Appendix C ICLEI Reporting Requirements

(May 2010)

About ICLEI

Founded in 1990 by a group of local government representatives from around the globe, ICLEI - Local Governments for Sustainability is the premier local government membership association focused solely on climate protection and sustainability. ICLEI currently boasts a membership of more than 600 local governments from all 50 states and a global network of over 1100 local governments. The mission of ICLEI is to build, serve, and drive a movement of local governments to advance deep reductions in GHG emissions and achieve tangible improvements in local sustainability.

ICLEI guides its members through a Five Milestone performance-based methodology for reducing GHG emissions, enhancing community sustainability, and promoting economic development through intelligent, region appropriate energy conservation strategies. These milestones are supported by ICLEI's dynamic emissions analysis, action planning, and implementation tools and resources.

ICLEI provides its members with a suite of tools, guidance, and best practice resources for developing and implementing a plan to reduce emissions and improve local sustainability. To develop a greenhouse gas emissions inventory, ICLEI members use ICLEI's Clean Air Climate Protection (CACP) software to track all emissions sources and develop an emissions profile for their government operations and entire community. ICLEI's Climate and Air Pollution Planning Assistant (CAPPA) is used by local governments to model the emissions reduction potential of over 100 different types of emissions reductions strategies. In addition to CAPPA, ICLEI also provides technical assistance and guidance to its members and clients on various sustainability, climate mitigation, and climate change adaptation policies, programs, and projects.

Through its milestone award process and best practice sharing, ICLEI recognizes and highlights the achievements of local governments around the country. These achievements are shared through ICLEI's website, newsletters, webinars, state networking calls, regional events, and ICLEI's national conference. ICLEI provides analysis, technical assistance, and regular updates on state, national, and international policies affecting local governments and facilitates communications between local governments on a variety of topics.

ICLEI's Five Milestones for Climate Protection

The Five Milestones for Climate Protection provide a simple, standardized means of calculating greenhouse gas emissions, of establishing targets to lower emissions, of reducing greenhouse gas emissions and of monitoring, measuring and reporting performance.

ICLEI's Five Milestone Methodology

The Five Milestones are designed to chart a course for local governments to set and meet their climate mitigation goals:

1. **Conduct a baseline emissions inventory and forecast**
   The local government first calculates greenhouse gas emissions for a base year (e.g., 2005) from all municipal operations (e.g., city owned and/or operated buildings, streetlights, transit systems, wastewater treatment facilities). It then selects a future year by which it wishes to reach an emissions reduction goal and estimates emissions for that future year presuming Business As Usual (BAU) growth of emissions from the base year. In other words, this is what would be expected if the local government pursues no further measures.

NOTE: Local governments working with ICLEI typically conduct inventories of both government operations and of the whole community which they govern. Additional guidance on community emissions inventories will be developed and provided in 2010.

2. **Adopt an emissions reduction target for the forecast year**
   The local government adopts an official reduction target defined as a percent reduction in annual emissions rate below the level reported in the base year (i.e. 20% reduction in emissions from 2005 baseline by 2020). The target fosters political will and creates a framework that guides the planning and implementation of measures.

3. **Develop a Local Climate Action Plan**
   Next, a local government develops a Climate Action Plan, a set of policies and measures designed to meet the emissions reduction target by the target year. Because emissions tend to grow over time, the Climate Action Plan must contain enough reductions to reduce emissions from the amount expected under business as usual to the desired target rate. These plans must include a timeline, a breakdown of actions and estimated benefits of each action compared to the baseline, a description of financing mechanisms, and an assignment of responsibility to departments and staff. Developing this plan is a multi-stakeholder process and most planning processes also incorporate public awareness and education efforts.

4. **Implement policies and measures**
   The next milestone is an ongoing effort to implement the Climate Action Plan. Typical policies and measures include energy efficiency improvements to municipal buildings and water treatment facilities, streetlight retrofits, public transit improvements, installation of renewable power applications, and methane recovery from waste management.

5. **Monitor and verify results**
   Monitoring and verifying progress towards target and status on the implementation of measures is a critical part of the milestone process. As part of this step, local governments will also need to conduct regular inventories to effectively gauge progress against the baseline.

ICLEI Requirements for Reporting Emission Inventories (Milestones 1 and 5)

ICLEI suggests that emissions inventories, for whatever year they represent, meet at least a specified level of rigor and quality. ICLEI recognizes that not all jurisdictions will be immediately able to meet all of the recommended methods outlined in this protocol and that in some cases, time and resources allocated to gathering hard-to-find data may limit the time and resources available to implement emissions reduction actions. Nevertheless, ICLEI recommends that you attempt to meet the ***ICLEI Reporting Standard for Local Governments*** described below. It is important to note that inventories that do not meet the ICLEI Reporting Standard for Local Governments may still be policy relevant for your local government actions to reduce greenhouse gas emissions. The standard below should be considered a best practice guideline, one that informs your current baseline inventory and catalyzes new data collection systems to improve future inventories.

NOTE: ICLEI does not disclose the details of reports that our members submit to us without explicit permission from them to do so.

ICLEI Reporting Standard for Local Government Operations

This reporting standard is what ICLEI considers to be a best practice in terms of sources required for inclusion and calculation methodologies. The ICLEI Reporting Standard for Local Government Operations (The ICLEI Reporting Standard) includes all the sources and recommended calculation methodologies

used by the Local Government Operations Standard Inventory Report (Chapter 13) and additionally requires some Scope 3 reporting. The ICLEI Reporting Standard uses the same significance threshold principles and criteria as outlined in this protocol for Scope 1 and Scope 2 sources.

NOTE: The ICLEI Reporting Standard should be considered a best practice, a goal toward which local governments should strive. Local governments may still produce a viable, policy relevant inventory report if they are not able to meet all of the requirements for this standard.

Terminology: Required, recommended and optional
Although elements of the ICLEI Reporting Standard are called "Required", there is currently no verification process for certifying that an inventory meets the standard. For the ICLEI Reporting Standard, "Required" means that the source must be reported to meet the standard. "Recommended" means that ICLEI strongly suggests that local governments add this to their inventory. "Optional" means that local government may want to consider these items if they have the time and capacity to do so.

Required Information:

- **Required reporting of all six Kyoto Protocol gases as described in Section 2.1 of the Local Government Operations Protocol**

- **Required reporting of all Scope 1 and 2 sources:**
  - Direct emissions from stationary combustion (Chapters 6 and 8)
  - Indirect emissions from electricity use, imported steam, and district heat and cooling (Chapter 6)
  - Indirect emissions from electricity transmission and distribution losses in government owned transmissions and distribution lines (Chapter 6)
  - Direct emissions from mobile source combustion (Chapter 7)
  - Direct process and fugitive emissions from sources that include, but are not limited to, government owned or operated solid waste facilities, wastewater facilities and equipment that contain refrigerants or fire suppressants (Chapters 9, 10 and 11)

- **Required reporting by sector and scope.**
  The ICLEI Reporting Standard organizes all emissions into a defined set of reporting sectors. This will simplify how reports are structured and facilitate uniform reporting between local governments. Within each reporting sector, emissions must additionally be broken out by scope. Local governments are responsible for a wide array of emissions sources, some of which can be claimed by multiple entities or other local governments. To eliminate double counting within a local government and between separate reporting entities, the ICLEI Reporting Standard requires that all emissions be categorized by scope. See Chapter 13 of this protocol for a sample reporting template.

  Reporting Sectors:

  - Buildings and Other Facilities
  - Streetlights and Traffic Signals
  - Water Delivery Facilities
  - Wastewater Facilities
  - Port Facilities
  - Airport Facilities
  - Vehicle Fleet
  - Transit Fleet
  - Power Generation Facilities
  - Solid Waste Facilities

- Other Process and Fugitive Emissions
- Information Items

Scopes:

- Scope 1
- Scope 2
- Scope 3
- Information Items

It is important to note that local governments are not required, under the ICLEI Reporting Standard, to report all Scope 3 sources or Information Items. Of these, only Scope 3 employee commute is required. If you choose to report other Scope 3 sources and/or information Items, they should be placed in the appropriate category. As noted above, all Scope 1 and 2 sources must be reported to meet the ICLEI Reporting Standard.

- **Required reporting of Scope 3 employee commute.**
ICLEI's experience working with local governments indicates that data for employee commute is easy to collect and is policy relevant as local governments can directly reduce emissions from these sources through programs to increase carpooling, mass transit, telecommuting, etc. ICLEI members can contact their regional representatives for sample employee commute surveys and other strategies for gathering and analyzing data on commuting habits by government employees. ICLEI strongly encourages local governments to account for and include other Scope 3 sources where possible and appropriate.

- **The significance threshold for reporting emissions is five percent**. The ICLEI Reporting Standard and this protocol both require that one hundred percent of emissions of Scope 1 and Scope 2 required gases be reported and acknowledged. To meet the highest, best practice standard, ninety-five percent of reported Scope 1 and Scope 2 emissions (by CO_2e weight) must be computed using the methods and emission factors in this protocol that are identified as suitable for third party verification standards to the CCAR standard.

  The remaining Scope 1 and Scope 2 sources, which cumulatively should equal less than five percent of the total emissions in the inventory, should be identified and can be computed with a best available approximation. Where possible, the estimation methodologies should be the alternate methodologies identified in this protocol.

  ICLEI understands that many local governments do not yet have the data collection systems and reporting mechanisms to use third party verifiable methods for 95% of emissions. Likewise, even rough estimates of emissions that do not meet the significance threshold can be time consumptive and laborious, taking away from other climate actions or other inventory pieces. While ICLEI highly encourages that all local governments aim to meet the best practice target of calculating 95% of required Scope 1 and 2 emissions using third party verifiable methods, inventories that do not meet this standard may still be policy relevant and suitable for creating emissions reduction plans.

  Sources for which data is commonly unavailable, and that typically do not meet the significance threshold, include refrigerants and fire suppressants from stationary and mobile sources, and vehicle miles travelled data used to calculate N_2O and CH_4 emissions from mobile sources. ICLEI recommends cataloging the emissions calculation methodologies used for each source, including sources which do not meet the significance threshold. See the Recommended section below on activity data disclosure.

Scope 3 sources are not subject to the significance threshold.

NOTE: Employee commute, a required Scope 3 source of The ICLEI Reporting Standard, does not count for or against meeting the significance threshold.

Recommended:

- **Recommended reporting of Scope 3 government generated waste.**
  ICLEI's experience working with local governments indicates that data for government generated waste can be estimated even if direct data is not available. Government generated waste is particularly policy relevant as local governments have direct control over the products they purchase and measures aimed at reduction, reuse or recycling. Methodologies for calculating emissions from government generated waste include the use of ICLEI's methane commitment model contained within CACP 2009. EPA's WARM Model can also be used.

  Although government generated waste is an important source to quantify, it is not a "Required" source under the ICLEI Reporting Standard since waste tonnage is typically measured indirectly and lifecycle analyses are employed to calculate emissions in both CACP 2009 and EPA WARM. Since lifecycle waste models include methane emitted over decades, and not just in the inventory year, these emissions should not be bundled with other Scope 1 or Scope 2 emissions in an inventory report without explanation and qualification. ICLEI strongly encourages that local governments account for and include other Scope 3 sources where possible and appropriate.

- **Recommended reporting of Scope 3 contracted services.**
  Local governments often contract out vital services like waste hauling, water treatment, bus systems, fire systems, etc. that would otherwise go into a government operations inventory. ICLEI recommends that local governments track data on contracted services to get a better picture of all government operations. In many cases ICLEI has detailed guidance on ways of gathering data and calculating emissions from contracted services. Due to the wide array of services that can be contracted out and varying data quality, these sources are recommended instead of required.

- **Recommended activity data disclosure.**
  In order to make sure that all relevant sources are represented in an inventory report, and that a list is kept of where data collection can be improved to meet best practice methods in the future, ICLEI recommends that local governments gather activity data and consider adding this to their inventory report. An activity data report should contain a list of sources (at the fuel level) included in your inventory along the type of calculation method used from this protocol to quantify emissions (recommended, alternate, other) from each of these sources. ICLEI is currently creating a data collection tool that will help local governments organize this data in a table format that can be added in the body of an inventory report or as an appendix. See Chapter 13.2, section 3 of this protocol for an example of activity data disclosure.

  "Recommended" and "alternate" calculation methodologies are defined by this protocol and contained within relevant chapters. For more on any particular recommended or alternate calculation methodology, see the relevant chapter in Part III of this protocol, Quantifying Your Emissions.

Optional:

- **Optional reporting of Scope 3 business travel.**
  Business travel for local governments is typically a very small source. While numerous calculators for business travel can be found online, no widely accepted calculation methodologies for transportation modes such as airline travel yet exist. Thus, while local governments have direct control over business travel, this is an optional source rather than a required or recommended source. ICLEI members can contact their regional representatives for more information on ways to calculate emissions from business travel.

- **Optional Scope 3 reporting of other sources.**
  ICLEI encourages the reporting of Scope 3 sources. For a list of Scope 3 sources, see Chapter 12 of this protocol.

- **Optional roll-up reporting.**
  Roll-up reporting is when you take emissions from multiple scopes and bundle them into one number. If you choose to report one summed emission number, be sure to first report your emissions by scope to avoid double counting. If a roll-up number is used, your inventory report *must* include a statement to explain precisely what the basis of the roll-up number is and offer an explanation as to why this choice was made. For more information on reporting a roll-up number, see the Rolling-Up Annual Emissions Into a Single Number section below. For more on scopes, see Chapter 4 of this protocol.

  Other methods of reporting, such as by indicator, are also encouraged. This includes reporting by any of the optional indicators you may choose to gather or those listed in Chapter 13.1.2.4 of this protocol. Examples include metric tons CO_2e per square foot of owned building floor area or metric tons CO_2e per full time staff equivalent.

Baseline Inventories

Establishing a Baseline Year Inventory

ICLEI's members first establish a greenhouse gas inventory for a baseline year, which will then be used to set emissions reductions targets and track progress towards their climate protection goals. Participants should select their baseline according to the year that best represents their standard emissions profile, as well as a year for which they have the most complete data.

After establishing a baseline, ICLEI members should report emissions inventory results at least every five years. ICLEI considers the best practice to be annually reporting.

Limitations of Baseline Inventories in Monitoring

Since baseline inventories represent estimates based upon the available data and inventory methods at the time, local governments will be faced with the challenge of how to deal with baseline inventories that are not up to date and may not be directly comparable to future inventories. This is especially true of local governments that have completed emissions inventories previous to the release of this protocol. In these cases, ICLEI provides two suggestions: baseline updates or baseline year changes.

Generally, local governments will conduct baseline updates or establish new base years at the same time as they conduct re-inventories. ICLEI does not expect or require baseline updates immediately upon the adoption of this protocol.

When it is time to conduct a routine re-inventory, ICLEI members should do so in accordance with the reporting standards in this protocol and in this chapter. ICLEI stresses that local governments should not claim credit for apparent emissions reductions which are really the result of a change in emissions

calculation methodology. Nor should they be held responsible for apparent emissions growth resulting from inclusion of additional sources in their re-inventory or changes in emissions factors used.

Updating a baseline

ICLEI considers it good practice, as part of a standard re-inventory process, to recalculate an existing baseline using the most up to date methodology and simultaneously to recalculate any established reduction targets as a percentage of the recalculated baseline.

Example 1: Anytown, USA completed an inventory of 2000 and set a reduction target of ten percent below 2000 levels by 2015. In 2005 they re-inventoried using the same methods employed in 2000. In 2010 they intend to re-inventory, this time using the ICLEI Reporting Standard. In order to determine whether they are approaching their goals, they should:

- Recalculate their 2000 inventory using the same methods and including the same sources as in their 2010 report
- Apply their original target of ten percent below 2000 levels by 2015 to their recalculated 2000 figure
- Time permitting, they should recalculate their 2005 inventory as well

Example 2: Othertown, USA completed an inventory in 2008 that included only CO_2, N_2O and CH_4 and established a reduction target against this base year. They are now doing a re-inventory in 2010, this time including all six Kyoto Protocol gases and more accurate methodologies for a number of the calculations. In order to be able to compare the two inventories to each other, they should:

- Recalculate the 2008 inventory to include all six gases and
- Use the recommended methodologies for their recalculated 2008 inventory

Establish a new baseline year

Due to the fact that in many cases data availability for a historical baseline is limited, many local governments will find it easier to establish a new baseline. Where the previous baseline included a reduction target, the new baseline should also establish a new reduction target and the level of that target should account for the previously established target.

Example 1: Anytown, USA has already completed two inventories for 2000 and 2005. They have determined that they are not able to find all of the necessary information to update their 2000 baseline, but they do have adequate records to update their 2005 inventory to the ICLEI Reporting Standard. They should:

- Recalculate their 2005 inventory
- Establish a new reduction target against 2005 emissions levels. The new reduction target should take into account the old target (10 percent below 2000 levels by 2015) for the parts of the 2000 and 2005 inventories that are comparable. Let's say that emissions levels have decreased one percent between 2000 and 2005. This means that the new target should be at least nine percent below 2005 levels by 2015 so that the old target can be achieved even though the city is now using a new baseline.

Example 2: Othertown, USA does not have the staff time or funding to complete all of the calculations to update their existing 2008 inventory to the same standard as the 2010. They have opted instead to establish a new baseline. The comparable sections of the inventory show that their emissions increased by two percent from 2008 to 2010. This means that in order to encompass the old reduction target, the new target, established against 2010 emissions levels, should be two percent greater than the old.

Recommended Scope 3 emissions

Chapter 12 of the Local Government Operations Protocol contains a list of possible Scope 3 sources for emission quantification. Although this protocol does not provide recommended or alternative calculation methodologies for these sources, they can contribute significantly to your inventory and also be sources

over which your local government will have direct control. ICLEI strongly encourages the calculation of these emission sources, where possible, and provides members with inventory guidance and emissions reduction strategies to address Scope 3 sources. In particular, ICLEI recommends quantifying emissions from your government generated waste, employee commute and employee business travel. Employee commute is included as a required source under the ICLEI Reporting Standard. Other Scope 3 sources are listed in Chapter 12 of this protocol.

How do I calculate Scope 3 employee commute?
Local government employee commute can be a significant contributor to your to local government inventory. It is also one of the emissions source over which local government exert significant control. Please contact your ICLEI regional representative for guidance and tools to help survey your employees on their commuting distances and behaviors. Many local governments have successfully used a Geographic Information System (GIS) to plot and track commuting behaviors. ICLEI provides guidance for local governments of all levels of technological sophistication.

How do I calculate Scope 3 waste?
CACP 2009 contains a Scope 3 waste calculator based on EPA's WARM model. This tool has been modified to exclude sequestered emissions at the site of disposal and is therefore called a methane commitment model. This calculator will assist your local government to estimate emissions from your government waste stream, to calculate the potential benefits of a waste stream reduction or a switch to an alternate waste control technology such as landfilling instead of open burning. If you utilize ICLEI's tools or Scope 3 waste guidance, please be sure to read our section below on rolling-up your annual emissions since there are basic incongruities between the lifecycle analysis used for Scope 3 waste and consumption calculations used for Scope 1 and Scope 2 sources.

Rolling up Annual Emissions into a Single Number

The Reporting Standard requires that local governments report their emissions by scope. The scopes framework was devised to eliminate double counting of emissions within a local government and between other local governments. No Scope 1 source used by City A can be claimed by City B, for example. Nor will any Scope 1 source appear as a Scope 1 source in City A's inventory twice. While scopes reporting is required under this standard, ICLEI recognizes that local governments may be interested in using a single number to represent their emissions in their reports, target setting and action planning. This number can vary greatly based on what has been included and, consequently, is not comparable to other local governments.

While ICLEI believes that the most accurate description of emissions requires separate accounting of emissions by scope, many local governments find it useful for public awareness and target setting to frame emissions in this simplified way. ICLEI recommends that local governments:

1. Report emissions by scope using The Reporting Standard.
2. If a roll-up number is used, local governments *must* include a statement to explain precisely what the basis of the roll-up number is and offer an explanation as to why they chose this basis.
3. Every time the local government references the roll-up number they should include a short description of the basis of the roll-up.

For example, in Year 2005 a local government has followed the ICLEI Reporting Standard and wishes to report aggregated emissions of 300,000 metric tons for its baseline. The report must include a statement and formula explaining this number. Below are three examples.

NOTE: The best option for local governments who seek to create a roll-up number is example 3, below. The exact components of a roll-up number will vary by local government.

Example 1: Emissions = All Scope 1

In this roll-up the local government is counting direct sources only. This is robust and ensures no double counting, but it also misses significant policy relevant GHG sources. For example, the impact of electricity efficiency measures will not be measured under this roll-up. They could say "our *direct or Scope 1* emissions are 300,000 tons." They should not report or publish this roll-up number without at least this level of specificity.

Example 2: Emissions = All Scope 1 – Scope 1 grid power generation + All Scope 2 and emissions from power consumption reported as information items.

In this example, the local government has opted to include Scope 2 energy consumption. To avoid double counting, the local government subtracts grid-based generation. This roll-up enables all forms of government, big and small, to assign itself some responsibility for electricity usage and enables them to target policy to reduce it. They could say "our *direct emissions and emissions from electricity consumption* total 300,000 metric tons." They should not report or publish this roll-up number without at least this level of specificity.

Example 3 (Best Option): Emissions = All Scope 1 – Scope 1 grid power generation + Scope 2 + emissions from power consumption reported as information items. + Scope 3 employee commute and employee business travel.

In this example a local government has also included several key Scope 3 sources against which it intends to take action. Now the impacts of these reduction measures will be apparent in future inventories conducted by the local government. In this case the government could say "*our direct emissions, emissions from electricity consumption and select other indirect sources* total 300,000 metric tons." They should not report or publish this roll-up number without at least this level of specificity.

At this time ICLEI does not recommend a specific roll-up number as local circumstances and opportunities will differ significantly. However, we believe that many local governments will find that third example includes the most policy relevant sources without creating an excessive data collection burden.

Finally, the report should include a disclaimer of its roll-up number clearly indicating that it should not be used for comparison purposes without careful analysis of the basis of the number. Contact your local ICLEI representative for help on defining and reporting a roll-up emissions number.

ICLEI Milestone Awards

ICLEI tracks achievements of its members through the Milestone award process. ICLEI recognizes members as officially reaching a milestone when they complete benchmarks associated with that level. Once a level has been reached by the local government, ICLEI endorses and encourages the local government to publicize this achievement. ICLEI members should e-mail membership-usa@iclei.org or contact their regional representatives for more information on how to submit information and receive a Milestone award.

Milestone One: The local government must complete and submit to ICLEI a baseline GHG invent for both community and local government operations and submit the reports, backup data, and software data to ICLEI. The local government must complete and submit to ICLEI a forecast of emissions ten years after the baseline year if emissions were to continue at a Business as Usual rate.

Milestone Two: The local government must submit written documentation to ICLEI that a baseline year and target has been approved by the local government body. Long-term targets must include

benchmarks (e.g. Target = eighty percent below the baseline year by 2050, Benchmark = two percent reduction/year). Alternatively, the target may be referenced in an approved emission inventory report.

Milestone Three: The local government must submit to ICLEI an official Climate Action Plan. The Climate Action Plan must list enough actions to reduce emissions from a rate forecasted as Business As Usual to a desired rate. Plans must include a timeline, a breakdown of actions and estimated benefits of each action compared to the baseline, a description of financing mechanisms, and an assignment of responsibility to departments and staff.

Milestone Four: The local government must demonstrate that 50 percent of the Climate Action Plan measures have begun implementation. Each measure that has been implemented, or where implementation is beginning, should include a summary description of the implementation process and quantified results.

Milestone Five: The local government must submit a climate action plan status report that includes a re-inventory of emissions for any one or more subsequent years following the same reporting format used for the baseline or else applying the baseline adjustment guidelines discussed in this chapter, and a status update on all measures included in the original plan. The re-inventory must be undertaken within five years of the base year. Local governments at Milestone Five are also expected to submit annual progress to ICLEI on local climate activities that would be beneficial to the network.

Software and Technical Assistance for GHG Management

ICLEI produces a number of tools and services to assist local governments with climate action planning. Our technical program staff is available to help our members through the Five Milestones. We offer a combination of on-line resources, software tools, data collection forms, technical trainings and personal assistance.

The Clean Air and Climate Protection (CACP) Software 2009 is a desktop software that can help local governments to compute Local Government Operations Protocol compliant GHG inventories. In addition, ICLEI provides supplemental tools and calculators to CACP 2009 on its website. The Climate and Air Pollution Planning assistant (CAPPA) is a decision support tool to help with a Milestone Two, emission reduction target and to select measures for a Milestone Three, climate action plan. Please contact your local ICLEI representative for more information on accessing ICLEI's tools and service.