



**KEY HIGHLIGHTS:** SAB received a draft policy assessment for single-use plastic bags, prepared by KU Public Administration students.

## **MINUTES**

**February 13, 2018 – 5:30 pm**

**MEETING LOCATION:** City Hall, Municipal Service Operations Conference Room, Ground Floor, 6 East Sixth Street, Lawrence, KS 66044

**Members present:** Jackie Carroll, Ma’Ko Quah Jones, Rachel Krause, Jessi Lee, Kira McPherson, Michael Steinle

**Members not present:** Sharon Ashworth, Tresa McAlhaney, Travis Robinett

**Staff present:** Jasmin Moore, Kathy Richardson

**Public present:** several members of the public were present

- I. **CALL MEETING TO ORDER:** Determine quorum of members. 5:36 pm
- II. Approve January meeting minutes. Motion by Michael Steinle. Second by Jessi Lee. Motion passed.
- III. SAB administrative items
  - a. SAB Membership. SAB member, Sharon Ashworth, was recently appointed to the Planning Commission and submitted a letter of resignation for her SAB position. There are currently three SAB openings. Members of the public are encouraged to explore Board vacancies and apply to serve at <https://lawrenceks.org/board-vacancies/>.
  - b. Common Ground liaison. The Common Ground program is looking to expand application review and engage members of advisory boards – Sustainability, Parks & Recreation, Arts Commission, and garden managers two to three times a year. Motion by Jackie Carroll for SAB to appoint a liaison. Second by Jessi Lee. Motion passed. Because several SAB members are interested in serving in this capacity, staff and chair will administer a random selection.
  - c. SAB priorities and subcommittees
    - i. During the March SAB meeting, the board will discuss reaffirming and/or adjusting priorities for the remainder of 2019. The intent is to vote on priorities and subcommittee structure.
    - ii. Questions for SAB members to consider in preparation for the March discussion:

1. Is there something that motivates you in the SAB current priorities? If not, what does motivate you?
  2. What would it take for Lawrence to be a leader in sustainability?
  3. What work has already been done (foundational document review)?
  4. What subcommittee (existing or new) are you interested in being a part of?
- iii. Staff will provide links to Sustainability foundational documents so that SAB members can review before the March meeting.
  - iv. Rachel Krause shared information about the Metro KC Climate Action Coalition, a new group of local governments organizing around climate change. The mission of the group is to enact and foster proactive strategies, systems and structures within the Metro KC region that will drawdown greenhouse gases, improve climate resiliency and generate corresponding economic, social, and quality of life benefits.

IV. Single-Use Plastics Update.

- a. SAB received a draft policy assessment report for single-use plastic bags, prepared by KU Public Administration students who engaged in researching single use plastics during the fall 2018 semester. The report includes policy research and recommendations from the students, **not** final recommendations from the Single Use Plastic subcommittee. The Single Use Plastic subcommittee is still working to engage multiple stakeholders and hopes to bring a recommendation to SAB later this spring. The student report is included at the end of the minutes and will be posted to the Single Use Plastic section of the SAB webpage.

- V. Action Item: Statement to City Commission about City Manager search. Motion by Michael Steinle to submit a letter from SAB to the City Commission referencing the importance of sustainability in the next city manager. Second by Rachel Krause. Motion passed.

VI. Staff Report

- b. **Commercial Single-stream Recycling Pilot Update** by Kathy Richardson, Solid Waste Manager. The City Commission approved a business plan to pilot commercial single-stream recycling collection in [January 2018](#). Nineteen businesses in the downtown area are currently participating in the pilot and receive recycling collection six days a week at a cost of \$131.56 per month. About 1800 pounds of recyclable materials are collected weekly. The City Commission will receive a report on the pilot in March, including what it would take to continue service to current customers and, or expand the pilot.
  - i. Motion by Ma'Ko Quah Jones for SAB to write a letter to the City Commission expressing support for the value of the existing program and potential to expand. Second by Michael Steinle. Motion passed.
- c. **Solid Waste Rate study** planned for 2019. A rate study will study and evaluate all solid waste collection services, including corrugated cardboard and white office paper, trash, and single-stream recycling.

- d. **Electric Vehicle Charging Stations** at Sports Pavilion. Westar Energy, Inc. approached city staff with an opportunity to engage in a public-private partnership to install Electric Vehicle charging stations at Sports Pavilion Lawrence. Three parking spots on the southeast portion of the lot will be reserved for this installation.

A limited number of strategic sites were identified by Westar within their service territory, including Sports Pavilion Lawrence, to place public charging stations. While over 80% of EV charging takes place at the driver's home, access to a network of public charging stations contributes to reduced range anxiety, one of the primary barriers to EV adoption.

Westar will install and operate:

- One DC FastCharge EV station, with one charging port, which will require one dedicated parking space. The FastCharge station will fully charge an EV in 30 to 60 minutes.
- One Level Two EV charging station, with two charging ports, which will require two dedicated parking spaces. The Level Two station will provide approximately 8-10 miles driving distance per charging hour.

Westar is responsible for all aspects, including funding, of the installation and maintenance of the EV charging stations. The EV charging station users will pay the kilowatt-hour (kWh) charge including applicable riders, surcharges, taxes and fees assessed by Westar.

- e. The City Commission requested staff research examples of how sustainability and equity can be used in policy discussions. Staff is developing a policy scan report.
- f. The [Sustainability Advisory Board webpage](#) (see Additional Resources section) now has links to several **foundational reports**, including the latest Greenhouse Gas Inventory, Climate Protection Plan, and the Peak Oil Taskforce Report. SAB members will review these documents in anticipation of the March meeting to reaffirm/adjust SAB priorities.
- g. **Downtown Master Plan public input.** One of SAB's priorities is to provide feedback on the Downtown Master Plan. The Downtown Master Plan began public engagement process in early February. The best way for SAB to find out about when and where they can engage in the process is to receive email updates, which can be done on the City's website (<https://lawrenceks.org/strategic-plan/downtown>). There is also an opportunity to provide feedback on the project website <http://www.hlplanning.com/portals/lawrence/>

## II. Key takeaways to share with the City Commission

- a. SAB received a draft policy assessment for single-use plastic bags, prepared by KU Public Administration students.

## III. Future Agenda Items

- a. March: Reaffirm/ adjust SAB priorities
- b. April: Sustainability Annual Report, including greenhouse gas inventory results

## IV. Member Updates

- a. Michael Steinle is working on a Smart City in the Middle East and is using the STAR rating system to influence the sustainability of the project design.

V. Public Comment. None.

VI. Adjourn 7:30 pm

**Next regular SAB meeting:**

March 13, 2019 at 5:30 p.m.

Venue: Parks and Recreation Administration Building in South Park, 1141 Massachusetts St, Lawrence, KS 66044

**Please note:** This report includes policy research and recommendations from the University of Kansas Masters of Public Administration Class. These are **not** final recommendations from the Sustainability Advisory Board. The Sustainability Advisory Board is still working to engage multiple stakeholders and hopes to bring a policy recommendation forward in spring 2019.

## **Assessment of Policy Alternatives to Reduce the Consumption of Single-Use Plastic Bags in the City of Lawrence, Kansas**

**Prepared for the Lawrence Sustainability Advisory Board  
by University of Kansas Masters of Public Administration Class, PUAD 853  
Fall 2018**

### **Estimate of Current Consumption**

**City of Lawrence residents are estimated to use between 29.7 and 35.4 million plastic shopping bags, annually.** This is calculated by multiplying the 2017 population of Lawrence (96,892) with commonly accepted range of national estimates of annual per capita plastic bag use in the United States.

- Plastic bag use is difficult to measure, but many current estimates suggest that approximately 100 billion plastic bags are used in the US each year.<sup>1</sup>
- National estimates of per capita annual consumption of single-use plastic bags range from 307 to 365.<sup>2</sup> Local estimates are typically somewhat higher, ranging from 335 in Austin to 511 in Seattle.<sup>3</sup>

### **Single-use Plastic Bags Defined**

Although there are several different types of single-use plastic bags - including newspaper bags, produce bags, and food storage bags - **this report and the policies it considers focus only on non-reusable plastic shopping bags provided by retail establishments.** Standard plastic shopping bags given out at retail establishments such as Walmart and Dillons are .5 mils thick, or .5 thousandths of an inch. **We define single-use plastics bags as those 4.0 mils thick or less.**<sup>4</sup>

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<sup>1</sup> Wagner, Travis P. 2017. "Reducing single-use plastic shopping bags in the USA" *Waste Management*. 70: 3-12

<sup>2</sup> USITC, 2016; National Geographic Fast Facts about Plastic Pollution.

<https://news.nationalgeographic.com/2018/05/plastics-facts-infographics-ocean-pollution/>

Using the less conservative National Geographic estimate, Lawrence residents utilize 35.4 million bags a year.

<sup>3</sup> Wagner 2017

<sup>4</sup> A number of jurisdictions, including the state of California and the City of Chicago use 2.25 mils as the cut-off between what is considered reusable or not. However, some retailers including Target responded by simply giving out thicker plastic bags and anecdotal research suggests most consumers continue treating them as single use. As a result we suggest a 4.0 mils as the standard, for reusable bags, which was used the City of Austin, TX and others. (Elejalde-Ruiz, Alexia. 2015. "The result of Chicago plastic bag ban: Shopping bags to be sturdier."

[www.chicagotribune.com/business/ct-plastic-bag-ban-0622-biz-20150622-story.html](http://www.chicagotribune.com/business/ct-plastic-bag-ban-0622-biz-20150622-story.html)

## Policy Criteria

Each policy alternative considered to reduce plastic shopping bag use will be assessed according to the following criteria:

### **Achieves reduction of single-use plastics (effectiveness)**

1a: % reduction in single-use plastic bags being consumed each year in Lawrence

### **Operates at low net cost (cost)**

2a: Annual expected net cost (or benefit) to City of Lawrence

2b: Annual expected net cost (or benefit) to businesses in Lawrence

2c: Annual expected net cost (or benefit) to “average” family of 4 in Lawrence

### **Does not disproportionately burden disadvantaged groups in community (equity)**

3a: Expectation of impact on the ease with which Lawrence residents with disabilities will have needs met

3b: Relative average cost to a low income Lawrence family (under poverty line) compared to Lawrence family with median income as a proportion of overall annual income.

**Policy 1: A ban prohibiting retail establishments from distributing single-use plastic shopping bags (under .4 mils thick) to customers. This regulation exempts bags used to carry bulk items (like fruits, vegetables and nuts) and raw meat and seafood. Paper bags or larger reusable plastic bags (over .4 mils) may be purchased from the retail establishment for \$.10 each. Retailors will have the prices of bags for purchase clearly displayed. A fine will be applied retailors found acting in violation of this ordinance. Enforcement will be complaint generated.**

**Three cents of every \$.10 collected from the sale of paper or reusable bags will go back to the retailer.<sup>5</sup> The remaining \$.07 will be split evenly between funds to support local environmental initiatives and low income Lawrence residents.<sup>6</sup>**

Similar bans are not without precedent: At least 349 local governments in the United States have adopted a ban on single-use plastic bags.<sup>7</sup> In most cases, this ban is accompanied by a fee on paper or reusable plastic bags. The per bag fees range from \$.05 to \$.50, with the most common fee being \$.10.<sup>8</sup> California was the first state to ban plastic bags state-wide in 2014 with New

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<sup>5</sup> This is equal to the difference between the cost to produce standard grocery bags (\$.01) and the price to produce paper bags (\$.04). (Source: Conway, Chris. 2007. Taking Aim at All Those Plastic Bags. The New York Times. [www.nytimes.com/2007/04/01/weekinreview/01basics.html](http://www.nytimes.com/2007/04/01/weekinreview/01basics.html))

<sup>6</sup> The City can of course decide how these funds will actually be used.

<sup>7</sup> Forbes. 2018. [www.forbes.com/sites/trevornace/2018/09/20/heres-a-list-of-every-city-in-the-us-to-ban-plastic-bags-will-your-city-be-next/#2e4ef3c83243](http://www.forbes.com/sites/trevornace/2018/09/20/heres-a-list-of-every-city-in-the-us-to-ban-plastic-bags-will-your-city-be-next/#2e4ef3c83243)

<sup>8</sup> According to Forbes, 106 of the 349 cities with plastic bag bans charge a \$.10 fee for paper or reusable plastic alternatives.

York and New Jersey poised to be the second and third. Hawaii, by virtue of all its most populous counties enacting bans, also effectively has a state wide ban on single-use plastic bags.

The intention of an outright ban is to eliminate the use of single-use plastic shopping bags entirely. The environmental ideal would see everyone switching to reusable shopping bags in response to the ban. However, some portion of people will opt to purchase paper bags or reusable plastic bags (which may or may not actually be reused). Each of these have their own associated environmental costs.

It is hard to predict the net behavioral response of Lawrence residents' to this ban. However, various studies conducted elsewhere have found the following:

- Prior to the adoption of the state-wide ban, the average response of residents in several California municipalities was: 46% of customers facing a ban and 47% of customers facing a fee chose to bring reusable bags rather than purchase disposable ones.<sup>9</sup>
- In Washington DC, residents self-report that they use an average of 60% fewer bags a week in response to a \$.05 fee on single-use bags.<sup>10</sup>
- Santa Barbara, California (2016), where a \$.10 fee on paper bags and ban on plastic bags resulted in an 89.3% reduction in consumption of both bags.<sup>11</sup>

The observed variation may be a result of differences in policies; differences in the consumer population; as well as differences in the study methodology utilized. Interestingly, bans and fees have been found to have similar effects on encouraging customers to bring reusable bags and reducing the overall consumption of single use bags.<sup>12</sup>

**The following parameters will be used in the forecast analysis:**

- We assume the most conservative estimate of bag use: 307 bags per Lawrence resident per year.
- We assume that the ban is fully enforced and eliminates the distribution of single-use plastic shopping bags by retailers in Lawrence;
- We initially assume that the ban will result in shoppers bringing their own reusable bags 60% of the time and 40% of the time shoppers will opt to purchase paper or reusable plastic bags from the retailer.<sup>13</sup>
- Paper bags or larger reusable plastic bags hold 1.5 times the volume of groceries that do standard single-use plastic shopping bags.

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<sup>9</sup> Taylor and Villas-Boas. 2105.

<sup>10</sup> Washington, DC Department of Energy and Environment. <https://doee.dc.gov/service/purpose-and-impact-bag-law>

<sup>11</sup> Taylor and Villas-Boas. 2015.

<sup>12</sup> Taylor and Villas-Boas. 2015.

<sup>13</sup> This is the middle estimate in the range of impacts described above. There is considerable uncertainty in these behavioral effects, and sensitivity analyses will be used to account for it.

## Predicted outcome

The implementation of this ban and fee combination is estimated to **eliminate the distribution of single-use plastic shopping bags in the city**. Based on the “best guess” that the policy will result in 60% of shoppers bringing their own reusable bags, with the remaining 40% purchasing paper or reusable plastic bags, **total disposable shopping bag use will be reduced by 21.78 million bags per year**. An estimated **7.92 million paper or reusable plastic bags will be sold each year at \$.10 each**. This is estimated to:

- Raise \$792,000 in revenue each year.
- Cost an average of \$8.17 per person and \$32.70 per family of 4 each year.
- Result in \$237,600 going to retailers to reimburse the cost of more expensive bags and \$277,200 going to support environmental initiatives and \$277,200 going to support low-income Lawrence residents.

## Sensitivity Analysis

The biggest uncertainty with these forecasts involves the assumed behavioral response to the policy on the part of Lawrence residents. Although our “best guess” is that it will result in the equivalent of 60% fewer single-use plastic bags, studies indicate that the response could be significantly higher or lower. A sensitivity analysis is conducted to generate similar estimates on a “reasonable” range of behavioral responses: 45% to 90% reduction.

Given this, the implementation of this ban and fee combination is estimated reduce the total consumption of **disposable shopping bags by between 18.81 and 27.72 million per year**. Between **1.98 and 10.98 million paper or reusable plastic bags will be sold each year at \$.10 each**. This is estimated to:

- Raise between \$198,000 and 1,098,000 in revenue each year.
- Cost an average of between \$2.04 and \$11.24 and between \$8.17 and \$44.96 per family of 4 each year.
- Assuming the City follows our recommended distribution plan, each year between \$59,400 and \$326,700 will go to retailers to reimburse the cost of more expensive bags. Equivalent amounts of between \$69,300 and \$381,150 will be used support each local environmental initiatives and low-income Lawrence residents.



**Policy 2: All retailers in the City of Lawrence will charge shoppers a \$.10 per bag fee upon checkout. This fee applies to both single-use plastic and paper bags. Bags used to carry bulk items (like fruits, vegetables and nuts) and raw meat and seafood are exempt from charge. Retailors will have prices for bags for purchase clearly displayed.**

**The revenue collected from bag sales will be split evenly between funds to support local environmental initiatives and low income Lawrence residents.<sup>14</sup>**

As it currently stands in Lawrence, retailers incorporate the price of a plastic or paper bag into the price of their products. Therefore, consumers do not directly see the cost of their bags and have the impression that they are free. The purpose of a fee would be to modify consumer behavior by presenting a visible, monetary increase in the price of single-use plastic carrier bags with the expectation that consumption will decrease by change in consumer behavior. In turn, pollution and negative environmental impacts from litter will be reduced.

Although not as common as the ban and fee combination, numerous local governments have approach the problem of single-use plastic bag over-use by allowing their continued use, but charging a fee for them. In US local governments, these fees are generally in the 5 to 10 cent range.<sup>15</sup> Some suggest that because the per bag cost to society is larger than these amounts the fee charged to purchase a bag should be higher. A 2006 study, the cost of both plastic and paper single-use carrier bags to society was approximated to be over ten-cents per bag. Therefore, it was suggested that the “Pigovian tax”, which is a tax levied on the producer of negative environmental externalities to off-put the social cost of the activity, be at least eleven-cents per bag.<sup>16</sup> Municipalities that have implemented bag fees based on the Pigovian tax include Boulder, Colorado, where a bag fee of \$0.198 was implemented to cover government external costs, administrative and retailer costs, and solid waste management costs.<sup>17</sup> In San Francisco, California, a \$0.17 fee was implemented based on estimated social costs of recycling stream, contamination of compostable trash, collection and disposal of bags, litter clean up, and processing landfills.<sup>18</sup>

Although the resulting waste streams will be different, as described previously, bans and fees are found to have similar behavioral effects on encouraging customers to bring reusable bags and reducing the overall consumption of single use bags. Moreover, whereas higher fees to result in

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<sup>14</sup> The City can of course decide how these funds will actually be used and may choose something entirely different.

<sup>15</sup> Forbes. 2018. <https://www.forbes.com/sites/trevornace/2018/09/20/heres-a-list-of-every-city-in-the-us-to-ban-plastic-bags-will-your-city-be-next/#1b8742dd3243>

<sup>16</sup> Akullian, A., Karp, C., Austin, K., Durbin, D., 2006. Plastic bag externalities and policy in Rhode Island. Brown Policy Review, Brown University, Providence, Rhode Island.

<sup>17</sup> Brendle Group (2012). Triple bottom line evaluation: Plastic bag policy options. City of Fort Collins, Colorado. <http://www.fcgov.com/recycling/pdf/triple-bottom-line-evaluation-plastic-bag-policyoptions-10-2012.pdf>.

<sup>18</sup> Burnett, H.S., (2013). Do bans on plastic grocery bags save cities money? Report #353. National Center for Policy Analysis. <http://www.ncpa.org/pdfs/st353.pdf>.

decreased consumption, the effect is not as dramatic as one might expect. The primary intervention is in breaking the expectation that bags are costless.<sup>19</sup>

**The following parameters will be used in the forecast analysis:**

- We assume the most conservative estimate of bag use: 307 bags per Lawrence resident per year.
- We assume the fee will be implemented by retailers as described.
- We initially assume that the ban will result in shoppers bringing their own reusable bags 60% of the time and 40% of the time shoppers will opt to purchase paper or reusable plastic bags from the retailer.<sup>20</sup>

**Predicted outcome**

Based on the “best guess” that the implementation of a \$.10 per bag policy will result in a 60% reduction in the use of single-use shopping bags, this will result in a reduction of approximately **17.82 million bags per year**. Approximately 11.88 million bags will be sold at \$.10 a piece, resulting in:

- \$1,188,000 in revenue raised each year.
- Costs on average of \$12.26 per person and \$49.00 per family of 4 each year.
- \$594,000 going to support environmental initiatives and \$594,000 going to support programming for low-income Lawrence residents.

**Sensitivity Analysis**

Again, biggest uncertainty with these forecasts involves the assumed behavioral response to the policy on the part of Lawrence residents, so we provide estimates associated with a reasonable range around our “best guess.” A sensitivity analysis is conducted to generate estimates on a behavioral responses that result in a 45% to 90% reduction in bags.

Given this, the implementation of this ban and fee combination is estimated reduce the total consumption of **disposable shopping bags by between 13.37 and 26.73 million per year**. In terms of costs, this is estimated to:

- Raise between \$297,000 and \$1,633,500 in revenue each year.
- Cost an average of between \$3.07 and \$16.86 and between \$12.00 and \$67.00 per family of 4 each year.
- Assuming the City follows our recommended distribution plan, each year equivalent amounts of between \$148,500 and \$816,750 will be used support each local environmental initiatives and low-income Lawrence residents.

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<sup>19</sup> Ohtomo, S., Ohnuma, S., 2014. Psychological interventional approach for reduce resource consumption: Reducing plastic bag usage at supermarkets. *Resour. Conserv. Recyc.* 84, 57–65.

<sup>20</sup> This is the middle estimate in the range of impacts described above. There is considerable uncertainty in these behavioral effects, and sensitivity analyses will be used to account for it.

**Policy 3: An annual education campaign “blast” and reusable bag give-away held as an optional compliment to the ban or fee (i.e. this is not a stand-alone recommendation). The first round of the campaign would coincide with the initial implementation of the primary policy and subsequent ones would be scheduled to coincide with the start of the academic school year.**

Community education is a common initial step in the effort to reduce the amount of single-use plastics in a community and/or improve recycling behavior. They can enhance the efficacy of other policies, but have been found minimally effective on their own. This is because they have an expectation that they are free, and consumer behavior is entrenched.<sup>21</sup>

Action steps for this approach include a multimedia communication strategy to consumers managed by local government and or retailers.<sup>22</sup> Additionally, an education strategy to include signage and notices at point of sale locations is important to change the consumer attitude that SUPB’s are truly not a “free” commodity.<sup>23</sup> Moreover, education can be used to counter some of the most common arguments against plastic bag policies, which include: that they will cause economic harm, that bags are drop in the bucket in terms of the overall litter and plastics waste problem, environmental undesirability of the alternatives such as paper bags, that people employ bags for secondary uses bags (e.g. trashcan liners), that people may get sick from using reusable bags, and that ordinances generally disrupt residents’ current habits and ways of doing things.<sup>24</sup> Effective education campaigns may strategically target the most locally salient of these areas of push-back.

An initial education campaign and reusable bag give away should precede and coincide with the launch of the adopted primary policy. In Lawrence we suggest that an education “blast” re-occur every August as KU students return to town. Throughout the year, obvious signs should be posted at all cash registers explaining the rationale for the policy.

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<sup>21</sup> Sharp, A., Wheeler, M., & Hoj, S. (2010). Proscription and its impact on anti-consumption behaviour and attitudes: the case of plastic bags. *Journal of Consumer Behaviour*, 470-484.

<sup>22</sup> Wagner, 2017.

<sup>23</sup> Sharp, A., Wheeler, M., & Hoj, S. (2010). Proscription and its impact on anti-consumption behaviour and attitudes: the case of plastic bags. *Journal of Consumer Behaviour*, 470-484.

<sup>24</sup> Schwanke, Crystal. “Why should we not ban plastic bags.”  
[https://greenliving.lovetoknow.com/Why\\_Should\\_We\\_Not\\_Ban\\_Plastic\\_Bags](https://greenliving.lovetoknow.com/Why_Should_We_Not_Ban_Plastic_Bags)

## Trade-off Assessment

Outcome Matrix				
Policy Criteria	Impact Category	SUP bag Ban and \$.10 fee for alternatives	\$.10 fee for all bags	Education add-on
Achieves reduction of single-use plastics (effectiveness)	Reduction in single-use plastics bags being consumed each year in Lawrence (%)	V. High - Eliminates local plastic shopping bags. 21.8 million bags removed from waste stream.	High - Eliminates 17.82 bags per year. Single-use plastics remain in waste stream.	Likely to increase behavioral change generated by both options.
Operates at a low cost (cost)	Annual expected net cost (or benefit) to City of Lawrence	Low - Initial administrative cost offset by \$0.035 bag fee benefit for local envi initiatives. (\$277,200)	Low - Initial administrative cost offset by \$.05 bag fee benefit for local envi initiatives (\$594,000)	Will increase cost to the city, but should be able to be paid for with environmental initiative fund.
	Annual expected net cost (or benefit) to businesses in Lawrence	Low - There will be some initial costs for training and software adjustment, but on-going costs will be offset by \$.03 portion of bag fee returned to stores. (\$237,600)	Modest - Some initial costs for training and software adjustment. More customers may opt for paper bags which cost retailers slightly more.	No impact.
	Annual expected net cost (or benefit) to "average" family of 4 in Lawrence	Modest - Expected to cost average family \$32.70 a year.	Modest - Expected to cost average family \$49.00 a year.	Somewhat reduce, if education and free bags results in less disposable bags purchased.
Does not disproportionately burden disadvantaged groups in community (equity)	Expectation of impact on the ease with which Lawrence residents with disabilities will have needs meet	Low - alternatives to SUP bags will be widely available.	Low - both SUPs and alternatives still widely available.	No impact.
	Relative average cost to a low income Lawrence family (under poverty line) compared to Lawrence family with median income as a proportion of overall annual income	Modest - The costs associated with paying for bags will have a greater proportionate impact on the low income. The effect can be reduced by a greater use of re-usable and maybe indirectly offset with the additional funding for programming to benefit the low income residents, provided by the \$.03 portion of bag fee. (\$277,200)	Modest - The costs associated with paying for bags will have a greater proportionate impact on the low income. The effect can be reduced by a greater use of re-usable and maybe indirectly offset with the additional funding for programming to benefit the low income residents, provided by the \$.05 portion of bag fee. (\$594,000)	Somewhat reduce, if education and free bags results in less disposable bags purchased. Low income can be prioritized for reusable bag giveaways.