

C. 10. Trash Load Reduction

The Permittees shall demonstrate compliance with Discharge Prohibition A.2 and trash-related Receiving Water Limitations through the timely implementation of control measures and other actions to reduce trash loads from municipal separate storm sewer systems (MS4s) in accordance with the requirements of this provision.

C.10.a. Trash Reduction Requirements

Permittees shall implement trash load reduction control actions in accordance with the following schedule and trash generation area management requirements, including mandatory minimum full trash capture systems.

- i. **Schedule** - Permittees shall reduce trash discharges from 2009 levels to receiving waters in accordance with the following schedule:
 - a. 60% by July 1, 2016;
 - b. 70% by July 1, 2017;
 - c. 80% by July 1, 2019; and
 - d. 100%, or no adverse impact to receiving waters from trash, by July 1, 2022.
- ii. **Trash Generation Area Management** - Permittees shall demonstrate attainment of the C.10.a.i trash discharges percentage-reduction requirements by management of mapped trash generation areas within their jurisdictions delineated on Trash Generation Area Maps included with their Long Term Trash Reduction Plans, submitted in February 2014, or if revised, included in their 2015 Annual Reports. These maps, which provide the basis of 2009 trash discharge levels, delineate trash generation areas within Permittees' jurisdictions into the following trash generation rate categories:

Low = less than 2.5 gal/acre/yr;
Medium = 7.5 gal/acre/yr;
High = 30 gal/acre/yr; and
Very High = greater than 100 gal/acre/yr.

Permittees also designated trash management areas on their maps, encompassing one or more trash generation areas, within which they will implement trash control actions.

- a. Permittees shall implement trash prevention and control actions, including full trash capture systems or other actions, or combinations of actions, with trash discharge control equivalent to or better than full trash capture systems, to reduce trash generation to a Low trash generation rate or better. The C.10.a.i percent reductions shall be demonstrated by percent of 2009 Very High, High, and Medium trash generation areas reduced to Low trash generation by the C.10.a.i schedule dates.
- b. Permittees shall ensure that private lands draining directly to their storm drain systems in Very High, High, and Medium trash generation areas are equipped with full trash capture systems or are managed with trash discharge control actions equivalent to or better than full trash capture systems. The latter shall be assessed with visual assessment consistent with C.10.b.ii.
- c. Permittees may claim higher percentage discharge reduction from 2009 from Very High generation areas reduced to Low (A_{VH-L}) and High generation areas reduced to

Low (A_{H-L}) trash compared to Medium trash generation areas reduced to Low (A_{M-L}) to meet the required total percent area reduction ($\%A_{T-L}$), e.g., 60% of ($A_{VH} + A_H + A_M$)₂₀₀₉, where ($A_{VH} + A_H + A_M$)₂₀₀₉ is the sum of the area of each in 2009, based on the following formula:

$$\%A_{T-L} = 100 \times (12 \times A_{VH-L} + 4 \times A_{H-L} + A_{M-L}) / (A_{VH} + A_H + A_M)_{2009}$$

- iii. **Mandatory Minimum Full Trash Capture Systems** - Permittees shall install and maintain a mandatory minimum number of full trash capture devices, to treat runoff from an area equivalent to 30% of Retail/Wholesale Land that drains to the storm drain system within their jurisdictions. A population-based Permittee with a population less than 12,000 and retail/wholesale land less than 40 acres, or a population less than 2000, is exempt from this trash capture requirement. **Table XX** contains the minimum amount of drainage area that must be treated with full trash capture devices by each population-based Permittee, and the minimum number of trash capture devices required to be installed and maintained by non-population-based Permittees.

A full capture system is any single device or series of devices that traps all particles retained by a 5 mm mesh screen and has a design treatment capacity of not less than the peak flow rate resulting from a one-year, one-hour, storm in the sub-drainage area. The device(s) must also have a trash reservoir large enough to contain a reasonable amount of trash safely without overflowing trash into the overflow outlet between maintenance events.

C.10.b. Demonstration of Trash Reduction Outcomes

- i. **Full Trash Capture Systems** – Permittees shall maintain, and provide for inspection and review upon request, documentation of the design, operation, and maintenance of each of their full trash capture systems, including the mapped location and drainage area served by each system.
- a. The maintenance of each full capture device shall be adequate to prevent plugging, flooding, or a full condition of the device's trash reservoir.
- (i) Storm drain inlet type full trash capture devices in Low or Medium trash generation areas shall be maintained a minimum of once per year.
 - (ii) Storm drain inlet type full trash capture devices in High trash generation areas shall be maintained a minimum of twice per year.
 - (iii) Storm drain inlet type full trash capture devices in Very High trash generation areas will be maintained a minimum of 3 times per year.

If any such device is found plugged or full of trash when maintained, the maintenance frequency shall be doubled at a minimum, and subsequently adjusted so that it is maintained frequently enough that it neither plugs nor is full before being maintained. Permittees shall map and document the catchment area controlled by full trash capture devices.

- b. Permittees shall retain device specific maintenance records, including, at a minimum: the date(s) of maintenance, the capacity condition of the device at the time of maintenance (full and overflowing or with storage capacity remaining), any special problems such as flooding, screen blinding or plugging from leaves, plastic bags, or other debris causing overflow, damage reducing function, or other negative conditions.

- Other information obtainable from the trash captured, such as brand name litter pointing to a particular source, leading to source control efforts, should be noted. A summary of this information shall be reported in each annual report which will be limited to the number of full capture devices maintained that exhibited a plugged or overflowing condition upon maintenance.
- c. Permittees shall certify annually that each of their full trash capture systems is operated and maintained to meet full trash capture system requirements. Drainage areas served by a full trash capture system will be considered equivalent or better than a Low trash generation area.
- ii. **Non-Full Trash Capture System Actions** - Permittees shall maintain, and provide for inspection and review upon request, documentation of non-full trash capture system trash control actions that verifies implementation of each action. Permittees shall also conduct assessment of the action that verifies effectiveness of the action or combination of actions and maintain, and provide for inspection and review upon request, documentation of assessments.
- a. **Implementation Documentation** - Permittees shall maintain documentation of trash control actions that describes each action or combination of actions, the level of implementation, the timing and frequency of implementation, standard operating procedures if applicable, location(s) of implementation including mapped location(s) and drainage area(s) affected, tracking and enforcement procedures if applicable, and other information relevant to effective implementation of the action or combination of actions.
- b. **Assessment** - Permittees shall conduct visual on-land assessment, including photo documentation, of each trash generation area within which it is implementing a trash control action or combination of actions to determine or verify the effectiveness of the action or combination of actions. Permittees may assess and account for one or more trash generation areas in a single trash management area within which a control action or combination of control actions is or will be implemented. The visual on-land assessment method used shall meet or exceed the following criteria:
- (i) Conduct observations within a trash management area of the sidewalk, curb, and gutter, comparing the observations with a visual reference of trash and litter condition, as in the calibration example in **Attachment XX (On-land Assessment Calibration Photos)**. Low trash generation corresponds to the A photos, Moderate trash generation to the B photos, High trash generation to the C photos, and Very High trash generation to the D photos.
 - (ii) Conduct observations at randomly selected locations covering at least 10% of a trash management area's street miles; or conduct observations at strategic locations with justification they are representative of trash generation in the management area and they will represent the effectiveness of the control action(s) implemented or planned in the management area.
 - (iii) Conduct observations at a frequency consistent with known or estimated trash generation rate(s) within a trash management area and the time frequency of implementation of the control action(s) implemented or planned in the management area.

- (iv) Conduct observations for effectiveness approximately at the halfway point of the interval between instances of recurring trash control actions such as street sweeping and on-land cleanup.
- iii. **Receiving Water Observations** –Permittees shall conduct receiving water observations downstream from trash generation areas that have been converted to Low from Very High, High, or Moderate to Low or better trash generation areas.
 - a. The observations shall be sufficient to determine whether a Permittee’s trash control actions have effectively prevented trash from discharging into receiving waters, whether additional actions may be necessary associated with sources within a Permittee’s jurisdiction, or whether there are ongoing sources outside of the Permittee’s jurisdiction that are causing or contributing to adverse trash impacts in the receiving water(s).
 - b. The observations shall be conducted a minimum of twice per year until the C.10.b.ii.c.(1) determination has been observed and then confirmed with a subsequent observation, after which the frequency may be reduced to once per year.
 - c. A C.10.c Trash Hot Spot cleanup site downstream of a trash management area may serve as a receiving water observation site.

C.10.c. Trash Hot Spot Selection and Cleanup

Trash Hot Spots in receiving waters shall be cleaned annually to achieve the multiple benefits of abatement of impacts as mitigation and to learn more about the sources and transport routes of trash loading.

- ii. **Hot Spot Cleanup and Definition** – The Permittees shall clean selected Trash Hot Spots to a level of “no visual impact” at least one time per year for the term of the permit. Trash Hot Spots shall be at least 100 yards of creek length or 200 yards of shoreline length.
- iii. **Hot Spot Selection** – Permittees shall maintain the number of trash hot spots identified in the previous permit term, which are included in Attachment XX. Permittees may select new trash hot spot locations if past locations are no longer trash hotspots or if other locations may better align with trash management areas.
- iv. **Hot Spot Assessments** – The Permittees shall quantify the volume of material removed from each Trash Hot Spot cleanup and attempt to identify sources to the extent readily feasible. Documentation of the cleanup activity to be retained by the Permittee shall include the trash condition before and after cleanup of the entire hot spot using photo documentation with a minimum of one photo per 100 feet of hot spot length and the total volume of trash and litter removed from the hot spot. Permittees shall report the volume removed for the most recent five years of hot spot cleanup in each annual report, or if a new trash hot spot location is selected, Permittees shall report the volume removed for the years of cleanup of that hotspot.

C.10.d. Trash Load Reduction Plans

Each Permittee shall maintain, and provide for inspection and review upon request, a Trash Load Reduction Plan, including an implementation schedule to meet the C.10.a Trash Load Reduction requirements. A summary of any new revisions to the Plan shall be included in the

Annual Report. The Plan shall describe trash load reduction control actions being implemented or planned and the trash generation areas or trash management areas where the actions are or will be implemented, including jurisdiction-wide actions, such as source control ordinances

The Plans should also include actions to control sources outside of the Permittee's jurisdiction that are causing or contributing to adverse trash impacts in the receiving water(s). Permittee's that implement such control actions may account for them towards meeting the C.10.a Trash Load Reduction requirements as long as they can demonstrate the controls will be sustained and they quantify the sustained load reduction benefit relative to control actions in the trash generation areas or trash management areas in their jurisdiction that drained to the affected receiving water.

C.10.e. Reporting

Each Permittee shall provide the following in each Annual Report:

- ii. A summary of trash control actions within each trash management area, including the types of actions, levels of implementation, areal extent of implementation, and whether the actions are ongoing or new, including initiation date.
- iii. An updated Trash Generation Area map or maps and associated trash management areas including the locations and associated drainage areas of full trash capture systems and non-full trash capture system trash control actions, and the location of Trash Hot Spots, with highlight or other indication of any revisions or changes from the previous year map(s).
- iv. Certification that each of its full trash capture systems is operated and maintained to meet full trash capture system requirements, and describe any systems that did not meet full trash capture system requirements, for example due to plugging or overflowing, and corrective actions taken.
- v. An accounting of its non-full trash capture system trash control actions assessments by providing a summary description of assessments in each of its trash management areas, including the number and times of observations.
- vi. An accounting of progress toward or attainment of C.10.a.i trash discharge reduction milestone requirements using the C.10.a.ii trash generation area mapping methodology and formula. If a Permittee cannot demonstrate attainment of a required milestone, it shall submit a detailed plan with the Annual Report, or in advance of the Annual Report, that describes actions to comply with the required milestone in a timely manner. The plan shall consider additional full trash capture systems to attain the milestone.
- vii. C.10.b.iii receiving water observations, including the locations and times of observations and associated determinations.
- viii. The volume removed for the most recent five years of hot spot cleanup for each of its trash hot spots, or for the years of cleanup if a new trash hot spot location has been selected.