

**From:** [Reed, Chad Howard](#)  
**To:** [Water Permits; Elizabeth Rorie](#)  
**Cc:** [Reed, Chad Howard](#)  
**Subject:** TVA- Annual Reports for Pesticides General Permit TNP10000  
**Date:** Thursday, February 14, 2019 7:23:24 AM  
**Attachments:** [image001.png](#)  
[image002.png](#)

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Please see attached TVA annual reports for the Pesticides General Permit.

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## **Chad Reed**

Water Specialist  
Water Permits, Compliance & Monitoring

Tennessee Valley Authority  
1101 Market Street  
Chattanooga, TN 37402

423-751-3948 (w)  
256-608-9903 (m)  
[chreed@tva.gov](mailto:chreed@tva.gov)



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Tennessee Valley Authority, 1101 Market Street, BR 4A, Chattanooga, Tennessee 37402

February 13, 2019

Tennessee Department of Environment  
and Conservation  
Division of Water Resources  
Attn: Water-Based Systems Unit – Pesticide General Permit  
William R. Snodgrass Tennessee Tower  
312 Rosa L. Parks Avenue, 11th Floor  
Nashville, Tennessee 37243

Dear Madam or Sir:

TENNESSEE VALLEY AUTHORITY (TVA) - RESOURCES AND RIVER MANAGEMENT -  
ANNUAL REPORT FOR GENERAL NPDES PERMIT NUMBERS TNP100003 AND  
TNP1000009 - DISCHARGES FROM THE APPLICATION OF PESTICIDES

Enclosed are completed annual reports for herbicide treatments in water or water's edge at TVA dams and reservoirs in calendar year 2018. These reports include:

1. Aquatic vegetation management in TVA reservoirs (TNP100003) and,
2. Herbicide applications in areas adjacent to TVA dams and reservoirs to reduce or eliminate invasive plant species, enhance waterfowl and/or other wildlife habitat, and to maintain the integrity of rip-rap and other manmade structures (TNP100009).

Please note that TVA is submitting separate annual reports for vegetation control on TVA transmission line rights of way (TNP100005) and at Coal and Gas Operations sites (TNP100013).

If you have questions or need additional information, please call Chad Reed at (423) 751-3948 or by email at [chreed@tva.gov](mailto:chreed@tva.gov).

Sincerely,

A handwritten signature in blue ink that reads 'Terry E. Cheek'.

Terry E. Cheek  
Senior Manager  
Water Permits, Compliance, and Monitoring

Enclosures

Tennessee Department of Environment  
and Conservation  
Page 2  
February 13, 2019

CHR:SMF

Enclosures

cc (Electronic Distribution w/Enclosures):

D. G. Brewster, FAB 1A-GVA

F. B. Edmondson, WTR 1A-GR

K. A. Love, SP 6B-C

M.T. Morrissey, MPB 1H-M

ECM, ENVrecords



C. Pest Management Area(s) (use additional pages for each Pest Management Area)

Pest Management Area# 1 of ## 3

1. Have any discharges from pest control activities occurred in this calendar year?
- a  No discharge from pest control activities this calendar year. Note: Checking this box completes Section C if you had no discharge from pest control activities this year. Proceed to section D.
- b  Yes. Proceed to question 2.

2. Indicate the pesticide use pattern for the Pest Management Area
- a  Mosquito and Other Flying Insect Pest Control    b  Weed and Algae Pest Control
- c  Animal Pest Control    d  Forest Canopy Pest Control

3. For each treatment area (use additional pages for each treatment area)

- a. Provide a description of the treatment area within this Pest Management Area, including location description.  
Chickamauga Reservoir, Tennessee River. A total of 29 sites within the 35,400 acre reservoir were treated in calendar year 2018.
- b. Size of treatment area (in acres or linear feet) 92.5 acres or \_\_\_\_\_ linear feet.
- c. Name or location of any waters of the state to which discharges occurred  
Chickamauga Reservoir (Tennessee River) in Hamilton, Meigs, and Rhea counties, TN. Applications occurred in the vicinity of public recreation areas such as ramps, parks, piers, and non-profit camps.  
Submerged vegetation (i.e., hydrilla, southern naiad, spinyleaf naiad, American pondweed, small pondweed, Watershield and cutgrass)
- d. Target Pest(s) \_\_\_\_\_

4. Name and contact information for pesticide applicator(s) (or check here if same as provided in Section A)

Company Name: Aqua Services, Inc.

Street: 23360 Highway 431

City: Guntersville State: AL ZIP Code: 35976

Contact: Terry Goldsby

Phone: 256-582-9101

E-mail: terryg@aquaservicesinc.com

5. Was this pest control activity addressed in your Pesticide Discharge Monitoring Plan (PDMP) before pesticide application:  Yes  No  Not Applicable

6. Enter the total amount of each pesticide product applied for the reporting year by the product name, EPA Registration Number(s) and by application method. Circle if quantity indicated is in lbs or gallons. Add additional pages if necessary.

| Product Name   | EPA Reg. No.    | Quantity Applied (lbs or gallons of product): | Product Name  | EPA Reg. No.     | Quantity Applied (lbs or gallons of product): |
|--|-----------------|---|---|------------------|---|
| <u>Tribune</u>   | <u>100-1390</u> |   | <u>Current</u>  | <u>70506-248</u> |   |
| Application method:  |                 |   | Application method:   |                  |   |
| a <input type="checkbox"/> Aerially by fixed-wing  |                 | _____ lbs or gallons                          | a <input type="checkbox"/> Aerially by fixed-wing   |                  | _____ lbs or gallons                          |
| b <input type="checkbox"/> Aerially by rotary aircraft   |                 | _____ lbs or gallons                          | b <input type="checkbox"/> Aerially by rotary aircraft  |                  | _____ lbs or gallons                          |
| c <input type="checkbox"/> Land-based sprayer (includes backpack, land vehicle mounted sprayers, high pressure canopy sprayer)           |                 | _____ lbs or gallons                          | c <input type="checkbox"/> Land-based sprayer (includes backpack, land vehicle mounted sprayers, high pressure canopy sprayer)            |                  | _____ lbs or gallons                          |
| d <input type="checkbox"/> Aquatic vehicle mounted sprayer   |                 | _____ lbs or gallons                          | d <input type="checkbox"/> Aquatic vehicle mounted sprayer  |                  | _____ lbs or gallons                          |
| e <input checked="" type="checkbox"/> Direct mixture (includes metering subsurface applications) (Airboat with submerged trailing hoses) |                 | <u>133</u> lbs or <u>gallons</u>              | e <input checked="" type="checkbox"/> Direct mixture (includes metering, subsurface applications) (Airboat with submerged trailing hoses) |                  | <u>325</u> lbs or <u>gallons</u>              |
| f <input type="checkbox"/> Chemigation   |                 | _____ lbs or gallons                          |   |                  | _____ lbs or gallons                          |
| g <input type="checkbox"/> Other (specify): _____  |                 | _____ lbs or gallons                          |   |                  | _____ lbs or gallons                          |

C. Pest Management Area(s) (use additional pages for each Pest Management Area)

Pest Management Area# 1 of ## 3 (continued)

1. Have any discharges from pest control activities occurred in this calendar year?
- a.  No discharge from pest control activities this calendar year. Note: Checking this box completes Section C if you had no discharge from pest control activities this year. Proceed to section D.
- b.  Yes. Proceed to question 2.

2. Indicate the pesticide use pattern for the Pest Management Area
- a.  Mosquito and Other Flying Insect Pest Control    b.  Weed and Algae Pest Control
- c.  Animal Pest Control    d.  Forest Canopy Pest Control

3. For each treatment area (use additional pages for each treatment area).

- a. Provide a description of the treatment area within this Pest Management Area, including location description.  
Chickamauga Reservoir, Tennessee River. A total of 31 sites within the 35,400 acre reservoir were treated in calendar year 2018.
- b. Size of treatment area (in acres or linear feet) 92.5 acres or \_\_\_\_\_ linear feet.
- c. Name or location of any waters of the state to which discharges occurred  
Chickamauga Reservoir (Tennessee River) in Hamilton, Meigs, and Rhea counties, TN. Applications occurred in the vicinity of public recreation areas such as ramps, parks, piers, and non-profit camps.  
Submerged vegetation (i.e., hydrilla, southern naiad, spinyleaf naiad, American pondweed, small pondweed, Watershield and cutgrass)
- d. Target Pest(s) \_\_\_\_\_

4. Name and contact information for pesticide applicator(s) (or check here if same as provided in Section A)

Company Name: Aqua Services, Inc.

Street: 23360 Highway 431

City: Guntersville State: AL ZIP Code: 35976

Contact: Terry Goldsby

Phone: 256-582-9101

E-mail: terryg@aquaservicesinc.com

5. Was this pest control activity addressed in your Pesticide Discharge Monitoring Plan (PDMP) before pesticide application:  Yes  No  Not Applicable

6. Enter the total amount of each pesticide product applied for the reporting year by the product name, EPA Registration Number(s) and by application method. Circle if quantity indicated is in lbs or gallons: Add additional pages if necessary.

| Product Name   | Quantity Applied (lbs or gallons of product): | Product Name   | Quantity Applied (lbs or gallons of product): |
|--|---|--|---|
| <u>Rodeo</u>   |   | <u>Nautique</u>  |   |
| EPA Reg. No. <u>62719-324</u>  |   | EPA Reg. No. <u>67690-10</u>   |   |
| Application method:  |   | Application method:  |   |
| a. <input type="checkbox"/> Aerially by fixed-wing _____ lbs or gallons  |   | a. <input type="checkbox"/> Aerially by fixed-wing _____ lbs or gallons  |   |
| b. <input type="checkbox"/> Aerially by rotary aircraft _____ lbs or gallons   |   | b. <input type="checkbox"/> Aerially by rotary aircraft _____ lbs or gallons   |   |
| c. <input type="checkbox"/> Land-based sprayer (includes backpack, land vehicle mounted sprayers, high pressure canopy sprayer) _____ lbs or gallons |   | c. <input type="checkbox"/> Land-based sprayer (includes backpack, land vehicle mounted sprayers, high pressure canopy sprayer) _____ lbs or gallons |   |
| d. <input type="checkbox"/> Aquatic vehicle mounted sprayer _____ lbs or gallons   |   | d. <input type="checkbox"/> Aquatic vehicle mounted sprayer _____ lbs or gallons   |   |
| e. <input checked="" type="checkbox"/> Direct mixture (includes metering subsurface applications) <u>12.5</u> lbs or <u>gallons</u>                  |   | e. <input checked="" type="checkbox"/> Direct mixture (includes metering subsurface applications) <u>2.0</u> lbs or <u>gallons</u>                   |   |
| f. <input type="checkbox"/> Chemigation _____ lbs or gallons   |   | (Airboat with submerged trailing hoses)  |   |
| g. <input type="checkbox"/> Other (specify): _____ lbs or gallons  |   |  |   |

C. Pest Management Area(s) (use additional pages for each Pest Management Area)

Pest Management Area# 1 of ## 3 (continued)

1. Have any discharges from pest control activities occurred in this calendar year?
- a.  No discharge from pest control activities this calendar year. Note: Checking this box completes Section C if you had no discharge from pest control activities this year. Proceed to section D.
- b.  Yes. Proceed to question 2.

2. Indicate the pesticide use pattern for the Pest Management Area.
- a.  Mosquito and Other Flying Insect Pest Control    b.  Weed and Algae Pest Control
- c.  Animal Pest Control    d.  Forest Canopy Pest Control

3. For each treatment area (use additional pages for each treatment area)

- a. Provide a description of the treatment area within this Pest Management Area, including location description:  
Chickamauga Reservoir, Tennessee River. A total of 31 sites within the 35,400 acre reservoir were treated in calendar year 2018.
- b. Size of treatment area (in acres or linear feet) 92.5 acres or \_\_\_\_\_ linear feet.
- c. Name or location of any waters of the state to which discharges occurred  
Chickamauga Reservoir (Tennessee River) in Hamilton, Meigs, and Rhea counties, TN. Applications occurred in the vicinity of public recreation areas such as ramps, parks, piers, and non-profit camps.
- d. Target Pest(s) Submerged vegetation (i.e., hydrilla, southern naiad, spinyleaf naiad, American pondweed, small pondweed, Watershield and cutgrass)

4. Name and contact information for pesticide applicator(s) (or check here if same as provided in Section A)

Company Name: Aqua Services, Inc.

Street: 23360 Highway 431

City: Guntersville

State: AL

ZIP Code: 35976

Contact: Terry Goldsby

Phone: 256-582-9101

E-mail: terryg@aquaservicesinc.com

5. Was this pest control activity addressed in your Pesticide Discharge Monitoring Plan (PDMP) before pesticide application:  Yes  No  Not Applicable

6. Enter the total amount of each pesticide product applied for the reporting year by the product name, EPA Registration Number(s) and by application method. Circle if quantity indicated is in lbs or gallons; Add additional pages if necessary.

| Product Name  | EPA Reg. No.         | Quantity Applied (lbs or gallons of product): | Product Name   | EPA Reg. No. | Quantity Applied (lbs or gallons of product): |
|---|----------------------|---|--|--------------|---|
| <u>Habitat</u>  | <u>241-426-67690</u> | <u>12.5</u> lbs or <u>gallons</u>             |  |              |   |
| Application method:   |                      |   |  |              |   |
| a. <input type="checkbox"/> Aerially by fixed-wing  |                      | _____ lbs or gallons                          | a. <input type="checkbox"/> Aerially by fixed-wing   |              | _____ lbs or gallons                          |
| b. <input type="checkbox"/> Aerially by rotary aircraft   |                      | _____ lbs or gallons                          | b. <input type="checkbox"/> Aerially by rotary aircraft  |              | _____ lbs or gallons                          |
| c. <input type="checkbox"/> Land-based sprayer (includes backpack, land vehicle mounted sprayers, high pressure canopy sprayer)           |                      | _____ lbs or gallons                          | c. <input type="checkbox"/> Land-based sprayer (includes backpack, land vehicle mounted sprayers, high pressure canopy sprayer)            |              | _____ lbs or gallons                          |
| d. <input type="checkbox"/> Aquatic vehicle mounted sprayer   |                      | _____ lbs or gallons                          | d. <input type="checkbox"/> Aquatic vehicle mounted sprayer  |              | _____ lbs or gallons                          |
| e. <input checked="" type="checkbox"/> Direct mixture (includes metering subsurface applications) (Airboat with submerged trailing hoses) |                      | <u>12.5</u> lbs or <u>gallons</u>             | e. <input checked="" type="checkbox"/> Direct mixture (includes metering, subsurface applications) (Airboat with submerged trailing hoses) |              | _____ lbs or <u>gallons</u>                   |
| f. <input type="checkbox"/> Chemigation   |                      | _____ lbs or gallons                          |  |              | _____ lbs or gallons                          |
| g. <input type="checkbox"/> Other (specify): _____  |                      | _____ lbs or gallons                          |  |              | _____ lbs or gallons                          |

C. Pest Management Area(s) (use additional pages for each Pest Management Area)

Pest Management Area# 2 of ## 3

1. Have any discharges from pest control activities occurred in this calendar year?
- a.  No discharge from pest control activities this calendar year. Note: Checking this box completes Section C if you had no discharge from pest control activities this year. Proceed to section D.
- b.  Yes. Proceed to question 2.

2. Indicate the pesticide use pattern for the Pest Management Area:
- a.  Mosquito and Other Flying Insect Pest Control      b.  Weed and Algae Pest Control
- c.  Animal Pest Control      d.  Forest Canopy Pest Control

3. For each treatment area (use additional pages for each treatment area).

- a. Provide a description of the treatment area within this Pest Management Area, including location description.

Nickajack Reservoir, Tennessee River. A total of 8 sites within the 10,370 acre reservoir were treated in calendar year 2018.

- b. Size of treatment area (in acres or linear feet): 63 acres or \_\_\_\_\_ linear feet.

- c. Name or location of any waters of the state to which discharges occurred:

Nickajack Reservoir (Tennessee River) in Marion County, TN. Applications occurred in the vicinity of public recreation areas such as ramps, parks, piers, and non-profit camps.

- d. Target Pest(s): Submerged vegetation (i.e., hydrilla, southern naiad, spinyleaf naiad, American pondweed, small pondweed, Watershield and cutgrass)

4. Name and contact information for pesticide applicator(s) (or check here if same as provided in Section A):

Company Name: Aqua Services, Inc.

Street: 23360 Highway 431

City: Guntersville

State: AL

ZIP Code: 35976

Contact Terry Goldsby

Phone 256-582-9101

E-mail: terryg@aquaservicesinc.com

5. Was this pest control activity addressed in your Pesticide Discharge Monitoring Plan (PDMP) before pesticide application.  Yes  No  Not Applicable

6. Enter the total amount of each pesticide product applied for the reporting year by the product name, EPA Registration Number(s) and by application method. Circle if quantity indicated is in lbs or gallons: Add additional pages if necessary.

| Product Name   | EPA Reg. No.    | Quantity Applied (lbs or gallons of product) | Product Name   | EPA Reg. No.     | Quantity Applied (lbs or gallons of product) |
|--|-----------------|--|--|------------------|--|
| <u>Tribune</u>   | <u>100-1390</u> | <u>117</u> lbs or <u>gallons</u>             | <u>Current</u>   | <u>70506-248</u> | <u>351</u> lbs or <u>gallons</u>             |
| Application method:  |                 |  | Application method:  |                  |  |
| a. <input type="checkbox"/> Aerially by fixed-wing   |                 | _____ lbs or gallons                         | a. <input type="checkbox"/> Aerially by fixed-wing   |                  | _____ lbs or gallons                         |
| b. <input type="checkbox"/> Aerially by rotary aircraft  |                 | _____ lbs or gallons                         | b. <input type="checkbox"/> Aerially by rotary aircraft  |                  | _____ lbs or gallons                         |
| c. <input type="checkbox"/> Land-based sprayer (includes backpack, land vehicle mounted sprayers, high pressure canopy sprayer)            |                 | _____ lbs or gallons                         | c. <input type="checkbox"/> Land-based sprayer (includes backpack, land vehicle mounted sprayers, high pressure canopy sprayer)            |                  | _____ lbs or gallons                         |
| d. <input type="checkbox"/> Aquatic vehicle mounted sprayer  |                 | _____ lbs or gallons                         | d. <input type="checkbox"/> Aquatic vehicle mounted sprayer  |                  | _____ lbs or gallons                         |
| e. <input checked="" type="checkbox"/> Direct mixture (includes metering, subsurface applications) (Airboat with submerged trailing hoses) |                 | <u>117</u> lbs or <u>gallons</u>             | e. <input checked="" type="checkbox"/> Direct mixture (includes metering, subsurface applications) (Airboat with submerged trailing hoses) |                  | <u>351</u> lbs or <u>gallons</u>             |
| f. <input type="checkbox"/> Chemigation  |                 | _____ lbs or gallons                         |  |                  | _____ lbs or gallons                         |
| g. <input type="checkbox"/> Other (specify): _____   |                 | _____ lbs or gallons                         |  |                  | _____ lbs or gallons                         |

C. Pest Management Area(s) (use additional pages for each Pest Management Area)

Pest Management Area# 2 of ## 3

1. Have any discharges from pest control activities occurred in this calendar year?
- a.  No discharge from pest control activities this calendar year. Note: Checking this box completes Section C if you had no discharge from pest control activities this year. Proceed to section D.
- b.  Yes. Proceed to question 2.

2. Indicate the pesticide use pattern for the Pest Management Area:
- a.  Mosquito and Other Flying Insect Pest Control    b.  Weed and Algae Pest Control
- c.  Animal Pest Control    d.  Forest Canopy Pest Control

3. For each treatment area (use additional pages for each treatment area):

- a. Provide a description of the treatment area within this Pest Management Area, including location description:  
Nickajack Reservoir, Tennessee River. A total of 8 sites within the 10,370 acre reservoir were treated in calendar year 2018.
- b. Size of treatment area (in acres or linear feet) 63 acres or \_\_\_\_\_ linear feet
- c. Name or location of any waters of the state to which discharges occurred:  
Nickajack Reservoir (Tennessee River) in Marion County, TN. Applications occurred in the vicinity of public recreation areas such as ramps, parks, piers, and non-profit camps.  
Submerged vegetation (i.e., hydrilla, southern naiad, spinyleaf naiad, American pondweed, small pondweed, Watershield)
- d. Target Pest(s): and cutgrass

4. Name and contact information for pesticide applicator(s) (or check here if same as provided in Section A):

Company Name: Aqua Services, Inc.

Street: 23360 Highway 431

City: Guntersville State: AL ZIP Code: 35976

Contact: Terry Goldsby

Phone: 256-582-9101

E-mail: terryg@aquaservicesinc.com

5. Was this pest control activity addressed in your Pesticide Discharge Monitoring Plan (PDMP) before pesticide application:  Yes  No  Not Applicable

6. Enter the total amount of each pesticide product applied for the reporting year by the product name, EPA Registration Number(s) and by application method. Circle if quantity indicated is in lbs or gallons: Add additional pages if necessary.

| Product Name   | Quantity Applied (lbs or gallons of product): | Product Name   | Quantity Applied (lbs or gallons of product): |
|--|---|--|---|
| <u>EPA Reg. No. _____</u>  |   | <u>Clipper</u>   |   |
| <u>EPA Reg. No. _____</u>  |   | <u>EPA Reg. No. 59639-161</u>  |   |
| Application method:  |   | Application method:  |   |
| a. <input type="checkbox"/> Aerially by fixed-wing _____ lbs or gallons  |   | a. <input type="checkbox"/> Aerially by fixed-wing _____ lbs or gallons  |   |
| b. <input type="checkbox"/> Aerially by rotary aircraft _____ lbs or gallons   |   | b. <input type="checkbox"/> Aerially by rotary aircraft _____ lbs or gallons   |   |
| c. <input type="checkbox"/> Land-based sprayer (includes backpack, land vehicle mounted sprayers, high pressure canopy sprayer) _____ lbs or gallons                   |   | c. <input type="checkbox"/> Land-based sprayer (includes backpack, land vehicle mounted sprayers, high pressure canopy sprayer) _____ lbs or gallons                         |   |
| d. <input type="checkbox"/> Aquatic vehicle mounted sprayer _____ lbs or gallons   |   | d. <input type="checkbox"/> Aquatic vehicle mounted sprayer _____ lbs or gallons   |   |
| e. <input checked="" type="checkbox"/> Direct mixture (includes metering, subsurface applications) (Airboat with submerged trailing hoses) _____ lbs or <u>gallons</u> |   | e. <input checked="" type="checkbox"/> Direct mixture (includes metering, subsurface applications) (Airboat with submerged trailing hoses) <u>13.5</u> lbs or <u>gallons</u> |   |
| f. <input type="checkbox"/> Chemigation _____ lbs or gallons   |   |  |   |
| g. <input type="checkbox"/> Other (specify): _____ lbs or gallons  |   |  |   |

C. Pest Management Area(s) (use additional pages for each Pest Management Area)

Pest Management Area# 3 of ## 3

1. Have any discharges from pest control activities occurred in this calendar year?
- a.  No discharge from pest control activities this calendar year. Note: Checking this box completes Section C if you had no discharge from pest control activities this year. Proceed to section D.
- b.  Yes. Proceed to question 2.

2. Indicate the pesticide use pattern for the Pest Management Area.
- a.  Mosquito and Other Flying Insect Pest Control    b.  Weed and Algae Pest Control
- c.  Animal Pest Control    d.  Forest Canopy Pest Control

3. For each treatment area (use additional pages for each treatment area).

- a. Provide a description of the treatment area within this Pest Management Area, including location description.  
Watts Bar Reservoir, Tennessee River. A total of 4 sites within the 39,090 acre reservoir were treated in calendar year 2018.
- b. Size of treatment area (in acres or linear feet) 10.75 acres or \_\_\_\_\_ linear feet.
- c. Name or location of any waters of the state to which discharges occurred.  
Watts Bar Reservoir (Tennessee River) in Roane Co., TN. Applications occurred in the vicinity of public recreation areas such as ramps, parks, piers, and non-profit camps.
- d. Target Pest(s) Submerged vegetation (i.e., hydrilla, southern naiad, spinyleaf naiad, American pondweed, small pondweed, Watershield and cutgrass)

4. Name and contact information for pesticide applicator(s) (or check here if same as provided in Section A)

Company Name: Aqua Services, Inc.

Street: 23360 Highway 431

City: Guntersville State: AL ZIP Code: 35976

Contact Terry Goldsby

Phone 256-582-9101

E-mail: terryg@aquaservicesinc.com

5. Was this pest control activity addressed in your Pesticide Discharge Monitoring Plan (PDMP) before pesticide application:  Yes  No  Not Applicable

6. Enter the total amount of each pesticide product applied for the reporting year by the product name, EPA Registration Number(s) and by application method. Circle if quantity indicated is in lbs or gallons. Add additional pages if necessary.

| Product Name  | Quantity Applied (lbs or gallons of product) | Product Name   | Quantity Applied (lbs or gallons of product) |
|---|--|--|--|
| <u>Tribune</u>  |  | <u>Komeen</u>  |  |
| <u>EPA Reg. No. 100-1390</u>  |  | <u>EPA Reg. No. 67690-25</u>   |  |
| Application method:   |  | Application method:  |  |
| a. <input type="checkbox"/> Aerially by fixed-wing _____ lbs or gallons   |  | a. <input type="checkbox"/> Aerially by fixed-wing _____ lbs or gallons  |  |
| b. <input type="checkbox"/> Aerially by rotary aircraft _____ lbs or gallons  |  | b. <input type="checkbox"/> Aerially by rotary aircraft _____ lbs or gallons   |  |
| c. <input type="checkbox"/> Land-based sprayer (includes backpack, land vehicle mounted sprayers, high pressure canopy sprayer) _____ lbs or gallons                      |  | c. <input type="checkbox"/> Land-based sprayer (includes backpack, land vehicle mounted sprayers, high pressure canopy sprayer) _____ lbs or gallons                         |  |
| d. <input type="checkbox"/> Aquatic vehicle mounted sprayer _____ lbs or gallons  |  | d. <input type="checkbox"/> Aquatic vehicle mounted sprayer _____ lbs or gallons   |  |
| e. <input checked="" type="checkbox"/> Direct mixture (includes metering, subsurface applications) (Airboat with submerged trailing hoses) <u>5</u> lbs or <u>gallons</u> |  | e. <input checked="" type="checkbox"/> Direct mixture (includes metering, subsurface applications) (Airboat with submerged trailing hoses) <u>12.5</u> lbs or <u>gallons</u> |  |
| f. <input type="checkbox"/> Chemigation _____ lbs or gallons  |  | f. <input type="checkbox"/> Chemigation _____ lbs or gallons   |  |
| g. <input type="checkbox"/> Other (specify): _____ lbs or gallons   |  | g. <input type="checkbox"/> Other (specify): _____ lbs or gallons  |  |

C. Pest Management Area(s) (use additional pages for each Pest Management Area)

Pest Management Area# 3 of ## 3

1. Have any discharges from pest control activities occurred in this calendar year?
- a  No discharge from pest control activities this calendar year. Note: Checking this box completes Section C if you had no discharge from pest control activities this year. Proceed to section D.
- b  Yes. Proceed to question 2.

2. Indicate the pesticide use pattern for the Pest Management Area.
- a  Mosquito and Other Flying Insect Pest Control    b  Weed and Algae Pest Control
- c  Animal Pest Control    d  Forest Canopy Pest Control

3. For each treatment area (use additional pages for each treatment area):

- a. Provide a description of the treatment area within this Pest Management Area, including location description:

Watts Bar Reservoir, Tennessee River. A total of 4 sites within the 39,090 acre reservoir were treated in calendar year 2018.

- b. Size of treatment area (in acres or linear feet) 10.75 acres or \_\_\_\_\_ linear feet.

- c. Name or location of any waters of the state to which discharges occurred:

Watts Bar Reservoir (Tennessee River) in Roane Co., TN. Applications occurred in the vicinity of public recreation areas such as ramps, parks, piers, and non-profit camps.

- d. Target Pest(s) Submerged vegetation (i.e., hydrilla, southern naiad, spinyleaf naiad, American pondweed, small pondweed, Watershield and cutgrass)

4. Name and contact information for pesticide applicator(s) (or check here if same as provided in Section A):

Company Name: Aqua Services, Inc.

Street: 23360 Highway 431

City: Guntersville

State: AL

ZIP Code: 35976

Contact: Terry Goldsby

Phone: 256-582-9101

E-mail: terryg@aquaservicesinc.com

5. Was this pest control activity addressed in your Pesticide Discharge Monitoring Plan (PDMP) before pesticide application:  Yes  No  Not Applicable

6. Enter the total amount of each pesticide product applied for the reporting year by the product name, EPA Registration Number(s) and by application method. Circle if quantity indicated is in lbs or gallons. Add additional pages if necessary.

| Product Name  | EPA Reg. No.    | Quantity Applied (lbs or gallons of product) | Product Name  | EPA Reg. No. | Quantity Applied (lbs or gallons of product) |
|---|-----------------|--|---|--------------|--|
| <u>Alligare</u>   | <u>81927-38</u> | <u>40.25</u> lbs or <u>gallons</u>           |   |              |  |
| Application method:   |                 |  |   |              |  |
| a <input type="checkbox"/> Aerially by fixed-wing   |                 | _____ lbs or gallons                         | a <input type="checkbox"/> Aerially by fixed-wing   |              | _____ lbs or gallons                         |
| b <input type="checkbox"/> Aerially by rotary aircraft  |                 | _____ lbs or gallons                         | b <input type="checkbox"/> Aerially by rotary aircraft  |              | _____ lbs or gallons                         |
| c <input type="checkbox"/> Land-based sprayer (includes backpack, land vehicle mounted sprayers, high pressure canopy sprayer)            |                 | _____ lbs or gallons                         | c <input type="checkbox"/> Land-based sprayer (includes backpack, land vehicle mounted sprayers, high pressure canopy sprayer)            |              | _____ lbs or gallons                         |
| d <input type="checkbox"/> Aquatic vehicle mounted sprayer  |                 | _____ lbs or gallons                         | d <input type="checkbox"/> Aquatic vehicle mounted sprayer  |              | _____ lbs or gallons                         |
| e <input checked="" type="checkbox"/> Direct mixture (includes metering, subsurface applications) (Airboat with submerged trailing hoses) |                 | <u>40.25</u> lbs or <u>gallons</u>           | e <input checked="" type="checkbox"/> Direct mixture (includes metering, subsurface applications) (Airboat with submerged trailing hoses) |              | <u>40.25</u> lbs or <u>gallons</u>           |
| f <input type="checkbox"/> Chemigation  |                 | _____ lbs or gallons                         |   |              | _____ lbs or gallons                         |
| g <input type="checkbox"/> Other (specify): _____   |                 | _____ lbs or gallons                         |   |              | _____ lbs or gallons                         |

**D. Certification**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. On the basis of 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 and imprisonment for knowing violations. A false statement is subject to the penalties of perjury.

Printed Name: Frank B. Edmondson

Title: Director, Natural Resources

E-Mail: fbedmondson@tva.gov

Signature Responsible *fbed* Date: 02 11 2019

Annual Report Preparer (Complete if the Annual Report was prepared by someone other than the certifier)

Preparer Name: Chad Reed

Organization: Tennessee Valley Authority, Water Permits, Compliance, and Monitoring

Phone: 423-751-3948 Date: 02 06 2019

E-Mail: chreed@tva.gov



C. Pest Management Area(s) (use additional pages for each Pest Management Area)

Pest Management Area# 1 of ## 1

1. Have any discharges from pest control activities occurred in this calendar year?
- a.  No discharge from pest control activities this calendar year. Note: Checking this box completes Section C if you had no discharge from pest control activities this year. Proceed to section D.
- b.  Yes. Proceed to question 2.

2. Indicate the pesticide use pattern for the Pest Management Area:
- a.  Mosquito and Other Flying Insect Pest Control    b.  Weed and Algae Pest Control
- c.  Animal Pest Control    d.  Forest Canopy Pest Control

3. For each treatment area (use additional pages for each treatment area):

- a. Provide a description of the treatment area within this Pest Management Area, including location description:

Vegetation control on and in the vicinity of TVA dams

- b. Size of treatment area (in acres or linear feet) 111.3 acres or \_\_\_\_\_ linear feet.

- c. Name or location of any waters of the state to which discharges occurred:  
Tennessee River and tributaries in the vicinity of TVA dams

- d. Target Pest(s) Nuisance vegetation

4. Name and contact information for pesticide applicator(s) (or check here if same as provided in Section A):

Company Name: \_\_\_\_\_

Street: \_\_\_\_\_

City: \_\_\_\_\_

State:

ZIP Code: \_\_\_\_\_

Contact \_\_\_\_\_

Phone \_\_\_\_\_

E-mail: \_\_\_\_\_

5. Was this pest control activity addressed in your Pesticide Discharge Monitoring Plan (PDMP) before pesticide application:  Yes  No  Not Applicable

6. Enter the total amount of each pesticide product applied for the reporting year by the product name, EPA Registration Number(s) and by application method. Circle if quantity indicated is in lbs or gallons: Add additional pages if necessary.

Product Name Rodeo®

Quantity Applied (lbs or gallons of product):

EPA Reg. No. 62719-324

Application method:

- a.  Aerially by fixed-wing \_\_\_\_\_ lbs or gallons
- b.  Aerially by rotary aircraft \_\_\_\_\_ lbs or gallons
- c.  Land-based sprayer (includes backpack, land vehicle mounted sprayers, high pressure canopy sprayer) 21.1 lbs or gallons
- d.  Aquatic vehicle mounted sprayer \_\_\_\_\_ lbs or gallons
- e.  Direct mixture (includes metering, subsurface applications) \_\_\_\_\_ lbs or gallons
- f.  Chemigation \_\_\_\_\_ lbs or gallons
- g.  Other (specify): \_\_\_\_\_ lbs or gallons

Product Name Element 3A®

Quantity Applied (lbs or gallons of product):

EPA Reg. No. 62719-37

Application method:

- a.  Aerially by fixed-wing \_\_\_\_\_ lbs or gallons
- b.  Aerially by rotary aircraft \_\_\_\_\_ lbs or gallons
- c.  Land-based sprayer (includes backpack, land vehicle mounted sprayers, high pressure canopy sprayer) 3.9 lbs or gallons
- d.  Aquatic vehicle mounted sprayer \_\_\_\_\_ lbs or gallons
- e.  Direct mixture (includes metering, subsurface applications) \_\_\_\_\_ lbs or gallons

y):

**C. Pest Management Area(s) (use additional pages for each Pest Management Area)**

Pest Management Area# 1 of ## 1 (continued)

1. Have any discharges from pest control activities occurred in this calendar year?
- a.  No discharge from pest control activities this calendar year. Note: Checking this box completes Section C if you had no discharge from pest control activities this year. Proceed to section D
- b.  Yes. Proceed to question 2.

2. Indicate the pesticide use pattern for the Pest Management Area:
- a.  Mosquito and Other Flying Insect Pest Control    b.  Weed and Algae Pest Control
- c.  Animal Pest Control    d.  Forest Canopy Pest Control

3. For each treatment area (use additional pages for each treatment area):
- a. Provide a description of the treatment area within this Pest Management Area, including location description:

Vegetation control on and in the vicinity of TVA dams

b. Size of treatment area (in acres or linear feet): 111.3 acres or \_\_\_\_\_ linear feet.

c. Name or location of any waters of the state to which discharges occurred:  
Tennessee River and tributaries in the vicinity of TVA dams

d. Target Pest(s) Nuisance vegetation

4. Name and contact information for pesticide applicator(s) (or check here if same as provided in Section A):

Company Name: \_\_\_\_\_

Street: \_\_\_\_\_

City: \_\_\_\_\_ State:  ZIP Code: \_\_\_\_\_

Contact \_\_\_\_\_

Phone \_\_\_\_\_

E-mail: \_\_\_\_\_

5. Was this pest control activity addressed in your Pesticide Discharge Monitoring Plan (PDMP) before pesticide application:  Yes  No  Not Applicable

6. Enter the total amount of each pesticide product applied for the reporting year by the product name, EPA Registration Number(s) and by application method. Circle if quantity indicated is in lbs or gallons. Add additional pages if necessary.

Product Name Garlan 3A<sup>®</sup>    Quantity Applied (lbs or gallons of product): \_\_\_\_\_

EPA Reg. No. 62719-37

Product Name 2-4-D Amine 4<sup>®</sup>    Quantity Applied (lbs or gallons of product): \_\_\_\_\_

EPA Reg. No. 1381-103

- Application method:
- a.  Aerially by fixed-wing \_\_\_\_\_ lbs or gallons
- b.  Aerially by rotary aircraft \_\_\_\_\_ lbs or gallons
- c.  Land-based sprayer (includes backpack, land vehicle mounted sprayers, high pressure canopy sprayer) 15.4 lbs or gallons
- d.  Aquatic vehicle mounted sprayer \_\_\_\_\_ lbs or gallons
- e.  Direct mixture (includes metering, subsurface applications) \_\_\_\_\_ lbs or gallons
- f.  Chemigation \_\_\_\_\_ lbs or gallons
- g.  Other (specify): \_\_\_\_\_ lbs or gallons

- Application method:
- a.  Aerially by fixed-wing \_\_\_\_\_ lbs or gallons
- b.  Aerially by rotary aircraft \_\_\_\_\_ lbs or gallons
- c.  Land-based sprayer (includes backpack, land vehicle mounted sprayers, high pressure canopy sprayer) 3.1 lbs or gallons
- d.  Aquatic vehicle mounted sprayer \_\_\_\_\_ lbs or gallons
- e.  Direct mixture (includes metering, subsurface applications) \_\_\_\_\_ lbs or gallons

C. Pest Management Area(s) (use additional pages for each Pest Management Area)

Pest Management Area# 1 of ## 1 (continued)

1. Have any discharges from pest control activities occurred in this calendar year?
- a.  No discharge from pest control activities this calendar year. Note: Checking this box completes Section C if you had no discharge from pest control activities this year. Proceed to section D.
- b.  Yes. Proceed to question 2.

2. Indicate the pesticide use pattern for the Pest Management Area.
- a.  Mosquito and Other Flying Insect Pest Control      b.  Weed and Algae Pest Control
- c.  Animal Pest Control      d.  Forest Canopy Pest Control

3. For each treatment area (use additional pages for each treatment area).
- a. Provide a description of the treatment area within this Pest Management Area, including location description:
- \_\_\_\_\_
- b. Size of treatment area (in acres or linear feet): 111.3 acres or \_\_\_\_\_ linear feet.
- c. Name or location of any waters of the state to which discharges occurred:  
Tennessee River and tributaries in the vicinity of TVA dams
- d. Target Pest(s) Nuisance vegetation

4. Name and contact information for pesticide applicator(s) (or check here if same as provided in Section A)

Company Name: \_\_\_\_\_

Street: \_\_\_\_\_

City: \_\_\_\_\_ State:  ZIP Code: \_\_\_\_\_

Contact \_\_\_\_\_

Phone \_\_\_\_\_

E-mail: \_\_\_\_\_

5. Was this pest control activity addressed in your Pesticide Discharge Monitoring Plan (PDMP) before pesticide application:  Yes  No  Not Applicable

6. Enter the total amount of each pesticide product applied for the reporting year by the product name, EPA Registration Number(s) and by application method. Circle if quantity indicated is in lbs or gallons: Add additional pages if necessary.

| Product Name   | EPA Reg. No.  | Quantity Applied (lbs or gallons of product): | Product Name   | EPA Reg. No. | Quantity Applied (lbs or gallons of product): |
|--|---------------|---|--|--------------|---|
| Habitat  | 241-426-67690 | 12.1 lbs or gallons                           | Pendulum 3.3   | 241-341      | 6.5 lbs or gallons                            |
| Application method:  |               |   |  |              |   |
| a. <input type="checkbox"/> Aerially by fixed-wing   |               | _____ lbs or gallons                          | a. <input type="checkbox"/> Aerially by fixed-wing   |              | _____ lbs or gallons                          |
| b. <input type="checkbox"/> Aerially by rotary aircraft  |               | _____ lbs or gallons                          | b. <input type="checkbox"/> Aerially by rotary aircraft  |              | _____ lbs or gallons                          |
| c. <input checked="" type="checkbox"/> Land-based sprayer (includes backpack, land vehicle mounted sprayers, high pressure canopy sprayer) |               | 12.1 lbs or gallons                           | c. <input checked="" type="checkbox"/> Land-based sprayer (includes backpack, land vehicle mounted sprayers, high pressure canopy sprayer) |              | 6.5 lbs or gallons                            |
| d. <input type="checkbox"/> Aquatic vehicle mounted sprayer  |               | _____ lbs or gallons                          | d. <input type="checkbox"/> Aquatic vehicle mounted sprayer  |              | _____ lbs or gallons                          |
| e. <input type="checkbox"/> Direct mixture (includes metering, subsurface applications)  |               | _____ lbs or gallons                          | e. <input type="checkbox"/> Direct mixture (includes metering, subsurface applications)  |              | _____ lbs or gallons                          |
| f. <input type="checkbox"/> Chemigation  |               | _____ lbs or gallons                          |  |              | _____ lbs or gallons                          |
| g. <input type="checkbox"/> Other (specify): _____   |               | _____ lbs or gallons                          |  |              | _____ lbs or gallons                          |

C. Pest Management Area(s) (use additional pages for each Pest Management Area)

Pest Management Area# 1 of ## 1 (continued)

1. Have any discharges from pest control activities occurred in this calendar year?
- a.  No discharge from pest control activities this calendar year. Note: Checking this box completes Section C if you had no discharge from pest control activities this year. Proceed to section D
- b.  Yes. Proceed to question 2.

2. Indicate the pesticide use pattern for the Pest Management Area:
- a.  Mosquito and Other Flying Insect Pest Control      b.  Weed and Algae Pest Control
- c.  Animal Pest Control      d.  Forest Canopy Pest Control

3. For each treatment area (use additional pages for each treatment area):
- a. Provide a description of the treatment area within this Pest Management Area, including location description:

**Vegetation control on and in the vicinity of TVA dams**

b. Size of treatment area (in acres or linear feet): ~348 acres or \_\_\_\_\_ linear feet

c. Name or location of any waters of the state to which discharges occurred:  
Tennessee River and tributaries in the vicinity of TVA dams

d. Target Pest(s) Nuisance vegetation

4. Name and contact information for pesticide applicator(s) (or check here if same as provided in Section A)

Company Name: \_\_\_\_\_

Street: \_\_\_\_\_

City: \_\_\_\_\_ State:  ZIP Code: \_\_\_\_\_

Contact \_\_\_\_\_

Phone \_\_\_\_\_

E-mail: \_\_\_\_\_

5. Was this pest control activity addressed in your Pesticide Discharge Monitoring Plan (PDMP) before pesticide application:  Yes  No  Not Applicable

6. Enter the total amount of each pesticide product applied for the reporting year by the product name, EPA Registration Number(s) and by application method. Circle if quantity indicated is in lbs or gallons. Add additional pages if necessary.

| Product Name   | EPA Reg. No. | Quantity Applied (lbs or gallons of product): | Product Name   | EPA Reg. No. | Quantity Applied (lbs or gallons of product): |
|--|--------------|---|--|--------------|---|
| Milestone  | 62719-519    | 0.8 lbs or gallons                            | Sulfamet   | 81927-26     | 1.2 lbs or gallons                            |
| Application method:  |              |   | Application method:  |              |   |
| a. <input type="checkbox"/> Aerially by fixed-wing   |              | _____ lbs or gallons                          | a. <input type="checkbox"/> Aerially by fixed-wing   |              | _____ lbs or gallons                          |
| b. <input type="checkbox"/> Aerially by rotary aircraft  |              | _____ lbs or gallons                          | b. <input type="checkbox"/> Aerially by rotary aircraft  |              | _____ lbs or gallons                          |
| c. <input checked="" type="checkbox"/> Land-based sprayer (includes backpack, land vehicle mounted sprayers, high pressure canopy sprayer) |              | 0.8 lbs or gallons                            | c. <input checked="" type="checkbox"/> Land-based sprayer (includes backpack, land vehicle mounted sprayers, high pressure canopy sprayer) |              | 1.2 lbs or gallons                            |
| d. <input type="checkbox"/> Aquatic vehicle mounted sprayer  |              | _____ lbs or gallons                          | d. <input type="checkbox"/> Aquatic vehicle mounted sprayer  |              | _____ lbs or gallons                          |
| e. <input type="checkbox"/> Direct mixture (includes metering, subsurface applications)  |              | _____ lbs or gallons                          | e. <input type="checkbox"/> Direct mixture (includes metering, subsurface applications)  |              | _____ lbs or gallons                          |
| f. <input type="checkbox"/> Chemigation  |              | _____ lbs or gallons                          |  |              | _____ lbs or gallons                          |
| g. <input type="checkbox"/> Other (specify): _____   |              | _____ lbs or gallons                          |  |              | _____ lbs or gallons                          |

D. Certification

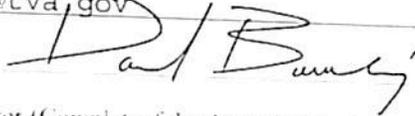
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. On the basis of my inquiry of the person or persons 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 and imprisonment for knowing violations. A false statement is subject to the penalties of perjury.

Printed Name: David L. Bowling

Title: Vice President, Land, River Management, and Env Compliance

E-Mail: dlbowling@tva.gov

Signature/Responsible Official:



Date: 02 13 2019

Annual Report Preparer (Complete if the Annual Report was prepared by someone other than the certifier)

Preparer Name: Chad Reed

Organization: TVA Environmental Permits, Compliance, and Monitoring

Phone: 423 751 3948 N/A

Date: 02 07 2019

E-Mail: chreed@tva.gov