



## City of Broken Arrow

City Hall  
220 S 1st Street  
Broken Arrow OK  
74012

### Minutes Broken Arrow Citizens Recycling Committee

*Chairperson Russell Peterson*  
*Vice Chairperson E.J. Hardwick*  
*Member Jim Hoffmeister*  
*Member Johnnie Parks*  
*Member Dawn Seing*  
*Member Tom Hahn*  
*Member Jill Spurgeon*  
*Member Rebecca Wood*  
*Member Michelle Bergwall*  
*Member Tom Chatterton*  
*Member Chris Taylor*  
*Alternate Member Scott Eudey*

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#### 1) Call to Order

Chairperson Russell Peterson called the meeting to order at approximately 6:00 p.m.

#### 2) Roll Call

**Present: 8 -**

Russell Peterson, E.J. Hardwick (*left meeting at 7:55 p.m.*), Jim Hoffmeister, Johnnie Parks, Dawn Seing, Tom Hahn, Jill Spurgeon, Rebecca Wood, Michelle Bergwall (*left meeting at 7:50 p.m.*), Alternate Member Scott Eudey (*left meeting at 6:55 p.m.*)

**Absent: 2 -**

Tom Chatterton, Chris Taylor

**Resource Team:**

Russell Gale, Lee Zirk, Bill Cade, Lisa Blackford

#### 3) Introductions

Kate Vasquez, Senior Consultant for Gershman, Brickner & Bratton, Inc.  
Dennis Wise, Vice President, Waste Zero, City bag supplier  
Robert Pickens, Vice President of Recycling American Waste Control  
Graham Brannin with the MET

#### 4) Discuss and review results of the pilot project

- **Pilot project and results, Kate Vasquez**
- **Bag program and information, Dennis Wise**
- **Recycle program information, Robert Pickens**

Kate Vasquez, Senior Consultant for Gershman, Brickner & Bratton, Inc. reviewed a document which illustrated the entire Pilot project and results. She noted the document included the survey which revealed the citizens were interested in recycling even understanding there may be a trash pickup cost increase associated with a recycling program. She noted the document included a report regarding the work accomplished by the Broken Arrow Citizens Recycling Committee who ultimately recommended the dual Pilot Program to Broken Arrow Municipal Authority (BAMA) to include once a week pickup and elimination of the plastic garbage bag distribution. She noted the pilot program began in January 2018 and listed the individuals and staff members who worked on the pilot program team. She noted great effort went into selecting an area to conduct the Pilot Program which would include a wide variety of Broken Arrow Citizens. She indicated the public outreach program, as organized by Krista Hemme, was excellent. She noted surveys were conducted during the Pilot Program. She stated recycling carts were distributed to citizens to store recyclables. She stated "oops" tags were distributed when necessary, which relayed an error in recycling material, cart placement, etc.

Kate Vasquez reported participation was excellent; page 10 displayed pounds of recycling and pounds of trash for each pilot area. She noted the one cart plus garbage bags pilot area put out more garbage and more recycling. Chairperson Peterson noted the one cart plus bags pilot area was a slightly more affluent area which could account for the increase in waste materials. Ms. Vasquez agreed this was a possibility.

Ms. Vasquez reported close to 60% of participants set out recycling. She discussed the recycling rate and the influence of yard waste upon the recycling rate. She reported the two cart pilot program had a higher rate of contamination than the one cart/bags pilot program. She noted the two cart pilot program had pickup on Thursday and the one cart/bags pilot program had pickup on Friday. She indicated recycling contamination cost the City money.

Ms. Vasquez stated page 14 provided feedback from the recycling processor regarding the various materials each pilot program area recycled and types of contamination for each pilot area. She discussed public education options to encourage less contamination and better understanding of proper recycling materials. Chairperson Peterson asked about "properly prepared" recycling materials. Ms. Vasquez responded a properly prepared recycling material was a lightly rinsed item when necessary (such as a dog food can) not stored inside a plastic bag. Committee Member Dawn Seing stated it was important for residents to understand non-recyclable waste materials went to Covanta and was converted into clean energy as this knowledge might encourage less contamination and less guilt about disposal of non-recyclable materials.

Chairperson Peterson noted many participants stored proper recyclable materials in plastic bags which caused contamination, and others attempted to recycle grocery store bags which were a contaminant. Ms. Vasquez indicated two types of messages should be sent with the public outreach education program: instructions on how to use the recycling system and instructions on how to reduce recycling contamination, such as encouraging residents to recycle plastic grocery store bags by placing the bags in recycling receptacles found at grocery stores. She discussed possible reasons citizens were placing trash in the recycling bins and discussed public education in this regard. Committee Member Johnnie Parks recommended consideration of recycling cart removal from homes which consistently disposed of trash inside recycling bins. Ms. Vasquez agreed and stated it was a fairly standard practice to remove a citizens recycling cart after multiple violations. She noted some municipalities send representatives to speak with citizens to determine if the violations are a result of not understanding how the cart should be used. Chairperson Peterson asked about establishment of guidelines in this regard. Ms. Vasquez responded guidelines were typically established through City Ordinance which indicated improperly used carts could be removed, such as using the cart to dispose of trash or using the cart on personal property for a completely different purpose; recycling carts were for disposal of recyclable materials only.

Committee Member Jim Hoffmeister asked what the target contamination rate should be. Ms. Vasquez responded a good target rate was 10% contamination or less. Mr. Robert Pickens, Vice President of Recycling with American Waste Control reported 15% or less was an acceptable target rate. He noted American Waste Control ran recycling programs which were being maintained at 10% or less; however, it took time and public education to reach this goal.

Ms. Vasquez noted she spent some time in April with Solid Waste Management, spot checked pilot program recycling carts, most of which were "okay" or "better" (she displayed a chart which illustrated these categories). She stated most contaminated carts held proper recycling materials stored in non-recyclable plastic bags; however, teaching citizens to place recyclables directly into the cart without bagging the recyclables was an achievable goal. She noted once a week pickup was not causing difficulties in either program; however, the trash cart better containerized the waste materials.

Kate Vasquez reviewed the survey materials. She explained demographically most residents who participated in the survey were older retired individuals. She noted attitudes regarding the carts moved towards the negative after use due to difficulty maneuvering the cart. She explained there were many ways this difficulty could be alleviated. She reported overall survey responses were very positive and the questions residents had negative or ambivalent responses to were expected.

Kate Vasquez noted there were many changes in the world of recycling, especially in the worldwide recyclables commodity market; acceptable recyclable materials were changing, foreign companies were establishing recycling plants in the U.S., and marketable materials post recycling were changing. She reported as a result processing costs have increased. Discussion ensued regarding the possibility of a glut on the market lowering recycling costs, oversupply not affecting costs at this stage, glass being recyclable at a

negative value due to transportation costs, other municipalities not allowing glass recycling, needing to decide now whether Broken Arrow would permit glass recyclables, the State of Oklahoma having three glass processing plants which wanted glass materials, various uses for recycled glass, recycled glass shipping costs and methods, influx of microbreweries creating a glass recycling demand, it being easier to add a permissible recyclable material than to remove a permissible recyclable material, Covanta not benefitting from glass, glass being used more often due to the negative image of plastic, and glass being found on the bottoms of lakes, rivers and the ocean as often as plastic.

Ms. Vasquez noted there were other options for glass recycling, such as setting up drop off points throughout the City. Alternate Committee Member Scott Eudey asked if the Met would be able to fill the glass recycling gap. Mr. Graham Brannin responded in the affirmative; the Met was considering how best to collect clean glass recycling materials. Chairperson Peterson noted once Broken Arrow implemented the City wide recycling program the Met would have a lower influx of recyclable materials. He asked if the Met depot would be negatively affected as a result. Mr. Brannon responded in the negative; he did not believe this would be the case. He reported when Tulsa implemented its recycling program the Met was not negatively affected. He stated he believed the Met would fill a niche the curbside program would not. He noted there were many products which were not recyclable curbside, but were still extremely recyclable, such as electronics, batteries, liquids, etc. Mr. Brannon noted recycling was a constantly changing market and the Met was constantly changing to accommodate the market. Ms. Vasquez noted it was very common for communities with curbside recycling to also have drop-off centers.

Ms. Vasquez noted the Committee was asked to consider the merits of recycling. She indicated preliminary cost analysis indicated it may be possible with rerouting to keep the current sanitary fleet level. Chairperson Peterson asked if cities normally purchased or leased carts. Ms. Vasquez responded this varied from city to city. She noted Broken Arrow typically chose to own and manage its own equipment; however, there were other options, such as leasing.

Ms. Vasquez reported the pilot program determined once a week pickup worked wonderfully and tremendously reduced operation costs. She reported there were many positive reasons to support the addition of recycling; there was good participation, good tonnage, and good set out, as well as demonstrated interest from the public at-large and the Committee. She stated in regards to which recycling process was the best choice, if looking strictly at the data, the one cart system was optimal; however, if a household chose not to recycle, said household would have a week's worth of garbage in bags which could be problematic. She noted in the pilot program the residents were still utilizing the high quality City-issued bags; however, if these bags were no longer distributed the use of regular kitchen bags could be problematic due to animals, breakage, etc. She noted cart and bag pickup was a slow process for the sanitary workers; however, there would always be bag pickup regardless of single cart/dual cart use, unless yard waste was picked up separately.

Chairperson Peterson asked about the truck logistics. Mr. Bill Cade responded separate trucks were used for recycling and trash and the trucks followed slightly different routes. Ms. Vasquez noted with City-wide implementation the recycling trucks would have a different route and a different pickup speed due to recycling pickup varying from house to house and cart usage for recycling.

Kate Vasquez reported and discussed the four recycling options: 1) The two cart (one recycling and one trash) system. 2) The one cart recycling and trash bag system. 3) The one cart garbage only system. The City could choose not to implement recycling at this time, but reroute the City for once a week pickup with trash cart implementation, and reconsider recycling at a later date. 4) The bag only system with once a week pickup; however, this was not recommended as there would be too much trash material set out in bags.

Ms. Vasquez noted the one cart system had better data results, the City would only be required to purchase a single cart per home, and a more efficient side loading truck could be phased in, which would enable a quicker pickup time with single driver/single helper operation, as opposed to a driver and two helpers. She explained the City would reroute to once a week pickup, there would be trash routes and recycling routes, the current fleet would be sufficient with a possibility of leasing an extra truck or two, and automatic side loaders

could be gradually added into the fleet for recycling cart pickup. Discussion ensued regarding impacts on mileage and computerized truck routes being more efficient.

Committee Member Johnnie Parks asked about recycling cart placement statistics. Ms. Vasquez noted approximately 50% of recycling carts were set out weekly. She explained residents indicated carts were not set out every week as the carts were not full every week. Committee Member Parks asked about bag usage. Ms. Vasquez indicated if Broken Arrow no longer provided bags residents would be placing kitchen bags and possibly grocery bags with garbage curbside; therefore, Broken Arrow might still need to provide garbage bags to residents if the one cart and trash bag system was chosen; however, the City would not need to supply as many bags. Chairperson Peterson noted during the City Council Meeting discussion of the recycling pilot programs many residents indicated a preference for garbage bag pickup. He noted residents appreciated not having to bring a cart back up to the house at the end of trash pickup day. Discussion ensued regarding residents currently utilizing personal carts for trash, bags becoming problematic if not being provided by the City, the number of bags currently being distributed by the City, workers compensation complaints with bag pickup, cart utilization significantly reducing workers comp complaints, trash bag pickup no longer being sustainable due to bag cost and personnel cost, the difficulty in hiring personnel willing to pickup trash bags, the benefits and efficiency of a two cart system, the possibility of rolling out a two cart system over several years, side loading trucks versus rear loading trucks, Tulsa's trash and recycling collecting system, using one truck for both recycling and trash by collecting trash first, dumping, and then collecting the recycling, side loading trucks being difficult to maneuver in cul-de-sacs, and utilizing smaller trucks in tighter neighborhoods.

Ms. Vasquez stated Gershman, Brickner & Bratton, Inc.'s recommendation was the one cart/bags system due to being the most streamlined and having the best data; however, if the Committee wished to recommend a two cart system, and the City chose a two cart system, GBB believed this would also be highly successful, especially considering how successful the dual cart system was across the U.S. She noted if Broken Arrow chose a two cart system public education would be geared towards discouraging contamination.

Vice President of Waste Zero Dennis Wise distributed copies of his presentation. He reported Waste Zero was not a consulting company and was not present to refute Ms. Vasquez. He indicated he wished to provide another option to the City of Broken Arrow through continuation of the trash bag program with inclusion of a recycling bag program. He stated Waste Zero was the Nation's largest waste reduction firm with over 350 bag-based pay-as-you-throw programs throughout the United States. He indicated Waste Zero worked with communities to greatly reduce the amount of solid waste generated and sent to landfills. He reported Waste Zero's average diversion rate was 45%. He stated Waste Zero was a B Corp (Benefit Corporation), much like Patagonia, Seventh Generation, and Whole Foods, with aims to improve the environment. He stated Broken Arrow might be the only City in Oklahoma with a bag give-away program; however, the State of Texas had over 50 bag give-away programs. He noted use of a standardized bag reduced workers comp claims as it reduced the possibility of overweight or oversize bags.

Dennis Wise reported after listening to Gershman, Brickner & Bratton, Inc. (GBB) presentation he understood recycling bins were not an item Broken Arrow was considering; therefore, he would not discuss bins. He noted carts were expensive; it would cost over \$2 million dollars to supply the entire City with carts. He indicated it was his experience many individuals did not appreciate carts, especially the older generation. He noted the City could lose carts during flood times. He noted on top of cart cost itself, the trucks would need to be refitted which was costly; however, bags did not require truck refitting of any sort. He stated some individuals did not enjoy rolling the cart to the curb and did not like the eyesore of a cart on the roadside. He noted carts took a longer time to collect by sanitation crews.

Mr. Wise reported bags were convenient to use and was currently the status quo in the City of Broken Arrow. He stated with bags there was no large capital expenditure, there was unlimited capacity, and bags were consistent with current protocol.

Mr. Wise explained the concept of co-collection: when the same vehicle collected both trash and recycling. He noted this was a possibility when bags were used for both trash and recycling. He noted when using a clear bag for recycling collection, sanitary workers would be able to identify and properly dispose of

recycling bags used for trash, reducing contamination. He stated in a pay-as-you-throw model most often approximately 50% of bags collected were trash and 50% were recycling.

Mr. Wise noted he spoke with Mr. Robert Pickens with American Waste Control today and Mr. Pickens indicated American Waste Control did not have a bag breaker which could handle the volume of Broken Arrow recycling; therefore, efforts would be made to finance a larger bag breaker system for American Waste Control. He stated the most cost effective method of recycling was with a bag system, the bag system was more efficient as it could be collected quickly, no capital investment was required, and trash/recycling could be easily tracked through the clear bag system and voucher redemption. He stated the bag system would not be an additional cost to the City as residents would not require additional bags; some bags would be for recycling and some would be for garbage materials.

Committee Member Dawn Seing commented the two bag system was considered at the start of the Recycling Committee process. She explained after visiting various recycling facilities it was determined bagged recycling was not the preferred method of collection and it was felt the health of the workforce, along with a reduction of workers compensation claims, was important as well. She stated she did not see how a dual bag system would make any improvements in manpower hours, worker health or workers compensation claims. Discussion ensued regarding bag color, educational materials regarding contamination, workers not being willing to work in the heat and the cold hauling bags daily, needing three or four workers per truck for bag pickup, needing one or two workers per truck for cart pickup, dual colored reversible bags, the cost of clear bags being a little higher than the cost of black bags, dual colored reversible bag cost being higher than black or clear bags, and the percentage of bag distribution for recycling versus trash.

Mr. Tom Hahn, Home Owners Association (HOA) Board of Directors, stated he received feedback from his residents. He noted the biggest complaint he received regarding the cart system was difficulty to store and roll. He noted in his neighborhood a large portion of the residents were older and had difficulty with the carts; his neighbor experienced an accident pushing the cart which resulted in a trip to the hospital with a broken nose, broken glasses, facial abrasions and skinned knees, elbows, and knuckles. He stated he personally felt the cart was poorly designed and unbalanced, as well as too large and difficult to store. He indicated the carts should be smaller and have four wheels rather than two.

Mr. Wise agreed carts had drawbacks. He stated it seemed Broken Arrow's biggest concerns were efficiency and cost. He noted Waste Zero would work with Robert Pickens and American Waste Control to ensure the American Waste Control (AWC) facility was able to process bagged recycling. He explained a two bag system would be the simplest method to implement a recycling program in the City of Broken Arrow; the City could always choose to initiate a cart system or other system in the future. He asked the Broken Arrow Citizens Recycling Committee to consider Waste Zero's recommendation of a two bag recycling and trash pickup system.

Mr. Robert Pickens reported American Waste Control (AWC) provided curbside recycling. He noted in an effort to curb contamination his company allowed residents to opt out of recycling. He explained most residents who did not wish to recycle would utilize the recycling cart for garbage or storage/personal use. He noted allowing residents to opt out of recycling would also bring the initial cost of carts down. He noted approximately 5% to 7% of households in the community would opt out of recycling. He stated American Waste Control (AWC) also offered a backyard service in which the sanitation workers would enter a resident's backyard, fetch, empty, and return the cart; residents were not required to handle the cart at all. He noted it was better to ask residents to opt out of the recycling program prior to cart delivery to prevent cart misuse. He stated in terms of public education it was important to "get information inside the house," for example, by distributing refrigerator magnets listing recycling materials with pictures and noting proper recycling preparation. He stated AWC distributed reusable tote bags with recycling information and posted stickers on the sides of carts showing recyclable items with picture examples. He discussed items which were not recyclable. He discussed glass recycling, and the effects glass had on the environment, which were negligent. He noted residents wanted to recycle glass; however, keeping glass out of the curbside recycling stream and recycling glass separately would keep recycling costs lower. He noted citizens could take glass recyclables to the Met depot.



Chairperson Peterson asked for Mr. Pickens thoughts regarding the two bag recycling/trash system. Mr. Pickens noted American Waste Control (AWC) had a bag breaker on the commercial mixed recycling line which was a very different stream than residential recycling. He explained how the bag breaker system worked. He indicated the bag breaker capacity was not large enough to facilitate Broken Arrow's resident recycling stream. He noted commercial mixed recycling did not include glass products. He explained American Waste Control (AWC) facilitated a recycling bag program in another community and noted if a clear bag showed any sign of contamination, said bag was tossed into the trash and all recyclables were then lost. He explained in a cart system the garbage was filtered out during processing and no recyclable materials were lost. Chairperson Peterson asked what type of investment would be required to install a bag breaker to accommodate Broken Arrow's curb side recycling stream. Mr. Pickens noted it would be a large capital expense for very little gain. He explained bag breakers also required more employees which would drive up cost. He noted contamination drove recycling costs up and glass materials often caused a negative value overall. Mr. Wise noted there were high capacity bag breakers which Waste Zero was willing to finance in the price range of \$200,000 dollars. Mr. Pickens noted the bag breaker itself was not necessarily the large investment, but overall capacity throughput and the additional labor required would drive up the costs. He explained why the bag breaker system was cost effective for commercial businesses, but not residential recycling streams.

Chairperson Peterson asked if American Waste Control (AWC) would be able to handle the increased volume of Broken Arrow's residential recycling stream through the cart system. Mr. Pickens responded in the affirmative; his facility was only at 50% capacity for residential cart recycling and could easily process Broken Arrow's recycling. He reported American Waste Control (AWC) pulled recycling carts which were misused for trash and charged residents \$65 dollars if said resident wished to have the recycling cart returned. He noted renters in low income areas tended to view recycling differently than homeowners, often misusing recycling carts for trash.

**5) Development of recommendation to the Broken Arrow Municipal Authority**

Chairperson Peterson stated he felt the Recycling Committee should adjourn and meet in the future to discuss the items brought before the Committee today, and discuss the recommendation to be made to City Council.

**6) Set date and time for second meeting**

Chairperson Peterson asked when the next Meeting date should be. It was decided the next Broken Arrow Citizen's Recycling Committee Meeting would be held August 19, 2019 at 6:00 p.m.

Chairperson Peterson recommended the Committee Members review the information which was presented and be prepared for discussion at the next Committee Meeting.

Mr. Russell Gale noted the Committee already recommended switching to once a week pickup and Broken Arrow Municipal Authority adopted this recommendation; therefore, the Committee Members should keep this in mind while reviewing and considering the presented information.

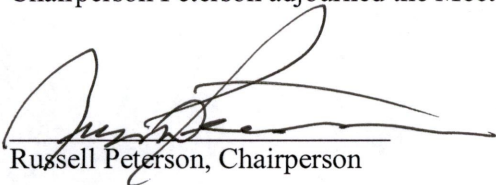
Chairperson Peterson asked if Ms. Vasquez would be able attend the Committee Meeting on August 19, 2019. Ms. Vasquez responded in the affirmative. She requested questions be sent to her, through Mr. Lee Zirk, prior to the Meeting, so she could come prepared.


**7) Set date for pilot program results and Committee recommendation to Authority**

No discussion was held regarding this Item.

**8) Adjourn**

Chairperson Peterson adjourned the Meeting at 8:05 p.m.

  
Russell Peterson, Chairperson

  
Lisa Blackford, Deputy City Clerk