HACCP Step 1 – Activity Description

| Activit | y Description |
|---|---------------|
| Facility: | Site: |
| Various Tulsa District Lakes | Reservoir |
| Project Coordinator: | Activity: |
| Everett Laney | Buoy Work |
| Site Manager: Lake Manager | |
| Address: Tulsa District Office 1645 S. 101 st East Ave Tulsa, OK 74128 | |
| Phone: (918) 669-7411 | |

Project Description

i.e. Who; What; Where; When; How; Why

Project personnel install and maintain buoys and buoy lines both in the reservoir and below the dam in the outlet channel. This work is typically performed with a work barge but may be accomplished with other types of vessels. Buoy maintenance is necessary to ensure public safety. This description assumes that the boat is kept at the Project Office compound on a trailer and has the potential to be transported to other Project Offices for use.

The species listed in this HACCP Plan are of primary concern to the Tulsa District. For a detailed list of additional species, refer to your state's Aquatic Nuisance Species (ANS) Management Plan.

Kansas:

http://www.kdwp.state.ks.us/news/Fishing/Aquatic-Nuisance-Species/KS-Nuisance-Species-Plan

Oklahoma:

http://anstaskforce.gov/State%20Plans/OK/OKLAHOMA%20ANS%20PLAN%20JULY08.pdf

Texas:

Currently the Texas ANS Management Plan is under development.

http://www.tpwd.state.tx.us/publications/pwdpubs/media/pwd_pl_t3200_1221_draft.doc

HACCP Step 2 – Identify Potential Hazards

(to be transferred to column 2 of HACCP Step 4 – Hazard Analysis Worksheet)

| Hazards: Species Which May Potentially Be Moved/Introduced |
|--|
| Vertebrates: |
| |
| |
| Invertebrates: |
| Zebra mussels |
| |
| |
| Plants: |
| Eurasian milfoil |
| Alligator weed |
| Common reed – genus <i>Phagmites</i> |
| Algae (golden) |
| |
| Other Biologics (e.g. disease, pathogen, parasite): |
| Other Biologies (eig. disease) partiogen, parasite). |
| |
| |
| |
| Others (e.g. construction materials, etc.): |
| |
| |
| |
| |

HACCP Step 3 – Flow Diagram

Flow Diagram Outlining Sequential Tasks to Complete Activity/Project
Described in HACCP Step 1 – Activity Description
(to be transferred to column 1 of the HACCP Step 4 – Hazard Analysis Worksheet)

| Task | | | | | |
|------|--|--|--|--|--|
| 1 | Hook up to the boat at the compound. | | | | |
| | | | | | |
| | | | | | |
| Task | | | | | |
| 2 | Tow the boat to the boat ramp that will be used. | | | | |
| | | | | | |
| | \downarrow | | | | |
| Task | | | | | |
| 3 | Launch the boat. | | | | |
| | | | | | |
| | <u> </u> | | | | |
| Task | | | | | |
| 4 | Conduct the buoy work. | | | | |
| | | | | | |
| | ↓ | | | | |
| Task | | | | | |
| 5 | Load the boat back onto the trailer. | | | | |
| | Loud the court onto the trailers | | | | |
| | ↓ | | | | |
| Task | | | | | |
| 6 | Tow the boat back to the compound and/or return if borrowed from another Project | | | | |
| | Office. | | | | |
| | Office. | | | | |
| | | | | | |

HACCP Step 4 - Hazard Analysis Worksheet

| 1 | 2 | 3 | lazard Analysis Woi | 5 | 6 |
|-------------------------------------|--|---------------------------|--|--|---|
| Tasks (from HACCP | Potential hazards identified in | Are any potential hazards | Justify evaluation for | What control measures can be | Is this task a critical control point? |
| Step 3 - Flow Diagram) | HACCP Step 2 | probable? (yes/no) | column 3 | applied to prevent undesirable results? | (yes/no) |
| Task 1 | Vertebrates | No | | | No |
| Hook up to the boat at the compound | Invertebrates Zebra mussels | Yes | Zebra mussels could have gotten on the boat during the previous work. | Check the boat for zebra mussels. Check to make sure the bilge water has been previously drained. Check to assure that the lower unit(s) of the out board does not have any water remaining. | Yes If the boat is to be transported from infested water to non-infested water. |
| | Plants Eurasian milfoil Alligator weed Common reed – genus <i>Phagmites</i> Algae (golden) | Yes | Plants could have gotten on the boat or trailer during the previous usage. | Physically examine the boat, trailer, and pickup for weeds and remove any that are seen. | Yes If the boat is to be transported from infested water to non-infested water. |
| | Others | No | | | No |
| Task 2 | Vertebrates | No | | | No |
| Tow the boat to | Invertebrates | No | | | No |
| the boat ramp | Plants | No | | | No |
| | Others | No | | | No |

HACCP Step 4 - Hazard Analysis Worksheet (continued)

| 1 | 2 | 3 | 4 | 5 | 6 |
|-----------------------|--|--------------------|--|---|-------------------------|
| Tasks | Potential hazards | Are any potential | Justify | What control | Is this task a critical |
| (from HACCP | identified in | hazards | evaluation for | measures can be | control point? |
| Step 3 - Flow | HACCP Step 2 | probable? (yes/no) | column 3 | applied to prevent | (yes/no) |
| Diagram) | | | | undesirable results? | |
| Task 3 | Vertebrates | No | | | No |
| Launch the boat | Invertebrates | No | | | No |
| | Plants | No | | | No |
| | Others | No | | | No |
| Task 4 | Vertebrates | No | | | No |
| Conduct the buoy work | Invertebrates Zebra mussels | Yes | Zebra mussel adults and veligers could get on the boat during the buoy work. | None | No |
| | Plants Eurasian milfoil Alligator weed Common reed – genus <i>Phagmites</i> Algae (golden) | Yes | Plants could get on the boat while it is on the water. | Avoid driving through weed beds and other vegetation. | No |
| | Others | No | | | No |

HACCP Step 4 - Hazard Analysis Worksheet (continued)

| 1 | 2 | 3 | 4 | 5 | 6 |
|---|---|--|--|---|---|
| Tasks (from HACCP Step 3 - Flow Diagram) | Potential hazards identified in HACCP Step 2 | Are any potential hazards probable? (yes/no) | Justify evaluation for column 3 | What control measures can be applied to prevent undesirable results? | Is this task a critical control point? (yes/no) |
| Task 5 Load the boat back | Vertebrates | No | | | No |
| on to the trailer | Invertebrates Zebra mussels | Yes | Zebra mussel adults and veligers could have gotten on the boat and trailer during usage. | Drain the bilge. Lower the motor(s) so that the water in the lower unit(s) will completely drain. | Yes |
| | Plants Eurasian milfoil Alligator weed Common reed – genus Phagmites Algae (golden) | Yes | Plants could have gotten on the boat and trailer during usage. Algae could have gotten into the bilge, lower unit(s), and trailer during usage. | Examine the boat, trailer, and pickup and remove any plants that are seen. Drain the bilge. Lower the motor(s) so that the lower unit(s) will completely drain. | Yes |
| | Others | No | | | No |

HACCP Step 4 - Hazard Analysis Worksheet (continued)

| 1 | 2 | CCP Step 4 - Hazard | 4 | 5 | 6 |
|---|---|--|--|--|---|
| Tasks (from HACCP Step 3 - Flow | Potential hazards identified in HACCP Step 2 | Are any potential hazards probable? (yes/no) | Justify evaluation for column 3 | What control measures can be applied to prevent | Is this task a critical control point? (yes/no) |
| Diagram) | | | | undesirable results? | |
| Task 6 | Vertebrates | No | | | No |
| Tow the boat back to the compound and/or return if borrowed from another Project Office. | Invertebrates Zebra mussels | Yes | Zebra mussel adults and veligers could still be on the boat, trailer, and pickup. | Using at least 140°F water, pressure wash at the boat, trailer, and pickup. Using at least 140°F water, pressure wash the anchor and rope (if used) and/or allow anchor storage area to be completely dried before using again. | Yes If the boat is to be transported from infested water to non-infested water for use. |
| | Plants Eurasian milfoil Alligator weed Common reed – genus Phagmites Algae (golden) | Yes | Plants could have been overlooked at the boat ramp. | Pressure wash the boat, trailer, and pickup. Pressure wash the anchor and rope (if used) and/or allow anchor storage area to be completely dried before using again. | Yes If the boat is to be transported from infested water to non-infested water for use. |
| | Others | No | | | No |

HACCP Step 5 – HACCP Plan Form

HACCP Plan Form

| | (all CCP's or "yes's" from column 6 of HACCP Step 4 – Hazard Analysis Worksheet) | | | | | | | |
|---|---|---|--|---|---|---------------|---|---|
| | | | | Moni | toring | | | |
| Critical Control Point (CCP) | Significant Hazard(s) | Limits for each Control Measure | What | How | Frequency | Who | Evaluation & Corrective Action(s) (if needed) | Supporting Documentation (if any) |
| Task 1 Hook up to the boat at the compound | Zebra mussels Eurasian milfoil Alligator weed Common reed – genus <i>Phagmites</i> Algae (golden) | Zero tolerance on the boat and trailer. | All areas of the boat and trailer. | Visual inspection and feeling with hands. | Before each use if the boat has been transported from infested water to non-infested water for use. | Boat operator | Check the boat and trailer before each use. | |

HACCP Step 5 – HACCP Plan Form (continued)

HACCP Plan Form

| | Monitoring | | | | | | | |
|--|---|---|------------------------------------|---|--------------------------|---------------|--|---|
| Critical Control Point (CCP) | Significant Hazard(s) | Limits for each Control Measure | What | How | Frequency | Who | Evaluation & Corrective Action(s) (if needed) | Supporting Documentation (if any) |
| Task 5 Load the boat back on to the trailer | Zebra mussels Eurasian milfoil Alligator weed Common reed – genus <i>Phagmites</i> Algae (golden) | Zero tolerance in the bilge, in/on lower unit(s), and on trailer. | Bilge, lower unit(s), and trailer. | Drain the lower unit(s) and bilge. Remove any visible zebra mussels and weeds. | Before leaving the ramp. | Boat operator | | |

HACCP Step 5 – HACCP Plan Form (continued)

HACCP Plan Form (all CCP's or "yes's" from column 6 of HACCP Step 4 – Hazard Analysis Worksheet) **Monitoring** Critical **Significant** Limits for **Frequency** Who **Evaluation & Supporting** What How **Control** Hazard(s) each Control Corrective **Documentation Point** Measure Action(s) (if any) (CCP) (if needed) All areas of Pressure wash* After each use Task 6 Zebra mussels Zero tolerance Boat the boat, trailer, when the boat is Eurasian milfoil on boat and the boat and operator Alligator weed and pickup. trailer. trailer. used in infested Tow the boat Common reed – water and is to be back to the genus *Phagmites* Pressure wash* transported to Any part of compound Algae (golden) the pickup the anchor and non-infested and/or return if that came rope (if used) water for use. borrowed from and/or allow into contact another Project with the anchor storage Office water (i.e. area to be tires, wheels, completely and fenders). dried before using again.

HACCP Plan has been discussed with all employees. It is the manager's responsibility to review plan with all new employees as required.

*Use at least 140°F water for zebra mussels.

| Facility: | Address: |
|------------|----------|
| | |
| | |
| Signature: | Date: |
| | |
| | |