
**County of Monterey
Reusable Bag Ordinance**

Categorical Exemption Report

Prepared for:

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CATEGORICAL EXEMPTION REPORT

This report serves as the technical documentation of environmental analyses performed by Rincon Consultants, Inc., for the proposed County of Monterey Reusable Bag Ordinance (the "proposed ordinance"). The intent of these analyses is to assess whether the proposed ordinance is eligible for Class 7 and Class 8 Categorical Exemptions (CE) under the California Environmental Quality Act (CEQA). The following report provides an introduction, project description, and evaluation of whether the ordinance falls within the class of projects that are categorically exempt under section 15307 (Class 7) and section 15308 (Class 8) of the CEQA Guidelines. (References to the CEQA Guidelines are to the regulations at sections 15000 through 15387 of title 14 of the California Code of Regulations.) This includes an analysis of whether the project would have potential environmental impacts and/or environmental benefits in the areas of biological resources, hydrology and water quality, air quality, greenhouse gas emissions, and utilities. The report concludes that the project would protect natural resources and protect the environment and qualifies for the Class 7 and 8 categorical exemptions.

1. INTRODUCTION

Classes of projects which have been determined not to have a significant effect on the environment and therefore are categorically exempt under CEQA include the following classes of projects, under CEQA Guidelines Section 15307 (Class 7) and 15308 (Class 8):

15307: Actions taken by regulatory agencies as authorized by state law or local ordinance to assure the maintenance, restoration, or enhancement of a natural resource where the regulatory process involves procedures for protection of the environment. Examples include but are not limited to wildlife preservation activities of the State Department of Fish and Game. Construction activities are not included in this exemption.

15308: Actions taken by regulatory agencies, as authorized by state or local ordinance, to assure the maintenance, restoration, enhancement, or protection of the environment where the regulatory process involves procedures for protection of the environment. Construction activities and relaxation of standards allowing environmental degradation are not included in this exemption.

A project that would otherwise fall within these categorical exemptions is not exempt if "there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances." (CEQA Guideline section 15300.2(c).)

Rincon Consultants, Inc. evaluated the project's potential environmental benefits and/or impacts in the areas of biological resources, hydrology and water quality, air quality, greenhouse gas emissions, and utilities. This analysis shows that substantial evidence supports the conclusion that the proposed ordinance will maintain, enhance, and protect natural resources and the environment. The analysis also indicates a lack of evidence of unusual circumstances that would create a reasonable possibility of the ordinance having a significant effect on the environment.



2. PROJECT DESCRIPTION

Surrounding Land Uses and Setting

Geographically Monterey County is one of the larger counties in the State of California, covering 3,300 square miles. The County is located along the central coast of California and is bordered by Santa Cruz County to the north; San Benito, Fresno, and King counties to the east; San Luis Obispo County to the south; and the Pacific Ocean to the west (2010 Monterey County General Plan). The County includes a diverse range of natural habitats from the rich farmlands located within the Salinas Valley to the tall peaks of the Santa Lucia Mountains whose steep faces make up the Big Sur coastline along the Pacific Ocean.

Multiple rivers, streams, and creeks including the Salinas River, San Antonio River, Carmel River, and Arroyo Seco can be found within Monterey County and represent an important habitat for native steelhead and rainbow trout (Center for Ecosystem Management and Restoration, 2008). These rivers ultimately flow into the Pacific Ocean and the Monterey Bay National Marine Sanctuary (MBNMS). The MBNMS stretches from Cambria in San Luis Obispo County to Rocky Point in Marin County, seven miles north of the Golden Gate Bridge. The MBNMS is home to 34 marine mammals, 180 bird species, and 525 different kinds of fish (Center for Ecosystem Management and Restoration, 2008).

Monterey County is home to 12 incorporated cities: Carmel-by-the-Sea, Del Rey Oaks, Gonzales, Greenfield, King City, Marina, Monterey, Pacific Grove, Salinas, Sand City, Seaside, and Soledad. These cities represent 75% of the County's population and 15% of its total land area. The population of unincorporated Monterey County is estimated to be 103,697 (California Department of Finance, 2014).

There are no manufacturers of any types of bags within Monterey County or the 12 cities within Monterey County.

Project Overview

The proposed ordinance would prohibit certain types of retail establishments within the unincorporated area of Monterey County from providing plastic single-use carryout bags, free recycled paper bags, or free reusable bags to customers. Under the ordinance, retail establishments would be required to charge a minimum of ten cents (\$0.10) to provide a recycled paper bag or reusable bag to a customer, with exceptions made for customers who participate in certain governmental or non-profit programs. These regulations would apply to retail establishments that sell perishable or nonperishable goods including clothing, food, and personal items, and would not apply to restaurants and take-out food establishments. The proposed ordinance would also apply to "farmers' markets." A six month "grace period" is incorporated into the ordinance for two reasons. First is to allow for a focused outreach and education component to distribute reusable bags and to maximize the usage rate of reusable bags for both the public and retailers. Second is to allow retail establishments time to make necessary arrangements for compliance and to expend current stocks of plastic single-use carryout bags. The regulations would be enforced under the Monterey County Code. The purposes of the proposed ordinance are to reduce litter, reduce impacts to waterbodies and wildlife, promote a shift to reusable bags and thereby protect the natural resources and environment of Monterey County.



“Single-use carryout bags” are defined in the proposed ordinance as “a bag, other than a reusable bag or recycled paper bag, provided at the check stand, cash register, point of sale, or other point of departure for the purpose of transporting food or merchandise out of the Retail Establishment. Single-use carryout bags do **not** include bags, a maximum of 11” x 17”, without handles provided to the customer for the following purposes: (1) to transport produce, bulk food or meat from a product, bulk food or meat department within a store to the point of sale; (2) to transport produce, bulk food, or other items to the point of sale at a farmers’ market; (3) to hold prescription medication dispensed from a pharmacy; (4) to segregate food or merchandise that could damage or contaminate other food or merchandise when placed together in a bag; or (5) a Garment Bag regardless of size.”

A “Reusable Bag” means a bag with handles that is specifically designed and manufactured to be reused at least 125 times and that is either: (1) made of cloth or other washable natural or synthetic fibers that can be cleaned and disinfected, or, (2) made from plastic film that is at least four (4.0) mils thick and capable of being cleaned and disinfected.

A “recycled paper bag” means “a bag that contains no old growth fiber and a minimum of 40 percent post-consumer recycled content, is 100 percent recyclable, and has printed in a highly visible manner on the outside of the bag the words “Reusable” and “Recyclable”, the name and location of the manufacturer, and the percentage of post-consumer recycled content. The proposed ordinance does not include any components that involve construction activities or relaxation of current environmental standards.

Staff also proposes to implement a public education and outreach campaign to promote reusable bags to both retailers and customers to further reduce impacts from paper bags and/or single-use carryout bags.

Bag Usage

Current statewide data estimates that approximately 13 billion single-use carryout bags are consumed annually in California (CalRecycle, 2013). On a per-capita basis this is approximately 339 bags per person. Assuming this same rate of usage applies to retail customers within the unincorporated areas of Monterey County, about 35 million single-use carryout plastic bags would be used per year (see Table 1) absent adoption of the proposed ordinance.

Table 1- Estimated Single-Use Carryout Bag Use in Unincorporated Monterey County

	Population*	Number of single-use carryout bags Used per Person**	Total Bags Used Annually
Unincorporated Monterey County	103,697	339	35,153,283

* California Department of Finance, E-5, May 2014.

** Based on annual statewide estimates of plastic bag use from the CalRecycle 2013) - 339 bags per person = 13 billion bags used statewide per year (Calrecycle 2013) / 38,340,074 people statewide (California's current population according to the State Department of Finance, 2014).

A discussion of bag use following implementation of the proposed ordinance is discussed further below in “Effect of Charging for Checkout Bags” and in Appendix A (attached).



3. EXISTING CONDITIONS

Background on Single-use carryout Bags

Single-use carryout bags are typically made of thin-film, lightweight, high density polyethylene (HDPE) (Hyder Consulting, 2007). For consumers, they offer a hygienic, odorless, water resistant and sturdy carrying sack, but are generally intended for one use before disposal. Currently, 13 billion of these single-use carryout bags are consumed annually in California (CalRecycle, 2013). Studies suggest that conventional single-use carryout bags are manufactured by independent manufacturers who purchase virgin resin from petrochemical companies or obtain non-virgin resin from recyclers or other sources and that 69.3% of single-use carryout bags used in the United States are made in the United States (Stephen L. Joseph, May 17, 2013).

According to the 2008 CalRecycle waste characterization report, approximately 0.3% (or 123 tons) of California's waste stream is made up of plastic grocery and other merchandise bags. Typical single-use carryout bags weigh approximately five to nine grams and are made of thin (less than 2.25 mils thick (0.00225 inches)) HDPE (Hyder Consulting, 2007). Post-use from a retail store, a customer may reuse a single-use carryout bag at home, but eventually the bags are disposed in the landfill or recycling facility or discarded as litter. Although some recycling facilities handle plastic bags, most reject them because they get caught in the machinery and cause malfunctioning, or are contaminated after use. Only about 6% of the plastic bags in California are currently recycled (CalRecycle, 2011). The majority of single-use carryout bags end up as litter or in the landfill. Even those collected by recycling and solid waste trucks and handled at transfer stations and landfills may blow away as litter due to their light weight (Green Cities California MEA, 2010). Single-use carryout bags that become litter can enter storm drains and may clog catch basins or be transported to the rivers, streams, and eventually the Pacific Ocean.

Improperly disposed of plastic waste has become a major problem for marine animals. According to the Center for Biological Diversity, fish in the North Pacific ingest an estimated 12,000 to 24,000 tons of plastic each year, which can cause injury and death as well as concentrate plastic contamination higher up the food chain. Plastic pollution in the oceans also has negative effects on seabirds and marine mammals (Center for Biological Diversity, 2014). In addition to being consumed directly by wildlife, plastic in the marine environment absorbs and releases chemicals. Plastics contain organic contaminants including polychlorinated biphenyls, polycyclic aromatic hydrocarbons, petroleum hydrocarbons and others. Experimental data have demonstrated the transfer of these pollutants from plastics to organisms (Teuten et al, 2009).

Existing Single-Use Bag Ordinances

Numerous California cities, towns and counties located throughout California have adopted, proposed or have pending carryout bag ordinances (including the Proposed Reusable Bag Ordinance) (see the table in Appendix B of a list of California cities, towns and counties that have recently adopted a carryout bag ordinance). Approximately 110 jurisdictions in California have adopted a bag ordinance as of July 2014 (Californians Against Waste, July 2014). Locally, the City of Monterey has had a bag ordinance in effect since January 2013. Several cities within Monterey County (Salinas, Gonzalez, Soledad, Greenfield, King City, Salinas and Seaside) are also pursuing ordinances of their own. The cities of Marina, Pacific Grove and Del Rey Oaks are



considering ordinances. Furthermore, the State of California has currently proposed legislation (Senate Bill 270 (SB 270)) which would ban plastic bags throughout the State at specified retailers beginning July 2015. SB 270 is currently progressing through the State legislature.

A comparison of Monterey's county's ordinance shows that it is substantially similar to dozens of ordinances adopted statewide and that there are no unique setting issues within Monterey County that would create special circumstances. Furthermore as described above, several components of the ordinance are specifically intended to increase the use of reusable bags including: a minimum 10-cent charge, specifying that paper and reusable bags be recyclable, and specifying reusability standards. During both the implementation and enforcement phases of the ordinance, the County will also implement an outreach and education campaign with a focus on promoting a shift to reusable bags. Both the public and retailers will be included.

Effect of Charging for Checkout Bags

As summarized in Appendix A, multiple studies have documented a decrease in single-use bag usage after a charge for carryout bags was implemented. In Australia, a study was conducted in November 2007 which included bag use observations at 800 retail stores. Customers of stores which charged a fee for single-use carryout bags used approximately one third fewer bags than customers of stores which did not have a fee (Hyder Consulting, 2007).

Washington D.C enacted a \$0.05 single-use plastic and paper bag fee in January 2010. In 2009, the city was using approximately 270 million single-use bags. Early estimates by city officials projected that residents were on pace to use approximately 55 million single-use bags, an approximate 81% decrease (Washington Post, 2011). According to a public outreach questionnaire completed by a non-profit, OpinionWorks, 75% of individuals responding to the survey noted a decrease in their plastic bag usage. 21% said they have not reduced their usage, and the rest did not use bags or were not sure. A majority of the businesses surveyed reported an estimated reduction in single-use bag usage of at least 50% (OpinionWorks, 2011).

Ireland enacted a similar bag ordinance in 2002, levying a 15 Euro cent environmental tax on all shopping plastic bags, which were previously provided free of charge. The result was a reduction in bag use in excess of 90%. Furthermore, the number of "clear" areas, or areas without plastic bag litter increased by 21% within the first year of the program (P. Kavanagh 2008).

A review of similar single-use carryout bag ordinances in comparable California locations was compiled by the Equinox Center (2013). The review covered three California study areas that have enacted similar ordinances including the City of San Jose, City of Santa Monica, and the County of Los Angeles. In these areas, single-use carryout bag use dropped from 75% of total bag use to 0%, reusable bag use increased from 5% to 45%, and recycled paper bag use increased from 3% to 16%. All three single-use carryout bag ordinances eliminated single-use carryout bag use and increased the use of reusable bags. This resulted in an overall decrease in total bag use.



4. ANALYSIS

The following provides an evaluation of whether the project falls within the Class 7 and 8 exemptions. The analysis examines the proposed ordinance's potential environmental benefits and/or impacts in the areas of biological resources, hydrology and water quality, air quality, greenhouse gas emissions, and utilities.

Biological Resources

Habitat. There are six separate watersheds in Monterey County, of which four drain into the Pacific Ocean (US EPA, 2014). Encompassing more than 3,300 square miles, Monterey County ranges from flat farmland in the Salinas Valley to the tall mountain side of the Santa Lucia Mountain which help form the Big Sur coastline. The County is home to an abundance of vegetative types, with a diverse number of plant species. The vegetative types found in the county can be categorized as saltwater marshes, riparian woodland, grassland, coastal scrub, chaparral, broadleaf evergreen, coniferous forest and mixed conifer forest (County of Monterey General Plan, 2010). Fish, wildlife and vegetative habitats, dependent on water resources in the Study Area include:

- Open waters, mud flats, tidelands, and salt ponds
- Coastal water habitats such as reefs, channels and tide pools
- Freshwater streams
- Freshwater lakes, reservoirs and ponds
- Riparian drainages and freshwater habitats
- Vernal pools

Special Status Species. More than 70,000 acres in the County are designated as critical habitat by the U.S. Fish and Wildlife Service. Fish and wildlife resources are numerous and diverse due to the wide variety of habitats contained in Monterey County including drainages, the Pacific Ocean and Monterey Bay. These habitats support a variety of plant and animal species, some of which are threatened or endangered by extinction. Several special status plant and animal species are known to occur within the freshwater, marine, and near-shore environment throughout Monterey County and have the potential to occur if suitable habitat is present as listed below (and as shown in Figures below for CNDDDB Maps):

- longfin smelt (*Spirinchus thaleichthys*)
- bald eagle (*Haliaeetus leucocephalus*)
- beach layia (*Layia carnosae*)
- California clapper rail (*Rallus longirostris obsoletus*)
- coastal dunes milk-vetch (*Astragalus tener* var. *titi*)
- Hickman's cinquefoil (*Potentilla hickmanii*)
- least Bell's vireo (*Vireo bellii pusillus*)
- Menzies' wallflower (*Erysimum menziesii*)
- Santa Cruz long-toed salamander (*Ambystoma macrodactylum croceum*)
- Tidestrom's lupine (*Lupinus tidestromii*)
- arroyo toad (*Anaxyrus californicus*)



- Contra Costa goldfields (*Lasthenia conjugens*)
- robust spineflower (*Chorizanthe robusta* var. *robusta*)
- Smith's blue butterfly (*Euphilotes enoptes smithi*)
- tidewater goby (*Eucyclogobius newberryi*)
- Yadon's rein orchid (*Piperia yadonii*)
- Monterey gilia (*Gilia tenuiflora* ssp. *arenaria*)
- San Joaquin kit fox (*Vulpes macrotis mutica*)
- Townsend's big-eared bat (*Corynorhinus townsendii*)
- Santa Lucia mint (*Pogogyne clareana*)s
- seaside bird's-beak (*Cordylanthus rigidus* ssp. *Littoralis*)
- bank swallow (*Riparia riparia*)
- Santa Cruz tarplant (*Holocarpha macradenia*)
- Bay checkerspot butterfly (*Euphydryas editha bayensis*)
- California red-legged frog (*Rana draytonii*)
- Monterey spineflower (*Chorizanthe pungens* var. *pungens*)
- Santa Lucia purple amole (*Chlorogalum purpureum* var. *purpureum*)
- steelhead (*Oncorhynchus mykiss irideus*)
- vernal pool fairy shrimp (*Branchinecta lynchi*)
- western snowy plover (*Charadrius alexandrinus nivosus*)
- California tiger salamander (*Ambystoma californiense*)

Furthermore, the following sensitive natural communities have been documented within fresh and maritime environments within Monterey County: Central Dune Scrub, Alkali Seep, Central Dune Scrub, Central Maritime Chaparral, Coastal and Valley Freshwater Marsh, Coastal Brackish Marsh, North Central Coast Drainage, North Central Coast Drainage Sacramento Sucker/Roach River, North Central Coast Fall-Run Steelhead Stream, Northern Coastal Salt Marsh, and Valley Sink Scrub. Sensitive species that may inhabit the freshwater, coastal, and marine environment are listed in the table in Appendix C. Further, the locations of special-status species and natural communities documented in the Study Area, as listed on the California Natural Diversity Database (CNDDDB), are mapped on Figures 1 (a and b), 2 (a and b) and 3 (a and b) which are also contained in Appendix C.

Impacts to Biological Resources/Natural Resources from Carryout Bags. The proposed ordinance would not include any physical activities that would result in direct biological impacts. The proposed ordinance would regulate the use of carryout bags within unincorporated Monterey County. The intent of the proposed ordinance is to reduce litter and protect the natural resources of Monterey County.

If improperly disposed, all carryout bags, including single-use carryout bags, recycled paper, and reusable bags, have the potential to affect local creeks and coastal habitats, such as the Monterey Bay National Marine Sanctuary and the Pacific Ocean. These bags can become litter that enter the storm drain system in more urbanized areas of Monterey County and ultimately enters creeks/ rivers and eventually coastal and marine environments. Litter that enters coastal and wetland habitats or surface waters tributary to Monterey Bay and the Elkhorn Slough



National Estuarine Reserve can adversely affect sensitive species that inhabit coastal and marine environments, including leatherback sea turtles, seals, fish, sea otters, or bird species as a result of ingestion or entanglement. Specific examples found within the Monterey Bay National Marine Sanctuary include the southern sea otter (*Enhydra lutris nereis*) and Leatherback turtles (*Dermochelys coriacea*). The sea otter is listed as Threatened and the Leatherback is Endangered by the U.S. Fish and Wildlife Service. However, each type of carryout bag's potential to become litter varies and is based on the number of bags disposed of as well as the bag's weight and material.

Typical single-use carryout bags are made from thin-film, lightweight HDPE, are less than 2.25 mils (0.00225 inches) thick, and weigh approximately five to nine grams. Post-use from a retail store, a customer may reuse a single-use carryout bag at home, but eventually the bags are disposed of in the landfill, recycled, or discarded as litter. Although some recycling facilities handle single-use carryout bags, most reject them because they can get caught in the machinery and cause malfunctioning, or are contaminated after use. Only about 6% of single-use carryout bags in California are currently recycled (CalRecycle, 2013). Therefore the majority of single-use carryout bags end up in a landfill or as litter. Even those collected by recycling and solid waste trucks and handled at transfer stations and landfills may blow away as litter due to their light weight (Green Cities California MEA, 2010). Single-use carryout bags that become litter can enter storm drains and watersheds from surface water runoff or may be blown directly into the ocean by the wind.

Litter from single-use carryout bags can adversely affect both terrestrial and marine species that ingest the plastic bags (or the residue of plastic bags) or become tangled in the bag (Green Cities California MEA, 2010). International data, collected for the Ocean Conservancy's Report from September 2009 Ocean Conservancy's International Coastal Cleanup Day, shows approximately 11% of total debris items collected were plastic bags (Ocean Conservancy, April 2010). California data shows similar results. According to the results from the years 1989 – 2013, the California Coastal Cleanup Day which is organized annually by the California Coastal Commission along California coastlines and beaches, plastic and paper bags have made up approximately 11% of total trash collected in that time period (California Coastal Commission, 2013). Further, in 2002, the volunteers for the Coastal Cleanup Day at 24 local sites cleared over 8,000 pounds of trash and recyclable materials (NOAA, 2003). The littered plastic bags also reach the ocean floor. Based on 22 years of video surveillance of Monterey Canyon the Monterey Bay Aquarium Research Institute documented that the most common debris found was plastic (33% of all debris), with plastic bags comprising the majority (54%) of these plastic items (MBARI, 2013).

Over 260 species of wildlife, including invertebrates, turtles, fish, seabirds and mammals, have been reported to ingest or become entangled in plastic debris. Ingestion or entanglement may result in impaired movement and feeding, reduced productivity, lacerations, ulcers, and death (Laist, 1997; Derraik and Gregory, 2009). Ingested plastic bags affect wildlife by clogging animal throats and causing choking, filling animal stomachs so that they cannot consume real food, and infecting animals with toxins from the plastic (Green Cities California MEA, 2010). One example is the Leatherback Turtle which is a Federally listed endangered species found in the Monterey Bay. According to NOAA Fisheries, sea turtles living in the pelagic (open ocean) environment commonly ingest or become entangled in marine debris (e.g., tar balls, plastic bags, plastic



pellets, balloons, and ghost fishing gear) as they feed along oceanographic fronts, where debris and their natural food items converge. This is especially problematic for turtles that spend all or significant portions of their life cycle in the pelagic environment (e.g., leatherbacks). A 2009 study by Dalhousie University found that of 371 necropsies since 1968 over one-third had ingested plastic as the leatherback turtles prefer to eat jellyfish and mistake floating bags as food.

In addition to affecting wildlife through physical entanglement and ingestion, plastic debris in the marine environment has been known to absorb and transport polychlorinated biphenyls (PCBs), phthalates, and certain classes of persistent organic pollutants (POPs) (Mato, Y., Isobe, T., Takada, H., et al., 2001; and, Moore, C.J.; Lattin, G.L., A.F. Zellers., 2005).

Recycled paper bags also have the potential to enter the marine environment as litter. Recycled paper bags are typically produced from kraft paper and weigh anywhere from 50 to 100 grams, depending on whether or not the bag includes handles (AEA Technology, 2009). A recycled paper carryout bag weighs approximately 90% more (approximately 45 to 90 grams) than a single-use carryout bag. Because of their weight and recyclability, recycled paper bags are less likely to become litter compared to single-use carryout bags (Green Cities California MEA, 2010). In addition, because recycled paper bags are not as resistant to biodegradation, they create less risk of entanglement if they enter the marine environment compared to single-use carryout bags. Finally, although not a healthy food source if ingested, a recycled paper carryout bag can be chewed effectively and may be digested by many marine animals (Green Cities California MEA, 2010). Thus, although recycled paper carryout bag litter may enter coastal habitats and affect sensitive species in the marine environment, the impacts of recycled paper bags would be less than those of single-use carryout bags.

Reusable bags may also become litter and enter the marine environment; however, these bags differ from single-use bags in their weight and longevity. Reusable bags can be made from plastic or a variety of cloths such as vinyl or cotton. Built to withstand many uses, reusable carryout bags typically weigh at least ten times what an HDPE single-use carryout bag weighs and two times what a recycled paper carryout bag weighs, therefore restricting the movement by wind (ExcelPlas Australia, 2004; City of Pasadena, 2008). Reusable bags are typically reused until worn out through washing or multiple uses, and then disposed either in a landfill or recycling facility (if the material is recyclable). Because of the weight and sturdiness of these bags, reusable bags are less likely to become litter or to be carried from landfills by wind compared to single-use plastic and paper carryout bags (Green Cities California MEA, 2010). In addition, since reusable bags are specifically designed to be used multiple times, they are disposed of less often than single-use plastic and paper carryout bags. As such, reusable bags are less likely to enter the marine environment as litter and would generally be expected to result in fewer impacts to species than single-use plastic or recycled paper carryout bags.

The proposed ordinance would reduce single-use carryout bag usage by an estimated 95 -99% compared to existing conditions (from 35 million to between 350,000 and 1.7 million annually). This overall reduction in single-use carryout bags would be expected to generally reduce litter-related impacts to sensitive species. Therefore, sensitive species such as leatherback sea turtles, mammals (such as sea otters or seals), and bird species (such as the bald eagle, California clapper rail, least Bell's vireo, seaside bird's-beak, bank swallow and western snowy plover) that



may inhabit Monterey Bay National Marine Sanctuary would benefit from the proposed ordinance, which would reduce the amount of litter that could enter the marine and near-shore environments. There would be a benefit to biological resources and to natural resources in unincorporated Monterey County as a result of the proposed ordinance.

Hydrology and Water Quality

Existing Hydrological Systems. Multiple rivers, streams, and creeks including the Salinas River, San Antonio River, Carmel River, and Arroyo Seco can be found within Monterey County and represent an important habitat for native steelhead and rainbow trout (Center for Ecosystem Management and Restoration, 2008). These rivers ultimately flow into the Pacific Ocean and the MBNMS. The sanctuary is home to 34 marine mammals, 180 bird species, and 525 different kinds of fish.

Urban runoff within Monterey County consists of stormwater runoff from rainfall as well as non-stormwater runoff from human activities (e.g. over-irrigation of landscapes, vehicle washing, discharges from pools, spas, or water features, etc.). Carryout bags can enter the storm drain system and effect storm water flow in urban areas by clogging drains and redirecting flow, and in other areas they may be washed into rivers, creeks, or the Pacific Ocean.

Impacts to Hydrology and Natural Resources. As described above, the majority of single-use carryout bags end up as litter or in the landfill. Even those collected by recycling and solid waste trucks and handled at transfer stations and landfills may blow away as litter due to their light weight (Green Cities California MEA, 2010). Single-use carryout bags that become litter can enter storm drains and may clog catch basins or be transported to the MBNMS. Plastic that enters the marine environment can cause significant damage to the ecosystem (Derraik, 2002).

Recycled paper bags also have the potential to enter the storm drains as litter. However, because of the weight, biodegradability of the materials, and recyclability, recycled paper bags are less likely to become litter compared to single-use carryout bags (Green Cities California MEA, 2010). In addition, because recycled paper bags are not as resistant to breakdown, there is less potential to clog catch basins compared to single-use carryout bags. Thus, although recycled paper bag litter may enter storm drains and affect hydrologic flow of surface water runoff, the potential to enter storm drains and cause hydrologic effects in Monterey County is less than with single-use carryout bags.

Reusable bags may also become litter and enter storm drains; however, these bags differ from the single-use bags in their weight and longevity. Reusable bags can be made from plastic or a variety of cloth such as vinyl or cotton. Built to withstand many uses, reusable bags weigh at least ten times what a single-use carryout bag weighs and two times what a recycled paper bag weighs, thereby restricting the movement by wind. Reusable bags are typically reused until worn out through washing or multiple uses, and then typically disposed either in the landfill or recycling facility. Because of the weight and sturdiness of these bags, reusable bags are less likely to become litter or to be carried from landfills by wind as litter compared to single-use plastic and recycled paper bags (Green Cities California MEA, 2010). Therefore, reusable bags are less likely to enter the storm drain system as litter.



The proposed ordinance would decrease the amount of single-use bags discarded within unincorporated Monterey County and encourage a shift toward reusable bags. Therefore, the proposed ordinance would be expected to reduce the amount of litter that could enter storm drains and local waterways, thus improving water quality, reducing maintenance and cleanup costs, and reducing the potential for storm drain blockage. Water quality, storm drain operation, and associated hydraulic and hydrological conditions would benefit from the proposed ordinance because reducing the amount of single-use carryout bags in unincorporated Monterey County would result in an incremental reduction in the amount of litter that enters the storm drain system and local waterways, thereby improving water quality and natural resources within Monterey County and also to surrounding areas outside of Monterey County's jurisdictional boundaries.

Air Quality

Existing Conditions in Monterey County. Monterey County is located within the North Central Coast Air Basin (NCCAB), which includes Monterey County, San Benito County, and Santa Cruz County. The Monterey Bay Unified Air Pollution Control District (MBUAPCD) is responsible for local control and monitoring of criteria air pollutants throughout the NCCAB. Local air districts and CARB monitor ambient air quality to assure that air quality standards are met, and if they are not met, to also develop strategies to meet the standards. Air quality monitoring stations measure pollutant ground-level concentrations (typically, ten feet aboveground level). Air quality in Monterey County is generally good in comparison to more urbanized areas. Table 2 summarizes the state and federal attainment status for criteria pollutants in the NCCAB.

As shown in Table 2, although the NCCAB is in attainment or unclassifiable of all federal ambient air quality standards (AAQS), it is designated as non-attainment with respect to the more stringent state PM₁₀ standard and the state's eight-hour ozone standard.

Table 2 - Attainment Status of the North Central Coast Air Basin

Pollutant	State Standard	Federal Standard
Ozone (O ₃)	Non-attainment ¹	Attainment/Unclassified ²
Inhalable Particulates (PM ₁₀)	Non-attainment	Attainment
Fine Particulates (PM _{2.5})	Attainment	Attainment/Unclassified ³
Carbon Monoxide (CO)	Attainment	Attainment/Unclassified
Nitrogen Dioxide (NO _x)	Attainment	Attainment/Unclassified ⁴
Sulfur Dioxide (SO _x)	Attainment	Attainment ⁵
Lead	Attainment	Attainment/Unclassified ⁶

¹ Effective July 26, 2007, the ARB designated the NCCAB a non-attainment area for the state ozone standard, which was revised in 2006 to include an 8-hour standard of 0.070 ppm.

² On March 12, 2008, USEPA adopted a new 8-hour ozone standard of 0.075 ppm, while temporarily retaining the existing 8-hour standard of 0.08 ppm.

³ In 2006, the Federal 24-hour standard for PM_{2.5} was revised from 65 to 35 µg/m³. Although final designations have yet to be made, it is expected that the NCCAB will remain designated unclassified/attainment.

⁴ In 2011, EPA indicated it plans to designate the entire state as attainment/unclassified for the 2010 NO₂ standard. Final designations have yet to be made by EPA.

⁵ In June 2011, the ARB recommended to EPA that the entire state be designated as attainment for the 2010 primary SO₂ standard. Final designations have yet to be made by EPA.

⁶ On October 15, 2008 EPA substantially strengthened the national ambient air quality standard for lead by lowering the level of the primary standard from 1.5 µg/m³ to 0.15 µg/m³. Final designations were made by EPA in November 2011.

Note: Non-attainment pollutants are highlighted in **Bold**.



Air Quality Impacts Related to Carryout Bags. The manufacturing process to make any type of carryout bags requires fuel and energy consumption which generates air pollutant emissions. These may include particulate matter, nitrogen oxides, hydrocarbons, sulfur oxides, carbon monoxide, and odorous sulfur (Green Cities California MEA, 2010). The level of emissions varies depending on the type and quantity of carryout bags produced. These emissions may contribute to air quality impacts related to acid rain (atmospheric acidification) or ground level ozone formation. However, it should be noted that there are no single-use carryout bag manufacturers or manufacturers of recycled paper bags or reusable bags located in Monterey County or within the NCCAB.

Several life cycle analyses have been completed which investigate the air quality impacts of producing single-use carryout bags, including the Boustead (2007) and Ecobilan (2004) studies. The parameters used in each of these studies varied as did the final results. However, the studies both agree that the manufacture, transport, and disposal of single-use carryout bags do result in substantial emissions which negatively impact air quality. The proposed ordinance would decrease the number of single-use carryout bags used in Monterey County, which would reduce air pollution impacts resulting from their manufacture, transport, and disposal.

The proposed project would eliminate single-use carryout bags at covered stores and as a result would increase the use of recycled paper bags and reusable bags. The previously mentioned life-cycle assessments concluded that the emissions resulting from the manufacture, transport, and disposal of both recycled paper bags and reusable bags could be marginally higher than those produced by single-use carryout bags on a per bag basis. However, these earlier conclusions were based on assumed reuse variables and do not take into account the specific characteristics of unincorporated Monterey County and the proposed ordinance. Specifically, there are no manufacturing facilities for either recycled paper bags or reusable bags located in either unincorporated Monterey County or within any of the incorporated cities. Also the proposed ordinance discourages single use of recyclable or reusable bags by requiring a minimum 10 cent charge for a reusable bag.

Delivery trucks that transport all types of carryout bags from manufacturers or distributors to the local retailers in Monterey County currently contribute air emissions locally and regionally. Diesel engines emit a complex mixture of air pollutants, composed of gaseous and solid material (ARB "Diesel & Health Research," 2011). The visible emissions in diesel exhaust are particulate matter, or PM, which are small and readily respirable. The particles have hundreds of chemicals adsorbed onto their surfaces, including many known or suspected mutagens and carcinogens. Diesel PM emissions are estimated to be responsible for about 70% of the total ambient air toxics risk. In addition to these general risks, diesel PM can also be responsible for elevated localized or near-source exposures ("hot-spots"). A switch to reusable bags is expected in the long term, which would decrease transport-related emissions due to less bag manufacturing, delivery, and disposal. Because single-use carryout bags have a lower volume than both recycled paper and reusable bags, an initial increase in truck trips may take place. However, this increase is expected to be insignificant as any additional truck trips would be spread throughout the county and would result in a net increase of less than one truck trip per week. Such an increase in truck trips would result in marginal increases (less than one pound per day) in emissions monitored by the MBUAPCD and would not exceed any thresholds of



significance. Therefore, the evidence does not indicate that the ordinance would have a reasonable possibility of significant impacts to air quality in Monterey County.

Greenhouse Gas Emissions

The proposed ordinance has the possibility of changing the levels of greenhouse gas (GHG) emissions related to the manufacturing, transport, and disposal of single-use plastic, recycled paper, and reusable carryout bags. The manufacturing process to make all types of carryout bags requires fuel and energy consumption. This generates GHG emissions, including CO₂, CH₄, N₂O, fluorinated gases, and ozone. In addition, fertilizers that are used on crops for resources such as cotton, which are then utilized in the manufacture of reusable bags, also have the potential to emit N₂O. The amount of GHG emissions varies depending on the type and quantity of carryout bags produced. Compared to truck trips and disposal, the manufacturing process is the largest emitter of GHGs due to the high volume of fuel and energy consumption that is used during the process. Delivery trucks that transport carryout bags from manufacturers or distributors to Monterey County retailers also create GHG emissions. GHG emissions from truck trips result primarily from the combustion of fossil fuels and include CO₂, CH₄, and N₂O. The energy use to power washing machines and clothes dryers to wash and sanitize reusable bags creates GHG emissions. The quantity of GHG emissions depends on the method of washing (i.e., hand washing, electric or natural gas-powered washing machine) and on the frequency of washing.

Emission rates per bag have been estimated by several life cycle analysis studies including the Boustead (2007) and Ecobilan (2004) studies mentioned above. Much like the estimation of air quality emissions, the estimation of GHG emissions are based on several estimated variables such as bag reuse, bag volume, and frequency and methodology of washings. Because the life cycle analysis studies do not take into account the specific variables inherent in this particular ordinance and unincorporated Monterey County, the overall findings of these reports have limited utility. Specifically, there are no manufacturing facilities for either recycled paper bags or reusable bags located in Monterey County. Also the proposed ordinance includes a minimum 10-cent charge, specifies that paper and reusable bags be recyclable, and sets reusability standards.

Furthermore, the County is taking active steps to reduce GHG emissions. the County of Monterey General Plan has several policies in place for mitigating GHG emissions within the County. Per Policy OS-10.11, the County is to develop and adopt a GHG reduction plan with a target to reduce emissions by 2020 to a level that is 15% below 2005 emission levels. Pursuant to OS-10.15, the County has quantified the current and projected (2020) GHG emissions associated with County operations and adopted a GHG Reduction Plan for County Operations. The County has also adopted a Green Building ordinance pursuant to Policy OS 10-12.

Regarding emissions related to single-use carryout-bags, the proposed ordinance would be consistent with these policies since it would reduce GHG emissions related to single-use carryout-bags and thus help attain the goal that the GHG Reduction Plan is meant to achieve.

Regarding emissions from the increased use of recycled paper and reusable bags, the proposed ordinance would impose a fee on recycled paper and reusable bags, and studies have shown



that establishing a fee on paper bags results in an increase in reusable bag but no decrease in paper bag use where no fee was required. Staff also intends to conduct a public education and outreach campaign aimed at promoting reusable bags to further reduce impacts from paper bags or single-use carryout bags to both retailers and customers. There are no manufacturing facilities for either recycled paper bags or reusable bags located in Monterey County. Also the proposed ordinance specifies that paper and reusable bags be recyclable and sets reusability standards which all decrease the lifecycle impacts for bags.

Therefore, the evidence does not indicate that the ordinance would have a reasonable possibility of creating significant additional greenhouse gas impacts.

Utilities

The production and ultimate disposal of all types of bags (single-use carryout, recycled paper, and reusable bags) currently have impacts on water usage and waste disposal. As with air quality and GHG emissions, life cycle analyses have previously been conducted concerning the water use and waste impacts of carryout bags. However, as stated above these studies have utilized varying parameters and thus, results varied from study to study. However, the assessments did conclude that manufacture and use of carryout bags currently results in substantial water use and waste generation in the areas where the bags are manufactured. Single-use carryout bags are currently allowed throughout unincorporated Monterey County. The proposed ordinance would ban single-use carryout bags and instate a fee on recycled paper bags as a way to encourage reusable bag use. Therefore, the proposed ordinance is expected to decrease the use of single-use carryout bags as well as the associated waste and water impacts.

The proposed ordinance would decrease the use of single-use carryout bags within unincorporated Monterey County. The result would be an increase in both recycled paper bags and reusable bags. The aforementioned life cycle analysis studies commonly conclude that the manufacture of recycled paper and reusable carryout bags use more water and produce more waste than single-use carryout bags. However, these findings are based on assumed variables such as bag durability and reuse which do not consider the specific study area and ordinance in question. Specifically, there are no manufacturing facilities for either recycled paper bags or reusable bags located in Monterey County. Also the proposed ordinance includes a minimum 10-cent charge, specifies that paper and reusable bags be recyclable, and sets reusability standards. Therefore, the life cycle analysis may not accurately represent the actual changes in water consumption and waste generation rates resulting from the project.

The impacts of the proposed ordinance on water consumption and waste disposal outside of unincorporated Monterey County would be indirect and difficult to quantify. It is plausible that a significant reduction in single-use carryout bags and an associated increase in recycled paper bags and reusable bags could result in the expansion of recycled paper and reusable bag manufacturing; however there are no bag manufactures within Monterey County or the cities within the County, so any such analysis would be speculative. Therefore, the evidence does not indicate that the ordinance would have a reasonable possibility of creating significant impacts to water and waste service providers.



5. SUMMARY

Single-use carryout bag use is known to have environmental impacts on biological resources, hydrology and water quality, air quality, greenhouse gas emissions, and utilities. The proposed ordinance would decrease the use of single-use carryout bags within unincorporated Monterey County by enacting a ban on single-use carryout bags and levying a ten cent (\$0.10) fee on recycled paper bags and reusable bags at covered stores. Although global life cycle studies not specific to Monterey County have suggested that recycled paper bags and reusable bags can have a negative impact on GHG, air quality, and utilities, these studies are not specific to Monterey County, and as shown in the analysis above, there is a lack of evidence of unusual circumstances that would create a reasonable possibility of the ordinance having significant impacts on GHG, air quality, and utilities. The ordinance could be expected to result in a net decrease in the overall number of bags used in Monterey County (including single-use, recycled paper and reusable bags). As described in the above analysis, the proposed ordinance would decrease overall use of single-use carryout bags and incentivize the use of reusable bags. Substantial evidence shows that the reduction of single-use carryout bags would have a beneficial impact to natural resources and the environment, and would enhance and protect the important biological resources and natural resources in Monterey County including local creeks, rivers, the Monterey Bay National Marine Sanctuary and the Pacific Ocean. Therefore, the proposed ordinance would enhance the environment and natural resources in Monterey County and falls within the classes of projects that are categorically exempt under sections 15307 and 15308 of the CEQA Guidelines.

Exempt Status and Conclusion

The California Environmental Quality Act (CEQA) Guidelines Section 15307 (Class 7), provides exemption for "actions taken by regulatory agencies as authorized by state law or local ordinance to assure the maintenance, restoration, or enhancement of a natural resource where the regulatory process involves procedures for protection of the environment". CEQA Guidelines Section 15308 (Class 8) provides exemption for "actions taken by regulatory agencies, as authorized by state or local ordinance, to assure the maintenance, restoration, enhancement, or protection of the environment where the regulatory process involves procedures for protection of the environment." Because the purpose of the ordinance is to assure the maintenance, restoration, and enhancement of natural resources and protection of the environment and the ordinance puts in place procedures to effectuate this purpose, and because there is substantial evidence of the benefits to biological resources and hydrology/water quality, as shown above, the proposed ordinance would be exempt under Classes 7 and 8.



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