



## **MEMORANDUM**

**DATE:** January 8, 2018  
**TO:** Committee on the Environment  
**FROM:** Jonathan Gregory, Conservation Program Coordinator  
**SUBJECT:** Response to questions from Greenhouse Gas (GHG) Inventory Report

### **GHG Inventory Update**

In November's COE meeting a presentation was made on the finalized 2016 GHG Inventory data. This presentation incorporated a basic review of the total figures as well as some analysis on observed trends. One such trend was an increase in emissions from Solid Waste operations. Discussions between staff members and the Sustainability team lead to the conclusion that these were most likely due to a combination of population growth, higher rates of dumping from non-Denton sources, as well as the natural cycle of biodegradation. In other words, the emission increases were the result of our region's growth at large and not at the hands of operations. Due the disproportionate amount of emissions from Solid Waste operations compared to the other major source categories in our Municipal Inventory it was requested by Councilmember Gregory that we ensure our emissions calculations were accurate and being recorded to protocol standards. Sustainability led a comprehensive investigation that included City staff, Weaver Group Consultants, and ICLEI personnel to review our data collection and inventory reporting processes. The conclusion of this research confirmed that our practices were aligned with the international protocols of GHG inventories and that no changes were necessary. On a related positive note, we also identified a few opportunities to improve the clarity of future reports so that our data collection guidelines are clearly defined for readers. Outlining these guidelines in our reports should allow anyone who wishes to easily reference that protocol standards are being followed. We will begin to incorporate these updated guidelines in our 2017 GHG Inventory due for release this coming spring.

### **Weather Normalization**

In relation to the presentation on our 2016 GHG Inventory, Councilmember Ryan requested that we investigate whether we could utilize Weather Normalization methodologies for these reports. The theory of Weather Normalization is that we can more accurately compare energy data on a historical basis when that data accounts for differences temperature. Applying such

### **OUR CORE VALUES**

Integrity • Fiscal Responsibility • Transparency • Outstanding Customer Service

methodologies are considered to be a practice that allow for annual data to be compared more fairly to one another. Because energy consumption is heavily correlated with outdoor air temperature, the intent is to balance those data points so we can more accurately determine usage trends.

The Sustainability team researched how these methodologies are commonly used and ran some tests on one of our facilities to provide some tangible examples. Our analysis suggests that though Weather Normalization is a viable lens in which we can alternatively view energy data, it is inherently full of numerous technical assumptions that limits its ultimate usefulness. We feel that these methodologies could be utilized in our Energy Star Portfolio Manager benchmarking program because it is strictly an internal review of our municipal building energy consumption to track trends and make comparisons between similar buildings. But when it comes to our GHG Inventories, which are publicly released and held to international protocols, we do not recommend that these methodologies be applied.