STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

RICK SNYDER
GOVERNOR

DAN WYANT
DIRECTOR

March 17, 2015

Aquatic Services, Inc.
PO Box 663
Goodrich, Michigan 48438-0647

Dear Mr. Knox:

SUBJECT: Templene, Lake, St. Joseph, St. Joseph County – Permit Number ANC9800498

The Department of Environmental Quality, Water Resources Division (WRD) has reviewed your aquatic nuisance plant control permit application for Templene, Lake. Your permit has been issued. If this permit is a partial approval of your application, the reason for partial approval is that the request differed from standard permit allowances. If you believe a non-standard request is needed and appropriate for this waterbody, please submit a completed permit revision form, with a clear reason for your request, to me at ziegenmeyerh@michigan.gov. In addition:

- Your application included a fee of $1,500.00.
- The fee paid provides permit coverage through December 31, 2015, if you do not increase the size of the approved treatment area through a revision or expansion for treatment of an infestation of non-native invasive species.
- If you expand the treatment area through a revision or expansion for treatment of an infestation of non-native invasive species and the expansion qualifies for a higher fee category, the difference in the application fee is required within 15 days of the expansion. The increase in the annual fee will be carried forward in subsequent years in which the permit is in effect. Fee categories are listed at www.michigan.gov/anc as "ANC Fee Information" under the "Application & Permit Information" heading.

Should you require further information, please contact me via phone at 517-290-6283, electronic mail at ziegenmeyerh@michigan.gov, or Department of Environmental Quality, P.O. Box 30458, Lansing, Michigan 48909-7958.

Sincerely,

Heidi Ziegenmeyer

Heidi Ziegenmeyer
Aquatic Nuisance Control Program
Water Resources Division
517-290-6283

Enclosure

STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY

STANDARD PERMIT FOR PESTICIDE APPLICATION TO SURFACE WATERS OF THE STATE OF MICHIGAN

Permits are required by Part 31, Water Resources Protection, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), and Part 33, Aquatic Nuisance Control, of the NREPA (Part 33).

Permission is hereby granted, based on information supplied on the permit application and on the applicant's assurance of adherence to State requirements and this permit, to apply chemicals to the waters described herein for the control of aquatic plants and/or algae or swimmer's itch.

PERMIT NUMBER: ANC9800498
DATE EFFECTIVE: 03/17/2015
This permit is valid only through December 31, 2015.

Permittee Name and Address

Aquatic Services, Inc.
PO Box 663
Goodrich, Michigan 48438-0647

Name of Waterbody Affected

Templene, Lake

County(ies) in which Waters are Located

St. Joseph, St. Joseph

Authority granted by this permit is subject to the following conditions and limitations:

Section A. Authorizations and Coverage Provisions

1. Chemical Application

The permittee may apply only those specific chemical products that are approved by the Department of Environmental Quality (DEQ) in the areas identified by this permit and on the attached approved treatment map(s). Please consult the chemical table titled "Chemicals Approved for Use Under the Aquatic Nuisance Control Standard Permit." This table is updated as any new chemicals are approved. The table is available at www.michigan.gov/anc. Click on "Chemicals used for Treatment of Aquatic Nuisance Plants and/or Algae," and then "Chemicals Approved on Standard Permits."

The application of chemical pesticides to the areas identified on the approved treatment map(s) is restricted to the stated maximum application rates listed in the table. This rate may be lower than the maximum allowed under the label. The maximum total amount of each chemical shall be based upon the application rates in the table, the actual area of treatment, the average depth of the treatment area, the treatment timing and location, plant or algae density, the target chemical concentration in the water, and the target species; or as otherwise indicated by the product label.

2. Treatment Intervals

With few exceptions, the products approved for use in Section A(1) of this Standard Permit have a minimum length of time required between each treatment in the same area(s) of impact, in accordance with the federal product label. Some of the federal product labels also have limits on the total amount of chemical applied annually per treatment area. Follow the federal treatment interval and annual limits unless a different interval or use limitation is specified in Section A.4 of this permit.

3. Authorized Areas

Control of nuisance aquatic plants or algae is authorized only in areas as defined by this permit and on the approved treatment map(s), or through an expansion due to an infestation of an adjacent area in accordance with Section 324.3311 of Part 33. Authorized areas do not include areas of native plants and native algae that have not been approved on the treatment map.

Areas where chemical control of nuisance plants or algae is undertaken must either be under the legal control of the permittee or the party(ies) who has/have granted the permittee permission to do the treatment, or otherwise under legal control as specified in Section 3308 of Part 33.

4. Special Conditions

Follow all pesticide label instructions to protect human health and the environment. The label provided with the pesticide container explains how to use the pesticide safely and effectively, and may suggest ways to avoid unintended impacts to human health and the environment. Read and understand the label before mixing or applying any pesticide. Most labels list a toll-free number for consumers. Pesticide labels are federally-approved legal documents and their requirements are enforced under both federal and state laws. This permit incorporates the product labels in effect at the time of application by reference. Violation of a label requirement is considered a violation of this permit.

All herbicides shall be applied in a manner to minimize impacts to non-target species. Refer to the product label requirements and suggestions to optimize selectivity. In addition, refer to the best management practices handbooks, and other best practices for Michigan when available, found at www.michigan.gov/anc, scroll down to Information and click on “Best Management Practices”. The applicator is expected to treat approved areas selectively through the careful choice of equipment, method, rate, and timing of application.

Do not treat within the outlet setback indicated on the approved treatment map, if applicable. An outlet setback is not required when there is no discharge from the waterbody.

Due to the toxicity of copper to spawning fish, do not use copper products within 20 feet of a known, or suspected, spawning bed.

Treatment of wild celery (Vallisneria americana) shall not occur more than two times per year within the same treatment area.

The use of water dyes allowed on this permit excludes water dyes that are labeled as herbicides (e.g., Aquashade, Admiral, Pond Care Algae Blocker).

Do not treat within 500 feet of loons' nests between April 15 and August 15.

For treatment of all waterbodies in Ingham County, the permittee must notify the Ingham County Drain Commissioner at 517-676-8381, or fax at (517) 676-8364, between 8:00 a.m. and 5:00 p.m., Monday through Friday. Notification must be given a minimum of two (2) business days prior to application of chemical(s) and include the date, time, and location(s) of the proposed chemical treatment.

Except for ponds with a total surface area of less than 10 acres, the chemical treatment of native emergent and floating leaf vegetation, such as water lilies, cattails, arrowhead, pickerelweed, rushes, etc., is approved for the purpose of access to the waterbody and not for the purpose of beach grooming. Restrict treatment of native emergent and floating leaf vegetation to a 40 feet x 40 feet area for swimming and boat launching, and a 20 feet wide boat lane to reach open water per residentially developed parcel. Treatment of an infestation of non-native floating or emergent species in excess of a 40 feet x 40 feet area per residential parcel is approved using selective application methods and timing of treatment to prevent impacts to non-target native species.

Except for ponds with a total surface area of less than 10 acres, chemical treatment of developed shorelines for submersed species (algae, macroalgae, and macrophytes) is limited to 100 feet of frontage out to the 5-foot depth contour or 300 feet (whichever is closer to shore) per residential property.

Chemical treatment of an infestation of submersed, non-native invasive species in areas exceeding 100 feet of frontage per residential property, in areas along undeveloped shoreline, and in offshore areas is approved using only the chemical protocol in the table below to prevent impacts to non-target native species in these areas.

Non-native invasive species target	Chemical (maximum application rate)	Restrictions
Eurasian watermilfoil (*Myriophyllum spicatum* or hybrid watermilfoil)	Aquathol K (1 gal/ac) diquat dibromide (1 gal/ac)[1] flumioxazin (200 ppb)	one time per season, prior to June 15
	2,4-D (label maximum) triclopyr (label maximum) 2,4-D - triclopyr combination (label maximum)	None
Curly leaf pondweed (*Potamogeton crispus*)	Aquathol K (1 gal/ac) diquat dibromide (1 gal/ac)[1]	one time per season, prior to June 15
Starry stonewort (*Nitellopsis obtusa*)	chelated copper algaecides (1.2 gal/ac ft.) copper sulfate (4.4 lb./ac ft.) flumioxazin (200 ppb) Komeen Crystal (1 ppm) Hydrothol 191 liquid (2.2 pints/acre foot)	None
Fanwort (*Cabomba caroliniana*)	flumioxazin (200 ppb)	None
All other non-native invasive species not identified above	Chemicals approved include those listed on the table titled “Chemicals Approved for Use Under the Aquatic Nuisance Control Standard Permit.” [1]	None

[1] Low-dose chelated copper only, at a rate not more than 0.11 ppm Cu, may be used with diquat in areas exceeding 100 feet of frontage per residential property, and in areas along undeveloped shoreline, but not in offshore areas.

Diquat dibromide products are designated as restricted use by the Michigan Department of Agriculture and Rural Development and are only available to certified applicators.

Application of herbicides containing imazapyr can be made only by federal or state agencies, such as Water Management District personnel, municipal officials, and the U. S. Army Corps of Engineers, or those applicators who are licensed or certified as aquatic pest control applicators and are authorized by the state or local government.

Application of any herbicide on a per acre basis in shallow areas may result in a concentration of active ingredient exceeding the label maximum, which could result in unacceptable impacts to non-target organisms. The per-acre chemical amount must be adjusted to the depth of water being treated. Consult the product label to ensure proper application.

Do not apply granular endothall or granular 2,4-D products within 75 feet of any active drinking water well or within 250 feet of wells less than 30 feet deep. Distances are measured from the well location not from the shoreline. Wells and isolation distances are not necessarily shown on the treatment map. Prior to treatment, locate the water wells and observe the appropriate isolation requirements. If well location and/or depth are unknown, then assume the full 250-foot isolation distance.

Multiple products with the same active ingredient are approved by this permit. Consult the federally-approved product labels to ensure that the total amount of the active ingredient applied does not exceed the amount allowed by label application rates and/or active ingredient concentration for the target species and site conditions.

The use of Hydrothol 191 liquid and/or granular herbicide has been approved at a rate in excess of 0.3 parts per million (ppm). The federal product label suggests that treatment be conducted only by a certified pesticide applicator. Apply product evenly in narrow margins or strips to control target vegetation so fish are not killed. Apply product from the shoreline out so fish are not trapped. Do not treat more than 10 percent of the waterbody, or a bay, at a time with doses greater than 1.0 part per million (54 pounds per acre foot granular or 1.4 gallons per acre foot liquid).

If the waterbody (excluding ponds less than 10 acres) has been treated with fluridone within the previous two years, then the following requirements are in effect:

Aquatic vegetation survey requirements as specified by the previous fluridone permit are incorporated by reference. Surveys must be submitted to the DEQ by e-mail to deq-wrd-anc@michigan.gov not later than November 1 of the year the survey was performed.

Upon receipt of written notification from the DEQ, the permittee may be required to do the following:

- Conduct the chemical treatment only when a DEQ representative is present.
- Notify the DEQ not less than two working days in advance of chemical treatment.
- Submit an accurate map of the exact locations where each chemical was applied to the DEQ within 24 hours of the completion of each treatment.
- In addition to the normally required notification, also notify other person(s) specified by the DEQ.
- Notify the Michigan Loon Watch Coordinator, by e-mail (michiganloons@yahoo.com, copy deq-wrd-anc@michigan.gov) a minimum of two (2) business days prior to the initial application of chemicals to this waterbody. Notification must include the name and county of the waterbody, the anticipated treatment schedule for the season, and a telephone number where you can be contacted.
- Allow the DEQ or its representative to collect a sample of the chemical(s) used before or during any chemical treatment.
- Apply chemicals so that swimming restrictions and fish consumption restrictions are not imposed on any Saturday, Sunday, or state-declared holiday.
- Take special precautions to avoid or minimize potential impacts to human health and safety, the environment, and non-target organisms.
- Perform lake water residue analysis to verify the chemical concentrations in the waterbody according to a frequency, timing, and methodology approved by the DEQ.
- Perform aquatic vegetation surveys according to a frequency, timing, and methodology approved by the DEQ.
- Use chemical control methods for nuisance aquatic vegetation that are consistent with the approved vegetation management plan submitted separately or as part of a lake management plan.
- Perform pretreatment monitoring of the target aquatic nuisance population according to a frequency, timing, and methodology that have been approved by the DEQ.
- Any other requirements determined by the DEQ as necessary to protect the natural resources or the public health and safety, to prevent economic loss or impairment of recreational uses, to protect non-target organisms, or to help ensure control of the aquatic nuisance.

5. Notification and Posting Requirements

For expansion of chemical treatment within or along the shoreline of the Great Lakes, or to inland waters, where the expansion will occur in the waterbodies in the municipalities or townships listed (refer to Appendix A), the permittee shall notify the DEQ not less than two (2) full business days prior to the application of chemicals. Notification shall be to the Aquatic Nuisance Control Program by email deq-wrd-anc@michigan.gov. Notification shall include a map of the proposed expansion area(s), list of chemical(s) to be applied, the date and time of anticipated treatment, and contact information for on-site chemical applicators.

The permittee is required to notify the DEQ ANC Program prior to expanding treatment into an infested area. Notification shall be made to the ANC general e-mail at deq-wrd-anc@michigan.gov or via telephone at 517-284-5593 if email is impracticable at the time.

The permittee is required to notify, in writing, an owner of any waterfront property within 100 feet of the area of impact, not less than seven days, and not more than 45 days, before each initial chemical treatment of the treatment season, in accordance with Section 324.3310(h) of Part 33. If the owner is not the occupant of the waterfront property or the dwelling located on the property, then the owner is responsible for notifying the occupant. This notification requirement applies to each new, or expanded, area of impact added during the treatment season.

Notice of the chemical application must be posted prior to each chemical application, in accordance with Section 324.3310(d) of Part 33 and shall remain posted for a minimum of 24 hours or until all water use restrictions have expired, whichever is later. Alternate posting locations may be approved on a case-by-case basis by the DEQ upon written request from the permittee. Written request must explain the necessity for alternative posting locations and a description of the proposed posting locations, including a map(s) for clarification.

Water use restrictions listed on the label for the specific product (i.e. trade name) used shall be included on the posting sign. In addition a 24-hour water use restriction for swimming/entry shall be indicated for all chemical applications, except for copper-based algae treatments and dyes when approved for use as a tracer or marker. All signs shall also include a recommendation that swimming/entry in the treatment area be avoided while applicators are applying chemicals. A posting sign template is available at www.michigan.gov/anc under the “Application & Permit Information” header, titled “Posting Sign”.

Section B. Permit Revisions

The permittee may request a revision if the proposed revisions do not involve a change in the scope of the project and the permittee requests the revisions in writing, using the Permit Revision/Expansion form available at www.michigan.gov/anc. Under the “Application & Permit Information” header, click “Permit Application, Revision, Transfer, and Treatment Report Forms,” and then click the Permit Revision form. A revision that involves a change in scope of the original project requires submittal of a new permit application. A revision for a DEQ error may be requested through an email to the permit writer or to deq-wrd-anc@michigan.gov.

Section C. Reporting and Record Keeping

1. Environmental Impacts

The applicant is required to immediately contact the DEQ, Water Resources Division, at 517-284-5593 if any fish or wildlife damage or significant non-target plant or human safety impacts occur in association with any chemical application.

2. Treatment Report

A completed DEQ Aquatic Nuisance Treatment Report Form must be returned postmarked no later than November 30 of each year this permit is in effect, even if treatment is not undertaken. Blank forms are available at www.michigan.gov/anc under the “Application & Permit Information” header, titled “Permit Application, Revision, Transfer, and Treatment Report Forms”, and then click the applicable Treatment Report Form. Submit completed and signed report to: Aquatic Nuisance Control Program, Water Resources Division, Department of Environmental Quality, P.O. Box 30458, Lansing, Michigan 48909-7958; or email deq-wrd-anc@michigan.gov.

3. Record Retention

The permittee must keep written or electronic records as required in this permit. These records must be accurate, complete, and sufficient to demonstrate compliance with the conditions of this permit.

The permittee shall obtain and maintain written permission from each bottomland owner in the area of impact for a minimum of one (1) year from the expiration date of the permit, unless exempt under Section 324.3308 of Part 33.

Records shall be made available to the DEQ within 48 hours upon request, or a timeframe agreed upon by DEQ.

4. **Electronic Reporting**

Upon notice by the Department that electronic reporting tools are available for specific reports and notifications, the permittee shall submit all such reports and notifications as required by this permit, electronically on a form required by the Department.

5. Vegetation Surveys, Management Plans and other Reports

A copy of any vegetation management plan, lake management plan, lake report, written recommendations, and/or vegetation surveys, prepared for the Lake Board or other governmental entity authorizing the chemical treatment, must be submitted with the treatment report no later than November 30 of each year this permit is in effect.

Section D. Liability

1. Noncompliance

Initiation of any work on the permitted project confirms the permittee's acceptance and agreement to comply with all terms and conditions of this permit. Noncompliance with these terms and conditions, and/or the initiation of other regulated activities not specifically authorized by this permit, shall be cause for the revocation of this permit. Further, the DEQ may initiate criminal and/or civil proceedings to correct deficiencies, protect public health and natural resources, and secure compliance with statutes. Federal pesticide label requirements are incorporated into this permit by reference. Violation of federal pesticide label requirements is considered a violation of this permit.

The issuance of this permit does not authorize violation of any federal, state or local laws or regulations, nor does it obviate the necessity of obtaining such permits, including any other DEQ permits, or approvals from other units of government, as may be required by law.

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve any permittee from any responsibilities, liabilities or penalties to which the Permittee may be subject under the Endangered Species Act of 1973 (16 U.S.C. § 1531 et seq.) or Endangered Species Protection, Part 365 of the Michigan Act.

2. Property Rights

This permit does not convey property rights in either real estate or material, nor does it authorize any injury to private property or invasion of public or private rights.

3. Indemnification

The permittee shall indemnify and hold harmless the State of Michigan and its departments, agencies, officials, employees, agents, and representatives for any and all claims or causes of action arising from acts or omissions of the applicant, or employees, agents, or representatives of the applicant, undertaken in connection with this permit. This permit shall not be construed as an indemnity by the State of Michigan for the benefit of the applicant or any other person.

4. Right of Entry

The permittee shall allow the Department the following actions upon the presentation of credentials:

- To enter upon the permittee's premises where application equipment is located or in which any records are required to be kept under the terms and conditions of this permit
- To copy any records required to be kept under the terms and conditions of this permit
- At reasonable times to have access to waterbodies regulated under this permit
- To inspect equipment for use under this permit
- To sample chemicals, discharges, chemical products, and waterbodies

5. Laboratory and Analytical

Laboratory analytical methods, practices, and product or water sampling techniques shall be performed in accordance with standard laboratory guidelines. The permittee shall periodically calibrate and maintain all monitoring instrumentation at necessary intervals to ensure accuracy of measurements. When outside contractors or volunteers are utilized to perform sampling and analysis, the permittee shall ensure that said contractors or volunteers are sufficiently qualified to perform the required sampling and analysis, and that the quality control measures listed above are properly executed.

6. **Permission to Treat**

The permittee shall obtain authorization to chemically treat the proposed area of impact by obtaining written permission from each property owner who owns bottomlands in the area of impact. Written authorization from all property owners within the area of impact is required for each season that this permit is in effect, prior to chemical treatment. It is the responsibility of the permittee to ensure all permissions within the permitted treatment area are up to date each season.

Written authorizations shall be maintained for 1 year from the expiration date of this permit and shall be made available to the Department upon request. In the event the permittee no longer has permission from the property owner(s) to apply pesticides, and this permit has not yet expired, the permittee shall inform the Department in writing by e-mail to deq-wrd-anc@michigan.gov or by mail to DEQ, Water Resources Division, ANC Program, Constitution Hall, P.O. Box 30458, Lansing, Michigan 48909-7958.

Section E. Definitions

1. Adjacent – an area of impact, contiguous to an approved treatment area, permissible for expansions for an infestation per Section 3311(3) of Part 33.
2. Change of scope – a request that does not meet the revision criteria for a permit revision.
3. Emergent plants – a plant that is rooted in the sediment with most parts of the plant maintained above the waterline.
4. Floating-leaf plants – plants with leaves and flowers that float on the water surface.
5. Infestation – includes any non-native invasive species that have grown into dense, monotypic stands causing ecological or economic harm.
6. Initial chemical treatment – the first treatment, of each season, at approved treatment areas as well as at expanded treatment areas for infestations.
7. Native – an indigenous species to the ecosystem of Michigan prior to European settlement necessary for environmental health, habitat production, and economic development of fisheries and wildlife recreation.
8. Non-native invasive – an introduced species that did not occur in Michigan's ecosystem prior to European settlement and where introduction causes or is likely to cause habitat, environmental, or economic harm, or harm to human health.
9. Offshore -- areas beyond the five-foot depth contour or 300 feet from shore, whichever is closer to shore.
10. Revision criteria—one or more of the following only: 1) addition of chemical(s) or modification of chemical amount(s)for an existing approved treatment area(s); 2) addition, deletion, or modification of permit conditions to protect natural resources or improve treatment efficacy or operations; 3) addition of treatment area(s) which are consistent with Section A.4 of this permit to a site absent of environmental, public health, and endangered and/or threatened species of concern; and/or 4) a correction of a DEQ error.
11. Shoreline – the line marking the edge of a body of water.
12. Submersed plants –plants rooted in the sediment, growing almost entirely underwater.

Heidi Ziegenmeyer
Environmental Quality Analyst
Water Resources Division

For additional information or questions regarding this permit, please contact the DEQ at:
DEQ, Water Resources Division, Constitution Hall, 525 West Allegan Street, P.O. Box 30458, Lansing, Michigan 48909-7958,
Telephone: (517) 284-5593, E-mail: DEQ-WRD-ANC@michigan.gov, Website: www.michigan.gov/anc

APPENDIX A

List of municipalities for the purpose of notification two (2) business days prior to an expansion of chemical treatment due to an infestation of non-native invasive species.

Waterbody	**Municipality**
Chippewa River	Union Township
Detroit River	City of Ecorse
Detroit River	Grosse Ile Township
Detroit River	City of Wyandotte
Flint River	City of Flint
Huron River	City of Ann Arbor
Indian River	Hiawatha Township
Indian River	City of Manistique
Indian River	Manistique Township
Lake Adrian	City of Adrian
Lake Erie	Frenchtown Township
Lake Huron	Alpena Township
Lake Huron	City of Alpena
Lake Huron	City of Caseville
Lake Huron	City of Harbor Beach
Lake Huron	Lexington Township
Lake Huron	City of Mackinac Island
Lake Huron	Port Austin Township
Lake Huron	Rubicon Township
Lake Huron	Sand Beach Township
Lake Huron	City of St. Ignace
Detroit River	City of Detroit
Lake Huron/Saginaw Bay	Bangor Township
Lake Huron/St. Mary's River	Detour Township
Lake Michigan	City of Bridgman
Lake Michigan	Charlevoix Township
Lake Michigan	City of Charlevoix
Lake Michigan	City of Grand Haven
Lake Michigan	Grand Haven Township
Lake Michigan	Lake Township
Lake Michigan	City of Ludington
Lake Michigan	City of New Buffalo
Lake Michigan/Big Bay de Noc	Fairbanks Township
Lake Michigan/Green Bay	City of Escanaba
Lake Michigan/Green Bay	City of Menominee
Lake Michigan/Green Bay	Menominee Township
Lake Michigan/Little Bay de Noc	City of Gladstone
Lake St. Clair	City of Grosse Pointe Farms
Lake St. Clair	Harrison Township
Lake St. Clair	Ira Township
Lake St. Clair	City of New Baltimore
Lake Superior	Baraga Township
Lake Superior	Carp Lake Township
Lake Superior	Eagle Harbor Township
Lake Superior	Houghton Township
Lake Superior	City of Marquette

Lake Superior/Keweenaw Bay	L'Anse Township
Lake Superior/Scott Bay	Drummond Township
Lake Superior/Upper St. Mary's River	City of Sault Saint Marie
Pine River	City of Alma
Pine River	Arcada Township
River Raisin	Blissfield Township
River Raisin	Deerfield Township
River Raisin	City of Monroe
River Raisin	Riga Township
St. Clair River	City of Algonac
St. Clair River	Clay Township
St. Clair River	East China Township
St. Clair River	City of Marine City
St. Clair River	City of Marysville
St. Clair River	City of Port Huron
St. Clair River	City of St. Clair

Date: _____

Crew: _____

Weath _____

Temps _____

Plant list

1 E. Milfoil pndwd
2 Curly l
3 Charaf pndwd
4 Thinlea pndwd
5 Flatstepndwd
6 Robbinpndwd
7 Variaem pndwd
8 Whitsons pndwd
9 Richa pndwd
10 Illinleaf pndwd
11 Lafgan pndwd
12 Amgrleaf pndwd
13 Floatergrass
14 Wadgry
15 Wildc
16 Sagto milfoil
17 Nuttallatum
18 Mervophylkm
19 Mollie
20 Coon
21 Elodea
22 Utricularia vulgaris
23 Bladderwort-mini
24 Buttercup
25 Naiad
26 Brittle naiad
30 Nymphaea
31 Nuphar
32 Brasenia
33 Lemna minor
34 Spirodella
35 Watermeal
36 Arrowhead
37 Pickerelweed
38 Arrow arum
39 Cattails
40 Bulrushes
41 Iris
42 Swamp loosestrife
43 Purple loosestrife

Density

a Found
b Sparse
c Commen
d Dense

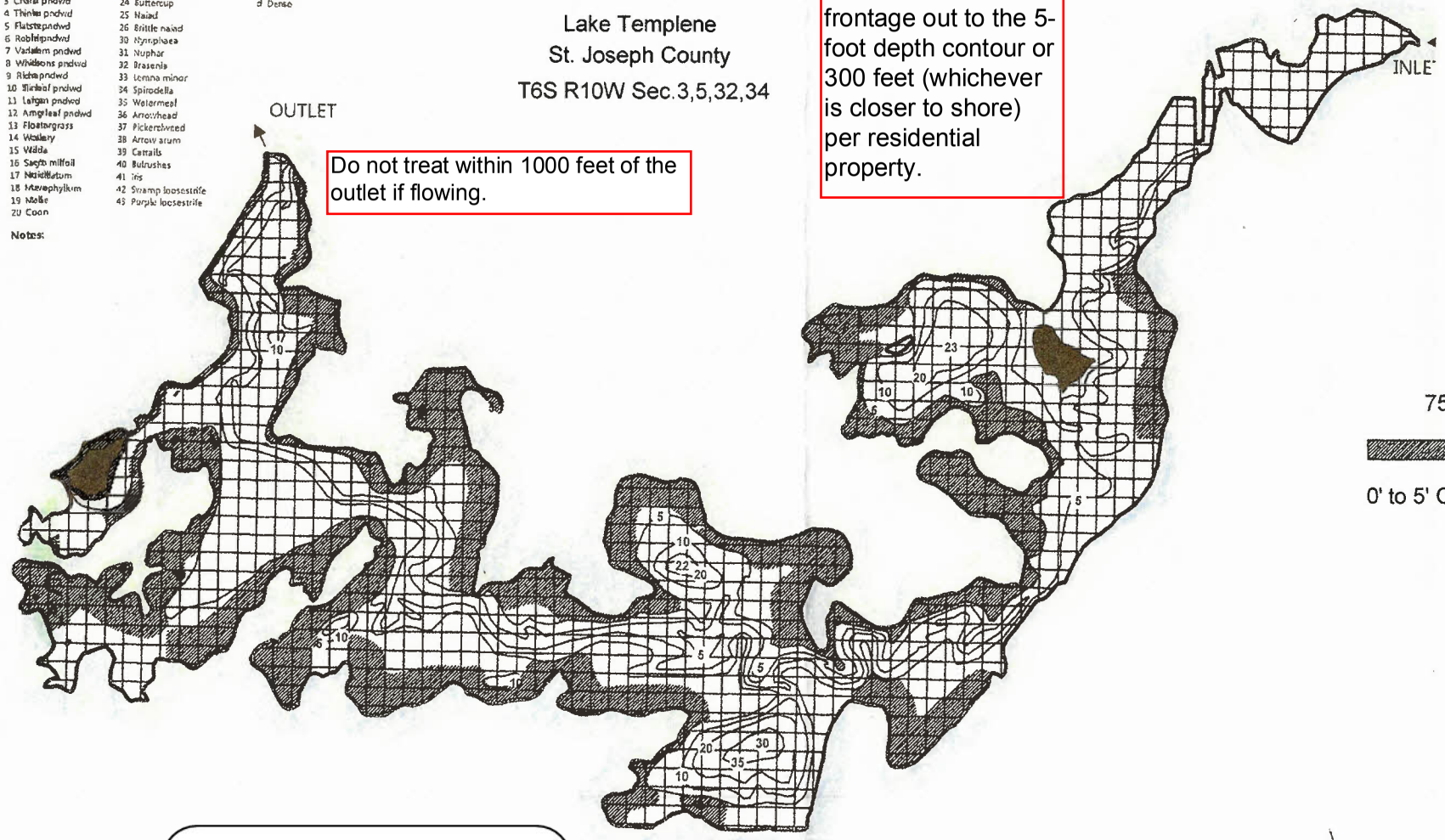
Notes:

LAKE TEMPLENE
PLANT SURVEY MAP
877 ACRES

Lake Templene
St. Joseph County
T6S R10W Sec.3,5,32,34

Treatment of native vegetation/algae is limited to 100 feet of frontage out to the 5-foot depth contour or 300 feet (whichever is closer to shore) per residential property.

Do not treat within 1000 feet of the outlet if flowing.



75 Acres

0' to 5' Contacts & Algae

Page 11 of 13

DEQ Approved Treatment Map

Heidi Ziegenmeyer

ANC9800498 Lake Templene
Map1 of 3

☐ = 1 AGRE

N

1 inch = 1,500 feet
progressive

LAKE TEMPLENE
PLANT SURVEY MAP
877 ACRES

Lake Templene
St. Joseph County
T6S R10W Sec.3,5,32,34

Date: _____

Crew: _____

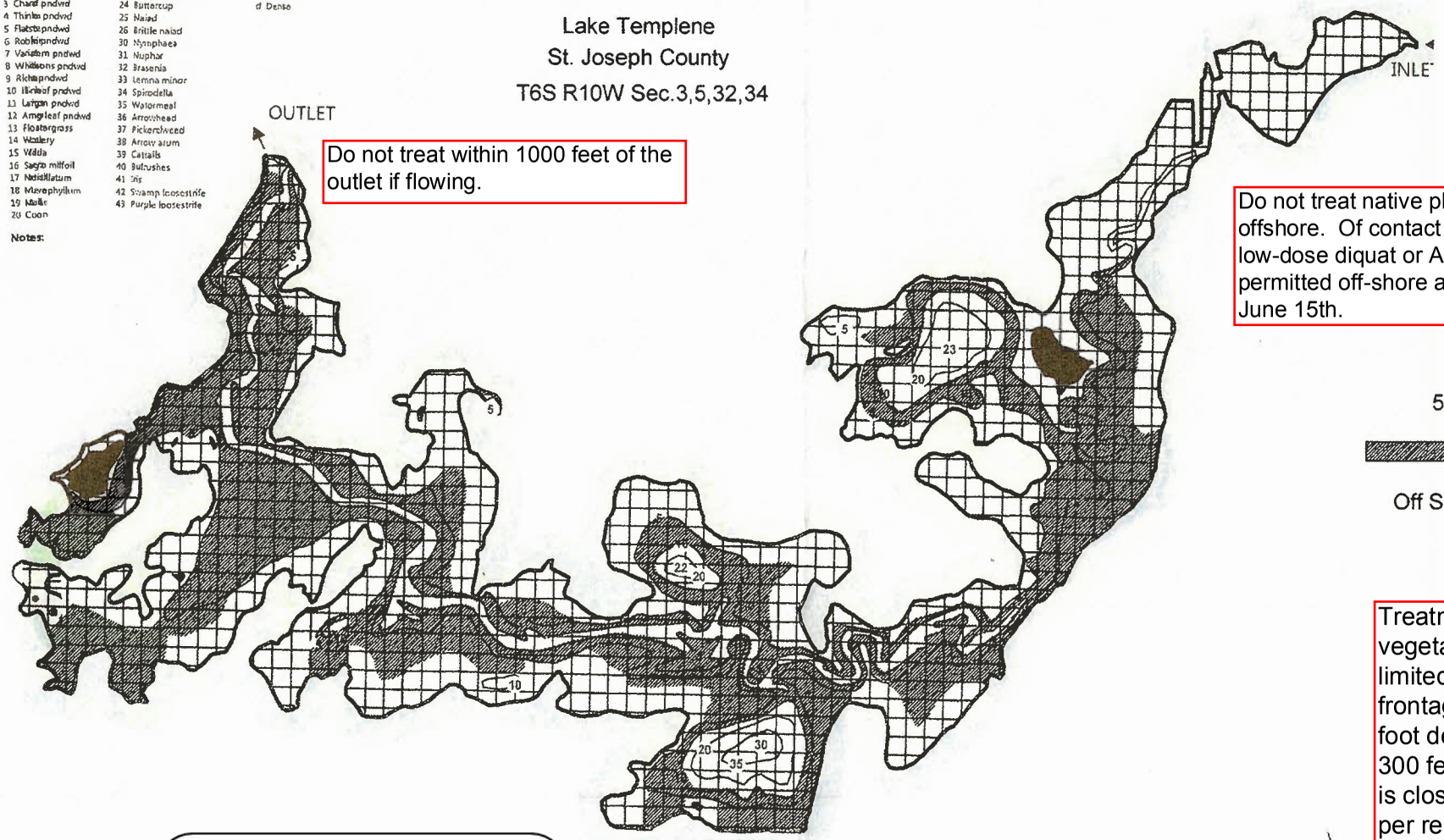
Weath

lames

Plant lst
1 E. Milfoil pndwd
2 Curly l
3 Chara pndwd
4 Thinle pndwd
5 Flatstepndwd
6 Robbinpndwd
7 Variatem pndwd
8 Whitsons pndwd
9 Richapndwd
10 Illinleaf pndwd
11 Largan pndwd
12 Amgleaf pndwd
13 Floatergrass
14 Wanery
15 Wilda
16 Sagro milfoil
17 Nadidilatum
18 Mavephyllum
19 Maile
20 Coon
21 Elodea
22 Utricularia vulgaris
23 Bladderwort-mini
24 Buttercup
25 Naiad
26 Brittle naiad
30 Nymphaea
31 Nuphar
32 Brasenia
33 Lemna minor
34 Spirodella
35 Watermeal
36 Arrowhead
37 Pickerelweed
38 Arrow arum
39 Cattails
40 Bulrushes
41 Iris
42 Swamp loosestrife
43 Purple loosestrife

Density
a Found
b Sparse
c Common
d Dense

Notes:



Do not treat within 1000 feet of the outlet if flowing.

Do not treat native plants and algae offshore. Of contact chemicals, only low-dose diquat or Aquathol K permitted off-shore and only before June 15th.

579 Acres

Off Shore Contacts

Treatment of native vegetation/algae is limited to 100 feet of frontage out to the 5-foot depth contour or 300 feet (whichever is closer to shore) per residential property.

N

1 inch = 1,500 feet
progressive

☐ = 1 ACRE

DEQ Approved Treatment Map
Heidi Ziegenmeyer

ANC9800498 Lake Templene
Map 2 of 3

Date: _____

Crew: _____

Weather: _____

Names: _____

Plant ID

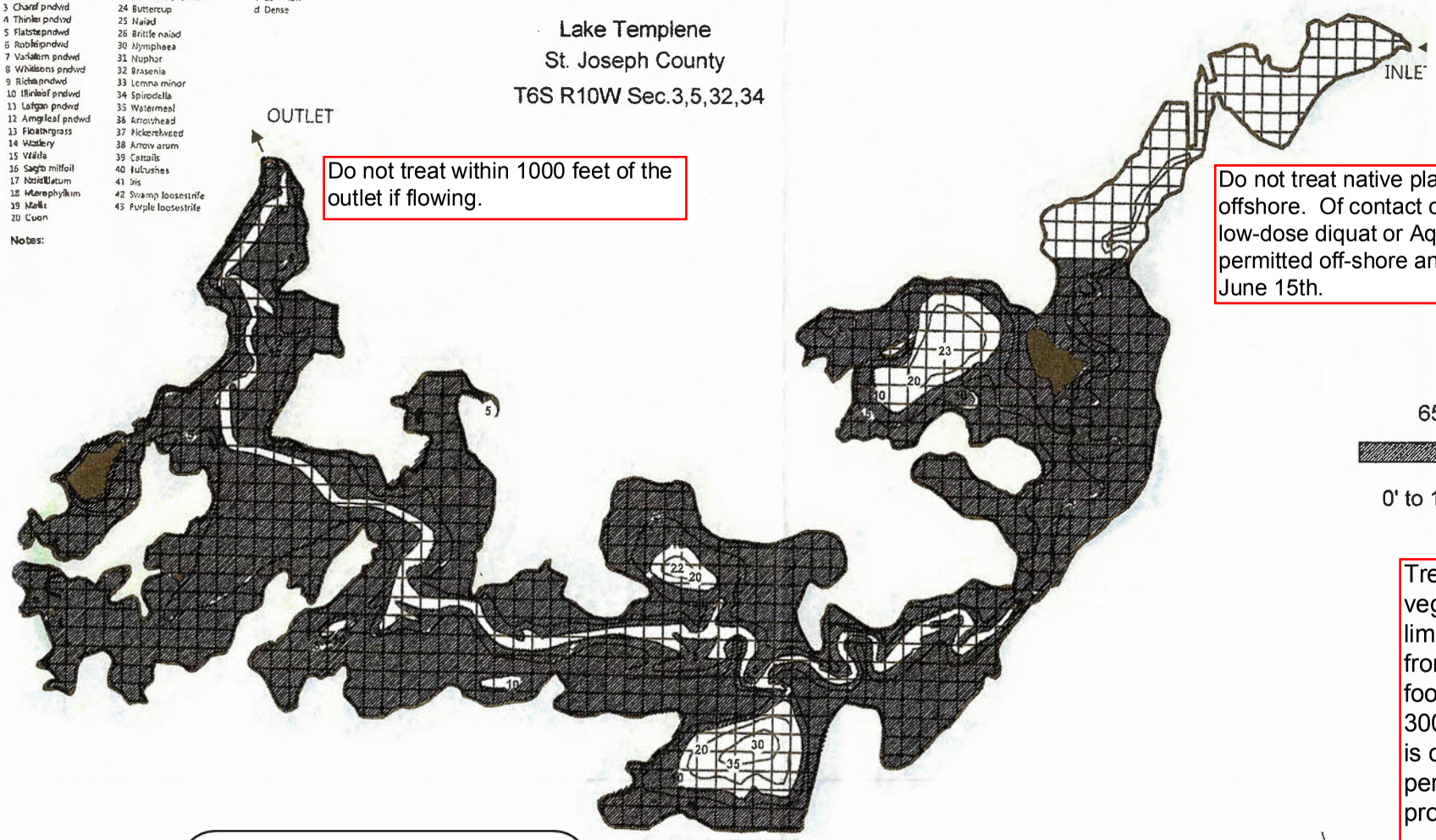
1 E. Milfoil pndwd
2 Curly l
3 Chara pndwd
4 Thinlfs pndwd
5 Flatstepndwd
6 Robbinpndwd
7 Variatem pndwd
8 Whitsons pndwd
9 Richapndwd
10 Illinleaf pndwd
11 Latgan pndwd
12 Amgleaf pndwd
13 Floatingrass
14 Watlery
15 Wildla
16 Sagto milfoil
17 Nitellatum
18 Myrophyllum
19 Mallx
20 Coon
21 Elodea
22 Utricularia vulgaris
23 Bladderwort-mini
24 Buttercup
25 Naiad
26 Brittle naiad
30 Nymphaea
31 Nuphar
32 Brasenia
33 Lemna minor
34 Spirodella
35 Watermeal
36 Arrowhead
37 Pickerelweed
38 Arrow arum
39 Cattails
40 Bulrushes
41 Iris
42 Swamp loosestrife
45 Purple loosestrife

Density
a Found
b Sparse
c Common
d Dense

Notes:

LAKE TEMPLENE
PLANT SURVEY MAP
877 ACRES

Lake Templene
St. Joseph County
T6S R10W Sec.3,5,32,34



Do not treat within 1000 feet of the outlet if flowing.

Do not treat native plants and algae offshore. Of contact chemicals, only low-dose diquat or Aquathol K permitted off-shore and only before June 15th.

654 Acres

0' to 10' Systemics

Treatment of native vegetation/algae is limited to 100 feet of frontage out to the 5-foot depth contour or 300 feet (whichever is closer to shore) per residential property.

N

1 inch = 1,500 feet

progressive

☐ = 1 ACRE

DEQ Approved Treatment Map

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Map 3 of 3