

Refinement Phase Task 3 – Develop Sustainability Guidance Document

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1.0 Introduction

In October 2007 the City of Omaha, through the Omaha CSO Program Management Team (PMT), submitted a Substantively Complete Long Term Control Plan (LTCP) to the Nebraska Department of Environmental Quality. This LTCP includes the following major CSO control elements:

- Deep conveyance/storage tunnel along the Missouri River;
- High rate treatment facilities that operate only during wet weather;
- Additional lift stations and lift station improvements;
- New South Interceptor force main;
- CSO storage tanks; and
- Sewer separation.

The development of the LTCP has been guided by the City of Omaha's desire to develop a plan that meets regulatory requirements, is affordable, and is accepted by the community. These three goals align with the traditional triple-bottom line analysis of sustainability that incorporates environmental protection; economic impacts and benefits; and social benefits and impacts.

The City and the PMT are required to submit a final LTCP in October 2009. During the two-year period between October 2007 and October 2009, the PMT is working to refine the LTCP. One of the refinement phase tasks is the development of a Sustainability Guidance Document to be applied during the implementation of CSO controls.

The members of the PMT that participated in the development of this Sustainability Guidance Document are as follows:

- Mike McMeekin, Task Lead
- Michaela Wittmann, Task Lead
- Andrea Gardner, Senior Sustainability Advisor
- Pat Nelson
- Linda Lovgren
- Ellen Fitzsimmons

City of Omaha participants included the following:

- Marty Grate
- Nina Cudahy

- Kirk Pfeffer
- Mike Arends

The Sustainability Guidance Document is intended to apply to the projects included in the LTCP as they are implemented. Some elements may overlap with other programs in the Public Works Department or other City departments. Opportunities for coordination and collaboration will be identified. Rigid requirements or mandates for specific technologies or approaches will not be included; the guidance will be structured as a template that allows flexibility and opportunities for updates as the implementation of the LTCP progresses. The guidance will be long-term in nature and consider design, construction, and operation and maintenance of the chosen CSO controls. Any public education opportunities that result from this Sustainability Guidance Document will be coordinated with the overall public education efforts of the CSO program.

1.1 Definition of Sustainability

This document is based on the definition of sustainability as a desirable and healthy state of dynamic balance between human and natural systems that can theoretically continue in perpetuity. Sustainable planning / design is a decision-making process that incorporates the following considerations from the beginning:

- Takes into account Earth's finite resources;
- Considers a comprehensive set of issues and effects;
- Seeks a long-term perspective;
- Leverages opportunities and mitigates risks associated with issues such as climate change and energy;
- Balances economic, environmental, and social concerns;
- Results in investment in natural capital (human economic and social systems are sub-sets of the natural environment, so healthy ecosystems are a precondition for thriving economies); and
- Includes tangible goals and monitors progress towards those goals.

1.2 Benchmarking

Several stormwater management / flood control and CSO programs of other agencies working to incorporate green or sustainable features were reviewed for potential input into the goals and actions plans in this document. The programs are summarized in Table 1 and a more detailed description is included in Table 9 at the end of this document. As the action plans are further developed, additional information could be obtained from these organizations to assist with implementation. Overall, several themes emerged, including the following:

- City-sponsored pilot and demonstration projects are a part of most programs to provide data, evaluate the best local solutions, and identify implementation issues for scaling up.
- Small-scale solutions like rain barrels are best used in targeted areas where they can be most effective (rather than trying a "blanket" application of such solutions).
- Inter-departmental coordination, particularly with respect to street design and drainage, is important to program success.

- Reviewing local ordinances and codes for issues/ disincentives to source control efforts can be an effective tool.

TABLE 1

Summary of Programs Reviewed for Benchmarking of Stormwater Programs

Vision and Goals	Implementation Strategies	Potential Application to Omaha CSO Program
Philadelphia Water Department's Office of Watershed "Clean Water – Green City" Program		
<p>Unite the City of Philadelphia with its water environment, creating a green legacy for future generations while incorporating a balance between ecology, economics, and equity.</p> <p>Goals include:</p> <ul style="list-style-type: none"> • Preserve and enhance the health of the region's watersheds through effective wastewater and storm water services and the adoption of a comprehensive watershed management approach. • Achieve a sensible balance between cost and environmental benefit. • Base program on planning and acting in partnership with other regional stakeholders. 	<p>Implement a balanced "land-water-infrastructure" approach to achieve watershed management and CSO control goals. This method includes infrastructure-based approaches where appropriate, but also includes a range of land-based stormwater management techniques and the physical reconstruction of aquatic habitats, where appropriate. The focus of the approach is to restore and protect rivers and streams including the floodplains, riparian buffers, stream channels, streambeds, wildlife, vegetation, and other biomarkers that define a healthy stream ecosystem that has been degraded as a result of urbanization within the City of Philadelphia and in the surrounding counties, while achieving full regulatory compliance in a cost-effective manner.</p>	<p>The Philadelphia program could provide examples/ models for smaller-scale green solutions (low-impact development) and associated land use controls and ordinances. In addition, the Philadelphia program focuses on making the river a regional economic, social, and environmental asset, and addressing issues on a watershed basis since the City is at the downstream end of the watershed. This may provide ideas for tying the Omaha CSO Program into regional watershed enhancement efforts.</p>
City of Chicago's Water Agenda 2003		
<p>No specific vision identified as such.</p> <p>Purpose of the Agenda 2003 document includes <i>"To provide a comprehensive approach to the City's treasured waterways to ensure that they are conserved for future generations, protected and improved, and managed so that water can continue to sustain Chicago, connect Chicago as neighbors, and define the community's role nationally and internationally."</i></p> <p>Goals include:</p> <ul style="list-style-type: none"> • Continue to invest in and encourage green infrastructure and design in City projects as well as private development. • Continue to reduce the amount of pollution that flows from roadways into area waterways. 	<ul style="list-style-type: none"> • Rooftop Garden Initiative, which includes City demonstration projects, developer density bonuses, and grants for small-scale installations. • Incentives for onsite stormwater management for new large developments. • Permeable alleys pilot project, which constructed an alley with a rigid grid system and gravel, allows rainwater to soak into the ground. • Testing rain gardens in parkways and intersections to reduce flooding and beautify streets. • City-sponsored rain barrel program, in which City residents purchased more than 400 55-gallon rain barrels in targeted areas with a high frequency of basement flooding. • Downspout disconnect program, to relieve basement flooding through installation of restrictors and residential disconnection of downspouts to direct stormwater to yards. 	<p>Chicago's experience with its stormwater ordinance, enacted January 2008, may provide useful input for developing local incentives and regulations in Omaha for larger developments. The Chicago ordinance generally applies to development projects affecting at least 15,000 square feet of land or creating at least 7,500 square feet of at-grade impervious surface.</p> <p>Chicago's approaches to pilot-testing green solutions such as rain gardens and to providing major city demonstration projects (e.g. green roofs) could provide a model and/or lessons learned to help guide implementation of green solutions on public land within Omaha. Likewise, City of Chicago incentives and education programs for private property owners to implement green solutions on their properties may provide valuable lessons learned.</p>

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Vision and Goals	Implementation Strategies	Potential Application to Omaha CSO Program
<ul style="list-style-type: none"> • Work with the Metropolitan Water Reclamation District (MWRD) to end the practice of discharging untreated wastewater into Lake Michigan. • Work with the MWRD and the State and Federal governments to ensure the continued improvement in the quality of the Chicago River. • Continue to protect and rehabilitate wetlands within the City limits. 		
Milwaukee Metropolitan Sewerage District (MMSD)		
<p>No vision identified as such.</p> <p>A primary goal of the stormwater runoff reduction program was to provide data and information that assisted the 2020 facilities planning team in developing alternatives that reduce stormwater runoff and pollutant loadings from nonpoint sources. Specifically, the 2020 facilities plan required capital and operational costs, implementation and maintenance information, and an evaluation of the overall effectiveness of BMPs that reduce stormwater runoff and/or reduce nonpoint pollution loads.</p>	<ul style="list-style-type: none"> • Greenseams, an innovative flood management program that permanently protects key lands containing water absorbing soils. The program makes voluntary purchases of undeveloped, privately owned properties in areas expected to have major growth in the next 20 years and open space along streams, shorelines and wetlands. • Evaluation of 17 different stormwater runoff reduction BMPs, including downspout disconnection, rain barrels, cisterns, rain gardens, green roofs, rooftop storage, green parking lots, stormwater trees, porous pavement, and inlet restrictors/ pavement storage. The BMPs have been evaluated for flow impacts, environmental impacts, implementation issues, function, operational maintenance, potential to promote public involvement and awareness, and cost. • Establishment of stormwater ordinance review committee to review local ordinances that could either obstruct or promote implementation of stormwater runoff reduction BMPs. 	<p>The MMSD evaluation of BMPs may provide useful information to the City of Omaha for selecting the most promising small-scale green solutions for implementation.</p> <p>The MMSD process for evaluation of local ordinances could be used as a model for a similar evaluation for the City of Omaha. This would also provide a good opportunity for cross-department coordination to address CSO issues.</p>

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Summary of Programs Reviewed for Benchmarking of Stormwater Programs

Vision and Goals	Implementation Strategies	Potential Application to Omaha CSO Program
City of Seattle (including Seattle Public Utilities [SPU] and Office of Sustainability and Environment [OSE])		
<p>No vision identified as such.</p> <p>Mayor’s inter-departmental “Restore our Waters Strategy” includes: “Seattle is surrounded by water - it’s <i>what makes the city such a beautiful place. We must protect the water quality of Puget Sound, our lakes and our creeks...Building a strong, healthy community means protecting these incredible assets for future generations. Let’s work together to restore our waters!</i>”</p> <p>Goals include:</p> <ul style="list-style-type: none"> • Focus the City’s efforts towards achieving what is best for water quality and aquatic habitats inside the City. • Establish City-wide priorities and a shared framework for investments and BMPs. • Develop a long-term framework for departments to work together on matters affecting waterbodies. • Streamline and coordinate city policies, regulations, and enforcement. • Provide incentives for others to steward, protect and restore these resources. • Identify methods to leverage City funding of these efforts. • Slow the flow and reduce the volume of stormwater runoff. 	<ul style="list-style-type: none"> • Street Edge Alternatives (SEA Streets) Project promotes street design to provide drainage that more closely mimics the natural landscape prior to development than traditional piped systems. • 110th Cascade, Broadview Green Grid, and High Point Projects - these projects used a series of stair-stepped natural pools that slow damaging stormwater flows from street runoff, reduce flooding, and trap pollutants. • Rainwater Harvesting is promoted in several ways, including demonstration project and subsidized rain barrels and cisterns. • The City has installed several green roofs and is collecting data on performance to potentially modify the stormwater code and identify appropriate incentives. • Establish Long-Term Aspirations for In-City Water Resources. • Use Science-Based Guidelines to Direct Citywide Efforts. • Establish Clear, Quantifiable Goals and Measures of Progress. • Make Strategic Changes to the City’s Policy and Regulatory Framework • Move Forward on Priority City Capital Project Investments. • Make Investments to Ensure City Operations Support Improved Aquatic Health. • Expand Partnerships with the Community and Private Property Owners to Restore Our Waters. • Advance Scientific Understanding and Adaptively Manage City Efforts. • Establish a Stakeholder Group to Promote Long-Term Coordination within City Government and Between the Citizens of Seattle. 	<p>Restore Our Waters was kicked off by the Mayor, who issued Executive Order 03-04 requiring inter-departmental review of everything the City does that affects water resources inside the City limits. Twelve City Departments were instructed to develop a shared action plan, which resulted in identification of the goals and objectives listed in this table. This may suggest a model for the City of Omaha to initiate inter-departmental cooperation to address CSO issues.</p> <p>SPU’s pilot projects in street design and low impact development included significant public outreach and collaboration and detailed evaluation of issues and successes, which may provide valuable lessons learned to Omaha if similar efforts are pursued.</p>

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Vision and Goals	Implementation Strategies	Potential Application to Omaha CSO Program
City of Pittsburgh		
<p>No vision identified as such.</p> <p>No goals formally identified; the City does not appear to have a comprehensive or well-defined plan to address watershed/ stormwater management.</p>	<ul style="list-style-type: none"> • Several City buildings (e.g. Phipps Conservatory and Botanical Gardens, David L. Lawrence Convention Center) have included green design features to reduce stormwater runoff through green roofs or rooftop collection/reuse. • The City and the US Army Corps of Engineers are restoring Nine Mile Run, one of the last remaining daylight streams in the city. The municipal contribution to the project is to repair sewer lines, preventing leakages due to old, failing pipes. In addition, the city is working with community groups on other source control efforts. • The 3 Rivers Wet Weather Demonstration Program created a homeowners guide for protecting watersheds, for use in multiple municipalities. It includes general guidance for rainspout disconnection and rain barrels, landscaping, and water quality protection measures. 	<p>Pittsburgh's efforts at civic engagement may provide valuable lessons learned and suggestions for future strategies for Omaha. For example, for Nine Mile Run, the City has partnered with a developer to transform a slag heap, a brownfield site polluting the river, into a 710-home residential development. Community groups commissioned an engineering study to determine where rain barrels would be most effective in reducing the stormwater runoff that contributes to CSOs. The groups focused on the educational component of the project to make homeowners aware of lot-level solutions to stormwater management.</p>
City of Portland's Sustainable Stormwater & Public Incentives Program		
<p>Portland Bureau of Environmental Services general vision: <i>[P]rotect the quality of surface and ground waters and conduct activities that promote healthy ecosystems in our watersheds. We provide sewage and stormwater collection and treatment services to accommodate Portland's current and future needs.</i></p>	<ul style="list-style-type: none"> • Provide technical assistance and support for building owners considering ecoroofs. • Build sustainable street projects to better manage stormwater runoff and enhance neighborhoods (curb extensions landscaped with plants that filter pollutants from stormwater runoff, swales that infiltrate and store stormwater runoff, lowered planter boxes, permeable pavement, and street trees). • Implement the Innovative Wet Weather Program for promoting stormwater management projects that contribute to healthy Portland watershed (examples include rain gardens, swales, and stormwater planters). • Improve neighborhood livability in areas affected by CSO construction through the Community Benefit Opportunity Program. Projects include neighborhood tree plantings, revegetation, pedestrian and bicycle paths, access to the river, a community garden, and a living water garden schoolyard restoration. 	<p>The Community Benefit Opportunity Program may provide ideas for the City of Omaha program to use funds leveraged from outside sources to enhance neighborhoods affected by construction.</p>
<p>Goals include:</p> <ul style="list-style-type: none"> • Promote projects that mimic natural systems and integrate stormwater into building and site development to reduce damage from urban stormwater runoff, replenish groundwater, and restore healthy watershed function. • Engage municipal, business, and individual stakeholders in effective strategies reducing the economic, environmental, and social impacts of CSOs and stormwater runoff on Portland's natural resources and urban infrastructure. 		

San Francisco Public Utilities Commission Sustainability Plan

No specific vision provided. SFPUC defines sustainability: *“the framework through which SFPUC will responsibly manage the resources under its care, protect public health, and balance its social and environmental responsibilities to the citizens and community, while providing cost effective services to its ratepayers.”*

The plan has 25 strategies to improve sustainability performance, including:

- Implement habitat conservation and biodiversity protection measures (e.g. land acquisition and conservation)
- Advance programs for recycled water, groundwater, desalination, stormwater and rainwater collection and/or other innovative technologies and practices to maintain and increase water supply (e.g. evaluate feasibility of using rainwater collection cisterns as an auxiliary water support system)
- Prevent, mitigate, and lessen disproportionate environmental impacts on communities in all service areas (e.g. identify organizations in the community to partner with to establish and fund small community projects in environmental justice areas)
- Develop as appropriate departmental, enterprise and division risk management tools
- Advance and institutionalize department-wide sustainability plan and program as the core of SFPUC's strategic planning and decision-making.
- Implement department-wide procurement procedures to ensure quality of goods and services procured.
- Apply the City's environmentally preferable purchasing and procurement protocol.

Key performance indicators could provide ideas for how some non-environmental aspects of the CSO Program could eventually be tracked. SFPUC indicators include:

- [Number of] Urban projects incorporating low impact design strategies that affect surface drainage impacts.
- Reduction in peak storm flows to combined system due to low impact development initiatives.
- Efforts to identify and map affected [EJ] communities.
- Number of adults and children reached through education programs.
- Number of partnerships established with community-based organizations to promote SFPUC activities.
- Climate change risks to the organization identified and analyzed and mitigation measures developed.
- Extent to which sustainability concepts embedded across mission, goals, planning and decision-making.
- Percent of purchasing decisions that have been screened for compliance with the environmentally preferable purchasing ordinance.

1.3 Process for Establishing Sustainability Vision and Goals

Development of this Sustainability Guidance Document was initiated at a workshop held on January 15, 2008, attended by the Sustainability Guidance Document team. Minutes from this workshop are attached to this document. Accomplishments at this workshop included developing key points to be included in the Vision Statement and developing preliminary goals for sustainability.

Following this workshop, the Vision Statement and Goals were reviewed, simplified and refined. A proposed Vision Statement and Goals were presented at a second workshop held on July 7, 2008. Minutes from this workshop are also attached to this document. Accomplishments at this workshop included minor revisions to the Vision Statement and Goals and preliminary discussion of key actions necessary to accomplish each goal. Final versions of the Vision Statement and Goals developed at the second workshop are stated below.

1.4 Vision for Combined Sewer Overflow Long-Term Control Plan Sustainability Plan

A vision is a succinct statement of what a group or program is trying to achieve; that is, it answers the question “where do we want to go?” It helps to focus and align team member efforts and activities. It should represent something of an ideal (“aim high”) to maintain progress.

Drafting and refinement of the vision for the CSO Long-Term Control Plan Sustainability Guidance Document resulted in adoption of the following Vision Statement.

The City of Omaha CSO Control Program will apply the principles of sustainability in a fiscally responsible manner to add meaningful and lasting social, environmental, and economic benefits to the implementation of the LTCP and serve as a model for the application of sustainability in the design, construction and operation of infrastructure.

1.5 Combined Sewer Overflow Long-Term Control Plan Sustainability Goals

Goals are the specific ends which, if achieved, will advance the implementation of the CSO LTCP toward the vision for sustainability stated above. These goals should meet the following criteria:

- Be relevant to the organization and CSO Control Program (i.e., things that the organization can influence);
- Have a positive, notable impact on the environment, economy or society (i.e., will make a meaningful difference and not expend effort on those areas with little impact);
- Framed to allow focusing resources to achieve results; and
- Focused in areas where the application of sustainable planning/design can enhance LTCP projects.

Drafting and refinement of the goals for the CSO LTCP Sustainability Guidance Document resulted in adoption of the following seven goals. The first six goals in the list were finalized in the July 7, 2008 workshop. The seventh goal in the list was also developed at the July 7, 2008 workshop, but was edited after the workshop to clarify the use of the term “life-cycle analysis.”

- Identify, capture and communicate to the public the social, environmental and economic (triple bottom line) benefits of the implementation of the CSO LTCP.
- Optimize the use of local workforce and materials in project construction and operation.
- Incorporate resource efficiency (e.g., energy efficiency, reduced construction waste, reduced hazardous waste generation, recycling) into project design, construction and operation to reduce energy and material use, reduce waste and provide economic benefit to rate-payers.
- Identify and implement opportunities for design practices that encourage innovative thinking to produce multiple benefits, such as enhanced environmental protection, contribution to the control of CSO’s and economic benefit to rate-payers.
- Identify and implement natural system enhancements that contribute to the control of CSO’s, improve water quality and/or create valuable community enhancements.

- Establish and implement collaborative processes with other City of Omaha departments, utility providers and with regional stakeholder groups to remove roadblocks to the implementation of the Sustainability Guidance Document, ensure effective communication and achieve greater benefits.
- As appropriate, use life-cycle analysis to better evaluate environmental impacts and benefits. Life-cycle analysis, for example, would consider the environmental and social impacts of the production and transport of construction materials that are utilized in infrastructure projects as well as the long-term environmental and operational impacts of materials or processes.

1.6 Key Actions

Proposed Key Actions for each sustainability goal are listed below. Goals are numbered from 1 through 7 for convenience only. No prioritization of the goals is implied by this numbering. Consideration was given in development of the Key Actions to other CSO tasks, including the CSO Control Program Risk Analysis. Some of the Key Actions have been included to specifically address risk events identified in this analysis. The recommended schedule for completion of the Key Actions is indicated through the following priority codes:

- A = Prior to commencing major design efforts (and, as feasible, prior to the completion of the LTCP)
- B = Early stages of implementation of the LTCP
- C = During design of LTCP projects

Responsibility for a number of the Completion Priority A tasks is assigned to the Sustainability Guidance Document Leadership Team (SGDLT), which consists of Mike McMeekin and Michaela Wittman, Sustainability Guidance Document Task Leads and Andrea Gardner, Senior Sustainability Advisor.

Goal 1: Identify, capture, and communicate to the public the social, environmental and economic (triple bottom line) benefits of the implementation of the Combined Sewer Overflow Long Term Control Plan.

The action plans for this goal will result in identification of the key sustainability benefits to be quantified and reported; development and use of tools to allow collection of the necessary data; and development of a communications process. Key actions are enumerated in Table 2 below. Note that, although sustainable metrics are not being formally developed for the CSO program, quantification of project benefits may result in defacto “metrics.” Actions listed below should be coordinated with the action plans for other sustainability goals, especially for development of the scorecard/ data collection, which may overlap with data collection efforts under other goals.

TABLE 2
Key Actions for Goal 1

	Key Actions	Responsible Party	Completion Priority
1.	Develop preliminary list of potential sustainable benefits and one or more metrics (strategy to quantify benefit) for each. Benefits considered should include social and economic benefits (e.g. local workforce used, increased amount of open space/recreation, local spending, cost savings, reduced impacts during construction, areas with separated sewers, and odor control measures).	Sustainability Guidance Document Leadership Team (SGDLT)	A
2.	Review initial list with Public Works Department and PMT and select no more than 10 benefits to track/report.	SGDLT	A
3.	Evaluate data availability for quantifying benefits and finalize quantification methodology.	SGDLT	A
4.	Verify other planned reporting requirements for the CSO Control Program.	SGDLT	A
5.	Develop a basic “scorecard” to record the benefits of each project.	SGDLT	B
6.	Review scorecard with Public Works Department and PMT.	SGDLT	B
7.	Evaluate CSO Control Program projects to identify approach/timing for using scorecard. Are there other data collection efforts for each project this could tie into? When is the needed data available in the project delivery process?	SGDLT	B
8.	Develop training guide for use of the scorecard.	SGDLT	B
9.	Develop education / communications plan. This should address methods for communicating program sustainable benefits (website, newsletters, etc.); frequency of reporting (monthly, quarterly, etc.); and approaches for project-specific benefits (media stories, interpretive signage, etc.).	Public Participation Facilitator , SGDLT	B
10.	Evaluate usefulness of a public survey on sustainability awareness before and after implementation of these actions. A survey could be done using online survey tools, the website, questions at public meetings, or other means.	Public Participation Facilitator, SGDLT	B
11.	Implement communications plan and survey, if done.	Linda Lovgren/Public Involvement Team,	B

Goal 2: Optimize the use of local workforce and materials in project construction and operation.

The action plans for this goal will ensure coordination between the CSO Control Program contract processes and other efforts to reach out to locally-owned businesses and will support development of tools and processes for optimizing local and “green” materials in projects. Because a significant level of effort related to workforce development is underway by other organizations such as the Greater Omaha Chamber of Commerce, Key Actions will focus on ways to enhance those efforts, rather than creating new outreach efforts. Efforts undertaken related to this goal will be coordinated with future protocols to be developed by PMT. These include pre-qualification of materials and products, design consultant selection, third party support services and construction contractor selection.

TABLE 3
Key Actions for Goal 2

	Key Actions	Responsible Party	Completion Priority
Local Materials			
1.	Obtain lists of pre-qualified City/Public Works vendors and lists of local businesses from the City, Chamber of Commerce and others.	PMT	B
2.	Identify legal impediments to procurement guidelines or criteria related to use of local materials.	PMT, City of Omaha	A
3.	Identify local businesses on the lists that could provide materials or resources for CSO projects. Identify any “gaps” in local business for key materials (e.g. construction trailers, pipe) and use other resources (e.g. online yellow pages) to identify additional local/regional businesses that could supply the “gaps.”	PMT, Public Works Staff	B
4.	Develop outreach program to revised list of local businesses on how local supply chains function and/or how to get on the list of local materials providers.	PMT, Public Works Staff	B
5.	Assist in the development of procurement requirements/language/guidance/bid award criteria for Contractor Bid Documents for local materials use. Develop examples for documenting local sources.	PMT, Public Works Staff	B
6.	Develop project-level tool to identify and track local materials/resource use on CSO projects.	PMT	B
7.	Develop training guide for use of the tracking tool, procurement requirements and specification requirements.	PMT, Public Works Staff	B
8.	Develop process for aggregating project information on local materials use.	PMT	B
Local Workforce			
9.	Confirm existing outreach efforts to business (local, minority, woman-owned, disadvantaged) by CSO Program, Chamber, General Contractors and others. Determine if additional support from the CSO Program is needed to achieve good outreach to local businesses.	PMT	B
10.	Identify legal impediments to procurement guidelines or criteria related to use of local workforce.	PMT, City of Omaha	A
11.	If CSO Program support determined to be advantageous, develop initial plan for addressing local workforce. Can include greater engagement with Chamber, Metro Community College, General Contractors, labor unions and others; strategies for local business outreach; and individual meetings with other organizations.	PMT	B
12.	Hold meeting(s) with Chamber of Commerce to discuss opportunities for engagement.	PMT	B
13.	Support update of local workforce plan, as appropriate.	PMT	B

Goal 3: Incorporate resource efficiency (e.g. energy efficiency, reduced construction waste, reduced hazardous waste generation, recycling) into project design, construction, and operation to reduce energy and material use, reduce waste, and provide economic benefit to the rate-payers.

The action plans for this goal will result in the development of processes that will insure conservation of valuable resources in the construction and operation of CSO control projects and facilities. Procedures for measurement of resource efficiency benefits will be coordinated with the steps outlined for Goal 1.

TABLE 4
Key Actions for Goal 3

	Key Actions	Responsible Party	Completion Priority
1.	Evaluate and include as appropriate resource efficiency benefit(s) in development of preliminary list of potential sustainable benefits in Goal 1 (Action 1).	SGDLT	A
2.	Evaluate and include as appropriate resource efficiency in evaluation of data availability in Goal 1 (Action 3).	SGDLT	A
3.	Evaluate and include as appropriate resource efficiency benefits in project “scorecard” referenced in Goal 1 (Action 5).	SGDLT	B
4.	Develop procurement standards for prioritized materials and equipment in accordance with procedures outlined for Goal 2, if applicable.	PMT	B
5.	Include resource efficiency analysis and best practices research in scope of work for design services for all projects.	Public Works Department, PMT	B
6.	Develop standard construction specifications for prioritized resource efficiency initiatives for sewer separation projects (examples include pump station energy source and use, construction materials, construction waste and construction equipment fuel consumption).	PMT	B
7.	Implement resource efficiency procedures on identified pilot sewer separation project.	PMT	C
8.	Evaluate “Sustainability Lessons Learned” from identified pilot sewer separation project.	PMT	C
9.	Finalize design guidelines related to resource efficiency for tunnel project (examples include pump station energy source and use, re-use of spoils or disposal methods that minimize environmental impact, liner and other construction materials, construction waste and construction equipment fuel consumption).	City of Omaha, PMT	C
10.	Finalize design guidelines related to resource efficiency for RTB projects (examples include pump station energy source and use, disinfection chemicals, construction materials, construction waste, construction equipment fuel consumption and operational wastes).	City of Omaha, PMT	C

Goal 4: Identify and implement opportunities for design practices that encourage innovative thinking to produce multiple benefits, such as enhanced environmental protection of the environment, contribution to the control of CSO’s, and economic benefit to the rate-payers.

The action plans for this goal will result in the development of processes that insure that best design practices related to sustainability will be utilized in the CSO control projects and facilities.

TABLE 5
Key Actions for Goal 4

	Key Actions	Responsible Party	Completion Priority
1.	Identify, prioritize and document potential areas for best design practices for tunnel project.	SGDLT, PMT	B
2.	Identify, prioritize and document potential areas for best design practices for Retention Treatment Basin (RTB) projects.	SGDLT, PMT	B
3.	Identify, prioritize and document potential areas for best design practices for sewer separation projects.	SGDLT, PMT	B
4.	Define best design practices as it applies to sustainability and request ideas relative to best design practices in procurement process for design services.	SGDLT, PMT	B
5.	Include applicable alternatives analysis relative to best practices in scope of work for design services.	Public Works Department, PMT	B
6.	Implement evaluation of best design practices brain-storming on identified pilot project if appropriate.	Pilot Project Design Team	C
7.	Evaluate “Sustainability Lessons Learned” from all phases of identified pilot project.	Pilot Project Design Team	C
8.	Document results of application of best design practices to insure application on similar projects.	PMT	C

Goal 5: Identify and implement natural system enhancements (green solutions) that contribute to the control of CSO’s, improve water quality, and/or create valuable community enhancements.

The action plans for this goal are adapted from the Green Solutions Technical Memorandum for the CSO Control Program and ensure that the appropriate use of green solutions are an integral part of the overall implementation of sustainability for the program. Key Actions will be carried out in close coordination with the implementation of Green Solutions by the PMT.

TABLE 6
Key Actions for Goal 5

	Key Actions	Responsible Party	Completion Priority
1.	Document natural system enhancements already completed by the City of Omaha as part of sewer separation program.	Public Works Department	A
2.	Document the benefits of Green Solutions projects included in LTCP in accordance with priorities for tracking sustainability benefits developed as described in Key Actions for Goal 1.	SGDLT, Green Solutions Team	A
3.	Determine communication of benefits. This can be through a separate communication or in coordination with benefits communications per Goal 1 to communicate sustainable benefits of the implementation of the CSO LTCP.	PMT, Public Participation Facilitator	A
4.	Develop process and guidelines for incorporating green solutions, including but not limited to stormwater BMP's, in each CSO project (Tunnel, RTBs and Sewer Separation projects).	SGDLT	B
5.	Develop process for capturing benefits of green solutions on each CSO project through use of "scorecard," in coordination with Goal 1 (Action 5).	SGDLT, PMT	B
6.	Develop process for capturing benefits of green solutions implemented on redevelopment projects within the combined sewer service area.	SGDLT, PMT, Public Works Department	B

Goal 6: Establish and implement collaborative processes with other City of Omaha departments and utility providers and with regional stakeholder groups to remove roadblocks to implementation of the Sustainable Guidance, ensure effective communication, and achieve greater benefits.

The action plans for this goal are intended to insure effective communication with stakeholders outside of the Public Works Department and the Program Management Team. Implementation of these action plans will also assist in fulfilling the element of the vision for the Sustainability Guidance Document to serve as a model for the application of sustainability in the design, construction and operation of infrastructure.

TABLE 7
Key Actions for Goal 6

	Key Actions	Responsible Party	Completion Priority
1.	Develop list of potential roadblocks to implementation of Sustainability Guidance Document and people or organizations that should be informed or involved. Develop strategies for communication.	SGDLT, Public Participation Facilitator	A
2.	Monitor the development of the City of Omaha Environmental Element to the Master Plan to insure that this Guidance Document fits with the goals, policies and strategies developed.	SGDLT, Public Works Department	A
3.	Develop communication strategy for elected officials, City departments, other organizations and utilities to communicate goals of Sustainability Guidance Document.	PMT	B

Goal 7: Use life-cycle analysis, as appropriate, to better evaluate environmental impacts and benefits.

Life-cycle analysis (LCA) is a process to evaluate the environmental impacts and benefits of a given product or service from its raw material production, manufacture or construction, operation or use, and final disposal, including all intervening transportation. The scope of an LCA can be as high-level or as detailed as warranted by budget and data needs. Looking at the life cycle of a project can better illustrate the true impacts and benefits of a project. As an example, assume two optional wastewater bio-solids treatment processes – incineration and digestion – are under consideration. If only the impacts from the processes themselves are considered – air emissions, energy use – then digestion is clearly the better option. However, if the impacts from hauling and using/disposing of the products of the processes are considered, then incineration is the overall better option primarily because of the significant impacts of hauling digested bio-solids.

The action plan for this goal will evaluate the usefulness of LCA to support key infrastructure decisions for the CSO Program through one or a few “pilot” projects or decisions. The intent of LCA will not be to change decisions on the types of controls, but to influence how those controls are implemented.

TABLE 8
Key Actions for Goal 7

	Key Actions	Responsible Party	Completion Priority
1.	Hold conference call/meeting to identify boundaries, data availability, resources, etc. for completing LCA. Identify pilot project(s)/decision(s).	SGDLT, PMT	B
2.	Hold kickoff meeting to initiate pilot LCA.	PMT	C
3.	Complete LCA.	PMT	C
4.	Hold conference call/meeting to evaluate LCA results.	PMT	C
5.	If appropriate, develop protocols for future use of LCA.	PMT	C

1.7 Implementation of Sustainability Guidance Document for Individual Projects

The principles of this Sustainability Guidance Document are intended to be applied to each of the projects that make up the CSO LTCP. It is envisioned that project-specific goals that are aligned with the overall program sustainability goals outlined above will be established for each project. As outlined in the Key Actions, sustainability considerations should start during development of the scope of work for projects and selection of project design teams, as appropriate.

In order to assist project teams in developing project-specific goals, a project sustainability checklist or scorecard tool will be developed and a pilot project for application of the checklist tool identified. Project teams will be responsible for implementation of project-specific goals.

1.8 Sustainability Guidance Document Management Responsibilities

This section identifies roles, responsibilities, authority and accountability for implementation of the Sustainability Guidance Document by the City of Omaha and the Program Management Team, which is needed to accomplish the following:

- Ensure effective implementation of sustainability on the CSO Program.
- Establish a means for reviewing progress toward meeting sustainability goals.
- Ensure the ongoing integration of sustainability into daily operations of implementation of the CSO LTCP.
- Provide a structure for identifying and implementing additional opportunities for sustainability.
- Ensure communication among all entities involved in implementation of the CSO LTCP.

Management of the implementation of the Sustainability Guidance Document will be led by the PMT. Management functions for this role are outlined below:

- Provide management of sustainability activities.
- Ensure that the Sustainability Guidance Document is updated as needed.
- Develop and implement training required for use of sustainability scorecard and other tools that may be developed as part of sustainability efforts.
- Lead education and coordination efforts with other City of Omaha departments.
- Oversee sustainability implementation and documentation by project teams.
- Monitor overall progress toward achieving goals.
- Prepare annual reports documenting specific sustainability initiatives within projects and overall program progress.
- Implement communication plan relative to sustainability.
- Other duties outlined in the Key Actions relative to implementation responsibilities of the PMT.

1.9 Recommendations for Future Steps

The Sustainability Guidance Document is a “living” document that will be updated and revised as appropriate to meet the ongoing needs of the CSO Control Program. For example, specific actions listed under each goal may be revised, added to, or re-prioritized and new goals may be identified.

To ensure that the Sustainability Guidance continues to meet the CSO Control Program needs, it is recommended that the following sections at a minimum be added to the document.

- A process for monitoring progress towards achieving the goals described in the Sustainability Guidance Document. For example, how will it be determined if the appropriate social, environmental and economic benefits of sustainability efforts have been identified and if they are being adequately captured and communicated to the public? This should be the highest priority for the next major update of the Sustainability Guidance Document.
- An overall process for verifying and updating the action plans. This would likely draw on the results of monitoring progress towards goals and the results of pilot efforts in the action plans (e.g. draft bid

award criteria). Changes in the Program schedule may result in changes in the priority of individual actions.

- Eventually, some consideration as to how the Sustainability Guidance Document could be adapted to support or promote sustainability efforts for the Public Works Department as a whole (e.g. operations). Some data collection, pilot testing of processes, or similar effort could be implemented on the CSO Program that could help with this adaptation.

ATTACHMENT 1

Benchmarking Study

TABLE 9
Sustainable Guidance Document Benchmarking

Vision	Goals/Objectives	Implementation Strategies	Potential Application to Omaha CSO Program
Philadelphia Water Department's Office of Watershed "Clean Water – Green City" Program Source: City of Philadelphia website: http://www.phillyriverinfo.org/CSOLTCPU/			
<p>Unite the City of Philadelphia with its water environment, creating a green legacy for future generations while incorporating a balance between ecology, economics, and equity.</p>	<p>Goals</p> <ul style="list-style-type: none"> • Preserve and enhance the health of the region's watersheds through effective wastewater and storm water services and the adoption of a comprehensive watershed management approach • Achieve a sensible balance between cost and environmental benefit • Base program on planning and acting in partnership with other regional stakeholders <p>Objectives</p> <ul style="list-style-type: none"> • Reconnect the city with its waterways • Key in on environmental aesthetics • Treat rainwater as an urban asset • Encourage smart growth / smart urban renewal • Empower the community, developers, architects • Use best of science, technology & common sense • Develop Watershed Assessment & Management Plans • Innovate and demonstrate 	<p>Implement a balanced "land-water-infrastructure" approach to achieve watershed management and CSO control goals. This method includes infrastructure-based approaches where appropriate, but also includes a range of land-based stormwater management techniques and the physical reconstruction of aquatic habitats, where appropriate. The focus of the approach is to restore and protect rivers and streams including the floodplains, riparian buffers, stream channels, streambeds, wildlife, vegetation and other biomarkers that define a healthy stream ecosystem that has been degraded as a result of urbanization within the City of Philadelphia and in the surrounding counties, while achieving full regulatory compliance in a cost-effective manner. Specific strategic elements include:</p> <ul style="list-style-type: none"> • Build CSO capital improvement projects through the Capital Improvement Program to continue to increase the capture and treatment of combined sewage (infrastructure-based approach). These construction projects include traditional storage, conveyance, and treatment measures within the combined sewer collection and treatment system. Infrastructure-based measures are typically focused on removing loads of specific pollutants in piping systems rather than restoring natural flow conditions and habitat. If used alone, infrastructure-based measures cannot address the root causes of impairment in urban streams. • Use Low Impact Development (LID) and other structural and non-structural controls to reduce CSO volume through evaporation, transpiration, infiltration, detention and controlled release to the combined sewer system for treatment (land-based approach). • Build projects, through the watershed-based Ecosystem Restoration and Aesthetics program, that contribute to the improvement of the aesthetic and ecological integrity of CSO receiving waters, including stream bed and bank stabilization and reconstruction, aquatic habitat creation, plunge pool removal, improvement of fish passage, and floodplain reconnection (water-based approach). Restoring designated uses and ultimately removing streams from the state's list of impaired waters will require the restoration of the functions of a healthy aquatic ecosystem. These functions may be impossible to restore without restoration of the physical channel and the habitat required to support them. <p>Early efforts in development of the "Clean Water – Green City" included an inventory of the city's natural resources, evaluation of funding strategies, and an assessment of cost and benefits of quality open spaces.</p>	<p>The Philadelphia program could provide examples/ models for smaller-scale green solutions (low impact development) and associated land use controls and ordinances. In addition, the Philadelphia program focuses on making the river a regional economic, social, and environmental asset, and addressing issues on a watershed basis since the City is at the downstream end of the watershed. This may provide ideas for tying the Omaha CSO Program into regional watershed enhancement efforts. These two elements of the Philadelphia program are summarized below.</p> <p>Green Solutions</p> <p>The "Clean Water – Green City" land-based stormwater management approaches include Philadelphia's stormwater management regulations for new development and redevelopment, enacted in 2005. These regulations focus on restoring a more natural balance between stormwater runoff and infiltration by requiring the capture of the first one inch of rainfall, reducing pollutant loads through infiltration and/or detaining and controlling runoff rates at levels that minimize stream bank erosion. Site designers can provide the level of performance required using a variety of controls such as disconnection of impervious cover, bioretention, subsurface storage and infiltration, green roofs, swales, and tree canopy. Land-based measures are a key part of this approach because they provide benefits to the community beyond water quality improvement. These benefits may include recreational opportunities, improved aesthetics, and increased home values. Measures include:</p> <ol style="list-style-type: none"> 1. Large-scale implementation of green, attractive measures to manage stormwater at the source on public land and streets to reduce demands on sewer infrastructure. 2. Requirements and incentives for green, attractive measures to manage stormwater at the source on private land and streets to reduce demands on sewer infrastructure. Possible measures include green roofs, rain gardens, vegetated swales and landscaping, porous pavement, downspout disconnection, rain barrels and cisterns. Incentives include the Stormwater BMP Recognition Program (http://www.stormwaterbmp.org/stormwaterbmp/). 3. A large-scale street tree program to improve appearance and manage stormwater at the source on city streets. 4. Incentives to preserve open space for use for stormwater management at the source. <p>Regional Watershed Efforts</p> <p>Through PWD's watershed management plans, water quality impairments are identified and addressed via comprehensive watershed based planning, stream water quality analysis, baseline water quality monitoring and the assessment of watershed-wide pollutants. The major sources of the impairments are explored, modeled, and defined to understand how to attain regulatory water quality standards and establish programs that will continue to monitor and ensure permanent improvements in water quality. The PWD forms partnerships with its suburban neighbors, businesses and industries, community and non-profit groups and all other watershed stakeholders to evaluate our regional watersheds and to develop an effective watershed management plan. To be successful, watershed management plans must be adopted and implemented by all participating stakeholders and their constituents.</p> <p>The Philadelphia program provides links to local economic development and the health of the river, with the following philosophy: <i>"The resources, amenities and socioeconomic impacts that could result from the implementation of watershed management approach are endless. A "Green Cities - Clean Waters" strategy will stimulate tourism, recreation, and riverfront development, along with achieving economic benefits and creating jobs. Cleaner rivers create increased civic pride in the riverfront area, higher property values, and greater potential for valuable riverfront projects."</i></p>

TABLE 9
Sustainable Guidance Document Benchmarking

Vision	Goals/Objectives	Implementation Strategies	Potential Application to Omaha CSO Program
<p>City of Chicago’s Water Agenda 2003</p> <p>Sources: Chicago’s Water Agenda 2003, City of Chicago Department of Environment. Municipal Code of Chicago, Title 11, Chapter 11-18 Stormwater Management, 2008. Rooftops to Rivers: Green Strategies for Controlling Stormwater and Combined Sewer Overflows, Natural Resources Defense Council (NRDC), June 2006.</p>			
<p>No specific vision identified as such. Purpose of the Agenda 2003 document, as noted in several places in the document, is:</p> <ul style="list-style-type: none"> To guide our water-related decisions for many years. It provides a strategy for keeping our water safe, clean and plentiful, and for improving the infrastructure that keeps our homes supplied with water. To outline a strategy for caring for water resources as a whole, and understanding that water resources work as a complex and connected system. To provide a comprehensive approach to the City’s treasured waterways to ensure that they are conserved for future generations, protected and improved, and managed so that water can continue to sustain Chicago, connect Chicago as neighbors, and define the community’s role nationally and internationally. 	<p>A partial list of the City’s goals and actions in the Water Agenda 2003 includes the following:</p> <ul style="list-style-type: none"> Managing Stormwater <ul style="list-style-type: none"> Continue to invest in and encourage green infrastructure and design in City projects as well as private development. Continue to reduce the amount of pollution that flows from roadways into area waterways Protect water quality <ul style="list-style-type: none"> Work with the Metropolitan Water Reclamation District (MWRD) to end the practice of discharging untreated wastewater into Lake Michigan. Work with the MWRD and the State and Federal governments to ensure the continued improvement in the quality of the Chicago River. Continue to protect and rehabilitate wetlands within the City limits. Outreach and mobilization <ul style="list-style-type: none"> Implement a citizen education campaign to raise awareness of the issues affecting water resources. Continue to build a coalition of Great Lakes mayors to ensure that municipalities are effective advocates for protecting water resources. 	<ul style="list-style-type: none"> Rooftop Gardens: The City’s Department of Planning and Development and Department of Environment have launched a Rooftop Garden Initiative. Through this initiative, the City is leading by example by installing green roofs on several new publicly owned buildings (e.g., green roof on City Hall) and encouraging the use of green roofs on private development as well. A density bonus is offered to developers who cover 50% or 2,000 square feet (whichever is greater) of a roof with vegetation (NRDC, 2006). In 2006, the city provided twenty \$5,000 grants for green roof installations on small-scale commercial and residential properties (NRDC, 2006). New Development: The City encourages large new developments to incorporate green infrastructure into their design. Through the planned development process, the City is working with large developers to recommend ways to manage stormwater on site and reduce significantly the amount of built infrastructure the developments require. The Department of Environment is currently working with Northeastern Illinois Planning Commission to develop a manual of stormwater best management practices for urban areas. Permeable Alley: The City is creating a green infrastructure by using unique open spaces to hold water that would normally drain directly into the sewer system. For instance, the City built a new kind of alley in a North Side community as part of a pilot project. The alley, constructed of a rigid grid system and gravel, allows rainwater to soak into the ground—reducing water flow into the sewer system and backyard flooding. Rain Gardens: The City is taking this idea a step further by experimenting with “rain gardens” in the parkways. Rain gardens move water into the ground through natural drainage and by using native plants that store water in their roots. Similar techniques can be employed at many street intersections, and help reduce flooding, use rainwater as a resource, and even beautify neighborhood streets. Once tested, these techniques will be applied throughout the city. Rain Barrels: In the fall of 2004, City residents purchased more than 400 55-gallon rain barrels for \$15 each (NRDC, 2006). The program cost the city \$40,000 excluding city labor. The Department of Environment estimates the pilot project has the potential to divert 760,000 gallons annually from the combined sewer system, a relatively small number compared to the total amount of stormwater runoff in the city. However, the program was targeted to areas with a high frequency of basement flooding, meaning the program may have a more significant impact in these localized areas. In addition, the water in rain barrels can be used for other purposes such as landscaping. Green Building/Green Design: The Chicago Center for Green Technology was designed to obtain a USGBC platinum LEED rating and provides a demonstration of stormwater management techniques. It contains pervious parking areas, vegetated swales, detention ponds, a rooftop garden, and cisterns that collect up to 12,000 gallons of rainwater. The site design reduces stormwater runoff by 50%. Downspout Disconnect Program: The City was the first major metropolitan area in the country to successfully implement an inlet control system to relieve basement flooding. The system works by installing restricters to slow the flow of stormwater into the sewer system. Stormwater is detained on city streets for brief periods before flowing back into the sewer system. In addition, the City actively encourages homeowners to disconnect their downspouts from the sewer system and direct the water instead to their yards or gardens. These measures help to relieve the burden on the sewer system and to reduce the frequency of basement flooding and combined sewer overflows into waterways. The effectiveness of the inlet control system depends on the number of roof downspouts that are disconnected from the sewer system. While impractical in some places (where there are only hard surfaces or where drainage could impact neighboring property), the potential to reduce basement flooding and increase natural infiltration is great. Reduce Roadway Runoff: The Chicago Department of Transportation has taken the first steps to keep roadway runoff from flowing directly into waterways. For example, the \$200 million reconstruction of Wacker Drive diverts the first flush of pollutants to the sewer system for treatment instead of draining into the Chicago River. The City will continue to incorporate this idea in its projects and will work with other agencies to construct roads so that polluted water is directed into the sewer system or natural areas for filtration. 	<p>Stormwater Regulations</p> <p>Chicago’s experience with its stormwater ordinance, enacted January 2008, may provide useful input for developing local incentives and regulations in Omaha for larger developments. The Chicago ordinance generally applies to development projects affecting at least 15,000 square feet of land or creating at least 7,500 square feet of at-grade impervious surface, and requires the following (<i>Municipal Code of Chicago</i>, 2008):</p> <p>“Every Regulated Development shall at all times have in place a Plan approved by the City. In addition to such other requirements as the commissioner may set forth by regulation, the Plan shall include the following:</p> <p>(a) Provisions for stormwater management:</p> <p>(1) Rate Control. Stormwater Drainage Systems shall manage the peak rate of discharge from the Regulated Development, incorporating the maximum permissible release rate. Provided, however, that Developments that create an at-grade impervious surface of less than 7,500 substantially contiguous square feet and that directly discharge to waters shall not be subject to the rate control requirements of this subparagraph (a)(1).</p> <p>(2) Volume Control. Stormwater drainage systems shall reduce the volume of runoff from a Regulated Development by one of the following measures:</p> <p>(A) Capture one-half inch of runoff from all impervious surfaces in accordance with volume control BMPs; or</p> <p>(B) For Developments that do not directly discharge to waters or to a municipal separate storm sewer system, achieve a fifteen-percent reduction in impervious surfaces from existing conditions.</p> <p>(b) Provisions for sediment and erosion control.</p> <p>(c) Provisions for operations and maintenance.”</p> <p>Green Solutions on Public and Private Land</p> <p>Chicago’s approaches to pilot-testing green solutions such as rain gardens and to providing major City demonstration projects (the Center for Green Technology and the green roof on City Hall) could provide a model and/or lessons learned to help guide implementation of green solutions on public land within Omaha.</p> <p>Likewise, City of Chicago incentives and education programs for private property owners to implement green solutions on their properties may provide valuable lessons learned. The City actively encourages homeowners to disconnect their downspouts from the sewer system and direct the water instead to their yards or gardens. Public service announcements, community meetings, instructional video tapes, brochures and discounts on materials for downspout disconnection have all been provided to homeowners. The City will continue and expand its efforts to educate citizens on the benefits of disconnecting existing downspouts and on alternative uses of stormwater.</p>

TABLE 9
Sustainable Guidance Document Benchmarking

Vision	Goals/Objectives	Implementation Strategies	Potential Application to Omaha CSO Program
<p>Milwaukee Metropolitan Sewerage District</p> <p>Sources: <i>Rooftops to Rivers: Green Strategies for Controlling Stormwater and Combined Sewer Overflows</i>, Natural Resources Defense Council (NRDC), June 2006. <i>Stormwater Runoff Reduction Program Final Report</i>, Milwaukee Metropolitan Sewerage District (MMSD), February 28, 2007. MMSD website, November 2008: http://v3.mmsd.com/default.aspx</p>			
<p>No vision identified as such.</p>	<p>A primary goal of the stormwater runoff reduction program was to provide data and information that assisted the 2020 facilities planning team in developing alternatives that reduce stormwater runoff and pollutant loadings from nonpoint sources. Specifically, the 2020 facilities plan required capital and operational costs, implementation and maintenance information, and an evaluation of the overall effectiveness of BMPs that reduce stormwater runoff and/or reduce nonpoint pollution loads (MMSD, 2007).</p>	<p>Milwaukee Metropolitan Sewerage District strategies for stormwater management include the following:</p> <ul style="list-style-type: none"> • Greenseams: this is an innovative flood management program that permanently protects key lands containing water absorbing soils. The program makes voluntary purchases of undeveloped, privately owned properties in areas expected to have major growth in the next 20 years and open space along streams, shorelines and wetlands. By storing and draining water into the ground naturally, Greenseams helps prevent future flooding while supporting and protecting MMSD's structural flood management projects. MMSD hired The Conservation Fund (TCF), a national non-profit conservation organization, to run Greenseams (MMSD, 2008). The capital budget designates funds to purchase privately owned lands to prevent development and establish conservation easements. More than \$27 million has been allocated for fiscal years 2000 through 2011 (NRDC, 2006). As of fiscal year 2005, 775 acres had been purchased in three watersheds for just under \$5.8 million. • Stormwater Runoff Reduction BMPs: the District has been evaluating 17 different BMPs, including downspout disconnection, rain barrels, cisterns, rain gardens, green roofs, rooftop storage, green parking lots, stormwater trees, porous pavement, and inlet restrictors/ pavement storage. The BMPs were evaluated for flow impacts, environmental impacts, implementation issues, function, operational maintenance, potential to promote public involvement and awareness, and cost (MMSD, 2007). The District has also implemented several pilot projects. Overall, it appears that several of the best BMPs (downspout disconnections, rain gardens, porous pavement, bioretention, green parking, and green roofs) can achieve an approximate 30% reduction in peak flows and volumes under total and widespread implementation. For a particular site, BMPs such as porous pavement, green roofs, and bioretention can be designed to reduce runoff by 70% or more (MMSD, 2007). • Audit of Local Ordinances: MMSD established a stormwater ordinance review committee to review local ordinances that could either obstruct or promote implementation of stormwater runoff reduction BMPs. The audit revealed that most communities in the MMSD service area already required that new development plans address stormwater management and follow a specified plan review process. In contrast, relatively few communities required or encouraged BMPs that would reduce impervious cover or stormwater runoff from parking lots. Most ordinances did not address BMPs that would promote porous paving materials, reduced rooftop runoff, native soils and vegetation, streetscaping, and BMP inspection and maintenance (MMSD, 2007). 	<p>The MMSD evaluation of BMPs may provide useful information to the City of Omaha for selecting the most promising small-scale green solutions for implementation.</p> <p>The MMSD process for evaluation of local ordinances could be used as a model for a similar evaluation for the City of Omaha. This would also provide a good opportunity for cross-department coordination to address CSO issues.</p>

TABLE 9
Sustainable Guidance Document Benchmarking

Vision	Goals/Objectives	Implementation Strategies	Potential Application to Omaha CSO Program
<p>City of Seattle (including Seattle Public Utilities [SPU] and Office of Sustainability and Environment [OSE]) Sources: <i>Restore Our Waters Strategy</i>, City of Seattle, September 2004. Restore our Waters Annual Report, City of Seattle, 2005. Restore our Waters website, http://www.seattle.gov/mayor/issues/row.htm, City of Seattle, November 2008. <i>Rooftops to Rivers: Green Strategies for Controlling Stormwater and Combined Sewer Overflows</i>, Natural Resources Defense Council (NRDC), June 2006. <i>Seattle's Natural Drainage System Manual</i>, Seattle Public Utilities. NDS Website: http://www.ci.seattle.wa.us/util/About_SPU/Drainage_&_Sewer_System/Natural_Drainage_Systems/Natural_Drainage_Overview/SPU01_002591.asp, Seattle Public Utilities, November 2008.</p>			
<p>No vision identified as such.</p> <p>Mayor's inter-departmental "Restore our Waters Strategy" includes: "Seattle is surrounded by water - it's <i>what makes the city such a beautiful place. We must protect the water quality of Puget Sound, our lakes and our creeks...Building a strong, healthy community means protecting these incredible assets for future generations. Let's work together to restore our waters!</i>" (Seattle, 2008).</p> <p>Seattle's Natural Drainage System Manual includes: "Create an entirely different kind of neighborhood street" (SPU).</p>	<p>Restore Our Waters Goals (Seattle, 2004):</p> <ul style="list-style-type: none"> Focus the City's efforts towards achieving what is best for water quality and aquatic habitats inside the City Establish City-wide priorities and shared framework for investments and BMPs Develop a long-term framework for departments to work together on matters affecting waterbodies Streamline and coordinate city policies, regulations, and enforcement Create educational opportunities which inspire others to take protective and restorative actions on behalf of waterbodies Provide incentives for others to steward, protect and restore these resources Identify methods to leverage City funding of these efforts Create a mechanism for stakeholder involvement <p>Seattle's Natural Drainage Systems (SPU, 2008): Although not stated, this is presumably the defacto capital improvement portion of the Restore Our Waters program.</p> <p>Goals:</p> <ul style="list-style-type: none"> Slow the flow and reduce the volume of stormwater runoff. Retrofit and redevelop public right-of-ways to improve water quality and imitate hydrologic processes that existed before development. Use a state-of-the-science approach to apply existing and new data in adjusting technical stormwater management design objectives. <p>Objectives:</p> <ul style="list-style-type: none"> Protect Aquatic Organisms: Minimize the fluctuation of stream levels and disturbance of creek beds during storms that account for up to 90 percent of the total volume of rainfall in a given year. Protect Creek Channels: Where possible, NDS will be used to reduce the disturbance of creek channels to pre-development levels. Improve Water Quality: Reduce pollutants 	<p>Restore Our Waters Actions (Seattle, 2004): The ROW Strategy identifies multiple projects and strategies to achieve each of these actions.</p> <ul style="list-style-type: none"> Establish Long-Term Aspirations for In-City Water Resources Use Science-Based Guidelines to Direct Citywide Efforts Establish Clear, Quantifiable Goals and Measures of Progress Make Strategic Changes to the City's Policy and Regulatory Framework Move Forward on Priority City Capital Project Investments Make Investments to Ensure City Operations Support Improved Aquatic Health Expand Partnerships with the Community and Private Property Owners to Restore Our Waters Advance Scientific Understanding and Adaptively Manage City Efforts Establish a Stakeholder Group to Promote Long-Term Coordination within City Government and Between the Citizens of Seattle. <p>Seattle Public Utilities Natural Drainage System (NDS) Projects and Programs (NRDC, 2006):</p> <p>Street Edge Alternatives (SEA Streets) Project promotes street design to provide drainage that more closely mimics the natural landscape prior to development than traditional piped systems. Pilot projects have been completed, including the 2nd Avenue SEA Street project, which redesigned an entire 660-foot block of 2nd Avenue with a number of green infrastructure techniques to reduce stormwater runoff and provide a livable community. Based on collaboration between SPU and local residents, the original 25-foot-wide straight street was replaced with a 14-foot-wide curvilinear street. Vegetated swales, designed to infiltrate and treat stormwater, were installed within the right-of-way on both sides of the street. Street parking was replaced with designated angled parking slots, and a sidewalk was installed on one side of the street. The final constructed design reduced imperviousness more than 18%, reduced total potential surface runoff up to 99%, and added 100 evergreen trees and 1,100 shrubs.</p> <p>110th Cascade, Broadview Green Grid, and High Point Projects - these projects used a series of stair-stepped natural pools that slow damaging stormwater flows from street runoff, reduce flooding, and trap pollutants.</p> <p>Rainwater Harvesting is promoted in several ways. The City completed the 327,000 square foot King Street Center, which uses three 5,400 gallon tanks to collect rainwater from the building's roof. The collected rainwater is filtered and pumped through a dedicated piping system for toilet flushing and landscaping needs, reducing stormwater runoff by 1.4 million gallons. In addition, SPU has begun the second phase of a subsidized rain barrel and cistern program intended to distribute the rainwater-harvesting devices throughout the city; the first phase of the program distributed 1,500 rain barrels at a reduced rate to private homeowners.</p> <p>Green Roofs – the City has installed several green roofs and is collecting data on performance to potentially modify the stormwater code and identify appropriate incentives.</p>	<p>Restore Our Waters was kicked off by the Mayor, who issued Executive Order 03-04 requiring inter-departmental review of everything the City does that affects water resources inside the City limits. Twelve City Departments were instructed to develop a shared action plan, which resulted in identification of the goals and objectives listed in this table. This may suggest a model for the City of Omaha to initiate inter-departmental cooperation to address CSO issues.</p> <p>SPU's pilot projects in street design and low impact development included significant public outreach and collaboration and detailed evaluation of issues and successes, which may provide valuable lessons learned to Omaha if similar efforts are pursued.</p> <p>Overall, though, Seattle does not appear to have a single, active comprehensive program for stormwater and CSO management (for example, the Restore Our Waters program is not referenced on the SPU website; the latest progress report available for Restore Our Waters is dated 2005; the City's information is very scattered). Individual projects and programs are being implemented by Seattle Public Utilities and Seattle Office of Sustainability and Environment. In addition, it appears that the organization formally responsible for addressing CSO infrastructure and issues in the Seattle area (King County) is not developing a comprehensive source-control program. Discussions with Seattle to identify the pros and cons of this approach may provide useful information for continued development of Omaha's program.</p>

TABLE 9
Sustainable Guidance Document Benchmarking

Vision	Goals/Objectives	Implementation Strategies	Potential Application to Omaha CSO Program
reaching water bodies.			
City of Pittsburgh <i>Sources:</i> <i>Rooftops to Rivers: Green Strategies for Controlling Stormwater and Combined Sewer Overflows</i> , Natural Resources Defense Council (NRDC), June 2006. <i>A Homeowner's Guide to Protecting our Watershed</i> , 3 Rivers Wet Weather Demonstration Program			
No vision identified as such.	None formally identified; the City does not appear to have a comprehensive or well-defined plan to address watershed/stormwater management.	<p>As noted in NRDC's report (2006), solving Pittsburgh's wet weather sewage problems is a complicated problem that is exacerbated by the fragmented nature of the collection and treatment system. While there is one treatment plant operated by the Allegheny County Sanitary Authority (ALCOSAN) in the metro area, there are 83 separate municipalities, each responsible for maintaining their own collection system. ALCOSAN is in the process of expanding its treatment plant to reduce CSOs; however, much of the expansion will only provide primary treatment. The private sector and citizens' groups in Pittsburgh have taken an active role to design and implement green infrastructure projects to address issues at the source.</p> <ul style="list-style-type: none"> • Several city buildings (e.g. Phipps Conservatory and Botanical Gardens, David L. Lawrence Convention Center) have included green design features to reduce stormwater runoff through green roofs or rooftop collection/reuse. • The City and the Army Corps of Engineers are restoring Nine Mile Run, one of the last remaining daylight streams in the city. The project is a large-scale effort that will include the construction of woody and herbaceous wetlands to provide both wildlife habitat and stormwater filtration. The stormwater management component of the project takes advantage of Pittsburgh's porous and permeable soils to capture recharge and attempts to prevent pollutants in stormwater from reaching the stream. In an effort to repair the stream and re-create more natural conditions, the new river design adds meanders and pool and riffle sequences, undoing channelization. The project also fits into the city of Pittsburgh's larger Riverfront Development Plan, which includes land conservation along stream banks to prevent runoff and erosion and increased set-asides for recreational trails along Nine Mile Run. The municipal contribution to the project is to repair sewer lines, preventing leakages due to old, failing pipes. In addition, the city is working with community groups on other source control efforts. • The 3 Rivers Wet Weather Demonstration Program created a homeowners guide for protecting watersheds, for use in multiple municipalities. It includes general guidance for rainspout disconnection and rain barrels, landscaping, and water quality protection measures. 	<p>Pittsburgh's efforts at civic engagement may provide valuable lessons learned and suggestions for future strategies for Omaha. For example, for Nine Mile Run, the city has partnered with a developer to transform a slag heap, a brownfield site polluting the river, into a 710-home residential development. Aiding in this effort are groups like 3 Rivers Wet Weather Demonstration Program and the Nine Mile Run Watershed Association. The community groups commissioned an engineering study to determine where rain barrels would be most effective in reducing the stormwater runoff that contributes to CSOs. The organizations installed 500 large rain barrels (132 gallons each) in critical neighborhoods. The groups focused on the educational component of the project to make homeowners aware of lot-level solutions to stormwater management.</p>
City of Portland's Sustainable Stormwater & Public Incentives Program <i>Sources:</i> <i>Combined Sewer Overflow Program Progress Report</i> , City of Portland Environmental Services, January 2007: <i>Mapping the Future: Our Clean River Guide</i> , City of Portland Environmental Services, January 2005. <i>Rooftops to Rivers: Green Strategies for Controlling Stormwater and Combined Sewer Overflows</i> , Natural Resources Defense Council (NRDC), June 2006.			
<p>Portland Bureau of Environmental Services general vision: <i>[P]rotect the quality of surface and ground waters and conduct activities that promote healthy ecosystems in our watersheds. We provide sewage and stormwater collection and treatment services to accommodate Portland's current and future needs.</i></p>	<p>Implied goals (Portland, 2007):</p> <ul style="list-style-type: none"> • Promote projects that mimic natural systems and integrate stormwater into building and site development to reduce damage from urban stormwater runoff, replenish groundwater, and restore healthy watershed function. • Engage municipal, business, and individual stakeholders in effective strategies reducing the economic, environmental, and social impacts of CSOs and stormwater runoff on Portland's natural resources and urban infrastructure. 	<ul style="list-style-type: none"> • Provide technical assistance and support for building owners considering ecoroofs. • Build sustainable street projects to better manage stormwater runoff and enhance neighborhoods (curb extensions landscaped with plants that filter pollutants from stormwater runoff, swales that infiltrate and store stormwater runoff, lowered planter boxes, permeable pavement, and street trees.) • Implement the Innovative Wet Weather Program for promoting stormwater management projects that contribute to healthy Portland watershed (examples include rain gardens, swales, and stormwater planters). • Improve neighborhood livability in areas affected by CSO construction through the Community Benefit Opportunity Program. Projects include neighborhood tree plantings, revegetation, pedestrian and bicycle paths, access to the river, a community garden, and a living water garden schoolyard restoration. • Clean and Healthy River Strategy. • Downspout disconnection/rainwater collection. 	<p>Technical relevance includes the following:</p> <ul style="list-style-type: none"> • Application in urban, built-out areas • Highest success in flat, residential areas • Overall watershed health directive contributes to cost/benefit • High standards for private, on-site detention • Green solutions work particularly well for low-intensity storms <p>In addition, the Community Benefit Opportunity Program may provide ideas for the City of Omaha program to use funds leveraged from outside sources to enhance neighborhoods affected by construction.</p>

TABLE 9
Sustainable Guidance Document Benchmarking

Vision	Goals/Objectives	Implementation Strategies	Potential Application to Omaha CSO Program
<p>San Francisco Public Utilities Commission Sustainability Plan Sources: All documents available on website at http://sfwater.org/PrintSubCat.cfm/MC_ID/18/MSD_ID/121</p>			
<p>No specific vision provided. Documents instead start with SFPUC's definition of sustainability: <i>"the framework through which SFPUC will responsibly manage the resources under its care, protect public health, and balance its social and environmental responsibilities to the citizens and community, while providing cost effective services to its ratepayers."</i></p>	<p>The SFPUC's Sustainability Plan will help the Department better manage its effects across the triple bottom line (financial, social and environmental) and become a model of a sustainable organization. The purposes and benefits of the Sustainability Plan are to:</p> <ol style="list-style-type: none"> 1. Provide a roadmap, including transparent Department-wide goals and targets, for how the SFPUC will become a model of an environmentally, socially and financially sustainable organization. 2. Provide tools to strategically manage SFPUC's current sustainability issues, and to build capacity in the organization to undertake future strategic planning and decision-making in a sustainable Manner. 3. Institutionalize/Activate Department-wide and sustainable strategic planning and decision-making. 4. Highlight performance and risks periodically and performance trends over time. 5. Engage stakeholders in Department-wide performance review and renewal into the future. 	<p>The plan included 25 strategies to improve sustainability performance. Potentially relevant strategies include the following.</p> <ul style="list-style-type: none"> • Implement habitat conservation and biodiversity protection measures. Initiatives include land acquisition and conservation. • Advance programs for recycled water, groundwater, desalination, stormwater and rainwater collection and/or other innovative technologies and practices to maintain and increase water supply. Initiatives include evaluating feasibility of potential new programs, e.g. using rainwater collection cisterns as an auxiliary water support system in the City or as a supplement to individual retail customer water supply and establishing incentives to encourage customers to incorporate programs. • Prevent, mitigate, and lessen disproportionate environmental impacts on communities in all service areas. Initiatives include development and adoption of an Environmental Justice (EJ) policy; identification of organizations in the community to partner with to establish and fund small community projects in EJ areas; adoption of a goal to equalize impacts and mitigation efforts for facilities regardless of neighborhood location; establish and report against metrics to measure how actions are improving the situation. • Develop as appropriate departmental, enterprise and division risk management tools. Initiatives include undertaking a comprehensive identification and assessment of risks posed to the organization (such as operational/services, environmental, financial, license to operate, political, regulatory, reputational risks); and development of tools and mechanisms to monitor, evaluate, address, minimize, mitigate, manage and control risks as appropriate. • Advance and institutionalize Department-wide sustainability plan and program as the core of SFPUC's strategic planning and decisionmaking. Commit to periodic public reporting on departmental sustainability. Initiatives include implementation of a strategic approach to planning efforts in the organization that incorporates sustainability goals and initiatives, including Department-wide sustainability goals and vision that inform the development of all other planning and activities and are assessed and reviewed semi-annually through the department-wide sustainability reporting program. • Implement department-wide procurement procedures to ensure quality of goods and services procured. Initiatives include development of a Department-wide procurement and supply chain policy consistent with sustainability goals and indicators. • Apply the City's environmentally preferable purchasing and procurement protocol. Initiatives include screening a sample of purchasing decisions for compliance with the environmentally preferable purchasing ordinance. 	<p>SFPUC Sustainability Program is quite comprehensive, with well over 100 key performance indicators to evaluate triple-bottom-line performance. These could provide ideas for how some non-environmental aspects of the CSO Program could eventually be tracked and lessons learned in implementation. SFPUC indicators include:</p> <ul style="list-style-type: none"> • [Number of] Urban projects incorporating low impact design strategies that affect surface drainage impacts • Reduction in peak storm flows to combined system due to low impact development initiatives • Efforts to identify and map affected [EJ] communities • Nature and extent of environmental impacts attributable to the SFPUC that are disproportionately impacting certain communities • Initiatives to prevent, address, and lessen disproportionate environmental impacts attributable to the SFPUC, and monitoring of results • Number of adults and children reached through education programs • Number of partnerships established with community-based organizations to promote SFPUC activities. • Climate change risks to the organization identified and analyzed and mitigation measures developed • Extent to which sustainability concepts embedded across mission, goals, planning and decisionmaking • Percent of purchasing decisions that have been screened for compliance with the environmentally preferable purchasing ordinance • Percent of project managers that have received formal training in environmental review process, environmental best practices and precautionary principle

<p>No specific vision provided. Documents instead start with SFPUC’s definition of sustainability: “<i>the framework through which SFPUC will responsibly manage the resources under its care, protect public health, and balance its social and environmental responsibilities to the citizens and community, while providing cost effective services to its ratepayers.</i>”</p>	<p>The SFPUC’s Sustainability Plan will help the Department better manage its effects across the triple bottom line (financial, social and environmental) and become a model of a sustainable organization. The purposes and benefits of the Sustainability Plan are to:</p> <ol style="list-style-type: none"> 1. Provide a roadmap, including transparent Department-wide goals and targets, for how the SFPUC will become a model of an environmentally, socially and financially sustainable organization. 2. Provide tools to strategically manage SFPUC’s current sustainability issues, and to build capacity in the organization to undertake future strategic planning and decision-making in a sustainable Manner. 3. Institutionalize/Activate Department-wide and sustainable strategic planning and decision-making. 4. Highlight performance and risks periodically and performance trends over time. 5. Engage stakeholders in Department-wide performance review and renewal into the future. 	<p>The plan included 25 strategies to improve sustainability performance. Potentially relevant strategies include the following.</p> <ul style="list-style-type: none"> • Implement habitat conservation and biodiversity protection measures. Initiatives include land acquisition and conservation. • Advance programs for recycled water, groundwater, desalination, stormwater and rainwater collection and/or other innovative technologies and practices to maintain and increase water supply. Initiatives include evaluating feasibility of potential new programs, e.g. using rainwater collection cisterns as an auxiliary water support system in the City or as a supplement to individual retail customer water supply and establishing incentives to encourage customers to incorporate programs. • Prevent, mitigate, and lessen disproportionate environmental impacts on communities in all service areas. Initiatives include development and adoption of an Environmental Justice (EJ) policy; identification of organizations in the community to partner with to establish and fund small community projects in EJ areas; adoption of a goal to equalize impacts and mitigation efforts for facilities regardless of neighborhood location; establish and report against metrics to measure how actions are improving the situation. • Develop as appropriate departmental, enterprise and division risk management tools. Initiatives include undertaking a comprehensive identification and assessment of risks posed to the organization (such as operational/services, environmental, financial, license to operate, political, regulatory, reputational risks); and development of tools and mechanisms to monitor, evaluate, address, minimize, mitigate, manage and control risks as appropriate. • Advance and institutionalize Department-wide sustainability plan and program as the core of SFPUC’s strategic planning and decisionmaking. Commit to periodic public reporting on departmental sustainability. Initiatives include implementation of a strategic approach to planning efforts in the organization that incorporates sustainability goals and initiatives, including Department-wide sustainability goals and vision that inform the development of all other planning and activities and are assessed and reviewed semi-annually through the department-wide sustainability reporting program. • Implement department-wide procurement procedures to ensure quality of goods and services procured. Initiatives include development of a Department-wide procurement and supply chain policy consistent with sustainability goals and indicators. <p>Apply the City’s environmentally preferable purchasing and procurement protocol. Initiatives include screening a sample of purchasing decisions for compliance with the environmentally preferable purchasing ordinance.</p>	<p>SFPUC Sustainability Program is quite comprehensive, with well over 100 key performance indicators to evaluate triple-bottom-line performance. These could provide ideas for how some non-environmental aspects of the CSO Program could eventually be tracked and lessons learned in implementation. SFPUC indicators include:</p> <ul style="list-style-type: none"> • [Number of] Urban projects incorporating low impact design strategies that affect surface drainage impacts • Reduction in peak storm flows to combined system due to low impact development initiatives • Efforts to identify and map affected [EJ] communities • Nature and extent of environmental impacts attributable to the SFPUC that are disproportionately impacting certain communities • Initiatives to prevent, address, and lessen disproportionate environmental impacts attributable to the SFPUC, and monitoring of results • Number of adults and children reached through education programs • Number of partnerships established with community-based organizations to promote SFPUC activities. • Climate change risks to the organization identified and analyzed and mitigation measures developed • Extent to which sustainability concepts embedded across mission, goals, planning and decisionmaking • Percent of purchasing decisions that have been screened for compliance with the environmentally preferable purchasing ordinance <p>Percent of project managers that have received formal training in environmental review process, environmental best practices and precautionary principle</p>
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Minutes from January 15, 2008 Workshop

SUSTAINABILITY GUIDANCE DOCUMENT WORKSHOP MINUTES

ATTENDEES: Mike McMeekin, Omaha CSO PMT, Task Co-Leader
 Michaella Wittmann, Omaha CSO PMT, Task Co-Leader
 Marty Grate, City of Omaha
 Kirk Pfeffer, City of Omaha
 Nina Cudahy, City of Omaha
 Mike Arends, City of Omaha
 Andrea Gardner, Omaha CSO PMT
 Pat Nelson, Omaha CSO PMT
 Ellen Fitzsimmons, Omaha CSO PMT
 Linda Lovgren, Lovgren Marketing

FROM: Mike McMeekin, Omaha CSO PMT

MEETING DATE: January 15, 2008

The kick-off workshop for the “Develop Sustainability Guidance Document” Refinement Phase Task was held on January 15, 2008 at the Omaha CSO Program Office. Meeting attendees are listed above. A copy of the meeting agenda is attached.

1.10 Summary of Meeting

The meeting included group discussion of all items on the agenda. A PDF of all flip charts generated at the meeting is available upon request. A summary of the workshop discussions follows.

COMPONENTS OF SUSTAINABILITY VISION

- Innovation.
 - Stormwater Source Control.
 - Use of best available technologies.
 - Reuse of resources – water with embedded energy.
- Enhanced public support.
 - Education.
 - Individual actions that impact stormwater and water quality.
 - Addressing community criteria.
- Maximizing economic, social and environmental benefits.
 - Aligned with goals of community acceptance, affordability and regulatory compliance.
- Model for the region.
 - Recognition of Public Works Department as leader in addressing sustainability.
 - Model framework for addressing sustainability.
 - Leadership and collaboration - model for removal of roadblocks.
 - Embraced by other communities in the region.

- Legacy for future generations.
 - Creation of public assets with long-term benefit.
 - Stormwater is a highly valued resource for the community.
 - Missouri River and Papio Creek transformed to community assets.
 - Viewed as valuable investment in the community.
 - Contributions to enhanced quality of life in Omaha.
 - Turning point for environmental stewardship.

BOUNDARIES FOR SUSTAINABILITY GUIDANCE AND GOALS

1. Align with original program goals of affordability, regulatory compliance, and community acceptance.
2. Allow flexibility, not locking in decisions now.
3. Be long-term in nature and consider design, construction, and operation and maintenance.
4. Apply for the entire service area.
5. Mesh with the efforts of the Papillion Creek Watershed Partnership for watershed management.
6. Public education components should mesh with overall public education efforts of program.
7. Focus on LTCP implementation, but mesh with other City efforts, such as the proposed Environmental Element to the City Master Plan.
8. Serve as a template for other efforts but not a mandate.

STAKEHOLDER ANALYSIS

- Level 1 Stakeholders (Feedback Needed, Focused Meeting) – Mayor’s Office, Program Management Team, Community Basin Panel.
- Level 2 Stakeholders (Presentation/Questions and Answers at Regular Meeting) – Utilities, City Council Public Works Committee, Basin Consultants, Basin Advisory Panels, Green Omaha Coalition, Omaha By Design.
- Level 3 Stakeholders (Written Communication Only) – Other Community Organizations, General Public.

PRELIMINARY SUSTAINABILITY GOALS

- Reduce basement backups – S1
- Water quality improvements – E1
- Apply innovative best management design practices - \$1
- Public acceptance of sustainability initiatives – S2
- Enhancement of natural systems to create valued community resources – S3, E2
- Consider life-cycle costs in decision-making - \$2
- Coordinate opportunities to create visible enhancements – S4, E3, \$3
- Maximize resource efficiency-materials, energy etc. – E4, \$4
- Support workforce development to effect the success of the program and sustainability – S5
- Maximize use of local labor and materials – S6, \$5
- Measure and track the positive environmental and social benefit
- Serve as a sustainability framework and model of collaboration for other city departments (Establish a process for collaboration for greater benefits)– S7, E5, \$6
- Support and/or provide leadership for other sustainability efforts in the region – S8, E6 (Captured in vision)
- Balance the near-term economics with long-term value and benefits to the community. – E7, \$7
- Minimizing community disruption – S9
- Support program management goals – all three

1.11 Workshop Follow-up

Following the workshop draft versions of the following were prepared: Definition of Sustainability, Sustainability Vision Statement, Sustainability Goals and Boundaries for Sustainability Guidance Document. These are all attached to these minutes for review.

SUSTAINABILITY GUIDANCE DOCUMENT WORKSHOP NO. 1 AGENDA

TO: Marty Grate, City of Omaha
Nina Cudahy, City of Omaha
Kirk Pfeffer, City of Omaha
Mike Arends, City of Omaha
Pat Nelson, Omaha CSO PMT
Dave Lampe, Omaha CSO PMT
Linda Lovgren, Lovgren Marketing

FROM: Mike McMeekin, Omaha CSO PMT
Michaela Wittmann, Omaha CSO PMT
Andrea Gardner, Omaha CSO PMT

COPIES Tom Heinemann, Omaha CSO PMT

FACILITATOR: Andrea Gardner, Omaha CSO PMT

MEETING DATE: Tuesday, January 15, 2008

MEETING TIME: 8:00 am – 2:00 pm (CDT)

VENUE: Program Management Office, First Floor Conference Room

1.	Introductions.	8:00 – 8:05
2.	Purpose of meeting and meeting protocols.	8:05 – 8:15
3.	Review of terminology and definition of sustainability.	8:15 – 8:30
4.	Roundtable: what do you see as the opportunities and issues regarding development of a sustainability plan or process?	8:30 – 9:15
5.	Review of initial benchmarking results – vision and goals.	9:15 – 9:30
6.	Brainstorm: what is the vision for the Omaha CSO Sustainability Program?	9:30 – 10:20
	Break	10:20 – 10:30
7.	Brainstorm: identify boundaries and constraints of Sustainability Program and Guidance Document	10:30 – 11:00
8.	Stakeholder analysis: determine appropriate outreach method for each stakeholder in this process	11:00 – 11:30
9.	Brainstorming: identify program-wide goals for a Sustainability Program.	11:30 – 12:15
	Break – get lunch and return to seats.	12:15 – 12:30
10.	Goal brainstorming (cont.). Develop approximate groupings and prioritization of key goals.	12:30 – 1:45
11.	Review of next steps and wrap-up	1:45 – 2:00

CITY OF OMAHA CSO CONTROL PROGRAM SUSTAINABILITY GUIDANCE DOCUMENT

DEFINITION OF SUSTAINABILITY

Sustainability is a desirable and healthy state of dynamic balance between human and natural systems that can continue in perpetuity. Sustainable planning is a decision-making process that incorporates the following from the beginning:

- Takes into account Earth's finite resources
- Considers a comprehensive set of issues and effects
- Seeks a long-term perspective
- Leverages opportunities and mitigates risks associated with issues such as climate change and energy
- Balances economic, environmental, and social concerns
- Results in investment in natural capital (human economic and social systems are sub-sets of the natural environment, so healthy ecosystems are a precondition for thriving economies)
- Includes tangible goals and monitoring progress

SUSTAINABILITY VISION

The City of Omaha CSO Control Program will provide leadership in sustainability to create assets for long-term public benefit, enhance public support for the program, serve as a model of sustainability for other City departments and the region, and spur innovation that maximizes the environmental, social, and economic benefits of the program.

SUSTAINABILITY GOALS

Environmental (Relates to Program Goal of Regulatory Compliance)

- Improve water quality in the Missouri River and Papio Creek.
- Maximize opportunities for natural system enhancements that create visible and valuable community resources.
- Maximize resource efficiency in design, construction, and operation. *(This can include energy use, waste generation, hazardous waste generation, recycling of excavated materials, re-use of combined sewer overflows as stored water and energy, etc.)*

Economic (Relates to Program Goal of Affordability)

- Minimize economic impacts on rate-payers.
- Consider life-cycle costs in decision-making (i.e. balance near-term economics with long-term value and benefits).

Social (Relates to Program Goal of Community Acceptance)

- Maximize elimination of potential basement back-ups.
- Minimize community disruption during construction.
- Maximize use of local labor and materials in construction and operation. (*This can include support of workforce development as part of implementation.*)
- Develop processes for collaboration with other City departments and with regional groups to achieve greater benefits.

BOUNDARIES FOR SUSTAINABILITY GUIDANCE DOCUMENT

9. Align with original program goals of affordability, regulatory compliance, and community acceptance.
10. Allow flexibility, not locking in decisions now.
11. Be long-term in nature and consider design, construction, and operation and maintenance.
12. Apply to the entire service area.
13. Align with the efforts of the Papillion Creek Watershed Partnership for watershed management.
14. Align public education components with overall public education efforts of program.
15. Focus on LTCP implementation, but align with other City efforts, such as the proposed Environmental Element to the City Master Plan.
16. Serve as a template for other regional sustainability efforts but not as a mandate.

ATTACHMENT 3

Minutes from July 7, 2008 Workshop

MEETING SUMMARY

OMAHA CSO CONTROL PROGRAM

SUSTAINABILITY GUIDANCE DOCUMENT WORKSHOP MINUTES

ATTENDEES: Mike McMeekin, Omaha CSO PMT, Task Co-Leader
Michaela Wittmann, Omaha CSO PMT, Task Co-Leader
Marty Grate, City of Omaha
Kirk Pfeffer, City of Omaha
Nina Cudahy, City of Omaha
Mike Arends, City of Omaha
Andrea Gardner, Omaha CSO PMT
Pat Nelson, Omaha CSO PMT
Ellen Fitzsimmons, Omaha CSO PMT
Linda Lovgren, Lovgren Marketing

FROM: Mike McMeekin, Omaha CSO PMT

MEETING DATE: July 7, 2008

Workshop No. 2 for the “Develop Sustainability Guidance Document” Refinement Phase Task was held on July 7, 2008 at the Omaha CSO Program Office. Meeting attendees are listed above. A copy of the meeting agenda is attached.

The meeting included group discussion of all items on the agenda. A PDF of all flip charts generated at the meeting is available upon request. A summary of the workshop discussions follows.

Sustainability Vision Statement. The draft Vision Statement was reviewed and discussed. The following revised Vision Statement was agreed to subject to attempting to incorporate an element of defining sustainability in the statement.

The City of Omaha CSO Control Program will apply the principles of sustainability in a fiscally responsible manner to add meaningful and lasting social, environmental and economic benefits to the implementation of the Long Term Control Plan. In addition, the Program will serve as a model for the application of sustainability in the design, construction and operation of infrastructure.

Sustainability Guidance Document Goals. The following revised goals were agreed to.

- Identify, capture and communicate to the public the social, environmental and economic (triple bottom line) sustainable benefits of the implementation of the CSO Long Term Control Plan.
- Optimize the use of local workforce and materials in project construction and operation.

- Incorporate resource efficiency (e.g., energy efficiency, reduced construction waste, reduced hazardous waste generation, recycling) into project design, construction and operation to reduce energy and material use, reduce waste and provide economic benefit to rate-payers.
- Identify and implement opportunities for innovative best management design practices for infrastructure that enhance protection of the environment, contribute to the control of CSO's and are of economic benefit to rate-payers.
- Identify and implement natural system enhancements that contribute to the control of CSO's, improve water quality and/or create valuable community enhancements.
- Establish and implement collaborative processes with other City departments and utility providers and with regional stakeholder groups to remove roadblock to the implementation of the Sustainability Guidance Document, ensure effective communication and achieve greater benefits.
- Use life-cycle cost analysis, as appropriate, to evaluate and balance near-term economics with long-term value and benefits.

Goal Action Plans and Progress Indicators. Potential components and ideas for action plans for each goal were discussed. These are summarized below.

- Identify, capture and communicate to the public the social, environmental and economic (triple bottom line) sustainable benefits of the implementation of the CSO Long Term Control Plan.
 - Use website/survey tool/questions at public presentations/other technique to determine public's level of awareness of sustainability before and after implementation of the sustainability guidance.
 - Provide "media stories."
 - Provide interpretive signage when sustainable actions are taken.
 - Develop a basic scorecard to record the benefit of each project. Scorecard should include social and economic benefits, e.g. local workforce used, increased amount of open space/recreation, local spending, cost savings.
 - Develop set of identified benefits to focus on.
 - Efforts should start now and be ongoing (various public presentations already make reference to triple bottom line).
 - Linda Lovgren and the Program Management Team (PMT), as well as some public participation team members, would be key people involved in developing and implementing action plans.
- Optimize the use of local workforce and materials in project construction and operation.
 - Hold more meetings on minority/women-owned/disadvantaged business and how to participate in contracting with the City.
 - Participate in local business outreach with the Chamber of Commerce.
 - Have a formal plan for greater engagement with the Chamber of Commerce, Metropolitan Community College, labor unions, others.
 - Track data on local labor and materials use.
 - Create and provide to contractors a list of local vendors/sources for materials and resources.
 - Provide outreach and training on local supply chains to vendors/sources of materials/resources.

- Develop construction specification requirements and examples for documenting local sources.
- Develop procurement requirements and associated training.
- The PMT and City departments (Law, Finance, HRR), as well as the Chamber and “Buy Omaha,” could help with local materials/resources efforts.
- The action plan should be completed and under implementation by the time construction starts on major CSO Program elements.
- It was noted during the discussion that the Chamber and the Program are already engaged in local staffing, and that this action plan could focus on local materials and other resources.
- Incorporate resource efficiency (e.g., energy efficiency, reduced construction waste, reduced hazardous waste generation, recycling) into project design, construction and operation to reduce energy and material use, reduce waste and provide economic benefit to rate-payers.
 - Identify one or two areas (e.g. reuse of tunnel spoils) for more innovative efforts.
 - Capture/record quantities associated with projects: tons of waste generated and recycled, energy used/reduced, etc.
 - Develop checklist tool to use with projects to identify potential areas for efficiency improvements, as well as a protocol/training for its use.
 - Develop and provide a list of examples to be used with the checklist tool.
 - Develop green procurement requirement(s)/standard(s).
 - Develop construction specification requirements and examples.
 - Provide verification of design and construction approaches.
 - The PMT and appropriate City Public Works staff should be involved in developing the action plans. Project designers should be involved in action plan implementation.
 - Action plan(s) should be developed and under implementation before design starts on major program components.
- Identify and implement opportunities for innovative best management design practices for infrastructure that enhance protection of the environment, contribute to the control of CSO’s and are of economic benefit to rate-payers.
 - Engage design engineers for the different controls.
 - Consider alternatives analysis, and future needs/use, for RTB vs. flocculation.
 - Provide list of areas for potential innovation: location of shafts, site selection, hybrid solutions, etc.
 - Identify and develop a pilot project to showcase a particular aspect of sustainability, perhaps through achieving additional benefit by modifying current design.
 - Define innovation and include in procurement process to generate good ideas.
 - Use as an evaluation tool early in the design process.
 - Would likely need to get started very soon.
 - Experts in specific areas within the PMT would be the most likely to be involved.
- Identify and implement natural system enhancements that contribute to the control of CSO’s, improve water quality and/or create valuable community enhancements.
 - Evaluate possible improvements (a list or plan for each, over and above code) on each CSO project.
 - Evaluate tasks/products from Green Solutions team.

- Determine how to capture the difference from/benefits of natural system enhancements, especially for the big CSO projects.
 - Stormwater controls, along with CSO controls, could be included in this category.
 - Document the benefits of including natural system enhancements on the few “big” projects identified by the Green Solutions Team.
 - Design engineers, using guidance from the Green Solutions Team, will focus on green solutions in specific projects.
 - Ideally, natural treatment systems would be incorporated into the design process for each project as early as possible, including consideration in procurement of design teams.
- Establish and implement collaborative processes with other City departments and utility providers and with regional stakeholder groups to remove roadblock to the implementation of the Sustainability Guidance Document, ensure effective communication and achieve greater benefits.
 - Hold workshops or training on the guidance document and its results (e.g. with Green Omaha coalition).
 - Develop a list of potential roadblocks to implementation of the guidance document and the people or organizations that need to be involved to address.
 - Consider engagement with the City’s efforts on the environmental element of the City’s master plan.
 - Efforts would be led by PMT, Linda Lovgren, perhaps with participation by the MUD and other City departments.
 - Could work through Community Basin Panel, which has a good range of representatives, including environmental groups.
 - Roadblocks should be identified as soon as the guidance plan is done. Other activities would be ongoing.
- Use life-cycle cost analysis, as appropriate, to evaluate and balance near-term economics with long-term value and benefits.
 - Define appropriate boundaries for the life-cycle analysis (LCA).
 - Select pilot project(s) or decision(s) (e.g. RTB and decisions about fisheries/USFWS concerns) which use of LCA could facilitate.
 - Take lessons learned from pilot project(s) and evaluate applicability of LCA more widely to other projects and decisions.
 - If applicable, develop protocols for future use of LCA.
 - PMT, project engineer for the pilot project(s) would be involved in implementation.
 - Efforts should start as soon as possible.

Implementation Framework. The following points with respect to implementation of the Guidance Document were agreed to.

- The PMT is the logical entity to take ownership of the guidance document(completion and implementation).
- Provide a prioritized list of the action plans and rough cost estimate of each to implement, separate from the guidance document, to help with budget planning. The costs of some action plans are expected to be “covered” because they can be incorporated into existing budgeted activities (e.g. Green Solutions, procurement, communications).

- There will be a decision point in the fall, after the guidance document is completed, about which activities to move forward with, if additional funding can be obtained, etc.

Stakeholder Discussion. Stakeholders for the Sustainability Guidance Document were discussed, and the following strategies agreed to.

- CSO Program Leadership (Public Works Department & Program Management Team) - Review of revised vision statement and goals at 7/8 Big Picture Issues Meeting.
- Community Basin Panel - briefing at 8/20 meeting.
- Mayor's Office - Invite to 8/20 Community Basin Panel meeting.
- Public Works Department leadership - Marty Grate to brief Bob Stubbe.
- Utilities - included in 8/20 Community Basin Panel meeting.
- City Council Public Works Committee - briefing at meeting in late July.
- Basin Consultants - briefing during Fall meeting.
- Basin Advisory Panels - briefing during Fall meetings.
- Tunnel Team - To be determined.
- RTB Team - To be determined.
- Sewer Separation Team - To be determined.
- Other Refinement Phase Teams - To be determined.
- Green Omaha Coalition - represented on Community Basin Panel.
- Omaha By Design - represented on Community Basin Panel.
- Other City Departments - represented on Community Basin Panel.
- Regulators (EPA A& NDEQ) - To be determined.
- Natural Resources District - represented on Community Basin Panel and briefing at monthly coordination meeting.
- Counties - briefing at monthly coordination meeting.
- General Public - briefing during Fall meetings.

SUSTAINABILITY GUIDANCE DOCUMENT WORKSHOP NO. 2 AGENDA

TO: Marty Grate, City of Omaha
Nina Cudahy, City of Omaha
Kirk Pfeffer, City of Omaha
Mike Arends, City of Omaha
Pat Nelson, Omaha CSO PMT
Linda Lovgren, Lovgren Marketing

FROM: Mike McMeekin, Omaha CSO PMT
Michaela Wittmann, Omaha CSO PMT
Andrea Gardner, Omaha CSO PMT

COPIES Tom Heinemann, Omaha CSO PMT
Jim Theiler, City of Omaha

FACILITATOR: Andrea Gardner, Omaha CSO PMT

MEETING DATE: Monday, July 7, 2008

MEETING TIME: 1:00 PM – 4:30 PM (CDT)

VENUE: Program Management Office

1.	Purpose of Meeting and Meeting Protocols.	1:00 – 1:10
2.	Bench-Marking Update.	1:10 - 1:20
3.	Review and Discussion of Sustainability Guidance Document Vision Statement.	1:20 – 1:35
4.	Review and Discussion of Sustainability Guidance Document Goals.	1:35 – 2:00
5.	Brainstorm Action Plans and Progress Indicators for Goals.	2:00 – 3:45
6.	Discuss Implementation Framework.	3:45 – 4:05
7.	Stakeholder Discussion.	4:05 – 4:20
8.	Review of Next Steps.	4:20 – 4:30