



MARYLAND DEPARTMENT OF THE ENVIRONMENT

Water and Science Administration
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FACT SHEET

General Permit for Discharges from Swimming Pools and Spas

General Discharge Permit Number: 17-SI-XXXX
NPDES Number: MDG76XXXX

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Table of Contents

SUMMARY OF SIGNIFICANT CHANGES FROM THE 12-SI..... 2

BACKGROUND..... 2

PART I: PERMIT APPLICABILITY 3

PART II: AUTHORIZATION UNDER THIS PERMIT 4

PART III: SPECIAL CONDITIONS FOR DISCHARGES 4

PART IV: MONITORING AND REPORTING 7

PART V: STANDARD PERMIT CONDITIONS..... 8

PART VI: AUTHORITY TO ISSUE GENERAL NPDES PERMITS 8

APPENDIX A: SPECIFIC REQUIREMENTS FOR DISCHARGE CATEGORIES 8

APPENDIX B: DEFINITIONS, ABBREVIATIONS, AND ACRONYMS..... 12

APPENDIX C: PERMIT EXEMPTION FORM 12

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Comments were received during the public participation process for this permit and have been addressed in a Response to Comments document. Any discrepancies in rationale between this fact sheet and the Response to Comments document are resolved in favor of the Response to Comments document.

SUMMARY OF SIGNIFICANT CHANGES FROM THE 12-SI

1. Clarification of limitations by reformatting permit into separate "Discharge Types"
2. Addition of a new discharge type to cover overflow, splashout, and spraydown of pool decks and surrounding areas with narrative limitations.
3. New requirement for standard operating procedures to be maintained at each facility.
4. Specific inclusion of "similar facilities," such as water slides, lazy rivers, spray pads, splash pads, interactive fountains, and water themed amusement park rides.
5. Specific exclusion of bumper boat facilities and any operations which discharge contaminants not addressed in the permit.
6. New narrative requirements for backwashing filters, including a requirement for the first 30 seconds of filter backwash wastewater to be either directed to sanitary sewer or collected for settling prior to discharge.
7. New conditional requirements for facilities discharging into Tier II receiving streams.
8. Addition of clarifying language regarding chemical additives, including what is approved, what can be requested for approval, and what cannot be approved.
9. New conditional permit limitations for discharges which have been chemically dechlorinated.
10. Inclusion of a reference to the permit exemption form, which was already offered by MDE.
11. Increased description of what constitutes groundwater as a receiving stream, including new narrative requirements for discharges to groundwater.
12. Addition of clarifying language regarding training and the use of contractors for discharges under the permit.
13. Standardizing submission of discharge monitoring reports for all pools with results submitted on separate forms for each quarter and due once annually.
14. Additional clarification of "public" versus "private" pools, including a new section which specifically authorizes "private" pools and some other dischargers to be covered without submitting a Notice of Intent.
15. Addition of a specific reference to cleansing of cartridge filters as part of filter backwash.
16. Addition of narrative requirements to monitor and manage temperature during pool draining.

BACKGROUND

The Clean Water Act (CWA) was originally enacted as the Water Pollution Control Act of 1948 (P.L. 80-845), and amended in 1972 by the Federal Water Pollution Control Act (P.L. 92-500), which established the National Pollutant Discharge Elimination System (NPDES) in Section 402 of the Act.

The 1972 amendments enumerated a set of national goals "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters," which among others included attainment of "water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water" (33 U.S.C. § 1251).

The law became known as the "Clean Water Act" (P.L. 95-217) under amendments to the Act in 1977. The 1977 amendments made it unlawful to discharge any pollutant from a point source into navigable waters without a permit, and gave EPA authority to regulate such discharges by setting limits on the amount of pollutants that can be discharged into a body of water from a permitted source.

Under § 402(b) of the CWA, 40 CFR Part 123, EPA may grant authority (in whole or in part) to individual states to administer the federal NPDES program in that state. The State of Maryland is so authorized. The Code of Maryland Regulations (COMAR) Title 26, Subtitle 08, Chapter 04 requires

all discharges of waste or wastewater to surface waters to be authorized under a State discharge permit or NPDES permit. Authorized states are prohibited from adopting standards that are less stringent than those established under the Federal NPDES permit program, but may adopt standards that are more stringent if allowed under state law. The Federal NPDES program under the CWA does not apply to groundwater discharges, therefore discharges to groundwater are regulated under the State discharge permit pursuant to COMAR 26.08.04.01 B(1).

This permit replaces General Permit Number 12-SI which became effective on October 1, 2012 and expired September 30, 2017. Currently, the 12-SI general permit is administratively continued for facilities covered under that permit at the time it expired. As of March 2021, over 540 Maryland facilities are registered under the 12-SI permit.

General Permit 17-SI regulates its discharges pursuant to COMAR 26.08.04.09 L which stipulates that coverage includes discharges of filter backwash, cleaning water, overflow, and drainage from lowering or emptying a public or private pool or spa to surface or ground water and specifically excludes all discharges to the sanitary sewer. Each of these types of discharge is further described below. As a General Permit, the application process includes completion of a Notice of Intent (NOI) and following the process as described below.

PART I: PERMIT APPLICABILITY

Part I of the permit identifies eligible and ineligible discharges under the permit, as do all of the Department's general permits. Other than a minor format change and the changes identified below, the 17-SI permit remains unchanged from the 12-SI permit.

Part I.B lists the types of discharge which may be covered by the 17-SI. Unlike past iterations, the 17-SI identifies specific "Discharge Types," in order to better describe eligible discharges, and to clarify requirements in subsequent sections.

The Department has added a list of facilities which are similar to pools and contain the same characteristics in their wastewater, which include water slides, lazy rivers, spray pads, splash pads, interactive fountains, and water-themed amusement rides and parks. These "similar facilities" were not intended to be excluded from past coverage and, in fact, the Department has issued permit registrations under the 12-SI to cover some of these facility types already. Considering that the types of wastewater and purpose of these facilities are nearly identical to that of swimming pools, interpreting the definition of "pool" to include them is only logical.

However, the Department specifically recognizes that some facilities, such as bumper boats may have potential for greater contamination due to exposure of pollutants which are not typically associated with swimming pools. For that reason, Part I.C of the permit specifically excludes bumper boats and any facility which discharges contaminants other than those addressed by the permit. Part I.C also continues to specifically prohibit the discharge of sanitary wastewater, including floor drains.

The Department has reviewed permits in several other states, specifically including Wisconsin, Michigan, and New Jersey, and found the inclusion of these "similar facilities" to be common.

There are three other changes of note from Part 1. First, the “Related Permits” section has been expanded to specifically note that this permit does not satisfy any local requirements for permits to construct or operate a swimming pool. Secondly, the permit has new language regarding administrative extension of the permit, a requirement to notify the Department of continued coverage under an administratively extended permit, and duty to reapply under the next iteration, once issued. Lastly, it is notable that has moved information regarding termination or transfer of the permit to Part II, which is consistent with other general permits.

PART II: AUTHORIZATION UNDER THIS PERMIT

This part clarifies what is required to apply for coverage. The terms of Part II remain largely unchanged from the information that was required to apply for the 12-SI. Any alterations should be considered very minor and are addressed in updated instructions for the Notice of Intent (NOI) or other parts of this fact sheet. Information about terminating or transferring a permit registration has been relocated to this section.

Previous iterations included “Definitions” at this point. To improve flow of the permit language, definitions have been relocated to Appendix B.

PART III: SPECIAL CONDITIONS FOR DISCHARGES

This part addresses basic special conditions that apply to all categories of discharges. Part III, Section A is a newly added section which specifically addresses which facilities may be authorized to discharge under this permit without submitting an NOI. These facilities include “private” pools, which have been defined as not open to the public, shared by no more than four residences, and used exclusively by those residents and non-paying guests; as well as facilities which only discharge from pool overflow and splashout during normal use. These authorizations were included in the 12-SI, but outreach conducted during the drafting process indicated that inspectors, permittees, and the general public often has difficulty in determining who needed to submit an NOI.

Part III, Section B is also new and simply requires notification to the Department for very large discharges and discharges of pollutants not regulated by the permit. This is standard language for general permits.

Part III, Section C is new as well. It refers permittees to Appendix A for guidelines and limitations specific to each discharge type. Previous versions of the SI permit listed all limitations in this Part, but this new approach better clarifies requirements for each specific type of discharge and allows for the Department to align permit conditions with the information required on the Notice of Intent in order to generate a site-specific permit registration letter.

Part III, Section D addresses common constraints. These are narrative requirements that the Department has determined are applicable for consideration in all discharge types. By including those requirements here, they don’t need to be repeated in each of the sections of Appendix A. Each requirement is rationalized below:

1) *Erosion and Sediment Control*: Any type of discharge may have the potential to cause erosion and/or sediment concerns if the outfalls are not established in the proper manner. This condition simply carries

over requirements that were specified in the previous SI permit. Specifically, the condition requires prevention or minimization of erosion and identifies some best management practice options for meeting its terms.

2) *Discharges to Groundwater*: This section is newly added to the 17-SI iteration in an effort to address the Department's concern that permittees were selecting "groundwater" as the receiving stream on their NOI despite conditions which made it very unlikely that all discharges would percolate into the ground. For several months after the 12-SI was issued, the Department was intently reviewing every NOI that selected "groundwater" to see if it was reasonable for the specified flows to not reach surface waters based on facility location. This process was time consuming, so the Department began adding language to the NOI instructions which detailed that selection of "groundwater" only indicated absolutely zero runoff to surface waters or a storm drain and provided instructions for determining if "groundwater" only was acceptable, as well as a warning that any discharges to surface waters which are not explicitly identified on the NOI are not authorized by the permit registration. The Department has incorporated the added instructions from the NOI directly into this section of the 17-SI permit.

Additionally, the Department made clear that this permit does not authorize discharge over land onto other owners' property without authorization. The permit also specifies that discharges should not occur within 50 feet of wells to prevent overloading the well, which aligns with requirements for well yield testing at COMAR 26.04.04.26G(1)(f).

3) *Standard Operating Procedures*: This condition is new to the 17-SI permit. Facilities shall be required to have a plan for how they manage their discharges to comply with the permit. It was largely expected by the Department that facilities would have standard operating procedures in place in order to ensure they knew they could comply with the permit before commencing discharge, as well as to share operational instructions amongst different pool operators. However, the permit did not specifically require such documentation.

One issue that has been a problem with swimming pool permittees is simple awareness from one pool employee or operator to another. This requirement should alleviate some of that problem, in addition to promoting more consistent treatment of discharges and improving treatment efficacy. The language used is largely modeled after other general permits which require Pollution Prevention Plans but has been tailored to pool operations.

The Department will not require submission of each plan, but the plan must be made available upon request by the Department. Facilities are required to update their plan to maintain current with site activities.

4) *Training/Contractors*: The training portion of this permit section requires that the permittee train any personnel working on site in the methods being used for pollution prevention and for training records to be maintained on site.

Prior iterations of the SI permit have been somewhat ambiguous as to who should be a permit holder in the event of a contractor and/or how a permittee/contractor situation works in the event of permit noncompliance. Therefore, this permit specifically identifies that the permittee is responsible for determining whether to allow a contractor to operate under their permit registration or obtain separate

coverage. Terms of either arrangement should be clear in any agreement between parties. If a contractor is allowed to operate under a permittee's registration, it is the permittee's responsibility to ensure all contractor staff is properly trained (and documented as such) and made aware of all permit requirements. The Department will assume that the permittee is at fault for any noncompliance unless a separate agreement between parties indicates otherwise.

5) *Chemical Additives*: During normal pool operations, it is necessary to use a variety of chemicals for the purposes of protecting pool users. Past iterations of the SI permit have included some information regarding pool additives as part of establishing appropriate numerical discharge limitations and in its various narrative conditions. The 17-SI has conglomerated all necessary information regarding which additives may or may not be used into this single narrative condition for clarity.

Additionally, the Department has added information to the SI permit regarding chemical dechlorination. In order to remove chlorine (the most common pool disinfectant) from pools, it is widely considered the easiest and safest method to be "resting" the pool for several days to allow the chlorine to naturally dissipate. However, the Department recognizes that some instances may require the use of chemicals to remove chlorine to meet permit limitations. Past iterations of the SI permit have been largely silent regarding dechlorination.

The use of dechlorinating agents may depress oxygen in the receiving stream if too much chemical is added during treatment. This section requires safe use of dechlorinating agents and specifies what constitutes "chemical dechlorination," which is important to delineate who is subject to the new effluent limitations for dissolved oxygen (see Appendix A). Specifically, the use of controlled release dechlorination tablets does not constitute "chemical dechlorination" because the mechanism of the tablet greatly reduces the risk of chemical over-addition.

This section does not authorize anything additional to the 12-SI permit and, other than the new information regarding dechlorination, does not add additional restriction. It has been added to improve the ability of permit holders to clearly determine what is and is not allowed in discharges.

6) *Visual Inspection of Discharges*: This condition was not specifically included in prior iterations of the SI permit but aligns with terms found in all of the Department's individual NPDES permits and several of its general permits as well. Essentially, it requires notification be provided in the event that a permittee observes oil sheen, floating solids, or persistent foam in its discharges.

Part III, Section E has been added to the 17-SI permit to address discharges into Tier II waters. COMAR 26.08.02.04 and 40 CFR §131.12(a) denote antidegradation requirements which must be followed in NPDES permits. Specifically, it requires the Department to provide additional review and protection in the event that new or increased pollutant loadings are proposed for discharge into waters that have been designated as Tier II high quality receiving streams. This condition specifies that the Department reserves the right to apply additional controls and/or require an individual permit for facilities with new or expanding discharges into Tier II receiving streams.

PART IV: MONITORING AND REPORTING

Part IV of the 17-SI permit specifies requirements for how to monitor discharges, data recording and retention, submission of testing results, and instructions to follow if a permit noncompliance occurs. This entire section is relatively standard across the Department's general NPDES permits and has been carried over from the 12-SI, with the exception of the section regarding discharge monitoring reports (DMRs).

On October 22, 2015, EPA published the NPDES Electronic Reporting Rule to modernize Clean Water Act reporting. As a result, this permit requires the submission of all reports electronically via EPA's (and MDE's) reporting website, NetDMR. The Department has included its standard language regarding this requirement, which is shared among all of its NPDES permits. More information regarding this rule can be found at www.epa.gov/compliance/npdes-ereporting.

During the permit drafting process, the Department consulted with stakeholders who indicated that there has been some confusion regarding how to submit reports, what parameters must be sampled, and when that sampling is required. This became obvious when reviewing compliance data and noting the large number of non-report violations for these facilities.

The 12-SI and prior iterations established a reporting regime where preprinted DMR forms were provided containing all possible pool additives and limitations, leaving the permittee to figure out what parameters to monitor. Additionally, the permit specified that summer pools operating 15 weeks or less (essentially Memorial Day to Labor Day) would be subject to once-annual reporting, while year-round pools would submit quarterly. The inconsistency of this process, along with general unawareness of the permit amongst many swimming pool stakeholders, contributed to the large amount of non-reporting.

A few stakeholders raised to the Department that the designation of a "Memorial Day to Labor Day" pool was becoming less frequent with changing climate and increased desirability of pools to operate beyond that timeframe, even if only for a few weeks in either direction. Furthermore, for pools which do operate only in the summer, the permit was confusing about whether monitoring and reporting was required for offseason activities – and specifically, how those activities fit into the monitoring and reporting periods of the permit.

In order to address these issues, the Department has decided to make some changes. First, with the introduction of NetDMR, the creation of facility-specific monitoring reports is now easily accomplished. No more will facilities receive report forms with parameters which are not applicable to them. NetDMR also makes the reporting of monitoring data significantly easier and less onerous. In order to address the concern of changing seasonality of pool operations, the confusion of offseason discharges, and alleviate confusion regarding the variability of what requirements apply to different facilities, the Department has determined it is appropriate to standardize DMR reporting across all pools. Thus, there will no longer be differing reporting schedules for year-round pools versus seasonal pools.

For the 17-SI permit, all pools will be subject to completion of a quarterly DMR form for each outfall (designated for each Discharge Type). Pools which do not discharge during a given quarter will simply be required to check a single “No Discharge” box on the forms corresponding to the applicable outfalls and quarters. The Department recognizes, however, that pools which do not continuously operate may find it difficult to recall the need to report during those times they are not operating. Therefore, the quarterly reports will all be due on October 28th – the month after Quarter Three for each calendar year. This date falls immediately after the summertime period and shutdown of seasonal pools, minimizing the time passed between collection of the monitoring information and submitting it. This also creates a continuous rolling cycle from Quarter Four of one calendar year through Quarter Three of another, eliminating the possibility that any discharge event could be thought it should be omitted from reporting. Facilities will have the option of completing each quarterly form separately and submitting as the year passes, should they find that easier.

Overall, the Department believes the changes regarding reporting which are outlined above will serve to increase consistency across permits, reduce the number of non-report violations for facilities which may have previously been confused, decrease the burden on the Department’s NetDMR and Compliance staff in following up on reports due at differing times, and improve the overall level of compliance with the permit conditions.

PART V: STANDARD PERMIT CONDITIONS

The standard permit conditions have been organized to be consistent with the recently issued general permits by the Department. There have been no substantial changes to the language of these conditions from the 12-SI permit.

PART VI: AUTHORITY TO ISSUE GENERAL NPDES PERMITS

This section identifies the statutes which provide authority for the Department to issue this and all other general NPDES permits. Language has been unchanged from the 12-SI.

APPENDIX A: SPECIFIC REQUIREMENTS FOR DISCHARGE CATEGORIES

This Appendix is meant to organize the SI clearly for both the operator and inspector. Therefore, the Department has split the types of permissible discharges under this permit into four types, defined as Discharge Type A through D as follows:

Discharge Type A: Wastewater from draining or drawdown – This category includes discharging a significant portion of the pool water, including draining of the pool at season’s end or prior to start-up/cleaning. For this renewal, this type now specifically notes the inclusion of wastewater from purging of a recycling system for water from operations like splash pads, which is similar in nature based on the expected volume and type of wastewater.

Discharge Type B: Cleaning wastewater – This category includes discharges following extensive cleaning events, which typically occur periodically (no more than once or twice annually), most commonly prior to opening the pool for seasonal operations. Routine daily cleaning operations would be low in reasonable potential and be expected to be regulated as part of splashout (Discharge Category D). This type of

wastewater is largely unchanged from the previous renewal, other than clarification of the routine daily cleaning, as discussed above.

Discharge Type C: Filter backwash – This type of discharge includes wastewater from backwashing of a sand or diatomaceous earth filter, as in previous permits, as well as a newly-added reference to cleansing of cartridge filters.

Discharge Type D: Splashout/Overflow/Spraydown – This type of discharge is newly added to the permit to layout specific BMPs that pools should follow to manage water which splashes out or overflows the pool during normal use. These wastewaters were covered under the previous permit, but in a much less-specific manner.

Limitations and monitoring requirements (both numeric and narrative) which are applicable specifically to each Discharge Category have been assembled and presented in Appendix A. The rationale below examines the numeric and narrative requirements by parameter.

Flow: All of the Department's NPDES permits require monitoring for flow. There are no numerical limitations for flow in this permit. In lieu of measured flow, the permittee may also provide monitoring via flow estimation, pursuant to the terms of Part IV.A.2 of the permit.

Turbidity and Total Suspended Solids (TSS): Other than filter backwash, the solids concern with regards to swimming pools stems from those which are often introduced by pool users, such as dirt, mud, bits of grass, etc. Elimination of these sorts of solids can be accomplished simply by filtering through a mesh filter. As a result, the Department has included a narrative condition which does not allow solid particles to exceed a Tyler designation mesh-20, which corresponds with 0.0331 inches in size. This requirement has been continued from the 12-SI.

For filter backwash, the potential for solid particles is increased, as the sand or diatomaceous earth used in the filter will also enter the discharge. The nature of swimming pool operations makes it more appropriate than for most permittees to have the ability to test for relevant parameters on site. As a result, rather than set a numerical limit for total suspended solids, the Department has limited for turbidity. The limitation of 150 Nephelometric Turbidity Units (NTU) is equivalent to the maximum-at-any-time in-stream water quality standard for all designated use classes at COMAR 26.08.02.03-3. Applying the "maximum-at-any-time" standard rather than the tighter monthly average standard is logical because discharges from swimming pools are infrequent and intermittent.

New to the 17-SI permit, the Department is requiring that a minimum of the first 30 seconds of discharge resulting from sand or diatomaceous earth filters be either directed to a sanitary sewer or collected for settling prior to discharge. Sand and diatomaceous earth are both fine solid particles which create a large amount of turbidity when the backwash initially begins. A review of permitting requirements in other states revealed a range of requirements from not authorizing filter backwash to requiring treatment to meet a TSS limitation. The Department does not believe revoking authorization to discharging filter backwash is appropriate, as it is reasonable to treat the wastewater to meet applicable standards. Simply requiring the collection of the initial, high-solids discharge will provide ample solids removal. The Department also strongly encourages the remainder of discharges to be directed for percolation into the

ground to naturally filter out solids. The permit for swimming pool discharges in the State of Michigan was largely referenced in creating this permit language.

The narrative prohibition on the discharge of a visible sediment plume coupled with the visual monitoring requirements of Part III.D.6 of the permit will also ensure protection of water quality standards with regards to solids.

pH: During operations, pool operators must maintain pH at an acceptable level for human health reasons which ensures that pool water will be between 7.2 and 7.8 (COMAR 10.17.01.45A(1)). Since filter backwash is accomplished using pool water, there is no basis to regulate pH for Discharge Type C.

Pool draining is also unlikely to have a pH concern, though it will typically occur weeks or months after the pool has not been in regular operation. The lack of regular pool monitoring during operations increases the possibility that the pH could fall outside water quality standards. Also, draining of pools can often result in a very large volume being discharged in a single day, making it more important to monitor the wastewater prior to discharging. Therefore, the Department has included a limitation for pH in Discharge Type A.

Pool cleaning wastewater is often generated using muriatic acid for cleaning the walls and bottom of the pool. This represents reasonable potential for the pH to be outside water quality standards as well, and thus is appropriate to limit for Discharge Type B.

The limit in all cases is a range of 6.0 to 9.0 which represents a technology standard found in numerical effluent limitation guidelines. The Department has chosen this limitation over the water quality standard range of 6.5 to 8.5 based on the assumption that enough buffering capacity would be present to accommodate for the slight difference between the two ranges. Narrative permit conditions prevent the permittee from causing an exceedance of water quality standards in the receiving stream, which covers the possibility of an extreme case where 6.0 to 9.0 would not be sufficiently protective.

Pool Additives: Several effluent limitations have been derived based on the disinfectants that are most commonly used in pools. The disinfectants chosen for regulation come from COMAR 10.17.01.44. This regulation denotes levels of each disinfectant required for pool operations and includes chlorinated products, brominated products, copper-containing products, silver-containing products, cyanuric acid, and poly(hexamethylenebiguanide hydrochloride)-related (or PHMB) disinfectants. The parameter which corresponds to these additives and the corresponding limitation is identified and rationalized below.

Pools also frequently use pH adjustment chemicals such as sodium carbonate or sodium thiosulfate in small doses to raise or lower the pH as needed during operations. Those chemicals are regulated by the pool operations requirements to maintain pH between 7.2 and 7.8.

Total Residual Chlorine (TRC): The most common disinfection technique for swimming pools and related facilities is chlorine. Any discharge which contains water which has been chlorinated must be subject to a limit for TRC. While the actual permit limit is established based on the numerical water quality standards in COMAR 26.08.02.03-2G(1), language at COMAR 26.08.03.06 requires only that chlorine be reduced to non-detectable levels and specifies that the non-detectable level is 0.1 mg/L. This is included in all relevant sections via footnote. This limitation and associated footnotes have been continued from the 12-SI permit.

Total Residual Bromine: Bromine is another option for disinfection, more commonly used in hot tubs or spas. While bromine can often cause staining on the interior of spa surfaces, it provides more stable levels at higher temperatures. All three forms of bromine – hypobromous acid, hypobromite ions, and bromamines – are active disinfectants, so it is appropriate to limit using the total residual bromine parameter.

There is no water quality standard for bromine, so a technology-based limitation of 100 µg/L has been established. The basis of this limitation is that it corresponds with the minimum detection level of a DPD-Colorimetric total residual oxidants test, which is what is primarily used to sample for total residual bromine in effluents. This limitation has been continued from the 12-SI permit.

Cyanuric Acid: Cyanuric acid is commonly used in pools to lengthen the usefulness of chlorine by binding with free chlorine, thus reducing the amount of chlorine used to maintain the required residual level during pool operations. Cyanuric acid is primarily managed by pH requirements at the pools, but increased levels can cause cloudiness in the pool water, so applying a limitation is appropriate. The previous permit established a maximum limitation of 100 µg/L for cyanuric acid based on COMAR 10.17.01.44 which limits levels of cyanuric acid to a range of 30 to 100 µg/L. This limit shall be continued from the 12-SI.

Total Copper: Disinfectants and algaecides which contain copper are largely toxic to aquatic life in their undiluted state. Copper residuals from use of such products must meet the State water quality standards for protection of aquatic life. The Department has established limits in the permit based on the acute water quality standard of 13 µg/L for freshwater receiving streams and 4.8 µg/L for saltwater receiving streams. Applying the acute standard is appropriate based on the infrequent and intermittent discharges from pools. Further protection is provided by applying the limit at end-of-pipe rather than applying a mixing zone. These limitations have been continued from the 12-SI permit.

Total Silver: Similar to copper, disinfectants and algaecides which contain silver are largely toxic to aquatic life in their undiluted state. The Department has established limits in the permit based on the acute water quality standard of 3.2 µg/L for freshwater receiving streams and 1.9 µg/L for saltwater receiving streams. Applying the acute standard is appropriate based on the infrequent and intermittent discharges from pools. Further protection is provided by applying the limit at end-of-pipe rather than applying a mixing zone. These limitations have been continued from the 12-SI permit.

Poly(hexamethyleneguanide hydrochloride)-related compounds: There is no water quality standard for PHMB, but literature research suggests that exposure concerns may exist. As a result, and per the Clean Water Act goal of removing all pollution, the Department has established a technology standard. The water test for PHMB has a detection limit of 0.1 mg/L for PHMB residuals and serves as a reasonable technology standard. This limitation has been continued from the 12-SI permit.

Dissolved Oxygen (DO): In cases where chemical dechlorination is required for a permittee to meet the chlorine limitation, it is possible for dissolved oxygen to be depressed, particularly if the dechlorinating agent is over applied. As a result, water discharges contain a water-quality based limit for DO which is applicable if chemical dechlorination is performed. The limit requires a minimum DO level of 5.0 mg/L

for Designated Use Class I, I-P, and II waters and a minimum DO level of 6.0 mg/L for Designated Use Class III, III-P, IV, and IV-P waters based on COMAR 26.08.02.03-3. This limit has been added to the 17-SI.

Temperature: If it is necessary to drain a large pool, it is possible that it could cause an excursion from water quality criteria for temperature in the receiving stream, particularly for Use III or III-P streams with a standard of 68°F and Use IV and IV-P streams with a standard of 75°F. It is largely expected that most pool draining will occur outside of summer, rendering temperature less of a concern, but it is still important to ensure protection of the receiving stream. Therefore, Discharge Type A includes narrative permit conditions which require the permittee to monitor temperature prior to draining the pool into surface waters and apply best management practices to mitigate impacts if the temperature exceeds the standard of the receiving stream. Language used in this section is new to the SI permit but has been adapted from the Department's 17-HT General Permit and is sufficient for protection of the waters of the State.

Monitoring Frequency: The monitoring frequency for the 17-SI permit has been entirely carried over from the 12-SI permit. All discharges of pool draining, drawdown, or cleaning wastewater under Discharge Types A and B are to be monitored a minimum of once per discharge. Filter backwash has an established monitoring frequency of once monthly, though it is anticipated that this will largely amount to once per discharge for most pools as well, based on likely frequency of backwashing the filter.

APPENDIX B: DEFINITIONS, ABBREVIATIONS, AND ACRONYMS

The standard terms and definitions have been moved into a separate appendix. Those that appeared in the 12-SI were compared with recently issued General Permits, and if required in this permit, they have been included

APPENDIX C: PERMIT EXEMPTION FORM

As described in Part I.D of the permit, the Department provides a form for facilities to complete and maintain on site to exhibit they are aware of the permit and explain why it does not apply to them. The form was established for use by the Department during the 12-SI permit cycle and is being continued here.