

CALIFORNIA OCEAN PROTECTION COUNCIL

Staff Recommendation

April 23, 2009

**A Master Environmental Assessment (MEA) on
Single-use (Plastic and Paper) and Reusable Bags**

File No.: 09-012

Project Manager: Doug George

RECOMMENDED ACTION: Authorize the disbursement of up to \$60,000 to complete a Master Environmental Assessment (MEA) to assess impacts related to regulation of single-use (plastic and paper) and reusable bags.

LOCATION: Statewide

STRATEGIC PLAN OBJECTIVE: Ocean and Coastal Water Quality

EXHIBITS

Exhibit 1: [Ordinances Regarding Plastic Bag Bans from the Cities of Oakland and Manhattan Beach](#)

Exhibit 2: [Letters of Support](#)

RESOLUTION AND FINDINGS:

Staff recommends that the Ocean Protection Council adopt the following resolution pursuant to Sections 35500 *et seq.* of the Public Resources Code:

“The Ocean Protection Council hereby approves the disbursement of \$60,000 to complete a Master Environmental Assessment (MEA) to assess impacts related to regulation of single-use (plastic and paper) and reusable bags.”

Staff further recommends that the Council adopt the following findings:

“Based on the accompanying staff report and attached exhibits, the Council hereby finds that:

1. The proposed project is consistent with the purposes of Division 26.5 of the Public Resources Code, the Ocean Protection Act.
2. The proposed project is consistent with the Ocean Protection Council's grant program funding guidelines.”

PROJECT SUMMARY:

In an effort to reduce marine debris, many local jurisdictions in California are proposing ordinances to ban or impose fees on single-use bags that often end up in the ocean as a result of improper disposal. As a part of complying with the California Environmental Quality Act (CEQA), when adopting these new ordinances, cities and counties need to examine the environmental impacts associated with the regulation of single-use bags, both paper and plastic. Certain life-cycle analysis (LCA) studies have concluded that while plastic bags are more damaging to the marine environment than paper bags, paper production may also have a significant adverse impact related to greenhouse gas emissions and waste streams. Yet, paper versus plastic is not the only trade-off available; another alternative is to encourage use of reusable bags made from fibers, such as canvas or jute, and impose bans or fees on single-use bags. Currently, no comparative analysis of the range of possible solutions and their associated impacts exists.

The proposed project would fund a Master Environmental Assessment (MEA) that would serve as a foundational analysis of the environmental impacts of the different bag options. CEQA requires all public agencies (local and state) to analyze and consider the environmental impacts of agency actions. Where a fair argument can be made that an action could have a significant impact on the environment, an Environmental Impact Report (EIR) must be prepared. Under CEQA, MEAs can be used to streamline the environmental review process. With an MEA, multiple jurisdictions can rely on the same analysis of similar policies with similar impacts, and thereby avoid duplication of effort and costs. Once complete, the MEA can be used by local agencies to inform decision-making and be incorporated by reference into individual jurisdiction-specific environmental documents. The MEA would include a literature review of available studies and would examine the relative impacts of plastic, paper, and reusable bags and the indirect environmental impacts of imposing fees and bans on single-use bags. The MEA would be a comprehensive analysis that could be used by all California cities and counties considering bans and fees, and would serve to speed each EIR process, thereby providing statewide cost savings. In addition, the MEA would address information gaps identified by the OPC and could inform state legislators and regulators considering restrictions or fees on single-use bags.

PROJECT DESCRIPTION:

Project Background:

The OPC has repeatedly drawn attention to the impacts from marine debris in marine ecosystems and has identified single-use disposable bags as one source of the problem. One challenge to imposing a prohibition or fee solely on single-use plastic bags is the likely increase of paper products as a replacement. Comparisons of product life-cycles for plastic versus paper provide conflicting results regarding the environmental impacts. In a 1990 Franklin Associates study, plastic bags were found to use 23 percent less energy, produce 76 percent less solid waste, contribute 57 percent less air emissions and 97 percent less water emissions than paper bags. This contrasts starkly with a 2000 Chalmers Industriteknik study that found paper uses 80 percent less energy, contributes 52 percent less to air emissions, and 29 percent less to water emissions. The second study also found that paper had less of an impact on acidification of waterways and toxicity in the aquatic environment. Yet, paper bag production can also have

negative impacts on the ocean by increased sediment loads in rivers from logging of trees in coastal watersheds to provide the raw materials for paper production. A shift toward reusable bags made from a variety of materials, such as jute and canvas, may ultimately be the solution. However, studies discussing the impacts of producing and using reusable bags remain elusive and a comprehensive review of all studies to assess the trade-offs between the different alternatives does not exist.

The OPC *Implementation Strategy to Prevent and Reduce Ocean Litter*, adopted at the November 2008 OPC meeting, identified the option of prohibiting single-use products that pose harmful threats to the marine environment as Priority Action #2. The strategy calls for a fee to be placed on single-use plastic and paper bags to encourage a shift toward reusable bags. Information gaps related to single-use bags were identified during the preparation of the OPC Implementation Strategy. A comprehensive assessment of all LCA and debris impact studies would address these information gaps and allow the OPC to coordinate and share data with decision-makers at state, regional, and local levels.

Coastal communities in particular face the challenge of how to address the problems created by marine debris. As a result, many coastal communities are proposing ordinances banning or imposing a fee on single-use bags. In the past two years, the Cities of Oakland and Manhattan Beach have attempted to impose new ordinances regarding single-use bags (Exhibit 1); Exhibit 2 includes letters from more than 30 other cities and counties interested in pursuing similar action.

Due to the conflicting, or sometimes absent, data regarding the impacts of paper and plastic bags, several recent court decisions have required local jurisdictions to complete an EIR prior to adoption of ordinances to ban or impose fees on single-use plastic bags. The courts found that the expert reports identifying the adverse lifecycle environmental impacts of paper bags – the presumed alternative to plastic – could be considered significant adverse impacts to the environment, requiring the preparation of an EIR. In the face of litigation, other cities and counties contemplating similar ordinances have also decided to prepare EIRs.

CEQA provides many avenues for agencies to streamline the environmental review process. One option is to prepare a MEA. When several jurisdictions are implementing similar policies or regulatory authorities, preparation of a general MEA, considering long-range, area-wide and cumulative impacts, helps avoid duplication of analysis for each individual action. A MEA can provide an inventory of existing science and analyze the environmental impacts of various alternatives. The MEA then serves as the foundational analysis that can be incorporated by reference and used to support individual jurisdiction-specific EIRs. No agency needs to adopt the MEA or serve as the “lead agency” – the MEA is merely a tool to identify and organize the existing science in preparation of individual EIRs. Each jurisdiction still must certify its own environmental review document and adopt its own findings in compliance with CEQA prior to adopting any ordinance.

An MEA could also serve to inform decision-makers at the state level. The MEA can provide a summary of existing knowledge for state agencies. This information will also be invaluable to the OPC and the Marine Debris Steering Committee as they continue to pursue actions to reduce impacts of debris in the marine environment.

Project Details and Scope of Work:

The proposed MEA will inform and expedite the individual preparation of EIRs by various jurisdictions seeking to regulate single-use bags. The MEA will include a comprehensive literature search and evaluation of existing studies regarding: 1) environmental impacts of single-use and reusable bags across their manufacture, transport, use, and disposal, and 2) the comparative environmental impacts of imposing fees or bans on single-use bags. Areas of impact analysis of comparative regulatory schemes will include: energy, greenhouse gas emissions, biological resources, water quality, waste, and transportation. CEQA only requires an analysis of existing research; no new data will be collected as part of this effort.

If funding is approved by the council, staff will hire a consultant to complete the MEA within six to nine months. The results of the MEA will be broadly applicable at the state, regional and local levels, fulfilling one of the OPC's roles to coordinate and share data to inform policy decisions. The MEA will reduce duplication of work that the jurisdictions must complete to satisfy the EIR requirements with many governments benefitting from its findings. This study must be performed urgently as several cities and counties are positioned to consider new ordinances.

PROJECT HISTORY:

The OPC has taken a leadership role in developing effective ways to tackle the marine debris problems plaguing the oceans. In February 2007, the OPC passed a resolution that identified 13 recommendations for reducing and preventing ocean litter, including increased enforcement of enforcement of litter laws, expanding watershed-based clean-ups, coordinating regional efforts with West Coast states, banning toxic plastic packaging and convening a Marine Debris Steering Committee.

The Steering Committee was established in 2007 and guided the development of the Implementation Strategy. Members of the Steering Committee include representatives from seven state agencies including the California Coastal Commission, California Integrated Waste Management Board, Department of Conservation, Department of Toxic Substances Control, State Water Resources Control Board, Department of Parks and Recreation, Department of Transportation and Keep California Beautiful. The Steering Committee has continued to interact with OPC staff since the adoption of the Implementation Strategy as it develops new tasks to assist the OPC in addressing marine debris issues.

The OPC also has supported research into understanding the composition of marine debris entering the Pacific Ocean from California. The Santa Cruz-based non-profit organization Save Our Shores was granted \$100,000 in September 2007 to develop a community-based beach and marine debris prevention and removal program to benefit the Monterey Bay National Marine Sanctuary. This pilot program has a standardized debris collection card with state partners, identified debris hotspots in the City and County of Santa Cruz and instituted a Fourth of July debris awareness project. The program was recently extended for an additional two years to continue to demonstrate and expand on its successful strategies.

The OPC staff continues to work with numerous partners to find viable solutions to the problem of marine debris. Completing the MEA will allow the OPC to build on these other efforts and will promote cooperation with cities and counties that may provide additional partnerships in future marine debris reduction programs.

PROJECT FINANCING:

Ocean Protection Council	\$60,000
Total Project Costs	\$60,000

Staff anticipates using \$60,000 of the Ocean Protection Council's tidelands oil funds, appropriated to the Secretary of Natural Resources in the FY 04/05 budget for projects authorized pursuant to the Ocean Protection Act. The Natural Resources Agency has entered into an interagency agreement with the Coastal Conservancy to administer these funds on behalf of the Council and recommend projects for funding.

CONSISTENCY WITH CALIFORNIA OCEAN PROTECTION ACT:

This project is consistent the Ocean Protection Act, Division 26.5 of the Public Resources Code, in the following respects:

The Ocean Protection Act identifies trust fund allowable projects in PRC Section 35650 (b)(2)(A), as including projects that eliminate or reduce threats to coastal and ocean ecosystems, habitats and species. The MEA allows municipalities to develop new ordinances that address products that frequently become marine debris. PRC Section 35650(b)(2)(J) identifies allowable projects that provide funding for coordination and research to minimize the adverse impacts of climate change on California's ocean ecosystem, including the effects of sea level rise. The MEA would be addressing marine impacts and greenhouse gas emissions, a primary driver of sea level rise.

PRC Sections 35615(a)(2) and 35615(a)(5) identify coordination and sharing of data and transmission of the results of research to provide information for policy decisions as activities in which the OPC should engage. The MEA would produce the necessary data to inform state, regional and local decision-makers regarding the environmental impacts of regulations related to single-use and reusable bags.

CONSISTENCY WITH OPC'S STRATEGIC PLAN:

Goal C (Ocean and Coastal Water Quality) Objective 5: Reduce ocean and coastal debris and its impacts to ocean ecosystems.

The OPC *Implementation Strategy* calls for prohibiting single-use products that could become marine debris when less harmful alternatives are available. The MEA will better inform about the impacts of the single-use bags and their replacements. The MEA would also provide a reference for municipalities seeking to investigate restrictions on single-use plastic or paper bags, both of which constitute marine debris.

CONSISTENCY WITH OPC'S GRANT PROGRAM FUNDING GUIDELINES:

The proposed project is consistent with the OPC's Grant Program Funding Guidelines adopted November 20, 2008, in the following respects:

Required Criteria

1. **Directly relate to the ocean, coast, associated estuaries, or coastal-draining watersheds:**
The MEA on single-use plastic and paper bags and reusable bags will survey the available literature examining the oceanic, atmospheric, and terrestrial impacts from production, transportation and disposal of the bags. This study will provide information that may lead to the mitigation, elimination or reduction of the harmful effect to the marine environment caused by single-use bags.
2. **Support of the public:** See Exhibit 2, Letters of Support.
3. **Greater-than-local interest:** Almost 20 municipalities are considering or have attempted to implement restrict the usage of single-use plastic and paper bags including Manhattan Beach, Palo Alto, San Jose, Santa Monica, Oakland, San Francisco, Pasadena, Moorpark, Encinitas, and San Clemente and the Counties of Los Angeles and Marin. This MEA would provide the necessary background information for these cities and counties to prepare EIRs for proposed ordinances.

Additional Criteria

5. **Improvements to management approaches or techniques:** The information gathered by the MEA will assist state, regional and local governments to engage in discussions about practical solutions instead of repetitive debates about the impacts of single-use and reusable bags.
8. **Timeliness or Urgency:** Several California municipalities are at various stages of developing new ordinances related to single-use plastic and paper bags; some are considering conducting EIRs as soon as summer 2009.
9. **Coordination:** The results of the MEA will be broadly applicable at the state, regional and local levels, fulfilling one of the OPC's roles to coordinate and share data to inform policy decisions. The MEA will also ensure a relevant reference is available for any jurisdiction and the background information for any EIR is consistent statewide.

CONSISTENCY WITH OPC'S PROGRAM PRIORITIES FOR 2009 THROUGH 2010:

Ocean and Coastal Water Quality – Marine Debris

As called for in the Program Priorities, the OPC will work with state agencies and other organizations to implement the actions called for in the Implementation Strategy, adopted in November 2008. The proposed project will allow jurisdictions to investigate implementing the strategy's Priority Action #2 of placing fees or bans on single-use items, such as bags.

COMPLIANCE WITH CEQA:

Under 14 California Code of Regulations Section 15378, the preparation of the MEA is not a project under the California Environmental Quality Act (CEQA), as the MEA is being prepared

to comply with CEQA requirements and does not have the potential for a direct physical change or a reasonably foreseeable indirect physical change in the environment. While the MEA may support future action by a public agency, that action, if any, has not yet been approved, adopted or funded. Staff will file a Notice of Exemption upon approval by the council.