

Trout in the Classroom – Who’s Involved

Due to the size and scope of the Trout in the Classroom program, there are many people that are needed to ensure that the program runs as effectively and efficiently as possible. This is a list of the key players in the programs and a general description of their jobs as related to Trout in the Classroom.

TIC State Coordinator: Prior to late 2008, this position was held on a volunteer basis by a member of Trout Unlimited. The program grew exponentially and in late 2008, was taken on by a full time employee of the New Jersey Division of Fish and Wildlife. The job of the State Coordinator is to maintain communication between teachers, volunteers and coordinators, develop new educational materials and provide guidance on educational materials, help coordinate programs, releases, paperwork, files, etc. The TIC State Coordinator will spend approximately 75% of their time on the program.

Trout Unlimited TIC Chapter Coordinators: There are currently 10 active chapters of Trout Unlimited in New Jersey. Each chapter has selected a Trout in the Classroom Chapter Coordinator. It is the job of the Chapter Coordinator to maintain contact with teachers and work closely with the State Coordinator. Chapter Coordinators also oversee the TIC Chapter Volunteers. Chapter Coordinators actively seek volunteer help for egg delivery day and coordinate delivery schedules. They check in with the teachers and students via phone or email to make sure that the tanks, fry and equipment are doing well throughout the year. Chapter Coordinators should seek volunteer help for releases if requested by teachers. Chapter Coordinators may be asked to deliver more eggs or fry to schools that have lost them, or to seek a volunteer who can do this. Chapter Coordinators should be active within their chapter and be able to recruit Chapter Volunteers. Chapter Coordinators will house and maintain their chapter’s spare chiller. If contacted by a teacher or the State Coordinator, the Chapter Coordinator will coordinate pickup of broken chiller, replace broken chiller with the chapter spare within 24 hours, bring the broken chiller to the Chiller Repair Person, pick up fixed chiller and return it to the school, swap it for the spare chiller and return spare chiller to storage. The Chapter Coordinator will assist teachers in year end tank and chiller maintenance if needed. TIC Chapter Coordinators should spend approximately 2-4 hours a month, depending on the time of year, with TIC.

Trout Unlimited TIC Chapter Volunteers: Each chapter has volunteers that come out and help with special TIC occasions, such as egg delivery, programs, releases and possibly new egg/fry delivery. Chapter Volunteers work closely with the Chapter Coordinator to ensure that these volunteer opportunities run as efficiently as possible and that everyone has a positive experience from their interactions. TIC Chapter Volunteers should spend approximately 8 hours a year on TIC.

Trout Unlimited TIC Chiller Repair Person: The Chiller Repair Person trouble shoots and repairs all chillers received for repair. The Repair Person maintains an inventory of replacement parts sufficient to repair any chiller within a day or two, and orders spare parts as needed. The Chiller Repair Person will maintain a log of repairs and submit expense reports quarterly for repayment. The Repair Person should expect to spend as much time as needed to get chillers in working order. The amount of time spent will be determined by the number of chillers in need of repair and the scope of the repairs needed.

Trout in the Classroom Teachers: Teachers work closely with the students to ensure an active Trout in the Classroom program throughout the year. An activity guide was developed for teachers to use with their students. Lessons covered in the guide are correlated to state science standards and are targeted for middle school age

children. Topics covered include trout biology, ecology, conservation, history, life cycle and more. Teachers maintain contact with the State Coordinator and the Chapter Coordinator throughout the year and are responsible for release applications, scheduling releases and programs, reports, etc. Teachers should contact Chapter Coordinators in case of emergencies and for general questions. Teachers may also contact the State Coordinator with questions and problems. Teachers should spend approximately 1 hour per week on TIC, but this will be dependent on the teacher.

Students: The students are an integral part of the TIC program. They work closely with the teacher to ensure that the tank environment is healthy and meets the habitat requirements of the brook trout. Students monitor water quality and hatchling status. They clean and maintain the tank to ensure a healthy trout population. Students feed the fish and monitor water temperature. Students participate in lessons about trout that the teachers supplies. Students should expect to spend at least 5-15 minutes a day observing their tank. More time may be needed dependent on the activities scheduled by the teacher.

TIC State Coordinator Expectations

1. *Late August-early September:* The State Coordinator will collect all relevant information from teachers interested in TIC for the upcoming year and will make sure that all the registration paperwork is complete. Schools will be assigned to chapters.
2. *Early-Mid September:* The State Coordinator will send the list of teachers to the chapters so that they know what teachers are assigned to them and how many teachers their chapter is responsible for. This helps Chapter Coordinators plan for Egg Day when they will need lots of volunteer help. The State Coordinator will prepare educational materials and maintain communication between teachers and chapters.
3. *Mid-Late September:* Teachers will be sent instructions for setting up their tank. Final registration paperwork will be entered into the database. Completed databases will be sent to the Chapter Coordinators. The State Coordinator will begin prepping everything needed for Egg Day, as well as coordinating Egg Day and schedules with chapters.
4. *Late September – Mid October:* The State Coordinator will send out instructions about Egg Day. Included will be what to bring, such as a cooler, what to expect upon arrival at the hatchery, how to tell a dead egg from a good egg so you can show the teachers and students, what you should do at the school, list of teachers and their contact information and estimated Egg Day date. The date of Egg Day will vary depending on the success of the egg take at the hatchery.
5. *Mid-Late October:* The State Coordinator will check with the teachers to make sure that they are ready for Egg Day. State Coordinator will make sure that the chapters are prepared for Egg Day. Instructions about when to arrive at the hatchery, reminders to bring coolers and ice wrapped in towels, to have their directions to the schools and teacher contacts handy. State Coordinators should let chapters know that they should be checking the water temperature (should be 50-52 degrees Fahrenheit) at the school before putting the eggs in the net basket and checking that chillers are at least 12 inches off the floor. State Coordinators should remind chapters that they represent Trout Unlimited, Fish and Wildlife and TIC. Chapters should take the time to show students how to cull out dead eggs and remind them that they have to do this daily, show teachers and students the different food sizes and remind teachers to look in the Activity Guide for information on when to feed the fish each size food, apply

the TIC stickers to new tanks to help brand the program, and make sure that all intakes are covered with the mesh screen and secured with a rubber band.

6. *November - June:* Eggs will start hatching and fish will start growing. Coordinator will continue to provide communication with the teachers, develop lesson plans, maintain the website, etc.

7. *January-December:* Coordinator should promote the TIC program to schools, teachers, chapter and other people that they know. Encourage them to get involved.

TIC Chapter Coordinator Expectations

1. *Late August-early September:* Coordinate all necessary volunteers for Egg Day deliveries. Plan to have a few extras on call, because teachers are still registering with the State Coordinator to receive their eggs.

2. *Early-Mid September:* The State Coordinator will be sending out your teacher lists for your chapters. Email or call the teachers in your chapter and introduce yourself, let them know your role in TIC and let them know that you are there to answer any questions or help with any problems that may arise. Make sure tanks and equipment are set up correctly.

3. *Mid-Late September:* Teachers should be setting up their tanks. Contact the teachers assigned to the chapter and make sure that all parts of their equipment are working and that water quality is okay. Make sure that the teachers have tested their chillers for at least a day to make sure that they are chilling the water properly. Make sure that they have their net breeders in the tank and ready for eggs. Make sure that the back, sides and top of the tanks are covered to prevent sunlight from getting into the tank. Eggs and alevin are sensitive to sunlight. Make sure tanks and equipment are set up correctly.

4. *Late September – Mid October:* The State Coordinator will send out instructions about Egg Day. Included will be what to bring, such as a cooler, what to expect upon arrival at the hatchery, how to tell a dead egg from a good egg so you can show the teachers and students, what you should do at the school, list of teachers and their contact information and estimated Egg Day date. The date of Egg Day will vary depending on the success of the egg take at the hatchery. Chapter Coordinators should make sure that all of the Chapter Volunteers receive this information. Chapter Coordinators should assign Chapter Volunteers to teachers for Egg Day, and ensure that the Chapter Volunteers have the contact information for the teachers they are responsible for, as well as an address for the school or directions to the school. Make sure tank and equipment are set up correctly.

5. *Mid-Late October:* Chapter Coordinators should check with the teachers to make sure that they are ready for Egg Day. Make sure that the tank and equipment are set up and working correctly. Chapter Coordinators should also check with Chapter Volunteers to make sure that they are prepared for Egg Day. Chapter Coordinators should remind Volunteers about when to arrive at the hatchery, remind them to bring coolers and ice wrapped in towels, to have their directions to the schools and teacher contacts handy. Chapter Coordinators should let Volunteers know that they should be checking the water temperature (should be 50-52 degrees Fahrenheit) at the school before putting the eggs in the net basket and checking that chillers are at least 12 inches off the floor. Chapter Coordinators should remind Volunteers that they represent Trout Unlimited, Fish and Wildlife and TIC. Volunteers should take the time to show students how to cull out dead eggs and remind them that they have to do this daily, show teachers and students the different food sizes and remind teachers to look in the Activity Guide

for information on when to feed the fish each size food, apply the TIC stickers to new tanks to help brand the program, and make sure that all intakes are covered with the mesh screen and secured with a rubber band.

6. *November - June:* Eggs will start hatching and fish will start growing. Coordinators should check with the teachers in their chapter periodically to see if they have any questions or concerns. Let them know you are there to help them. Offer programs such as fly tying, macro invertebrate studies, fly casting. Ask if the teachers would like your assistance at their release.

7. *April – June:* Chapter Coordinators should contact teachers and offer to help with their releases. If the Chapter Coordinator can not make it, they should ask a Chapter Volunteer to assist the school. While on the release trip, take pictures of the event. Develop a write-up for your website or newsletter and let the teacher know about it. This will help the kids realize that they are part of the bigger picture when it comes to coldwater conservation and will help your chapter members realize that they are part of the bigger picture as well. Releases are better with a trout expert and who better than a member of Trout Unlimited.

8. *January-December:* Coordinators should promote the TIC program to schools, teachers, chapter and other people that they know. Encourage them to get involved.

Trout Unlimited TIC Chiller Repair Person Expectations

1. *September - June:* The Chiller Repair Person will coordinate all necessary repairs for chillers that are in need of maintenance. The Repair Person will maintain an inventory of spare parts and will restock the inventory as needed, submitting financial reports to the State Council. When asked by a Chapter Coordinator, the Chiller Repair Person may pick up a problematic chiller from a school, fix it and return it. The Chiller Repair Person will keep the TIC State Coordinator and Chapter Coordinators aware of any repairs being made and to which schools.

TIC Chapter Volunteer Expectations

1. *Late August-early September:* Let the Chapter Coordinator know that you would like to help with Egg Delivery. With so many schools in the program, Chapter Coordinators need a lot of help to ensure that eggs are delivered to schools and taken care of as quickly as possible.

2. *Late September – Mid October:* Chapter Volunteer should have the direction and contacts for the schools that they are responsible for. A sensible driving route should be mapped, so that eggs are received at the schools as quickly as possible.

3. *Mid-Late October:* Chapter Volunteers should arrive at the hatchery or their assigned meeting place at the assigned time on Egg Day. Chapter Coordinators will tell you when you should arrive and where. Volunteers should have a small cooler with them and ice wrapped in towels to keep the eggs cold. Volunteers should get their assigned school's eggs, two pieces of screening per teacher, a TIC sticker per teacher and one bag or each size food. Upon arrival at the school, Volunteers should show the teacher and students how to pick out the dead eggs, remind them that this is something they need to do daily, check the water temperature and make sure the chiller is at least 12 inches off the floor, make sure the tanks are protected from the sun on all sides but the front, place the TIC sticker on the front of the tank to promote the program, show teachers and students the different size food

and remind them to check the Activity Guide for feeding charts and information, and make sure that all intakes are covered and secured with the mesh screen that you just delivered.

4. *November - June:* As the year goes on, some schools will lose eggs or fry, or have some sort of equipment failure. Chapter Coordinators may not be able to help a teacher in need right away. Chapter Volunteers should let the Chapter Coordinator know that they are willing and available to help in emergency situations as needed.

5. *November – June:* Many schools would like an opportunity to invite Trout Unlimited in to help with a program. If you have a knowledge of fly tying, fly casting, macro invertebrate identification or anything else that is pertinent to the TIC program and would like to offer yourself as a teacher for the day in your chapter's assigned schools, please let your Chapter Coordinator know. If a request comes in to your Chapter Coordinator for a program, he/she will be able to call upon their corps of volunteers to help with a program at the schools.

6. *April – June:* Chapter Coordinators may ask a Chapter Volunteer to assist a school with a release. While on the release trip, take pictures of the event. Develop a write-up for your website or newsletter and let the teacher know about it. This will help the kids realize that they are part of the bigger picture when it comes to coldwater conservation and will help your chapter members realize that they are part of the bigger picture as well. Releases are better with a trout expert and who better than a member of Trout Unlimited.

7. *January-December:* Volunteers should promote the TIC program to schools, teachers, chapter and other people that they know. Encourage them to get involved.

TIC Teacher Expectations

1. *September:* Teachers are expected to fill out their registration paperwork and return it to the State Coordinator by the deadline. At the end of the month, teachers should put their tank together and make sure that all equipment is in proper working order. Start preparing your students for Egg Day and the rest of the TIC year. Introduce them to the tank and the tests that they will need to perform daily once the eggs arrive. Register on the TIC website to participate in the forum and get monthly activities from the State Coordinator.

2. *October:* A week before Egg Day, chillers need to be turned on to bring the temperatures down. Egg hatching baskets should be placed in the tank or hung on the side of the tank in preparation for eggs. Gather Petri dishes and eye droppers so that when eggs arrive, students will be immediately hands on with the program by removing the dead eggs.

3. *November:* Watch the eggs hatch and the fry grow. Use lessons in the Activity Guide to help your students learn about trout and coldwater conservation. Start thinking and planning about your release day.

4. *December:* Watch the fry grow. Use lessons in the Activity Guide to help your students learn about trout and coldwater conservation. Fill out the application for the trout release. They are due at the end of the month. Prepare for your holiday break by doing a big water change and replacing the charcoal in your filters. Plan a field trip to the hatchery.

5. *January – April:* Watch the fry grow. Use lessons in the Activity Guide to help your students learn about trout and coldwater conservation. Plan a field trip and your release day.

6. *April – June*: Release your trout. Break down and clean your tank and store it for next year. Fill out the end of the year report for Trout in the Classroom.

7. *January – December*: Keep in touch with Trout Unlimited chapters and the State Coordinator. We are here for you and will help in any way possible to make your program a success. Talk to other teachers you know and spread the word about the TIC program.

TIC Student Expectations

1. *September – June*: Learn about trout, coldwater conservation and the benefits of clean, healthy coldwater habitats. Students should be as hands-on with the tank as possible, monitoring water quality, temperature, fish health, etc. Students are the future conservationists.

TIC Tank Monthly Maintenance

1. *September*

- Order the equipment. Inventory what you receive. Set up the equipment. Make sure all the equipment is in working order. There could have been damage from shipping or storage. Some things to keep in mind as you are setting up the equipment are:
 - a. Chillers need to be a minimum of 12 inches off the floor and have 10-12 inches of free air on all sides to ensure that they are working properly and not getting over stressed. This will keep the dust from the floors out of the chiller and will extend chiller life.
 - b. Your tank should not be near a heater because that will stress the chiller. If it is near a heater, you will need to have the heat cut off to that corner of the room or block the vent in some way.
 - c. Your tank should not be near the windows. If it is, make sure to cover the back, bottom and sides with Styrofoam (available at hardware stores). The front of the tanks should remain open so the students can see in. Eggs and young fish are extremely sensitive to UV light, which is why your tanks should be covered. Prolonged exposure to sunlight will kill eggs and sac-fry. Once your fish start swimming you can uncover the tank, put your tank hood on and turn on the lights. You may want to leave the Styrofoam on the tank to help keep the tank cool, especially if your room gets really hot later in the year. This will help prolong the chiller life.
 - d. All TIC classroom electrical equipment must be protected by a ground fault interrupter (GFI). The electrical supply of all classrooms where electrical equipment is in contact with water must have this protection -- just as is required in bathrooms and kitchens. Some of the older schools may be in violation. The recoil of an electrical shock causes more harm than the electricity itself.
 - e. Run water through your chiller once it is out of storage to remove the scale in the evaporator tubing. Do this in the sink, not at the tank.
 - f. If you did not thoroughly clean your chiller at the end of the season (recommended) you need to do that now. See the instructions under the chiller maintenance section of this document.
 - g. Make sure the chiller control temperature and your actual tank temperature are within a degree or two of each other.
 - h. Check on with the fire marshall, electric and structural engineers of your school before you set up your tank. They may not approve a location because of wiring, safety or weight of the tank when filled with water.
- Let the TIC State Coordinator know you are ready to receive eggs and submit the registration paperwork.

- Download the Trout in the Classroom Activity Guide from www.njtroutintheclassroom.org and start planning your lessons.
- Register as a member on the site, www.njtroutintheclassroom.org, so that you can interact with the State Coordinator, Chapter Coordinators and other teachers around the state and get access to some great lessons.

2. October

- Turn your chiller on a week before Egg Day, so the water is 50 degrees, the same temperature as the hatchery water. This will prevent heat shock to your eggs when they are added to the tank.
- Make sure all equipment is working properly *before* Egg Day.

3. *October – November* – When all of your eggs have hatched and yolk sacs have been absorbed, unhook the hatching basket and let it sink in the water. Adventurous fry will swim out. The less adventurous will remain in the basket a few more days.

4. *November – December* – Do a small water change, only if your testing numbers are high.

5. *November – June* – Clean the chillers air filters each month.

6. *December* – Change your filter media and do a large water change right before the holiday break.

7. *January – June* – Do a small water change, only if your test results are high.

8. *June* – Break down all the equipment. Clean everything with a 10% bleach solution and rinse very well. Store in a safe place. Reorder your supplies for next year. Things to order are water test kits, stress zyme, Chemi-pure filter media, foam block for Fluval Filter, Tap Water Conditioner (if needed), Sandstone 12” Airstone, 1 pack of check valves. These can be ordered in a refill kit from That Fish Place.

TIC Tank Set Up

1. Unpack all materials and compare to shipping list. Ensure that nothing is missing or broken. Check plastic pieces for cracks, particularly the filter components.



2. Place tank in a location away from heat, excessive light, and activity. If next to a window, make sure that the window shade is down until the fry are swimming around, or that there is some protection around the tank.