more information, please contact:

Candida Granillo-Dodds, P.E.  
Environmental Engineer 3  
Southwest Drinking Water Regional Operations  
Office of Drinking Water  
Washington State Department of Health  
[candida.granillo-dodds@doh.wa.gov](mailto:candida.granillo-dodds@doh.wa.gov)  
(564) 669-3170

## **Topic 6: Legal Authority of the HOA**

(Commentors: 3, 5, 7)

Summary: The HOA does not have the authority to apply for permit coverage. Property lines within the HOA extend into the lakebed, and we do not believe the HOA has the authority to treat the lakebed on the properties of individual homeowners who do not want pesticide treatments. The HOA made this decision too quickly and without enough homeowner discussion.

### **Ecology's Response to Topic 6:**

In consultation with the Attorney General's Office, Ecology has determined that the Tempo Lake Glen Homeowner's Association has the authority to sponsor treatment under Aquatic Plant and Algae Management general permit coverage. The HOA bylaws and CC&Rs (covenants, codes and restrictions) authorize the HOA to maintain the park, which includes the lake. Given that every landowner is an HOA member, and based on the property rights as Ecology has reviewed them, the HOA President, Board of Trustees, "Park and Architectural Control Committee" has the right to treat the lake using the permit.

Decisions such as whether or not to treat the lake with pesticides are internal to the HOA. Based on the information provided to Ecology, this decision was approved by a majority of the HOA members. Ecology does not have the authority or responsibility to enforce HOA bylaws, community engagement, and meeting rules.

## **Topic 7: Impacts to Wetlands**

(Commentor: 7)

Summary: How does the permit prevent impacts to wetlands adjacent to treatment areas?

### **Ecology's Response to Topic 7:**

Identified wetlands are addressed in the permit, which states: *The Permittee may treat only high use areas to provide for safe recreation (e.g., defined swimming corridors) and boating (e.g., defined navigation channels) in identified and/or emergent wetlands. The Permittee must limit the treated area to protect native wetland vegetation.*

## **Topic 8: Limitations on Use**

(Commentors: 12, 15)

Summary: What are the use restrictions on the lake during treatments? When will they be lifted?

### **Ecology's Response to Topic 8:**

The use restrictions on the lake depend on the chemical treatment used and how the application is done. Ecology recommends you reach out to the licensed applicator contracted for Tempo Lake treatments for more information on this matter. You can also find out about how use restrictions are communicated under the APAM permit on the Ecology website<sup>1</sup>.

The APAM permit requires several types of public notification, including shoreline signage. These signs will list all use restrictions, and their duration. The APAM permit also requires that the permittee provide replacement water in certain situations. This is explained in Special Condition S4.D.5 on page 14 of the APAM permit.

### **Topic 9: Aquatic Plant Control Methods**

(Commenter: 1, 2, 5, 7, 9, 15)

Summary: Several comments mentioned physical removal of plants, concerns about rotting plants, frequency of treatments, and drift of herbicides during application.

### **Ecology's Response to Topic 9:**

Physical removal of aquatic plants can be an effective method of control in some situations. The decision to use aquatic herbicides and frequency of treatment is up to the organization responsible for lake management, in this case the HOA. Plants or algae left in the lake will decompose after treatment, releasing nutrients back into the lake. There is a potential for additional plant and algae growth after treatment. The lily pads will be sprayed with a liquid herbicide. The product labels for aquatic herbicides list requirements that limit drift during spray applications, including a maximum wind speed of 10 miles per hour.

### **Topic 10: Length of Permit Coverage**

(Commenter: 1)

Summary: If the application is approved, does this mean that the application is approved in perpetuity, or will a new application be required every year?

### **Ecology's Response to Topic 10:**

Once permit coverage has been issued, it will renew annually as long as the permittee pays the annual fee and complies with permit requirements. New permit applications are not required every year. The APAM general permit will expire on March 21, 2026. Existing permit coverages under the APAM permit need to be renewed prior to that date or will be cancelled.

## Topic 11: Proper Notification

(Commenter: 15)

Summary: A number of people have said that they did not receive the required legal notification.

### Ecology's Response to Topic 11:

The APAM permit requires that written notices be provided to all waterfront businesses and residences within one quarter mile of the proposed treatment areas at least 10 days prior to treatment. The Permittee is also required to provide a copy of this notice to Ecology, along with the addresses that received the notice. The permittee submitted this information to Ecology on April 26, 2023. The list of addresses is shown below.

10828 Stedman RD SE	Olympia	WA	98513
8912 B Kimmie St SW	Tumwater	WA	98503
10822 Stedman	Olympia	WA	98513
9900 Bloomberg st SW # 18	Olympia	WA	98503
10806 Stedman RD SE	Olympia	WA	98513
10808 Stedman RD SE	Olympia	WA	98513
10738 Stedman RD SE	Olympia	WA	98513
10648 Stedman RD SE	Olympia	WA	98513
10640 Stedman RD SE	Olympia	WA	98513
10630 Stedman RD SE	Olympia	WA	98513
5711 Etude Loop SE	Olympia	WA	98513
5711 Etude Loop SE	Olympia	WA	98513
5725 Etude Loop SE	Olympia	WA	98513
5731 Etude Loop SE	Olympia	WA	98513
5745 Etude Loop SE	Olympia	WA	98513
PO Box 553	East Olympia	WA	89513
PO Box 176	East Olympia	WA	98513
10707 Tempo Lake DR SE	Olympia	WA	98513
8343 Walnut RD NE	Olympia	WA	98516
10807 Tempo Lake DR SE	Olympia	WA	98513

10811 Tempo Lake Dr SE	Olympia	WA	98513
10819 Tempo Lake Dr SE	Olympia	WA	98513
10905 Tempo Lake DR SE	Olympia	WA	98513
406 3rd Ave SW	Tumwater	WA	98512
10917 Tempo Lake Dr SE	Olympia	WA	98513
145 Moonlight Circle	Sedona	AZ	86336
11003 Tempo Lake Dr SE	Olympia	WA	98513
11007 Tempo Lake Dr SE	Olympia	WA	98513
2860 81st Ave CT E	Edgewood	WA	98317
11019 Tempo Lake Dr SE	Olympia	WA	98513
3902 N Proctor	Tacoma	WA	98407
11035 Tempo Lake Dr SE	Olympia	WA	98513
PO Box 553	East Olympia	WA	98540