NCTCOG RECYCLING SURVEY AND CAMPAIGN

This document describes the Scope of Work and Budget for Burns & McDonnell to complete a Recycling Survey and Campaign for the NCTCOG.

SCOPE OF WORK

Task 1: Project Management

To successfully implement the proposed approach, a high level of project management and oversight will be provided throughout the project. Our project management approach is designed to communicate our ability to perform on time, within budget, and according to NCTCOG requirements.

INITIAL DATA REQUEST AND REVIEW

Following receipt of the Notice to Proceed, we will provide a data request outlining the necessary data for completion of the study. Should the requested data not be readily available or in a different format as requested, Burns & McDonnell will work with your Project Manager to arrive at reasonable substitutes. We will lead a conference call with NCTCOG staff to discuss the request.

KICK-OFF MEETING

Key project team leaders will meet with NCTCOG and members of the Project Advisory Group (PAG) at the start of the project to refine the proposed scope of work, finalize the project schedule, and review project methodologies and report preparation process. The meeting will also discuss the desired outcomes to make sure the project is a success. Following the meeting, the project team will provide a concise summary memorandum of the key meeting takeaways and a description of next steps.

PROGRESS REPORTS

To facilitate consistent communication throughout the project, we will prepare written project updates monthly. The updates will be in a summary memorandum format and will explain work completed, preliminary results as applicable, and schedule adherence.

CONFERENCE CALLS AND ATTENDANCE AT PROJECT ADVISORY GROUP MEETINGS

Burns & McDonnell is committed to keeping NCTCOG staff and members of the PAG informed of project progress and insight. We will plan to participate in the meetings in-person and via conference call, as appropriate. Our budget assumes two in-person meetings.

FINAL WORKSHOP AND POWERPOINT PRESENTATION

Our project team will coordinate with NCTCOG staff regarding the planning for the final workshop. We have assumed that NCTCOG will have lead responsibility for invitations and providing the facility. We will collaborate with NCTCOG and PAG staff regarding the content and agenda. We intend for the workshop to include an overview of the entire project's key findings and recommendations, while focusing on strategies to implement the regional outreach campaign. Specifically, we would like for the workshop to provide an opportunity to prepare and train NCTCOG members on deploying and monitoring the effectiveness of the

regional recycling campaign. As a comprehensive deliverable, we will develop a PowerPoint presentation that will summarize key outcomes for all project tasks.

TASK 1 DELIVERABLES
► Submittal of Request for Information
► Participation at kick-off meeting and subsequent project meetings
► Summary from the kick-off meeting and monthly progress reports
► Participation in the Final Workshop, including delivery of a PowerPoint presentation that summarizes the project

Task 2: Creation of Data Tool

ANNUAL SUBSCRIPTION, SURVEY DEVELOPMENT AND PRE-TEST

Our scope and budget include a one-year annual subscription for Re-TRAC Connect. For this project, our team will demonstrate the existing capabilities of Re-TRAC Connect's local government reporting solution with NCTCOG staff and the PAG. Following this demonstration, we will discuss potential additions/updates that could be considered for use by NCTCOG. For example, we plan to add questions related to strategies and challenges associated causes of the high rates of recycling contamination and causes of low rates of recycling participation, identify their MRF and/or request that cities identify the five most common types of non-recyclable materials in their recycling stream. We do recommend that potential changes to the software configuration be relatively minor in order to maximize comparisons to other communities and regions across the U. S.

After receiving input from NCTCOG and/or the PAG, we will update the survey instrument. Based on this initial feedback, standardized reporting forms and analytical reports will be configured in the software by a dedicated Solutions Manager of Emerge Knowledge. All forms have built-in validation controls, ensuring all required information is provided and verifies that all entries (responses from reporting entities) comply with the expected response format. After a draft survey instrument is completed, it will be reviewed by NCTCOG and/or the PAG. Prior to finalizing the survey, we will also request that 3 – 4 cities complete the survey on a test-basis to identify any potential issues.

RECOMMENDATION ON FUTURE USE

Our budget described in Tab H includes the fees for system development and the first subscription year (valid through August 2019). NCTCOG will have the opportunity to renew the annual subscription for the data reporting program that is configured for this project (we have also identified this additional pricing for future years). In future years, program updates and additions will be accommodated to evolve the data fields and analytical reports to evaluate performance and trend analysis. If preferred, NCTCOG will be able to contract directly with Emerge Knowledge in future years (as opposed to being a subconsultant to Burns & McDonnell).

TRAINING TOOLS

Our project team will conduct one web-based Re-TRAC Connect training webinar for reporting entities to learn how to utilize the software. The training will be facilitated and recorded for ongoing reference by reporting entities during the project. We are proposing to conduct the training at NCTCOG so that city staff can attend in person. We can also assist city staff with entering their data into Re-TRAC at the end of the workshop. We'll also use this as an opportunity to provide more in-depth training for NCTCOG staff so they will be able to help cities respond to the survey (as described in Task 4). In addition,

the software includes in-system tool-tips, instructions, and an online technical support form will be made accessible to all users.

DATA COLLECTION
As further detailed in Task 4, cities in the region will create accounts (no subscription costs for cities) to join the NCTCOG voluntary reporting program in Re-TRAC Connect and easily report key metrics that the NCTCOG wishes to collect on an annual basis.

DATA MANAGEMENT
Once the data is reported, the administrators of data collection program in Re-TRAC Connect can use the response audit feature to review and verify the data before it is included in analytical reports. This will initially be the responsibility of Burns & McDonnell, and we will provide training for NCTCOG staff to facilitate NCTCOG's review of data provided by the cities.

ANALYTICS AND DATA SHARING
Once data has been verified, the cities and NCTCOG can view and share reports in a variety of user-friendly ways including:

1. Generating analytical reports within each password-protected Re-TRAC Connect account.
2. Exporting charts, graphs, and tabular data in a variety of formats (PNG, JPEG, PDF, XLS)
3. Sharing on a dedicated public profile page via RecycleSearch.com (Example: https://recyclesearch.com/profile/tn-progress-report/report/286). NCTCOG will link to their unique profile page from the NCTCOG website and will be able to update analytical reports real-time.

MOBILE USE
Re-TRAC Connect is designed and optimized to operate with modern browsers to support business processes in an office environment involving the management of significant volumes of data and to ensure high quality of data collected. The majority of users login to the system using desktop computers, but the system can also be accessed using mobile devices. Learn more about Re-TRAC Connect's local government reporting solution here: https://www.re-trac.com/solutions/local-government-reporting/

TASK 2 DELIVERABLES
- One-year subscription for Re-TRAC Connect, including setting up the annual reporting data tool with structure and content to streamline information management for recycling and solid waste data for municipalities
- Develop training tools to include: one web-based Re-TRAC Connect training webinar for reporting entities will be facilitated and recorded; and the software will include in-system tool-tips, instructions, and an online technical support form will be made accessible to all users
- Document task outcomes via PowerPoint and provide recommendations on how the NCTCOG can effectively implement and sustain the program in the future (which will be presented in the Final Workshop from Task 1)

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Task 3: Survey and Evaluation of Material Recovery Facility (MRF)-sheds

DEVELOP MRF ACCEPTABLE MATERIALS WORKSHEET

Our project team will provide the MRF Acceptable Materials Worksheet (Worksheet) to NCTCOG staff and the PAG for review and any potential revisions. The Worksheet provides a detailed list of acceptable and unacceptable materials and asks whether unacceptable materials are detrimental (e.g. damage equipment, harm employees, degrade material value). It also includes a listing of prohibitive items and asks MRF representatives to rank the top five unacceptable items. We will ask each designated MRF (outlined in the map) to identify the cities that are using their facility. After receiving input and finalizing the Worksheet, we will distribute it to the points of contact for each designated MRF in advance of their interviews and site visits.

CONDUCT INTERVIEWS AND SITE VISITS

We will schedule meetings with each of the nine large commercial MRFs identified on the map shown on the next page (adapted from the *Study on the Economic Impacts of Recycling*). During the site visits, we will review the MRF Acceptable Materials Worksheet and discuss the operators' perspectives on key strategies to increase participation and decrease contamination. We will also ask for their opinions on which materials should be included and excluded from becoming a part of the regional recycling campaign, as well as their thoughts on terms and common language to be used for public engagement. We will leverage our team's experience working directly with multiple MRFs in Texas and across the U. S. to identify problem contaminants.

MRF-SHED MAPPING

For each of the MRFs in the region, we will develop a set of data tables and maps that identify the material types that are accepted or not accepted at each MRF. We will also develop maps that communicate where cities are sending their recyclables (MRF-sheds). We will provide the GIS files to the NCTCOG, to facilitate future updates.

CONDUCT FACILITATED WORKSHOP TO DEVELOP RECYCLABLE MATERIAL LIST

We will conduct a workshop with the MRF operators and key stakeholders (e.g. NCTCOG staff, PAG members, recycling/educational coordinators) to communicate the findings from this task and the data collection and analysis task. The objective of the workshop will be to communicate the findings and to facilitate a discussion to develop a list of targeted acceptable recyclable materials and non-accepted materials for the educational campaign and develop a common set of terms and common language to be used for public engagement. This workshop will be conducted as a part of the focus group described in Task 5.
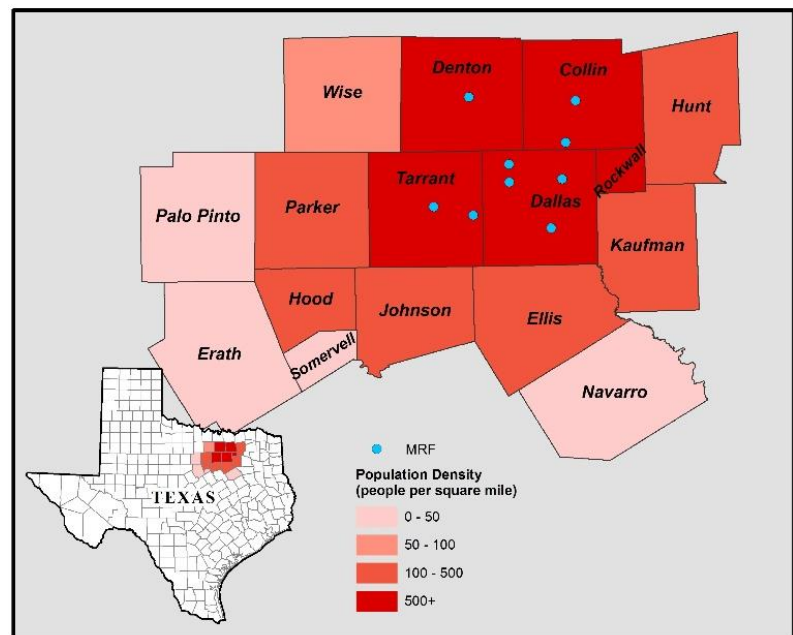
- ► Updated and customized version of the MRF Acceptable Materials Worksheet
- ► On-site meetings with large, commercial MRFs in the region
- ► Multiple printed map and GIS files identifying MRF locations, materials accepted and material flows
- ► Conduct workshop to develop acceptable materials and prevalent non-acceptable materials lists for the regional educational campaign
- ► Document task outcomes via PowerPoint and provide key findings and recommendations (which will be presented in the Final Workshop from Task 1)

Task 4: Data Collection and Analysis

RECYCLING DATA COLLECTION

Efforts to document recycling quantities will include the following:

- ► **Implement Re-TRAC Connect Survey**: After developing the data tool in Task 2, our project team and NCTCOG will survey cities in the NCT region utilizing Re-TRAC Connect. This survey will provide insight on the quantities of recyclables and contamination from each city in the NCT region. We envision the survey administration being a collaborative effort between our project team and NCTCOG staff, which was the approach utilized in the prior recycling measurement studies that our team members completed for NCTCOG. Our proposed fee includes the assumption that NCTCOG staff lead stakeholder outreach to encourage cities to enter their data into Re-TRAC. To encourage survey participation, we will coordinate with NCTCOG to implement a stakeholder outreach plan for cities (based on the plan utilized for the *Study on the Economic Impacts of Recycling*). As discussed in Task 2, we will provide training for NCTCOG staff on the use of Re-TRAC Connect. Strategies to encourage survey participation will be similar to the efforts from the 2010 *Regional Recycling Rate Update* (managed by Scott Pasternak and our team). For cities that do not have recycling data, we will request that they allow our team to request the data from their recycling processor. As a part of the stakeholder outreach, we would also like to request that each City send a pdf that summarizes their recycling educational assets (e.g. brochures, fliers, PSAs, web site content).
- ► **Leverage Data from the *Study on the Economic Impacts of Recycling***: Since Burns & McDonnell completed this study for TCEQ, we can aggregate recycling and contamination data that is specific to several NCT MRFs identified in Task 3 (all data will be aggregated at the regional level). This will provide an understanding of the recycling quantities by material types and contamination levels in the recycling stream. The TCEQ study also included questions on key challenges and opportunities facing MRFs, which we can also summarize for the NCT region as part of this task. The contamination data will strongly inform the content and focus of the outreach components under Task 5.
- ► **Summarize Recycling Audit and Characterization Data**: We will gather the results of recent recycling audits that several cities (including but not limited to Arlington, Dallas, Fort Worth, Garland, Mesquite) have performed as a part of their recycling processing services. This information will offer insight on the composition of recyclable materials and recycling rates from many cities in the region. We will also review recycling characterization data from Fort Worth.

REFUSE DATA COLLECTION

Utilizing the recycling data described above will provide our team with the opportunity to focus more resources on physically sorting and characterizing residential refuse from multiple cities in the region. This analysis will harmonize material categories with the recycling data and will allow calculations to be done that estimate recyclables generation and capture. Since the cities of Dallas and Fort Worth have conducted characterization studies in the past few years, we would propose that their data be included in the refuse characterization analysis. We would propose to develop a targeted sampling plan for each of these two cities to update their respective studies and gather data from other cities within the NCT region that are presently using these two landfills for disposal of their residential refuse. Our sampling plan will include sorting up to approximately 50 samples of at least 200 pounds each representing the various NCT cities. Based on discussions with NCTOG staff and multiple cities in the region, we are planning for the cities in the region to deliver the residential refuse loads to the sorting location to minimize project costs. The cities will deliver loads of approximately 200 pounds per sample and the refuse can be sourced from multiple refuse carts or from a refuse vehicle. Overall, we propose to evaluate approximately 10 cities representing a diverse range of population, geography, and other identified demographics.

Sampling selection of the targeted cities will focus on which communities can provide robust and detailed recycling data (e.g. from MRF audits or characterizations) that allows "apples to apples" calculation of commodities in both the trash and recycling streams, on a specific residential basis. By matching detailed waste and recycling data, the project team will be able to provide a reliable estimate of individual commodity capture (e.g., how much of household generated residential cardboard is being captured). This data will help inform the Task 5 outreach plan for increasing material recovery.

RECYCLING AND REFUSE DATA ANALYSIS

Once we have the data from the recycling and refuse data collection efforts, we will evaluate the data. Our evaluation will include but not be limited to providing the following metrics and comparisons:

- ► Residential curbside recycling capture rates for cities that provide both recycling and refuse audit and/or characterization data
- ► Pounds per household of recycling
- ► Pounds per household of recyclables generation, with specific commodity breakdown where possible
- ► Comparisons to the 2010 Regional Recycling Rate Update and the *Study on the Economic Impacts of Recycling*
- ► Contamination rates and listing of the primary types of contamination

TASK 4 DELIVERABLES

- ► Analysis of recycling and refuse data based on key metrics
- ► Document task outcomes via PowerPoint and provide key findings and recommendations (which will be presented in the Final Workshop from Task 1)

Task 5: Create Regional Educational Campaign

PRETESTING VIA FOCUS GROUP

Building on The Partnership's tested, national, It's All You Campaign, along with related behavior change programs, the project team will clearly define the top issues and desired focal points for the NCTCOG by hosting a workshop of community recycling leaders and key stakeholders to understand local needs, collect existing expertise, and test messaging. The workshop will be conducted instead of a traditional focus group as a more cost-effective approach to collecting the necessary information for the project's success. We have selected this approach since the local recycling leaders have the best vantage point for identifying critical issues that are most timely to address across the region. Further, their buy-in to the process and program development is essential to a successful adoption and roll-out, so involving them early in the process helps ensure long-term success. We would request that NCTCOG provide the facility for the meeting and assist with extending invitations.

The project team will analyze knowledge gained from these local leaders and distill it into consistent, engaging, simple, and actionable messaging to positively affect resident behavior. The harmonized recycling accepted materials lists for the region will be incorporated into the messaging.

DEVELOP CAMPAIGN ASSETS

The project team will then use these insights and messaging to build the campaign assets. Activities and deliverables will include:

► Customized existing participation-focused videos, plus the development of one new video that is focused on quality (e.g. reducing contamination).
► Conversion of video segments into PSAs plus the development of one new radio spot.
► Customize existing marketing assets, such as flyers, bill inserts, direct mail, tags for curbside feedback on material quality, and signage shown to meet recycling behavior change objectives. One set of customizable assets and two rounds of edits of the assets between the NCTCOG and/or PAG and the project team will be provided.
► Existing social media assets will lightly customized, along with the creation of six new topic-specific blog posts.
► All existing materials will be updated to reflect the local learnings and accepted materials lists and to further imbed desired behavioral changes into the psyche of residents.
► Assets will be provided in up to three languages as needed and identified by the project team.
► Art files will be lightly customizable to allow tailoring by member governments to incorporate city seals, local web addresses, etc.

DEVELOP CAMPAIGN IMPLEMENTATION PLAN

To prepare this carefully crafted campaign for deployment, the team will create an implementation timeline and media buy plan. This plan will include timeframes for preparation, launch, and post-launch activities, along with recommendations for media types, campaign durations, and opportunities for cost savings. Understanding that the most impactful tactics will vary from community to community, it will

> Local programs will be empowered with nationally tested, best-practice marketing materials and approaches, that have been customized to reflect the local culture and needs, serving them throughout this campaign and long into the future.

allow flexibility to accommodate local expertise and insights.

DEVELOP ON-LINE TOOLKIT

All final assets and the communications plan will be presented in an action-ready online toolkit, appropriate for deployment by local recycling programs across the region and beyond. The Partnership will house and maintain all materials on the NCTCOG project webpage, which will be located on itsallyou.org, providing an easy online portal for communities to download the toolkit, support materials and design assets.

DEVELOP PERFORMANCE MEASURES

NCTOG will receive a plan for measuring and tracking the impact of the campaign on increasing recycling participation and decreasing contamination. The plan will include key performance measures, evaluative protocols, and a tracking timeline. Instruments such as surveys, capture rate studies, MRF feedback and participation rate tracking will be reviewed and cost estimates will be provided.

TASK 5 DELIVERABLES

- ► One day focus group workshop and associated meeting summary
- ► Recycling campaign assets: please refer to the Develop Campaign Assets section of this task for a detailed listing of deliverables
- ► Campaign implementation plan
- ► On-line toolkit
- ► Performance measurement recommendations
- ► Document task outcomes via PowerPoint and provide key findings and recommendations (which will be presented in the Final Workshop from Task 1)

NCTCOG's RFP identifies a robust set of deliverables intended to provide local recycling programs with a well-researched, professionally developed, turnkey campaign toolkit, ready for customized deployment and including metrics for evaluation of success. As itemized in Tab H, the project team will deliver a turnkey toolkit, applying years of successful community based social marketing engagement experience and assets, using past learnings as a foundation to create a truly impactful, far reaching campaign.

The work under Task 5 incorporates the findings from previous tasks and begins and ends with the building of knowledge that drives resident action in the form of increased material recovery and reduced contamination. The Partnership will utilize the information gathered during the data collection task and the survey of MRF-sheds, alongside The Partnership's expertise in behavior change campaign building, to develop an Education Recycling Campaign for the NCT region.

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BUDGET

We are presenting our proposed fee based on the project tasks included in our Detailed Business Plan. Our costs include professional labor fees, all indirect expenses and subcontracting. We are proposing to invoice NCTCOG on a percent complete basis by task for the total budget provided in the following table.

TASK	ACTIVITY	TOTAL COST
1	**Project Management**	
	Initial Data Request and Review	$3,570
	Kick-off Meeting	$5,900
	Progress Reports	$2,300
	Conference Calls and Meetings	$7,370
	Final Workshop and PowerPoint Presentation	$13,750
2	**Creation of Data Tool**	
	Annual Subscription[1], Survey Development and Pre-Test	$16,200
	Training Tools	$6,320
	Data Management	$1,050
3	**Survey and Evaluation of MRF-sheds**	
	Develop MRF Acceptable Materials Worksheet	$4,380
	Conduct Interviews and Site Visits	$29,780
	MRF-Shed Mapping	$9,970
	Conduct Facilitated Workshop to Develop Recyclable Material List	$6,200
4	**Data Collection and Analysis**	
	Recycling Data Collection	$18,440
	Refuse Data Collection	$52,390
	Recycling and Refuse Data Analysis	$33,830
5	**Create Regional Educational Campaign**	
	Pre-Testing via Focus Group	$10,710
	Develop Campaign Assets	
	Videos	$21,170
	PSAs	$5,420
	Marketing Assets	$21,170
	Social Media Assets	$5,420
	Develop Campaign Implementation Plan	$5,420
	Develop On-Line Toolkit	$15,920
	Develop Performance Measures	$3,320
Total		**$300,000**

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[1] Should NCTCOG decide to continue utilizing Re-TRAC Connect after the initial one-year subscription, NCTCOG could contract directly with Emerge Knowledge. The estimated annual fee for 2019 is $11,700, which includes software licensing, maintenance and technical support and professional services for software updates.

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PROJECT TIMELINE

TASK		JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR
		2018							**2019**		
TASK 1	PROJECT MANAGEMENT	🖥									💬
TASK 2	CREATION OF DATA TOOL	🖥		💬							
TASK 3	SURVEY AND EVALUATION OF MRF-SHEDS			🖥		💬					
TASK 4	DATA COLLECTION AND ANALYSIS			💬			🖥				
TASK 5	CREATE REGIONAL EDUCATIONAL CAMPAIGN						💬		🖥		💬

🖥 Meeting 💬 Workshop

Notes:
1. Additional meetings may be scheduled as needed.
2. Some workshops and meetings may address multiple tasks and are shown distinctly on the schedule.
3. For some meetings and workshops, we can use our toll free conference calling and Webinar system to encourage participation.

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