To All Current TIC Teachers and Those Interested in Beginning the Program:

Attached is the TIC Memo of Intent for the 2023-24 school year. This information is used by MATIC coordinators for planning for the upcoming year and securing equipment and volunteer resources.

We need to have a signed copy of the MOI no later than the date of your 2023 trout release. or the submission date of your funding request, whichever is earliest. The DNR will not process a funding request without a MOI. The last day to submit a funding request is July 31, 2023.

The MOI will serve as a record of your intention to continue in the program. If you are aware of any changes in the staff who will participate or the number of tanks you plan to have, please provide that at this time too. This will help ensure that all TIC participants receive emails. Minor changes to the MOI have been highlighted, but it is requested both you and your principal review the entire document.

As many of you know the MOI stipulates that a school that has more than two years participation in TIC is responsible for planning and coordinating its trout release. The manual provides guidance for the release and also lists sources for obtaining volunteers to assist with the release.

A suggestion that Alan and I would like to offer is that at the start of the school year you recruit two TIC volunteers who will make a commitment to assist with your release. Check with parents of TIC students, other teachers/retired teachers, family, friends, relatives – you get the point. All these folks need to do is agree to spend 4-5 hours one day next spring helping with your release. It doesn't require a college degree to help lead students in a Scavenger Hunt or conduct tests of stream water.

Also, in order for schools that have two or more years of TIC experience to facilitate transporting fingerlings during a release, teachers should have a cooler and an aerator on hand. The aerator was added to the Start-Up Kit for new schools several years ago. It is also on the equipment list the TIC Manual.

Thank you for your cooperation.

Alan Burrows, Chelsea Miller(DNR), Chuck Dinkel ><>

MOI Attached:

Principles, Policies and Practices

I. BACKGROUND

The Mid-Atlantic Trout in the Classroom (MATIC) program is a voluntary effort started and originally supported by the Potomac-Patuxent Chapter of Trout Unlimited (PPTU). It is part of a loose and growing national network of over 4,500 TIC programs in more than 20 states. About 40% of these TIC programs are associated with Trout Unlimited (TU). TIC began around 40 years ago in California. It expanded to other states and was introduced into New York City in 1995, where it later caught the attention of Potomac-Patuxent Trout Unlimited here in Maryland.

The MATIC program started in 2003 with 3 elementary schools in Montgomery County and has expanded to a combination of almost 100 elementary, middle and high schools, one college and 4 outdoor education centers in 13 Maryland Counties, Baltimore City and the District of Columbia. Partly due to MATIC's statewide expansion, the Mid-Atlantic Council of Trout Unlimited, made up of TU chapters throughout Maryland and The District of Columbia took on stewardship of the program in 2012. This growth in MATIC has been accompanied by the development of principles, policies and practices which help to provide uniform guidance to this expanding program.

MATIC's long range vision includes helping to implement the state's education requirement for environmental literacy. Through the MATIC, teachers will promote a durable conservation ethic among their students on whom the future of our water and other natural resources depends.

THE MATIC MISSION is to introduce students to cold water conservation as the first step in becoming future protectors of and advocates for clean and healthy streams, lakes and rivers

MATIC is essentially a cold water conservation program taught to students in a classroom. The students are provided with fertilized rainbow trout eggs which they raise in a 55-gallon tank, in water kept at optimum conditions for the eggs to hatch and grow rapidly to fingerling size. The MATIC program concludes with a release of these fish into an approved designated stream. Here, the connection is made between the tank water which has been carefully controlled with respect to temperature, chemical balance and cleanliness and the stream receiving the trout. The students see that they have created in the classroom a microcosm of what prevails in nature.

II. PRINCIPLES

1. The MATIC program is teacher driven. Teachers, rather than school administrators, initiate applications to join the MATIC family.
2. Teachers are responsible for implementing MATIC's mission of introducing students to cold water conservation.
3. Schools own the equipment required to successfully raise the trout if it has been purchased with their funds. Equipment provided to a school with DNR funding must be returned to the DNR if the school ceases to participate
4. Schools provide financial and administrative support to the program.
5. Under teacher supervision, students are responsible for carrying out all MATIC trout raising activities.
6. The release event as a yearly field trip during school hours is an integral part of the MATIC program.
7. MATIC management will facilitate the MATIC program with technical, training, advisory and other types of support.

8. Volunteers have an essential role in helping implement MATIC. Because of its mission, MATIC needs to partner with like-minded organizations that promote conservation in order to implement and enrich its program to the students.

III. POLICIES ON:

1. ADMISSION TO THE PROGRAM

Teacher initiated applications will get priority consideration for admission to the MATIC. Experience has shown that MATIC school performance and teacher commitment are better when teachers, rather than school administrators, initiate application for admission to the program. Also, fish survival rates are better. Although MATIC is designed for third grade and above, exceptions are possible based on discussion with MATIC coordinators. This factor is taken into consideration when determining admission to the program.

2. TEACHER TRAINING

All first-year teachers must attend a free one-day special session where they receive MATIC orientation, training and resource materials. Veteran teachers should recertify participation by attending a training course at least once every three years. It is MATIC's experience that teachers who do not periodically retrain, keep up with changes to the program, or read the TIC Manual often have the poorest results. Teachers who in the opinion of TIC volunteers fall into this category may be placed on probation and/or the school limited to the number of tanks permitted.

3. PROGRAM MODEL

The rapidly increasing number of schools has outstripped the capacity of MATIC management to support them. For that reason, MATIC is changing from a ***management support*** model to a ***self-reliant teacher*** model in counties where support volunteers are insufficient to provide the high level of support hitherto provided. Teachers with more than two years of MATIC experience will now be fully responsible for recruiting guest speakers and planning, organizing and conducting their own release programs in accordance with guidelines in Chapter 9 of the teacher's manual. However, they will continue to receive help in emergencies and with spare parts and other needs when available.

For the first two years of their participation in MATIC, each teacher will receive priority technical support and access to emergency equipment from the program's volunteer network. MATIC also will continue to promote a system by which new TIC teachers can contact designated, experienced ones for ways for help in resolving tank care problems.

4. EQUIPMENT OWNERSHIP

MATIC schools will procure the equipment and supplies listed in Chapter 2 of the teacher's manual. Schools are responsible for the maintenance, repair and replacement of their equipment. The Maryland Department of Natural Resources (DNR) is a source for funding for procuring complete new systems, part of the costs of substitutes teachers and buses for trout releases and replacing defective, and out-of-warranty equipment. It is particularly important for schools to use the chillers and filters specified in the equipment list because MATIC management tries to keep several spare units and parts on hand for emergency use. Loaned units must be maintained to the same standard as original equipment and returned to MATIC management when asked to do so. Equipment provided by DNR funding belongs to that agency and must be returned if a school decides to no longer participate in TIC.

5. RELEASE EVENT

A yearly event to release the trout grown in the classroom is a critical part of every MATIC program. The release event provides closure to the annual school MATIC effort and illustrates the relationship between the tank and the stream. Just as the water in the tank needs to be kept clean, chemically balanced and free of pollution so should our streams, lakes and rivers. By signing the MOI the teacher and principal of each participating facility

agree the school will carry out a planned release program following the guidelines in Chapter 9 of the teacher's manual.

6. NETWORKING

Early in the development of the program, it became clear that MATIC must network with other organizations to fulfill its mission and help schools enrich their TIC programs. MATIC has reached out to TU chapters for volunteers to: (a) deliver trout eggs and food to schools, (b) conduct macro-invertebrate and other stream studies and (c) demonstrate casting and fly tying at releases. A contact list of potential volunteers may be found in Appendix G of the teacher's manual.

7. PROGRAM GROWTH

The MATIC program has expanded considerably faster than the required increase in volunteers to service it. To avoid mismatches between volunteers and the needs of the program, MATIC has adopted a policy of limiting the number of new schools, when necessary, to those for which adequate volunteer support is available. The decision on the number of new schools will be made yearly. Title 1 Schools will receive priority when deciding which new schools will be added to the program. Otherwise, funding approvals will be based on a first-come-first-serve basis. Each submission will have a timestamp that will allow for this to be decided fairly. The deadline to fill out this Funding Request Form is July 31st.

8. DISCONTINUATION FROM THE PROGRAM

A school, which fails to meet its commitment to the MATIC principles, policies or practices will be discontinued from the program but can apply for readmission after a two-year interval. Where in MATIC management's opinion, special circumstances exist, a school may be placed on a year's probation instead of being immediately discontinued. See Section III, Article 2, Teacher Training

IV. PRACTICES

A. STUDENT ROLE

It is desirable for as many students as possible carry out all trout-raising activities, including water quality testing and maintenance, trout feeding, tank maintenance and year-end equipment cleanup as specified in the teacher's manual. Students are expected to maintain an up-to-date record of conditions in the tank and fish health as specified in the teacher's manual. All of these activities should be done under teacher supervision. It is hoped that students taking an active role in the care of the fish and their environment are more likely to feel more caring and responsible for trout, not only in the tank but in nature.

B. TEACHER ROLE

The MATIC teacher

1. Takes the initiative to apply to join MATIC and implement the program in that school.

2. Obtains MATIC start-up equipment and supplies as listed in the current TIC teacher's manual. A grant for the funds needed to obtain this equipment may be submitted to a funding agency. (see chapter 13 of the TIC Manual for information regarding funding from the Maryland DNR.)

3. Using the manual, will instruct and be responsible for supervising students in the protocols for proper tank, fertilized egg and fish care.

….4 Using the data sheets in the TIC Manual or those provided by TIC volunteers, maintain a daily record of tasks performed and water quality measurements. The data sheets provide information that helps volunteers analyze problems that occur. Requests by teachers for assistance correcting water quality issues or fish losses should be accompanied by 7 – 10 days of the data recorded prior to the incident.

5. Plans, organizes and carries out an annual field trip during school hours to release the school's trout fingerlings into waters approved by the Maryland Department of Natural Resources (DNR). Those teachers with two or more years of experience will recruit the volunteers required for their planned release activities. MATIC will try to provide volunteers to help first and second year teachers implement their trout release events.

6. Will, assisted by students, clean up the tank and its accessories, chiller and filter for storage until the next school year as specified in Chapter 12 of the current teacher's manual.

C. MATIC MANAGEMENT ROLE

MATIC management will supply each participating TIC facility with free fertilized rainbow trout eggs and enough food to promote healthy trout growth while the hatchlings are in the school tanks.

MATIC management will obtain from DNR and distribute to each member school permits to raise trout in classrooms and to release them at DNR-approved sites. Teachers will propose specific release sites, preferably in consultation with MATIC management, no later than the date specified in the current TIC teacher's manual or other official MATIC communication. The teacher's manual contains a list of DNR-approved trout release sites. MATIC management will apply for stocking permits for all schools. If several schools apply for a permit to stock trout in the same location on the same day, the earliest applicant will get the applicable permit.

MATIC management is also responsible for developing, updating and distributing the teacher's manual and other printed and online materials. The manual is the key compilation of best practices and procedures for successful implementation of the MATIC program.

D. VOLUNTEER ROLE

Volunteers are an essential part of the MATIC family. They may come from both within and outside the ranks of TU members. They may deliver fertilized eggs, food and permits to MATIC schools and may help in other ways, including: (a) assisting teachers in organizing students at release events, (b) helping teachers resolve problems of tank management, and (c) speaking to students on topics such as the importance of the health of our streams, lakes, and rivers to our future; how streams provide the temperature, chemical balance and cleanliness the students maintain in the tank for trout survival, and other topics relevant to the program.

E. COMMUNITY ROLE

Parental or other volunteer involvement can facilitate the TIC experience by providing assistance with release programs, tank maintenance and such activities as feeding trout during prolonged school closings. While not mandatory, such help from the parent or neighborhood community can enrich the TIC experience.

Memorandum of Intent - 2023-2024 School Year

TO: The Mid-Atlantic Trout in the Classroom (MATIC) Contact in each Nature Center or Learning Organization (Center)

FROM: Mid-Atlantic Trout in the Classroom (MATIC)

Welcome to the Trout in the Classroom (TIC) family for 2023-2024

All of us who manage and coordinate the program are pleased that _____ would like to take part in The Mid-Atlantic Trout in the Classroom (MATIC) program during the 2023-2024 school year. We look forward to the establishment or maintenance of an exciting and rewarding experience for you, your visitors and staff, and a productive and mutually beneficial relationship with the MATIC program.

The mission of TIC is to introduce youth to cold water conservation as the first step in becoming future protectors of and advocates for clean and healthy streams, lakes and rivers. More broadly, TIC aims to reinforce experiences that nurture a conservation ethic in Maryland and D.C. youth.

The purpose of this memorandum of intent is to make key MATIC relationships clear: what a Center can expect from MATIC and what MATIC expects from participating Centers. The objective is to promote a mutually collaborative and supportive relationship among the key participants - educators, administrators, visitors and volunteers - to achieve the program's mission and make TIC an enjoyable and rewarding experience for all those involved.

The attached Chapter 1 of the teacher's manual defines those relationships in detail and constitutes an integral part of this memorandum.

To affirm agreement, the responsible educator and the director of each Center implementing MATIC are requested to sign, date and return a copy of this memorandum of intent (MOI) by mail or email. Please include the number of tanks you plan to operate and return the MOI to Chuck Dinkel no later than the date of your trout release or the submission date of your DNR funding request, whichever is earliest. The DNR will not process a funding request without a MOI. The last day to submit a funding request is July 31, 2023.

This information will enable us to begin planning for your participation in the fall of 2023. (See MOI cover letter for additional guidance) Please retain a copy of this memorandum of intent for your records. Questions about the MATIC Program and this memorandum should be addressed to MATIC co-coordinator, Chuck Dinkel (troutintheclassroomcd@gmail.com 301- 401-5066). Only this signed page needs to be sent to Chuck either electronically or Chuck Dinkel, 2771 Loch Haven Drive, Ijamsville, MD 21754

The parties acknowledge that MATIC is not a manufacturer or seller of equipment used in TIC, and MATIC assumes no liability for the use of TIC equipment by participating schools. We look forward to your Center's participation in the 2023-2024 MATIC Program.

With best wishes for a productive and enjoyable TIC experience.

CENTER/SCHOOL _____ NUMBER of TANKS_____

DIRECTOR/PRINCIPAL _____ _____ _____
Please Print Name Signature Date

EDUCATOR/TEACHER _____ _____ _____
Please Print Name Signature Date

MID-ATLANTIC Trout in the Classroom (MATIC)

Chuck Dinkel/**Alan Burrows** _____
Signature Date