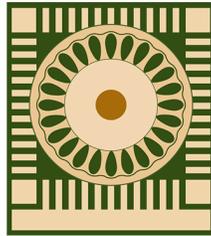


CITY OF HAYWARD

Hayward City Hall
777 B Street
Hayward, CA 94541
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CITY OF
HAYWARD
HEART OF THE BAY

Agenda

Monday, March 11, 2019

4:30 PM

Conference Room 2A

Council Sustainability Committee

CALL TO ORDER**ROLL CALL****PUBLIC COMMENTS:**

(The Public Comment section provides an opportunity to address the City Council Committee on items not listed on the agenda as well as items on the agenda. The Committee welcomes your comments and requests that speakers present their remarks in a respectful manner, within established time limits, and focus on issues which directly affect the City or are within the jurisdiction of the City. As the Committee is prohibited by State law from discussing items not listed on the agenda, any comments on items not on the agenda will be taken under consideration without Committee discussion and may be referred to staff.)

APPROVAL OF CORRECTED MINUTES FROM NOVEMBER 26, 2018 MEETING

[MIN 19-031](#) Corrected Minutes from the November 26, 2018 Council Sustainability Committee Meeting

Attachments: [Attachment I Corrected Minutes from Nov 26, 2018 CSC Meeting](#)

APPROVAL OF MINUTES

[MIN 19-028](#) Approval of Minutes of Council Sustainability Committee Meeting on January 14, 2019

Attachments: [Attachment I Minutes from Jan. 14, 2019 CSC Meeting](#)

REPORTS/ACTION ITEMS

[ACT 19-109](#) Climate Mayors Electric Vehicle Purchasing Collaborative

Attachments: [Attachment I Staff Report](#)
[Attachment II Draft Resolution](#)

[RPT 19-236](#) Update on the City's Renewable Diesel Use in Diesel Vehicle Fleet Pilot

Attachments: [Attachment I Staff Report](#)

[ACT 19-108](#) PCBs Management for Demolition Projects

Attachments: [Attachment I Staff Report](#)
[Attachment II Stormwater Permit Application](#)
[Attachment III BASMAA's PCBs in Priority Building Materials: Model Screening Assessment Package](#)
[Attachment IV Ordinance - Management of PCBs](#)

[ACT 19-105](#) Draft Ordinance for the Reduction of Single-Use Food Service Ware

Attachments: [Attachment I Staff Report](#)

[ACT 19-103](#) Participation in the 8th Annual Wyland National Mayor's Challenge for Water Conservation

Attachments: [Attachment I Staff Report](#)

[RPT 19-233](#) East Bay Community Energy Update

Attachments: [Attachment I Staff Report](#)

[ACT 19-106](#) Proposed 2019 Agenda Planning Calendar

Attachments: [Attachment I Staff Report](#)

ORAL REPORTS

COMMITTEE MEMBER/STAFF ANNOUNCEMENTS AND REFERRALS

ADJOURNMENT



CITY OF HAYWARD

Hayward City Hall
777 B Street
Hayward, CA 94541
www.Hayward-CA.gov

File #: MIN 19-031

DATE: March 11, 2019

TO: Council Sustainability Committee

FROM: Director of Utilities & Environmental Services

SUBJECT

Corrected Minutes from the November 26, 2018 Council Sustainability Committee Meeting

RECOMMENDATION

That the Committee reviews and approves the corrected minutes from the November 26, 2018 Council Sustainability Committee meeting.

ATTACHMENTS

Attachment I Corrected Minutes from Nov. 26, 2018 CSC Meeting

CITY COUNCIL SUSTAINABILITY COMMITTEE MEETING
Hayward City Hall – Conference Room 2A
777 B Street, Hayward, CA 94541-5007

November 26, 2018
4:30 p.m. – 6:08 p.m.

CORRECTED MEETING MINUTES

CALL TO ORDER: Meeting called to order at 4:30 p.m. by Chair Mendall.

ROLL CALL:

Members:

- Al Mendall, City Council Member/CSC Chair
- Elisa Márquez, City Council Member
- Francisco Zermeño, City Council Member

Staff:

- Alex Ameri, Interim Director of Public Works
- Jan Lee, Water Resources Manger
- Erik Pearson, Environmental Services Manager
- Jeff Krump, Solid Waste Program Manager
- Nicole Grucky, Sustainability Specialist
- Crissy Mello, Senior Secretary
- Carol Lee, Management Analyst I
- Kait Byrne, Management Analyst I
- Maria Hurtado, Assistant City Manager
- Jennifer Ott, Deputy City Manager
- Christina Morales, Housing Division Manager
- Marcus Martinez, Assistant Planner

Others:

- Amanda Groziak, Hayward Resident
- Jillian Buckholz, Director of Sustainability, CSUEB
- Stacy Lee
- Minane Jameson, HARD Board President
- Carol Gorringer
- Kimberlee Burks

PUBLIC COMMENTS

Environmental Services Manager, Erik Pearson, introduced Nicole Grucky, as the new Sustainability Specialist.

1. Approval of Minutes of Council Sustainability Meeting on September 24, 2018.

The item was moved by Council Member Zermeño, seconded by Council Member Márquez, and approved unanimously, to approve the minutes of the Council Sustainability Committee meeting of September 24, 2018.

2. Tiny Homes – Sustainability Considerations

Director Ameri, introduced the item and Environmental Services Manager, Erik Pearson, presented the report.

The Committee expressed concern regarding the potential impact that tiny homes would have on street parking, if they were added to existing homes as accessory dwelling unit. Council Member Zermeño asked that staff look into container homes similar to the City of Oakland and Laney College model and present findings to the City Council. Chair Mendall stated that micro-apartments or townhomes offered higher density development on vacant lots, and that building tiny homes on lots with existing homes resulted in more efficient use of land. The Committee expressed support for tiny homes or micro units as a way to enable home ownership, noting that tiny homes should be affordable by design.

Minane Jameson commented that the flood control property near BART and Industrial Parkway or behind the driving range on Industrial may be potential locations for tiny homes.

3. Possible Fee to Address Litter from Disposable Food Packaging

Solid Waste Program Manager, Jeff Krump, presented the report.

Amanda Groziak presented the Finland model of litter reduction and recommended the Committee consider litter prevention in addition to litter clean-up.

Chair Mendall supported incorporating a litter fee as part of the business license fee for certain types of businesses. He urged his colleagues to consider a litter fee.

Council Member Márquez stated that this item would not be ready for a 2020 ballot measure and that the supplemental business license fee should be explored by the Budget and Finance Committee. She also commented that the fee should also apply for grocery stores.

Council Member Zermeño recommended that the City educate consumers on the effects of litter and relocate or add additional trash receptacles to areas of frequent litter accumulation.

Chair Mendall moved that the Committee recommend that the Budget and Finance Committee explore incorporating the litter fee as part of the business license fee when the business license rewrite occurs. Council Member Márquez seconded and the motion passed 2:1 with Council Member Zermeño dissenting.

4. East Bay Community Energy – Priorities for Implementation of the Local Development Business Plan

Director Ameri introduced the item and Environmental Services Manager, Erik Pearson, presented the report.

Director Ameri commented that the Two-megawatt Phase II Solar Project has been delayed. He stated that EBCE has been indecisive on tariffs partially due to an increase in the exit fee that EBCE customers must pay to PG&E.

Council Member Zermeño asked why EBCE has been hesitant to establish a rate to which Director Ameri replied that EBCE is concerned about maintaining rate parity with PG&E.

Chair Mendall commented on the recent California Public Utilities Commission's decision regarding PG&E's ability to charge a higher exit fee and there would be more stable figures in January.

Director Ameri commented that the City's current opt out rate from EBCE is 1.1%, which is below the County average. He also commented that GHG reduction should be included in addition to all priorities.

Discussion ensued and it was acknowledged that all priorities were inter-related. It was moved by Council Member Márquez that the priorities be in the following order: (1) GHG reduction, (2) maintain relative rate parity with PG&E, (3) build local projects, and (4) create local jobs. The motion was seconded by Chair Mendall and passed unanimously.

5. Update on Recycled Water Project

Water Resources Manager, Jan Lee, presented the report, and gave an update on the construction of the storage and distribution system. Ms. Lee also provided an update on connecting customers to the new recycled water system.

The Committee commended staff for the early completion of the distribution system and expressed their preference for staff to continue working cooperatively with customers that have not yet signed up. The Committee agreed that enforcing the mandatory use provisions in the Recycled Water Use Ordinance would be a last resort. Furthermore, Committee members noted that customers would be more receptive to signing up for recycled water service once Council adopts a recycled water rate and could see the cost savings for using recycled water. Council Member Márquez also recommended partnering with the Chamber of Commerce to reach businesses.

Chair Mendall asked staff to develop a long-term plan for expanding recycled water service throughout the City. Director Ameri responded that staff plans to prepare a recycled water master plan.

6. Declaration a Climate Emergency

Environmental Services Manager, Erik Pearson, presented the report and asked for a recommendation from the Committee to present to Council.

Chair Mendall gave credit to all those involved in trying to solve the crisis and commented that more needs to be done. Council Members Márquez and Zermeño

concurring. The item was moved by Zermeño, seconded by Márquez, and passed unanimously.

7. Proposed 2019 Agenda Planning Calendar

Council Member Zermeno asked that the Tree City Inventory include an urban forest component.

Council Member Márquez requested a discussion about future development, retail specifically, to address the litter issue through the development review process.

Chair Mendall suggested the addition of litter collection as a standard condition of approval for applicable new businesses.

Chair Mendall commented that he was looking forward to the natural gas and new construction staff report and suggested that staff consider a ban on natural gas to encourage the use of electric energy.

Jillian Buckholz, Director of Sustainability CSUEB, stated that the university is moving away from natural gas and disposables.

COMMITTEE MEMBER/STAFF ANNOUNCEMENTS AND REFERRALS:

Council Member Márquez announced that the Mosquito Abatement District Board formed a Sustainability Committee and will be installing solar soon.

Council Member Zermeno stated that he would like to see a graphic for the climate action emergency to distribute on social media.

Mr. Pearson announced the upcoming EBCE workshop for residents and community members.

Jillian Buckholz of CSUEB commented that portions of campus housing have moved to EBCE with the rest to eventually follow.

ADJOURNMENT: 6:08 p.m.

MEETINGS

Attendance	Present 11/26/18 Meeting	Present to Date This Fiscal Year	Excused to Date This Fiscal Year	Absent to Date This Fiscal Year
Elisa Márquez	✓	6	1	0
Al Mendall*	✓	7	0	0
Francisco Zermeño	✓	6	1	0



CITY OF HAYWARD

Hayward City Hall
777 B Street
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File #: MIN 19-028

DATE: March 11, 2019

TO: Council Sustainability Committee

FROM: Director of Utilities & Environmental Services

SUBJECT

Approval of Minutes of Council Sustainability Committee Meeting on January 14, 2019

RECOMMENDATION

That the Committee reviews and approves the minutes of the Council Sustainability Committee meeting on January 14, 2019.

ATTACHMENTS

Attachment I Minutes of the CSC Meeting on January 14, 2019

CITY COUNCIL SUSTAINABILITY COMMITTEE MEETING
Hayward City Hall – Conference Room 2A
777 B Street, Hayward, CA 94541-5007

January 14, 2019
4:30 p.m. – 6:14 p.m.

MEETING MINUTES

CALL TO ORDER: Meeting called to order at 4:30 p.m. by Chair Mendall.

ROLL CALL:

Members:

- Al Mendall, City Council Member/CSC Chair
- Elisa Márquez, City Council Member
- Francisco Zermeño, City Council Member

Staff:

- Alex Ameri, Interim Director of Public Works
- Maria Hurtado, Assistant City Manager
- Jan Lee, Water Resources Manager
- Erik Pearson, Environmental Services Manager
- Jeff Krump, Solid Waste Program Manager
- Nicole Grucky, Sustainability Specialist
- Carol Lee, Management Analyst I
- Kait Byrne, Management Analyst I
- Elli Lo, Management Analyst I
- Bob Genera, Utilities Maintenance Supervisor
- Brandon Hutchens, Climate Corps Fellow
- Angel Groves, Administrative Secretary

Others:

- Greg Galati, Hayward Resident
- Stacy Lee, Alameda County Office of Sustainability
- Minane Jameson, HARD Board President

Chair Al Mendall asked that Public Comments and the approval of the Minutes from the January 14, 2019, meeting be postponed until Council Member Marquez arrived.

2. Diesel Backup Generators: Environmental Impacts and Feasibility of Alternatives

Director Ameri introduced the item and Management Analyst I, Kait Byrne, presented the report.

Council Member Mendall inquired why the use of a back-up emergency generator is necessary at the Library and should power go down, would it make sense to close the library to the public versus the cost of a generator. Director Ameri explained if power is lost, without a back-up generator, we would be unable to use solar energy.

The library could be closed in a non-emergency situation, however, if we needed to use the library as a staging area during an emergency situation, a back-up generator would be needed.

Council Member *Márquez* joined the meeting.

Council Member *Márquez* asked if staff has plans to replace all existing generators with Tier 4 generators at a cost of \$9 million. Director Ameri confirmed that the City has no intention of replacing any generator before it fails. Staff will consider the best available technology when replacing a failing generator on a case-by-case basis. Council Member Mendall noted the report mentions switching the City's fleet to biodiesel fuel and asked which vehicles would be affected. Staff advised that City trucks and some construction equipment use diesel fuel and may be able to use biodiesel. Council Member Mendall asked staff to investigate using biodiesel. He also asked that staff provide a memorandum to the Committee on a potential switch to biodiesel.

The Committee thanked staff for the report.

PUBLIC COMMENTS

Resident, Greg Galati, praised the Committee, the Keep Hayward Clean and Green Task Force, and City staff for their efforts to keep City streets clean. He also acknowledged the challenge of keeping the City clean and that streets don't stay clean for long. Mr. Galati suggested assigning certain staff specifically to the task of litter removal.

The Committee thanked Mr. Galati for his comments and suggestions, and his continued efforts in keeping City streets clean.

Council Member *Márquez* encouraged Mr. Galati to attend the Council's budget work session scheduled for Saturday, April 27, 2019, at 9:00 a.m., in Conference Room 2A.

1. Approval of Minutes of Council Sustainability Committee Meeting on November 26, 2018.

Council Member *Márquez* noted an item erroneously reported on Page 2, Item 3 of the minutes, which indicated that the proposed litter fee added to business license applications would be ready for the 2020 ballot when in fact, it should state that it would not be ready. Council Member Mendall noted a small typo. Staff acknowledged the errors and advised that the revisions would be made and provided to the Committee at the March 11, 2019 Committee meeting.

The item was moved by Chair Mendall, seconded by Council Member *Márquez*, and the minutes from the November 26, 2018 meeting were approved unanimously.

2. Natural Gas Use in New Construction

Director Ameri introduced Environmental Services Manager, Erik Pearson, who presented the item.

Council Member Márquez encouraged staff to continue to work with other municipalities to collaborate on mutually agreed upon ordinance and asked for clarification on the region staff is working with.

Mr. Pearson advised that twenty to twenty-five local jurisdictions throughout the nine-county Bay Area have indicated a shared interest.

Council Member Márquez acknowledged her support and encouraged early communication with builders and planning staff.

Council Member Mendall asked for clarification from staff as to possible Federal laws that would prevent the City from putting in place regulations that prohibit the use of natural gas. Mr. Pearson clarified that the reach code would not ban natural gas, but would likely encourage all-electric construction.

Council Member Mendall mentioned an item scheduled for the City Council Meeting on January 22, 2019, Declaration of Climate Change, and a statement that indicates the immediate halt in natural gas use. He suggested that staff not go the route of a hard ban, but rather add additional requirements for builders or provide incentives/variances to opt out of using natural gas.

Director Ameri advised that Council action would be needed for staff to research and create a list of acceptable incentives to be made available to developers that chose to forgo the use of natural gas. Council Member Mendall made a formal motion for staff prepare the information, with pros and cons, and take it before Council for action; Council Member Márquez second the motion and it was passed unanimously.

Council Member Zermeño reiterated the Committee's desire to work closely with other jurisdictions.

3. Annual Update on City's Waste Reduction and Recycling Programs

Director Ameri introduced Solid Waste Manager, Jeff Krump, who presented the item.

In response to the information provided pertaining to the compost giveaway, Council Member Zermeño asked if the event was costly to the City, when including staff time, etc. Mr. Krump confirmed that staff is paid at an overtime rate for their assistance with the event. Director Ameri, clarified that the expense is not an impact on the General Fund, but rather on the Recycling Fund. Mr. Krump added that the compost is delivered by Waste Management (WM) at no cost to the City.

Council Member Zermeño asked if staff was providing outreach to the public that encourages creating compost piles at home. He encouraged staff to increase those efforts to increase participation.

Council Member Márquez verified that the compost giveaway takes place twice annually and asked that other HUSD campuses be taken into consideration, such as Mt. Eden High School, as event locations. She clarified that the Committee did specifically ask that Tennyson High School be used as the main location, though she would like to see events alternate between South Hayward and North Hayward.

In reference to the bulky pick up service available to residents, Council Member Márquez asked staff to work with the City's Public Information Officer to use all resources available to advertise the service to the community.

Council Member Mendall asked staff to work with WM to secure additional bulky pick-ups in lieu of not meeting the target percentages for Franchise Recovery.

Council Member Márquez asked that additional information and direction be provided to residents next year on proper disposal of Christmas trees. She asked that staff utilize all resources available to disseminate information to the public.

4. Sustainability Guidelines for Special Events

Director Ameri introduced Nicole Grucky, Sustainability Specialist, who presented the item.

Council Member Márquez thanked staff for their outreach efforts and shared her excitement with staff that greater effort is being placed in making all City events green. She suggested encouraging event coordinators to use such items as butcher paper, craft paper, etc., in lieu of plastic disposable table covers. She also asked staff to target businesses that are still using polystyrene and assist with educating them on alternatives.

Staff informed the Committee of additional efforts being made to educate event coordinators and the public attending such events by providing signage, proper bins for recycling and organics removal, speaking to coordinators prior to events to review their purchasing plans and guide them towards better alternatives. She thanked staff for including travel options to events such as BART and AC Transit. Council Member Zermeño and Council Member Mendall concurred with Council Member Márquez on all points made and thanked Ms. Grucky for the presentation.

5. Proposed Amendment to the 2009 Water Supply Agreement with the City and County of San Francisco

Director Ameri introduced Water Resources Manager, Jan Lee, who presented the item.

Council Member Mendall commented that there is a benefit to having San Jose and Santa Clara included as purchasers to share the total cost. Marquez moved and the Committee voted unanimously to approve staff's proposed amendments to the Water Supply Agreement.

Council Member Mendall asked that the item be brought to Council before the February meeting of the Bay Area Water Supply and Conservation Agency.

Ms. Lee continued the presentation with a recommendation to omit the language that would amend the existing minimum purchase requirements from the Water Supply Agreement. Council Member Mendall moved and the Committee voted unanimously to approved staff's recommendation.

6. Proposed 2019 Agenda Planning Calendar

Council Member Zermeño reminded staff that he would like to see an item on urban forests added to unscheduled items. Director Ameri acknowledged the request and ensured the Committee that the item would be added.

Council Member Mendall would like to see additional options for addressing illegal dumping and liter citywide and for staff to review and select the more feasible resources.

Council Member Márquez asked that meetings that fall on City observed holidays be rescheduled prior to the August Council recess, so Committee members can adjust their schedules accordingly.

Council Member Mendall kindly requested that staff not schedule meetings the third week of the month.

COMMITTEE MEMBER/STAFF ANNOUNCEMENTS AND REFERRALS:

None.

ADJOURNMENT: 6:14 p.m.

Meeting Attendance

	Present 1/14/19 Meeting	Present to Date This Fiscal Year	Excused to Date This Fiscal Year	Absent to Date This Fiscal Year
Elisa Márquez	✓	4	0	0
Al Mendall*	✓	4	0	0
Francisco Zermeño	✓	4	0	0



CITY OF HAYWARD

Hayward City Hall
777 B Street
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File #: ACT 19-109

DATE: March 11, 2019

TO: Council Sustainability Committee

FROM: Director of Utilities & Environmental Services and Director of Maintenance Services

SUBJECT

Climate Mayors Electric Vehicle Purchasing Collaborative

RECOMMENDATION

That the Committee reviews and comments on this report and recommends to Council adoption of the attached resolution.

SUMMARY

Cities and counties around the country are committing to participate in the Climate Mayors Electric Vehicle Purchasing Collaborative. Staff has drafted a resolution in support of Hayward's participation (see Attachment II). If the Committee supports the attached draft resolution, staff will present it to Council.

ATTACHMENTS

Attachment I Staff Report
Attachment II Draft Resolution



DATE: March 11, 2019

TO: Council Sustainability Committee

FROM: Director of Utilities & Environmental Services and
Director of Maintenance Services

SUBJECT: Climate Mayors Electric Vehicle Purchasing Collaborative

RECOMMENDATION

That the Committee reviews and comments on this report and recommends to Council adoption of the attached resolution.

SUMMARY

Cities and counties around the country are committing to participate in the Climate Mayors Electric Vehicle Purchasing Collaborative. Staff has drafted a resolution in support of Hayward's participation (see Attachment II). If the Committee supports the attached draft resolution, staff will present it to Council.

BACKGROUND

The Mayors National Climate Action Agenda (Climate Mayors) is a network of over 400 U.S. mayors representing 70 million people in 47 states collaborating on addressing climate change. Climate Mayors works to support local actions to reduce greenhouse gas emissions and to encourage effective federal and global policy action. Mayor Halliday joined Climate Mayors in June 2017, soon after the United States announced its intention to withdraw from the Paris Agreement.

Members of Climate Mayors agree to pursue actions to achieve an emissions reduction target. These actions include setting near- and long-term targets to reduce emissions, developing a Climate Action Plan to guide actions, and regularly reporting on progress through the creation of a greenhouse gas inventory. Hayward committed to these same actions when it joined the Alameda County Climate Protection Project in 2006, has completed the actions, and continues to make climate action progress. Additionally, Climate Mayors members are occasionally asked to join in letters and statements of support for action around climate change. Climate Mayors hosts monthly meetings for Mayors and sustainability staff from member cities to learn from each other and share progress.

Relevant General Plan policies:

General Plan Policy NR-2.9 Fleet Operations

The City shall continue to purchase low-emission or zero-emission vehicles for the City's fleet and to use available clean fuel sources such as biodiesel for trucks and heavy equipment.

General Plan Policy PFS-2.3 Sustainable Practices

The City shall serve as a role model to businesses and institutions regarding purchasing decisions that minimize the generation of waste, recycling programs that reduce waste, energy efficiency and conservation practices that reduce water, electricity and natural gas use, and fleet operations that reduce gasoline consumption.

DISCUSSION

The Climate Mayors Electric Vehicle Purchasing Collaborative (the Collaborative) is a partnership between Climate Mayors and the Electrification Coalition. The Electrification Coalition is a nonpartisan, non-profit organization dedicated to promoting policies and actions that facilitate the adoption of electric vehicles on a mass scale. The Collaborative aims to accelerate the conversion of municipal fleets to electric by leveraging the collective buying power of cities and counties to reduce the cost of electric vehicles and accompanying charging infrastructure. The Collaborative offers a turnkey, one-stop, online procurement portal that provides municipalities access to competitively priced electric vehicles and charging infrastructure, innovative financing options, policy guidance, and expert resources. The Collaborative will also provide training, best practices, educational materials, and analysis support.

The attached draft resolution indicates the City's commitment to participate in the Collaborative. Participation includes exploring opportunities to adopt electric vehicles and charging infrastructure. The resolution does not obligate the City to purchase electric vehicles or charging infrastructure through the Collaborative.

Cities and counties around the country have committed to participate in the Collaborative. In California alone, the cities of Berkeley, Beverly Hills, Chula Vista, Long Beach, Los Angeles, San Diego, and Santa Monica have made the commitment, as well as Alameda and Los Angeles County. These cities and counties have also committed to purchasing a certain number of electric vehicles by the end of 2020. The draft resolution omits any language around a commitment to purchase a specific number of electric vehicles.

ECONOMIC IMPACT

Participation in the Collaborative is not expected to have a significant impact on the local economy.

FISCAL IMPACT

Participation in the Collaborative would not impact the City's General Fund. If electric vehicles are purchased as part of this program, it will be consistent with the City's vehicle replacement plan using already-budgeted funds.

STRATEGIC INITIATIVES

This item does not directly relate to any of the City's Strategic Initiatives.

SUSTAINABILITY FEATURES

Adoption of the draft resolution would reinforce Hayward's commitment to addressing climate change through the purchase and use of electric vehicles. By transitioning the City's fleet to electric vehicles, the City will reduce its greenhouse gas emissions, save money, decrease air pollution, and serve as a role model for the community.

NEXT STEPS

Depending on direction from the Committee, staff will present the attached draft resolution to Council.

Prepared by: Brandon Hutchens, Climate Corps Fellow

Recommended by: Alex Ameri, Director of Utilities & Environmental Services
Todd Rullman, Director of Maintenance Services

Approved by:



Kelly McAdoo, City Manager

HAYWARD CITY COUNCIL

RESOLUTION NO. 19-

Introduced by Council Member _____

RESOLUTION IN SUPPORT OF THE CLIMATE MAYORS ELECTRIC VEHICLE
(EV) PURCHASING COLLABORATIVE

WHEREAS, consensus exists among the world's leading climate scientists that global warming caused by emissions of greenhouse gases (GHG) from human activities is among the most significant problems facing the world today; and

WHEREAS, documented impacts of global warming include but are not limited to increased occurrences of extreme weather events (e.g. droughts and floods), adverse impacts on ecosystems, demographic patterns and economic value chains; and

WHEREAS, the State of California has mandated statewide reduction of GHG emissions to 80% below 1990 levels by 2050 and, as part of reaching that goal, has committed to having 5 million zero-emission vehicles on the road by 2030; and

WHEREAS, the City of Hayward's Climate Action Plan, updated with the adoption of the Hayward 2040 General Plan in 2014, includes GHG emission reduction targets of 61.7% by the year 2040 and 82.5% by 2050 using the year 2005 as the baseline; and

WHEREAS, responding to the climate change provides communities an opportunity to access first mover advantage in the range of products, services and know-how that transitioning to a climate-compatible future brings; and

WHEREAS, the City of Hayward is a member of Climate Mayors, a bipartisan, peer-to-peer network of more than 416 U.S. mayors representing 70 million people in 47 states committed to taking meaningful action on climate change; and

WHEREAS, Climate Mayors established the Climate Mayors EV Purchasing Collaborative (the Collaborative) in partnership with the Electrification Coalition, a nonpartisan, not-for-profit organization committed to promoting policies and actions that facilitate the acceleration of electric vehicle adoption on a mass scale, on September 12th, 2018 at the Global Climate Action Summit hosted in San Francisco, CA;

NOW, THEREFORE, BE IT RESOLVED that the City Council of the City of Hayward hereby commits to reducing GHG emissions through a commitment to participate in the Climate Mayors EV Purchasing Collaborative; and

BE IT FURTHER RESOLVED that the City Council of the City of Hayward hereby commits to exploring the potential benefits and costs of adopting electric vehicles and electric vehicle infrastructure that promote the long-term goal of GHG emissions reduction while maximizing economic and social co-benefits of such action; and

BE IT FURTHER RESOLVED that the City Council of the City of Hayward hereby acknowledges the value and importance of committing to this partnership, while recognizing that it is not legally bound or obligated to purchase electric vehicles or electric vehicle infrastructure through the Climate Mayors EV Purchasing Collaborative.

IN COUNCIL, HAYWARD, CALIFORNIA _____, 2019

ADOPTED BY THE FOLLOWING VOTE:

AYES: COUNCIL MEMBERS:
 MAYOR:

NOES: COUNCIL MEMBERS:

ABSTAIN: COUNCIL MEMBERS:

ABSENT: COUNCIL MEMBERS:

ATTEST: _____
 City Clerk of the City of Hayward

APPROVED AS TO FORM:

City Attorney of the City of Hayward



CITY OF HAYWARD

Hayward City Hall
777 B Street
Hayward, CA 94541
www.Hayward-CA.gov

File #: RPT 19-236

DATE: March 11, 2019

TO: Council Sustainability Committee

FROM: Alex Ameri, Director of Utilities & Environmental Services

SUBJECT

Update on the City's Renewable Diesel Use in Diesel Vehicle Fleet Pilot

RECOMMENDATION

That the Committee reviews and comments on this informational report.

SUMMARY

Renewable diesel is an alternative diesel fuel made from vegetable oils and animal fats which produces significantly fewer emissions than conventional diesel. The fuel has been viable in diesel vehicle fleet applications and is also associated with improved engine performance when compared to other diesel fuels. As such, the Fleet Division is currently implementing a trial period to test its use in certain vehicles within the City's fleet. If at the end of the trial period no problems are identified with the fuel's use in these vehicles, staff plan to begin replacing currently used ultra-low sulfur fuel with renewable diesel at all ten of the City's fueling stations.

ATTACHMENTS

Attachment I Staff Report



DATE: March 11, 2019

TO: Council Sustainability Meeting

FROM: Director of Utilities & Environmental Services

SUBJECT: Update on the City's Renewable Diesel Use in Diesel Vehicle Fleet Pilot

RECOMMENDATION

That the Committee reviews and comments on this informational report.

SUMMARY

Renewable diesel is an alternative diesel fuel made from vegetable oils and animal fats which produces significantly fewer emissions than conventional diesel. The fuel has been viable in diesel vehicle fleet applications and is also associated with improved engine performance when compared to other diesel fuels. As such, the Fleet Division is currently implementing a trial period to test its use in certain vehicles within the City's fleet. If at the end of the trial period no problems are identified with the fuel's use in these vehicles, staff plan to begin replacing currently used ultra-low sulfur fuel with renewable diesel at all ten of the City's fueling stations.

BACKGROUND & DISCUSSION

At the January 14, 2019 Council Sustainability Committee meeting, staff presented a report¹ regarding the City's diesel-powered emergency backup generators and the feasibility of using more renewable sources of emergency power. In the report, staff identified renewable diesel as a fuel source that is not suitable for use in backup power applications due to its biodegradability and long-term storage concerns, but which is proven in vehicle applications and is currently being utilized by other municipalities, including the Cities of San Francisco, Oakland, and San Leandro. The carbon intensity of renewable diesel can be up to 80% lower than ultra-low sulfur diesel, which is the standard diesel option currently available on the market. Due to renewable diesel's reduced emission levels and proven use in vehicle fleets, the Committee requested that staff prepare a report regarding the feasibility of integrating renewable diesel in Hayward's vehicle fleet.

Because renewable diesel matches the chemical composition of conventional diesel, it is considered a "drop in" fuel, and can simply be added to the City's diesel tanks – no draining of

¹ <https://hayward.legistar.com/LegislationDetail.aspx?ID=3834313&GUID=04920F01-ED08-4C07-BCB3-E8036AE973A1&Options=&Search=>

the ultra-low sulfur diesel currently in these tanks is necessary. Similarly, no engine modifications need to be made in order for the vehicles to utilize the fuel.

The City's Fleet Division is currently implementing a 60- to 90-day renewable diesel trial period to test its use in City vehicles. This trial, occurring at Fire Station 1, began on Monday, February 4, 2019. Seven vehicles fill up at this station, including three fire engines, two ladder trucks, and two other vehicles. If at the end of the trial period staff do not identify any problems with the fuel's use in these vehicles, the Fleet Division plans to begin utilizing renewable diesel in all ten of the City's diesel tanks, which are located at each of the nine fire stations, as well as at the Water Pollution Control Facility. This also means that, upon full implementation, all of the City's approximately 108 diesel-powered vehicles will be utilizing renewable diesel whenever they fill up at one of the City's diesel stations. However, it is important to note that many of the City's diesel vehicles do not solely rely on fuel provided by the City's fueling stations. Many vehicles also fuel up at commercially operated stations, which only offer ultra-low sulfur diesel at this time. For this reason, few City vehicles will be operating on 100% renewable diesel 100% of the time.

ECONOMIC IMPACT

The use of renewable diesel in City vehicles will not impact the local economy.

FISCAL IMPACT

The renewable diesel being used for this trial period is provided by Neste, one of the largest global suppliers of renewable diesel. Neste also supplies renewable diesel to the Cities of San Francisco, Oakland, and San Leandro. Use of Neste's product at Fire Station 1 over a 90-day period is estimated to result in an approximately \$570 increase over what would otherwise be spent on ultra-low sulfur diesel. Full adoption of renewable diesel at all City fueling stations is estimated to raise annual bulk diesel spending from approximately \$213,300 to approximately \$220,700. Fleet staff anticipate that this \$7,400 increase in fuel costs will be made up quickly in maintenance savings, as renewable diesel burns more completely than other diesel types during the combustion process, resulting in reduced particulate emissions. Reduced particulate emissions leads to reduced particulate buildup within the engines, fewer clogs, and better engine performance.

STRATEGIC INITIATIVES

This agenda item does not directly relate to one of Council's three Strategic Initiatives.

SUSTAINABILITY FEATURES

Utilizing renewable diesel to fuel the City's diesel-powered vehicles has the potential to cut emissions associated with the City's vehicle fleet and overall carbon footprint.

NEXT STEPS

Staff will keep the Committee apprised of the results of this trial period when it concludes, as well as the timeline for full implementation, assuming the trial period does not reveal any issues with the fuel's use in City vehicles.

Prepared by: Kait Byrne, Management Analyst

Recommended by: Alex Ameri, Director of Utilities & Environmental Services

Approved by:

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Kelly McAdoo, City Manager



CITY OF HAYWARD

Hayward City Hall
777 B Street
Hayward, CA 94541
www.Hayward-CA.gov

File #: ACT 19-108

DATE: March 11, 2019

TO: Council Sustainability Committee

FROM: Director of Utilities and Environmental Services

SUBJECT

PCBs Management for Demolition Projects

That the Committee reviews and comments on this report and makes a recommendation to Council regarding revisions to the Municipal Code to include an article to control Polychlorinated Biphenyls (PCBs) from entering the storm drain system from demolition projects.

SUMMARY

The Municipal Regional Permit (MRP) mandates the control of PCBs from entering the storm drain system and polluting the San Francisco Bay. Compliance with the mandate requires appropriate management of materials during demolition projects. This report provides a summary of the mandate to control PCBs in demolition debris and recommended actions to comply with the mandate.

ATTACHMENTS

- Attachment I Staff Report
- Attachment II Provision C.12 of the San Francisco Bay Municipal Regional Stormwater NPDES Permit No. R2-2015-0049
- Attachment III BASMAA's Applicant Package
- Attachment IV Ordinance - Management of PCBs



DATE: March 11, 2019

TO: Council Sustainability Committee

FROM: Director of Utilities and Environmental Services

SUBJECT: PCBs Management for Demolition Projects

RECOMMENDATION

That the Committee reviews and comments on this report and makes a recommendation to Council regarding revisions to the Municipal Code to include an article to control Polychlorinated Biphenyls (PCBs) from entering the storm drain system from demolition projects.

SUMMARY

The Municipal Regional Permit (MRP) mandates the control of PCBs from entering the storm drain system and polluting the San Francisco Bay. Compliance with the mandate requires appropriate management of materials during demolition projects. This report provides a summary of the mandate to control PCBs in demolition debris and recommended actions to comply with the mandate.

BACKGROUND

PCBs were once widely produced as a common coolant and insulating fluid for a variety of electrical products such as transformers and capacitors. PCBs were also used in oils, lubricates, coatings, sealants, adhesives, and paper. PCBs are widespread, do not easily break down or degrade, and readily penetrate skin. Due to their persistence in the environment from leaking equipment and exposure from the abundance of manufactured products over several decades, studies have found the lasting effects of PCBs on humans and wildlife. PCBs are probable human carcinogens and have been shown to cause cancer in animals. Historically, per the Environmental Protection Agency (EPA), studies have found increases in malignant melanoma and rare liver cancers in PCB workers. The EPA banned the production of PCBs in 1979. PCBs remain in electrical equipment due to economic need. The EPA regulates the remaining usage and disposal of PCBs.

PCBs have been detected in elevated levels in certain sport fish in San Francisco Bay. To improve water quality and to make the fish safer to eat, PCBs sources to the Bay need to be identified and controlled. Urban runoff is considered a significant pathway for PCBs into the Bay. Accordingly, regulatory agencies are requiring that Bay Area municipalities address sources of PCBs in stormwater runoff discharged to the Bay from municipal storm drain

systems. This regulation targets selected priority building materials that may contain relatively high levels of PCBs, especially in buildings constructed or renovated between 1950 and 1980. During demolition, these building materials and associated PCBs may be released to the environment and transported to the Bay by stormwater runoff. The priority building materials are caulking, thermal/fiberglass insulation, adhesive/mastic, and rubber window gaskets.

Municipal Regional Permit – The National Pollutant Discharge Elimination System (NPDES) program was established in 1972 by the Federal Clean Water Act (CWA). In 1986, the NPDES program was amended to regulate stormwater runoff and established a permitting structure for municipal discharge to the waters of the state. From 1990 to 2009, each municipality was regulated under countywide stormwater permits. The first regional stormwater permit, the Municipal Regional Permit (MRP), was adopted by the San Francisco Bay Regional Water Quality Control Board (Water Board) in 2009 and it was updated in 2015. The MRP regulates municipalities within Alameda, Contra Costa, Santa Clara, San Mateo counties as well as the cities of Fairfield, Suisun, and Vallejo and the Vallejo Sanitation and Flood Control District. The MRP, adopted as a five-year permit, requires stormwater pollution prevention control measures for both public and private properties and activities including municipal operations, development, inspections, response to illicit discharges, education and outreach, water quality monitoring, and specific controls for pollutants of concern identified by the Water Board.

DISCUSSION

MRP Provision C.12.f – Manage PCB-Containing Materials and Wastes During Building Demolition Activities So that PCBs Do Not Enter Municipal Storm Drains

Provision C.12.f of the MRP (see Attachment II) states the city shall develop and implement an effective protocol for managing materials with PCBs concentrations of 50 ppm (parts per million) or greater in applicable structures at the time such structures undergo demolition so that PCBs do not enter the storm drain system. Applicable structures include, at a minimum, commercial, public, institutional and industrial structures constructed or remodeled between the years 1950 and 1980 with building materials with PCBs concentrations of 50ppm or greater. Single-family residential and wood frame structures are exempt. PCBs are typically found in caulking, and other sealants used in and around concrete structures such as windows and door frames. PCBs from these structures can enter storm drains during and/or after demolition through vehicle track-out, airborne releases, soil erosion, or stormwater runoff.

To comply with Provision C.12.f, the City is required to develop and implement a protocol by June 30, 2019, that includes:

- a. The authority to ensure that PCBs do not enter the storm drain from PCB-containing materials in applicable structures at the time such structures undergo demolition;
- b. A method for identifying applicable structures prior to their demolition;
- c. Method(s) for ensuring PCBs are not discharging to the storm drain from demolition of applicable structures; and
- d. A data collection program to quantify PCB loads reduced through implementation of the protocol.

To implement Provision C.12.f, the Bay Area Stormwater Management Agencies Association (BASMAA), which is the regional entity working to implement the stormwater regulation, has provided a model ordinance and is assisting cities and assessment methodology and data collection program to quantify reductions in PCBs loads to the storm drain system through new programs for controlling PCBs during demolition of applicable structure. The methodology and forms for data collection are provided as Attachment III and the ordinance is provided as Attachment IV. Cities will be responsible for informing demolition permit applicants that their project is subject to the requirements, necessitating an initial screen for priority PCBs-containing materials. The screening will require that applicants fill out a form with data that will determine whether or not the building is an applicable structure, and the estimated mass of PCBs in each priority material in applicable structures. Cities will require applicants submit a copy of these completed forms to BASMAA so BASMAA can determine the number of applicable structures demolished each year and estimate the mass of PCBs managed.

To comply with Provision C.12.f(a), staff recommends including the attached ordinance in the City's municipal code to give the City the specific authority to request any demolition applicant to implement the required forms, monitoring, and handling of PCB waste to ensure no PCB contamination enters the City's storm drain system.

ECONOMIC IMPACT

Compliance with the MRP mandate for managing PCB laden waste during demolition will increase costs for certain demolition projects. Staff will provide sufficient advance outreach to notify contractors of this new program via the City's website, a handout in the Permit Center, and targeted outreach to the development community.

FISCAL IMPACT

Oversight of a PCB management program will impact staff resources. Staff will monitor the time required to review assessment forms and sampling data to assess whether the existing fees are sufficient to cover staff time.

STRATEGIC INITIATIVES

This agenda item does not relate to one of Council's three Strategic Initiatives.

SUSTAINABILITY FEATURES

Preventing PCBs from entering the storm drain system will benefit Hayward's aquatic ecosystems and the health of the San Francisco Bay.

PUBLIC CONTACT

No public contact has been made regarding this agenda item.

NEXT STEPS

Upon direction from the Committee, staff will present to the full Council an article for the municipal ordinance to address PCBs during demolition projects and will pursue citywide initiatives to comply with the MRP Provision C.12.f.

Prepared by: Elisa Wilfong, Water Pollution Control Administrator

Recommended by: Alex Ameri, Director of Utilities & Environmental Services

Approved by:

A handwritten signature in black ink, appearing to read 'K. McAdoo', written over a horizontal line.

Kelly McAdoo, City Manager

C.12. Polychlorinated Biphenyls (PCBs) Controls

The Permittees shall implement the following control program for PCBs. The Permittees shall implement PCBs control measures (source control, treatment control, and pollution prevention strategies) in areas where benefits are most likely to accrue (focused implementation) and report on those control measures according to the provisions below. The provisions implement the urban runoff requirements of the PCBs TMDL. Permittees shall reduce PCBs loads by a specified amount during the term of the Permit, thereby making substantial progress toward achieving the urban runoff PCBs wasteload allocation in the Basin Plan. The allocation, on an aggregate and regionwide basis, is 2 kg/yr (1.6 kg/yr allocated to Permittees) to be achieved by March 2030. This wasteload allocation represents a load reduction from all urban runoff sources to the Bay of approximately 18 kg/yr (14.4 kg/yr from Permittees) compared to loads estimated using data collected in 2003. The Permittees may comply with any requirement of this Provision through a collaborative effort.

C.12.a. Implement Control Measures to Achieve PCBs Load Reductions.

- i. Task Description** – Permittees shall implement PCBs source and treatment control measures and pollution prevention strategies to achieve PCBs load reductions in Table 12.1 throughout the area covered by this Permit (permit-area).
- ii. Implementation level** – To comply with this provision element, Permittees shall:
 - (1) Identify the watersheds or portions of watersheds (management areas) in which PCBs control measures are currently being implemented and those in which new control measures will be implemented during the term of this permit;
 - (2) Identify the control measures that are currently being implemented and those that will be implemented in each watershed and management area;
 - (3) Submit a schedule of control measure implementation; and
 - (4) Implement sufficient control measures to achieve the permit-area-wide reduction stated below or the county-specific load reduction performance criteria shown in Table 12.1. The Permittees shall demonstrate achievement of these load reductions as required in provision C.12.b. Load reductions from control measures implemented prior to the effective date of this Permit may be counted toward the required reductions of this Permit term if these control measures were established or implemented during the Previous Permit term, but load reductions from the activity were not realized or credited during the Previous Permit term (e.g., they were implemented after the 2014 Integrated Monitoring Report was submitted).

For all Permittees combined, these county-specific average annual PCBs load reduction performance criteria shall total 0.5 kg/yr by June 30, 2018, and 3.0 kg/yr by June 30, 2020. The June 30, 2020, deadline shall be extended to December 31, 2020, if the Permittees provide documentation that control measures that will attain the load reduction will be implemented by December 31, 2020. The Fact Sheet describes the amount of PCBs load reduction benefit associated with implementing a number of control measures.

The Permittees may meet the load reductions as a group. The load reduction requirements summed over all Permittees within each county are set forth in Table 12.1. If neither the permit-area-wide total load reduction criteria nor the county-specific load reduction criterion is achieved, Permittees shall achieve load reductions consistent with their share of the county total. The individual Permittee share of the county load reduction performance criteria is the proportion of county population in each municipality.

If all the Permittees in a county wish to use an alternative method of distributing the county load reductions, these Permittees shall report through their countywide stormwater programs on their alternative method (if different from default population-based method) for assigning Permittee-specific load fractions in the 2017 Annual Report. This can be determined by the Permittees within the counties and may be different from one county to the next, but all Permittees within a county shall use the same method of distributing the county load reductions. Any acceptable alternative load reduction criteria must be approved through an amendment of this Permit.

Table 12.1 PCBs Load Reductions Performance Criteria by County

County	PCBs load reduction (g/yr) by June 30, 2018	PCBs Load Reduction (g/yr) by June 30, 2020
Alameda Permittees	160	940
Contra Costa Permittees	90	560
San Mateo Permittees	60	370
Santa Clara Permittees	160	940
Solano Permittees: Suisun City, Vallejo, Fairfield	30	190
Totals	500	3000

iii. Reporting

- (1) The Permittees shall report by April 1, 2016, progress toward developing a list of the watersheds and management areas where PCBs control measures are currently being implemented and those in which control measures will be implemented (C.12.a.ii(1)) during the term of this Permit as well as the monitoring data and other information used to select these watersheds and management areas. This list should include watersheds containing contaminated sites referred to the Water Board as well.
- (2) The Permittees shall report in their 2016 Annual Report the list of watersheds and management areas where control measures are currently being implemented or will be implemented during the term of the Permit (C.12.a.ii(1)) along with the specific control measures (C.12.a.ii(2)) that are currently being implemented and those that will be implemented in these watersheds and management areas

and an implementation schedule (C.12.a.ii(3)) for these control measures. In addition to the list of watersheds and management areas, this report shall include:

- a. The number, type, and locations and/or frequency (if applicable) of control measures;
 - b. A cumulative listing of all potentially PCB-contaminated sites Permittees have discovered and referred to the Water Board to date, with a brief summary description of each site and where to obtain further information;
 - c. The description, scope, and start date, of PCBs control measures;
 - d. For each structural control and non-structural BMP, interim implementation progress milestones (e.g., construction milestones for structural controls or other relevant implementation milestones for structural controls and non-structural BMPs) and a schedule for milestone achievement; and
 - e. Clear statements of the roles and responsibilities of each participating Permittee for implementation of pollution prevention or control measures identified under C.12.a.ii(2).
- (3) Beginning with the 2017 Annual Report and continuing in all Annual Reports, Permittees shall update all the information required under C.12.a.iii(2) as necessary to account for new control measures implemented but not described in the 2016 Annual Report.
 - (4) All Permittees in a county may submit, in the 2017 Annual Report, an alternative (different from the default described in C.12.a.ii(4)) and supporting information to derive Permittee-specific proportions of load reduction criteria.

C.12.b. Assess PCBs Load Reductions from Stormwater

- i. Task Description** – The Permittees shall develop, document, and implement an assessment methodology and data collection program to quantify in a technically sound manner PCBs loads reduced through implementation of pollution prevention, source control, and treatment control measures, including PCBs source control, stormwater treatment, green infrastructure and other measures. The Permittees shall use the assessment methodology to demonstrate progress toward achieving the load reductions required in this Permit term and the program area wasteload allocations.

A reasonable and technically sound load reduction accounting system is described in the Fact Sheet and is based on information submitted by Permittees in the January 2014 Integrated Monitoring Report. This task consists of documenting the method described in the Fact Sheet or any alternative methodology, updating and refining the accounting system to account for new information, justifying assumptions, analytical methods, sampling schemes and parameters used to quantify the load reduction for each type of control measure, and indicating what information will be collected and submitted to confirm the calculated load reduction for each unit of activity.

- ii. Implementation Level** – The Permittees shall adequately quantify the PCBs load reductions achieved through all the pollution prevention, source control, and

treatment control measures Permittees will implement in this Permit term, except for measures to manage PCB-containing materials and wastes during building demolitions (C.12.f).

For this Permit term, the Permittees will receive a total of 2000 g/yr (2 kg/yr) PCBs load reduction value if they have developed and implemented effective protocols for managing PCB-containing materials during demolition so that PCBs do not drain into the MS4 as required in provision C.12.f. The 2000 g/yr PCBs load reduction value shall be in furtherance of meeting the June 30, 2020, 3000 g/yr requirement in Table 12.1.

The Permittee-specific portion of the 2000 g/yr PCBs load reduction value shall be based on the proportion of county population in each municipality. If all the Permittees in a county wish to use an alternative method of distributing the county load reductions for managing PCB-containing materials during demolition, these Permittees shall report through their countywide stormwater programs on their alternative method (if different from default population-based method) for assigning Permittee-specific load fractions in the 2019 Annual Report. This can be determined by the Permittees within the counties and may be different from one county to the next, but all Permittees within a county shall use the same method of distributing the county load reductions. Any acceptable alternative load reduction criteria must be approved through an amendment of this Permit.

iii. Reporting

- (1) In their 2016 Annual Report the Permittees shall submit for approval by the Executive Officer the assessment methodology and data collection program required in C.12.b.i. and described in C.12.b.ii.
- (2) Beginning with the 2017 Annual Report, Permittees shall report annually the loads reduced using the default (from the Fact Sheet) or alternative approved assessment methodology to demonstrate cumulative PCBs load reduced from each control measure implemented since the beginning of the Permit term. Permittees shall submit all supporting data and information necessary to substantiate the load reduction estimates, including appropriate reference to the control measures described in the reporting required under C.12.a.
- (3) In their 2018 and subsequent Annual Reports, the Permittees shall submit, for Executive Officer approval, any refinements, if necessary, to the measurement and estimation methodologies to assess PCBs load reductions in the subsequent Permit.
- (4) All Permittees in a county may submit, in the 2019 Annual Report, an alternative (different from the default population-based method) and supporting information to derive Permittee-specific shares of load reduction value associated with implementation of C.12.f.

C.12.c. Plan and Implement Green Infrastructure to reduce PCBs loads

- i. **Task Description** – Permittees shall implement green infrastructure projects during the term of the Permit to achieve PCBs load reduction performance criteria in Table

12.2 in furtherance of meeting the 3000 g/year load reduction criteria required in C.12.a.ii.(4) and Table 12.1. Green infrastructure projects on both public and private land can serve to achieve this load reduction requirement. Additionally, Permittees shall prepare a reasonable assurance analysis (see below and the Fact Sheet) to demonstrate quantitatively that PCBs load reductions of at least 3 kg/yr will be achieved by 2040 through implementation of green infrastructure throughout the permit-area.

Table 12.2 PCBs Load Reduction Performance Criteria via Green Infrastructure Implementation by County

County Permittees	PCBs Load Reduction (g/yr) by June 30, 2020, through green infrastructure
Alameda Permittees	37
Contra Costa Permittees	23
San Mateo Permittees	15
Santa Clara Permittees	37
Solano Permittees: Suisun City, Vallejo, Fairfield	8
Totals	120

ii. Implementation Level

- (1) The Permittees shall implement green infrastructure projects so that PCBs loads are collectively reduced by 120 g/yr by June 30, 2020, which shall be extended to December 31, 2020, if the Permittees provide documentation that control measures that will attain the load reduction will be implemented by December 31, 2020. Permittees shall demonstrate achievement of these load reductions by using the accounting methods approved under provision C.12.b.iii(1). Load reductions from green infrastructure projects implemented prior to the effective date of this Permit may be counted toward the required green infrastructure reductions of this Permit term if these projects were established and implemented during the Previous Permit term, but load reductions from the activity were not realized or credited during the Previous Permit term.

The Permittees may meet the load reduction as a group. The load reduction requirements summed over all Permittees within each county are set forth in Table 12.2. If neither the permit-area-wide total load reduction nor the county-specific load reduction is achieved, Permittees shall achieve load reductions consistent with their share of the county total under provision C.12.a.ii(4).

- (2) Permittees shall prepare a reasonable assurance analysis that demonstrates how green infrastructure will be implemented in order to achieve a PCBs load reduction of 3 kg/yr across the permit-area by 2040. This analysis shall include the following:
 - a. Quantify the relationship between areal extent of green infrastructure implementation and PCBs load reductions, taking into consideration the scale of contamination of the treated area as well as the pollutant removal effectiveness of likely green infrastructure strategies;
 - b. Estimate the amount and characteristics of land area that will be treated through green infrastructure by 2020, 2030, and 2040;
 - c. Estimate the amount of PCBs load reductions that will result from green infrastructure implementation by 2020, 2030, and 2040;
 - d. Quantitatively demonstrate that PCBs reductions of at least 3 kg/yr will be realized by 2040 through implementation of green infrastructure projects; and
 - e. Ensure that the calculation methods, models, model inputs and modeling assumptions used to fulfill C.12.c.ii(2)a-d have been validated through a peer review process.

iii. Reporting

- (1) The Permittees shall submit in their 2018 Annual Report, as part of reporting for C.12.b.iii(3), the quantitative relationship between green infrastructure implementation and PCBs load reductions. This submittal shall include all data used and a full description of models and model inputs relied on to establish this relationship.
- (2) The Permittees shall submit in their 2020 Annual Report an estimate of the amount and characteristics of land area that will be treated through green infrastructure implementation by 2020, 2030, and 2040. This submittal shall include all data used and a full description of models and model inputs relied on to generate this estimate.
- (3) The Permittees shall submit in their 2020 Annual Report a reasonable assurance analysis to demonstrate quantitatively that PCBs reductions of at least 3 kg/yr will be realized by 2040 through implementation of green infrastructure projects. This submittal shall include all data used and a full description of models and model inputs relied on to make the demonstration and documentation of peer review of the reasonable assurance analysis.
- (4) The Permittees shall submit as part of reporting for C.12.b.iii(4), beginning with their 2019 Annual Report an estimate of the amount of PCBs load reductions resulting from green infrastructure implementation during the term of the Permit. This submittal shall include all data used and a full description of models and model inputs relied on to generate this estimate.

C.12.d. Prepare Implementation Plan and Schedule to Achieve TMDL Wasteload Allocations

- i. Task Description** – Permittees shall prepare a plan and schedule for PCBs control measure implementation and reasonable assurance analysis demonstrating that sufficient control measures will be implemented to attain the PCBs TMDL wasteload allocations by 2030.
- ii. Implementation level** – Permittees shall prepare a PCBs control measures implementation plan and corresponding reasonable assurance analysis that demonstrates quantitatively that the plan will result in PCBs load reductions sufficient to attain the PCBs TMDL wasteload allocations by 2030. The plan must:
 - (1) Identify all technically and economically feasible PCBs control measures to be implemented (including green infrastructure projects); and
 - (2) Include a schedule according to which these technically and economically feasible control measures will be fully implemented; and
 - (3) Provide an evaluation and quantification of the PCBs load reduction of such measures as well as an evaluation of costs, control measure efficiency and significant environmental impacts resulting from their implementation.

iii. Reporting

Permittees shall submit the plan and schedule in the 2020 Annual Report.

C.12.e. Evaluate PCBs Presence in Caulks/Sealants Used in Storm Drain or Roadway Infrastructure in Public Rights-of-Way

- i. Task Description** –Permittees shall collect samples of caulk and other sealants used in storm drains and between concrete curbs and street pavement and investigate whether PCBs are present in such material and in what concentrations. PCBs are most likely present in material applied during the 1970s, so the focus of the investigations should be on structures installed during this era.

ii. Implementation Level

Permittees shall collect at least 20 composite samples (throughout the permit-area) of the caulks and sealants used in storm drains or roadway infrastructure in public rights-of-way and analyze this material for PCBs in such a way as to be able to detect a minimum PCBs concentration of 200 parts per billion. This sampling and analysis will count toward partial fulfillment of the monitoring effort aimed at finding PCBs sources (see management information need in C.8.f).

iii. Reporting

Permittees shall report on the results (including all data gathered) of this investigation no later than the 2018 Annual Report.

C.12.f. Manage PCB-Containing Materials and Wastes During Building Demolition Activities So That PCBs Do Not Enter Municipal Storm Drains

- i. Task Description** – Permittees shall develop and implement or cause to be developed and implemented an effective protocol for managing materials with PCBs concentrations of 50 ppm or greater in applicable structures at the time such structures undergo demolition so that PCBs do not enter MS4s. PCBs from these structures can enter storm drains during and/or after demolition through vehicle track-out, airborne releases, soil erosion, or stormwater runoff.

Applicable structures include, at a minimum, commercial, public, institutional and industrial structures constructed or remodeled between the years 1950 and 1980 with building materials with PCBs concentrations of 50 ppm or greater. Single-family residential and wood frame structures are exempt.

A Permittee is exempt from this requirement if it provides evidence acceptable to the Executive Officer that the only structures that existed pre-1980 within its jurisdiction were single-family residential and/or wood-frame structures.

ii. Implementation Level

- (1) The Permittees shall develop a protocol by June 30, 2019, that includes each of the following components, at a minimum:
 - a. The necessary authority to ensure that PCBs do not enter MS4s from PCB-containing materials in applicable structures at the time such structures undergo demolition;
 - b. A method for identifying applicable structures prior to their demolition; and
 - c. Method(s) for ensuring PCBs are not discharged to the storm drain from demolition of applicable structures.
- (2) By July 1, 2019, and thereafter, the Permittees shall implement or cause to be implemented the PCBs management protocol for ensuring PCBs are not discharged to MS4s from demolition of applicable structures via vehicle track-out, airborne releases, soil erosion, or stormwater runoff.
- (3) By July 1, 2019, Permittees shall develop an assessment methodology and data collection program to quantify in a technically sound manner PCBs loads reduced through implementation of the protocol for controlling PCBs during demolition of applicable structures.

iii. Reporting

- (1) In their 2016, 2017, and 2018 Annual Reports, the Permittees shall summarize the steps they have taken to begin implementing this requirement, which could include working with State and local agencies on inter-agency coordination regarding building demolitions, developing ordinances or policies, obtaining information materials, updating or supplementing permit application materials, developing a tracking tool for potential PCB-containing structures, and training relevant staff as needed to comply with this sub-provision.

- (2) Each Permittee seeking exemption from C.12.f requirements must submit in its 2017 Annual Report documentation, such as historic maps or other historic records, that clearly demonstrates that the only structures that existed pre-1980 within its jurisdiction were single-family residential and/or wood-frame structures.
- (3) In their 2020 Annual Report, the Permittees shall provide documentation demonstrating implementation with each of the minimum requirements in C.12.f.ii(1)(a)-(c).
- (4) In their 2020 Annual Report and thereafter, the Permittees shall provide documentation of each of the following items:
 - a. The number of applicable structures that applied for a demolition permit during the reporting year; and
 - b. A running list of the applicable structures that applied for a demolition permit (since the date the PCBs control protocol was implemented) that had material(s) with PCBs at 50 ppm or greater, with the address, demolition date, and brief description of PCBs control method(s) used.
- (5) In their 2020 Annual Report, Permittees shall submit an assessment methodology and data collection program to quantify PCBs loads reduced through implementation of the protocol for controlling PCBs during building demolition. This should be reported at the regional level on behalf of all Permittees.

C.12.g. Fate and Transport Study of PCBs: Urban Runoff Impact on San Francisco Bay Margins

- i. Task Description** – The Permittees shall conduct or cause to be conducted studies concerning the fate, transport, and biological uptake of PCBs discharged from urban runoff to San Francisco Bay margin areas.
- ii. Implementation Level** – The specific information needs include understanding the in-Bay transport of PCBs discharged in urban runoff, the sediment and food web PCBs concentrations in margin areas receiving urban runoff, the influence of urban runoff on the patterns of food web PCBs accumulation, especially in Bay margins, and the identification of drainages where urban runoff PCBs are particularly important in food web accumulation.
- iii. Reporting** – The Permittees shall submit in their 2017 Annual Report a workplan describing the specific manner in which these information needs will be accomplished and describing the studies to be performed with a preliminary schedule. The Permittees shall report on status of the studies in their 2018 Annual Report. The Permittees shall report in the March 15, 2020, Integrated Monitoring Report the findings and results of the studies completed, planned, or in progress as well as implications of studies on potential control measures to be investigated, piloted or implemented in future permit cycles.

C.12.h. Implement a Risk Reduction Program

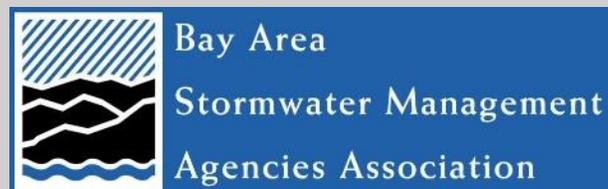
- i. Task Description** – The Permittees shall conduct an ongoing risk reduction program to address public health impacts of PCBs in San Francisco Bay/Delta fish. The fish risk reduction program shall take actions to reduce actual and potential health risks in those people and communities most likely to consume San Francisco Bay-caught fish, such as subsistence fishers and their families. The risk reduction framework developed in the Previous Permit term, which funded community-based organizations to develop and deliver appropriate communications to appropriately targeted individuals and communities, is an appropriate approach. Permittees should work with local health departments, the Bay Area Clean Water Agencies, and the Western States Petroleum Association to leverage resources for this program and to appropriately target at-risk populations.
- ii. Implementation Level**

 - (1) At a minimum, Permittees shall conduct or cause to be conducted an ongoing risk reduction program with the potential to reach 3,000 individuals annually who are likely consumers of San Francisco Bay-caught fish. Permittees are encouraged to collaborate with San Francisco Bay industrial and wastewater discharger agencies in meeting this requirement.
 - (2) In year four of the Permit term, Permittees shall evaluate the effectiveness of their risk reduction program.
- iii. Reporting** – The Permittees shall report on the status of the risk reduction program in each of their Annual Reports, including a brief description of actions taken, an estimate of the number of people reached, and why these people are deemed likely to consume Bay fish. The Permittees shall report the findings of the effectiveness evaluation of their risk reduction program in their 2020 Annual Report.

PCBs in Priority Building Materials: Model Screening Assessment Applicant Package



Managing PCBs–Containing Building Materials during Demolition: Guidance, Tools, Outreach and Training



August 2018

This document is a deliverable of the Bay Area Stormwater Management Agencies Association (BASMAA) project *Managing PCBs–Containing Building Materials during Demolition: Guidance, Tools, Outreach and Training*. BASMAA developed guidance, tools, and outreach and training materials to assist with San Francisco Bay Area municipal agencies’ efforts to address the requirements of Provision C.12.f. of the Bay Area Municipal Regional Stormwater Permit (referred to as the MRP). Provision C.12.f of the MRP requires Permittees to manage PCBs–containing building materials during demolition.

We gratefully acknowledge the BASMAA Steering Committee for this project, which provided overall project oversight, including during the development of this and other project deliverables:

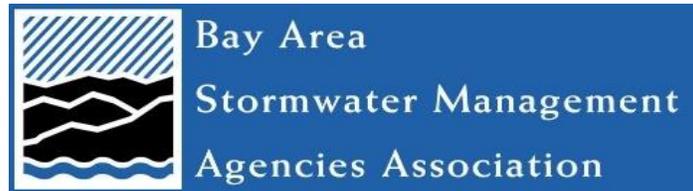
- Reid Bogert, Stormwater Program Specialist, San Mateo Countywide Water Pollution Prevention Program (BASMAA Project Manager)
- Amanda Booth, Environmental Program Analyst, City of San Pablo
- Kevin Cullen, Program Manager, Fairfield-Suisun Urban Runoff Management Program
- Matt Fabry, Program Manager, San Mateo Countywide Water Pollution Prevention Program
- Gary Faria, Supervisor, Inspection Services, Building Inspection Division, Contra Costa County
- Napp Fukuda, Deputy Director - Watershed Protection Division, City of San José
- Ryan Pursley, Chief Building Official, Building Division, City of Concord
- Pam Boyle Rodriguez, Manager, Environmental Control Programs – Stormwater, City of Palo Alto
- Jim Scanlin, Program Manager, Alameda Countywide Clean Water Program
- Melody Tovar, Regulatory Programs Division Manager, City of Sunnyvale

We also gratefully acknowledge the project Technical Advisory Group, which provided feedback from a variety of project stakeholders during development of selected project deliverables:

Stakeholder Group	Representative(s)
Regulatory – stormwater/PCBs	Luisa Valiela and Carmen Santos, U.S. EPA Region 9
Regulatory – stormwater/TMDL	Jan O’Hara, San Francisco Bay Regional Water Quality Control Board
Regulatory – experience with related program (asbestos management)	Ron Carey and Richard Lew, Bay Area Air Quality Management District
Industry – demolition contractors	Avery Brown, Ferma Corporation
Industry – remediation consultants	John Martinelli, Forensic Analytical Consulting John Trenev, Bayview Environmental Services, Inc.
MRP Permittee – large municipality	Patrick Hayes, City of Oakland
MRP Permittee – medium municipality	Kim Springer, San Mateo County Office of Sustainability
MRP Permittee – small municipality	Amanda Booth, City of San Pablo

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Prepared by:

EOA, Inc.
Larry Walker Associates
Geosyntec Consultants
Stephanie Hughes
David J. Powers & Associates, Inc.



MEMORANDUM

TO: BASMAA Board of Directors

FROM: BASMAA Project Team: EOA, Inc., Larry Walker Associates, Geosyntec Consultants, Stephanie Hughes, and David J. Powers & Associates, Inc.

DATE: August 13, 2018

SUBJECT: Supplemental Demolition Permit Application Materials - Managing PCBs–Containing Building Materials during Demolition: Guidance, Tools, Outreach and Training

This memorandum transmits a deliverable for Task 5 (Supplemental Demolition Permit Application Materials) of the Bay Area Stormwater Management Agencies Association (BASMAA) project *Managing PCBs–Containing Building Materials during Demolition: Guidance, Tools, Outreach and Training*. BASMAA developed guidance, tools, and outreach and training materials to assist with San Francisco Bay Area municipal agencies’ efforts to address the requirements of Provision C.12.f. of the Bay Area Municipal Regional Stormwater Permit (SFBRWQCB 2015, referred to as the MRP). The MRP is issued by the San Francisco Bay Regional Water Quality Control Board¹ (Regional Water Board). Provision C.12.f requires Permittees to manage PCBs–containing building materials during demolition.

OBJECTIVES OF THIS TECHNICAL MEMORANDUM

MRP Provision C.12.f.ii (2) requires that by July 1, 2019 Permittees “implement or cause to be implemented the PCBs management protocol for ensuring PCBs are not discharged to MS4s from demolition of applicable structures via vehicle track-out, airborne releases, soil erosion, or stormwater runoff.” This memorandum was developed to assist Permittees to comply with Provision C.12.f.ii (2) by transmitting a *PCBs in Priority Building Materials: Model Screening Assessment Applicant Package*.

PCBS IN PRIORITY BUILDING MATERIALS SCREENING ASSESSMENT APPLICANT PACKAGE

The attached *PCBs in Priority Building Materials Screening Assessment Applicant Package (Applicant Package)* contains model supplemental demolition permit application materials that incorporate the PCBs in building materials control program requirements in the MRP. It includes supplemental demolition permit application model materials, including an overview of the process, forms, applicant instructions, and process flow charts. The starting point was the model process flowcharts and forms developed for the PCBs in Caulk Project in 2011.²

The *Applicant Package* incorporates the steps outlined in the *Protocol for Evaluating Priority PCBs–Containing Materials before Building Demolition* (BASMAA 2018), which was developed via Task 3 of this BASMAA regional project, and converts those steps into appropriate application questions and submittals. In addition, the *Applicant Package* incorporates gathering tracking and assessment

¹ The MRP was reissued November 19, 2015, with an effective date of January 1, 2016. There are 77 Phase I municipal stormwater Permittees in five Bay Area counties, which are among the over 90 local agencies represented by BASMAA.

² <http://www.sfestuary.org/taking-action-for-clean-water-pcbs-in-caulk-project>

information related to the MRP Provision C.12.f.ii (3) requirement to develop an assessment methodology and data collection program to quantify reductions in PCBs loads to MS4s through the new program for controlling PCBs during demolition. Task 7 of this BASMAA regional project developed a conceptual approach to developing the assessment methodology and data collection program that is coordinated with the *Applicant Package*.

The *Applicant Package* summarizes the typical process that a local agency will need to follow to implement a new program to manage PCBs-containing materials during building demolition. It is anticipated that each jurisdiction's approach to implementing the new program will vary depending upon that agency's current procedures and needs. Potential approaches include using the model materials as a stand-alone program, or incorporating questions in the model materials into existing demolition permit or building permit applications, Construction and Demolition (C&D) applications and plan development guidance, and/or information management systems such as GreenHalo™. However, the *Applicant Package* was developed as a stand-alone package in order to provide a complete overview of a model process.

REFERENCES

California Regional Water Quality Control Board, San Francisco Bay Region (SFBRWQCB) 2015. Municipal Regional Stormwater NPDES Permit, Order R2–2015–0049, NPDES Permit No. CAS612008. November 19, 2015.

BASMAA 2018. Protocol for Evaluating Priority PCBs–Containing Materials before Building Demolition. Prepared for Bay Area Stormwater Management Agencies Association (BASMAA). August 2018.

PCBs in Priority Building Materials: Model Screening Assessment Applicant Package

Contents

DISCLAIMER	iv
Process Overview	1
Applicant Instructions for Completing the PCBs Screening Assessment Form	2
Part 1. Owner and project information	2
Part 2. Is building subject to the screening requirement based on type, use, and age of the building?	2
Part 3. Report concentrations of PCBs in priority building materials	3
Part 4. Certification	4
Notices to Applicants Regarding Federal and State PCBs Regulations	5
Agency Contacts	6
Attachment A Process Flow Chart	A-1
Attachment B PCBs in Priority Building Materials Screening Assessment Form	B-1
Attachment C Protocol for Evaluating Priority PCBs-Containing Materials before Building Demolition	C-1

DISCLAIMER

Information contained in BASMAA products is to be considered general guidance and is not to be construed as specific recommendations for specific cases. BASMAA is not responsible for the use of any such information for a specific case or for any damages, costs, liabilities or claims resulting from such use. Users of BASMAA products assume all liability directly or indirectly arising from use of the products.

The material presented in this document is intended solely for the implementation of a municipal regulatory program required by the San Francisco Bay Area Regional Water Quality Control Board Municipal Regional Stormwater Permit for the protection of water quality under the Clean Water Act.

BASMAA prepared the tools and guidance herein to assist MRP Permittees' efforts to address the requirements of Provision C.12.f. of the MRP. The project team received input from a variety of stakeholders during development of the tools and guidance, including regulators (San Francisco Bay Regional Water Quality Control Board, U.S. EPA, and Bay Area Air Quality Management District staff), Bay Area municipal agency staff, and industry representatives.

This document does not address other environmental programs or regulations (e.g., PCBs regulations under the Toxic Substances Control Act (TSCA); federal, state, or local regulations for hazardous material handling and hazardous waste disposal; health and safety practices to mitigate human exposure to PCBs or other hazardous materials; recycling mandates; and abatement at sites with PCBs (or other contaminants). The applicant is responsible for knowing and complying with all relevant laws and regulations.

The mention of commercial products, their source, or their use in connection with information in BASMAA products is not to be construed as an actual or implied approval, endorsement, recommendation, or warranty of such product or its use in connection with the information provided by BASMAA.

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Process Overview

This document provides a model PCBs in Priority Building Materials Screening Assessment process to be conducted by demolition project proponents (applicants). A flow chart illustrating the above processes is provided in **Attachment A**.

Applicants proposing to demolish buildings must conduct the PCBs screening assessment. Through the PCBs screening assessment applicants will:

- 1) Determine whether the building proposed for demolition is likely to have PCBs-containing building materials (see discussion of applicable structure); and
- 2) Determine whether PCBs are present at a concentration equal to or greater than 50 parts per million (ppm) in building materials.

Use the *PCBs Screening Assessment Form (Attachment B)* to summarize and certify the information required by the municipality to issue the demolition permit. The form is divided into four parts:

- **Part 1** provide applicant information and project location.
- **Part 2** complete the questions to identify whether the project involves an applicable structure. If the demolition does not involve an applicable structure, the form may be certified and submitted without completing Part 3.
- **Part 3** complete the questions to provide the concentrations of PCBs in any priority building materials.
- **Part 4** certify the information being submitted.

Note that fluorescent light ballasts, polyurethane foam furniture, and Askarel fluid used in transformers, all of which may contain PCBs, are typically managed during pre-demolition activities under current regulations and programs that require removal of universal waste and outdated transformers. For this process it is assumed that those materials will be evaluated and managed under those existing programs.

This screening process is part of a program for water quality protection and was designed in accordance with requirements in the MRP.¹ It does not address other environmental programs or regulations (e.g., PCBs regulations under the Toxic Substances Control Act (TSCA); federal, state, or local regulations for hazardous material handling and hazardous waste disposal; health and safety practices to mitigate human exposure to PCBs or other hazardous materials; recycling mandates; or abatement at sites with PCBs (or other contaminants). **The applicant is responsible for complying with all relevant laws and regulations. See the Notices to Applicants section for additional information.**

Water quality within the San Francisco Bay Region is regulated by the San Francisco Bay Area Regional Water Quality Control Board (Regional Water Board).

In 2015, the Regional Water Board reissued the Municipal Regional Permit (MRP)¹ that regulates discharges of stormwater runoff. The MRP includes provisions for reducing discharges of polychlorinated biphenyls (PCBs) in stormwater runoff and requires municipalities to develop a program to manage priority PCBs-containing building materials during demolition and implement the program by July 1, 2019.

Existing federal and state regulations create the framework for managing PCBs in building materials once those PCBs are identified through this program and for disposing of wastes containing PCBs.

¹ A National Pollutant Discharge Elimination System (NPDES) permit, Order No. R2-2015-0049, issued to municipalities in the counties of Alameda, Contra Costa, San Mateo, and Santa Clara, and the Cities of Fairfield, Suisun City, and Vallejo.

Applicant Instructions for Completing the PCBs Screening Assessment Form

Applicants for demolition permits or other permits that involve the complete demolition of a building must conduct an assessment to screen for PCBs in priority building materials. Use the *PCBs Screening Assessment Form*, to summarize and certify the information needed by the municipality to issue a demolition permit. The form is provided in **Attachment B**. If the project includes the demolition of multiple buildings complete one form for each building to be demolished.

Part 1. Owner and project information

Complete the owner and consultant information and the project location information.

For the Type of Construction select one of the following options:

- **Wood Frame** (Buildings constructed with lumber or timbers, which make up the studs, plates, joists, and rafters.)
- **Masonry Construction** (Buildings constructed with concrete blocks or bricks as the load bearing walls typically with the floors and ceilings constructed with wooden joists.)
- **Steel Frame Construction** (Buildings constructed with steel studs or steel columns and steel joists or trusses to support floors and roofs. Includes light gauge steel construction and high-rise steel construction.)
- **Concrete Frame** (Buildings constructed with reinforced concrete columns, concrete beams, and concrete slabs.)
- **Pre-Engineered** (Buildings constructed with pre-engineered parts bolted together.)

Part 2. Is building subject to the screening requirement based on type, use, and age of the building?

Part 2 documents the determination of whether the proposed demolition will affect an applicable structure. If the demolition does not affect an applicable structure, then the assessment is complete, and the form can be certified.

This determination screens out buildings that are a lower priority with regard PCBs-containing materials and provides an off-ramp from the rest of the screening process.

Key Definitions

Demolition means the wrecking, razing, or tearing down of any building. The definition is intended to be consistent with the demolition activities undertaken by contractors with a C-21 Building Moving/Demolition Contractor's License.

Priority Building Materials are:

1. Caulk;
2. Thermal insulation;
3. Fiberglass insulation;
4. Adhesive mastics; and
5. Rubber window gaskets.

Buildings are structures with a roof and walls standing more or less permanently in one place. Buildings are intended for human habitation or occupancy.

Applicable Structures are defined as buildings constructed or remodeled between January 1, 1950 and December 31, 1980. Wood framed buildings and single-family residential buildings are not applicable structure regardless of the age of the building.

Question 2.a: Is the building to be demolished wood framed and/or single family residential?

- If YES the PCBs Screening Assessment is complete, skip to the certification in Part 4.
- If NO, continue to Question 2.b.

Question 2.b: Was the building to be demolished constructed or remodeled between January 1, 1950 and December 31, 1980?

- If YES continue to Question 2.c.
- If NO, the PCBs Screening Assessment is complete, skip to the certification in Part 4.

Question 2.c: Is the proposed demolition a complete demolition of the building (as defined in key definitions of this document)?

- If YES continue to Part 3.
- If NO, the PCBs Screening Assessment is complete, skip to the certification in Part 4.

Studies have found the highest concentrations of PCBs in building materials in buildings that were built or remodeled from 1950 to 1980.

For this process, the date that the building permit was issued will be used to determine applicability.

Part 3. Report concentrations of PCBs in priority building materials

Part 3 documents the results of the assessment of PCBs concentrations in priority building materials. Part 3 is only required for proposed demolition of an applicable structure, as determined in Part 2. Check the option used.

- **Option 1** Conduct representative sampling and analysis of the priority building materials per the *Protocol for Evaluating Priority PCBs-Containing Materials before Building Demolition* (August 2018) provided in **Attachment C**.
- **Option 2** Use existing sampling results of the priority building materials. Applicants who have conducted sampling prior to the publication of the protocol may use that data provided it is consistent with the protocol (e.g., analytical methods, sample collection frequency, QA/QC). It is anticipated that prior sampling results will rarely be available and that most Applicants will need to use Option 1.

3.a Option 1 – Conduct representative sampling

Check this box if you conducted representative sampling and analysis of the priority building materials per the *Protocol for Evaluating Priority PCBs-Containing Materials before Building Demolition* (August 2018) (**Attachment C**).

- Complete the applicable tables for each priority building material.
- Attach the contractor's report² documenting the evaluation results.
- Attach (or include in the contractor's report) the QA/QC checklist (see **Attachment C**, Section 3.2.4).
- Attach copies of the analytical data reports.

² The contractor's report of the findings of the PCBs building material evaluation. See section 3 of Protocol for Evaluating Priority PCBs-Containing Materials before Building Demolition (Attachment C).

3.a Option 2 – Use existing sampling records

In some cases, a property owner may have conducted sampling of the priority building materials for PCBS. If such data exist, you may use these data to demonstrate the concentration of PCBs in the priority building materials for the PCBs screening. However, if the sampling must be consistent with the *Protocol for Evaluating Priority PCBs-Containing Materials before Building Demolition*.

- Complete the applicable tables for each priority building material.
- Attach the contractor's report/statement that the results are consistent with the *Protocol for Evaluating Priority PCBs-Containing Materials before Building Demolition*.
- Attach copies of the analytical data reports.

Part 3 Tables Summarize concentrations of PCBs in priority building materials

Use these tables to summarize the concentrations of PCBs in the priority building materials.

- Each page of the table is for a different material. Duplicate the pages as needed to report all concentration data.
- A blank page is provided. Applicants have the option of submitting PCBs concentration data on other materials in addition to the priority building materials.

Column 1: required for all priority building material PCBs concentrations

- Use column 1 to report all PCBs concentrations in the priority building materials. Provide short description of the sample location, concentration.

Column 2: only required for PCBs concentrations ≥ 50 ppm

- Use column 2 to estimate the amount of material associated with each sample.

Part 4. Certification

- Complete the certification. The certification must be signed by the property owner or the owner's agent or legal representatives and the consultant who complete the application form.

Notices to Applicants Regarding Federal and State PCBs Regulations

Applicants that determine PCBs exist in priority building materials must follow applicable federal and state laws. This may include reporting to U.S. Environmental Protection Agency (USEPA), the San Francisco Bay Regional Water Quality Control Board, and the California Department of Toxic Substances Control (DTSC). These agencies may require additional sampling and abatement of PCBs.

Depending on the approach for sampling and removing building materials containing PCBs, you may need to notify or seek advance approval from USEPA before building demolition. Even in circumstances where advance notification to or approval from USEPA is not required before the demolition activity, the disposal of PCBs waste is regulated under Toxic Substances Control Act (TSCA).

Additionally, the disposal of PCBs waste is subject to California Code of Regulations (CCR) California Code of Regulations (CCR) Title 22, Section Division 4.5, Chapter 12, Standards Applicable to Hazardous Waste Generators.

Building owners and employers need to consider worker and public safety during work involving hazardous materials and wastes including PCBs.

Federal and State Regulations

Building materials containing PCBs at or above 50 ppm that were manufactured with PCBs (e.g., caulk, joint sealants, paint) fall under the category of PCBs bulk product wastes. See 40 Code of Federal Regulations (CFR) 761.3 for a definition of PCBs bulk product wastes.

Building materials such as concrete, brick, metal contaminated with PCBs are PCBs remediation wastes (e.g., concrete contaminated with PCBs from caulk that contains PCBs). 40 CFR 761.3 defines PCBs remediation wastes.

Disposal of PCBs wastes are subject to TSCA requirements such as manifesting of the waste for transportation and disposal. See 40 CFR 761 and 40 CFR 761, Subpart K.

TSCA-regulated does not equate solely to materials containing PCBs at or above 50 ppm. There are circumstances in which materials containing PCBs below 50 ppm are subject to regulation under TSCA. See 40 CFR 761.61(a)(5)(i)(B)(2)(ii).

Disposal of PCBs wastes are subject to California Code of Regulations (CCR) Title 22, Section Division 4.5, Chapter 12, Standards Applicable to Hazardous Waste Generators.

California hazardous waste regulatory levels for PCBs are 5 ppm based on the Soluble Threshold Limit Concentration test and 50 ppm based on the Total Threshold Limit Concentration test, see CCR, Title 22, Section 66261.24, Table III.

Agency Contacts

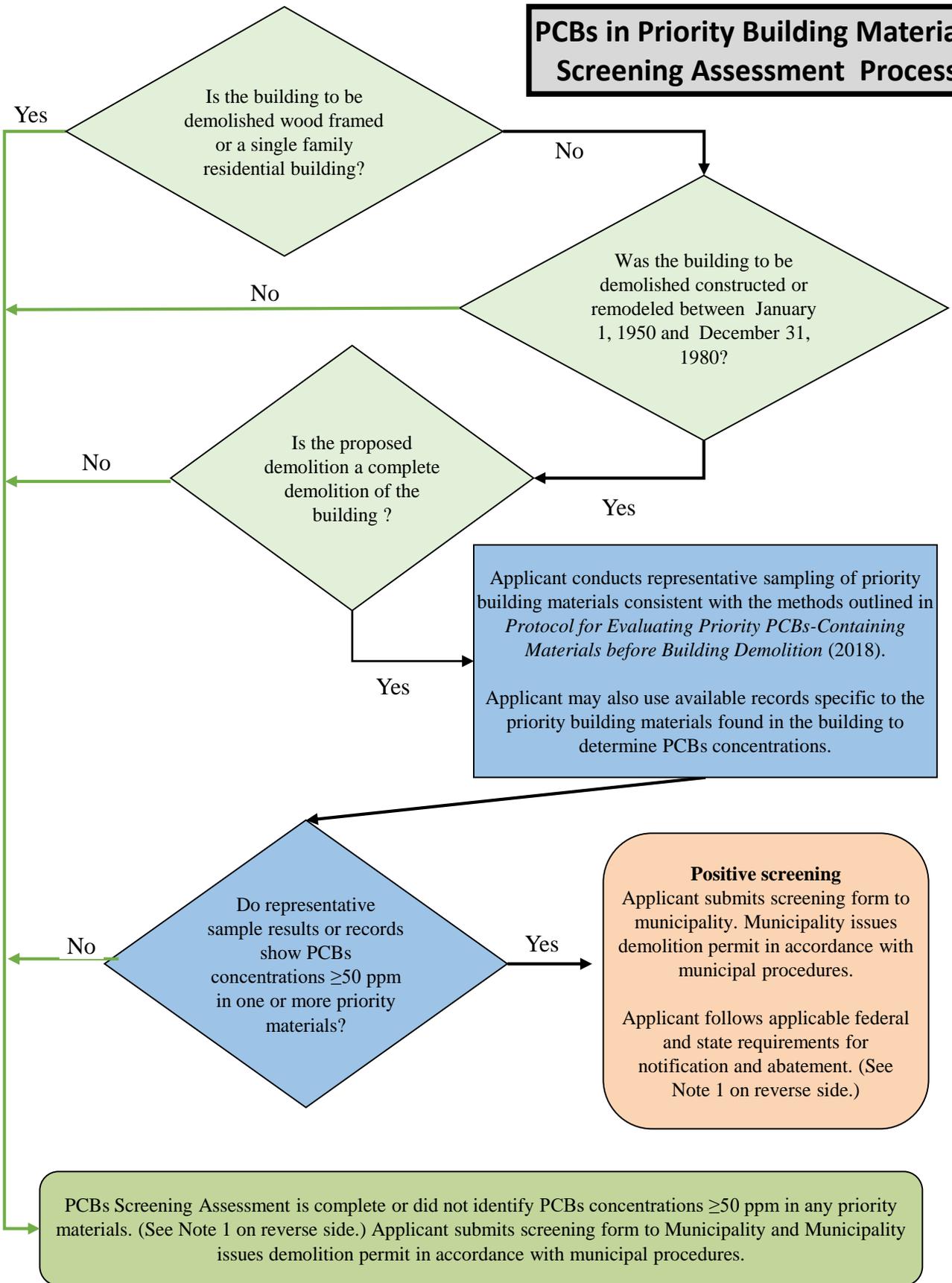
Applicants should contact the appropriate agencies and review the relevant guidance and information about PCBs in building materials. Municipal staff are not able to advise you on the requirements of the applicable federal and state laws.

Agency	Contact	Useful Links
US Environmental Protection Agency	Steve Armann (415) 972-3352 armann.steve@epa.gov	https://www.epa.gov/pcbs (EPA PCB website) https://www.epa.gov/pcbs/questions-and-answers-about-polychlorinated-biphenyls-pcbs-building-materials (PCBs in Building Materials Fact Sheet and Q/A Document) https://www.epa.gov/pcbs/pcb-facility-approval-streamlining-toolbox-fast-streamlining-cleanup-approval-process (USEPA PCB Facility Approval Streamlining Toolbox (PCB FAST)) https://www.epa.gov/pcbs/polychlorinated-biphenyls-pcbs-building-materials#Test-Methods (See Information for Contractors Working in Older Buildings that May Contain PCBs)
San Francisco Bay Regional Water Quality Control Board	Jan O'Hara (510) 622-5681 Janet.O'Hara@waterboards.ca.gov Cheryl Prowell (510) 622-2408 Cheryl.Prowell@waterboards.ca.gov	https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/TMDLs/sfbaypcbstmdl.shtml https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/sitecleanupprogram.html
Department of Toxic Substances Control	Regulatory Assistance Office 1-800-72TOXIC RAO@dtsc.ca.gov	http://www.dtsc.ca.gov/SiteCleanup/Brownfields/upload/PUB_SMP_Guide-to-Selecting-a-Consultant.pdf
California Division of Occupational Safety and Health (known as Cal/OSHA)	CalOSHA Consultations Services 1-800-963-9424	https://www.dir.ca.gov/dosh/consultation.html

Attachment A

Process Flow Chart

PCBs in Priority Building Materials Screening Assessment Process



Note 1

- ❖ Building materials containing PCBs at or above 50 ppm that were manufactured with PCBs (e.g., caulk, joint sealants, paint) fall under the category of PCBs bulk product wastes. See 40 Code of Federal Regulations (CFR) 761.3 for a definition of PCBs bulk product wastes.
- ❖ Building materials such as concrete, brick or metal contaminated with PCBs are PCBs remediation wastes (e.g., concrete contaminated with PCBs from caulk that contains PCBs). 40 CFR 761.3 defines PCBs remediation wastes.
- ❖ Disposal of PCBs wastes are subject to TSCA requirements such as manifesting of the waste for transportation and disposal. See 40 CFR 761 and 40 CFR 761, Subpart K.
- ❖ TSCA-regulated does not equate solely to “materials containing PCBs at or above “50 mg/kg.” There are circumstances in which materials containing PCBs below 50 mg/kg are subject to regulation under TSCA. See 40 CFR 761.61(a)(5)(i)(B)(2)(ii).
- ❖ Disposal of PCBs wastes are subject to California Code of Regulations (CCR) Title 22, Section Division 4.5, Chapter 12, Standards Applicable to Hazardous Waste Generators.
- ❖ California hazardous waste regulatory levels for PCBs are 5 ppm based on the Soluble Threshold Limit Concentration test and 50 ppm based on the Total Threshold Limit Concentration test, see CCR, Title 22, Section 66261.24, Table III.

Attachment B
PCBs in Priority Building Materials Screening
Assessment Form

PCBs Screening Assessment Form

For Municipality Use Only

Date Received	
File #	

This screening process is part of a program for water quality protection and was designed in accordance with requirements in the Bay Area regional municipal stormwater NPDES permit (referred to as the Municipal Regional Permit). This process **does not** address other environmental programs or regulations (e.g., PCBs regulations under the Toxic Substances Control Act (TSCA); federal, state, or local regulations for hazardous material handling and hazardous waste disposal; health and safety practices to mitigate human exposure to PCBs or other hazardous materials; recycling mandates; or abatement at sites with PCBs or other contaminants). **The applicant is responsible for knowing and complying with all relevant laws and regulations. See Notices to Applicants section in the Applicant Instructions and at the end of this form.**

Complete all applicable parts of the PCBs Screening Assessment Form and submit with your demolition permit application.

All Applicants must complete Part 1 and Part 2.

Part 1. Owner/Consultant and project information		
Owner Information		
Name		
Address		
City	State	Zip
Contact (Agent)		
Phone	Email	
Consultant Information		
Firm Name		
Address		
City	State	Zip
Contact Person		
Phone	Email	
Project Location		
Address		
City	State CA	Zip
APN (s)		
Year Building was Built	Type of Construction	
Estimated Demolition Date		

Part 2. Is building subject to the PCBs screening requirement based on type, use, and age of the building?

2.a Is the building to be demolished wood framed and/or single family residential? Yes No

If the answer to question 2.a is **Yes**, the PCBs Screening Assessment is complete, skip to Part 4. If the answer is **No**, continue to Question 2.b.

2.b Was the building to be demolished constructed or remodeled between January 1, 1950 and December 31, 1980? Yes No

➤ If the answer to Question 2.b is **No** the PCBs Screening Assessment is complete, skip to Part 4. If the answer is **Yes**, continue to Question 2.c.

2.c Is the proposed demolition a complete demolition of the building? Yes No

➤ If the answer to Question 2.c is **No** the PCBs Screening Assessment is complete, skip to Part 4. If the answer is **Yes**, complete Part 3.

All applications affecting applicable structures and demolitions must complete Part 3 and the Part 3 Tables.

Part 3. Report concentrations of PCBs in priority building materials

Option 1. Applicants conducted representative sampling and analysis of the priority building materials per the Protocol for Evaluating Priority PCBs-Containing Materials before Building Demolition (2018) (Attachment C).

Option 2. Applicants possess existing sample results that are that are consistent with the Protocol for Evaluating Priority PCBs-Containing Materials before Building Demolition (2018) (Attachment C).

3.a Select option and report PCBs concentrations in the priority building materials and the source of data for each of the priority building materials. Provide the required supporting information

- Option 1 Conduct Representative Sampling
- Summarize results on Part 3 Tables; and
 - Provide the following supporting information:
 - Contractor’s report documenting the assessment results;
 - QA/QC checklist (see Attachment C, section 3.2.4); and
 - Copies of the analytical data reports.

- Option 2 Use Existing Sampling Records
- Summarize results on Part 3 Tables; and
 - Provide the following supporting information:
 - Contractor’s report/statement that the results are consistent with the Protocol for Evaluating Priority PCBs-Containing Materials before Building Demolition.
 - Copies of the analytical data reports.

All Applicants must complete Part 4.

Part 4. Certification

I certify that the information provided in this form is, to the best of my knowledge and belief, true, accurate, and complete. I further certify that I understand my responsibility for knowing and complying with all relevant laws and regulations related to reporting, abating, and handling and disposing of PCBs materials and wastes. I understand there are significant penalties for submitting false information. I will retain a copy of this form and the supporting documentation for at least 5 years.

Signature: _____ Date: _____
 (Property Owner//Agent/Legal Representative)

Print/Type: _____
 (Property Owner/Agent/Legal Representative Name)

Signature: _____ Date: _____
 (Consultant Completing Application Form)

Print/Type: _____
 (Consultant Completing Application Form)

Notices to Applicants Regarding Federal and State PCBs Regulations

Applicants that determine PCBs exist in building materials must follow applicable federal and state laws. This may include reporting to U.S. Environmental Protection Agency (USEPA), the San Francisco Bay Regional Water Quality Control Board, and the California Department of Toxic Substances Control (DTSC). These agencies may require additional sampling and abatement of PCBs. Depending on the approach for sampling and removing building materials containing PCBs, you may need to notify or seek advance approval from USEPA before building demolition. Even in circumstances where advance notification to or approval from USEPA is not required before the demolition activity, the disposal of PCBs waste is regulated under TSCA and the California Code of Regulations. (See Note 1)

Note 1 - Federal and State Regulations

Building materials containing PCBs at or above 50 ppm that were manufactured with PCBs (e.g., caulk, joint sealants, paint) fall under the category of PCBs bulk product wastes. See 40 Code of Federal Regulations (CFR) 761.3 for a definition of PCBs bulk product wastes.

Building materials such as concrete, brick, metal contaminated with PCBs are PCBs remediation wastes (e.g., concrete contaminated with PCBs from caulk that contains PCBs). 40 CFR 761.3 defines PCBs remediation wastes.

Disposal of PCBs wastes are subject to TSCA requirements such as manifesting of the waste for transportation and disposal. See 40 CFR 761 and 40 CFR 761, Subpart K.

TSCA-regulated does not equate solely to materials containing PCBs at or above 50 ppm. There are circumstances in which materials containing PCBs below 50 ppm are subject to regulation under TSCA. See 40 CFR 761.61(a)(5)(i)(B)(2)(ii).

Disposal of PCBs wastes are subject to California Code of Regulations (CCR) Title 22, Section Division 4.5, Chapter 12, Standards Applicable to Hazardous Waste Generators.

California hazardous waste regulatory levels for PCBs are 5 ppm based on the Soluble Threshold Limit Concentration test and 50 ppm based on the Total Threshold Limit Concentration test, see CCR, Title 22, Section 66261.24, Table III.

Agency	Contact	Useful Links
US Environmental Protection Agency	Steve Armann (415) 972-3352 armann.steve@epa.gov	https://www.epa.gov/pcbs (EPA PCBs website) https://www.epa.gov/pcbs/questions-and-answers-about-polychlorinated-biphenyls-pcbs-building-materials (PCBs in Building Materials Fact Sheet and Q/A Document) https://www.epa.gov/pcbs/pcb-facility-approval-streamlining-toolbox-fast-streamlining-cleanup-approval-process (USEPA PCB Facility Approval Streamlining Toolbox (PCB FAST)) https://www.epa.gov/pcbs/polychlorinated-biphenyls-pcbs-building-materials#Test-Methods (See Information for Contractors Working in Older Buildings that May Contain PCBs)
San Francisco Bay Regional Water Quality Control Board	Jan O'Hara (510) 622-5681 Janet.O'Hara@waterboards.ca.gov Cheryl Prowell (510) 622-2408 Cheryl.Prowell@waterboards.ca.gov v	https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/TMDLs/sfbaypcbstmtl.shtml https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/sitecleanupprogram.html
Department of Toxic Substances Control	Regulatory Assistance Office 1-800-72TOXIC RAO@dtsc.ca.gov	http://www.dtsc.ca.gov/SiteCleanup/Brownfields/upload/PUB_SMP_Guide-to-Selecting-a-Consultant.pdf
California Division of Occupational Safety and Health (Cal/OSHA)	CalOSHA Consultations Services 1-800-963-9424	https://www.dir.ca.gov/dosh/consultation.html

Part 3 Caulk Applications Table

Column 1. Report all PCBs concentrations for each homogenous area of caulking area (see Attachment C, Section 3.2.2). Use sample designators/descriptions from laboratory report.

Column 2. Complete for each concentration ≥ 50 ppm

<u>Caulk Application Sample Description</u>	<u>Concentration (mg/kg)</u>	<u>Estimate Amount of Material</u>	<u>Units</u>
<i>Example:</i>			
<i>Caulk Sample 1</i>	320	48	Linear Feet
1. _____	_____	_____	Linear Feet
2. _____	_____	_____	Linear Feet
3. _____	_____	_____	Linear Feet
4. _____	_____	_____	Linear Feet
5. _____	_____	_____	Linear Feet
6. _____	_____	_____	Linear Feet
7. _____	_____	_____	Linear Feet
8. _____	_____	_____	Linear Feet
9. _____	_____	_____	Linear Feet
10. _____	_____	_____	Linear Feet

Duplicate page if additional space is needed.

Part 3 Fiberglass Insulation Applications Table

Column 1. Report all PCBs concentrations for each homogenous area of fiberglass insulation (see Attachment C, Section 3.2.2). Use sample designators/descriptions from laboratory report.

Column 2. Complete for each concentration ≥ 50 mg/kg

<u>Fiberglass Insulation Application Sample Description</u>	<u>Concentration (mg/kg)</u>	<u>Estimate Amount of Material</u>	<u>Units</u>
<i>Example:</i>			
<i>Fiberglass Insulation Sample 1</i>	78	86	Square Feet
1. _____	_____	_____	Square Feet
2. _____	_____	_____	Square Feet
3. _____	_____	_____	Square Feet
4. _____	_____	_____	Square Feet
5. _____	_____	_____	Square Feet
6. _____	_____	_____	Square Feet
7. _____	_____	_____	Square Feet
8. _____	_____	_____	Square Feet
9. _____	_____	_____	Square Feet
10. _____	_____	_____	Square Feet

The area of insulation wrapped around a pipe may be estimated using the following formula:
 Area (square feet) = $2\pi rh$; where r is the pipe radius (feet) and h is the pipe length (feet).

Duplicate page if additional space is needed.

Part 3 Thermal Insulation Applications Table

Column 1. Report all PCBs concentrations for each homogenous area of thermal insulation (see Attachment C, Section 3.2.2). Use sample designators/descriptions from laboratory report.

Column 2. Complete for each concentration ≥ 50 mg/kg

<u>Thermal Insulation Application Sample Description</u>	<u>Concentration (mg/kg)</u>	<u>Estimate Amount of Material</u>	<u>Units</u>
<i>Example:</i>			
<i>Thermal Insulation Sample 1</i>	20	_____	Square Feet
1. _____	_____	_____	Square Feet
2. _____	_____	_____	Square Feet
3. _____	_____	_____	Square Feet
4. _____	_____	_____	Square Feet
5. _____	_____	_____	Square Feet
6. _____	_____	_____	Square Feet
7. _____	_____	_____	Linear Feet
8. _____	_____	_____	Square Feet
9. _____	_____	_____	Square Feet
10. _____	_____	_____	Square Feet

The area of of insulation wrapped around a pipe may be estimated using the following formula:

Area (square feet) = $2\pi rh$, where r is the pipe radius (feet) and h is the pipe length (feet).

Duplicate page if additional space is needed.

Part 3 Adhesive Mastic Applications Table

Column 1. Report PCBs concentrations for each homogenous area of mastic (see Attachment C, Section 3.2.2. Use sample designators/descriptions from laboratory report.)

Column 2. Complete for each concentration ≥ 50 mg/kg

<u>Adhesive Mastic Application Sample Description</u>	<u>Concentration (mg/kg)</u>	<u>Estimate Amount of Material</u>	<u>Units</u>
<i>Example:</i>			
<i>Adhesive Mastic Sample 1</i>	87.4	800	Square Feet
1. _____	_____	_____	Square Feet
2. _____	_____	_____	Square Feet
3. _____	_____	_____	Square Feet
4. _____	_____	_____	Square Feet
5. _____	_____	_____	Square Feet
6. _____	_____	_____	Square Feet
7. _____	_____	_____	Linear Feet
8. _____	_____	_____	Square Feet
9. _____	_____	_____	Square Feet
10. _____	_____	_____	Square Feet

Duplicate page if additional space is needed.

Part 3 Rubber Window Gasket Applications Table

Column 1. Report PCBs concentrations for each gasket (see Attachment C, Section 3.2.2). Use sample designators/descriptions from laboratory report.

Column 2. Complete for each concentration ≥ 50 mg/kg

<u>Rubber Window Gasket Application Sample Description</u>	<u>Concentration (mg/kg)</u>	<u>Estimate Amount of Material</u>	<u>Units</u>
<i>Example:</i>			
<i>Window Gasket Sample 1</i>	70	75	Linear Feet
1. _____	_____	_____	Linear Feet
2. _____	_____	_____	Linear Feet
3. _____	_____	_____	Linear Feet
4. _____	_____	_____	Linear Feet
5. _____	_____	_____	Linear Feet
6. _____	_____	_____	Linear Feet
7. _____	_____	_____	Linear Feet
8. _____	_____	_____	Linear Feet
9. _____	_____	_____	Linear Feet
10. _____	_____	_____	Linear Feet

Duplicate page if additional space is needed.

Part 3 Other Materials Table

Column 1. *Optional: Use this form to report PCBs concentration data from materials other than priority building materials. Report PCBs concentrations for each material and homogeneous area. Use sample designators/descriptions from laboratory report.*

Column 2. *Complete for each concentration ≥ 50 mg/kg*

<u>Material Sample Description</u>	<u>Concentration (mg/kg)</u>	<u>Estimate Amount of Material</u>	<u>Units</u>
<i>Example:</i>			
<i>Wall paint Sample 1</i>	<i>228</i>	<i>1500</i>	<i>Square Feet</i>
1. _____	_____	_____	_____
2. _____	_____	_____	_____
3. _____	_____	_____	_____
4. _____	_____	_____	_____
5. _____	_____	_____	_____
6. _____	_____	_____	_____
7. _____	_____	_____	_____
8. _____	_____	_____	_____
9. _____	_____	_____	_____
10. _____	_____	_____	_____

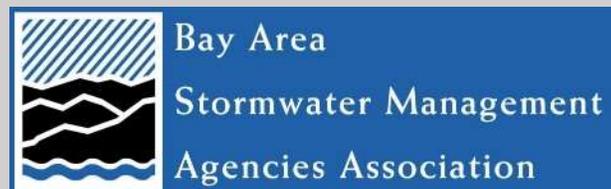
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Attachment C
Protocol for Evaluating Priority PCBs-Containing
Materials before Building Demolition

Protocol for Evaluating Priority PCBs-Containing Materials before Building Demolition



Managing PCBs–Containing Building Materials during Demolition: Guidance, Tools, Outreach and Training



August 2018

This document is a deliverable of the Bay Area Stormwater Management Agencies Association (BASMAA) project *Managing PCBs–Containing Building Materials during Demolition: Guidance, Tools, Outreach and Training*. BASMAA developed guidance, tools, and outreach and training materials to assist with San Francisco Bay Area municipal agencies’ efforts to address the requirements of Provision C.12.f. of the Bay Area Municipal Regional Stormwater Permit (referred to as the MRP). Provision C.12.f of the MRP requires Permittees to manage PCBs–containing building materials during demolition.

We gratefully acknowledge the BASMAA Steering Committee for this project, which provided overall project oversight, including during the development of this and other project deliverables:

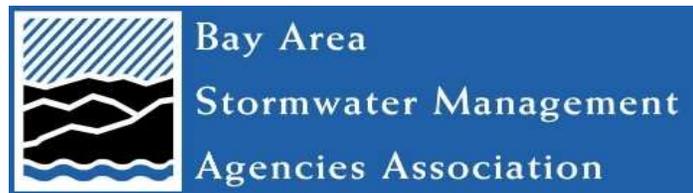
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Regulatory – stormwater/TMDL	Jan O’Hara, San Francisco Bay Regional Water Quality Control Board
Regulatory – experience with related program (asbestos management)	Ron Carey and Richard Lew, Bay Area Air Quality Management District
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TABLE OF CONTENTS

DISCLAIMER	iv
1. INTRODUCTION	1
2. CURRENTLY ESTABLISHED BUILDING MATERIAL EVALUATION PROTOCOLS	3
2.1 Asbestos Containing Material Evaluation Procedures.....	3
2.1.1 Asbestos-Containing Materials in Schools Rule	3
2.2 Lead-Based Paint (LBP) Evaluation Procedures	7
2.2.1 LBP Sampling Procedures: Test Kits	7
2.2.2 LBP Sampling Procedures: XRF Devices	8
2.2.3 LBP Sampling Procedures: Laboratory Testing of Paint Chips	10
3. PCBs BUILDING MATERIAL EVALUATION PROTOCOL.....	13
3.1 Priority Building Materials to be Tested.....	13
3.2 PCBs Sampling Procedures	15
3.2.1 Sampling Equipment.....	16
3.2.2 Sample Collection Frequency	16
3.2.3 Sample Analysis and Preservation.....	18
3.2.4 Quality Assurance and Quality Control.....	19
3.3 Reporting and Notifications.....	19
4. REFERENCES	21

LIST OF APPENDICES

- Appendix A: PCBs Building Material Prioritization Worksheet**
- Appendix B: Priority Building Materials Photographic Log**

DISCLAIMER

Information contained in BASMAA products is to be considered general guidance and is not to be construed as specific recommendations for specific cases. BASMAA is not responsible for the use of any such information for a specific case or for any damages, costs, liabilities or claims resulting from such use. Users of BASMAA products assume all liability directly or indirectly arising from use of the products.

The material presented in this document is intended solely for the implementation of a municipal regulatory program required by the San Francisco Bay Area Regional Water Quality Control Board Municipal Regional Stormwater Permit for the protection of water quality under the Clean Water Act.

BASMAA prepared the tools and guidance herein to assist MRP Permittees' efforts to address the requirements of Provision C.12.f. of the MRP. The project team received input from a variety of stakeholders during development of the tools and guidance, including regulators (San Francisco Bay Regional Water Quality Control Board, U.S. EPA, and Bay Area Air Quality Management District staff), Bay Area municipal agency staff, and industry representatives.

This document does not address other environmental programs or regulations (e.g., PCBs regulations under the Toxic Substances Control Act (TSCA); federal, state, or local regulations for hazardous material handling and hazardous waste disposal; health and safety practices to mitigate human exposure to PCBs or other hazardous materials; recycling mandates; and abatement at sites with PCBs (or other contaminants). The applicant is responsible for knowing and complying with all relevant laws and regulations.

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Protocol for Evaluating Priority PCBs-Containing Materials before Building Demolition

1. INTRODUCTION

The San Francisco Bay Region Municipal Regional Stormwater NPDES permit, referred to as the Municipal Regional Permit (MRP)¹, includes provisions that implement stormwater-related aspects of the Total Maximum Daily Load (TMDL) for polychlorinated biphenyls (PCBs) in the Bay. Provision C.12.f. requires that Permittees develop and implement or cause to be developed and implemented an effective protocol for managing materials with PCBs concentrations of 50 milligrams per kilogram (mg/kg) (equivalent to parts-per-million, or ppm), the target management level, or greater in applicable structures at the time such structures undergo demolition², so that PCBs do not enter municipal storm drain systems. Applicable structures include, at a minimum, non-residential structures constructed or remodeled between the years 1950 and 1980 with building materials such as caulking and thermal insulation with PCBs concentrations of 50 ppm or greater. Single-family residential and wood frame structures are exempt. Also, a Permittee is exempt from this requirement if it provided evidence acceptable to the Executive Officer in its 2016/17 Annual Report that the only structures that existed pre-1980 within its jurisdiction were single-family residential and/or wood-frame structures.³

Permittees are required to develop a protocol by June 30, 2019 that includes each of the following components, at a minimum:

1. The necessary authority to ensure that PCBs do not enter municipal storm drains from PCBs-containing materials in applicable structures at the time such structures undergo demolition;
2. A method for identifying applicable structures prior to their demolition; and
3. Method(s) for ensuring PCBs are not discharged to the municipal storm drain from demolition of applicable structures.

By July 1, 2019 and thereafter, Permittees are required to:

- Implement or cause to be implemented the PCBs management protocol for ensuring PCBs are not discharged to municipal storm drains from demolition of applicable structures via vehicle track-out, airborne releases, soil erosion, or stormwater runoff.
- Develop an evaluation methodology and data collection program to quantify in a technically sound manner PCBs loads reduced through implementation of the protocol for controlling PCBs during demolition of applicable structures.

¹ The Municipal Regional Stormwater Permit, Order No. R2-2015-0049, was adopted November 19, 2015.

² Demolition means the wrecking or taking out of any load-supporting structural member of a facility together with any related handling operations (40 CFR., Part 61, Subpart M).

³ The City of Clayton provided evidence to support an exemption from the requirement.

Protocol for Evaluating Priority PCBs-Containing Materials before Building Demolition

On behalf of MRP Permittees, the Bay Area Stormwater Management Agencies Association (BASMAA) is conducting a regional project to assist MRP Permittees to achieve compliance with Provision C.12.f. The regional project is developing guidance materials, tools, protocols and training materials and conducting outreach. The goal is to assist Permittees to develop local programs to prevent PCBs from being discharged to municipal storm drains due to demolition of applicable buildings. Local agencies will need to tailor the BASMAA products for local use and train local staff to implement the new program.

This document is the deliverable for Task 3 of the regional project, which is to develop a protocol for the assessment of prioritized PCBs-containing building materials prior to demolition. The full scope of work for the regional project is presented in the Project team's *Proposal for Tools, Protocol, Outreach & Training Work Plan: PCBs Materials Management during Building Demolition Project* (dated January 31, 2017; revised March 2017). If materials are found or known to contain PCBs, those materials must be managed appropriately and according to all applicable local, state, and federal requirements. Management of PCBs-containing materials is beyond the scope of this document.

To establishing the PCBs protocol, current established protocols were evaluated that are widely accepted in the building demolition industry for other Federal- and State-regulated constituents of concern. This document provides applicable examples of sampling and evaluation procedures for building materials potentially contaminated with asbestos-containing material (ACM)⁴ and lead-based paint (LBP)⁵, which are summarized and referenced to provide the foundation for the PCBs protocol. These components include guidance on sampling frequencies, laboratory sample analysis, quality assurance and quality control procedures, and reporting.

⁴ Asbestos-containing material (ACM) means any material or product which contains more than one percent asbestos.

⁵ Lead-based paint (LBP) is any paint, varnish, shellac, or other coating that contains lead equal to or greater than 1.0 mg/cm² as measured by XRF device or laboratory analysis, or 0.5 percent by weight (5,000 ppm or 5,000 mg/kg) as measured by laboratory analysis.

Protocol for Evaluating Priority PCBs-Containing Materials before Building Demolition

2. CURRENTLY ESTABLISHED BUILDING MATERIAL EVALUATION PROTOCOLS

This section presents evaluation protocols for ACM and LBP, which provide a foundation for the PCBs protocol summarized in Section 3. This section includes guidance on sampling frequencies, laboratory sample analysis, quality assurance and quality control procedures derived from regulatory procedures for ACM and LBP.

2.1 Asbestos Containing Material Evaluation Procedures

Asbestos bulk sampling procedures are specified in several Federal regulations, implemented primarily by the United States Environmental Protection Agency (EPA) as well as the Occupational Safety and Health Administration (OSHA). The Consumer Product Safety Commission (CPSC) and the Mine Safety and Health Administration (MSHA) specify additional regulations and procedures, but these are generally less applicable to evaluation procedures.

The foundational regulations pertaining to asbestos sampling in buildings are the Asbestos Hazard Emergency Response Act (AHERA; Toxic Substances Control Act [TSCA] Title II) (15 U.S.C. § 2641-2656) as well as the Asbestos School Hazard Abatement Reauthorization Act (ASHARA). EPA promulgated regulations under AHERA to require inspection of schools for asbestos-containing building materials, and to perform resultant corrective actions. Furthermore, AHERA tasked the EPA with developing a plan for accreditation of asbestos inspectors. ASHARA extended funding for asbestos programs at schools and expanded accreditation requirements to cover asbestos abatement at commercial buildings other than schools.

Pursuant to AHERA, the Asbestos-Containing Materials in Schools rule (40 CFR Part 763, Subpart E) details specific requirements for building material inspections at schools, preparation of asbestos management plans, and implementation of response actions. EPA regulation on asbestos related to structure demolition is specified in subpart M of the National Emission Standards for Hazardous Air Pollutants (NESHAP) regulations (40 CFR Part 61, Subpart M).

The following sections summarize the evaluation procedures specified in the Asbestos-Containing Materials in Schools rule as well as the Asbestos NESHAP regulations. Both OSHA and EPA worker protection requirements are also discussed.

2.1.1 Asbestos-Containing Materials in Schools Rule

The following sections summarize the inspection, re-inspection, sampling, analysis, and evaluation procedures specified in the Asbestos-Containing Materials in Schools rule (40 CFR Part 763, Subpart E).

Protocol for Evaluating Priority PCBs-Containing Materials before Building Demolition

Evaluation

For each inspection and re-inspection of asbestos-containing building material (ACBM)⁶, the local education agency shall have an accredited inspector provide a written evaluation of all friable known or assumed ACBM. The evaluation shall consider the following:

- Location and amount of material, both in total quantity and as a percentage of the functional space;
- Condition of the material, specifying:
 - Type of damage or significant damage (e.g., flaking, blistering, water damage, or other signs of physical damage);
 - Severity of damage (e.g., major flaking, severely torn protective jackets, as opposed to occasional flaking, minor tears to jackets);
 - Extent or spread of damage over large areas or large percentages of the homogeneous⁷ area;
- Whether the material is accessible;
- The material's potential for disturbance;
- Known or suspected causes of damage or significant damage (e.g., air erosion, vandalism, vibration, water); and
- Preventive measures that could potentially eliminate the reasonable likelihood of undamaged ACBM from becoming significantly damaged.

The inspector shall classify and give reasons in the written evaluation for classifying the ACBM and suspected ACBM assumed to be ACM into one of the following categories:

1. Damaged or significantly damaged thermal system insulation ACM;
2. Damaged friable surfacing ACM;
3. Significantly damaged friable surfacing ACM;
4. Damaged or significantly damaged friable miscellaneous ACM;
5. ACBM with potential for damage;
6. ACBM with potential for significant damage; and
7. Any remaining friable ACBM or friable suspected ACBM.

⁶ Asbestos-containing building material (ACBM) means surfacing ACM, thermal system insulation ACM, or miscellaneous ACM that is found in or on interior structural members or other parts of a building.

⁷ Homogenous refers to a substance or area that is uniform in texture, color, and general physical appearance and properties.

Protocol for Evaluating Priority PCBs-Containing Materials before Building Demolition

Inspection and Re-inspection

Inspect any building that is to be used as a school, prior to such use, by an accredited inspector. In emergency situations, inspect the building within 30 days of commencement of such use.

For each area of the building, complete the following inspection procedure:

- Visually inspect the area to identify suspected ACBM;
- Touch suspected ACBM to determine friability (Friable material is material that may be crumbled or pulverized by hand pressure alone. Note that thermal system insulation that has retained its structural integrity and that has an undamaged protective jacket or wrap that prevents fiber release shall be treated as non-friable.);
- Categorize all areas into homogenous areas of friable suspected ACBM and non-friable suspected ACBM;
- Assume that some or all the homogeneous areas are ACBM, and for each homogeneous area that is not assumed to be ACBM, collect and submit samples for bulk analysis. Do not sample areas that an accredited inspector assumes to contain ACBM. For uncertain areas, collect and bulk samples and submit for analysis (see Sampling below);
- Assess friable material in areas where samples are collected, in areas where samples are not collected but ACBM is assumed to be present, and in areas identified in previous inspections;
- Record the following information and submit a copy for inclusion in an asbestos management plan, within 30 days of the inspection:
 - An inspection report including the signature, state of accreditation, and accreditation number of each inspector, as well as the date of the inspection;
 - A comprehensive inspection inventory, including the date and locations of samples, locations of areas assumed to contain friable ACBM, and locations of areas assumed to contain non-friable ACBM;
 - A description of the manner used to determine sampling locations;
 - A list of all categorized and identified homogenous areas into surfacing material, thermal system insulation, or miscellaneous material; and
 - Evaluations made of friable material.

Repeat this process as a re-inspection at least once every 3 years after a management plan is in effect. Reassess the condition of friable known or assumed ACBM previously identified. Identify any homogenous areas with material that has become friable since the last inspection or re-inspection and collect and submit samples of the material.

Protocol for Evaluating Priority PCBs-Containing Materials before Building Demolition

Sampling

Collect samples in a statistically random manner that is representative of each homogeneous area.

- For surfacing material, the number of samples to be collected is as follows:
 - Collect at least three samples from each homogenous area less than 1,000 square feet;
 - Collect at least five samples from each homogenous area between 1,000 and 5,000 square feet; and
 - Collect at least seven samples from each homogenous area greater than 5,000 square feet.
- For thermal system insulation:
 - Collect at least one bulk sample from each homogeneous area that is not assumed to be ACM;
 - Collect at least one bulk sample from each homogeneous area of patched insulation that is not assumed to be ACM, if the patched section is less than six linear or square feet;
 - Where cement or plaster is used on fittings such as tees, elbows or valves, collect samples to determine if material is ACM or not;
 - If the accredited inspector determines that the thermal system insulation is fiberglass, foam glass, rubber, or other non-ACBM, samples are not required to be collected;
- For miscellaneous material, collect bulk samples from each homogeneous area of friable material that is not assumed to be ACM.

Analysis

Samples should be analyzed by laboratories accredited by the National Bureau of Standards (NBS). The laboratories must have received interim accreditation for polarized light microscopy (PLM) analysis under the EPA Interim Asbestos Bulk Sample Analysis Quality Assurance Program until the NBS PLM laboratory accreditation program for PLM is operational.

Samples should be analyzed for asbestos content by PLM using the “Interim Method for the Bulk Determination of Asbestos in Bulk Insulation Samples”, found at Appendix E to Subpart E of 40 CFR Part 763. Samples should not be composited.

A homogenous area is considered not to contain ACM only if the results of all samples from that area show asbestos in concentrations of 1 percent or less. An area is considered to contain ACM if at least one sample from the area shows asbestos in concentrations greater than 1 percent.

Protocol for Evaluating Priority PCBs-Containing Materials before Building Demolition

Submit the name and address of each laboratory performing the analysis, the date of the analysis, and the person performing the analysis for inclusion into the management plan within 30 days of the analysis.

2.2 Lead-Based Paint (LBP) Evaluation Procedures

Lead-Based Paint (LBP) evaluation procedures are codified in various federal and state regulations.

Title IV of the Toxic Substances Control Act (TSCA) as well as other authorities in the Residential Lead-Based Paint Hazard Reduction Act of 1992 directs the EPA to regulate lead-based paint hazards. The primary Federal regulations and guidelines related to LBP evaluation procedures include:

- The Lead Renovation, Repair and Painting Program (RRP) Rule (40 CFR 745, Subpart E);
- The National Lead Laboratory Accreditation Program (TSCA Section 405(b)); and
- The Housing and Urban Development (HUD) Guidelines for the Evaluation and Control of Lead-Based Paint Hazards in Housing (2012 Edition) (pursuant to Section 1017 of the Residential Lead-Based Paint Hazard Reduction Act of 1992, A.K.A. “Title X”)

Furthermore, the California Department of Public Health (CDPH) Title 17, California Code of Regulations, Division 1, Chapter 8 “Accreditation, Certification, and Work Practices for Lead-Based Paint and Lead Hazards,” specifies some LBP evaluation procedures as part of the accreditation program.

The HUD Guidelines provide the most comprehensive procedures for LBP evaluations and are referenced by many other regulations.

There are three primary methods of performing LBP evaluation: test kits, X-ray Fluorescence (XRF) devices, and laboratory testing of paint chips. Sampling procedures for each method are detailed in the following sections.

Under CDPH Title 17, certified Lead Inspector/Assessors are required to use XRF devices or laboratory analysis, and not test kits.

2.2.1 LBP Sampling Procedures: Test Kits

In 2008, the EPA published the RRP rule, which, among other things, established criteria for lead test kits for use in LBP evaluation. Lead test kits recognized by EPA before September 1, 2010, must meet only the negative response criterion outlined in 40 CFR 745.88(c)(1):

Protocol for Evaluating Priority PCBs-Containing Materials before Building Demolition

For paint containing lead at or above the regulated level, 1.0 mg/cm² or 0.5% by weight, a demonstrated probability (with 95% confidence) of a negative response less than or equal to 5% of the time must be met.

Lead test kits recognized after September 1, 2010, must meet both the negative response and positive response criteria outlined in 40 CFR 745.88(c)(1) and (2). The positive-response criterion states:

For paint containing lead below the regulated level, 1.0 mg/cm² or 0.5% by weight, a demonstrated probability (with 95% confidence) of a positive response less than or equal to 10% of the time must be met.

To date, no lead test kit has met both criteria⁸. However, three lead test kits recognized before September 1, 2010, exist and are recognized by EPA:

- 3M™ LeadCheck™, manufactured by the 3M Company, for use on wood, ferrous metal, drywall, and plaster surfaces;
- D-Lead®, manufactured by ESCA Tech, Inc., for use on wood, ferrous metal, drywall, and plaster surfaces; and
- The Commonwealth of Massachusetts lead test kit, for use only on drywall and plaster surfaces.

Test kits cannot determine the concentration of lead, only presence or absence at best. For this reason, test kits are best used by homeowners or other non-professionals as a preliminary evaluation before using an XRF device or laboratory analysis of paint chips.

There are currently no detailed sampling procedures for test kits that would be applicable to PCBs evaluation. However, test kit technology may be a useful paradigm for PCBs evaluation if a kit can be developed to test PCBs at an acceptable concentration that uses a repeatable methodology to meet the data quality objectives.

2.2.2 LBP Sampling Procedures: XRF Devices

The following sections summarize LBP evaluation procedures for XRF devices, including description of sampling equipment, collection techniques and frequency, sample analysis, and quality assurance.

⁸ US EPA, Lead Test Kits, <https://www.epa.gov/lead/lead-test-kits>, accessed September 19, 2017.

Protocol for Evaluating Priority PCBs-Containing Materials before Building Demolition

LBP Analyzers

According to the HUD Guidelines, portable XRF devices are the most common primary analytical method for inspections in housing because of their versatility in analyzing a wide variety of surface types, non-destructive measurement, high speed, and low cost per sample. Each XRF device must have a HUD-issued XRF Performance Characteristic Sheet (PCS), which contains information about XRF readings taken on specific surface types, calibration check tolerances, and interpretation of XRF readings.

Collection Techniques and Frequency

HUD Guidelines provide separate sampling techniques for single- and multi-family housing. However, the general approach to sampling is the following seven-step procedure:

- List all testing combinations of building components and substrates (e.g., wood doors, metal doors, plaster walls, concrete walls);
- Select testing combinations. A numbering system, floor plan, sketch or other system may be used to document which testing combinations were tested;
- Perform XRF testing, including calibration;
- Collect and analyze paint-chip samples as needed;
- Classify XRF and paint-chip results;
- Evaluate the work and results to ensure the quality of the inspection; and
- Document the findings in a summary and in a complete technical report.

Because of the large surfaces and quantities of paint involved, and the potential for spatial variation, HUD Guidelines recommend taking at least four readings per room, with special attention paid to surfaces that clearly have different painting history. The selection of test locations should be representative of locations most likely to be coated with old paint or other lead-based coatings, such as areas with thick paint; areas with worn or scraped off paint should be avoided.

For large buildings with many similar units, HUD Guidelines recommend testing a designated sample of units to provide 95% confidence that most units are below the lead standard. The sample size should be carefully chosen using statistical techniques (see HUD Guidelines, Table 7.3).

Sample Analysis

Portable XRF devices expose a surface to X-ray or gamma radiation and measure the emission of characteristic X-rays from each element in the analyzed surface. The XRF reading is compared with a range specified in the PCS for the specific XRF device being used and the specific substrate beneath the painted surface.

Protocol for Evaluating Priority PCBs-Containing Materials before Building Demolition

When discrepancies exist between the PCS, HUD Guidelines, and the XRF device's manufacturer's instructions, the most stringent guideline should be followed.

Quality Assurance

HUD Guidelines provide several techniques for evaluation of inspection quality.

A knowledgeable observer independent of the inspection firm should be present for as much XRF testing as possible, especially if they have knowledge of LBP evaluation and/or the paint history of the facility.

The client should ask the inspector to provide copies of the results as soon as possible, or daily, allowing for immediate review.

Data from HUD's private housing lead-based paint hazard control program show that it is possible to successfully retest painted surfaces without knowing the exact spot which was tested. Therefore, the client may consider selecting 10 testing combinations for retesting at random from the already compiled list of all testing combinations, using the XRF device used for the original measurements, if possible. The average of the 10 repeat XRF results should not differ from the 10 original XRF results by more than the retest tolerance limit. The procedure for calculating the retest tolerance limit is specified in the PCS. If the limit is exceeded, the procedure should be repeated using 10 different testing combinations. If the retest tolerance limit is exceeded again, the original inspection is considered deficient.

Currently XRF technology and methods are not applicable to PCBs building material evaluation, as the precision is not adequate to provide a concentration that could be relied upon for this program.

2.2.3 LBP Sampling Procedures: Laboratory Testing of Paint Chips

The following sections summarize LBP evaluation procedures for XRF devices, including the description of sampling equipment, collection techniques and frequency, sample analysis, and quality assurance.

Laboratory analysis of paint chip samples is only recommended by HUD for inaccessible areas or building components with irregular (non-flat) surfaces that cannot be tested using XRF devices, for confirmation of inconclusive XRF results, or for additional confirmation of conclusive XRF results.

Unlike XRF analysis, paint chip collection techniques may be more directly applicable to potential PCBs collection techniques.

Protocol for Evaluating Priority PCBs-Containing Materials before Building Demolition

Sampling Equipment

Common hand tools can be used to scrape paint chips from a surface; specialized equipment is not necessary. However, HUD Guidelines recommend that samples should be collected in sealable rigid containers rather than plastic bags, which generate static electricity and make laboratory transfer difficult.

Collection Techniques

HUD Guidelines, which are consistent with ASTM E1729, Standard Practice for Field Collection of Dried Paint Samples for Subsequent Lead Determination, recommend that only one paint chip needs to be taken for each testing combination, although additional samples are recommended for quality control.

The paint chip sample should be taken from a representative area that is at least 4 square inches in size. The dimensions of the surface area must be accurately measured to the nearest 1/16th of an inch so that laboratory results can be reported in units of mg/cm². Paint chip collection should include collection of all the paint layers from the substrate, but collection of actual substrate should be minimized. Any amount of substrate included in the sample may cause imprecise results.

Sample Analysis

A laboratory used for LBP analysis must be recognized under EPA's National Lead Laboratory Accreditation Program (NLLAP) for the analysis of lead paint; however, States or Tribes may operate an EPA-authorized lead-based paint inspection certification program with different requirements.

There are several standard laboratory techniques to quantify lead in paint chip samples, including Atomic Absorption Spectroscopy, Inductively Coupled Plasma-Atomic Emission Spectroscopy (ICP-AES), Anodic Stripping Voltammetry, and Potentiometric Stripping Analysis.

For analytical methods that require sample digestion, samples should be pulverized so there is adequate surface area to dissolve the sample before laboratory instrument measurement. In some cases, the amount of paint collected from a 4-square-inch area may exceed the amount of paint that can be analyzed successfully. It is important that the actual sample mass analyzed not exceed the maximum mass the laboratory has successfully tested using the specified method. If subsampling is required to meet analytical method specifications, the laboratory must homogenize the paint chip sample (unless the entire sample will eventually be analyzed, and the results of the subsamples combined). Without homogenization, subsampling would likely result in biased, inaccurate lead results. If the sample is properly homogenized and substrate inclusion is negligible, the result can be reported as a loading, in milligrams per square centimeter (mg/cm²), the preferred unit, or as percent by weight, or both.

Protocol for Evaluating Priority PCBs-Containing Materials before Building Demolition

Quality Assurance

Laboratory reference materials processed with the paint chip samples for quality assurance purposes should have close to the same mass as those used for paint-chip samples (refer to ASTM methods E1645, E1613, E2051, and E1775).

Reporting

The laboratory report for analysis of paint chip samples should include at a minimum, the information outlined in the EPA National Lead Laboratory Accreditation Program Laboratory Quality System Requirements, Revision 3.0, section 5.10.2, Test Reports⁹. In addition to those minimum requirements, test reports containing the results of sampling must include specified sampling information, if available.

⁹ National Lead Laboratory Accreditation Program: Laboratory Quality System Requirements <https://www.epa.gov/sites/production/files/documents/lqsr3.pdf>, accessed September 20, 2017.

Protocol for Evaluating Priority PCBs-Containing Materials before Building Demolition

3. PCBS BUILDING MATERIAL EVALUATION PROTOCOL

This section presents the evaluation protocol for identifying building materials in structures constructed or remodeled between the years 1950 and 1980¹⁰ that may contain a significant mass of PCBs. Once identified as containing PCBs at concentrations exceeding 50 ppm, these materials should be properly managed prior to building demolition, to ensure PCBs are not discharged to the municipal storm drain system.

This protocol is not intended to address all PCBs-containing materials that may be disturbed during building demolition. Additional sampling is likely to be required to comply with EPA and Cal/OSHA regulations pertaining to the management, removal and disposal of PCBs-containing materials.

For this program, it is assumed that organizations and staff qualified to sample, test, remediate, and dispose of PCBs at the building site will coordinate processes for other hazardous building materials at the building site, to ensure proper sampling, testing, remediation, and disposal of all statutorily-required hazardous materials handling.

3.1 Priority Building Materials to be Tested

A prioritized list of PCBs-containing materials is provided in Appendix A. Building materials were evaluated based upon the following criteria:

- **Source Material** – Does the building material contain PCBs through the original product manufacturing process or was the building material contaminated (impregnated) with PCBs from an adjacent building material that already contained PCBs? For the evaluation, building materials originally manufactured with PCBs at or above 50 mg/kg were prioritized.
- **Concentration** – Building materials were evaluated based on readily available existing data regarding ranges of PCBs concentrations identified in the materials.
- **Prevalence** – A prevalence factor was assigned based upon best professional judgement of the prevalence of occurrence of the PCBs-containing materials in buildings, which ranged from highly prevalent to low prevalence.
- **Ease of Removal** – Building materials were evaluated based on their attachment to the building, which ranged from “very easily removed” to “difficult to remove,” under the assumption that higher ease of removal results in higher feasibility and lower costs for removing a material before demolition.

¹⁰ Single-family residential and wood frame structures are exempt.

Protocol for Evaluating Priority PCBs-Containing Materials before Building Demolition

- **Flaking/Crumbling** – Building materials were evaluated based on their tendency to flake or crumble during disturbance or demolition, which could lead to a higher likelihood of entering stormwater as a result of building demolition.
- **PCBs Removed by Other Waste Program** – This factor addresses materials that are removed from buildings because of other waste management programs (e.g., Universal Waste Rule). Fluorescent light ballasts¹¹, polyurethane foam furniture, and Askarel fluid used in transformers, all of which may contain PCBs, are typically managed during pre-demolition activities under current regulations and programs that require removal of universal waste and outdated transformers. For this program it is assumed that those materials will be evaluated and managed under those existing programs.

Material prioritization was conducted by assigning a score on a scale of 1 to 5 (low to high) for each criterion. The final score for each material type was calculated as the average of the scores assigned to the six criteria. The materials given the highest scores through the prioritization analysis are shown below, along with their typical locations in a building. For this evaluation, thermal insulation and fiberglass insulation were grouped together as they tend to be co-located and are typically managed together. The materials listed below (along with typical locations where they are found) are the materials that should be sampled using the protocols described in Section 3.2.

1. Caulks and Sealants:
 - a. Around windows or window frames;
 - b. Around door frames; and
 - c. Expansion joints between concrete sections (e.g., floor segments).
2. Thermal/Fiberglass Insulation and Other Insulating Materials:
 - a. Around HVAC systems,
 - b. Around heaters,
 - c. Around boilers,
 - d. Around heated transfer piping, and
 - e. Inside walls or crawls spaces.
3. Adhesive/Mastic:
 - a. Below carpet and floor tiles;

¹¹ Fluorescent light ballasts that contain PCBs are not required to be managed under the Universal Waste Rule Program but are recommended by the EPA to be identified in a pre-demolition survey of a structure and to be managed with the removal of other required wastes in the abatement process.

Protocol for Evaluating Priority PCBs-Containing Materials before Building Demolition

- b. On, under, or between roofing materials and flashing.
- 4. Rubber Window Seals/Gaskets:
 - a. Around windows or window frames.

Examples of the prioritized PCBs-containing building materials and what they may look like in a building planned for demolition are provided in Appendix B.

3.2 PCBs Sampling Procedures

Many building materials may contain PCBs. The building owner is responsible for identifying and handling all hazardous materials in accordance with all applicable laws, including all materials with 50 ppm or more PCBs. For purposes of obtaining a demolition permit, the City requires a building owner to sample the limited number of materials shown below:

- 1. Caulks and Sealants:
 - a. Around windows or window frames;
 - b. Around door frames; and
 - c. Expansion joints between concrete sections (e.g., floor segments).
- 2. Thermal/Fiberglass Insulation and Other Insulating Materials:
 - a. Around HVAC systems,
 - b. Around heaters,
 - c. Around boilers,
 - d. Around heated transfer piping, and
 - e. Inside walls or crawls spaces.
- 3. Adhesive/Mastic:
 - a. Below carpet and floor tiles;
 - b. On, under, or between roofing materials and flashing.
- 4. Rubber Window Seals/Gaskets:
 - a. Around windows or window frames.

It should be noted that some materials that are being evaluated for PCBs in this protocol may also be associated with asbestos, lead, or other hazardous substances. Since this protocol follows pre-established asbestos management program guidelines and procedures, the sampling frequency, types of building materials, and surveying techniques overlap with the PCBs survey protocol. If a

Protocol for Evaluating Priority PCBs-Containing Materials before Building Demolition

material has been determined to contain asbestos, lead or other hazardous substances and will be abated under an associated waste program, that material need not be sampled for PCBs under this program.

3.2.1 Sampling Equipment

Building materials that are planned to be collected for laboratory analysis should be placed in laboratory-supplied glass jars with Teflon-sealed lids. Samples should be collected with either factory-sealed or decontaminated equipment that will be used to remove a representative building material sample (i.e., scissors, tweezers, pliers, spoons, or putty knife).

For sampling equipment (i.e., scissors, tweezers, pliers, spoons, putty knife, etc.) that will be decontaminated, the following three bucket wash procedure should be performed, which is in general accordance with standard decontamination procedures defined in SESDPROC-205-R3 (EPA, 2015):

- In the first bucket, mix a residue free cleaning detergent (e.g., Alconox®), with distilled water to generate the recommended detergent concentration specified in the product directions;
- Fill the second bucket with distilled water;
- Fill the third bucket with distilled water;
- Clean the equipment in the first bucket with the cleaning detergent, then rinse in the second and then the third bucket. If the second bucket becomes slightly discolored during the rinse, change the contents of the second bucket with distilled water. Change the third bucket, if any dirt or material is observed in the water, since the third bucket needs to stay clean as it is the final rinse; and
- At the end of cleaning, let the equipment air dry in a clean area before use in sample collection. The rinse water should then be drummed and sampled for disposal. The planned disposal facility should be contacted to determine the required sample analysis for the rinse water characterization and profiling and that the disposal procedures comply with state and federal regulations.

If disposable sampling tools are used, the above decontamination procedures do not apply.

3.2.2 Sample Collection Frequency

For the four prioritized building materials, the following collection techniques and frequency should be followed.

Caulking

Three different types of caulking should be evaluated:

Protocol for Evaluating Priority PCBs-Containing Materials before Building Demolition

1. Window caulking;
2. Door frame caulking; and
3. Floor and expansion joint caulking.

For each type of caulking material identified, the following number of samples should be collected:

- Collect at least one sample from each homogenous area that contains less than 50 linear feet of caulking;
- Collect at least three samples from each homogenous area that contains between 50 and 250 linear feet of caulking;
- Collect at least five samples from each homogenous area that contains between 250 and 1,000 linear feet of caulking;
- Collect at least seven samples from each homogenous area that contains between 1,000 and 2,500 linear feet of caulking; and
- Collect at least nine samples from each homogenous area that contains greater than 2,500 linear feet of caulking.

If homogenous caulking material is found throughout the building, samples should be spatially distributed so as to not collect the required number of samples from one area. In addition, the width or cross-sectional area of the caulking bead is not relevant for determining the linear footage to be sampled. It is also recommended that the sampler performing the evaluation inspect the entire building prior to sample collection to insure proper distribution is performed.

Thermal/Fiberglass Insulation

For thermal/fiberglass insulation:

- Collect at least one bulk sample from each homogeneous area.

Adhesive/Mastic

For each type of adhesive/mastic material identified, the following number of samples should be collected:

- Collect at least three samples from each homogenous area less than 1,000 square feet;
- Collect at least five samples from each homogenous area between 1,000 and 5,000 square feet; and
- Collect at least seven samples from each homogenous area greater than 5,000 square feet.

If homogenous adhesive/mastic material is found throughout the building, samples should be spatially distributed so as to not collect the required number of samples from one area. It is

Protocol for Evaluating Priority PCBs-Containing Materials before Building Demolition

recommended that the sampler performing the evaluation inspect the entire building prior to sample collection to insure proper distribution is performed.

Rubber Window Seals/Gaskets

For rubber window seals/gaskets identified, the following number of samples should be collected:

- Collect at least one sample from each homogenous area that contains less than 50 linear feet of caulking (of any width or cross-sectional are of bead);
- Collect at least three samples from each homogenous area that contains between 50 and 250 linear feet of caulking;
- Collect at least five samples from each homogenous area that contains between 250 and 1,000 linear feet of caulking;
- Collect at least seven samples from each homogenous area that contains between 1,000 and 2,500 linear feet of caulking; and
- Collect at least nine samples from each homogenous area that contains greater than 2,500 linear feet of caulking.

If homogenous rubber window seals/gaskets are found throughout the building, samples should be spatially distributed so as to not collect the required number of samples from one area. It is also recommended that the sampler performing the evaluation inspect the entire building prior to sample collection to insure proper distribution is performed.

3.2.3 Sample Analysis and Preservation

Samples collected to evaluate building materials for PCBs should be analyzed for Aroclors by EPA Method 8082/8082A¹² by an accredited analytical laboratory. The minimum reporting limit should be 50 micrograms per kilogram ($\mu\text{g}/\text{kg}$) and the laboratory should be contacted before sampling to confirm minimum material volume required to meet the reporting limit objectives. A sample reporting limit of 50 $\mu\text{g}/\text{kg}$ is well below the target management level of 50 mg/kg.

Samples should immediately be chilled in an ice cooler and then kept at 4 degrees Celsius (39.2 degrees Fahrenheit) or colder during storage and transportation to the laboratory. Proper chain-of-custody¹³ procedures should be followed from the time the samples are collected until they are delivered to the laboratory for analysis. Holding times for EPA Method 8082/8082A are sample extraction within 14 days of sample collection and analysis of the extract within 40 days of

¹² Provision C.12.f. requires that Permittees develop and implement or cause to be developed and implemented an effective protocol for managing materials with PCBs concentrations of 50 ppm. EPA Method 8082/8082A is an acceptable method to quantify PCBs. Analysis of PCBs congeners is not required to meet the permit requirement.

¹³ Chain-of-custody is the procedure to document, label, store, and transfer samples to personnel and laboratories. For a detailed list of procedures, refer to the *Sample and Evidence Management, Operating Procedure* (SESDFPROC-005-R2), January 29, 2013

Protocol for Evaluating Priority PCBs-Containing Materials before Building Demolition

extraction. However, PCBs are very stable in a variety of matrices and holding times may be extended to as long as one year. Once extracted, analysis of the extract should take place within 40 days.

3.2.4 Quality Assurance and Quality Control

For this program, general quality assurance and quality control (QA/QC) procedures will be utilized. The following checklist should be used by the contractor performing the evaluation:

- QA/QC Checklist:
 - Proper specified sampling equipment was used (pre-cleaned or other, stainless steel);
 - Proper decontamination procedures were followed;
 - Sampling collection spatial frequency was met;
 - A National Environmental Laboratory Accreditation Program (NELAP) laboratory was utilized;
 - Samples were received by the laboratory within proper temperature range;
 - Samples were extracted and analyzed within the method holding time for EPA Method 8082/8082A; and
 - Sample reporting limit met data quality objectives.

3.3 Reporting and Notifications

The following considerations are applicable to reporting and notification:

- Assessment results must be submitted to the applicable Permitting Authority by the project applicant;
- Applicants that determine PCBs exist in priority building materials must follow applicable federal and state laws. This may include reporting to USEPA, the San Francisco Bay Regional Water Quality Control Board, and the California Department of Toxic Substances Control (DTSC). These agencies may require additional sampling and abatement of PCBs.
- Depending on the approach for sampling and removing building materials containing PCBs, applicants may need to notify or seek advance approval from USEPA before building demolition. Even in circumstances where advance notification to or approval from USEPA is not required before the demolition activity, the disposal of PCBs waste is regulated under TSCA.
- The disposal of PCBs waste is subject to California Code of Regulations (CCR) Title 22, Section Division 4.5, Chapter 12, Standards Applicable to Hazardous Waste Generators.

Protocol for Evaluating Priority PCBs-Containing Materials before Building Demolition

- Building owners and employers need to consider worker and public safety during work involving hazardous materials and wastes including PCBs.

For further information, applicants should refer to the *PCBs in Priority Building Materials Screening Assessment Applicant Package*, BASMAA, July 2018.

Protocol for Evaluating Priority PCBs-Containing Materials before Building Demolition

4. REFERENCES

Guidelines for Asbestos Sampling:

- <https://www.epa.gov/asbestos/asbestos-laws-and-regulations>

Guidelines for Lead-Based Paint Evaluations:

- Environmental Protection Agency (EPA) - Created the Renovation, Repair, and Painting (RRP) Rule which requires training and certification for anyone working for compensation in pre-1978 residential structures, day care centers, and schools where known or assumed lead-based paint is impacted. The EPA website with complete information on this regulation is <https://www.epa.gov/lead/renovation-repair-and-painting-program>.
- California Department of Public Health (CDPH) - Created "Title 17" which includes lead testing and abatement provisions in residential and public structures in California. Several important definitions are contained in Title 17 including Abatement, Clearance Inspection, Containment, Lead-Based Paint.
- Lead Contaminated Dust and Soil, Lead Hazard, and Lead Hazard Evaluation. Title 17 establishes that lead testing be performed using XRF equipment or by paint chip sample analysis in California. Lead test kits are not accepted. It also establishes testing in California be performed by a State certified lead inspector/assessor if the testing is related to a project involving compensation.
- Department of Housing and Urban Development (HUD) - Created the HUD Guidelines which contain protocols for lead testing and abatement.

EPA Method 8082A – Polychlorinated Biphenyls (PCBs) by Gas Chromatography

- <https://www.epa.gov/sites/production/files/2015-07/documents/8082a.pdf>

SESDPROC-205-R3, *Field Equipment Cleaning and Decontamination*, replaces SESDPROC-205-R2. December 18, 2015

- https://www.epa.gov/sites/production/files/2016-01/documents/field_equipment_cleaning_and_decontamination205_af.r3.pdf

SESDPROC-005-R2, *Sample and Evidence Management*, Operating Procedure, January 29, 2013

- <https://www.epa.gov/sites/production/files/2015-06/documents/Sample-and-Evidence-Management.pdf>

APPENDIX A

PCBs Building Material Prioritization Worksheet

Appendix A - PCBs Building Materials Prioritization

Material	Material Class	Median/Average/Single Reported Concentration (ppm)	Minimum (ppm)	Maximum (ppm)	PCBs Source Material? (Rating values: source = 5, or not source = 1)	Concentration (Rating values: 1 to 5, higher value means higher concentration)	Prevalence of PCBs Containing Material in Buildings (Rating values: high = 5, medium = 3, or low = 1)	Ease of Removal (Rating values: 1 to 5, higher value means easier to remove)	Flaking/ Crumbling (Rating values: 1 to 5, higher value means more likely to flake/crumble)	PCBs Removed by Other Waste Program? (Rating values: not removed by other = 5, or removed = 1)	Prioritization Score
Caulking (sealant, plaster)	Caulk/sealant/tape/glue		0.001	752,000	5	5	5	3	5	5	4.67
Thermal insulation	Insulation			73,000	5	5	5	4	4	5	4.67
Fiberglass insulation	Insulation			39,158	5	4	5	4	4	5	4.50
Adhesives/mastic	Caulk/sealant/tape/glue			3,100	5	3	5	3	5	5	4.33
Rubber gaskets	Gaskets/Rubber			84,000	5	5	3	3	4	5	4.17
Wool felt gaskets	Gaskets/Rubber			688,498	5	5	3	3	4	5	4.17
Cloth/paper insulating material	Insulation			12,000	5	4	3	4	4	5	4.17
Foam rubber insulation	Insulation			13,100	5	4	3	4	4	5	4.17
Ceiling tiles coated w/ flame resistant sealant	Internal nonstructural surface		53	110,000	5	5	5	3	2	5	4.17
Backer rod	Caulk/sealant/tape/glue			99,000	1	5	5	3	5	5	4.00
Roofing/siding material	External nonstructural surface		0	30,000	5	4	5	3	2	5	4.00
Paint (complete removal)	Paint/pigment/coatings		0.001	97,000	5	5	5	1	3	5	4.00
Insulating materials in electric cable	Electrical		0	280,000	5	5	3	4	1	5	3.83
Adhesive tape	Caulk/sealant/tape/glue			1,400	5	3	1	3	5	5	3.67
Surface coating	Paint/pigment/coatings			255	5	3	5	1	3	5	3.67
Coal-tar enamel coatings	Paint/pigment/coatings			1,264	5	3	5	1	3	5	3.67
Grout	Caulk/sealant/tape/glue			9,100	5	4	1	2	5	5	3.67
Cove base	Internal nonstructural surface			170	5	3	3	4	2	5	3.67
Plastics/plasticizers	Electrical			13,000	5	4	3	3	1	5	3.50
GE silicones	Caulk/sealant/tape/glue	<1.9	0	1.8	5	1	3	2	5	5	3.50
Glazing	Caulk/sealant/tape/glue	Up to 100% liquid PCBs		51	5	2	3	3	3	5	3.50
Flooring and floor wax/sealant	Internal nonstructural surface	Maximum likely >50		51	5	2	3	3	2	5	3.33
Light ballast	Light ballasts	Minimum likely <50	49	1,200,000	5	5	3	5	1	1	3.33
Anti-fouling compounds	Paint/pigment/coatings			59,000	5	4	1	1	3	5	3.17
Polyurethane foam (furniture)	Caulk/sealant/tape/glue			50	5	2	1	5	5	1	3.17
Askarel fluid/cutting oils/hydraulic fluid	Oils/dielectric fluids			450,000	5	5	1	5	2	1	3.17
Fire retardant coatings	Paint/pigment/coatings			59,000	5	4	1	1	3	5	3.17
Waterproofing compounds	Paint/pigment/coatings			59,000	5	4	1	1	3	5	3.17
Electrical wiring	Electrical			14	5	1	3	4	1	5	3.17
Concrete	Concrete/stone	2.5	0.001	17,000	1	4	3	1	4	5	3.00
Foam rubber	Gaskets/Rubber			1,092	1	3	1	3	4	5	2.83
Soil/sediment/sand	Soil/dust	0.15	0.001	581	1	3	1	2	5	5	2.83
Brick/mortar/cinder block	Concrete/stone			1,100	1	3	3	1	4	5	2.83
Wood	Wood			380	1	3	3	3	2	5	2.83
Door frame	Internal nonstructural surface			102	1	2	3	4	2	5	2.83
Metals surfaces in contact with caulk/sealant	Metal surfaces	448	51	448	1	3	1	2	4	5	2.67

Appendix A - PCBs Building Materials Prioritization

Material	Material Class	Median/Average/Single Reported Concentration (ppm)	Minimum (ppm)	Maximum (ppm)	PCBs Source Material? (Rating values: source = 5, or not source = 1)	Concentration (Rating values: 1 to 5, higher value means higher concentration)	Prevalence of PCBs Containing Material in Buildings (Rating values: high = 5, medium = 3, or low = 1)	Ease of Removal (Rating values: 1 to 5, higher value means easier to remove)	Flaking/ Crumbling (Rating values: 1 to 5, higher value means more likely to flake/crumble)	PCBs Removed by Other Waste Program? (Rating values: not removed by other = 5, or removed = 1)	Prioritization Score
Asphalt	Concrete/stone			140	1	2	1	2	4	5	2.50
Carpet	Internal nonstructural surface		0.46	9.7	1	1	1	5	2	5	2.50
Stone (granite, limestone, marble, etc.)	Concrete/stone			130	1	2	1	1	4	5	2.33
Air handling system	Air system		0.46	9.7	1	1	1	3	1	5	2.00

APPENDIX B

Priority Building Materials

Photographic Log

Appendix B

Priority Building Materials to be Tested for PCBs

Photograph 1

Window Caulking:

Damaged caulking around a window.



Photograph 2

Window Caulking:

Worn and potentially friable caulking around a window.



Appendix B

Priority Building Materials to be Tested for PCBs

Photograph 3

Door Frame Caulking:

**Damaged, friable
caulking on an interior
door frame.**



Photograph 4

**Floor and Expansion
Joint Caulking:**

**Joint compound between
flooring segments.**



Appendix B

Priority Building Materials to be Tested for PCBs

Photograph 5

Thermal Insulation:

Foam insulation material in an attic.



Photograph 6

Thermal Insulation:

Damaged floor foam insulation.



Appendix B

Priority Building Materials to be Tested for PCBs

Photograph 7

Thermal Insulation:

Damaged pipe foam insulation.



Photograph 8

Thermal Insulation:

Exposed/damaged pipe insulation.



Appendix B

Priority Building Materials to be Tested for PCBs

Photograph 9

Thermal Insulation:

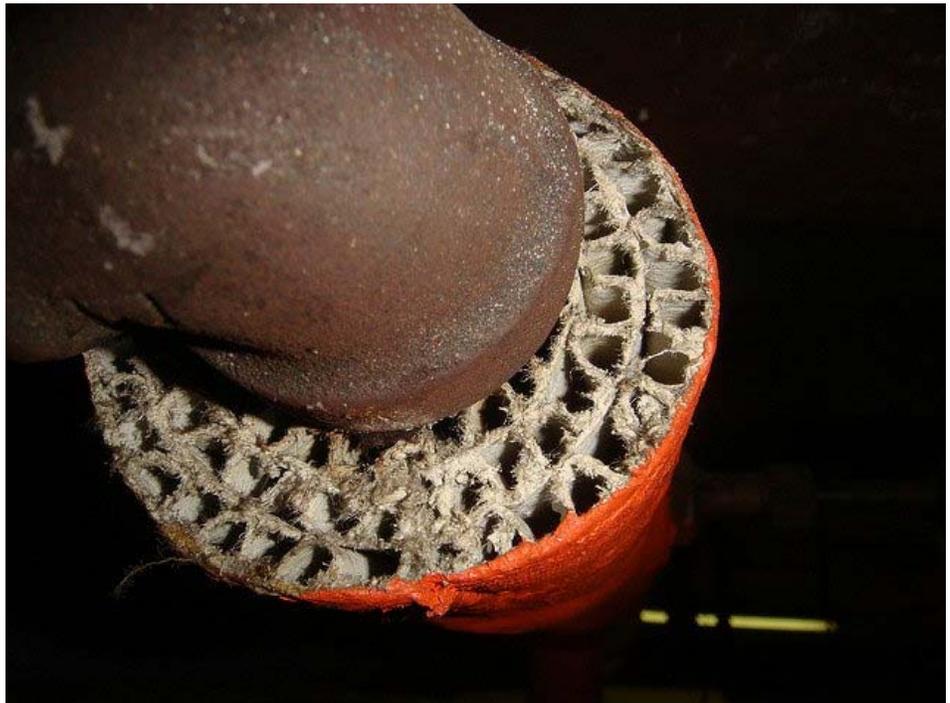
Damaged pipe insulation.



Photograph 10

Thermal Insulation:

Exposed pipe insulation.



Appendix B

Priority Building Materials to be Tested for PCBs

Photograph 11

Adhesive / Mastic:

Friable adhesive on a cement surface.



Photograph 12

Adhesive / Mastic:

Adhesive beneath a carpet.



Appendix B

Priority Building Materials to be Tested for PCBs

Photograph 13

Adhesive / Mastic:

Adhesive remnants on flooring.



Photograph 14

Adhesive / Mastic:

Exposed adhesive on roofing.



Appendix B

Priority Building Materials to be Tested for PCBs

Photograph 15

**Rubber Window
Seal/Gasket:**

Grey rubber window seal/gasket in a wood type frame.



Photograph 16

**Rubber Window
Seal/Gasket:**

Off white rubber window seal/gasket in an aluminum type frame.



Model Ordinance

MANAGEMENT OF PCBs DURING BUILDING DEMOLITION PROJECTS

- Section 1. Purpose**
- Section 2. Definitions**
- Section 3. Applicability**
- Section 4. Exemptions**
- Section 5. PCBs in Priority Building Materials Screening Assessment**
- Section 6. Agency Notification, Abatement, and Disposal for Identified PCBs**
- Section 7. Compliance with California and Federal PCBs Laws and Regulations**
- Section 8. Information Submission and Applicant Certification**
- Section 9. Recordkeeping**
- Section 10. Obligation to Notify [insert name of municipality] of Changes**
- Section 11. Liability**
- Section 12. Enforcement**
- Section 13. Fees**
- Section 14. [City or County] Projects**
- Section 15. Effective Date**

Section 1. Purpose

(a) The provisions of this Article shall be construed to accomplish the following purposes:

1. Require building demolition permit applicants (Applicants) to conduct a PCBs in Priority Building Materials Screening Assessment and submit information documenting the results of the screening. Such documentation to include (1) the results of a determination whether the building proposed for demolition is high priority for PCBs-containing building materials based on the structure age, use, and construction, and (2) the concentration of PCBs in each Priority Building Material present and, (3) for each Priority Building Material present with a PCBs concentration equal to or greater than 50 ppm, the approximate amount (linear feet or square feet) of that material in the building.
2. Inform Applicants with PCBs present in one or more of the Priority Building Materials (based on the above screening assessment) that they must comply with all related applicable federal and state laws. This may include reporting to the U.S. Environmental Protection Agency (EPA), the San Francisco Bay Regional Water Quality Control Board (Regional Water Board), and/or the California Department of Toxic Substances Control (DTSC). Additional sampling for and abatement of PCBs may be required.

3. Meet the requirements of the Federal Clean Water Act, the California Porter-Cologne Water Quality Control Act, and the Municipal Regional Stormwater Permit Order No. R2-2015-0049.
- (b) The requirements of this ordinance do not replace or supplant the requirements of California or Federal law, including but not limited to the Toxic Substances Control Act, 40 Code of Federal Regulations (CFR) Part 761, and California Code of Regulations (CCR) Title 22.

Section 2. Definitions

In addition to the general definitions applicable to this Code, whenever used in this Article, the following terms shall have the meanings set forth below:

- (a) “Applicable Structure” means buildings constructed or remodeled from January 1, 1950 to December 31, 1980. Remodeling, partial building, wood framed structure, and single-family residence demolition projects are exempt.
- (b) “Applicant” means a person applying for a building demolition permit as required by Article [insert applicable article], Sections [insert applicable code for building demolition permits].
- (c) “[Appropriate Authority]” means the [insert name of Appropriate Authority] of [insert name of municipality].
- (d) “Building” means a structure with a roof and walls standing more or less permanently in one place. Buildings are intended for human habitation or occupancy.
- (e) “Demolition” means the wrecking, razing, or tearing down of any structure. This definition is intended to be consistent with the demolition activities undertaken by contractors with a C-21 Building Moving/Demolition Contractor’s License.
- (f) “DTSC” means the State of California Department of Toxic Substances Control.
- (g) “EPA” means The United States Environmental Protection Agency.
- (h) “PCBs” means polychlorinated biphenyls.
- (i) “PCBs in Priority Building Materials Screening Assessment” means the two-step process used to 1) determine whether the building proposed for demolition is high priority for PCBs-containing building materials based on the structure age, use, and construction; and if so 2) determine the concentrations (if any) of PCBs in Priority Building Materials revealed through existing information or representative sampling and chemical analysis of the Priority Building Materials in the building. Directions for this process are provided in the PCBs in the Priority Building Materials Screening Assessment Applicant Package.
- (j) “Priority Building Materials” means the following:
 - a. Caulking: e.g., around windows and doors, at structure/walkway interfaces, and in expansion joints;
 - b. Thermal/Fiberglass Insulation: e.g., around HVAC systems, around heaters, around boilers, around heated transfer piping, and inside walls or crawls spaces;
 - c. Adhesive/Mastic: e.g., below carpet and floor tiles, under roofing materials, and under flashing; and

- d. Rubber Window Gaskets: e.g., used in lieu of caulking to seal around windows in steel-framed buildings.
- (k) “Priority Building Materials Screening Assessment Applicant Package” (Applicant Package) means a document package that includes an overview of the screening process, Applicant instructions, a process flow chart, a screening assessment form, and the *Protocol for Evaluating Priority PCBs-Containing Materials before Building Demolition* (BASMAA 2018, prepared for the Bay Area Stormwater Management Agencies Association, August 2018).
- (l) “Regional Water Board” means the California Regional Water Quality Control Board, San Francisco Bay Region.
- (m) “Remodel” means to make significant finish and/or structural changes that increase utility and appeal through complete replacement and/or expansion. A removed area reflects fundamental changes that include multiple alterations. These alterations may include some or all of the following: replacement of a major component (cabinet(s), bathtub, or bathroom tile), relocation of plumbing/gas fixtures/appliances, significant structural alterations (relocating walls, and/or the addition of square footage).

Section 3. Applicability

This Article applies to Applicants for buildings constructed or remodeled from January 1, 1950 to December 31, 1980.

Section 4. Exemptions

Applications for remodeling, partial building, wood framed structure, and single-family residence demolition projects are exempt.

Section 5. PCBs in Priority Building Materials Screening Assessment

Every Applicant for a building demolition permit shall conduct a PCBs in Priority Building Materials Screening Assessment, a two-step process used to

1. determine whether the building proposed for demolition is high priority for PCBs-containing building materials based on the structure age, use, and construction (i.e., whether the building is an *Applicable Structure*); and if so
2. demonstrate the presence or absence and concentration of PCBs in Priority Building Materials through existing information or representative sampling and chemical analysis of the Priority Building Materials in the building.

Applicants shall follow the directions provided in the PCBs in Priority Building Materials Screening Assessment Applicant Package (Applicant Package), which includes an overview of the process, Applicant instructions, a process flow chart, a screening assessment form, and the *Protocol for Assessing Priority PCBs-Containing Materials before Building Demolition*. Per the Applicant Package, for certain types of buildings built within a specified date range, the Applicant must conduct further assessment to determine whether or not PCBs are present at concentrations ≥ 50 ppm. This determination is made via existing data on specific product formulations (if available), or more likely, via conducting representative sampling of the priority building materials and analyzing the samples for PCBs at a certified analytical laboratory. Any representative sampling and analysis must be conducted in accordance with the *Protocol for*

Assessing Priority PCBs-Containing Materials before Building Demolition. The Applicant Package provides additional details.

Section 6. Agency Notification, Abatement, and Disposal for Identified PCBs

When the PCBs in Priority Building Materials Screening Assessment identifies one or more Priority Building Materials with PCBs, the Applicant must comply with all related applicable federal and state laws, including potential notification of the appropriate regulatory agencies, including EPA, the Regional Water Board, and/or the DTSC. Agency contacts are provided in the Applicant Package. Additional sampling for and abatement of PCBs may be required. Depending on the approach for sampling and removing building materials containing PCBs, the Applicant may need to notify or seek advance approval from USEPA before building demolition. Even in circumstances where advance notification to or approval from USEPA is not required before the demolition activity, the disposal of PCBs waste is regulated under Toxic Substances Control Act (TSCA). Additionally, the disposal of PCBs waste is subject to California Code of Regulations (CCR) Title 22 Section 66262. Additional information is provided in the Applicant Package.

Section 7. Compliance with California and Federal PCBs Laws and Regulations

Applicants must comply with all Federal and California laws and regulations, including but not limited to health, safety, and environmental laws and regulations, that relate to management and cleanup of any and all PCBs, including but not limited to PCBs in Priority Building Materials, other PCBs-contaminated materials, PCBs-contaminated liquids, and PCBs waste.

Section 8. Information Submission and Applicant Certification

- (a) The Applicant shall conduct a PCBs in Priority Building Materials Screening Assessment and submit the associated information and results as part of the building demolition permit application, including the following (see Applicant Package for more details):
1. Owner and project information, including location, year building was built, description of building construction type, and anticipated demolition date.
 2. Determination of whether the building proposed for demolition is high priority for PCBs-containing building materials based on the structure age, use, and construction.
 3. If high priority for PCBs-containing building materials based on the structure age, use, and construction, the concentration of PCBs in each Priority Building Material present. If PCBs concentrations are determined via representative sampling and analysis, include a contractor's report documenting the assessment which includes the completed QA/QC checklist from the *Protocol for Assessing Priority PCBs-Containing Materials before Building Demolition* and the analytical laboratory reports.
 4. For each Priority Building Material present with a PCBs concentration equal to or greater than 50 ppm, the approximate amount (linear feet or square feet) of that material in the building (see Applicant Package for more details).
 5. Applicant's certification of the accuracy of the information submitted.

- (b) The [Director of Public Works, Community Development, or Environmental Services, or other Appropriate Authority] may specify a format or guidance for the submission of the information.

Section 9. Recordkeeping

Those Applicants conducting a building demolition project must maintain documentation of the results of the PCBs in Priority Building Materials Screening Assessment for a minimum of five years after submittal.

Section 10. Obligation to Notify [insert name of municipality] of Changes

The Applicant shall submit written notifications documenting any changes in the information submitted in compliance with this Article.

The Applicant shall submit the revised information to [insert name of Appropriate Authority] when changes in project conditions affect the information submitted with the permit application.

Section 11. Liability

The Applicant is responsible for safely and legally complying with the requirements of this Article. Neither the issuance of a permit under the requirements of [insert Building Ordinance Section], nor the compliance with the requirements of this Article or with any condition imposed by the issuing authority, shall relieve any person from responsibility for damage to persons or property resulting there from, or as otherwise imposed by law, nor impose any liability upon the [insert name of municipality] for damages to persons or property.

Section 12. Enforcement

Failure to submit the information required in this Article or submittal of false information will result in enforcement under [insert appropriate code].

Section 13. Fees

In addition to the fees required under Article [insert applicable article], Sections [insert applicable code for building demolition permits], all Applicants subject to this Article shall deposit funds with the [Insert name of municipality], pay a fee of [insert amount, refer to master fee schedule or insert “sufficient to reimburse {insert name of municipality’s} costs for staff time required to implement this Article (i.e., to compensate specifically for municipal staff time related to implementing a new program to manage PCBs—containing building materials during demolition in compliance with MRP Provision C.12.f., and not for any other purpose)”].

Section 14. [City or County] Projects

[City or County] departments shall comply with all the requirements of this Article except they shall not be required to obtain permits and approvals under this Article for work performed within a [City or County] owned properties and areas, such as right-of-ways.

Section 15. Effective Date

This ordinance shall become effective on July 1, 2019 [or earlier date].



CITY OF HAYWARD

Hayward City Hall
777 B Street
Hayward, CA 94541
www.Hayward-CA.gov

File #: ACT 19-105

DATE: March 11, 2019

TO: Council Sustainability Committee

FROM: Director of Utilities & Environmental Services

SUBJECT

Draft Ordinance for the Reduction of Single-Use Food Service Ware

RECOMMENDATION

That the Committee reviews and comments on this report and recommends to Council adoption of an ordinance amending Chapter 5, Article 11 of the Hayward Municipal Code "Polystyrene Foam Disposable Food Service Ware Prohibited; Recyclable or Compostable Food Service Ware Required," renaming the Article as "Disposable Food Service Ware," and additionally establishing procedures and prohibitions to limit the distribution of certain single-use food service ware to customers of food vendors.

SUMMARY

Staff presented a report on plastic straws and utensils to the Committee in March 2018, and an additional report on September 24, 2018 that provided an update on regulations adopted by other cities and the State of California as well as options for possible action in Hayward. This report provides a draft ordinance (see Attachment II) that intends to reduce the amount of solid waste and litter generated from disposable food service ware in Hayward.

Improperly managed disposable food service ware often becomes litter in Hayward. The material degrades slowly, pollutes the land and water, and can harm wildlife. Offering single-use items only upon request and promoting reusable food service ware can reduce the prevalence of litter from food service ware in Hayward.

ATTACHMENTS

Attachment I Staff Report



DATE: March 11, 2019

TO: Council Sustainability Committee

FROM: Director of Utilities & Environmental Services

SUBJECT: Draft Ordinance for the Reduction of Single-Use Food Service Ware

RECOMMENDATION

That the Committee reviews and comments on this report and recommends to Council adoption of an ordinance amending Chapter 5, Article 11 of the Hayward Municipal Code “Polystyrene Foam Disposable Food Service Ware Prohibited; Recyclable or Compostable Food Service Ware Required,” renaming the Article as “Disposable Food Service Ware,” and additionally establishing procedures and prohibitions to limit the distribution of certain single-use food service ware to customers of food vendors.

SUMMARY

Staff presented a report on plastic straws and utensils to the Committee in March 2018, and an additional report on September 24, 2018 that provided an update on regulations adopted by other cities and the State of California as well as options for possible action in Hayward. This report provides a draft ordinance (see Attachment II) that intends to reduce the amount of solid waste and litter generated from disposable food service ware in Hayward.

Improperly managed disposable food service ware often becomes litter in Hayward. The material degrades slowly, pollutes the land and water, and can harm wildlife. Offering single-use items only upon request and promoting reusable food service ware can reduce the prevalence of litter from food service ware in Hayward.

BACKGROUND

To address the issue of plastic pollution in Hayward, in July of 2011, Council enacted a ban on the use of polystyrene packaging for take-out food, adopting Chapter 5, Article 11 of the Hayward Municipal Code “Polystyrene Foam Disposable Food Service Ware Prohibited; Recyclable or Compostable Food Service Ware Required.”

At the March 12, 2018, Council Sustainability Committee meeting¹, the Committee recommended that the Mayor send a letter of support for Assembly Bill 1884 (AB1884) to Assembly member Calderon's office and the Mayor did so. The Governor signed AB1884 into law, and it took effect January 1, 2019. The law requires dine-in restaurants to offer straws only upon request from customers and is enforced by county health inspectors as part of their routine inspections. Also, at the March 2018 meeting, the Committee expressed a desire for the City to move forward with its own ordinance to address the issue of pollution from single-use plastic straws and utensils unless StopWaste moved forward with a County-wide ordinance banning single-use plastics.

On September 24, 2018², the Committee expressed support for an ordinance that would allow the distribution of single-use plastics food ware only upon request. The Committee again encouraged staff to work with StopWaste to develop a county-wide ordinance.

On December 19, 2018, the StopWaste Board adopted their priorities for the next two years, which did not include the development of a county-wide ordinance addressing straws and related items.

On February 5, 2019³, when Council approved new garbage rates and considered the challenges associated with today's recycling markets, some Council members expressed a desire to limit single-use products in Hayward restaurants.

Plastic straws, stirrers, and utensils are of little economic value to recyclers, and because of their small size, when these items are captured for recycling, they often fall through the recycling equipment commonly used at material recovery facilities and get mixed in with landfill debris. Disposable food ware not properly managed often ends up as litter, polluting the environment. The California Coastal Commission has collected more than 835,000 drinking straws during coastal clean-ups between 1988-2014. Like single-use plastic bags, these items are used for a matter of minutes, but remain in the environment for many years.

DISCUSSION

Several West Coast jurisdictions have taken various approaches to adopting regulations to reduce pollution from plastic straws and other single-use disposable food ware. Local cities that have adopted ordinances restricting the use of disposable food ware include: Alameda, Oakland, Richmond, Berkeley and San Francisco. Some cities simply require restaurants and businesses to offer certain single-use items only upon request from customers. These on-request requirements often exclude drive through service. Other jurisdictions have enacted bans on the sale or distribution of plastic straws and utensils. Some jurisdictions, like San

¹ <https://hayward.legistar.com/LegislationDetail.aspx?ID=3373001&GUID=09BC7D6F-B510-48FE-B23D-ADB462977C7E&Options=&Search=>

² <https://hayward.legistar.com/LegislationDetail.aspx?ID=3683331&GUID=D38BDD40-113E-4D0B-8F3F-737FCBA7FF3C&Options=&Search=>

³ <https://hayward.legistar.com/LegislationDetail.aspx?ID=3851986&GUID=B1CDF3A5-3C19-45D3-8212-6D1FAF65D82E>

Francisco, require food ware accessory items such as, sleeves, lids, stirrers, beverage plugs, utensils, condiment packets and napkins also be plastic-free and may be provided only upon request or by self-serve. In January the City of Berkeley adopted an ordinance banning all disposable food ware. More information about Berkeley's ordinance is available on their website⁴.

Jurisdictions enacting bans on single-use plastics, including straws and utensils, have encountered some challenges implementing the ordinances. These include meeting the needs of community members with disabilities, the increased cost of alternative products, and the availability of alternative products. Advocates for the disabled community say that straws are needed by some people who do not have full use of their arms or hands, experience a lack of jaw control, or have other medical conditions. A complete ban of plastic straws and utensils can negatively affect members of the community with disabilities. Offering disposable food ware accessory items by request can reduce litter, help local businesses avoid cost and availability challenges, and provide items to those who need them.

Some jurisdictions enacting bans on single-use plastics require food vendors to use compostable products. However, many products marketed as "compostable" or "biodegradable," including those certified by the Biodegradable Products Institute (BPI), don't degrade in a reasonable amount of time during composting at typical local commercial compost facilities. These items often get screened out as residue. BPI will release updated standards for certification in 2020, and staff anticipates that proven compostable products will become more widely available in the next few years.

The proposed ordinance would implement a "by request only" policy that would help to address waste and litter issues in Hayward. Items defined as "disposable food ware accessory" items such as straws, utensils, sleeves, lids, stirrers, beverage plugs, utensils would only be offered by food vendors, including both dine-in and take-out establishments, upon request from customers. The ordinance would allow restaurants to offer these items at self-service beverage stations and drive through service would be exempt from the requirement.

FISCAL/ECONOMIC IMPACTS

Requiring restaurants to only offer disposable food ware accessory items on request would not have a significant fiscal impact to customers or businesses. Businesses might save money if fewer disposables are provided to customers. Also, enacting some level of enforcement would require staff time.

STRATEGIC INITIATIVES

This agenda item supports steps toward a more sustainable community, however, it does not relate directly to any of the Strategic Initiatives.

⁴ See Item 27 at https://www.cityofberkeley.info/Clerk/City_Council/2018/12_Dec/City_Council_12-11-2018_-_Regular_Meeting_Agenda.aspx

SUSTAINABILITY FEATURES

Solid waste management involves the safe and responsible management of discarded material from generation through processing to disposal. Reducing waste landfilled by maximizing the reuse, recycling, and composting of materials increases diversion, conserves natural resources, and plays an important role in making a community sustainable. Reducing the amount of hard-to-manage solid waste also reduces the opportunity for material to enter waterways and the Bay.

NEXT STEPS

Upon direction of the Committee, City staff will present the attached draft ordinance to Council to reduce the use of plastic food accessories in Hayward food service establishments.

Prepared by: Jeff Krump, Solid Waste Program Manager

Recommended by: Alex Ameri, Director of Utilities & Environmental Services

Approved by:

A handwritten signature in black ink, appearing to read 'K. McAdoo', is written over a horizontal line.

Kelly McAdoo, City Manager



CITY OF HAYWARD

Hayward City Hall
777 B Street
Hayward, CA 94541
www.Hayward-CA.gov

File #: ACT 19-103

DATE: March 11, 2019

TO: Council Sustainability Committee

FROM: Director of Utilities and Environmental Services

SUBJECT

Participation in the 8th Annual Wyland National Mayor's Challenge for Water Conservation

RECOMMENDATION

That the Committee reviews and comments on this information report.

SUMMARY

The annual Wyland National Mayor's Challenge for Water Conservation (Challenge) is a campaign run by the Wyland Foundation to promote environmental consciousness by asking Cities and Mayors to encourage residents to make online pledges during the month of April to use water more efficiently, reduce pollution, and save energy. This report provides an overview of staff's proposed efforts for the City to participate in the Challenge in 2019.

ATTACHMENTS

Attachment I Staff Report



DATE: March 11, 2019

TO: Council Sustainability Committee

FROM: Director of Utilities & Environmental Services

SUBJECT: Participation in the 8th Annual Wyland National Mayor's Challenge for Water Conservation

RECOMMENDATION

That the Committee reviews and comments on this information report.

SUMMARY

The annual Wyland National Mayor's Challenge for Water Conservation (Challenge) is a campaign run by the Wyland Foundation to promote environmental consciousness by asking Cities and Mayors to encourage residents to make online pledges during the month of April to use water more efficiently, reduce pollution, and save energy. This report provides an overview of staff's proposed efforts for the City to participate in the Challenge in 2019.

BACKGROUND

The annual Wyland National Mayor's Challenge for Water Conservation (Challenge) is a campaign run by the Wyland Foundation to promote environmental consciousness by asking Cities and Mayors to encourage residents to make online pledges during the month of April to use water more efficiently, reduce pollution, and save energy. This year will be the Wyland Foundation's eighth year holding the Challenge. Last year, residents from more than 3,800 cities across the United States pledged to reduce their annual consumption of freshwater by 3 billion gallons, reduce waste sent to landfills by 79.9 million pounds, and prevent more than 177,000 pounds of hazardous waste from entering watersheds. Bay Area cities that have formally participated in the past include Alameda, Cupertino, East Palo Alto, Mountain View, Napa, Oakland, Palo Alto, Petaluma, Redwood City, San Francisco, San Jose, San Leandro, South San Francisco, and Union City.

All prizes are provided by the Wyland Foundation. Participating residents of cities with the highest percentage of pledge makers in their population category are entered into drawings for hundreds of eco-friendly prizes, including home improvement gift cards, home irrigation equipment, and the Grand Prize, which is a \$5,000 Home Utility Bill Payment. The population

categories include: 5,000-29,999, 30,000-99,999, 100,000-299,999, 300,000-599,999, and 600,000+.

DISCUSSION

The requirements for participating in the Challenge include a statement from the Mayor expressing the City's support for water conservation, energy efficiency, and pollution reduction, as well as a commitment to promote the Challenge to Hayward residents, needs to be submitted to the Wyland Foundation to formally participate. After the Mayor's statement is submitted, staff will work with the Community and Media Relations office to promote the Challenge on social media platforms, as well as in our departmental newsletter, The Leaflet, which is distributed to approximately 3,400 email subscribers, and the City's official newsletter, The Stack, which is sent to approximately 49,000 email subscribers. The Challenge will also be promoted on the City's website with links to the various efficiency programs offered by the City.

Pledges can be made at www.MyWaterPledge.com and are split into four categories, including: Home, Daily Life, Yard, and Community. There are four to five pledge opportunities in each of these areas. Below are examples of pledges participants can make in each category:

I pledge to make the following choices at home:

- Shorten showers, use low-flow devices, and turn off the tap

I pledge to make the following choices in my daily life:

- Say nope to plastic straws

I pledge to make the following choices in my yard:

- Turn off sprinklers when it rains

I pledge to make the following choices for my community:

- Recycle clean paper, cardboard, aluminum, and glass

ECONOMIC IMPACT

Conserving water and energy directly result in lower utility bills.

FISCAL IMPACT

Participation in the Challenge will have no fiscal impact on the City. All prizes offered are provided by the Wyland Foundation. The staff time needed to promote the Challenge is expected to be minimal.

STRATEGIC INITIATIVES

This agenda item does not directly relate to one of Council's Strategic Initiatives.

SUSTAINABILITY FEATURES

Encouraging water conservation, energy consciousness, and pollution prevention throughout the community will improve the reliability of the City's water supplies, reduce our community's carbon footprint, and help mitigate the contamination of local ecosystems.

While the actual per-capita reduction in water consumption or waste disposal may be small, the more significant aspect of the Challenge is the fact that the participants get engaged in the conversation about the importance of resource conservation and reducing waste.

PUBLIC CONTACT

Staff plans to raise awareness of the Challenge and encourage residents to participate via social media, email newsletters, and other online platforms.

NEXT STEPS

Based on the Committee's comments, staff plans to proceed with the steps needed for Hayward to formally participate in the annual Wyland National Mayor's Challenge for Water Conservation in 2019.

Prepared by: Kait Byrne, Management Analyst

Recommended by: Alex Ameri, Director of Utilities & Environmental Services

Approved by:



Kelly McAdoo, City Manager



CITY OF HAYWARD

Hayward City Hall
777 B Street
Hayward, CA 94541
www.Hayward-CA.gov

File #: RPT 19-233

DATE: March 11, 2019

TO: Council Sustainability Committee

FROM: Director of Utilities & Environmental Services

SUBJECT

East Bay Community Energy Update

RECOMMENDATION

That the Committee reviews and comments on this informational report.

SUMMARY

Staff will present an update prepared by East Bay Community Energy (EBCE) on enrollment, customer engagement, and plans for local development activities.

ATTACHMENTS

Attachment I Staff Report



DATE: March 11, 2019
TO: Council Sustainability Committee
FROM: Director of Utilities & Environmental Services
SUBJECT: East Bay Community Energy Update

RECOMMENDATION

That the Committee reviews and comments on this informational report.

SUMMARY

Staff will present an update prepared by East Bay Community Energy (EBCE) on enrollment, customer engagement, and plans for local development activities.

BACKGROUND

EBCE formed in 2016 as a joint powers authority to provide cleaner, greener energy at lower rates to Alameda County customers. EBCE started providing electricity to commercial and municipal accounts in June 2018 and to residential customers in November 2018. Information about EBCE is available on their website¹. Staff has provided many reports about EBCE to the Committee and Council, all of which are available on the City's website². The most recent report to the Committee, on November 26, 2018, was about the priorities for EBCE's Local Development Business Plan (LDBP), which provides a framework for accelerating the development of clean energy assets within Alameda County while providing for local economic benefits. The Committee asked that EBCE's efforts align with priorities in the following order: (1) GHG Reductions; (2) Maintain Relative Rate Parity with PG&E; (3) Build Local Projects; and (4) Create Local Jobs.

DISCUSSION

During the meeting, staff will share a presentation that has been provided by EBCE. It will cover:

- Enrollment (opt-outs, opt-ups by city, product and sector)
- Customer Engagement

¹ <https://ebce.org/>

² <https://www.hayward-ca.gov/cce>

- Local Development Activities proposed for 2019 and 2020.

ECONOMIC IMPACT

Early implementation of the LDBP is likely to have limited impact on the local economy, but full implementation of the LDBP is expected to create approximately 3,000 direct jobs over the next eight years.

STRATEGIC INITIATIVES

This agenda item does not directly relate to one of Council's three Strategic Initiatives.

FISCAL IMPACT

EBCE's implementation of the LDBP will not have a significant impact on the City's General Fund.

SUSTAINABILITY FEATURES

Community choice energy was identified in the City's Climate Action Plan as the program with the greatest potential to reduce community-wide GHG emissions. It is possible that EBCE will enable Hayward to meet its goal to reduce emissions by 20% by 2020. Full implementation of the LDBP is expected to result in the development of approximately 400 megawatts of new renewable energy facilities by 2025, which would result in significant further reductions in GHG emissions.

NEXT STEPS

Staff will continue to partner with EBCE on customer engagement and implementation of the LDBP.

Prepared by: Erik Pearson, Environmental Services Manager

Recommended by: Alex Ameri, Director of Utilities & Environmental Services

Approved by:



Kelly McAdoo, City Manager



CITY OF HAYWARD

Hayward City Hall
777 B Street
Hayward, CA 94541
www.Hayward-CA.gov

File #: ACT 19-106

DATE: March 11, 2019

TO: Council Sustainability Committee

FROM: Director of Utilities & Environmental Services

SUBJECT

Proposed 2019 Agenda Planning Calendar

RECOMMENDATION

That the Committee reviews and comments on this report.

SUMMARY

The Council Sustainability Committee reviews the attached proposed 2019 Agenda Planning Calendar at each Sustainability Committee meeting for any modifications.

ATTACHMENTS

Attachment I Agenda Planning Calendar



DATE: March 11, 2019

TO: Council Sustainability Committee

FROM: Director of Utilities & Environmental Services

SUBJECT: Proposed 2019 Agenda Planning Calendar

RECOMMENDATION

That the Committee reviews and comments on this report.

SUMMARY

The Council Sustainability Committee reviews the attached proposed 2019 Agenda Planning Calendar at each Sustainability Committee meeting for any modifications.

DISCUSSION

For the Committee’s consideration, staff suggests the following tentative agenda topics for 2019.

May 13, 2019
Pay-As-You-Save (PAYS) Program
Long Term Water Conservation Framework (Moved to unscheduled. Likely Nov.)
Draft Green Infrastructure Plan
Reach Code to Encourage Building Electrification
July 8, 2019
Standard Conditions of Approval for New Development
Annual Update on City’s Waste Reduction and Recycling Programs
Litter Reduction – Consideration of Alternatives
Draft Reach Code to Encourage Building Electrification
Unscheduled Items
City Tree Inventory & Urban Forest
Long Term Water Conservation Framework
Illegal Dumping (The What Works Cities project will focus on data management.)
Greenhouse Gas Inventory Update
Sustainable Groundwater Plan

Multifamily Building Energy Efficiency (update on CEC grant-funded work by StopWaste)

NEXT STEPS

Upon direction from the Committee, staff will revise the above list and schedule items accordingly for 2019.

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Approved by:



Kelly McAdoo, City Manager