

PORTLAND STATE UNIVERSITY

INTERGOVERNMENTAL AGREEMENT

This Agreement is entered into between the City of Portland, Oregon, hereinafter referred to as SPONSOR and the State of Oregon acting by and through the State Board of Higher Education on behalf of Portland State University, hereinafter referred to as UNIVERSITY.

WITNESSETH:

WHEREAS SPONSOR desires UNIVERSITY'S services on "Business Recycling Best management Practices Evaluation," in accordance with the SCOPE OF WORK, Attachment A hereunder;

WHEREAS the performance of such services is consistent, compatible and beneficial to the academic role and mission of UNIVERSITY;

Therefore, in consideration of the mutual promises and covenants contained herein, the parties hereto agree as follows:

ARTICLE I - SCOPE OF WORK

UNIVERSITY agrees to perform for SPONSOR the research and evaluation services described in ATTACHMENT A hereto, which by this reference is incorporated herein and made a part hereof.

ARTICLE II - AGREEMENT PERIOD

This Agreement shall become effective on the date of last signature and shall be completed by May 31, 2010, unless subsequent time extension, supplement, addition, continuation, or renewal is mutually agreed upon in writing between the parties. Costs may be incurred for this Agreement from December 1, 2009.

ARTICLE III - SCIENTIFIC PERSONNEL

Shanna Eller is responsible for the conduct of research under this Agreement for the UNIVERSITY. The UNIVERSITY shall not replace Shanna Eller without prior written approval of the SPONSOR. Jill Kolek is the Project Manager for the SPONSOR. SPONSOR will inform UNIVERSITY in writing of any change in Project Manager.

ARTICLE IV - CONSIDERATION

SPONSOR agrees to pay UNIVERSITY for the actual costs of services performed under this Agreement not to exceed FORTY THOUSAND (\$40,000) DOLLARS, as shown in ATTACHMENT B.

Invoices for work accomplished under this Agreement shall be submitted quarterly in an original and two copies to Jill Kolek, City of Portland, Bureau of Planning and Sustainability, 721 NW 9th

Ave., Suite 350, Portland, OR 97209-3447. SPONSOR certifies that sufficient funds are available and authorized to finance the costs of this Agreement. Payment shall be sent to Portland State University, Office of Business Affairs, Research Accounting, PO Box 751 (BO/RA), Portland, Oregon 97207-0751.

ARTICLE V - NOTICE

Any notice provided for under this Agreement shall be sufficient if in writing and delivered to the following addressee:

If to SPONSOR:

Jill Kolek
City of Portland
Bureau of Planning & Sustainability
721 NW 9th Ave, Suite 350
Portland, OR 97207-0751
jkolek@ci.portland.or.us

If to UNIVERSITY:

Christina E. Frost, Contract Officer
Office of Research & Sponsored Projects
Portland State University
PO Box 751 (ORSP)
Portland, OR 97200
frost@pdx.edu

ARTICLE VI - PERFORMANCE / REPORTING REQUIREMENT

UNIVERSITY is responsible for the performance of work and will provide progress reports of findings, if any, as stated in ATTACHMENT A, SCOPE OF WORK. UNIVERSITY shall maintain fiscal records pertinent to this Agreement for at least three (3) years following completion of work under this Agreement. UNIVERSITY shall maintain all fiscal records relating to this Agreement in accordance with generally accepted accounting principles. In addition, UNIVERSITY shall maintain all other records pertinent to this Agreement in such a manner as to clearly document UNIVERSITY'S performance hereunder.

ARTICLE VII - CONFIDENTIALITY

Subject to the limitations and conditions of the Oregon Public Records law, UNIVERSITY agrees to keep confidential any SPONSOR proprietary information that SPONSOR designates as such and supplies to UNIVERSITY during the course of this Agreement. Such information will not be included in any published material without prior approval by SPONSOR.

ARTICLE VIII - INDEMNIFICATION

To the extent permitted by Oregon Law (ORS 30.260 through 30.300 and the Oregon Constitution, Article XI, Section 7, UNIVERSITY and SPONSOR each agree to indemnify the other party against any liability for damage to life or property arising from the indemnitor's actions under this Agreement, provided, however, that neither party shall be required to indemnify the other party for any such liability arising out of the wrongful or negligent acts of employees or agents of the indemnitor.

ARTICLE IX - COMPLIANCE WITH LAWS

This Agreement shall be governed and construed in accordance with the laws of the State of Oregon. Any suit for enforcement shall occur, if in the state courts, in the Multnomah County Court having jurisdiction thereof, and if in the federal courts, in the United States District Court for the District of Oregon.

ARTICLE X - ASSIGNMENT

Neither party shall assign or transfer any interest in this Agreement, nor assign any claims for money due or to become due during this Agreement, without the prior written approval of the other party.

ARTICLE XI - COPYRIGHT

UNIVERSITY may assert copyright on materials that it produces in the performance of the work of this agreement. SPONSOR shall have a time-limited first right to negotiate a non-transferable, irrevocable, worldwide, royalty-free, non-exclusive license to use, reproduce, publish or re-publish, or otherwise disseminate such copyrighted materials.

ARTICLE XII - PATENTS AND INVENTIONS

All rights to inventions or discoveries arising from research conducted under this Agreement shall belong to the UNIVERSITY and shall be disposed of in accordance with UNIVERSITY'S policies.

To the extent that UNIVERSITY has the legal right to do so, UNIVERSITY shall offer to SPONSOR a time-limited first right to negotiate an exclusive or non-exclusive, royalty-bearing license. If Sponsor does not elect to secure such license, rights to inventions disclosed hereunder shall be disposed of in accordance with UNIVERSITY policies with no further obligation to SPONSOR. Nothing contained in this Agreement shall be deemed to grant either directly or by implication, estoppel or otherwise any license under any patents, patent applications or other proprietary interests of any other invention, discovery or improvement of either party.

ARTICLE XIII - TERMINATION

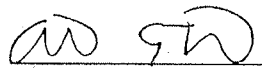
This Agreement may be terminated by either of the parties hereto upon written notice delivered to the other party at least thirty (30) days prior to intended date of termination. By such termination, neither party may nullify obligations already incurred for performance or failure to perform prior to the date of termination. Payment to UNIVERSITY shall be prorated to and include the day of termination.

THIS AGREEMENT CONSTITUTES THE ENTIRE AGREEMENT BETWEEN THE PARTIES. THERE ARE NO UNDERSTANDINGS, AGREEMENTS, OR REPRESENTATIONS, ORAL OR WRITTEN, NOT SPECIFIED HEREIN REGARDING THIS AGREEMENT. NO AMENDMENT, CONSENT, OR WAIVER OF TERMS OF THIS AGREEMENT SHALL BIND EITHER PARTY UNLESS IN WRITING AND SIGNED BY ALL PARTIES. ANY SUCH AMENDMENT, CONSENT, OR WAIVER SHALL BE EFFECTIVE ONLY IN THE SPECIFIC INSTANCE AND FOR THE SPECIFIC PURPOSE GIVEN. SPONSOR, BY THE SIGNATURE BELOW OF ITS AUTHORIZED REPRESENTATIVE, ACKNOWLEDGES HAVING READ AND UNDERSTOOD THE AGREEMENT AND SPONSOR AGREES TO BE BOUND BY ITS TERMS AND CONDITIONS.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed as of the date set forth herein by their duly authorized representatives.

STATE OF OREGON ACTING BY AND THROUGH THE STATE BOARD OF HIGHER EDUCATION ON BEHALF OF PORTLAND STATE UNIVERSITY.

THE CITY OF PORTLAND

Signed: 

Christina E. Frost

Title: Contract Officer

Date: 12/16/09

Employer Tax ID Number : 48-1278529

Signed: _____

Name: _____

Title: _____

Date: _____

Portland Bureau of Planning and Sustainability Business Recycling Best Management Practices Evaluation

Prepared by: **Community Environmental Services**
Portland State University

v. 12-10-09

STATEMENT OF PURPOSE

Community Environmental Services (CES) shall conduct an evaluation of the Recycle at Work "Five Easy Steps" Best Management Practices (BMPs) on behalf of the City of Portland Bureau of Planning and Sustainability (BPS). Evaluation of the BMPs will measure the effectiveness of the BMPs as currently practiced by Portland businesses in diverting commercial waste and increasing the recycling recovery rate.

Background

The Recycle at Work program has been administered by the City of Portland BPS for 9 years. A new initiative was launched in May 2009 to enhance participation in the program. Letters are being sent to 25,000 businesses through May 2010 to inform businesses of new recycling requirements, offer assistance to set up or improve recycling and waste prevention systems, and to request submission of required Progress Reports indicating participation in the program.

To assist businesses in developing an effective recycling system, BPS developed the "Five Easy Steps" Best Management Practices (BMPs). BPS has encouraged businesses to adopt the BMPs as their recycling and waste prevention system.

The five BMPs as stated by BPS include¹:

Step 1: Identify your champion

The person who is responsible starting or maintaining a business' recycling system, making recycling easy for all employees, ensuring management is supportive of recycling efforts, and being the contact;

Step 2: Recycle all paper, bottles, and cans

Make calls to your garbage and recycling company (or property manager if applicable) to set up recycling for all paper, bottles and cans;

Step 3: Make recycling easy

Label recycling containers and decide where to place them. Make recycling containers as easy to find as garbage cans;

Step 4: Train your team

Set up a time to let your managers and co-workers know about your updated system and how it works; and

Step 5: Throw away less

Plan at least one activity that helps your business use and dispose of fewer items.

¹ Definitions of BMPs are from several BPS publications, each with different wording.

Objectives, Scope, and Anticipated Results

The objective of this research is to determine the effectiveness of the BMPs in diverting commercial waste and increasing the recycling recovery rate. The scope of the research will include self-reported information obtained from businesses, direct observation of BMP implementation at individual businesses, and observations of recycled material volumes coupled with waste diversion assessments conducted at businesses exhibiting a high level of BMP implementation. Anticipated results include data that will assist BPS in determining the relative value of the BMPs in achieving a 75% commercial waste diversion and recycling recovery rate, and, if necessary, potential revisions to the BMPs to improve waste diversion and recycling recovery rates at businesses within the City.

METHODOLOGY

CES will conduct the research in three phases: 1) study group selection and initial contact; 2) on-site BMP evaluations; and 3) waste diversion assessments and recycling volume observations. First, CES will create a sample of businesses to study from the population of businesses that have submitted a BPS Recycling Progress Report. The selected businesses will be contacted by telephone and screened to determine suitability for inclusion in the research group. Second, businesses in the research group will receive on-site BMP evaluations. They will also provide CES with self-reported information on current and past recycling and waste-minimization practices. Third, a subset of study group businesses will receive in-depth waste diversion assessments of their landfill-bound waste and have their recycling observed for estimated volume.

Phase I: Study Group Selection and Initial Contact

Develop a study group from businesses that have submitted a BPS Recycling Progress Report and engage those businesses in the research.

Task 1. Identify study group. Businesses that have submitted a Recycling Progress Report to BPS by December 1, 2009 will be divided into groups based on business size and sector in combination with reported engagement in specific BMPs.

The two categories of business size to be used for grouping businesses shall be small generators and large generators as defined by BPS for purposes of notifying businesses of new recycling requirements beginning in 2009.

The three business sectors to be used for grouping businesses shall be:

- 1) office and professional services;
- 2) manufacturing and industrial; and
- 3) restaurant and retail.

Businesses, once sorted by business size and business sector, shall then be grouped based on their reported engagement in the five BMPs.

CES has hypothesized that engagement in the five BPS BMPs by businesses is most often an incremental, and cumulative process. The CES hypothesis is that business most often proceed cumulatively through Stages 1-4 of:

- 1) installing containers and signage;
- 2) identifying a champion;
- 3) training their team; and
- 4) throwing away less.

BPS has operated under the belief that as a result of adopting these BMPs the business is then prepped to successfully recycle all paper, bottles, and cans.

CES shall evaluate business engagement in the five BMPs as reported through the Recycling Progress Reports to determine if, in fact, businesses report a consistent pattern of sequential and/or cumulative BMP adoption.

If a pattern of sequential and cumulative BMP adoption is identified, then businesses shall be grouped within business size and sector groups by Stage 1-4 of BMP adoption. The result shall be a list of businesses provided to BPS organized into 24 business types, stratified by size, sector, and Stage 1-4 of BMP adoption.

CES shall provide to BPS the full list of businesses sorted by size, sector, and stage of BMP adoption with a recommended list of at least ten businesses in rank order from each of the 24 groups that shall comprise the study group. The study group shall be the pool of businesses from which one business in each of the 24 business types shall be advanced through all stages of the study.

BPS shall either approve or modify the ranked list of businesses comprising the study group. This study group shall be contacted by phone and receive on-site evaluations in rank order in order to identify one business from each of the 24 business types that is a BMP Stage 1-4 high performer. Those 24 high performers shall receive waste assessments coupled with recycling volume observations and estimates.

If a pattern of sequential and cumulative BMP adoption is not identified, then CES staff shall recommend for BPS approval or modification an alternative four stage BMP adoption scheme based on information contained in the business Recycling Progress Reports.

Task 2. Create telephone-calling script and screening questions. The telephone script will contain an introduction to the study and an invitation to participate. The script will also contain screening questions to confirm information provided in the Progress Report and obtain additional data. Information obtained during the call shall:

- i. Determine property management status;
- ii. Confirm and/or update information on BMP engagement contained in Progress Report;
- iii. Gain permission from each business to participate in Phases II and III of the research study; and
- iv. Determine waste hauling service provider and schedule of recycling and garbage pick up.

Businesses shall be informed in initial telephone calls that Phase II on-site evaluations will be conducted in December of 2009 and that Phase III waste assessments will be conducted in partnership with their contracted waste hauler at an unannounced time in 2010. If an incentive is needed to encourage the business to participate in the study, CES may inform the business that data from the waste assessment will be available to the business from BPS at the conclusion of the study. CES may also inform the business that individual waste assessments for businesses carry a \$1,000 - \$1,500 monetary value when purchased as a service to a business.

Businesses shall be informed that information collected through the study will not be reported in association with individual business names or in a manner whereby an individual business may be identified through the study report.

Task 3. Make calls to businesses, screen for participation and schedule site visits. Businesses in the study group shall be contacted in rank order to participate in Phases II and III will be scheduled for on-site BMP evaluation.

CES shall contact the study group businesses in rank order by telephone. CES shall make up to three calls per business and leave a brief message with the business contact identified on the business Recycling Progress Report. CES shall request a return call from the business in the message left. Once CES has successfully identified by telephone one business in each of the 24 groups within the study group that meets the study group criteria and states its willingness and interest in being part of the full study, then CES shall schedule an on-site BMP evaluation with that business and suspend additional phone calls to businesses in that stratified group within the study group.

Task 4. Write Phase I Report. Provide BPS with a brief report on the activities and results of Phase I.

Task 5. Review Phase I Report with BPS. Review Phase I report and activities with BPS by phone or in person as necessary. BPS and CES shall make any necessary adjustments to Phase II research plan. BPS and CES shall review the overall project timeline and make any adjustments necessary.

Phase II: On-site BMP Evaluations

Conduct on-site BMP evaluations with businesses selected and screened in Phase I to identify BMP Stage 1-4 high performers and additional business practices to be studied in Phase III.

Task 1. Develop field research data collection forms and interview questionnaire. The data collection forms and interview will:

- i. Verify information obtained during Phase I;
- ii. Develop knowledge about BMP implementation at each business in order to identify BMP high performers in accordance with characteristics of high performing BMP implementation to be provided to CES by BPS;
- iii. Develop knowledge about current and past recycling and waste reduction practices and BMP adoption, including length of time each practice has been in place (long-standing, newly updated, or newly implemented);
- iv. Develop knowledge about additional business practices (beyond the Five Easy Steps but with probes for a list of up to twelve other business practices to be provided to CES by BPS) the business is engaged in;
- v. Obtain information from the business representative regarding the value of each BMP in supporting waste diversion and waste reduction efforts;
- vi. Gain information on the relative value of implemented BMPs toward achieving a 75% waste reduction goal;
- vii. Identify business recall of receiving a business recycling notification letter from BPS and changing practices based on receipt of the letter; and
- viii. If appropriate given the waste hauling schedule for the business, collect information about the estimated volume of recyclables diverted by the business for recycling either through a contracted waste hauler or self-hauling.

During the on-site assessment businesses will be asked to sign a form indicating that they have authorized CES to conduct assessments of their materials diverted for recycling and the landfill through up to three unannounced site visits and one unannounced waste assessment to be conducted off-site in coordination with their contracted waste hauler and/or property manager and its agents sometime in calendar year 2010.

Task 3. Conduct on-site assessments of BMP implementation and interview the business contact. Utilize data collection forms and questionnaire to assess recycling and waste reduction practices.

Task 4. Analyze data collected from on-site BMP evaluations and interviews to identify high performers and additional business practices. Information collected through on-site evaluations shall be used to identify businesses that are BMP implementation high performers appropriate for advancing to Phase III of the study and businesses engaging in additional business practices beyond the five easy steps also for study in Phase III.

Businesses receiving an on-site evaluation, but determined to not be sufficiently high performers to be advanced to Phase III of the study shall not be advanced beyond the on-site evaluation. In these cases, CES shall return to the ranked list of businesses in the study group and resume telephone calling and on-site BMP evaluation procedures until one high performing business in each of the 24 groups is identified for Phase III.

Additional business practices of significant reported value beyond the five easy steps and up to six businesses engaging in those practices shall be identified by CES in the on-site assessments. Those businesses and business practices shall be recommended to BPS for inclusion in Phase III of the study. In making those recommendations CES shall work to identify a diverse group of businesses in terms of business size, sector, and location in a property managed business site or non. CES shall also consider the list of up to twelve other business practices provided to CES by BPS which were considered as a possible BMP when the BPS BMPs were developed.

Task 5. Write Phase II report. Provide BPS with a brief report on the activities and results of Phase II.

Task 6. Review Phase II Report with BPS. Review Phase II report and activities with BPS by phone or in person as necessary. BPS shall approve or modify the list of businesses recommended for advancement to Phase III based on engagement in additional business practices beyond the five easy steps. BPS and CES shall review the overall project timeline and make any adjustments necessary.

Phase III: Waste Diversion Assessments

Conduct waste diversion assessments of landfill bound waste coupled with observations of estimated volumes of materials diverted for recycling at up to 30 businesses identified in Phase II.

Task 1. Develop efficient schedule for performing waste diversion assessments and recycling estimates. CES shall use information gathered from businesses to create an efficient schedule for conducting three observations of materials diverted for recycling and one waste diversion assessment for each of the 30 businesses identified for inclusion in Phase III.

CES shall provide this schedule to BPS and the overall project timeline shall be assessed for any necessary adjustments.

Task 2. Conduct observations of materials diverted for recycling. CES shall make three separate observations of the volume of materials diverted for recycling by each of the 30 businesses included in Phase III. Those three observations shall be made of materials in containers external to the business placed for waste hauler collection or internal to the business in cases where the business shares external containers with other businesses.

The three estimates of volume shall be averaged for a final recycling volume estimate. The final, individual business recycling volume estimate shall be converted to an estimated weight using a material volume to weight conversion to be developed by CES and BPS using existing, secondary data from previous studies and or regional material collection facilities (MRFs).

In cases where observations must be made of containers internal to the business attention shall be given to minimizing distortions to routine business recycling behavior as a result of study observation.

In cases where businesses collect bottles and cans for deposit redemption separate from collection for recycling CES shall make one estimate of the volume of deposit containers collected based on information gathered during the on-site assessment. Those materials shall be included in the overall recycling diversion estimate for each business.

Task 3. Conduct waste diversion assessments. Utilize established CES waste diversion assessment protocols. The protocol shall be congruent with that used for Metro Recycle at Work funded waste diversion assessments in 2009.

Waste Diversion Assessment Protocol

The waste diversion assessment s shall be conducted in one day, off-site, at the Metro Central waste transfer station in Portland or other suitable location. A representative sample shall be pulled and sorted from the landfill bound waste. The sample shall comprise a rough minimum 10% by estimated volume of the disposed waste.

The sample shall be hand sorted into a maximum of ten material categories. Each material category shall be weighed on an A&D FK150 series bench scale that has been independently calibrated by AAA Scale of Portland, Oregon to collect weights to the nearest 5/100 of a pound.

The nine material sort categories to be utilized by CES are as follows, unless modified by agreement with BPS.

A. Recyclable Fibers

- Corrugated Cardboard
- Mixed Paper

B. Recyclable Containers

- Aluminum / Metal / Steel Cans
- Glass Bottles / Jars
- Plastic Bottles / Tubs

C. Other Recyclables

- Compostable Foods and Fibers
- Scrap Metal
- Wood

D. Non-Recyclables

- Other Non-Recyclable Materials

The waste assessment will not include measurements of segregated components of the business waste not directed to the landfill. Segregated materials not directed to the landfill for disposal include such items as collected recyclables, landscaping & yard debris, hazardous or universal waste, grease or oil.

Task 4. Analyze data collected from waste diversion assessments.

Task 5. Write Phase III report. Provide BPS with a brief report on the activities and results of Phase III. BPS and CES shall review the overall project timeline and make any adjustments necessary.

Phase IV: Final Report

Provide analysis of data collected during the study and observations related to BMPs as practiced by businesses in Portland. Provide observations related to utilization of current BMPs and, if needed, recommend changes to BMPs to achieve 75% diversion rate.

Task 1. Analyze data and summarize findings from Phases I-III of research study.

Task 2. Draft recommendations to improve waste diversion rates.

Task 3. Complete report and provide to BPS.

PROJECT TIMELINE AND DELIVERABLES

Initial Timeline

December & January, 2009	Phase I. Study Group Selection and Initial Contact
January, 2009	Phase II. On-Site BMP Evaluations
January & February, 2010	Phase III. Waste Diversion Assessments
March, 2010	Phase IV. Final Report

BPS and CES shall review the overall project timeline at the conclusion of each phase of the project and make any adjustments necessary. It is recognized that the initial project timeline is very aggressive and spans the dates from December 19-29, 2009 when Portland State University will be closed for business. It is also recognized that many variables will impact the ability of CES to complete the field work for this study in the timeframes planned. Those variables include: availability of recycling contacts at individual businesses for initial phone contact; willingness of businesses to be part of the study; and geographic location and waste hauling schedule of businesses that are advanced to Phase III of the study. CES shall apprise BPS through the brief reports scheduled for each phase of the study of changes needed to project timelines.

City of Portland Deliverables

- Data set from all businesses that have completed a Recycling Progress Report as of December 1, 2009 in an electronic format compatible with Excel.
- A written description of the characteristics of high performing BMP implementation for each of the five easy steps.
- A written list of up to twelve other business practices that BPS had considered as possible BMPs when the five easy steps were identified.
- A material volume to weight conversion equation to be applied to recycling volume estimates for each business studied in Phase III.
- Verification of commitment from the Metro waste transfer stations to make space available for up to thirty business waste assessments as part of this study.
- Verification of notice to commercial waste haulers requiring their participation in support of this study as needed to facilitate on-site recycling volume estimates and off-site waste assessments without notice to businesses.
- Review and feedback on reports for each phase of the study.

CES Deliverables

- Phase I Report – shall include full list and summary of;
 - business who have submitted Recycling Progress Reports as of December 1, 2009, organized by business characteristics selected for use in stratifying that business population;
 - businesses contacted in Phase I and outcome of contact in terms of success in reaching appropriate business contact and success in gaining business agreement to participate in study (list to remain organized by stratifying business characteristics throughout the study).
- Phase II Report – shall include full list and summary of;
 - businesses that participated in on-site BMP evaluations;
 - business that were identified as high performers implementing the BMPs;
 - additional business practices identified beyond the five BPS BMPs to be studied through waste assessments;
 - businesses selected for inclusion in Phase III of the study.
- Phase III Report – shall include full list and summary of;
 - business waste assessments and recycling volume estimates attempted and conducted by date.
- Phase IV Final Report – shall include:
 - all information reported in Reports I-III;
 - observations on implementation of individual or combinations of BMPs;
 - numeric data from waste diversion assessments and recycling volume estimates combined to create an estimated recycling diversion rate by weight for each business;
 - observations on BPS BMPs or other business practices used by a business, amount of time BMP(s) have been in place, findings from any on-site evaluations and any waste diversion assessment, or other indicators;
 - the estimated relative value of BMPs in meeting the City's compliance with Recycle at Work requirements and Council goal of 75% recycling recovery rate by 2015;
 - recommendations for modifying select Recycle at Work BMPs (e.g., revising language of current BMPs, adding or deleting BMPs);
 - other related observations;
 - other recommendations; and
 - a one page summary of the data from each business waste assessment appropriate for distribution to the business, not as part of the final report document.

PROJECT COSTS AND AGREEMENT PERIOD

The time period for this contract shall be December 1, 2009 to May 30, 2010.

Total costs for this project shall not exceed \$40,000 for actual costs of the work using a costs and services agreement.

Portland Bureau of Planning and Sust Fall 2009
Business Recycling BMPs Evaluation

Personnel	monthly rate	monthly FTE	months billed			Number of Items	Time per Item	Time per Task	PI	Research Staff	Field Staff	Task Hours						
										Hourly	Hourly							
Phase I: contact businesses by phone																		
						1	45	45	15	15	15	45						
						1	18	18	3	15	0	18						
						1	8	8	1	7	0	8						
						45	3.5	157.5	5	15	137.5	157.5						
						1	20	20	5	12	3	20						
						1	9	9	3	6	0	9						
						Phase I Total		257.5				257.5						
Hourly				\$	21,347	Phase II: on-site BMP evaluations												
						1	25	25	10	15	0	25						
						45	3	135	25	110	0	135						
						1	16	16	4	12	0	16						
						1	60	60	10	47	3	60						
						1	9	9	3	6	0	9						
						Phase II Total		245				245						
Total Salaries and Wages				\$	26,009	Phase III: waste diversion assessments												
Fringe Benefits						1	30	30	5	25	0	30						
PI 41%				\$	1,911													
Hourly 9%				\$	1,921	30	3	90	3	8	79	90						
						30	25	750	5	300	445	750						
						1	60	60	10	47	3	60						
Total Fringe Benefits				\$	3,833	Phase III Total		930				930						
Total Personnel Costs				\$	29,841	Phase IV: final project report												
Travel	rate	quantity	months			1	125	125	20	100	5	125						
mileage	300	1	3	\$	900	Phase IV Total		125				125						
Total Travel				\$	900	Project Total		1557.5	127	740	690.5	1557.5						
Other Direct Costs																		
Supplies				\$	1,005													
Total Other Direct Costs				\$	1,005													
Total Direct Costs				\$	31,746													
Total Indirect Costs - 26% of TDC				\$	8,254													
Total Project Costs				\$	40,000													

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