

NOTICE AND AGENDA

**MANAGEMENT COMMITTEE for the
MONTEREY REGIONAL STORMWATER
MANAGEMENT PROGRAM**

DATE: January 25, 2023
TIME: 9:30 a.m.
LOCATION: Zoom Video Conference and Teleconference

**THIS MEETING WILL BE HELD ELECTRONICALLY AND REMOTELY
ONLY VIA ZOOM VIDEO CONFERENCING AND TELECONFERENCING**

This meeting is compliant with Governor Newsom's Executive Order N-29-20 which allows for holding public meetings electronically only, without a physical location for public participation, accessible only telephonically or otherwise electronically (video conferencing) to all members of the public seeking to observe and address the local legislative body, in order to avoid public gatherings, and until further notice.

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link: <https://us02web.zoom.us/j/85119483657?pwd=aEZuOTFUVjFWOVRDQktEd2g3OXlndz09>
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(669) 900-9128

Webinar ID: 851 1948 3657 Password: 635280

PUBLIC COMMENTS: If you are unable to participate via telephone or webinar, you may also submit your comments by e-mailing them to jeff@mylwater.org with one of the following subject lines "PUBLIC COMMENT ITEM #" (insert the item number relevant to your comment) or "PUBLIC COMMENT – NON-AGENDA ITEM". Comments must be received by 12:00 p.m. on Tuesday, January 24, 2023. All submitted comments will be provided to the Committee and may be read into the record and will be compiled as part of the record.

Officers:	Chairperson:	Michael Trapani, County of Monterey
	Vice-Chairperson:	Leon Gomez, City of Sand City
Participating Entities:	City of Carmel-by-the-Sea	City of Del Rey Oaks
City of Monterey	City of Pacific Grove	City of Sand City
City of Seaside	County of Monterey	
Other Coordinating Entities:	Carmel Unified School District	Pacific Grove Unified School District
	Monterey Peninsula Unified School District	Pebble Beach Company
Ex-Officio Members:	Association of Monterey Bay Governments	Monterey Bay National Marine Sanctuary

AGENDA ITEMS

Page #

- | | |
|------------------------------|-----|
| 1. Call to Order / Roll Call | n/a |
| 2. Public Comments | n/a |

CONSENT AGENDA

- | | | |
|--|-------------|---|
| 3. Approve Management Committee Meeting Minutes for 11/16/22 | (Attach. 1) | 3 |
| 4. Approve Management Committee Meeting Minutes for 12/16/22 | (Attach. 2) | 7 |

INFORMATION AND DISCUSSION ITEMS

- | | | |
|---|-------------|-----|
| 5. Update on COVID-19 Situation | | n/a |
| 6. De-Brief of Recent Storms and Response | | n/a |
| 7. Update on Public Education and Public Outreach Program | | |
| a. Community-Based Social Marketing Workshop – Feb. 7-9 | (Attach. 3) | 8 |
| b. Update on TV Ad Development | | n/a |
| 8. Discussion of EPA Memo regarding PFAS | (Attach. 4) | 10 |
| 9. Update on MS4 Phase II Permit Re-Issuance | | n/a |
| 10. Update on Post-Construction Requirements | | |
| a. Discussion of SCM O&M Fact Sheets | (Attach. 5) | 15 |
| b. Discussion of SCM O&M Training Opportunities | | n/a |
| 11. Presentation of Snapshot Day Results | | n/a |
| 12. Update on Trash Amendment | | |
| a. Region 3 Trash Amendment Exchange – Feb. 8 | | n/a |

ACTION ITEMS

13. **Nomination and Election of Officers** (Chairperson and Vice-Chairperson) – per Bylaws
- “Selection of Officers: Each year the Management Committee shall select a Chair and Vice-Chair. The selection of the members to serve in this position shall be at the regularly scheduled January meeting and shall be based on nominations by the Management Committee. No member of the Management Committee may serve as Chair or Vice-Chair for more than two consecutive and complete one-year terms.”*

ADMINISTRATIVE REPORTS

- | | |
|---|-----|
| 14. Management Committee Member and Program Manager Reports | n/a |
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SCHEDULE NEXT MEETING / ADJOURNMENT

- | | |
|---|-----|
| 15. Schedule Next Meeting: The next MRSWMP Meeting date is tentatively scheduled for Wednesday, February 22, at 9:30a.m. | n/a |
| 16. Meeting Adjournment | n/a |

Monterey Regional Stormwater Management Program

Management Committee

MEETING MINUTES For November 16, 2022

AGENDA ITEMS

1. Call to Order / Roll-Call

Chairperson Trapani (County of Monterey) called the meeting to order at 9:33a.m. and performed roll call.

Management Committee (MC) Members:

City of Carmel – Agnes Martelet
City of Del Rey Oaks – Ron Fucci
City of Monterey - Tricia Wotan
City of Sand City – Leon Gomez
City of Seaside – Melissa Savage
County of Monterey – Michael Trapani

Other:

Maris Sidenstecker – Save the Whales
Lucas Sharkey – Regional Board
Bridget Hoover, Lindsay Brown – National
Marine Sanctuary Foundation

MRSWMP Staff:

Program Manager – Jeff Condit

2. Public Comment

None.

CONSENT AGENDA

3. Approve Management Committee Meeting Minutes for 9/28/22

- **Action:** On a motion by Wotan (*City of Monterey*), seconded by Gomez (*City of Sand City*), Management Committee approved the Management Committee Meeting Minutes for 9/28/22 (6-0).

- **Ayes:** Martelet, Trapani, Wotan, Fucci, Gomez, Savage
- **Noes:** None
- **Abstain:** None

DISCUSSION ITEMS

4. Update on COVID-19 Situation

A brief discussion ensued regarding impacts the current COVID-19 situation has had on stormwater programs and local government in general.

- Trapani shared that the Governor's Executive Order will end on February 28.
- Carmel will be meeting in person, with an option for public participation via virtual. They will not require proof of vaccination. They will release the community transmission level, requiring masks for medium and high level of community transmission.

5. De-Brief of Annual Report Process

Members discussed the Annual Report process, providing feedback on their experience.

- Wotan inquired whether the Second Nature platform is based on the Permit Year or Water Year as their calculating window. Condit will follow up with Second Nature to understand their approach.
- Martelet shared that it would be helpful to have Second Nature participate in our future August MRSWMP Meetings, prior to the Annual Report process, to explain changes and provide feedback (**Action Item – Condit**).
- Gomez shared that he found a need to update and revisit his Enforcement Response Plan. It may be helpful to revisit these guidance documents to ensure they are up to date.

6. De-Brief of CASQA Conference

Condit and Martelet shared their experiences attending the recent Annual CASQA Conference. Highlights included:

- The STORMS team confirmed that a Cost of Compliance Permit Requirement will include Phase II Permittees
- Maintenance of Structural Control Measures (SCM) appears to be a statewide issue. SCVURPPP offered a presentation on their approach to maintaining SCMs.
- There was a focus on PFAS as a potential emerging pollutant of concern
- The City of Watsonville provided an overview of their recently developed Green Infrastructure Plan. We may wish to see if Jackie McCloud is available to present this Plan to MRSWMP during an upcoming meeting
- Martelet presented the results of her ASBS Monitoring Program

7. Update on Public Education and Public Outreach Program

a. Highlights of Year 9 PE/PO Program

Sidenstecker provided an update of the Year 9 PE/PO activities. Highlights included:

- Our school outreach program reached over 1,200 students for in-person presentations
- We were able to participate in local community events in person after a 2-year hiatus due to the Covid pandemic
- We continue our outreach activities through the Our Water Our World program, in person at Home Depot
- It is projected that our TV Ad campaign reached nearly 1 million impressions
- We updated ads for radio, newspapers, and movie theaters
- We installed 63 storm drain emblems throughout the region through a volunteer effort

b. Update on TV Ad Development

Condit provided an update on the development of new TV Ads to promote our stormwater messaging to the public. He is currently working with our regional partners and firm Advance Creative to develop a series of ads. Fuerst is representing MRSWMP on the Sub-Committee along with Condit and Sidenstecker.

8. Presentation on City of Carmel's ASBS Monitoring Program

Martelet shared a presentation she recently developed for the Annual CASQA Conference regarding the City of Carmel's ASBS Monitoring Program. The pollutants of concern consisted of fecal indicator bacteria (FIB) and copper in the City's ASBS receiving water. The management questions explored included: 1) where do these pollutants come from and are they human sources; and 2) how can the City address these pollutants.

The program covered a 5-year time period, with 2 storms sampled per year. Martelet discussed findings on FIB and copper. Highlights of her findings for Management as well as actions pursued include:

- Sewer main was relined
- Development of Sewer Lateral Ordinance
- Expand dog waste outreach into the watershed.
- Dissolved copper is more difficult to treat
- Remove copper from accepted architectural material in design guidelines
- Sharing information with Monterey County

An extended discussion ensued. Wotan shared that the Building Code requires copper piping for potable water, which is utilized for irrigation and may serve as a potential source.

9. Update on Post-Construction Requirements

a. Discussion of SCM Maintenance & Training Options

Condit shared that training opportunities for SCM maintenance appears to be in high demand throughout the state. He is currently seeking to identify Maintenance Fact Sheets that may be presented as a resource for municipal staff and the private sector.

In addition, he is hoping to identify a training schedule for the new year that would cover a range of PCR topics to possibly include:

- PCR O&M training
- PCR Stormwater Technical Guide training (more of a general PCR overview)
- PCR Design and Plan Review training (in-depth project-specific training, Case Study)

Towards these goals, Savage, Trapani, and Gomez volunteered to serve on a PCR Sub-Committee to guide the effort.

10. Update on Trash Amendment

a. Region 3 Trash Amendment Exchange

Condit shared that during the recent CASQA Conference, a number of Region 3 Permittees expressed an interest in developing a platform to allow for knowledge sharing regarding the Trash Amendment requirements. The first meeting will be held in

mid-January. Condit will explore Brown Act considerations with his Legal Team
(Action Item – Condit).

ADMINISTRATIVE REPORTS

11. Management Committee Member and Program Manager Reports

- a. **City of Carmel** – Martelet shared that she is working with Sidenstecker on a CBSM survey of the public on dog doo.
- b. **City of Monterey** – Wotan shared that she is working on two urban diversion projects that will serve as a water supply for the Pure Water Monterey project.
- c. **County of Monterey** – Trapani conducted water sampling activities during the latest rainfall event. He reminded members that the State Water Board invoices will be sent out shortly.
- d. **Program Manager** – Condit shared that the December MRSWMP meeting is proposed to be a Management Committee retreat which will include a tour of the Pure Water Monterey facility.

ADJOURNMENT / SCHEDULE NEXT MEETING

12. Schedule Next Meeting

The next Management Committee meeting is scheduled for Friday, December 16, at 9:30am.

13. Meeting Adjournment

The meeting was adjourned at 11:33a.m.

**Monterey Regional Stormwater Management Program
Management Committee
MEETING MINUTES
For December 16, 2022**

AGENDA ITEMS**1. Call to Order / Roll-Call**

Chairperson Trapani (County of Monterey) called the meeting to order at 11:00a.m. and performed roll call.

Management Committee (MC) Members:

City of Carmel – Agnes Martelet
City of Del Rey Oaks – Ron Fucci
City of Monterey - Tricia Wotan
City of Pacific Grove – George Fuerst
City of Sand City – Leon Gomez
City of Seaside – Melissa Savage
County of Monterey – Michael Trapani

Other:

Mike McCullough, Rachel Gaudoin –
Monterey One Water
Bridget Hoover – Monterey Bay National
Marine Sanctuary

MRSWMP Staff:

Program Manager – Jeff Condit

2. Public Comment

None.

DISCUSSION ITEMS**3. Pure Water Monterey Facility Site Visit**

Mike McCullough and Rachel Gaudoin welcomed members to the Pure Water Monterey facility located at the Monterey One Water Regional Treatment Plant. Members proceeded to tour the facility. An extended discussion ensued.

ADJOURNMENT / SCHEDULE NEXT MEETING**4. Schedule Next Meeting**

The next Management Committee meeting is scheduled for Wednesday, January 25, at 9:30am.

5. Meeting Adjournment

The meeting was adjourned at 12:00p.m.

3-day Virtual Workshop

Action Changers: How to Drive Behavioral Change in Communities

February 7, 8 and 9

8:30 am - 12:30 pm

Focus

Program design to change behavior for positive environmental outcomes

Dr. Doug McKenzie-Mohr

Helping organizations develop effective programs that foster sustainable, healthy, and safe behaviors for over three decades

Registration

\$75 non-profit rate

\$150 corporate and government rate

*Scholarships available

[Register via Eventbrite](#)



**Monterey Bay
Aquarium®**



**Central Coast
Community
Energy**

CLEAN ENERGY. LOCAL CONTROL.

~ Workshop Sponsors ~



Community-Based Social Marketing

February 7, 8 and 9 3-day Virtual Workshop

We invite you to attend a workshop with the founder of community-based social marketing (CBSM), Dr. Doug McKenzie-Mohr. The training provided will fundamentally change the way you think about environmental, health and safety program design. No, this is not about 'social media' marketing... it is about achieving change by methodically developing programs to get humans to shift their behavior.

Who should attend?

Government, nonprofit and business staff from the Tri-County region who are responsible for programs in waste management, alternative transportation, electrification, emergency response, climate resiliency, water conservation, and human health where success depends on humans behavioral changes to collectively 'do better' by the planet and each other.

If you are in the business of changing people's behavior, then this workshop is for you.

- Just how do we **get people out of their cars** and onto the bus?
- How do we get people to **give up their gas stove** for an electric one?
- What does it take to **stop littering the beaches** with cigarette butts?
- How do we **get people to exercise** and give up sugary sodas?
- What can be done to **stop illegal dumping in fields** and waterways?
- How do we get people to **dispose recyclables and food scraps** in the right bin?
- How do we **get visitors to care for the beautiful places** they came to see?
- How can our communities **connect and care** about these issues.

We believe that many of our nonprofits, businesses and government agencies can benefit greatly by learning and practicing **Community-Based Social Marketing** to achieve effective behavior change. And if we are 'all singing from the same song sheet', we can be more effective in our collective efforts across the Tri-County area.

Find out more about CBSM and Doug at www.cbsm.com



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF WATER

December 5, 2022

MEMORANDUM

SUBJECT: Addressing PFAS Discharges in NPDES Permits and Through the Pretreatment Program and Monitoring Programs

FROM: Radhika Fox
Assistant Administrator

A handwritten signature in black ink, appearing to be "R. Fox", is placed to the right of the "FROM:" line.

TO: EPA Regional Water Division Directors, Regions 1-10

The National Pollutant Discharge Elimination System (NPDES) program is an important tool established by the Clean Water Act (CWA) to help address water pollution by regulating point sources that discharge pollutants to waters of the United States. Collectively, the U.S. Environmental Protection Agency (EPA) and states issue thousands of permits annually, establishing important monitoring and pollution reduction requirements for Publicly Owned Treatment Works (POTWs), industrial facilities, and stormwater discharges nationwide. The NPDES program interfaces with many pathways by which per- and polyfluoroalkyl substances (PFAS) travel and are released into the environment, and ultimately impact water quality and the health of people and ecosystems. Consistent with the Agency's commitments in the October 2021 [*PFAS Strategic Roadmap: EPA's Commitments to Action 2021-2024*](#) (*PFAS Strategic Roadmap*), EPA will work in cooperation with our state-authorized permitting authorities to leverage the NPDES program to restrict the discharge of PFAS at their sources. In addition to reducing PFAS discharges, this program will enable EPA and the states to obtain comprehensive information on the sources and quantities of PFAS discharges, which can be used to inform appropriate next steps to limit the discharges of PFAS.

This memorandum provides EPA's guidance to states and updates the April 28, 2022 guidance¹ to EPA Regions for addressing PFAS discharges when they are authorized to administer the NPDES permitting program and/or pretreatment program. These recommendations reflect the Agency's commitments in the PFAS Strategic Roadmap, which directs the Office of Water to leverage NPDES permits to reduce PFAS discharges to waterways "*at the source and obtain more comprehensive information through monitoring on the sources of PFAS and quantity of PFAS discharged by these sources.*" While the Office of Water works to revise Effluent Limitation Guidelines (ELGs) and develop water quality criteria to support technology-based and water quality-based effluent limits for PFAS in NPDES permits, this memorandum describes steps permit writers can implement under existing authorities to reduce the discharge of PFAS.

¹ Addressing PFAS Discharges in EPA-Issued NPDES Permits and Expectations Where EPA is the Pretreatment Control Authority, https://www.epa.gov/system/files/documents/2022-04/npdes_pfas-memo.pdf.

This memorandum also provides EPA's guidance for addressing sewage sludge PFAS contamination more rapidly than possible with monitoring based solely on NPDES permit renewals. States may choose to monitor the levels of PFAS in sewage sludge across POTWs and then consider mechanisms under pretreatment program authorities to prevent the introduction of PFAS to POTWs based on the monitoring results.

EPA recommends that the following array of NPDES and pretreatment provisions and monitoring programs be implemented by authorized states and POTWs, as appropriate, to the fullest extent available under state and local law. NPDES and pretreatment provisions may be included when issuing a permit or by modifying an existing permit pursuant to 40 CFR 122.62.

A. Recommendations for Applicable Industrial Direct Dischargers

1. **Applicability:** Industry categories known or suspected to discharge PFAS as identified on page 14 of the PFAS Strategic Roadmap include: organic chemicals, plastics & synthetic fibers (OCPSF); metal finishing; electroplating; electric and electronic components; landfills; pulp, paper & paperboard; leather tanning & finishing; plastics molding & forming; textile mills; paint formulating, and airports. This is not an exhaustive list and additional industries may also discharge PFAS. For example, Centralized Waste Treatment (CWT) facilities may receive wastes from the aforementioned industries and should be considered for monitoring. There may also be categories of dischargers that do not meet the applicability criteria of any existing ELG; for instance, remediation sites, chemical manufacturing not covered by OCPSF, and military bases.

EPA notes that no permit may be issued to the owner or operator of a facility unless the owner or operator submits a complete permit application in accordance with applicable regulations, and applicants must provide any additional information that the permitting authority may reasonably require to assess the discharges of the facility (40 CFR 122.21(e), (g)(13)).² The applicant may be required to submit additional information under CWA Section 308 or under a similar provision of state law.

2. **Effluent-and wastewater residuals monitoring:** In the absence of a final 40 CFR Part 136 method, EPA recommends using CWA wastewater [draft analytical method 1633](#) (see 40 CFR 122.21(e)(3)(ii) and 40 CFR 122.44(i)(1)(iv)(B)). EPA also recommends that monitoring include each of the 40 PFAS parameters detectable by draft method 1633 and be conducted at least quarterly to ensure that there are adequate data to assess the presence and concentration of PFAS in discharges. All PFAS monitoring data must be reported on Discharge Monitoring Reports (DMRs) (see 40 CFR 122.41(l)(4)(i)). The draft Adsorbable Organic Fluorine CWA wastewater method 1621 can be used in conjunction with draft method 1633, if appropriate. Certain industrial processes may generate PFAS-contaminated solid waste or air emissions not covered by NPDES permitting and permitting agencies should coordinate with appropriate state authorities on proper containment and disposal to avoid cross-media contamination. EPA's draft analytical method 1633 may be appropriate to assess the amount and types of PFAS for some of these wastestreams.³

² For more, see [NPDES Permit Writer's Manual Section 4.5.1](#).

³ See <https://www.epa.gov/water-research/pfas-analytical-methods-development-and-sampling-research> for a list of EPA-approved methods for other media.

- 3. Best Management Practices (BMPs) for discharges of PFAS, including product substitution, reduction, or elimination of PFAS, as detected by draft method 1633:** Pursuant to 40 CFR 122.44(k)(4), EPA recommends that NPDES permits for facilities incorporate the following conditions when the practices are “reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.”⁴
- a. BMP conditions based on pollution prevention/source reduction opportunities, which may include:
 - i. Product elimination or substitution when a reasonable alternative to using PFAS is available in the industrial process.
 - ii. Accidental discharge minimization by optimizing operations and good housekeeping practices.
 - iii. Equipment decontamination or replacement (such as in metal finishing facilities) where PFAS products have historically been used to prevent discharge of legacy PFAS following the implementation of product substitution.
 - b. Example BMP permit special condition language:
 - i. *PFAS pollution prevention/source reduction evaluation:* Within 6 months of the effective date of the permit, the facility shall provide an evaluation of whether the facility uses or has historically used any products containing PFAS, whether use of those products or legacy contamination reasonably can be reduced or eliminated, and a plan to implement those steps.
 - ii. *Reduction or Elimination:* Within 12 months of the effective date of the permit, the facility shall implement the plan in accordance with the PFAS pollution prevention/source reduction evaluation.
 - iii. *Annual Report:* An annual status report shall be developed which includes a list of potential PFAS sources, summary of actions taken to reduce or eliminate PFAS, any applicable source monitoring results, any applicable effluent results for the previous year, and any relevant adjustments to the plan, based on the findings.
 - iv. *Reporting:* When EPA’s electronic reporting tool for DMRs (called “NetDMR”) allows for the permittee to submit the pollution prevention/source reduction evaluation and the annual report, the example permit language can read, “The pollution prevention/source reduction evaluation and annual report shall be submitted to EPA via EPA’s electronic reporting tool for DMRs (called “NetDMR”).
- 4. BMPs to address PFAS-containing firefighting foams for stormwater permits:** Pursuant to 122.44(k)(2), where appropriate, EPA recommends that NPDES stormwater permits include BMPs to address Aqueous Film Forming Foam (AFFF) used for firefighting, such as the following:⁵
- a. Prohibiting the use of AFFFs other than for actual firefighting.
 - b. Eliminating PFOS and PFOA -containing AFFFs.
 - c. Requiring immediate clean-up in all situations where AFFFs have been used, including diversions and other measures that prevent discharges via storm sewer systems.
- 5. Permit Limits:** As specified in 40 CFR 125.3, technology-based treatment requirements under CWA Section 301(b) represent the minimum level of control that must be imposed in NPDES permits. Site-specific technology-based effluent limits (TBELs) for PFAS discharges developed on a best professional judgment (BPJ) basis may be appropriate for facilities for which there are no applicable effluent guidelines (*see* 40 CFR 122.44(a), 125.3). Also, NPDES permits must include water quality-based effluent limits (WQBELs) as derived from state water quality standards, in

⁴ For more on BMPs, see [NPDES Permit Writer’s Manual Section 9.1](#) and [EPA Guidance Manual for Developing Best Management Practices](#).

⁵ [Naval Air Station Whidbey Island MS4 permit](#) incorporates these provisions.

addition to TBELs developed on a BPJ basis, if necessary to achieve water quality standards, including state narrative criteria for water quality (CWA Section 301(b)(1)(C); 40 CFR 122.44(d)). If a state has established a numeric criterion or a numeric translation of an existing narrative water quality standard for PFAS parameters, the permit writer should apply that numeric criterion or narrative interpretation in permitting decisions, pursuant to 40 CFR 122.44(d)(1)(iii) and 122.44(d)(1)(vi)(A), respectively.

B. Recommendations for Publicly Owned Treatment Works

1. **Applicability:** All POTWs, including POTWs that do not receive industrial discharges, and industrial users (IUs) in the industrial categories above.
2. **Effluent, influent, and biosolids monitoring:** In the absence of a final 40 CFR Part 136 method, EPA recommends using CWA wastewater [draft analytical method 1633](#) (*see* 40 CFR 122.21(e)(3)(ii) and 40 CFR 122.44(i)(1)(iv)(B)). EPA also recommends that monitoring include each of the 40 PFAS parameters detectable by draft method 1633 and be conducted at least quarterly to ensure that there are adequate data to assess the presence and concentration of PFAS in discharges. All PFAS monitoring data must be reported on DMRs (*see* 40 CFR 122.41(l)(4)(i)). The draft Adsorbable Organic Fluorine CWA wastewater method 1621 can be used in conjunction with draft method 1633, if appropriate.
3. **Pretreatment program activities:**
 - a. **Update IU Inventory:** Permits to POTWs should contain requirements to identify and locate all possible IUs that might be subject to the pretreatment program and identify the character and volume of pollutants contributed to the POTW by the IUs (*see* 40 CFR 403.8(f)(2)). As EPA regulations require, this information shall be provided to the pretreatment control authority (*see* 40 CFR 122.44(j) and 40 CFR 403.8(f)(6)) within one year. The IU inventory should be revised, as necessary, to include all IUs in industry categories expected or suspected of PFAS discharges listed above (*see* 40 CFR 403.12(i)).⁶
 - b. **Utilize BMPs and pollution prevention to address PFAS discharges to POTWs.** EPA recommends that POTWs:
 - i. Update IU permits/control mechanisms to require quarterly monitoring. These IUs should be input into the Integrated Compliance Information System (ICIS) with appropriate linkage to their respective receiving POTWs. POTWs and states may also use their available authorities to conduct quarterly monitoring of the IUs (*see* 40 CFR 403.8(f)(2), 403.10(e) and (f)(2)).
 - ii. Where authority exists, develop IU BMPs or local limits. 40 CFR 403.5(c)(4) authorizes POTWs to develop local limits in the form of BMPs. Such BMPs could be like those for industrial direct discharges described in A.3 above.
 - iii. In the absence of local limits and POTW legal authority to issue IU control mechanisms, state pretreatment coordinators are encouraged to work with the POTWs to encourage pollution prevention, product substitution, and good housekeeping practices to make meaningful reductions in PFAS introduced to POTWs.

⁶ ELG categories of **airport deicing, landfills, textile mills, and plastics molding and forming** do not have categorical pretreatment standards, and therefore small-volume indirect dischargers in those categories would not ordinarily be considered Significant Industrial Users (SIUs) and may not be captured on an existing IU inventory. IUs under the Paint Formulating category are only subject to Pretreatment Standards for New Sources (PSNS), and existing sources may need to be inventoried.

C. Recommended Biosolids Assessment

- 1. Where appropriate, states may work with their POTWs to reduce the amount of PFAS chemicals in biosolids, in addition to the NPDES recommendations in Section B above, following these general steps:⁷**
 - a. EPA recommends using draft method 1633 to analyze biosolids at POTWs for the presence of 40 PFAS chemicals.⁸
 - b. Where monitoring and IU inventory per section B.2 and B.3.a above indicate the presence of PFAS in biosolids from industrial sources, EPA recommends actions in B.3.b to reduce PFAS discharges from IUs.
 - c. EPA recommends validating PFAS reductions with regular monitoring of biosolids. States may also use their available authorities to conduct quarterly monitoring of the POTWs (*see* 40 CFR 403.10(f)(2)).

D. Recommended Public Notice for Draft Permits with PFAS-Specific Conditions

- 1. In addition to the requirements for public notice described in 40 CFR 124.10, EPA recommends that NPDES permitting authorities provide notification to potentially affected downstream public water systems (PWS) of draft permits with PFAS-specific monitoring, BMPs, or other conditions:**
 - a. Public notice of the draft permit would be provided to potentially affected PWS with intakes located downstream of the NPDES discharge.
 - b. NPDES permit writers are encouraged to collaborate with their drinking water program counterparts to determine on a site-specific basis which PWS to notify.
 - i. EPA's Drinking Water Mapping Application to Protect Source Waters ([DWMAPS](#)) tool may be helpful as a screening tool to identify potentially affected PWS to notify.
 - c. EPA will provide instructions on how to search for facility-specific discharge monitoring data in EPA's publicly available search tools.

⁷ EPA is currently evaluating the potential risk of PFOA and PFOS in biosolids and supporting studies and activities to evaluate the presence of PFOA and PFOS in biosolids. This recommendation is not meant to supersede the PFOA and PFOS risk assessment or supporting activities. The conclusions of the risk assessment and supporting studies may indicate that regulatory actions or more stringent requirements are necessary to protect human health and the environment.

⁸ While water quality monitoring activities (including monitoring of PFAS associated with NPDES permit or pretreatment requirements) at POTWs are generally not eligible for Clean Water State Revolving Fund (CWSRF), monitoring for the specific purpose of project development (planning, design, and construction) is eligible. Monitoring in this capacity, and within a reasonable timeframe, can be integral to the identification of the best solutions (through an alternatives analysis) for addressing emerging contaminants and characterizing discharge and point of disposal (e.g., land application of biosolids). Though ideally the planning and monitoring for project development would result in a CWSRF-eligible capital project, in some instances, the planning could lead to outcomes other than capital projects to address the emerging contaminants.

Monterey Regional Stormwater Management Program

Stormwater Facility Operation and Maintenance Fact Sheet**► BIORETENTION PLANTERS**

Bioretention planters are intended to:

1. Reduce pollutant loads by filtering stormwater runoff through a layer of specially formulated soil and then infiltrating stormwater into the ground.
2. Pond water before overflowing to a drain inlet.
3. Infiltrate completely following each rain event.

Bioretention are not intended to:

1. Have standing water for periods longer than 48 hours after a storm
2. Serve as wetland or riparian habitat
3. Be accessed by anyone other than authorized personnel

The recommended routine maintenance activities for bioretention planters are:

On an as-needed basis:

1. Remove any soil build-up, fallen leaves, debris, and trash.
2. Irrigate plants as needed during prolonged dry periods. In general, plants should be selected to be drought-tolerant and not require irrigation after establishment (two to three years).
3. Prune or cut back plants for health and to ensure stormwater is able to flow into inlets and across the surface of the facility. Remove and replant as necessary. When replanting, maintain the design surface elevation and minimize the introduction of soil.
4. Control weeds by manual methods or by adding mulch. If problem areas occur, corn gluten, white vinegar, vinegar-based products such as Burnout, or non-selective natural herbicides such as Safer's Sharpshooter may be used.
5. Examine the vegetation to ensure that it is healthy and dense enough to provide filtering and to protect soils from erosion. Remove and replace all dead and diseased vegetation.
6. Replenish mulch as necessary. Use "aged mulch" (also called compost mulch) to reduce the ability of weeds to establish, keep soil moist, and replenish soil nutrients. Mulch may be added from time to time to maintain a mulch layer thickness of 1" to 2".

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7. Check signage. Remove graffiti and replace if necessary.
8. Confirm that irrigation is adequate and not excessive.

Annually, prior to the beginning of the rainy season:

1. Remove trash, debris, vegetation, and accumulated sediment.
2. Replenish mulch as necessary. Use "aged mulch" (also called compost mulch) to reduce the ability of weeds to establish, keep soil moist, and replenish soil nutrients. Mulch may be added from time to time to maintain a mulch layer thickness of 1" to 2".
3. Visually inspect the facility to determine if any maintenance activities are required in order to be prepared for the upcoming season.
4. If necessary, replenish rock or other material used as a splash pad.
5. Inspect drainage outlets for signs of erosion or plugging. If minor erosion is observed, backfill the eroded area. Rock rip rap or a concrete splash pad may be needed to avoid future erosion. If significant erosion is observed, consult a Civil Engineer or Landscape Architect.
6. Inspect soil slopes for evidence of instability or erosion. If minor erosion is observed, backfill the eroded area, and cover the area with mulch or erosion control blanket to prevent future erosion. If significant erosion is observed, or if there is evidence of instability, consult a Civil Engineer or Landscape Architect.

During the rainy season:

1. Abate potential vectors (mosquito larvae) by filling holes in the ground in and around the facility so that there are no areas where water stands longer than 48 hours following a storm. If mosquito larvae are present and persistent, contact Monterey County Mosquito Abatement District. Mosquito larvicides should be applied only when absolutely necessary and then only by a licensed individual or contractor.

Annually, at the end of the rainy season:

1. Remove trash, debris, dead vegetation, and accumulated sediment.
2. Determine if any maintenance activities should be scheduled, since many maintenance activities need to be performed during the dry season.

Do Not:

1. Do not add fertilizer to bioretention facilities. Compost tea, available from various nurseries and garden supply retailers, may be applied at a maximum recommended rate of 5 gallons, mixed with 15 gallons of water, per acre, up to two weeks prior to planting and once per year between March and June. Do not apply

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when temperatures are below 50°F or above 90°F or when rain is forecast in the next 48 hours.

2. Do not use synthetic pesticides or herbicides on bioretention facilities. Beneficial nematodes and non-toxic controls may be used. Acceptable natural pesticides include Safer® products and Neem oil.
3. Do not add "normal" soil into the bioretention facility. Bioretention soil is specially formulated to provide a high infiltration rate; adding other "normal" soils can significantly reduce the ability of the facility to function as designed.
4. Do not re-grade or re-contour the bioretention facility. It is important that the ground surface be maintained in the design configuration.
5. Do not make additional openings in the side of the drain inlet in order to address surface water ponding issues. Water must pond up to the design overflow elevation before overflowing into the storm drain. If surface water ponding is an issue, contact the project civil engineer.

Major Facility Changes or Renovation:

Contact the project civil engineer (**Engineer's Name**), or other qualified engineer or landscape architect, in the event that major work is contemplated in or adjacent to the facility. Major work includes:

- Significant changes to the facility's planting palette or irrigation system.
- Re-grading the facility.
- Any activity which involves adding or removing soil from the facility.
- Modifying the "engineered" elements of the facility, including drain inlets, pipes, subsurface drains, check dams, water barriers, and structural elements.
- Improvements in areas which drain to the facility; especially improvements which would increase the area of impervious surface which drains to the facility.

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Stormwater Facility Operation and Maintenance Fact Sheet**► RAINWATER HARVESTING CISTERN**

A rainwater harvesting cistern is intended to:

1. Store stormwater runoff for extended periods of time.
2. Reduce the reliance on potable water, by providing a source of non-potable water for landscape irrigation use.
3. Reduce the quantity and velocity of stormwater runoff flowing to local drainage system.

A rainwater harvesting cistern is not intended to:

1. Produce water for potable uses.
2. Provide vector (mosquito larvae) habitat.
3. Be accessed by anyone other than authorized personnel.

The recommended routine maintenance activities for rainwater harvesting cisterns are:

At least twice a year:

1. Remove any soil, debris, or trash from the building gutters or roof drainage system which could prevent stormwater from entering the cistern.
2. Inspect the cistern screens to make sure debris is not collecting on the surface and there are no holes for insects to enter.
3. Inspect, remove and wash the stainless steel filter insert. Use a brush and water to remove any residue on the filter.
4. Inspect all downspout pipes to make sure debris has not collected or blocked them.
5. Inspect water stored in the cistern. Observe the water surface for mosquito larvae. Observe the floor of the cistern for accumulation of excess amounts of sediment or debris.
6. Check signage and water level indicator. Remove graffiti and replace if necessary.

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Annually, at the end of the rainy season (after the tank is empty):

1. Remove trash, debris, and accumulated sediment from the inside of the cistern and the cistern filter. Use only vinegar or another non-toxic cleaner if needed.

Do Not:

1. Do not use synthetic pesticides or synthetic or toxic cleaners to clean the cistern.

Major Facility Changes or Renovation:

Contact the project civil engineer (**Engineer's Name**) landscape architect, or other qualified company in the event that major work is contemplated in or adjacent to the facility. Major work includes:

- Modifying the openings, screens, pipes, and structural elements.
- Improvements in areas which drain to the facility; especially improvements which would increase the area of impervious surface which drains to the facility.

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Stormwater Facility Operation and Maintenance Fact Sheet**► PERMEABLE CONCRETE**

Permeable concrete is intended to:

1. Infiltrate all precipitation during smaller storms.
2. Surface drain during higher-intensity storms.
3. Reduce pollutant loads by infiltrating stormwater and by filtering stormwater runoff through the aggregate base course.
4. Drain completely following each rain event.

Permeable concrete is not intended to:

1. Have standing water on its surface.
2. Settle over time

The recommended routine maintenance activities for permeable concrete is:

On an ongoing and as-needed basis:

1. Keep surrounding landscaped areas well maintained and covered with landscaping and/or mulch so that soils are prevented from being washed onto the permeable concrete.
2. Ensure the concrete pavement is draining and that there is no standing water.
3. Control weeds by manual methods. If problem areas occur, corn gluten, white vinegar, vinegar-based products such as Burnout, or non-selective natural herbicides such as Safer's Sharpshooter may be used.
4. Monitor regularly to ensure that the surface drains properly after storms.

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Annually, prior to September 1:

1. Inspect the surface of the system for signs of sediment build-up, surface flow characteristics, and surface ponding.
2. Remove soil build-up, fallen leaves, debris, and trash.
3. Vacuum the concrete using a dry vacuum type street sweeper or other dry vacuum system. Vacuum and sweeper settings may require adjustments to prevent surface damage and uptake of aggregate.
4. Re-inspect the surface for signs of accumulated sediment, erosion, or lost filler materials.
5. Annual vacuuming typically is all that is required, unless an excessive amount of sediment is deposited onto the permeable concrete. If excessive amounts sediment are deposited onto the permeable concrete, the source of the sediment should be investigated and addressed. If it is not possible to eliminate the issue, an increased sweeping frequency may be necessary.

Do not:

1. Do not pressure wash permeable concrete.
2. Do not seal, overlay, or repave with impermeable materials.

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Stormwater Facility Operation and Maintenance Fact Sheet**► PERMEABLE GEO-CELL PAVING**

Permeable geo-cell paving is intended to:

1. Provide an all-weather driving surface for vehicular traffic.
2. Infiltrate all precipitation during smaller storms.
3. Surface drain during higher-intensity storms.
4. Reduce pollutant loads by infiltrating stormwater and by filtering stormwater runoff through the aggregate base course.
5. Drain completely following each rain event.

Permeable geo-cell paving is not intended to:

1. Have standing water on its surface.
2. Become soft or unstable, even after prolonged precipitation.

The recommended routine maintenance activities for permeable geo-cell paving are:

On an ongoing and as-needed basis:

1. Keep surrounding landscaped areas well maintained and covered with landscaping and/or mulch so that soils are prevented from being washed onto the pervious pavement.
2. Remove soil build-up, fallen leaves, debris, and trash.
3. Ensure pervious pavement system is draining and that there is no standing water.
4. Control weeds by manual methods. If problem areas occur, corn gluten, white vinegar, vinegar-based products such as Burnout, or non-selective natural herbicides such as Safer's Sharpshooter may be used.
5. Pesticide use should be limited and conducted by appropriate professionals. Synthetic pesticides shall not be used.

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Stormwater Facility Operation and Maintenance Fact Sheet**► PERMEABLE PAVERS**

Permeable pavers are intended to:

1. Infiltrate all precipitation during smaller storms.
2. Surface drain during higher-intensity storms.
3. Reduce pollutant loads by infiltrating stormwater and by filtering stormwater runoff through the aggregate base course.
4. Drain completely following each rain event.

Permeable pavers are not intended to:

1. Have standing water on its surface.
2. Shift or settle over time.

The recommended routine maintenance activities for permeable pavers are:

On an ongoing and as-needed basis:

1. Keep surrounding landscaped areas well maintained and covered with landscaping and/or mulch so that soils are prevented from being washed onto the permeable pavers.
2. Ensure the paver system is draining and that there is no standing water.
3. Control weeds by manual methods. If problem areas occur, corn gluten, white vinegar, vinegar-based products such as Burnout, or non-selective natural herbicides such as Safer's Sharpshooter may be used.
4. Monitor regularly to ensure that the surface drains properly after storms.
5. Regular dusting or sweeping by either brush or vacuum systems. Cleaning intervals will depend on several factors including traffic type, traffic frequency and environmental factors.

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Annually, prior to September 1:

1. Inspect the surface of the system for signs of sediment build-up, surface flow characteristics, and surface ponding.
2. Remove soil build-up, fallen leaves, debris, and trash.
3. Vacuum the pavers using a dry vacuum type street sweeper or other dry vacuum system. Vacuum and sweeper settings may require adjustments to prevent uptake of aggregate from the paver voids and joints.
4. Re-inspect the surface for signs of accumulated sediment, erosion, or lost filler materials.
5. Re-fill joints with aggregate (matching existing aggregate specification) if aggregate is more than 1/2" below the paver surface.
6. Annual vacuuming typically is all that is required, unless an excessive amount of sediment is deposited onto the permeable paving. If excessive amounts sediment are deposited onto the permeable paving, the source of the sediment should be investigated and addressed. If it is not possible to eliminate the issue, an increased sweeping frequency may be necessary.
7. Surface rehabilitation likely will be needed once every 5 to 20 years. Surface rehabilitation is needed when the infiltration characteristics of the paver system are not restored by standard dry vacuuming. Perform surface rehabilitation in accordance with the system manufacturer's current recommendations. Activities may include:
 - a. Pervious body paver systems:
 - i. Perform a light pressure wash at 1200-1500 psi in conjunction with wet vacuuming. A steam or hot water option will provide best results.
 - ii. Using a fan tip spray nozzle, at 30 degree angle, 14 to 16 inches from the paver and working at a 45 degree angle from the dominant pattern.
 - iii. Start from the highest grade, working in a sweeping motion, downhill to the lowest point of the project.
 - iv. Care must be taken not to allow the nozzle of the pressure washer to come in close contact with the paver as damage may occur.
 - v. Perform flood testing to verify the system's rehabilitated infiltration rate. The rehabilitated infiltration rate should be at least 3 inches per hour.
 - b. Pervious joint paver systems:
 - i. Remove the upper 1/2" to 1" of joint filler material (and the accumulated sediments) using a commercial vacuum sweeper with water jets and vacuum bar attachment.
 - ii. Backfill the joints with new joint filler (match existing filler material) and sweep the surface clean.

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- iii. Perform flood testing to verify the system's rehabilitated infiltration rate. The rehabilitated infiltration rate should be at least 50 inches per hour.
- c. Solvents or cleaners shall not be used.

Reconstruction:

Partial or full reconstruction is required in the event that the foregoing rehabilitation techniques fail to restore the system's function.

Reconstruction is also required if the pavement becomes unstable or settles.

A qualified civil engineer or landscape architect should be consulted if reconstruction is needed. A construction contractor qualified in permeable paver installation should perform any needed reconstruction.

Do not:

1. Do not pressure wash permeable pavers with more than 1500 psi . Only pressure wash by following the procedures specified by the manufacturer.
2. Do not seal, overlay, or repave with impermeable materials.

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Stormwater Facility Operation and Maintenance Fact Sheet**► TREE BOX FILTER**

High flow rate tree box type biofilters ("tree box filters") are intended to:

1. Reduce pollutant loads by filtering stormwater runoff through a layer of engineered soil media.
2. Pond water to a specified depth before overflowing to a drain inlet.
3. Drain completely following each rain event.

Tree box filters are not intended to:

1. Infiltrate significant amounts of water into the underlying soil
2. Have standing water after a storm
3. Serve as wetland or riparian habitat
4. Be accessed by anyone other than authorized personnel

The recommended routine maintenance activities for tree box filter are:

On an as-needed basis:

1. Remove accumulated sediment, fallen leaves, debris, and trash.
2. Prune or cut back plants for health and to ensure stormwater is able to flow into inlets and across the surface of the facility. Remove and replant as necessary. When replanting, maintain the design surface elevation and minimize the introduction of soil.
3. Control weeds by manual methods.
4. Examine the vegetation to ensure that it is healthy. Remove and replace all dead and diseased vegetation.
5. Remove graffiti and replace signs and markers as necessary.
6. Confirm that irrigation is adequate and not excessive.

Annually, prior to the beginning of the rainy season:

1. Remove trash, debris, weeds, and accumulated sediment.

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2. Remove mulch and place 3" of new mulch. The mulch should be double-shredded hardwood mulch, or as specified by the system manufacturer. Mulch shall not be colored or dyed.
3. Prior to placing the new mulch, evaluate if additional engineered soil media is required. Additional soil media shall be obtained from the manufacturer; do not use other types of soil.
4. Adjust splash pad material. Replenish if needed.
5. Visually inspect the facility and surroundings to determine if any other maintenance activities are required in order to be prepared for the upcoming season.

During the rainy season:

1. Observe the water level draw-down characteristics of the tree box filter during the 24 hour period following each rain event. The tree box filter should completely draw down immediately after each rain event. If it does not draw-down immediately, inspect the tree box for sediment which may have accumulated and reduced the infiltrative ability of the engineered soil media. Sediment typically does not penetrate deeply into the mulch and soil media, and therefore can typically be removed by replacing the mulch layer. In some instances it may be necessary to additionally replace the top layer of soil media. If the facility is still not operating as desired, consult the system designer and/or the manufacturer.

Annually, at the end of the rainy season:

1. Remove trash, debris, vegetation, and accumulated sediment.
2. Determine if any maintenance activities should be scheduled, since many maintenance activities need to be performed during the dry season.

Do Not:

1. Do not add fertilizer to tree box filters. Compost tea, available from various nurseries and garden supply retailers, may be applied at a maximum recommended rate of 5 gallons, mixed with 15 gallons of water, per acre, up to two weeks prior to planting and once per year between March and June. Do not apply when temperatures are below 50°F or above 90°F or when rain is forecast in the next 48 hours.
2. Do not use synthetic pesticides or herbicides on tree box filters. Beneficial nematodes and non-toxic controls may be used. Acceptable natural pesticides include Safer® products and Neem oil.
3. Do not add "normal" soil into the tree box filters. Tree box filter soil media is specially formulated to provide a high infiltration rate; adding "normal" soils can significantly reduce the ability of the facility to function as designed.

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