

RATIONALE

DISCHARGES ASSOCIATED WITH COMMERCIAL WASHING OF OUTDOOR STRUCTURES

GENERAL PERMIT IN COLORADO
FIRST ISSUE
CDPS PERMIT NUMBER COG-607000

I. STATUS

This is the first issue of a separate general permit for low-risk discharges associated with commercial washing of outdoor structures. Previously, most of these discharges were covered, as categories, under the Minimum Industrial Discharge (MINDI) general permit (COG-600000). This change is made to provide more specific limitations for this category and support efficiency in the development of certifications. Also, this permit can provide coverage (upon amendment) for additional types of commercial outdoor washing activities provided the minimal and low-risk requirements for discharge can be met.

II. TYPES OF DISCHARGES COVERED

A. Introduction

The general permit is designed to provide coverage for certain types of discharges that can be primarily characterized as: an intermittent or temporary discharge, containing concentrations of pollutants of concern that pose low risk to impairing receiving water quality, and possess minimal toxicity. Long-term discharges may require coverage under an individual permit.

The narrative and numeric effluent limits are based on the water-quality standards for the receiving water and, thus, are protective of the designated beneficial uses. All minimal discharge general permits contain narrative limitations and exclusions in common (see Part I.B.1. of the permit). Additions to the narrative limitations and monitoring requirements may occur on a site-specific basis after review of all appropriate facility information and The Basic Standards and Methodologies for Surface Water (Regulation No. 31) and/or the Basic Standards for Ground Water (Regulation No.41). The scope of this permit does include discharges to land, that are not subject to the jurisdiction of an implementing state agency. Certifications that require numeric effluent limits will include one or more tables that specify the limitations and monitoring requirements that apply to that facility.

The implementation of Best Management Practices (BMPs) is an option for meeting compliance with the terms and conditions of this permit. However, the Water Quality Control Division (Division) has the right to require sampling and implement numeric effluent limits. Examples of cause for implementing numeric effluent limits include: a history of non-compliance with previous permits, data supplied to the Division that shows the BMPs are not protective of water quality, or information supplied in the application warrants the need for numeric effluent limits. This will be determined on a case by case basis. The certification to discharge will state whether numeric effluent limits or the implementation of a BMP Compliance Plan will be required.

Dischargers that do not fit under this characterization and/or possess toxic chemicals in elevated concentrations should apply for coverage under an individual permit.

B. General Coverage

This general permit currently only authorizes discharges from the commercial washing of outdoor structures including, but not limited to:

*utility equipment (rooftop or ground level location)-without use of chemical additions
seating structures at outdoor sporting or entertainment events*

These activities are expected to be for cosmetic and/or light cleaning purposes using potable water and not for situations where potentially hazardous materials (i.e., lead-based paint, oxidized metal or

asbestos from building materials, chemical deposits, etc) are removed from the outdoor structure and carried in the wastewater. Additionally, the activities are expected to be performed under the implementation of BMPs, which are part of the permit conditions, and include requirements for pre-cleaning (to minimize source of potential pollutants) and post-removal of residuals (to minimize potential pick-up during next precipitation event and transport to local stormwater system or receiving water); see Section B1 of the General Permit. Wastewater disposal options are:

- No permit required - Collection and release to sanitary system (need permission of system)
 - Collection and transport off-site to commercial treatment facility
 - Allow complete evaporation to occur, this will require clean-up of residuals. **Chemicals can not be added to the rinse water..**

- Permit required
 - Release (after implementation of BMPs) to storm sewer system, other conveyance, or receiving water. (Note: This option requires clean-up of residuals, especially on rooftop. Pre-approval from the owner of the storm sewer system or conveyance is needed before the discharge.)
 - Release (after implementation of BMPs) to adjacent vegetated area or drainageway

Since it is not possible to identify all types of outdoor washing activities -and associated effluent limits needed to control the quality of the discharge -that could be covered under this general permit, the following approach will be used. The basic requirements for this class of dischargers are provided in this permit. Previous types of outdoor washing activities that had coverage under the previous MINDI permit (COG-060000) are identified (Section C, below), with their specific permit requirements. The general permit will be amended as additional types of outdoor washing activities are approved, with their specific permit requirements defined. Based on the Division's evaluation of effluent data and permittee's adherence to the BMP Compliance Plan, the Division may reduce or eliminate the need to formally submit such data and rely on the continued implementation of the BMP Compliance Plan as the mechanism to maintain compliance with the terms of the permit. This decision will be documented in the certification of each permittee.

Commercial outdoor washing activities that do not qualify for coverage under this permit will have to apply for an individual permit from the Division. Examples of these activities would include, but are not limited to:

- hydroblasting (2,000 psi or greater),
- heavy cleaning of equipment with chemical additives that would be present in wastewater and present high risk to water quality, and
- washing of chemical deposits off paved surfaces or structure.

Certain types of commercial outdoor washing activities can generate a wastewater that contain chemicals that mandate that the wastewater be handled and disposed of as a hazardous or solid waste. In these cases, the Hazardous Materials and Solid Waste Management Division should be contacted to discuss how to comply with these regulations.

Table 1 Basic Parameters for Certifications with Numeric Effluent Limits

Since each type is a batch discharge, the limitations can be expressed in terms of a daily maximum concentration - as allowed under 40 CFR 122.45 (e) and (f). A professional decision is made to use the 30-day average, if the parameter does not have a daily maximum value in Regulation No. 31.

<i>Effluent Parameter</i>	<i>Discharge Limitations</i>	<i>Monitoring Frequency¹</i>	<i>Sample Type</i>
	<i>Daily Maximum</i>		
<i>Flow, gpm</i>	<i>Report</i>	<i>Once per Discharge</i>	<i>Estimate</i>
<i>5-Day Biochemical Oxygen Demand, mg/l</i>	<i>30</i>	<i>Once per Discharge</i>	<i>Grab</i>
<i>Total Suspended Solids, mg/l</i>	<i>30</i>	<i>Once per Discharge</i>	<i>Grab</i>
<i>Escherichia Coli, No./100 ml</i>	<i>126</i>	<i>Once per Discharge</i>	<i>Grab</i>
<i>Total Residual Chlorine, mg/l</i>	<i>0.019</i>	<i>Once per Discharge</i>	<i>In-situ</i>
<i>pH, s.u.</i>	<i>6.5-9.0</i>	<i>Once per Discharge</i>	<i>In-situ</i>
<i>Oil and Grease, mg/l²</i>	<i>10</i>	<i>Once per Discharge</i>	<i>Visual/Grab</i>
<i>Site Specific</i>			
<i>Other Pollutants, units</i>	<i>Limit³</i>	<i>Once per Discharge</i>	<i>Grab</i>
<i>Other Pollutants, units</i>	<i>Report⁴</i>	<i>Once per Discharge</i>	<i>Grab</i>
<i>Total Dissolved Solids, mg/l⁵</i>	<i>Report</i>	<i>Once per Discharge</i>	<i>Grab</i>
<i>Phosphorus, mg/l⁶</i>	<i>0.05</i>	<i>Once per Discharge</i>	<i>Grab</i>
<i>Phosphorus, mg/l⁶</i>	<i>Report</i>	<i>Once per Discharge</i>	<i>Grab</i>

- 1 This monitoring frequency is based on discharges that are classified as intermittent or temporary, such as those surrounding HTE activities. If the discharge is not classified as intermittent or temporary, the monitoring frequency may be increased.
- 2 There shall be no visible sheen. If a visual sheen is detected a grab sample is required.
- 3 Limits will be established on a site-specific basis for additional parameters. See Part I.B.2.b. of the permit
- 4 "Report" only requirements may be established for other pollutants that are not limited in this permit based on findings that the pollutants are listed along with the facility's receiving stream in Colorado Regulation Nos. 93 and 94. The reporting requirements, where applicable, will be discussed in the certification for this permit and are fully enforceable under this permit.
- 5 Monitoring is required only for discharges within the Colorado River Basin.
- 6 Monitoring and/or numeric effluent limits may apply to discharges to watersheds with a control regulation for Phosphorus.

C. Specific Types of Initial Coverages

The following type of commercial outdoor washing activities were authorized to discharge under the previous MINDI permit and existing permittees will have continued coverage under this new general permit.

Washing of Heat Transfer Equipment (HTE) – without use of chemical additives

Seating structures at outdoor sporting or entertainment events

Note: Currently, the Division is working with the HTE industry to acquire information on the quality of rinse water from cleaning activities that use chemical additives and to evaluate the risk posed by possible discharge. If this risk is minimal, with implementation of an associated BMP Compliance Plan, then the Division may amend this general permit to provide coverage for this second category of washing of the (with chemical additives). Initially, the Division may implement numeric effluent limits which will require monitoring and sampling for this second category of discharge. If the permittee can continually meet the limits, the numeric effluent limits and monitoring / sampling requirements may be dropped from their certification; adherence to the BMP Compliance Plan will be required.

PERMIT CONDITIONS

Numeric effluent limitations (found in Part I.B.2. of the permit) are imposed for pollutants that are specific to the category of discharges covered. If chemical additions are approved by the Division, and reflected in an amendment to this General Permit, additional parameters may be included and/or require

monitoring to address additional pollutants that may be in the discharge.

- a. Regulations for Effluent Limitations (Regulation No. 62) – Section 62.4 of the regulations includes effluent limitations that apply to all discharges of wastewater to State waters. These regulations are the basis for 5-Day Biochemical Oxygen Demand (BOD₅), Oil and Grease (O&G) and Total Suspended Solids (TSS) limitations. These limits are the same as existed in the MINDI permit.
- b. Technology-Based Limitations – No federal guidelines have been promulgated for this type of facility.
- c. Water Quality Standard-based Limitations (Discharges to Surface Waters)

Water quality-based limits are imposed for pH, total residual chlorine (TRC) and Escherichia Coli (E. Coli). The pH limits are the same as in the previous permit. Chlorine may be present in this discharge due to the source water being potable water and/or the potential chlorination of the wastewater to meet E. Coli limits; thus, TRC is a newly limited parameter in this permit based on the discussion that follows. E. Coli limits replace fecal coliform limits as described in the paragraphs that follow.

1. pH – This parameter is limited by Water Quality Standards as the water quality standards of 6.5-9.0 s.u. range are more stringent than those specified under the Regulations for Effluent Limitations.
 2. Total Residual Chlorine – The TRC limitations are equal to the most stringent standards found in Table II of The Basic Standards and Methodologies for Surface Water (Regulation No. 31). Effluent must be dechlorinated by chemical or physical means prior to discharge to meet limitations. If chlorine is not present in any concentration in the source water and none is added, the permit writer can exempt a permittee from TRC effluent limits and TRC monitoring.
 3. Escherichia Coli – The Water Quality Control Commission (WQCC) has recently determined that E. Coli is a better indicator parameter for pathogen contamination than fecal coliform. Thus, The Basic Standards and Methodologies for Surface no longer contains standards for fecal coliform; they have been replaced with E. Coli standards. However, until each basin has been reviewed by the WQCC and the fecal coliform standards have been dropped, some stream segments still have applicable fecal coliform standards in addition to E. Coli standards.
 4. Other Pollutants Limitations and/or Monitoring – The permit writer will review every application and determine if any additional pollutants must be limited and/or monitored to protect classified uses. The permit writer will set these additional limitations equal to the appropriate water quality standards.
- d. Chemicals – The application must include disclosure of chemicals that may be added to the wash water and the source of wash water. This information is necessary for an assessment of possible coverage under this general permit or the need to apply for coverage under an individual permit.
 - e. Salinity Requirements – All permit actions for discharges to surface waters in the Colorado River Basin must include salinity monitoring. Accordingly, the permit writer will perform an analysis, as set out in the paragraphs that follow, to determine which salinity requirements apply pursuant to the requirements of Section 61.8(2)(1) of the Colorado Discharge Permit System Regulations (Regulation No. 61). Multiple discharges covered from a single facility are subject to the limitation that would apply if there were a single discharge point.

In conformance with the Colorado Discharge Permit System Regulation (Regulation No. 61), existing permits for discharges to the Colorado River basin incorporate total dissolved solids (TDS) as the monitoring parameter for compliance with the salinity requirements. Electrical conductivity (EC) may be substituted for TDS if a constant correlation (a minimum of 5 samples) exists between TDS and EC; this must be approved by the permit writer.

To ensure compliance with the regulations, the compliance staff will review the reported data that the facility will not discharge more than 1 ton per day, or 365 tons/year. For facilities exceeding this threshold, a salinity report is required that includes satisfactory demonstration by the permittee that it is not practicable to prevent the discharge of all salt. The Division will decide on this exception prior to the start of discharge and may require further actions by the permittee to reduce the salt load before approval of the discharge.

Based on the effluent data in the application from a new facility, the permit writer will make an assessment of the expected salinity load in the discharge (from concurrent flows at all outfalls) and if less than 1 ton/day, the calculation will be documented in the issued certification. If the load exceeds this level, then the discharge can not be authorized.

Because the discharges covered under this permit are short-term and usually once per location, one analysis for TDS is normally required. The certification will indicate if additional salinity reporting requirements are waived and upon what basis this decision was made

- f. Control Regulations – Control regulations exist to place additional limits on discharges to surface waters in five watersheds – Dillon Reservoir, Cherry Creek Reservoir, Chatfield Reservoir, Cheraw Lake, and Bear Creek Reservoir. The total available wasteloads (i.e., phosphorus; possibly nutrients in the future) have been allocated in these regulations to various wastewater treatment facilities and non-point sources that discharge to flows on these watersheds. Certifications for discharges to these watersheds may include limitations and/or monitoring requirements for the parameters specified in the regulation. Since the discharges are expected to be short-term and contain levels of the control parameters equal to or less than the concentrations in nearby ambient waters, these authorized loads are viewed as de minimus and not subject to assignment under the above allocation process. The permit writer will briefly state in the certification the reason, with supporting data, the basis for the de minimus decision.
- g. Antidegradation – As set out in The Basic Standards and Methodologies for Surface Water, Section 31.8(3)I, an antidegradation analysis is required except in cases where the regulated activity will not result in “significant degradation.” Discharges permitted under this general permit are expected to be short-term or intermittent. Thus, in accordance with Section 31.8(3)I(ii)I of The Basic Standards and Methodologies for Surface Water (Regulation No. 31), which indicates that regulated activities that result in only temporary or short-term changes in water quality are not considered to result in significant degradation, an antidegradation analysis is not necessary as part of this permit.
- h. Whole Effluent Toxicity (WET) – WET testing is not a part of this permit. Discharges covered under this minimal discharge general permit are judged to have minimal impact on the receiving waters; thus, these discharges are not expected to exhibit whole effluent toxicity. If an application shows that or if the permit writer determines that the proposed discharge may or will exhibit whole effluent toxicity, an individual permit with effluent limitations and other permit conditions, including a WET limit and monitoring, will be considered more suitable.
- i. Mixing Zones – Under this general permit mixing zone regulations do not apply, since water quality standards are applied as the effluent limits (i.e., no dilution is allowed).
- j. Discharges to 303(d) Listed Waters – Since the effluent limits are equal to the water-quality standards and the discharge is expected to be short-term or intermittent, the assumption is that the discharge will not further impair the quality of the receiving water for the 303(d)-listed parameters.
- k. Discharges to Ground Water – Facilities permitted under this general permit may discharge to ground water via land application, infiltration ponds or other approved means. Because the standards for groundwater are based on water supply and agricultural uses, which also apply to surface waters of the state, the Division has determined that discharges that are protective of surface water standards are also protective of groundwater standards, unless a more stringent site-specific groundwater standard has been adopted. The Division will include a site-specific limit in the certification or require coverage under an individual permit as needed to implement more stringent site-specific groundwater standards. Certain discharges, due to proximity to alluvial water associated with nearby surface flow, are considered to be hydrologically connected this surface flow and will be considered a discharge to surface water.

Additionally, the permittee will need to demonstrate in the application by what method effluent is discharged to ground water, and how and where effluent can be monitored prior to discharge to ground water. Because this is a minimal discharge general permit, it is not practical to require that a permittee install ground water monitoring wells for compliance determination, so all applicable effluent limitations will have to be met prior to application to the land.

III. APPLICATION

Dischargers can apply for coverage under this general permit once the permit is issued.

Holders of certifications under the administratively extended MINDI (COG-600000) will automatically be transferred to this new general permit. Their coverage under the MINDI will be transferred without a lapse of coverage (i.e. discharging without a permit) and without loss of fee payments. Incidentally, the annual fee for each of these general permits is \$630, effective July 1, 2007. The permittee will have 90 days, from date of transfer, to comply with any new terms and conditions of this general permit.

The Division will be terminating the MINDI permit (COG-600000) in a few months.

Nicole Smith
July 27, 2007

IV. PUBLIC NOTICE COMMENTS

During public notice period (July 27 to August 27, 2007), no written comments were received.

In situations when there are no written comments, the Division routinely provides no further information under this section before the permit is issued. However, the Division decided to add the following two areas of background information on stakeholder involvement that is pertinent to the development of this general permit.

First, as stated in Sections I and II of this rationale, the Division decided to breakup the MINDI general permit into various separate general permits. Drafts of eight of these separate permits were sent to public notice on June 22 and received substantial public feedback and written comments. On July 27, the Division sent another separate general permit (this one) to public notice. Since some of the written comments during the former public notice period were generic to the conditions in all of the eight draft permits, the Division feels it prudent to repeat, in this rationale, some examples of these comments and the responses that have been prepared for Section IV in these other permits.

First example of generic comment

The proposed permit requires the permittee to obtain approval from each MS4 for a state-authorized discharge. This process raises several issues to the MS4s:

- *Under the Phase I and II MS4 permits, discharges authorized under a separate Division permit and in compliance with the provisions of those permits are allowable but appear to conflict with other MS4 permit language (Part I.A.2 and Part II.A.2) and possibly with local ordinances.*
- *Does a MS4 incur a level of liability for a Division permitted discharge if the MS4 conveyance is utilized to transport the discharge to state waters? MS4 permits require action to address illicit discharges to stormwater sewer system.*
- *Some MS4s prefer only notification of Division permitted discharges but do not want to be required to provide approval of this discharge. Others prefer approval of such discharges in advance of Division permit issuance. There has been insufficient time for MS4s to develop internal strategies to address how this process would work.*

- *There is a need for a system whereby an MS4 can determine if a Division permitted discharger may or may not be potential source of a reported illicit discharge, such as a website where permitted dischargers enter addresses of where they are operating each week, and MS4s have access to that information to either accept or deny discharge to their storm drain system .*

On the basis of the above concerns, CSC requests the following changes to the permit:

- *Remove the application requirement that a permittee obtain written approval from the owner of the storm drain system for discharge,*
- *Add provision to exempt MS4s of liability for dischargers permitted under Division permit – including bypass, spill, or upset conditions.*
- *Develop, with adequate MS4 input, a website where an MS4 can access information on proposed discharge locations and expected dates of discharge.*
- *Provision to notify the MS4 in the event of a spill or noncompliance situation.*

Response: *Based on input from MS4s, the permit no longer requires prior written approval from the owner of the system to be submitted with the application. The owner of the storm drain system has the right to decide on what inflows are accepted by the system -such as the owner of a domestic waster treatment facility has the right to decide on flows entering their collection system. For this reason, the Division can not unilaterally authorize a discharge to either type of permitted system and, thus, will require the permittee to contact the owner of the system to verify if there are additional ordinances, regulations, or requirements set by the owner of the system.*

In response to the liability questions raised at the July 10 meeting, the Division provided an initial response in a July 13 letter sent to the MS4 contacts. Briefly, the response is - “Therefore, unless specifically directed by the Division, the MS4 permits do not require permittees to implement procedures to address pollutant sources resulting from activities and discharges not required by the program elements in Part I.B of the permits.”

The Division is considering improved ways to provide detailed information on certifications issued under specific general permits, including online inventories.

The Division has a standing spill notification program which includes notification of the collection system and/or downstream water users when such events occur. This program will be reviewed to identify the need for specific text on notification of MS4s.

Second example of generic comment

Although the breakout of the MINDI into several general permits offers some advantages, the strategy results more work for the Division and the permittees to handle an increased number of certifications. Why is this favorable, given the Division is resource limited?

Response: *The breakout of one general permit with hundreds of certifications into several general permits, with staggered periods of coverage, affords options to better manage permit workloads. The Division estimates that of the hundreds of certifications issued in the past less than 20% will now need to be separated into two or three certifications. Most certifications are not for more than one category under the MINDI.*

Third example of a generic comment

The new \$630 fee will be a burden to small facilities.

Response: *The new fee for this type of general permit is set in the fee bill (HB 07-1379) and not by the Division. The Division recommends that the permittee terminate the certification promptly when the discharge is completed or when the interval between intermittent discharges is more than one year. This will avoid situations where billing for annual fees continues and the permittee is not discharging.*

Fourth example of generic comment

Why did the 10-day requirement for applications to be submitted prior to expected discharge date change to 30 days?

Response: *The previous MINDI permit, as well as all process water general permits, required 30 days notification prior to discharge for processing of the certification to discharge. The Division receives numerous applications for process water discharges requiring permit coverage. There is a substantial amount of detailed work that goes into writing certifications to discharge, such as identifying the receiving stream segment identification, determining the beneficial uses of the segment, and implementing the corresponding water quality standard effluent limits.*

The Division recognizes the importance of timely action on applications for certifications under general permits and makes an effort to reach a decision within two weeks, especially if the permittee has initiated contact with the permit writer before submitting the application and discussed the nature of the project and basis for urgent action. The Division will continue to informally expedite the review process to meet the needs of permittees when time allows; however, the option for the 30-day review period is needed since the Division encounters unexpected periods of excessive workload and can not maintain the shorter response time.

Fifth example of generic comment

Since these discharges are expected to be low-risk, the general permit should be BMP based, rather than structured like a discharge permit for a wastewater treatment facility. Further, an annual certification that the BMP was followed would be adequate, instead of requirements for monitoring, analysis, and reporting on DMR forms.

Response: *The Division can use a mixture of BMPs and effluent limits in any permit to meet the goal of protecting water-quality and beneficial uses in the receiving waters. While stormwater permits have emphasized BMPs and wastewater treatment plant permits have emphasize effluent limitations, permitting trends are heading towards a greater mixture in each case. The Division supports the use of BMPs where possible, when there is evidence that this approach is more effective than specific limits in achieving water-quality goals. Also, the Division will need staff resources for a field presence to verify through the inspection process and education and outreach processes that BMP based permits are adequately protecting water quality.*

Second, the washing of Heat Transfer Equipment, HTE, (without chemical additives) is an initial specific activity identified for coverage under this new separate general permit. Since the spring of 2007, the Division has been involved with representatives of this industrial business in various outreach and educational activities, that included presentations at numerous industry-sponsored workshops, one-on-one discussions with HTE cleaning contractors about permit requirements and compliance, preparation of fact sheets for distribution at HTE-related supply houses and placement on Division's webpage, mass mailing of fact sheets, and interviews for publication in HTE trade magazines. This stakeholder process provided significant contributions to the development of this general permit and will continue as certification are issued and as possible amendments are evaluated to add other types of HTE cleaning activities to the general permit. The response by this industrial segment, since the spring, includes nearly 200 applications for permits. Thus, the Division is offering the above information to indicate that the concepts and approach in this general permit have been in discussion with stakeholder for several months.

Nicole Smith
September 11, 2007