

Economic and Fiscal Impact Analysis

Attachment to STD 399

February 2020

SAFER CONSUMER PRODUCTS REGULATIONS – Listing Carpets and Rugs Containing Perfluoroalkyl or Polyfluoroalkyl Substances as a Priority Product

Department of Toxic Substances Control reference number: R-2019-02

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This document details the background of the economic and fiscal impacts of the Department of Toxic Substances Control's (DTSC) proposed regulation to amend the California Code of Regulations, title 22, sections 66260.11, References, and 69511, Priority Product List – General, and adopt section 69511.4, Carpets and Rugs Containing Perfluoroalkyl or Polyfluoroalkyl Substances.

Summary: DTSC prepared this economic impact analysis to support the designation of *Carpets & Rugs Containing Perfluoroalkyl or Polyfluoroalkyl Substances* as a Priority Product under the Safer Consumer Products (SCP) regulations (Chapter 55 of Division 4.5 of Title 22 of the California Code of Regulations (commencing with sections 69501)). For the purposes of this regulation, DTSC defines “carpets and rugs containing perfluoroalkyl or polyfluoroalkyl substances” as carpets and rugs that are placed into commerce in California that contain any member of the class of perfluoroalkyl and polyfluoroalkyl substances (PFASs). Such products may be designed for indoor use.

PFASs are a class of fluorinated organic chemicals containing at least one fully fluorinated carbon atom, as defined by the California Environmental Contaminant Biomonitoring Program as of the effective date of these regulations. These chemicals confer in products increased stability in extreme temperatures, anti-static properties, and resistance to wettability, staining, and corrosion. However, PFASs or their degradation products are environmentally persistent and display a variety of toxicological hazard traits. The wide use of carpets and rugs containing PFASs creates potential for significant adverse health effects from exposure to PFASs for California workers and consumers.

Findings: DTSC determined that there are up to 20 manufacturers of carpets and rugs containing PFASs located in California¹ that could be impacted by this proposed

¹ The DTSC SCP Division considers a business ‘California-based’ if the business is incorporated or headquartered in California or employs over 50 percent of its employees in California.

regulation. DTSC estimates the cumulative costs could range from \$2,259,200 to \$6,099,200 for all affected California manufacturers to fulfill the SCP regulatory requirements to submit a Priority Product Notification and Alternatives Analysis (AA) Report.

This economic impact assessment is based on the assumption that manufacturers of carpets and rugs with any PFASs will comply fully with the SCP regulations by submitting Priority Product Notifications and AA Reports to DTSC by the dates specified in regulation. Manufacturers of carpets and rugs with any PFASs that do not submit AA Reports must: 1) remove PFASs from their carpet and rug products, 2) replace PFASs with a different chemical that meets certain regulatory requirements for those products, or 3) stop selling carpets and rugs containing PFASs in California. If a manufacturer fails to comply with the regulation and DTSC provides notice of this noncompliance, the requirements for importers, retailers, or assemblers, as applicable, call for importers to cease placing the product into the stream of commerce in California, and for retailers and assemblers to cease ordering the product.

Background: Following the designation of carpets and rugs with any PFASs as a Priority Product, manufacturers must submit a Priority Product Notification and conduct an AA to determine if there are any safer alternatives to the use of PFASs in carpets and rugs. In lieu of submitting an AA Report, a manufacturer could also remove PFASs from its carpets and rugs, replace PFASs in its products, or stop selling their carpets and rugs with any PFASs in California.

In general, the AA is a two-stage process that takes into account many facets of product manufacturing, including process engineering, environmental management, financial analysis, and research and development. In the first stage of the AA process, manufacturers are required to identify the legal, functional, and performance requirements of the Priority Product and the Chemical of Concern, and use this information to identify an array of alternatives to consider. When the first stage is completed, the manufacturer documents the findings in a Preliminary AA Report and submits this report to DTSC. During the second stage of the AA process, the manufacturer compares the Priority Product with possible alternatives using a more in-depth analysis and considers additional factors, including life cycle and economic impacts. This information is submitted to DTSC in the Final AA Report.

If a manufacturer determines there are no functionally acceptable or technically feasible alternatives to the use of the Chemical of Concern in the Priority Product, it may submit an Abridged AA Report, in lieu of submitting the Preliminary and Final AA Reports required by the two-stage process. The Abridged AA process requires manufacturers to document their screening of potential alternatives. Because the Abridged AA process

allows for the continued sale and use of the Priority Product, Abridged AA Reports must include an implementation plan to carry out the following Regulatory Responses, which require:

- Providing product safety information to consumers, including information on chemical hazards, safe handling and disposal procedures, and other information needed to protect public health or the environment; and
- Advancing green chemistry and green engineering principles, including initiating research and development projects or funding challenge grants to design safer alternatives or improve performance, lower cost, or increase market penetration of existing safer alternatives.

Following submission of an Abridged AA Report or Final AA Report, DTSC will invite the public to comment on the report. Manufacturers are required to address all public comments identified by DTSC. DTSC will then initiate a departmental review of the AA Report. DTSC must evaluate each report on its own merit, taking into consideration each manufacturer's unique conclusions and proposals. Because AA Reports and proposed Regulatory Responses address the manufacturers' specific business situations, DTSC cannot predetermine the actions that manufacturers would need to take, either individually or collectively, to meet the goals of protecting people and the environment and advancing green chemistry or green engineering principles. Despite uncertainty surrounding individual AA Reports, DTSC's response to these submissions will maximize the use of alternatives of least concern and give preference to Regulatory Responses that provide the greatest level of inherent protection to people and the environment.

I. ECONOMIC IMPACT STATEMENT

The following information supplements statements in the Economic and Fiscal Impact Statement (STD 399) for the rulemaking proposal titled "Safer Consumer Products Regulations – Listing Carpets and Rugs Containing Perfluoroalkyl or Polyfluoroalkyl Substances." The section headings and numbers shown below correspond to sections in the Economic Impact Statement portion of the STD 399 that require additional information.

A) Estimated Private Sector Cost Impacts

3. Total Number of Businesses Impacted

Through internet research and consultation with industry representatives, DTSC estimates there are at most 20 California-based manufacturers of carpets and rugs with any PFASs that would be required to comply with this regulation.

Types of Businesses

These businesses are manufacturers of carpets and rugs with any PFASs that make and sell their products in California.

Number or Percentage of Total Businesses Impacted that are Small Businesses

Under California Rulemaking Law, Government Code section 11342.610, a small business is defined as being both independently owned and operated and not dominant in its field of operation. California Government Code 11346.3(b)(4) adds an additional criterion to the small business definition: a small business must have fewer than 100 employees. Many of the potentially impacted manufacturers are non-public companies and do not publish information about employment size, ownership, or management of their organizations. DTSC relied on the United States Census Bureau and D & B Hoovers databases to provide estimates of employment size for each potentially impacted manufacturer. Based on this information and the limited information that is available on company websites, DTSC estimates that 17 of the 20 potentially impacted manufacturers are small businesses.

4. Number of Businesses Created and Eliminated

DTSC determined that this proposal is unlikely to result in the elimination of any manufacturers of carpets and rugs with PFASs. DTSC anticipates zero ongoing costs associated with this proposed regulation. DTSC expects that the one-time costs associated with the Priority Product Notifications and AA Reports are low enough for all potentially impacted manufacturers to comply without eliminating their businesses. Manufacturers can significantly reduce their individual costs of compliance by submitting a combined AA Report through a consortium.

The AA process requires manufacturers to provide DTSC with data and analysis to determine whether safer alternatives to the use of the Chemical of Concern in the Priority Product exist. DTSC reviews each AA Report on its own merits, taking into consideration each manufacturer's unique conclusions and proposals. Because each manufacturer's proposal will address its specific business situation, DTSC cannot predetermine the actions that manufacturers of carpets and rugs with any PFASs would need to take, either individually or collectively, to

meet the goals of protecting people and the environment and advance green chemistry or green engineering principles. While it is impossible to accurately predict or quantify the full range of potential benefits associated with the implementation of this proposed regulation, DTSC anticipates that this proposed regulation could potentially lead to increased business opportunities in consulting services, chemical and material science research and support, product research and design and marketing.

6. Number of Jobs Created and Eliminated

Statewide job expansion could occur in consulting services, product research and design, chemical and material science research, and support and marketing.

B) Estimated Costs

1.a. Small Business Costs

DTSC estimates that it will take each manufacturer a maximum of 16 hours at \$60/hour to complete a Priority Product Notification, or a total of \$960. DTSC estimates that the cost to each manufacturer for the Priority Product Notification, AA report, and responding to DTSC's AA report review will be \$112,960 to \$182,960 for an Abridged AA (Table 1a), and \$139,960 to \$304,960 for a two-stage AA (Table 1b), regardless of manufacturer size. DTSC expects costs to individual manufacturers to be lower if they form a consortium and submit a combined AA. These are one-time notification and reporting requirements that manufacturers are expected to complete within one year of adoption of the proposed regulation; therefore, there are no ongoing costs. Seventeen out of the 20 impacted California businesses are small businesses, however, each business size will incur the same costs of regulatory compliance.

1.b. Typical Business Costs

See section '1.a.', which immediately precedes this section. DTSC estimates that costs for each business will be the same regardless of size.

Table 1a: Estimated Total Costs to Manufacturers - Abridged AA

Manufacturer AA-Related Tasks	Individual Manufacturer Cost Range	CA Industry-Wide Cost Range
Priority Product Notification	\$960 - \$960	\$19,200 - \$19,200
AA	\$100,000 - \$150,000	\$2,000,000 - \$3,000,000
Respond to Reviews of AA	\$12,000 - \$32,000	\$240,000 - \$640,000
Combined Tasks	\$112,960 - \$182,960	\$2,259,200 - \$3,659,200

Table 1b: Estimated Total Costs to Manufacturers - Two-stage AA

Manufacturer AA-Related Tasks	Individual Manufacturer Cost Range	CA Industry-Wide Cost Range
Priority Product Notification	\$960 - \$960	\$19,200 - \$19,200
AA	\$120,000 - \$250,000	\$2,400,000 - \$5,000,000
Respond to Reviews of AA	\$19,000 - \$54,000	\$380,000 - \$1,080,000
Combined Tasks	\$139,960 - \$304,960	\$2,799,200 - \$6,099,200

1.c. Individual Costs

There are no anticipated costs to individuals.

3. Reporting Requirement Costs

There are no annual ongoing reporting costs because Priority Product Notifications, Abridged AA Reports and two-stage AA Reports are one-time reporting requirements.

5. Federal Regulations

The SCP program established a unique approach to regulating chemicals of concern in consumer products that allows DTSC to take a precautionary approach to protecting people and the environment when other regulatory programs or protective standards are lacking. There are no equivalent federal regulations that require product manufacturers to determine if the chemical in their product is necessary and if there is a safer alternative, and to take steps to protect human health and the environment. This proposed regulation is an

important effort to protect the health of California workers and consumers from harmful exposures to carpets and rugs with any PFASs. Furthermore, this proposed regulation is an important supplement to current research, legislative, and regulatory activities related to PFASs at the federal level and in other states.

C) Estimated Benefits

A reduction in exposure to PFASs could benefit the health of California's residents and wildlife. The development of safer alternatives benefits California workers, consumers, employers, and the environment. DTSC cannot pre-determine the alternatives that each manufacturer will propose; therefore, it is impossible to accurately predict or quantify the full range of potential benefits associated with their development. DTSC will maximize the use of alternatives of least concern and give preference to those that provide the greatest level of inherent protection. In general, economic benefits to California workers and business owners may include expanded employment opportunities in the fields of consulting and marketing. Additional benefits may accrue because of increased research and product development collaboration between manufacturers and California-based research entities. Institutional and corporate financial support of chemical and material science programs focused on developing safer carpet and rug protective treatments could advance the field. These research initiatives could provide manufacturers with employees that are highly skilled in the research and design of products for newly emerging global markets.

D) Alternatives to the Regulation

DTSC analysis found that no reasonable alternative to the selected alternative (the proposed regulation) would be either more effective in carrying out the purpose for which the action is proposed or would be less burdensome to affected private persons and equally effective in achieving the purposes of the regulation in a manner that ensures full compliance with the law being implemented or made specific.

D.1. Alternatives Considered

DTSC considered the following alternatives to the proposed regulation:

Regulation: List carpets and rugs with any PFASs as a Priority Product:

This option was selected due to the persistent health and environmental hazards caused from exposure to carpets and rugs with any PFASs.

- 1) Alternative 1: List carpets and rugs containing long-chain perfluoroalkyl acids (PFAAs) and their precursors as a Priority Product.

While they may be present in imported rugs and as impurities in domestic carpets containing recycled content, long-chain PFAAs and their precursors have been phased out from domestic carpet manufacturing following U.S. EPA's 2010/2015 voluntary Stewardship Program. Shorter-chain PFAAs (which form the basis for currently used PFAS treatments in domestic carpets and rugs) show potential for some of the same adverse health hazards as their longer-chain counterparts, including developmental toxicity, endocrine toxicity, hematotoxicity, hepatotoxicity, neurodevelopmental toxicity, and reproductive toxicity. To meaningfully protect California's people and environment, DTSC decided to include carpets and rugs containing any PFASs in its Priority Product designation.

- 2) Alternative 2: List carpets and rugs containing perfluoroalkyl acids (PFAAs) and their precursors as a Priority Product.

Side-chain fluorinated polymers, which are PFAA precursors, are the main type of PFAS treatment used in domestic carpets and rugs. However, perfluoropolyethers, which may not be PFAA precursors, can also be used as carpet and rug treatments. DTSC is concerned about perfluoropolyethers as well, because they are persistent, may be manufactured using PFAAs and contain PFAAs as impurities, and may degrade into PFAAs if incinerated. Incineration for energy recovery is a common end-of-life fate for carpets and rugs in California. Given the known hazard traits, replacing currently-used PFASs in carpets and rugs with other members of the PFAS class could constitute a regrettable substitution. Therefore, to adequately protect California's people and environment, DTSC decided to include carpets and rugs containing any PFASs in its Priority Product designation.

- 3) Alternative 3: List indoor upholstered furniture containing perfluoroalkyl or polyfluoroalkyl substances as a Priority Product.

In January 2017, DTSC held a workshop on carpets, rugs, indoor upholstered furniture, and their care and treatment products. At that workshop, DTSC learned that the upholstered furniture manufacturers usually receive the textile materials pre-treated with PFASs, even when they do not specify a need for PFASs in those materials. In that case, indoor upholstered furniture

manufacturers would be considered an assembler and would not be subject to requirements for manufacturers in the proposed regulations.

- 4) Alternative 4: List care and treatment products for carpets, rugs, upholstery, and other textiles containing perfluoroalkyl or polyfluoroalkyl substances as a Priority Product.

In January 2017, DTSC held a workshop on carpets, rugs, indoor upholstered furniture, and their care and treatment products. Because of the widespread use of carpets and rugs in California homes and workplaces, DTSC decided to first list carpets and rugs containing perfluoroalkyl or polyfluoroalkyl substances as a Priority Product, but may pursue listing care and treatment products containing these chemicals as a Priority Product in the future.

D.2. Costs of Alternatives

DTSC did not attempt to quantify costs associated with any of the Alternatives since none of the Alternatives would have yielded health and environmental benefits approximating the health and environmental benefits provided by including carpets and rugs containing any PFASs in the Priority Product designation. Alternative 1 targets chemicals that industry has already made tremendous strides in phasing out, and Alternative 2 may likely result in manufacturers turning to a regrettable substitute chemical. Alternative 3 would target businesses types that DTSC could not regulate effectively. Alternative 4 does not replace the need for this proposed regulation, and may be pursued subsequently. Pursuing it concomitantly would cast too wide of a regulatory net as to make implementation and enforcement unworkable.

E) Major Regulations

DTSC estimates that regulatory costs to manufacturers of carpets and rugs with any PFASs will be less than the threshold amounts for a "major" regulation cited in Section 11346 of the Government Code and Section 57005 of the Health and Safety Code. Accordingly, DTSC is not required to prepare, and submit for approval, a "Standardized Regulatory Impact Assessment" because the estimated costs incurred by manufacturers of carpets and rugs with any PFASs will be less than \$50 million in the first year. Consequently, DTSC is not required to conduct macro-economic modeling for the proposed rulemaking pursuant to Section 11346 of the Government Code. Similarly, the estimated additional costs for the proposed regulation will be less than the \$10 million Cal/EPA-specific threshold pursuant to Section 57005 of the Health and Safety Code.

II. FISCAL IMPACT STATEMENT

The following information supplements statements in the Economic and Fiscal Impact Statement (STD 399) for the rulemaking proposal titled “Safer Consumer Products Regulations – Listing Carpets and Rugs Containing Perfluoroalkyl or Polyfluoroalkyl Substances.” The section headings and numbers shown below correspond to sections in the Fiscal Impact Statement portion of the STD 399 that require additional information.

A) Fiscal Effect on Local Government

No fiscal impact exists.

B) Fiscal Effect on State Government

Safer Consumer Products (SCP) estimates that the state fiscal impact of adopting this regulation will range from \$900,000 to \$3,245,000 Toxic Substances Control Account (TSCA) in DTSC staff costs for reviewing all Notifications, Abridged Alternatives Analysis (AA) Reports, and two-stage AA reports submitted by manufacturers that use PFASs (Table 2). This calculation uses job classification rates from the State of California Civil Service Pay Scale. Moreover, the costs are dependent on the complexity of the type of AA report submitted.

Table 2: Estimated Fiscal Cost to State Government

	Low	High
Individual Notification and AA	\$20,860	\$75,500
Total (All Notifications and AAs)	\$897,150	\$3,244,610

DTSC estimates these one-time² costs would be absorbed within DTSC’s existing budget. Existing DTSC staff and managers will perform the reviews, and no new personnel resources will be needed to complete these tasks. However, if actual workload exceeds expectations and SCP Program capacity, the Program will initially issue Notices of Ongoing Review, as provided in the SCP regulations, to extend the AA review into subsequent fiscal years. Given substantial uncertainty as to the total number and breadth of AA submittals for this proposed regulation, Notices of Ongoing Review may only partially mitigate SCP’s resource shortfall. For instance, complex two-stage AAs may comprise the bulk of submittals. Should circumstances such as these dictate

² These activities will likely fall within FY 2020-21, depending on the precise timing of regulatory milestones.

that SCP requires additional resources to complete required AA reviews, DTSC will pursue a staffing augmentation through the annual budget process.

SCP anticipates that it is unlikely that all 83 responsible manufacturing entities will submit individual AAs, thus fiscal impacts could be overstated. For instance, SCP assumes for the fiscal cost range in Table 2 that 20 of the 83 carpet manufacturers, which are located in the Dalton, Georgia region, will form a consortium and submit one AA for review. Other manufacturers will likely form consortiums as well. The Program's experience with regulations for Spray Polyurethane Foam and Paint Strippers containing harmful chemicals provides evidence to support this assumption. A decision of the six non-Dalton, Georgia Carpet and Rug Institute member manufacturers to join the Dalton consortium represents one potential 'best case' fiscal review scenario. These circumstances could drive the estimated fiscal impact down to a range of \$772,000 to \$2,792,000 (Table 3).

Table 3: Best-Case Estimated Fiscal Cost to State Government

	Low	High
Individual Notification and AA	\$20,860	\$75,500
Total (All Notifications and AAs)	\$771,970	\$2,791,880

Estimates include costs of review by a variety of technical staff including environmental scientists, toxicologists, engineers, economists, and attorneys. The primary sources of uncertainty in these estimates are as follows: the precise number of manufacturers of carpets and rugs with any PFASs; how many manufacturers will form a consortium to submit a combined AA Report; the number of hours it will take DTSC to review an individual Notification, Abridged AA, or two-stage AA report; and whether any of the 83 identified entities are not manufacturers but assemblers (which would not be required to submit a Priority Product Notification or conduct an AA under SCP regulations).

C) Fiscal Effect on Federal Funding of State Programs

No fiscal impact exists.