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DIVISION OF WATER QUALITY

Attachment E – Notice of Intent

WATER QUALITY ORDER NO. 2013-0002-DWQ
GENERAL PERMIT NO. CAG990005

STATEWIDE GENERAL NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT FOR RESIDUAL AQUATIC PESTICIDE DISCHARGES TO WATERS OF THE UNITED STATES FROM ALGAE AND AQUATIC WEED CONTROL APPLICATIONS

I. NOTICE OF INTENT STATUS (see Instructions)

Mark only one item A. New Applicator B. Change of Information: WDID# 5B50AP00003
C. ☐ Change of ownership or responsibility: WDID# _____

II. DISCHARGER INFORMATION

A. Name West Stanislaus Irrigation District			
B. Mailing Address PO Box 37			
C. City Westley	D. County Stanislaus	E. State CA	F. Zip 95387
G. Contact Person Bobby Pierce	H. E-mail address bobby.pierce@weststanislausid.org	I. Title General Manager	J. Phone 209-894-3091

III. BILLING ADDRESS (Enter Information *only* if different from Section II above)

A. Name			
B. Mailing Address			
C. City	D. County	E. State	F. Zip
G. E-mail address	H. Title	I. Phone	

IV. RECEIVING WATER INFORMATION

A. Algaecide and aquatic herbicides are used to treat (check all that apply):

1. ☒ Canals, ditches, or other constructed conveyance facilities owned and controlled by Discharger.
   Name of the conveyance system: WSID Main Canal and Laterals
2. ☐ Canals, ditches, or other constructed conveyance facilities owned and controlled by an entity other than the Discharger.
   Owner's name: _____
   Name of the conveyance system: _____
3. Directly to river, lake, creek, stream, bay, ocean, etc.
   Name of water body: _____

B. Regional Water Quality Control Board(s) where treatment areas are located
(REGION 1, 2, 3, 4, 5, 6, 7, 8, or 9): Region 5
(List all regions where algaecide and aquatic herbicide application is proposed.)

V. ALGAECIDE AND AQUATIC HERBICIDE APPLICATION INFORMATION

A. Target Organisms: _____
Algae

B. Algaecide and Aquatic Herbicide Used: List Name and Active ingredients
Cascade - 40.3% endothall
Teton - 53.0 endothall

C. Period of Application: Start Date March 1 End Date September 30

D. Types of Adjuvants Used:
None

VI. AQUATIC PESTICIDE APPLICATION PLAN

Has an Aquatic Pesticide Application Plan been prepared and is the applicator familiar with its contents?
☒ Yes ☐ No

If not, when will it be prepared? _____

VII. NOTIFICATION

Have potentially affected public and governmental agencies been notified? NA ☐ Yes ☐ No

VIII. FEE

Have you included payment of the filing fee (for first-time enrollees only) with this submittal?
☐ YES ☐ NO ☒ NA

IX. CERTIFICATION

"I certify under penalty of law that this document and all attachments were prepared under my direction and supervision in accordance with a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment. Additionally, I certify that the provisions of the General Permit, including developing and implementing a monitoring program, will be complied with."

A. **Printed Name:** Robert Pierce

B. **Signature:** Robert Pierce **Date:** 12/19/13

C. **Title:** General Manager

XI. FOR STATE WATER BOARD STAFF USE ONLY

WDID:	**Date NOI Received:**	**Date NOI Processed:**
Case Handler's Initial:	**Fee Amount Received:** $	**Check #:**
☐ **Lyris List Notification of Posting of APAP**	**Date** _____	**Confirmation Sent** _____

Aquatic Pesticide NPDES Permit

Prepared for

West Stanislaus Irrigation District

In Compliance with General Permit No. CAG990005

WDID No. 5B50AP00003

December 30, 2013

SEI
Summers Engineering, Inc
Since 1965

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West Stanislaus Irrigation District

Aquatic Pesticide Application Plan (APAP)

Forward: This Aquatic Pesticide Application Plan (APAP) was developed in accordance with the requirements listed in the Water Quality Order No. 2013-00002-DWQ, General Permit No. CAG990005. Topics below are numbered consistent with Part C of that Order.

1. Water Bodies: West Stanislaus Irrigation District (District) delivers agricultural water to growers within the District. The conveyance system is made up of one Main Canal with six lifts. On each lift, there is a lateral that runs north and another that runs south.

2. Systems Treated: Aquatic weed control is required in eight laterals: Laterals 2-South, 3-South, 4-North, 4-South, 5-North, 5-South, 6-North, and 6-South. These are labeled on the attached vicinity map as 2S, 3S, 4N, 4S, 5N, 5S, 6N, and 6S, respectively.

3. Weeds to Control: Sago Pondweed, Horned Powndweed and Algae are major problems within the District. Weed growth restricts conveyance capacity in each lateral thereby limiting deliveries to farms especially at times of peak demand when it is most important to water crops. Weed growth breaks off at times and plugs screens, turnout gates, siphons, on-farm siphon pipes, and filtration systems resulting in overtopping of canals which cause significant damage to property, increase in maintenance and repair labor, and loss of water.

4. Applied Product: The District proposes to apply endothall in the form of Teton (53% endothall) and Cascade (40.3% endothall). Endothall disperses with water flow and is broken down into carbon, hydrogen, and oxygen by microorganisms. Surfacants or anjuvants will not be used during treament. The half-life for Cascade ranges from five to ten days and full decomposition ranging from 30 to 60 days and the half-life for Teton is 8 hours. The District expects to perform spot treatments within the affected laterals according to the level of aquatic growth present. Applications will be made by metering pump at a rate consistent with the label requirements and as recommended by a certified pest control advisor.

5. Factors Influencing Decision to use Aquatic Pesticides: Various options of aquatic weed control have been researched and implemented including no action where no control measures were taken. This proved to be bad management practice as this reduced supplies to farms and caused various damage as described above. Dragging a heavy chain has been used to break up the weeds sending them downstream to be cleaned out at the next canal crossing. This method has also proven to be a bad management practice as this method is extremely labor intensive, causes severe damage to the canals' concrete lining, and drastically stirs up sediment which plugs irrigators' filtration systems. In addition, the weeds plug screens, filtration systems, gates, siphons and on-farm irrigation siphons. When this method is scheduled, water users are notified 24 hours in advance so that irrigations can be re-scheduled.

Because the alternate (non-chemical) methods described above proved to be poor management practices, aquatic pesticides must be used. The use of aquatic pesticides drastically reduces the equipment and labor resources required by the alternative methods because application and monitoring of the aquatic pesticides will require only one person and one vehicle. The chain method described above requires two to four people in addition to an excavator, dump truck, and two vehicles. The use of aquatic pesticides will eliminate damage to the concrete lining of the canals as compared to the no action and chain alternative. It will also improve water quality because application will not cause sediment to be stirred up. Aquatic pesticide use will not damage grower irrigation systems and will provide increased water supply and reliability to growers.

6. **Control Structures.** The District's lateral system is effectively a closed system. Although each of the laterals are capable of spilling to regional drains, normal operating conditions is to keep all spills sealed and only allow discharge from the spills during dewatering procedures at the end of the irrigation season. South laterals would spill into Del Puerto and Black Gulch Creeks and North laterals would spill into the Blewett Drain. Prior to, during, and after the application of pesticides, District staff will visually inspect the spill structures of the treated lateral and confirm that it is adequately sealed. Inspections will occur 24 hours prior to applications, daily during the application period, and daily for the seven day period after the application is complete. A list of the spill structures to monitored is shown below when applications are scheduled in the effected lateral.

- Lateral 2-S Spill
- Lateral 3-S Spill
- Lateral 4-S Spill
- Lateral 5-S Spill
- Lateral 6-S Spill
- Lateral 4-N Spill
- Lateral 5-N Spill
- Lateral 6-N Spill

7. **Short-term or Seasonal Exception.** The District does not have a short-term or seasonal exception.

8. **Monitoring Program.** Applications will be made when aquatic weed growth hampers the efficient delivery of irrigation water in the District. Due to the cost of product, application and monitoring, aquatic herbicides are used only when necessary. Endothall has been determined to be the most cost-effective alternative for controlling aquatic weeds in the District. The basic monitoring plan is as follows:

- Grab sample during application at the application site.
- Grab sample at the end of laterals in operation during treatment.

The sample will be taken by District staff and processed by an approved laboratory with methods outlined by the BMP's. The sample location will vary depending on which laterals are being used during applications. The District intends to operate the treated lateral such that no water spills from the lateral during the treatment period.

9. Procedures Used to Prevent Sample Contamination. Typical sample collection techniques will be utilized to collect samples. Laboratory-clean containers will be provided by a qualified laboratory. Samples will be triple-rinsed with site water, with the fourth filling capped and sealed. Sample containers will be sealed in an ice chest and delivered to the laboratory (with the appropriate chain of custody paperwork) by a courier.

10. Implemented BMPs: The following BMPs will be implemented by the District:

- Licensing, pesticide labeling and permits. West Stanislaus Irrigation District (WSID) consults with a licensed Pest Control Advisor and the employee who makes the aquatic applications is licensed with a Qualified Applicator Certificate.

- Personnel at WSID routinely make preliminary site evaluations. These are used to determine areas in need of a treatment, location of a treatment site (site suitability), and some of the precautions to be used for a particular type of treatment. Pest type and growth stage are also considered in order to help determine the treatment type. This greatly increases the likelihood of achieving a high level of control.

- Secondary site evaluations and pre-treatment monitoring are routinely made. Some of the factors considered are weed species present, growth stage, weed location and weed density. These are used to help determine such things as the appropriate mechanical control measure or herbicide to use, herbicide rate, and may also help in determining the number of treatment sites needed.

- Grower Awareness. WSID will notify growers via phone calls and/or email of endothall treatments 48 hours in advance of aquatic pesticide applications.

- Alternative Control Measures. Mechanical weed removal has been evaluated as an alternative to chemical application. The District has determined that this alternative is cost prohibitive and ineffective. It causes extreme canal bank erosion damage and a silt water quality problem. In addition, the mechanical removal alternative costs six to ten times more than the costs associated with application of the aquatic herbicide.

  Endothall has the ability to control rooted aquatic weeds and algae. Most of the District canals are concrete lined and the District can minimize the available silt out well enough to keep most rooted aquatic weeds from growing (they need the silt to root in).

  Canal water quality is considered in the application of Teton and Cascade, and the application amount is adjusted according to the label recommendations to improve

efficacy. Overall, site conditions, water use, and weather conditions are all considered in the decision to implement and/or continue with a treatment.

- Post-treatment assessment. This evaluation of efficacy is routine and normally starts at about one week after application and continues for the rest of the irrigation season. If a treatment is deemed ineffective then corrective measures are researched, eliminate that treatment type from a given area or totally eliminate a certain type of treatment from our program. If the control level is at a higher level considered necessary, the treatment rate will be reduced and/or the location of the treatment site will be adjusted.

- Applicator Safety. Safety measures listed on the product label will be followed including use and availability of personal protective equipment. Applicators will properly trained and licensed.

- Prevention of Fish Kill. Fish kill will be prevented by preventing aquatic pesticide spill to receiving waterbodies.

- Prevention of Pesticide Spill. All spills are sealed during treatments and inspected daily during treatment periods. No discharge outside of the District will be allowed during the treatment period.

11. Examination of Possible Alternatives. The District has implemented a number of non-chemical aquatic weed abatement measures.

- No action alternative. Should the District implement no aquatic weed abatement measures, the District would be unable to operate its canals effectively. The weeds would impede flow and cause the canal banks to overtop causing damages not limited to destruction of canal banks and damage to crops neighboring said canal.

- Prevention. WSID diverts water from the San Joaquin River and delivers it to growers within the District. Upon diversion from the river, algae and aquatic weed spores are already present in the irrigation supply making prevention impossible.

- Mechanical and Physical Methods. The District has employed mechanical methods for aquatic weed removal in the form of chaining. This is not an efficient aquatic weed abatement practice as it damages the canal, and must be performed every other day or thereabouts to effectively manage aquatic weeds. This management practice is not preferred by growers because the elevated silt levels it brings about are problematic to high-efficiency irrigation systems.

- Cultural Methods. Regional on-farm practices have no effect on aquatic weed growth in WSID laterals.

- Biological Control Methods. Aquatic weed abatement measures are employed to prevent operational inefficiencies and provide high quality water to growers in the District.

Biological control methods cannot achieve the level of aquatic weed control that the District requires to effectively manage its water supply.

- Algaecides and Aquatic Herbicides. The District has been successful with algaecides and aquatic herbicides in the past. Captain and Nautique, both copper based products, have proved both effective and economical. The District intends to begin chemical abatement measures using endothall as the active ingredient.

  The district intends to apply only the amount of chemical (Teton or Cascade) required to adequately control aquatic weeds. The District will work in conjunction with a Licensed Pest Control Advisor and employ the best management practices discussed in number 10.

  The treated water will not be discharged to local drains under any foreseeable circumstance apart from a conveyance system failure (canal breach or flow control structure failure) or a flood event. Chemical applications will only occur on an as needed bases after the appropriate application site and application concentration have been determined.

ATTACHEMENT 1 – NOTICE OF INTENT

ATTACHMENT 2 – MONITORING AND REPORTING PROGRAM

Monitoring and Reporting Program (MRP)

This MRP is designed to address the two key questions listed in the Order:

Question 1: Does the residual algaecides and aquatic herbicides discharge cause an exceedance of receiving water limitations?

Question 2: Does the discharge of residual algaecides and aquatic herbicides, including active ingredients, inert ingredients, and degradation by products, in any combination cause or contribute to an exceedance of the "no toxics in toxic amount" narrative toxicity objective?

West Stanislaus Irrigation District (WSID or District) intends to implement a treatment program using endothall to manage aquatic growth within its laterals. Treatments will consist of the application of the appropriate amount of endothall as either Cascade or Teton, under the supervision of a licensed Pest Control Advisor. The District will address both questions by preventing discharge from treated laterals during the treatment period. During treatment events, all spills from the treated lateral are sealed to prevent any discharge to a receiving waterway. Unless efforts to prevent discharge fail, receiving water samples will not be collected as part of WSID's MRP. See the District's Aquatic Pesticide Application Plan (APAP).

Monitoring Locations and Sample Types

Monitoring Locations. Monitoring locations are shown in Figure 1. Each of the District laterals operate in the same manner in terms of both hydraulic performance and function. The District does not anticipate any discharge of treated water to any water body as this is not normal operating procedure. The lateral sampled may vary from application to application but will always occur at one of the pre-specified sampling locations.

Sample Types. Grab samples will be taken from the application site. Three major sample types are listed below and constitute a full sample set for an application:

- Background Monitoring: Background monitoring samples will be collected in the application area approximately 24 hours prior to the application event.
- Event Monitoring: Event monitoring samples will be collected during treatment to test the concentration of endothall.
- Post-Event Monitoring: Post-Event monitoring samples shall be collected within the treatment area one week after application.

District staff will complete a field sheet with each sample collection. See **Attachment 1**.

Receiving Water Monitoring Requirements

As stated previously, in order to prevent receiving water quality impacts, the District seals all spills during treatments to prevent any discharge of treated water. District monitoring during treatment events will include visual inspection of all discharge points within the treated lateral to make certain no discharge is occurring. Receiving water samples will not be collected as long as the discharge points from treated laterals remain sealed.

In the event of an unplanned discharge during treatment, the District will be prepared to implement receiving water quality sampling and reporting.

Visual, Physical and Chemical Monitoring Requirements

The following data will be collected during treatment events. Field parameters (including temperature, dissolved oxygen, turbidity, conductivity, and pH) will be collected in the field using a probe or meter as appropriate, and logged on daily field sheets.

Analyte	EPA Method	Reporting Limit	Hold Time (days)	Container	Chemical Preservative
Temperature*	-	-	Field	-	-
Dissolved Oxygen*	360.1 or 360.2	0.0 mg/L	Field	NA	none
Turbidity*	180.1	0.00 NTU	Field	NA	none
Conductivity*	120.1	0 µS/cm	Field	NA	none
pH*	150.1 or 150.2	1-14	Field	NA	none
Endothall**	548.1	40µg/L	7	500mL HDPE	none

* Measurements obtained in the field by District Staff

** Measurements obtained by laboratory testing

Endothall samples will be collected in a laboratory-clean bottle and triple rinsed with site water before finally filling the sample bottle. The samples will be stored in an ice chest and delivered to the testing laboratory and chain-of-custody records will be maintained. The samples bottles will be labeled with information pertaining to the application event, location and date and time of collection.

After analysis, the laboratory will report the results using a standard format. At a minimum, each laboratory report will be accompanied by the following information:

- The date, place, and time of the sample taken by district staff
- The date the analysis was performed

- The analytical techniques and methods used by the laboratory
- The results of the analysis by the laboratory
- Chain-of-custody record

Field data sheets will be maintained by the District and summarized in the annual monitoring reports.

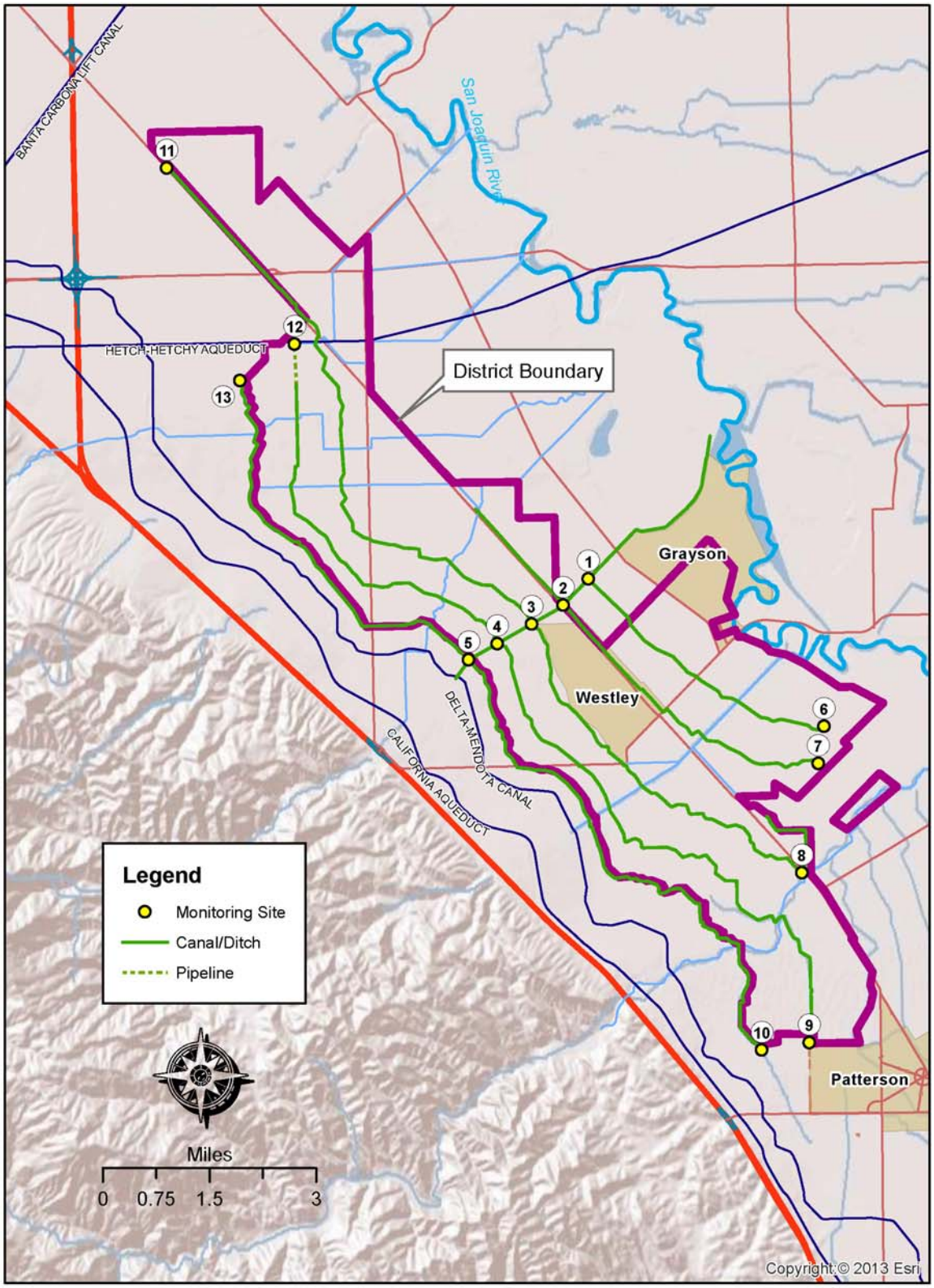
Reporting Requirements

The District will keep the original data outlined in section IV.B of Attachment C for three calendar years and have said information available for review by the Regional Water Board. Annual monitoring reports will be prepared and submitted to the Regional Water Board. These reports will included the following:

- executive summary discussing compliance or violation of this Order and the effectiveness of the APAP.
- Summary of monitoring data.
- Identification of BMPS currently in use and a discussion of their effectiveness in achieving the goals outlined by the Order
- A discussion of BMP modifications if required.
- A map showing the location of the treated area
- Information of surface area and volume of treatment areas and ay other information used to calculate dosage, concentration, quantity of each algaecide and aquatic herbicide used.
- Sampling results.
- Summary of Algaecide and Aquatic herbicide Application Log
- An executive summary discussing compliance or violation of the Order and the Effectiveness of the APAP
- A summary of the monitoring data, including the identification of water quality improvements or degradation as a result of the algaecide or aquatic pesticide application. The monitoring data will be submitted in accordance with the Reporting Protocols (IV.E) of the Order.

Should the District become aware of any violations of this Order, a Twenty- Four hour report will be submitted along with a Five-day report in accordance with Attachment C of the Order.

Figure 1



West Stanislaus Irrigation District
Pesticide Application Monitoring Sites

Prepared by:
Summers Engineering, Inc
Consulting Engineers
Hanford California

Attachment 1

West Stanislaus Irrigation District
Field Monitoring Data

Date: _____

Site Name: _____ **Site Coord. Code:** _____

Time: _____ AM PM **Weather:** _____

Monitoring Type:
- ☐ Pre-Application Monitoring
- ☐ Application Monitoring
- ☐ Post-Application Monitoring
- ☐ Discharge Monitoring

Notes: _____

Field Data:

Temp: _____ EC: _____ **Lab Sample Collected:**

D.O.: _____ pH _____ Yes

Turb: _____ No

Date: _____

Site Name: _____ **Site Coord. Code:** _____

Time: _____ AM PM **Weather:** _____

Monitoring Type:
- ☐ Pre-Application Monitoring
- ☐ Application Monitoring
- ☐ Post-Application Monitoring
- ☐ Discharge Monitoring

Notes: _____

Field Data:

Temp: _____ EC: _____ **Lab Sample Collected:**

D.O.: _____ pH _____ Yes

Turb: _____ No

Date: _____

Site Name: _____ **Site Coord. Code:** _____

Time: _____ AM PM **Weather:** _____

Monitoring Type:
- ☐ Pre-Application Monitoring
- ☐ Application Monitoring
- ☐ Post-Application Monitoring
- ☐ Discharge Monitoring

Notes: _____

Field Data:

Temp: _____ EC: _____ **Lab Sample Collected:**

D.O.: _____ pH _____ Yes

Turb: _____ No

G:\data\SPRDSHTS\WSID\WSID EndothallMonit field sheet.xls
11/6/2013

ATTACHMENT 3 – CASCADE AND TETON DATA SHEETS

CASCADE®

AQUATIC HERBICIDE

For aquatic plant control in irrigation systems and other flowing water aquatic sites and quiescent, or slow moving waters.

ACTIVE INGREDIENT:	
Dipotassium salt of endothall*	40.3%
OTHER INGREDIENTS:	59.7%
TOTAL	100.0%

Contains 4.23 lbs. dipotassium endothall* per gallon
*7-oxabicyclo [2.2.1]heptane-2,3-dicarboxylic acid equivalent 28.6%

KEEP OUT OF REACH OF CHILDREN

DANGER PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

FIRST AID

IF IN EYES:
- Hold eye open and rinse slowly and gently with water for 15-20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.
- Call a poison control center or doctor for treatment advice.

IF SWALLOWED:
- Call a poison control center or doctor immediately for treatment advice.
- Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told by a poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

IF ON SKIN OR CLOTHING:
- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15-20 minutes.
- Call a poison control center or doctor for treatment advice.

IF INHALED:
- Move person to fresh air.
- If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.
- Call a poison control center or doctor for treatment advice.

HOT LINE NUMBER: Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 866-673-6671 (Rocky Mountain Poison Control Center) for emergency medical treatment information.

See inside for additional precautionary statements.

NOTE TO PHYSICIAN: Measures against circulatory shock, respiratory depression, and convulsion may be needed.

EPA Registration No. 70506-176

Batch/Lot No.: _____

Net Contents: _____

UPI
United Phosphorus, Inc.
630 Freedom Business Center, Suite 402
King of Prussia, PA 19406
1-800-438-6071

PRODUCT INFORMATION

Cascade is a liquid concentrate soluble in water which is effective against a broad range of aquatic plants. Dosage rates indicated for the application of Cascade are measured in parts per million (ppm) of dipotassium endothall.

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER

CORROSIVE. CAUSES IRREVERSIBLE EYE DAMAGE. MAY BE FATAL IF SWALLOWED. HARMFUL IF INHALED OR ABSORBED THROUGH SKIN. DO NOT GET IN EYES, ON SKIN, OR ON CLOTHING. AVOID BREATHING VAPORS OR SPRAY MIST. PROLONGED OR FREQUENTLY REPEATED SKIN CONTACT MAY CAUSE ALLERGIC REACTIONS IN SOME INDIVIDUALS.

Personal Protective Equipment (PPE)

Mixers, Loaders, Applicators and other handlers must wear:

- Long-sleeved shirt and long pants,
- Shoes and socks,
- Chemical-resistant gloves made of any waterproof material,
- Protective eyewear,
- NIOSH-approved respirator with a dust/mist filter with MSHA/NIOSH approval number prefix TC-21C or any N, R, P, or HE filter.

  Exception: During application, the respirator need not be worn, provided that the pesticide is applied in a manner (such as direct metering or subsurface application from the rear of a vessel that is moving into the wind) such that the applicator will have no contact with the pesticide.

See Engineering Controls for additional requirements.

User Safety Requirements:

Follow the manufacturers' instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Discard clothing or other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

Engineering Controls:

When mixers and loaders use a closed system designed by the manufacturer to enclose the pesticide to prevent it from contacting handlers or other people AND the system is functioning properly and is used and maintained in accordance with the manufacturers written operating instructions, the handlers need not wear a respirator, provided the required respirator is immediately available for use in an emergency such as a spill or equipment breakdown.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations

User should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

Do not contaminate water by cleaning of equipment or disposal of equipment washwaters.

This pesticide is toxic to mammals.

Treatment of aquatic plants can result in oxygen loss from decomposition of dead plants. This loss can cause fish suffocation. Water bodies containing very high plant density should be treated in sections to prevent suffocation of fish.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift.

- For quiescent or slow moving water treatments: Waters treated with Cascade may be used for swimming, fishing, and irrigating turf, ornamental plants and crops immediately after treatment with the following exceptions: Do not use the Cascade treated water to irrigate the following for 7 days after the treatment: annual nursery or greenhouse crops including hydroponics and newly seeded or transplanted annual crops, newly seeded or transplanted ornamentals, and newly sodded or seeded turf. Do not use treated water for animal consumption within the following periods:

  0.5 ppm dipotassium salt – 7 days after application

  4.25 ppm dipotassium salt – 14 days after application

  5.0 ppm dipotassium salt – 25 days after application
- For flowing water treatments: Waters treated with Cascade may be used for swimming, fishing, livestock watering, and irrigating turf, ornamental plants and crops immediately after treatment with the following exceptions: Do not use the Cascade treated water to irrigate the following: annual nursery or greenhouse crops including hydroponics and newly seeded or transplanted annual crops, newly seeded or transplanted ornamentals, and newly sodded or seeded turf.
- Phytotoxicity is not expected on plants or crops irrigated with Cascade treated water, however, all species and cultivars (varieties) have not been tested.
- Undiluted Cascade may be injurious to crops, grass, ornamentals or other foliage.
- Do not use Cascade treated water for chemigation as interactions between Cascade and other pesticides and fertilizers are not known.
- Do not use Cascade in brackish or saltwater.
- Wash out spray equipment with water after each operation.
- Avoid contact of spray concentrate (product) directly or by drift with non-target plants or crops as injury may result.

HOW TO APPLY:

Cascade is a contact herbicide; consequently, apply when target plants are present.

Cascade should be sprayed on the water or injected below the water surface. It may be applied as a concentrate or diluted with water depending on the equipment.

In instances where the plant(s) to be controlled is an exposed surface problem (i.e., some of the broad-leaved pond weeds) coverage is important. For best results, apply the concentrate with the least amount of water compatible with the application equipment.

Drinking Water (Potable Water)

Consult with appropriate state or local water authorities before applying this product to public waters. State or local agencies may require permits.

The drinking water (potable water) restrictions on this label are to ensure that consumption of water by the public is allowed only when the concentration of endothall acid in the water is less than the MCL (Maximum Contamination Level) of 0.1 ppm. Applicators should consider the unique characteristics of the treated waters to assure that endothall concentrations in potable drinking water do not exceed 0.1 ppm at the time of consumption.

For Lakes, Ponds, and other Quiescent Water Bodies:

- For Cascade applications, the drinking water setback distance from functioning potable water intakes in the treated water body must be greater than or equal to 600 feet.
- Note: Existing potable water intakes that are no longer in use, such as those replaced by a connection to a municipal water system or a potable water well, are not considered to be functioning potable water intakes.

For Irrigation Canals and other Flowing Water Bodies:

- Applicator is responsible to assure that treated water does not enter potable water intakes. For Cascade applications, potable water intakes must be closed when treated water is present at the intake. In the event the water intake cannot be closed, treatments must only be made downstream from the intake in order to assure Cascade treated water does not enter the potable water system.

QUIESCENT OR SLOW MOVING WATER TREATMENTS: SURFACE OR INJECTED APPLICATIONS

For aquatic plant control in quiescent or slow moving water, Cascade recommended use rates can be found in the following chart. Since the active ingredient is water soluble and tends to diffuse from the treated area, select the dosage rate applicable to the area to be treated. Marginal treatments of large bodies of water require higher rates as indicated.

Use higher labeled rates of Cascade when making treatments to small areas with an increased potential for rapid dilution or when treating narrow areas such as boat lanes or shoreline treatments where dilution may reduce the exposure of plants to Cascade.

Use lower labeled rates of Cascade for large contiguous treatment blocks or in protected areas such as coves where reduced water movement will not result in rapid dilution of Cascade from the target treatment area or when treating entire lakes or ponds.

PLANTS CONTROLLED AND CASCADE DOSAGE RATE CHART

	APPLICATION RATE			
	Entire Pond/Lake or Large Area Treatment		Spot or Lake Margin Treatment	
Aquatic Plant	ppm Dipotassium Endothall	gallons Cascade per Acre Ft.	ppm Dipotassium Endothall	gallons Cascade per Acre Ft.
Bur Reed, Sparganium spp.	3.0-4.0	1.9-2.6	4.0-5.0	2.6-3.2
Coontail, Ceratophyllum spp.	2.0-3.0	1.3-1.9	3.0-5.0	1.9-3.2
Horned Pondweed, Zannichellia palustris	2.0-3.0	1.3-1.9	3.0-5.0	1.9-3.2
Sago Pondweed, Stuckenia pectinata	1.0-2.0	0.6-1.3	2.0-5.0	1.3-3.2
Hydrilla, Hydrilla verticillata	1.0-4.0	0.6-2.6	2.0-5.0	1.3-3.2
Hygrophila*, Hygrophila polysperma	4.0-5.0	2.6-3.2	5.0	3.2
Milfoil, Myriophyllum spp.	2.0-3.0	1.3-1.9	3.0-5.0	1.9-3.2
Naiad, Najas spp.	2.0-4.0	1.3-2.6	3.0-5.0	1.9-3.2
Pondweed, Potamogeton spp.	0.75-3.0	0.45-1.9	1.5-5.0	1.0-3.2
Including:				
American, P. nodosus	2.0-3.0	1.3-1.9	3.0-5.0	1.9-3.2
Largeleaf (Bass Weed), P. amplifolius	2.0-3.0	1.3-1.9	3.0-5.0	1.9-3.2
Curlyleaf, P. crispus	0.75-1.5	0.45-1.0	1.5-5.0	1.0-3.2
Flatstem, P. zosteriformis	2.0-3.0	1.3-1.9	3.0-5.0	1.9-3.2
Floating-leaf, P. natans	1.0-2.0	0.6-1.3	2.0-5.0	1.3-3.2
Illinois, P. Illinoensis	1.5-2.5	1.0-1.6	2.5-5.0	1.6-3.2
Narrowleaf, P. pusillus	1.0-2.0	0.6-1.3	2.0-5.0	1.3-3.2
Threadleaf, P. filiformis	2.0-3.0	1.3-1.9	3.0-5.0	1.9-3.2
Variable Leaf, P. diversifolius	1.0-2.0	0.6-1.3	2.0-5.0	1.3-3.2
Parrotfeather, Myriophyllum aquaticum	2.0-3.0	1.3-1.9	3.0-5.0	1.9-3.2
Water Stargrass, Heteranthera spp.	2.0-3.0	1.3-1.9	3.0-5.0	1.9-3.2

* Suppression only

The following charts indicate the quantity of Cascade to be applied.

Gallons of Cascade to Treat One Acre-Foot of Water

	Rate (ppm)						
	0.75	1.0	1.5	2.0	3.0	4.0	5.0
	gallons/A-ft.						
1 acre ft.	0.45	0.6	1.0	1.3	1.9	2.6	3.2

Fluid Ounces of Cascade to Treat 1,000 Square-Feet per Foot of Depth

	Rate (ppm)						
	0.75	1.0	1.5	2.0	3.0	4.0	5.0
	fl. oz./1,000 ft.^{2}						
1,000 ft.^{2}	1.4	1.9	2.8	3.8	5.7	7.6	9.4

IRRIGATION SYSTEMS AND FLOWING WATER TREATMENTS: DRIP OR METERING SYSTEM APPLICATIONS

For aquatic plant control in flowing water, Cascade recommended use rates can be found in the following chart. Apply Cascade in a manner to achieve the desired rate and adequate mixing so product is distributed throughout the entire water column. Adequate concentration (rate) and exposure time (length of treatment) will impact Cascade efficacy on the target plant species. Although Cascade is a contact herbicide adequate exposure time is critical. The rates and the length of treatment are guidelines to control the target species. The following rate chart has been developed based on Concentration Exposure Time (CET) data for Cascade. The CET concept allows rates and the length of exposure to be adjusted for different treatment scenarios.

CASCADE APPLICATION RATES FOR FLOWING WATER TREATMENTS

	Length of Treatment (hours)							
	6	8	12	18	24	36	48	72
Plant Species	Rate (ppm)							
Pondweeds (Potamogeton spp.) Sago Pondweed (Stuckenia pectinata)	4.0-5.0	3.0-4.0	2.0-3.0	1.5-2.5	1.0-2.0	0.75-1.5	0.5-1.0	0.5
Milfoil (Myriophyllum spp.) Parrotfeather (Myriophyllum aquaticum) Coontail (Ceratophyllum spp.) Horned pondweed (Zannichellia spp.) Hydrilla (Hydrilla verticillata) Naiad (Najas spp.) Water Stargrass (Heteranthera spp.)	5.0	4.0-5.0	3.0-4.0	2.0-3.0	1.5-2.5	1.0-2.0	0.75-1.5	0.5-1.0

NOTE: Hygrophila (Hygrophila polysperma) may be suppressed at the higher application rates listed in this table.

Restrictions: Do not apply more than 30 ppm per growing season, not to exceed 5 ppm per application. Do not apply more than a total of 5 ppm within a 7-day interval.

Note: There is no Pre-harvest Interval (PHI) for crops irrigated with treated water.

To calculate the amount of Cascade required for a particular treatment use the following formula:

[Cubic Feet per Second (CFS) X Length of Treatment (hrs.) X Rate (ppm)] x 0.052947 = Gallons of Cascade Needed for Treatment

To calculate the amount of Cascade to be applied per hour use the following formula:

Gallons of Cascade per Hour = Total Gallons of Cascade / Length of Treatment (hrs.)

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

Pesticide Storage: Store in the original container. Do not store in a manner where cross-contamination with other pesticides, fertilizers, food or feed could occur. Storage at temperatures below 32°F may result in the product freezing or crystallizing. Should this occur the product must be warmed to 50°F or higher and thoroughly agitated. In the event of a spill during handling or storage, absorb with sand or other inert material and dispose of absorbent in accordance with the Pesticide Disposal instructions listed below.

Pesticide Disposal: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Handling:

(for Nonrefillable containers)

Nonrefillable container. Do not reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying.

For containers 5 gallons or less:

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Or

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

For containers more than 5 gallons:

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

Or

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Pour or pump rinsate into application equipment or rinsate collection system. Drain for 10 seconds after the flow begins to drip.

Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

(for Refillable containers)

Refillable container. Refill this container with pesticide only. Do not use this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

EMERGENCY TELEPHONE NUMBERS

CHEMTREC: (800) 424-9300

MEDICAL: (866) 673-6671 Rocky Mountain Poison Control Center

AQUATIC ALGICIDE AND HERBICIDE

For algae and aquatic plant control in irrigation systems and other flowing water aquatic sites and quiescent or slow moving waters.

ACTIVE INGREDIENT:	
Mono(N,N-dimethylalkylamine) salt of endothall*	53.0%
OTHER INGREDIENTS:	47.0%
TOTAL	100.0%

*7-oxabicyclo [2.2.1] heptane-2,3-dicarboxylic acid equivalent 23.36%
Contains 2 lbs. endothall acid per gallon

KEEP OUT OF REACH OF CHILDREN

DANGER PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(If you do not understand the label, find someone to explain it to you in detail.)

FIRST AID

IF IN EYES:
- Hold eye open and rinse slowly and gently with water for 15-20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.
- Call a poison control center or doctor for treatment advice.

IF ON SKIN OR CLOTHING:
- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15-20 minutes.
- Call a poison control center or doctor for treatment advice.

IF SWALLOWED:
- Call a poison control center or doctor immediately for treatment advice.
- Have person sip a glass of water if able to swallow.
- Do not induce vomiting unless told by a poison control center or doctor.
- Do not give anything by mouth to an unconscious person.

IF INHALED:
- Move person to fresh air.
- If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.
- Call a poison control center or doctor for treatment advice.

HOT LINE NUMBER: Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 866-673-6671 (Rocky Mountain Poison Control Center) for emergency medical treatment information.

See inside for additional precautionary statements.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression and convulsion may be needed.

EPA Registration No. 70506-175

Batch/Lot No.: _____

Net Contents: _____

United Phosphorus, Inc.
630 Freedom Business Center, Suite 402
King of Prussia, PA 19406
1-800-438-6071

PRODUCT INFORMATION

Teton is a liquid concentrate soluble in water and is a highly effective aquatic algicide and herbicide. Apply when target algae and ants are actively growing. Note: Susceptibility of algae may vary due to subspecies, strains or environmental conditions. Dosage rates are measured in parts per million (ppm) endothall acid.

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER

CORROSIVE. CAUSES IRREVERSIBLE EYE DAMAGE AND SKIN BURNS. MAY BE FATAL IF SWALLOWED, OR ABSORBED THROUGH SKIN. HARMFUL IF INHALED. DO NOT GET IN EYES, ON SKIN OR ON CLOTHING. AVOID BREATHING VAPOR OR SPRAY MIST.

Personal Protective Equipment (PPE)

Mixers, loaders, applicators and other handlers must wear:

- Coveralls over long-sleeved shirt and long pants,
  Exception: When the product is applied in a manner in which the applicator will have no contact with the pesticide (such as direct metering or subsurface injection), coveralls need not be worn.
- Chemical-resistant footwear plus socks,
- Chemical-resistant gloves made of any waterproof material,
- Chemical-resistant headgear for overhead exposure,
- Protective eyewear,
- Chemical-resistant apron when mixing, loading, or cleaning equipment,
- NIOSH-approved respirator with a dust/mist filter with MSHA/NIOSH approval number prefix TC-21C or any N, R, P, or HE filter.
  Exception: During application, the respirator need not be worn, provided that the pesticide is applied in a manner (such as direct metering or subsurface release from the rear of a vessel that is moving into the wind) such that the applicator will have no contact with the pesticide.

See Engineering Controls for additional requirements.

User Safety Requirements:

Follow the manufacturers' instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

Discard clothing or other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

Engineering Controls:

When mixers and loaders use a closed system designed by the manufacturer to enclose the pesticide to prevent it from contacting handlers or other people AND the system is functioning properly and is used and maintained in accordance with the manufacturers written operating instructions, the handlers need not wear a respirator, provided the required respirator is immediately available for use in an emergency such as a spill or equipment breakdown.

When handlers use closed systems, enclosed cabs or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

User Safety Recommendations:

User should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

Do not contaminate water by cleaning of equipment or disposal of equipment washwaters.

This pesticide is highly toxic to fish and aquatic invertebrates. This pesticide is toxic to wildlife.

Treatment of algae and aquatic plants can result in oxygen loss from decomposition of dead algae and plants. This loss can cause fish suffocation. Water bodies containing very high algae or plant density should be treated in sections to prevent suffocation of fish.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift.

- For quiescent or slow moving water treatments: Waters treated with Teton may be used for swimming, fishing, and irrigating turf, ornamental plants and crops immediately after treatment with the following exceptions: Do not use the Teton treated water to irrigate the following for 7 days after the treatment: annual nursery or greenhouse crops including hydroponics and newly seeded or transplanted annual crops, newly seeded or transplanted ornamentals, and newly sodded or seeded turf. Do not use treated water for animal consumption within the following periods:
  0.3 ppm – 7 days after application
  3.0 ppm – 14 days after application
  5.0 ppm – 25 days after application
- For flowing water treatments: Waters treated with Teton may be used for swimming, fishing, livestock watering, and irrigating turf, ornamental plants and crops immediately after treatment with the following exceptions: Do not use the Teton treated water to irrigate the following: annual nursery or greenhouse crops including hydroponics and newly seeded or transplanted annual crops, newly seeded or transplanted ornamentals, and newly sodded or seeded turf.
- Phytotoxicity is not expected on plants or crops irrigated with Teton treated water, however, all species and cultivars (varieties) have not been tested.
- Undiluted Teton may be injurious to crops, grass, ornamentals or other foliage.
- Do not use Teton treated water for chemigation as interactions between Teton and other pesticides and fertilizers are not known.
- Do not use Teton in waters containing Koi or hybrid goldfish. Teton is not intended for use in small volume garden pond systems.
- Fish may be killed by dosages in excess of 0.3 parts per million (ppm).
- Do not use Teton in brackish or saltwater.
- Wash out spray equipment with water after each operation.
- Avoid contact of spray concentrate (product) directly or by drift with non-target plants or crops as injury may result.
- Do not treat more than 10% of the area at one time with doses in excess of 1 ppm.

HOW TO APPLY:

Teton is a contact algicide and herbicide. Apply when target algae and plants are present. Teton should be sprayed on the water or injected below the water surface. It may be applied as a concentrate or diluted with water depending on the equipment. Teton can be applied to floating algae mats as a surface application. In instances where the algae or plant(s) to be controlled is an exposed surface problem (i.e. some of the broad-leaved pond weeds) coverage is important. For best results, apply the concentrate with the least amount of water compatible with the application equipment.

Drinking Water (Potable Water)

Consult with appropriate state or local water authorities before applying this product to public waters. State or local agencies may require permits.

The drinking water (potable water) restrictions on this label are to ensure that consumption of water by the public is allowed only when the concentration of endothall acid in the water is less than the MCL (Maximum Contamination Level) of 0.1 ppm. Applicators should consider the unique characteristics of the treated waters to assure that endothall acid concentrations in potable drinking water do not exceed 0.1 ppm at the time of consumption.

For Lakes, Ponds, and other Quiescent Water Bodies:

- For Teton applications, the drinking water setback distance from functioning potable water intakes in the treated water body must be greater than or equal to 600 feet.
- Note: Existing potable water intakes that are no longer in use, such as those replaced by a connection to a municipal water system or a potable water well, are not considered to be functioning potable water intakes.

For Irrigation Canals and other Flowing Water Bodies:

- Applicator is responsible to assure that treated water does not enter potable water intakes. For Teton applications, potable water intakes must be closed when treated water is present at the intake. In the event the water intake cannot be closed, treatments must only be made downstream from the intake in order to assure Teton treated water does not enter the potable water system.

QUIESCENT OR SLOW MOVING WATER TREATMENTS: SURFACE OR INJECTED APPLICATIONS

Teton use is limited to algae and the following plants: Hygrophila*, Vallisneria, Hydrilla, Cabomba*, Bur Reed*, *Elodea canadensis*, and Brazilian Elodea. (* Not for this use in California.)

ALGAE CONTROL: Teton is effective on a broad range of planktonic, filamentous, and branched algae. Note: Susceptibility of algae may vary due to subspecies, strains or environmental conditions. Generally rates of 0.05 to 0.3 ppm (0.6-3.6 pints per acre foot) are effective for the control of algae. Repeat applications when algae reappear and reach treatment levels. Dosages may be increased (from 0.3 to 3.0 ppm) where greater longevity of control is desired or to improve efficacy on species that prove difficult to control. Due to the potential for fish toxicity at higher rates, it is suggested that applications above 0.3 ppm be made only by commercial applicators as marginal or sectional treatments.

SUBMERGED AQUATIC PLANTS: Apply Teton at 1 to 5 ppm (1.4 gallons to 6.8 gallons per acre foot) for control of aquatic plants. Teton is for use on the following aquatic plants: Hygrophila*, Vallisneria, Hydrilla, Cabomba*, Bur Reed*, *Elodea canadensis*, and Brazilian Elodea. (* Not for this use in California.) Due to potential fish toxicity, Teton use for submerged aquatic plant control is suggested to be made only by commercial applicators as marginal or sectional treatments. Use application rates over 1.0 ppm only on very narrow margins or in areas where some fish kill is not objectionable.

RATE OF APPLICATION:

Algae or Plant	Rate ppm endothall acid	Amount of Teton per Acre Ft.
Algae Planktonic, Filamentous, Branched (Use in California limited to Cladophora, Pithophora, Spirogyra, Chara)	0.05-3.0	0.6-36 pints
Bur Reed*	2-5	2.7-6.8 gals.
Cabomba*†	2-5	2.7-6.8 gals.
Brazilian Elodea	2-5	2.7-6.8 gals.
Elodea Canadensis	2-5	2.7-6.8 gals.
Hydrilla	1-5	1.4-6.8 gals.
Hygrophila*†	2-5	2.7-6.8 gals.
Vallisneria	2-5	2.7-6.8 gals.

* Not for this use in California
† Suppression only

FLOWING WATER TREATMENTS: DRIP OR METERING SYSTEMS

For algae and aquatic plant control in flowing water, Teton recommended use rates can be found in the following chart. Apply Teton in a manner to achieve the desired rate and adequate mixing so Teton is distributed throughout the entire water column. Adequate concentration (rate) and exposure time (length of treatment) will impact Teton efficacy on the target algae and plant species. Although Teton is a contact algicide and herbicide, adequate exposure time is critical. The rates and the length of treatment are guidelines to control the target species. The following rate chart has been developed based on Concentration Exposure Time (CET) data for Teton. The CET concept allows rates and the length of exposure to be adjusted for different treatment scenarios.

For irrigation systems, because of potential fish toxicity, rates of more than 0.3 ppm are to be used only in irrigation systems without return flows, or for making partial treatments to treat sections of the irrigation system where dilution of the treated water will result in concentrations of 0.3 ppm or less in return water.

RATE OF APPLICATION:

Target Species	Rate ppm endothall acid	Duration	Restrictions
Algae: Planktonic, Filamentous, Branched (Use in California limited to Cladophora, Pithophora, Spirogyra, Chara)	0.05 – 3.0 ppm	6 – 120 hours	A maximum of 30 ppm per growing season, not to exceed 5 ppm per application. Do not apply more than a total of 5 ppm within a 7-day interval. There is no Pre-harvest Interval (PHI) for crops irrigated with treated water.
Plants: Bur Reed* Cabomba*† Coontail 'odea Canadensis ydrilla Hygrophila*† Milfoil (Myriophyllum spp.) Naiad (Najas spp.) Pondweed (Potamogeton spp.) Water Stargrass* Vallisneria Zannichellia	0.2 – 5 ppm	6 – 120 hours	

* Not for this use in California
† Suppression only

To calculate the amount of Teton required for a particular treatment use the following formula:

[Cubic Feet per Second (CFS) X Length of Treatment (hrs.) X Rate (ppm)] x 0.11198 = Gallons of Teton Needed for Treatment

To calculate the amount of Teton to be applied per hour use the following formula:

Gallons of Teton per hour = Total Gallons of Teton / Length of Treatment (hrs.)

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

Pesticide Storage: Store in the original container. Do not store in a manner where cross-contamination with other pesticides, fertilizers, food or feed could occur. In the event of a spill during handling or storage, absorb with sand or other inert material and dispose of absorbent in accordance with the Pesticide Disposal instructions listed below.

Pesticide Disposal: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Handling:

(for Nonrefillable containers)

Nonrefillable container. Do not reuse or refill this container. Triple rinse or pressure rinse container promptly after emptying.

For containers 5 gallons or less:

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

Or

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

For containers more than 5 gallons:

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

Or

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Pour or pump rinsate into application equipment or rinsate collection system. Drain for 10 seconds after the flow begins to drip.

Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

(for Refillable containers)

Refillable container. Refill this container with pesticide only. Do not use this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or reconditioning if appropriate or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

EMERGENCY TELEPHONE NUMBERS

CHEMTREC: (800) 424-9300

MEDICAL: (866) 673-6671

Rocky Mountain Poison Control Center

IMPORTANT INFORMATION
READ BEFORE USING PRODUCT

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product reflect the opinion of experts based on field use and tests, and must be followed carefully. It is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of United Phosphorus, Inc. or Seller. Handling, storage, and use of the product by Buyer or User are beyond the control of United Phosphorus, Inc. and Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold United Phosphorus, Inc. and Seller harmless for any claims relating to such factors.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, UNITED PHOSPHORUS, INC. AND SELLER MAKE NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ON THIS LABEL.

To the extent consistent with applicable law, United Phosphorus, Inc. or Seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product and **THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF UNITED PHOSPHORUS, INC. AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF UNITED PHOSPHORUS, INC. OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

United Phosphorus, Inc. and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by the duly authorized representative of United Phosphorus, Inc.

Rev. 9/15/11

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