



**Colorado Department
of Public Health
and Environment**

Colorado Stormwater Excellence Program (CSEP)

Pilot, Stage I – Final Report

April 12, 2006

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**COLORADO STORMWATER EXCELLENCE PROGRAM (CSEP)
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INTRODUCTION

In watersheds experiencing intensive construction activity, the localized impacts of water quality may be severe because of high pollutant loads, primarily sediments. Siltation is the largest cause of impaired water quality in rivers and the third largest cause of impaired water quality in lakes (U.S. EPA, 1998). The 1996 305(b) report also found that construction site discharges were a source of pollution in: 6 percent of impaired rivers; 11 percent of impaired lakes, ponds, and reservoirs; and 11 percent of impaired estuaries.

NPDES Phase II, Final Rule, December 8, 1999

In an effort to reduce the amount of sediment and other pollutants entering waterways, regulators nationwide have recently turned their enforcement focus toward the construction industry with an intensity that has caught many contractors uneducated and unprepared. In response to this increase in regulatory focus, many builders have questioned the justification for such a strong focus on minimizing sediment transport to the nation's waters when erosion is a process that occurs naturally. The answer to these contractors is that mechanically disturbed soils, common to construction activities, are proven to dramatically increase the detrimental sediment load in runoff over that experienced in nature (U.S. EPA. 1992.

Environmental Impacts of Storm Water Discharges: A National Profile. EPA 841-R-92-001, Office of Water, Washington, DC). A number of pollutants, such as nutrients, are absorbed onto sediment

particles and also are a source of pollution associated with sediment discharged from construction sites. The fact is that millions of acres of development take place in the United States each year, and the cumulative effect of that much disturbance and resulting load of sediment and other pollutants can be extremely detrimental to the physical and biological integrity of the water that we all rely on for drinking, recreation and other beneficial uses.

With the quality of our State's diminishing water supply at stake, and public sentiment supporting more stringent regulatory enforcement, the Colorado Water Quality Control Division (the Division) began directing an increasing amount of their resources toward enforcement of the stormwater regulations. To enhance compliance even further, the Division also agreed to consider lending its support to a privately funded and operated stormwater program for the construction and property development industries, if the program could demonstrate positive Stormwater Construction Permit compliance results. A program was proposed to the Division in January 2005 that was a new and innovative approach using a public/private partnership focused on participants voluntarily implementing a stormwater management program that exceeded the Stormwater Construction Permit requirements, including highly accountable self-policing procedures. The program also would require minimal Division resources be dedicated to its oversight. The Division agreed to support the proposed program on a limited trial basis to verify the viability of the innovative concepts. If proven effective, the Division could then consider the program for permanent implementation. The Division named the trial program the Colorado Stormwater Excellence Program-Pilot, Stage I (the Pilot).

This Final Report for the Pilot will summarize the original goals of the program, the systems and tools utilized, the successes and challenges experienced along the way, and the many important lessons learned that could be used to further improve the CSEP, should it be continued. Additional supporting documentation gleaned from other programs and studies across the country was combined with the experiential data from the Pilot and is referenced throughout this Final Report.

CSEP-PILOT, STAGE I

CSEP Program History

On December 8, 1999 the EPA released the Final Rule of the NPDES Phase II regulations, which significantly broadened the reach of the original NPDES Phase I rules issued in 1990. On July 1, 2002, the State of Colorado began implementing the Phase II regulation. In the year 2003, the EPA at the national level declared that a stronger focus would be placed on enforcing NPDES regulations in the construction and property development industries (U.S. EPA, 2003 Storm Water Compliance and Enforcement Strategy, <http://www.epa.gov/compliance/resources/policies/civil/cwa/stwenfstrategy2003.pdf>).

The EPA's new message was very clear; the time for NPDES compliance assistance from regulators (as was the emphasis in the 1990's) was over and the time for compliance assurance and enforcement had begun. State regulators were now shifting resources from assistance to enforcement and private industry now had to become educated and meet compliance requirements that had not been prioritized since they were initiated in 1992, or face costly penalties. The Division was seeking innovative solutions to improve statewide Stormwater Construction Permit compliance without reliance on major Division resource increases.

In early 2004, the Division and private industry began investigating options for partnerships that would address the Division's goal of increasing compliance, while allowing construction site operators to come into compliance as quickly and efficiently as possible. A couple of proposed solutions were put on the table for Division consideration but an overall program acceptable to all parties had not been found. It was at that time a local consulting firm, Stormwater Risk Management, Inc. (SRMI), representing a number of prominent contractors in the Colorado market, presented an innovative new program it had developed that appeared to contain the program elements that assured measurable compliance improvements for the regulated community with little added resources required from regulators.

In the SRMI program, a number of general contractors had voluntarily subjected themselves to a rigorous program of stormwater training and education, regular outside third-party inspections and increased levels of documentation and accountability. The positive effect on compliance levels was measured and documented and was almost immediate upon initiating the program. These results were compiled and presented by SRMI to the Division for consideration along with the program requirements and systems that were used to achieve them. The Division recognized that the program contained many elements of an Environmental Management System (EMS) approach to environmental compliance. The Division offered to support a pilot program with a limited number of participants to test the innovative approach for potential implementation on a wider scale. The only special accommodations requested by SRMI or its clients at the time were increased Division oversight and official recognition of the program and its benefits. The Division, however, pursued and received an agreement with the EPA where both agencies recognized and endorsed the benefits of such a program. The EPA agreement also allowed the Division primary oversight of pilot program participant enforcement actions while the program was running. The Division also later agreed to rely on only the summary report data to monitor the participants, to alleviate participant concerns that the detailed reports might be used against them should they become public record. As the program was developed, the Division took on many other important roles which are described in more detail in later sections of this report.

The Storm Water Phase II Final Rule is the next step in EPA's effort to preserve, protect, and improve the Nation's water resources from polluted storm water runoff. The Phase II program expands the Phase I program by requiring additional operators of MS4s in urbanized areas and operators of small construction sites, through the use of NPDES permits, to implement programs and practices to control polluted storm water runoff. Phase II is intended to further reduce adverse impacts to water quality and aquatic habitat by instituting the use of controls on the unregulated sources of storm water discharges that have the greatest likelihood of causing continued environmental degradation. The environmental problems associated with discharges from MS4s in urbanized areas and discharges resulting from construction activity are outlined below.

SRMI was contracted by the Division to administer the CSEP from March 2005 to July 2005 and record and report the results. The Pilot results were fully documented with the results summarized in this Final Report, as well as in monthly reports to the Division. The detailed information of over 200 monthly initial and follow-up inspection reports provided the basis for the analysis and recommendations in this Final Report.

Part I – CSEP-Pilot, Program Goals & Objectives

The original purpose of the Colorado Stormwater Excellence Program (CSEP) as set forth in the “Statement of Work” issued to SRMI by the Division in March 2005 was as follows:

“In order to explore options for providing innovative tools for permit compliance to the regulated community, the Water Quality Control Division (WQCD) of the Colorado Department of Public Health and Environment is initiating a Stage I pilot project to investigate and collect information on implementation of a Stormwater Excellence Program. The concept of the Stormwater Excellence Program is to provide guidance to entities regulated under the Stormwater General Permit for Construction Activities on the development and implementation of a program containing the appropriate elements of an Environmental Management System (EMS), with a focus on permit compliance. The EMS-based program, including auditing by a third party, will include elements that will be in addition to the CDPS Stormwater Construction Permit requirements. Stage I of the project includes implementation and assessment of a pilot program and development of guidance.

Upon completion and evaluation of the Stage I pilot program, the WQCD could end the program if positive results were not demonstrated, or, following development of the applicable guidance, either proceed into full implementation of the Stormwater Excellence Program or continue with a Stage II Pilot Program. The Stage II Pilot Program would include a one-year implementation of the program, followed by further evaluation and a determination of whether to continue with full implementation.”

SRMI was to undertake four key tasks over the four-month Pilot Program period starting in March 2005, as summarized here:

Task 1: Ensure Consistency of Current Program with Components of an EMS

Task 2: Implement an EMS-based Program at Construction Sites

Task 3: Collect, Analyze, and Report Data from Participating Construction Sites

Task 4: Develop an Initial Draft Guidance Document for Implementation of an EMS-based Program for Construction Sites.

SRMI, upon issuance of this Final Report, will have completed the first three of the above tasks. Task 4 is a separate submittal to the Division and is not addressed in this Final Report. The final results of the first three tasks are detailed in the following chapters:

I.A - Task 1: Ensure Consistency of Current Program with Components of an EMS

In January of 2005, SRMI presented the Division with the details of the principles, systems and tools that were being used by SRMI's clients to achieve voluntary over-compliance with the minimum requirements of the Stormwater Construction Permit. Documented results demonstrating compliance improvements by SRMI's clients were also presented to the Division based on SRMI's scoring system called the Environmental Impact Score (E-Impact™). SRMI at that time called their program the Storm Water Compliance Program (SWCP). The Division recognized that the SWCP contained many elements of an EMS tailored to the specific CDPS compliance needs of the construction industry. The SWCP, however, was originally created by SRMI without any consideration specifically given to an EMS approach, and the Division felt it was important for the long term success and acceptance of the program for it to be EMS-based. SRMI was directed by the Division to demonstrate how the SWCP system matched up to an EMS and, if possible, add missing EMS elements to the SWCP before or even during the Pilot Program that could enhance its effectiveness and acceptance.

An EMS is a methodology to improve environmental performance by providing a systematic approach to managing an organization's environmental affairs. The EMS methodology provides for a holistic approach to a company's environmental management to include every aspect of its business operations, with a strong emphasis on evaluating the success of conformance with management systems.

Most environmental management systems are built on the "Plan, Do, Check, Act" model. In the widely recognized ISO 14001 EMS Standard, these steps have been expanded to encompass seventeen elements. These seventeen elements are grouped into five phases that are similar to "plan, do, check, act". The five phases are called Environmental Policy, Planning, Implementation and Operation, Checking and Corrective Action, and Management Review.

To meet the Division's stated objective to create an EMS-based stormwater compliance program, the SRMI SWCP was compared to a recognized and accepted EMS program implementation guide called *Second Edition, Environmental Management Systems Implementation Guide* (<http://www.epa.gov/owm/iso14001/ems2001final.pdf>). The principles, systems and tools of the original SRMI SWCP were evaluated against this guide and further developed to create the core elements of the EMS-based CSEP-Pilot, Stage I.

The CSEP-Pilot incorporates many of the important elements of an EMS and, while it is referred to as an EMS-based program, it can be distinguished from an EMS by a few differences. Most notably, the CSEP-Pilot does not incorporate practices that address *all* environmental concerns within an organization; rather, it is a compliance assurance program that is targeted at the construction industry with a specific focus on implementing those systems that result in improved compliance with state, federal, and municipal stormwater quality requirements. The CSEP-Pilot incorporates five principles that parallel the five ISO 14001 phases, and 12 standardized systems and tools that can be related to the seventeen ISO 14001 elements (a comparison can be found in Appendix B). When voluntarily implemented within an established organizational structure, these CSEP-Pilot elements together result in dramatic stormwater compliance improvements at construction sites.

Although there may be a few companies in the building industry that currently possess the commitment required for full implementation of a program to conform to the ISO 14001 standard, many might benefit from and utilize an interim step such as the EMS-based CSEP. Many companies currently see the ISO 14001 EMS certification process as a multi-year effort requiring much focus and effort directed away from their core business, with little immediately apparent benefit to the profitability of the organization. The Division hopes compliance programs within the proposed EMS-based CSEP will demonstrate that rapid compliance improvements can be achieved with relative ease and cost-effectiveness and will improve industry perceptions of the EMS. As the construction industry evolves, the CSEP could well serve as a stepping stone for its participants to implement a full, self-directed EMS such as the Colorado Environmental Leadership Program [<http://www.cdphe.state.co.us/el/elp/elphom.asp>].

I.A.1: CSEP-Pilot Structure

To compare the elements of the CSEP-Pilot to the elements of an EMS, one must first understand the five principles guiding the CSEP- Pilot, Stage I, the roles of the major stakeholders, and the systems and tools created to support the principles. When reviewing the following principles, note that SRMI acted as the “industry sector administrator” of the CSEP-Pilot for the commercial construction industry during Stage I, and they provided the participants with the standardized systems and tools to implement the program. With only minor program modifications, other industry sector representatives could utilize the CSEP principles and act as the industry sector administrator. Individual companies can also utilize these principles by replacing the words “industry sector” and “participant” with “company” in Principles 2 through 4.

I.A.1.i: Principles

The five principles guiding the CSEP-Pilot program are described below:

CSEP-Pilot Principle 1: Corporate Commitment

Ownership, or the highest-level management in a region or division of a participant corporation, is committed to continually improve their company’s environmental performance. They establish managerial and accountability structures that promote successful implementation of the company’s written environmental policies which emphasize pollution prevention, compliance with environmental regulations and adherence to the CSEP-Pilot guidelines.

CSEP-Pilot Principle 2: Pollution Prevention & Compliance Assurance

Industry sector administrators identify the aspects of their industry sector operations that have an impact on the environment and prioritize pollution prevention approaches to meet Federal, State and local environmental regulations. They create industry sector standardized systems and tools that fit within the CSEP-Pilot guidelines, and implement proactive programs that correct compliance deficiencies and ensure environmental performance.

CSEP-Pilot Principle 3: Measurable Results & Continuous Improvement

Industry sector administrators implement approved CSEP-Pilot measurement systems to regularly assess progress toward meeting industry sector environmental goals, and use the measured results to continuously improve industry sector and participant environmental performance.

CSEP-Pilot Principle 4: Accountability Structures

Industry sector administrators develop and adopt measures to evaluate industry sector environmental performance and ensure full accountability of environmental functions throughout all program levels.

CSEP-Pilot Principle 5: Enabling Systems

Industry sector administrators develop and implement standardized systems and tools that meet the CSEP-Pilot guidelines and enable CSEP-Pilot participants to perform their functions consistent with regulatory requirements and program policies and goals.

I.A.1.ii: Stakeholder Roles and Responsibilities

A number of Stakeholders have significant roles and responsibilities in the stormwater compliance process and are described below:

EPA

The EPA has influence in the success of any environmental program, although its direct involvement with the CSEP was limited to initial advice and consent. Consent from the EPA was in the form of a Memorandum of Agreement (MOA) stating the EPA's support of the program and allowing the Division the designation of lead agency for oversight in enforcement matters regarding the CSEP. This MOA was instrumental in encouraging participation in the CSEP-Pilot Stage I.

The Colorado Water Quality Control Division (Division)

The Division was a critical stakeholder in the CSEP-Pilot. Its support provided the CSEP-Pilot credibility, which was another vital element in attracting participants. The Division established the minimum standards with which the CSEP-Pilot had to comply to maintain credibility with regulators. Ongoing guidance regarding regulatory issues was given to the CSEP-Pilot administrator that was then disseminated to the participants.

During the CSEP-Pilot, the Division continued their regular enforcement activities as well as conducted "spot checks" of CSEP-Pilot participating sites. The spot checks were conducted to verify third-party inspector performance, compliance with CDPS stormwater permit requirements, and conformance with the elements of the CSEP-Pilot.

Additionally, the Division recognized the extra efforts of the CSEP-Pilot participants in maintaining over-compliance with the Stormwater Construction Permit requirements. In one specific case the Division took this into consideration in determining the appropriate level of response to a violation found during a Division inspection. A determination not to pursue formal enforcement for alleged violations at sites participating in the program was not automatically made, but was based on an assessment of whether the participant/permittee's consistent actions resulted in improved conditions at the site and whether the permittee had adhered to the CSEP-Pilot guidelines.

In the future, if the proposed CSEP is continued, the Division may choose to develop policies referencing inspection prioritization, enforcement response priorities, and penalty assessment to recognize exceptional performance. These policies may include criteria for using enforcement discretion for those that demonstrate they are substantially maintaining Stormwater Construction Permit compliance through the implementation of an EMS-based program as described in this Division guidance. The Division could also provide additional "incentives" which could include:

- Recognition/award for companies making extra effort, such as recognition through the Department's existing Environmental Leadership Program.
- Division agreement to reduce oversight of companies or sites in the program

If the Division decides to continue the CSEP, their resource commitment will likely have to be limited. Generally the Division's involvement will be to represent the State's interest at meetings, occasional training opportunities, recognition events and act as the liaison between the CSEP and the EPA when required. In addition, the Division would continue to monitor the program to ensure it remained credible and protective of State waters. The Division will continue to play a critical leadership role within the CSEP organization and will retain the final word on all matters concerning Division incentives for program participants.

MS4s

Certain cities and counties are required to implement local construction site water quality programs in accordance with a CDPS Municipal Separate Storm Sewer System (MS4) permit. These entities are referred to as MS4s. MS4s played a limited role in the initial implementation of the CSEP-Pilot, Stage I, but some provided valuable feedback to the Division about the compliance improvements of CSEP-Pilot projects within their jurisdictions. Based on the current trend, however, MS4s would play an increasingly larger role in the CSEP as regulatory oversight becomes more extensive at the local level. Their input and involvement in the formation and oversight of the proposed CSEP is vital and will continue to be sought.

CSEP Administrator

CSEP-Pilot administration involved many important activities that led to the success of the program, such as scheduling of regular inspections including the follow-up inspections, interpretation of inspection results, quality assurance reviews of inspection findings before issuance to participants, and most importantly, management and improvement of the database used to record and maintain the CSEP-Pilot data.

SRMI acted as CSEP Administrator in the Pilot and performed oversight and dispute resolution as well as third-party inspections and recordkeeping. This flat organizational structure worked well for the limited scope and duration (four months) of the Pilot Program, but could lead to weakened accountability systems and diminished program credibility should the Division decide to continue the CSEP long-term and broaden its participation. The “CSEP Lessons Learned” section of this Final Report explains in greater detail the necessity of a deeper organizational structure.

CSEP-Pilot Oversight

CSEP-Pilot oversight included the handling of disputes related to inspection findings, especially those that affected E-Impact™ performance scores and any concerns involving Construction Reviewer activities. Jobsite inspections by their very nature involve a certain amount of subjectivity and can naturally lead participants to question their fairness. Also, as participants began to take performance scores more seriously, they questioned the findings or actions of the third party inspectors (Construction Reviewers) more frequently. It is important to the long-term acceptance and credibility of the proposed CSEP that all questions of program fairness be taken seriously and a structure be provided to resolve them quickly.

SRMI provided the CSEP-Pilot oversight and aided in dispute resolution even though all disputes involved Construction Reviewers employed by SRMI. Although minimal time was required for dispute resolution during the Pilot Program, it will be vital to the proposed CSEP as participation broadens and other industry sectors become involved. In the “CSEP Lessons Learned” section of this Final Report the case is made for the addition of a CSEP Advisory Board to assume this oversight role.

Construction Reviewer – (Independent Third-party Inspectors)

SRMI served in the Construction Reviewer capacity during the CSEP-Pilot Program. The Construction Reviewer performs the inspections and E-Impact™ scoring, and records in the CSEP database the results of the program implementation efforts of the participants. The Construction Reviewer served as the direct link between the CSEP-Pilot Administrator and the participant field implementation teams and played perhaps the most vital role in the compliance effort. The Construction Reviewer must know the regulations at the State and municipal levels and must be able to balance the interests of the CSEP-Pilot with the interests of his/her participant clients. The Construction Reviewer above all must be unaffected by any political concerns or outside influences, and must always report data as objectively as possible. On-site training and education of the participant field teams was also an important role of the Construction Reviewer. If the CSEP is continued by the Division, the Construction Reviewer will interact with all levels of the proposed CSEP organization, making this role one of the most important and challenging CSEP positions to properly structure and oversee the program to assure successful implementation.

Program Participants

Program participants were tasked with voluntarily meeting all of the CSEP-Pilot requirements while maintaining regulatory compliance at both the State and municipal levels. Their commitment to continuous improvement in environmental performance was a prerequisite for participation. Ongoing feedback from the participants played a vital role in many of the improvements made in the CSEP systems and tools as the program evolved. Participants voluntarily funded all CSEP-Pilot activities both directly and indirectly, and as such they were not only the “regulated entity” from a compliance standpoint but they were also considered “clients” of the CSEP-Pilot.

The table below provides more detailed information about the roles and responsibilities of the CSEP-Pilot stakeholders tasked with implementation of the program.

I.A.1.iii: Implementation Tools

A number of implementation tools were originally developed by SRMI to support the SWCP principles and they consistently yielded excellent compliance results for the participants. After comparison of the original SWCP tools to the elements of an EMS, twelve standardized tools were included within the CSEP-Pilot, Stage I that supported the five principles of the program. The following chart describes in more detail each of the standardized tools, their purposes and the CSEP-Pilot principles they supported.

Table 1: Standardized CSEP-Pilot Systems & Tools

STANDARDIZED CSEP SYSTEMS & TOOLS	PURPOSE	CORRESPONDING CSEP PRINCIPLE
1. CSEP-Pilot participation agreements (Verbal 4 month minimum commitment for Stage I)	A short form agreement that requires the participant to commit to a minimum time period of CSEP involvement. This time commitment places emphasis on a participant’s longer-term continuous improvement and stabilizes CSEP participation levels allowing for better CSEP administration resource planning. <ul style="list-style-type: none"> • Includes a complete listing of all Participant projects that are required to pull a Stormwater Construction Permit 	Corporate Commitment Accountability Structures
2. Standardized management system program	An industry sector standardized program binder, intended to be kept in the jobsite trailer, that provides a format for collecting and organizing stormwater compliance information. It supplies useful guidelines and tools for managing the stormwater compliance process during all stages of construction.	Enabling Systems
3. Pre-Construction Project Planning Systems	This is a separate program for pre-planning stormwater management activities and budgeting stormwater costs. The results of this program are then incorporated into Tool #2. <ul style="list-style-type: none"> • Places strong emphasis on proper planning and budgeting of project pollution prevention practices • Provides various approaches to realize cost savings through good pre-planning • System provides standard contract agreements for BMP sharing, subcontractor responsibilities, etc. • Facilitates early project team communication and effective coordination • <u>Begins accountability process and engages project team early</u> 	Accountability Structures Enabling Systems
4. Independent Third-Party (Construction Reviewer) Initial Inspections	Provides an unbiased initial assessment by a Construction Reviewer of regulatory compliance at the jobsite and provides one-on-one field training for participant’s stormwater supervisors. <ul style="list-style-type: none"> • Outside Construction Reviewer eliminates Participant’s internal political conflicts of interest in reporting violations on themselves. • Provides opportunity for jobsite compliance assistance, including education updates on program and regulatory updates 	Accountability Structures Enabling Systems Pollution Prevention & Compliance Assurance
5. Independent third-party (Construction Reviewer) follow-up inspection	Provides an unbiased assessment of the responsiveness of project teams to correction of potential violations identified in tool #4 <ul style="list-style-type: none"> • Benefits are the same as items listed in tool #4 • Holds participant field teams accountable for proper corrective actions • Prevents compliance issues from “stacking up” or going un-resolved 	Accountability Structures Enabling Systems Pollution Prevention & Compliance Assurance
6. Photo-driven inspection reporting	Documents the findings of third-party (Construction Reviewer) inspection and follow-up findings in an electronic format including <u>digital photos</u> of all alleged violations.	Pollution Prevention & Compliance Assurance

	<ul style="list-style-type: none"> Clearly documents issues of non-compliance Photos reduce disputes regarding compliance opinions Facilitates corporate commitment and accountability by providing clear documentation of field conditions to participant's Executive Management team Photos allow quality assurance review before reports are issued to participant Makes locating and correcting violations much easier Builds a verifiable and documented compliance history Photos clearly document when appropriate corrective actions have been taken Facilitates root cause analysis 	Accountability Structures
7. Standardized E-impact scoring system (See Appendix A)	<p>A relatively objective scoring system that a Construction Reviewer uses to assign a numeric value from 1 to 5 based on the perceived environmental risk of a finding of non-compliance, where 5 is the highest risk.</p> <ul style="list-style-type: none"> Facilitates continuous improvement through performance benchmarking Creates healthy competition among organizations through performance benchmarking. Low performers can try to emulate high performers Helps establish industry sector specific performance standards Creates basis for executive summary reports and rapid snapshot view of performance Builds valuable environmental data resource for regulators Builds a powerful compliance case for participants Establishes benchmarks for awards and recognition programs 	Measurable Results & Continuous Improvement Accountability Structures Enabling Systems Pollution Prevention & Compliance Assurance
8. 24-hour database, Internet access, storage and retrieval	<p>A paperless system to rapidly communicate the results of the third-party (Construction Reviewer) inspections.</p> <ul style="list-style-type: none"> Immediate, secure access to project compliance conditions 24/7 for participants from any location with internet access Easy access to detailed reports eliminates excuses and increases accountability Allows comparative analysis of unlimited data sets Encourages Participant management review and facilitates corporate commitment and accountability. 	Enabling Systems Accountability Structures
9. Regulation database (State, Watersheds & MS4's)	<p>A system contained in the database that allows all stakeholders to view current state and local regulations that have an impact on stormwater compliance and which are referenced with each alleged finding of non-compliance by the Construction Reviewer.</p> <ul style="list-style-type: none"> Clearly ties non-compliance findings to the current stormwater regulations Educates participants about applicable regulations Reduces the frequency of participants contesting observations Supports regulatory efforts at State and local levels May be a useful resource for all regulatory bodies such as watershed groups, EPA, etc. 	Pollution Prevention & Compliance Assurance Accountability Structures Enabling Systems
10. Standardized performance summary reports	<p>Reports that compile and summarize the inspection findings of individual inspections and are accessible through the database that allow for easy oversight by all stakeholders but are specifically targeted at the executive management level of participants</p> <ul style="list-style-type: none"> Provides performance snapshot with links to detailed reports Ensures office-to-field accountability Helps identify areas of reoccurring violations and pinpoints additional training needs within an organization Enables participants to do in-house trend analysis and root cause determination 	Measurable Results & Continuous Improvement Accountability Structures Enabling Systems
11. CSEP-Pilot administration (SRMI)	<p>Administrative duties performed by a representative body for all participants in a sector or group, eliminating much of the duplication of administrative efforts to operate the program.</p> <ul style="list-style-type: none"> Implements program enhancements or corrections based on participant feedback. Facilitates working relationship with regulators Provides cost-effective privately funded program administration Provides Construction Reviewer oversight and accountability Improves accountability of CSEP-Pilot Participants 	Accountability Structures Enabling Systems
12. Standardized training and Education	<p>Industry sector standard classes tailored to provide stormwater regulatory compliance information deemed important by industry sector representatives to improve participant compliance results.</p> <ul style="list-style-type: none"> Includes in-field training during inspection visits Shorter class times allowing broader field level participation 	Enabling Systems

I.A.1.iv: CSEP-Pilot v. EMS

The table in **Appendix B** compares the EMS-based CSEP-Pilot Principles and supporting tools with those elements that are consistent with an ISO 14001 EMS certified program.

I.B - Task 2: Implement an EMS-based program at construction sites

Task 2 began once the aforementioned modifications were made to the SRMI SWCP principles, systems and tools to more closely match an EMS. SRMI recruited some of their existing or past SWCP participants, Waner Construction, Fransen Pittman General Contractors and Saunders Construction, Inc. into the CSEP-Pilot. The first two commercial General Contractors were considered “medium sized” with revenues around 50 million dollars per year, while Saunders Construction was a large commercial contractor with revenues over 250 million dollars. One other large commercial general contractor, Roche Construction, Inc. (on behalf of Target Corporation), joined the Pilot after the first month with three Target Corporation projects in the Denver area. Also, a large commercial property developer, Continuum Partners, LLC, joined the Pilot after the first month with one of their 100 acre developments.

As the administrator on behalf of the Division, SRMI implemented the Pilot principles, systems, and tools at nearly 40 participating member commercial construction sites operated by the participants listed above. The size and scope of each of the participating commercial jobsites within the Pilot was wide-ranging from small, individual pad projects to very large and more complex multi-pad projects. There was no formal decision to include only commercial construction participants in the Pilot; however, the sudden initiation and short duration of the Pilot Program resulted in existing SRMI clients or prospective clients already familiar with the SRMI SWCP being the only readily available participants. It is believed, however, that the five aforementioned Pilot principles should work equally as well in other construction industry segments. The standardized systems and tools that were developed specifically for the commercial construction industry will need to be modified only slightly to reflect the cultural and procedural differences that exist in other construction industry segments.

The first step in the Pilot implementation was to collect baseline data for each participant on each project. One requirement of the Pilot was that all of a participant’s projects in Colorado must be included in the program. Participants would not be allowed to select projects they felt would reflect more favorably on their performance scores and leave out the projects they believed would not. Some flexibility for this rule was provided to two of the participants as discussed Part I.C.2.i of this report. Roche Constructors entered into the site based on participation for a specific client and Continuum Partners, LLC participated for one very large development project. As a general rule, however, the Pilot Program, similar to an EMS, focused on company-wide compliance efforts.

Baseline inspections, utilizing the typical initial inspection process outlined in “Task 3” below and further described in Appendix A were conducted for each Pilot project. For the three companies that joined the program at or after initiation of the Pilot (i.e., Roche Constructors, Saunders Construction and Continuum Partners), the baseline inspection was conducted prior to any formal Pilot Program education or training. For the two active clients of SRMI, baselines consisted of the March inspection results. Because these two companies had already been in a compliance program similar to the Pilot and were familiar with and utilizing most of the systems and tools, their baseline scores started higher than participants new to the program. This situation provided an opportunity to determine if the Pilot system would lead to a contractor’s continuous environmental improvement even after initial improvements had already been achieved.

Throughout the Pilot, SRMI collected compliance related data on more than 200 baseline, initial and follow-up inspections performed. Monthly summary reports of the data were compiled and provided to the Division for review. Only summary data was provided to the Division to alleviate the participant’s concern that the detailed inspection reports might alone prompt an enforcement action. Because of the short duration of the Pilot, trend analysis was only performed on a limited basis and root-cause analysis for compliance deficiencies were not done. The data collection and reporting aspect of the CSEP, however, should provide an excellent forum for this to occur in a longer duration program.

While the results of the Pilot Program were positive for all of the participating jobsites, many program improvements and opportunities for program enhancements were discovered throughout the process. Each of these is addressed in more detail in “Lessons Learned” under Part II.A of the Final Report. The program results based on the data collected are summarized in the following chapter.

I.C - Task 3: Collect, Analyze, and Report Data from Participating Construction Sites

Construction Reviewers collected and recorded a tremendous amount of useful data for the Division and the participants. This section will summarize the types of important data that were collected, why it was collected and how the results of the comparative analysis of different data sets led to the conclusions drawn. This section demonstrates the importance and usefulness of collecting measurable data during the environmental inspection process. The concern was voiced on a few occasions during the Pilot that the data collection process had subjective elements to it therefore rendering the information useless. While it is true that some aspects of the data collection are somewhat subjective, quite the contrary was proven regarding its usefulness.

SRMI, acting as the Construction Reviewer, performed monthly initial third-party inspections at intervals of 30 days, weather permitting, and five business days later a Follow-up inspection was performed to evaluate and record the participant’s response to the initial findings. These inspections were performed in addition to the site inspection required by the Stormwater Construction Permit. The title “Qualified Person” in the context of this report means the on-site person representing the Pilot participant who is tasked with the jobsite stormwater regulatory compliance responsibilities. Further inspection process description can be found in Appendix A.

The typical initial inspection process was generally as follows:

- Call the jobsite Qualified Person or Superintendent (often the same) 24 hours in advance of the inspection to coordinate time of day for the visit.
- Prior to the inspection, prepare a project file including reviewing the local stormwater compliance regulations.
- Arrive at the jobsite and perform a cursory review of the project and a general assessment of stormwater compliance conditions around the visible perimeter, e.g., cleanliness of streets, condition of visible BMPs, etc.
- Meet Qualified Person in the project trailer and discuss stormwater compliance implementation strategy on the jobsite.
- Review all documentation in the trailer for compliance with State and local regulations. Digitally photograph all non-compliant or suspect items.
- Perform jobsite inspection with or without the project’s Qualified Person in attendance to review the condition and current location of all BMPs. Digitally photograph all non-compliant or suspect items.
- Return to jobsite trailer to compare existing BMPs in the field with those indicated on the SWMP. Digitally photograph discrepancies.
- Provide feedback to Qualified Person on items that were discovered to be out of compliance and areas where BMPs were working well. Provide suggestions on areas where immediate action is required or where regulatory action could occur before the follow-up inspection in five days. Schedule the Pilot mandated five day follow-up.
- Enter report, assess E-Impact score, assign regulation code to each violation, perform quality check review and make the report available to the Qualified Person and other requested participant company personnel, usually within 24 hours.

During the typical Follow-Up inspection, the following occurred:

- Call the participant's Qualified Person to arrange the time of visit.
- Arrive at the jobsite and checked in with the Qualified Person to discuss progress made on corrective actions, answer compliance questions and verify status of documentation findings. Take digital photographs of the corrections or the lack of corrections.
- Review each item on the initial report completely and photographically document results.
- Hold closing conference with the Qualified Person, if available, and answer any questions.
- Enter the Follow-Up Report matching follow-up photos with the initial photos; score the Follow-Up Report using the E-Impact scoring system. Review the final report for quality and make available to the Qualified Person within 24 hours.

Prior to the inspection, the Construction Reviewer collected administrative information regarding the project from the participant. Information was gathered such as job name and address, qualified person on-site, municipality, job size in acres, etc. The inspector then determined the jurisdictions that had regulatory authority over stormwater compliance and familiarized themselves with the requirements. Current MS4 or watershed authority regulatory requirements were entered into the regulatory database at this time, along with the State's requirements. With the rapidly changing MS4 regulatory landscape, this is an important process to follow. Armed with this knowledge, Pilot Construction Reviewers were able to support the efforts of the MS4 regulators by educating the participants to the local requirements.

On their first jobsite visit, inspectors collected other pertinent data while re-confirming the accuracy of the administrative information in the project folder. Jobsite size in acres, disturbance area, latitude and longitude coordinates of the project and environmental regulatory permit numbers, both state and local, were collected. All of this information was added to the database to enhance future data sorting capabilities along with the specific compliance data gathered.

I.C.1: Measurement Criteria

Although a tremendous amount of compliance related data was gathered with each site visit, the Division determined that six areas of stormwater compliance would be measured and evaluated for the purposes of determining Pilot effectiveness. The data documented not only the compliance of participating sites with local and state stormwater quality requirements, but also provided indicators for several of the main causes for noncompliance, such as inadequate training and lack of corporate commitment. The six data sets that were monitored are listed below with a brief definition of each, as well as the reason each was chosen.

1. Number of initial findings

“Initial findings” are compliance issues that are discovered by the Construction Reviewer on the first of the two monthly inspections (i.e., the initial inspection) conducted at each project. Initial findings are anything the Construction Reviewer finds that do not meet Stormwater Construction Permit or local permit requirements. They can be anything from minor BMP maintenance items to serious BMP failures or insufficient SWMP documentation.

Initial Findings are an excellent indicator of what is, or is not, happening in the way of compliance efforts on the jobsite in-between the monthly inspections. What occurs in the time between inspections can serve as a gauge of the level of environmental commitment of the jobsite compliance team or Qualified Person. It is also an indicator of the effectiveness of training efforts and tells the participant's executive team what they might expect from an inspection conducted by a local, state, or EPA regulator.

2. Number of initial “more severe” findings

Initial “more severe” findings are those initial findings that score a 3 or above on the Environmental Impact (E-Impact) measurement systems. The entire E-Impact scoring criteria for the Pilot can be found in Appendix “A” of this report. A 3 on the E-Impact scale means that an item is out of compliance with State or local permit requirements and has led to a discharge of pollutants off-site or into the municipal storm sewer system.

More severe findings that have already led to a discharge could have an impact on the environment. For participants they reflect not only a more serious risk to the environment but to the bottom line of the company, since they are a violation more likely to result in penalties from regulators.

3. Number of uncorrected items found on follow-up

Uncorrected items found on follow-up inspections are compliance findings where corrective actions were attempted, but the items were not adequately resolved from the initial inspection findings and are still not in compliance with the State or local permit.

These findings are a good indicator of areas where additional training is needed. Repairs made incorrectly often mean that the willingness is there but the knowledge of how to correct the item is not. If the number of these types of items remains high month after month, it can be an indicator of poor environmental management systems and low corporate commitment to correcting environmental practices. The E-Impact scoring system was weighted heavily against these items because the resources were made readily available to the participants during the Pilot to provide guidance on how to make the necessary corrections.

4. Number of “no attempt to correct” items found on follow-up

“No attempt to correct” items are those non-compliant findings that were completely ignored even after participant notification and were found in the same condition on the follow-up inspection as they were on the initial.

Because a full five working days are allowed between the initial inspection and the follow-up inspection, unresolved initial findings are a good indicator of a project’s attitude toward compliance. Project teams or companies that are not committed to environmental compliance or who have not adequately implemented management systems to ensure that their commitment results in actions in the field will often show it by failing to resolve items they have been made aware of. “No attempt to correct” items on follow-up inspections were scored very punitively on the E-Impact scale during the Pilot for this reason and are considered “serious” permit violations.

The Division takes disregard for environmental concerns very seriously and will almost always assess fines when project teams fail to take any corrective action after being made aware of non-compliance. Participant companies were advised to watch this category closely during the Pilot and take immediate corrective action with project teams.

5. Initial E-Impact performance score

Initial E-Impact performance scores are the first of two performance scores assessed each month and are based on the findings during the monthly initial inspections. A detailed explanation of the E-Impact scoring criteria can be found in Appendix “A”.

These scores provide a good snapshot of project Stormwater Construction Permit compliance as well as a project’s ongoing environmental and regulatory risk. The E-Impact performance score combines all factors on a project into one single score. These scores are very useful for tracking environmental trends over time. A downward trend in scores is good and indicates a commitment to compliance between inspections as well as overall continuous environmental improvement. Consistently low scores also indicate a low environmental risk for a participant’s project.

6. Follow-up E-Impact score

Follow-up E-Impact scores are the second of two performance scores assessed each month and normally follow the initial E-Impact score by five days.

Follow-up scores can be compared to the initial scores to indicate overall responsiveness to initial findings. In the Pilot a punitive weighting factor was assigned to unresolved follow-up findings in an effort to stress the importance of responsiveness to initial findings. The scores are more indicative of project team responsiveness rather than of environmental performance or impact. See the “Lessons Learned” section of this Final Report for changes that will be made to improve the Follow-up E-Impact score’s reflection of environmental impact if the CSEP is continued.

I.C.2: Performance Data Review

The performance results from the Pilot showed impressive results in all of the aforementioned compliance measurement categories. “Table A” shows the results for all participants combined and from the initial baseline inspection to the final inspection at the completion of the four-month program. The remaining five tables B through F show the results for each participant company individually.

Table A			
COMBINED TOTAL RESULTS (ALL PARTICIPANTS)			
Category Measured (Considers average for all jobsites)	Baseline	Completion	% Improvement
Average number of initial findings	14.538	7.38	49.24%
Average number of initial “more severe” findings	4.993	.444	91.11%
Average number of uncorrected items found on follow-up	3.139	1.176	62.54%
Average number of “no attempt to correct” items found on follow-up	2.155	.536	75.13%
Average initial E-Impact performance score	38.018	5.34	85.95%
Average follow-up E-Impact score	24.056	6.576	72.66%

Every Pilot participant was required to utilize the core accountability tools of outside third-party inspections, E-Impact™ performance scoring and photo documented inspection reports, along with the other systems and tools directly related to their implementation. This generally meant that eight of the twelve CSEP systems and tools were mandatory for Pilot participation. However, as shown in Appendix C, a varying amount of the other four standardized Pilot systems and tools could be utilized depending on what existed in the participant’s stormwater compliance programs prior to the start of the Pilot. Appendix C details what SRMI felt each Pilot participant utilized in the way of stormwater program elements prior to entering the program, as well as what

systems and tools were used during the Pilot. Participant names have been removed from Appendix C at the request of some participants who were concerned about publishing this information. It is important to note that the Pilot participant who utilized the most CSEP systems and tools in addition to the eight mandatory core accountability tools also happened to be the highest performer in the Pilot in almost all categories.

All Pilot participants demonstrated tremendous compliance improvements during the course of the four-month program. The *degree* of success they experienced is difficult to directly correlate with what “optional” CSEP systems and tools were, or were not, utilized by the participants. Should the opportunity arise to run a second, longer CSEP-Pilot, more emphasis can be placed on analyzing these correlations rather than simply demonstrating that the program as a whole yields compliance improvements. In some cases SRMI had little or no knowledge of or experience with a participant company’s overall stormwater compliance program outside of the projects reviewed in the Pilot. It is reasonable to assume that some compliance improvements may have originated from influences outside the Pilot. It is also important to note that some industry-wide assumptions and recommendations made by SRMI in this report do not apply to all participants.

I.C.2.i: Participant Performance Results

Saunders was the largest contractor in the Pilot program based on construction revenues in Colorado, and prior to joining had two full time employees that performed random internal third-party compliance inspections in conjunction with their normal safety inspections. Saunders’ system occasionally involved the use of their own version of a photo documentation system to communicate some observations and correction recommendations to the field personnel. They also performed follow-up inspections on some projects to confirm if and when major compliance corrections were made. Saunders’ management team believed that their company’s program was very effective in observing and addressing environmental concerns and they were reluctant to employ any additional and potentially more costly Pilot Program systems and tools beyond the minimum required for participation. Comparing the Saunders’ baseline data in the first column of Table B to that of the average for all companies shows that they performed better than the average on most initial finding scores such as the “average number of initial findings” (first column) indicating that they did start the Pilot with a good environmental program as compared with the average participant. Saunders had the most projects in the Pilot by a wide margin, averaging 14 from month-to-month

Table B			
SAUNDERS PERFORMANCE RESULTS			
Category Measured (Considers average for all jobsites)	Baseline	Completion	% Improvement
Average number of initial findings	13.92	11.9	14.5%
Average number of initial “more severe” findings	2.833	1.5	47%
Average number of uncorrected items found on follow-up	4.5	3	33%
Average number of “no attempt to correct” items found on follow-up	3.75	1.8	52%
Average initial E-Impact performance score	28.42	12.2	57%
Average follow-up E-Impact score	39.25	21	46.5%

as compared to the average of 6 projects for all other participants. Saunders' large size was a factor that hindered implementing the program as quickly as the other smaller participants, and contributed to their improvement percentages being slightly lower than the combined average of all participants (Table A). However, the number of projects Saunders had to adapt to the CSEP procedures to participate compared to the other participants made their improvement percentages all the more impressive.

Roche Construction, Inc. (Roche) also showed tremendous improvement over the course of the Pilot (Table C), although they only entered three Target stores into the Pilot program.

Roche is a large multi-state general contractor performing an annual volume of work similar to Saunders. Roche had a relatively strong stormwater program prior to the Pilot that, similar to Saunders, operated under the direction of their Safety Manager. Roche's Manager of Safety and Health had assembled a company standardized, detailed and job specific stormwater program prior to the start of the three Roche projects that were observed in the Pilot. The Manager of Safety and Health performed regular internal third-party inspections although the frequency of these inspections was not confirmed by SRMI.

Table C			
TARGET / ROCHE PERFORMANCE RESULTS			
Category Measured (Considers average for all jobsites)	Baseline	Completion	% Improvement
Average number of initial findings	12.33	2	83.5%
Average number of initial "more severe" findings	4.667	.333	92.5%
Average number of uncorrected items found on follow-up	1.333	.333	75%
Average number of "no attempt to correct" items found on follow-up	.333	.333	0%
Average initial E-Impact performance score	42.58	4.25	90%
Average follow-up E-Impact score	5.667	3.333	41%

Roche began the program with what appeared to be a strong corporate commitment toward compliance with environmental regulations that was well understood and honored by the field personnel involved in the Pilot. Roche demonstrated dramatic compliance improvements in all but one category by implementing the eight core program elements of accountability (See Appendix C). The only category that showed no positive percentage change already had a baseline and completion score that was well below the completion score of the combined average for all participants and would have been difficult to show any percentage improvement during the short pilot program.

Because Roche already had a relatively strong corporate commitment to stormwater compliance in place prior to the start of the Pilot Program, field personnel took compliance very seriously when issues were brought to their attention and took rapid corrective actions. Roche's Manager of Safety and Health was also very concerned about the results of every CSEP inspection and placed a high emphasis on pursuing all report findings to a final resolution.

Both Saunders and Roche expressed reservations to the Division about requiring the use of outside inspectors and monthly inspections for participation in the CSEP, mostly due to the added project costs and their

assertion that this function could be performed in-house with equal effectiveness. The performance results indicate that the increased accountability associated with the outside third-party inspections did result in positive changes although proving the inspections were the only cause is difficult. The other three participants stated that the outside third-party inspections were one of the most effective and most important program aspects that led to their dramatic performance improvements. In addition, Fransen Pittman stated their concern during the Pilot exit meeting that the measured performance data would be rendered useless in comparing company-to-company performance for the purpose of awards and recognition if unbiased outside third-party inspectors were not used, and that the credibility of the overall CSEP would also be greatly diminished.

Fransen Pittman was the participant that consistently demonstrated the best performance during the Pilot Stage I as shown in Table D. Fransen Pittman also utilized the largest percentage of the Pilot, Stage I systems and tools of any participant, indicating that the program achieves maximum performance results when all elements are utilized in concert with the outside third-party inspections.

Table D			
FRANSEN PITTMAN PERFORMANCE RESULTS			
Category Measured (Considers average for all jobsites)	Baseline	Completion	% Improvement
Average number of initial findings	8.6	4.5	47.5%
Average number of initial “more severe” findings	1.8	0	100%
Average number of uncorrected items found on follow-up	.2	0	100%
Average number of “no attempt to correct” items found on follow-up	.2	0	100%
Average initial E-Impact performance score	14.9	1.5	90%
Average follow-up E-Impact score	2.2	0	100%

When comparing the first column of results in Table D with the averages for all companies in Table A, it is obvious that Fransen Pittman started the Pilot ahead of most companies in stormwater compliance performance. Fransen Pittman was the only participant utilizing the full SRMI SWCP in the months prior to the start of the Pilot and had completed all of the available stormwater training courses for all their Qualified Persons (See Appendix C). The most impressive aspect of the performance data, however, is seen in the second column where, by the end of the Pilot program, Fransen Pittman had achieved a level of compliance far exceeding that of the average participant. The number of perfect follow-up scores in the final month of the program shows responsiveness to environmental concerns unparalleled, and indicates how a corporate attitude of environmental excellence can permeate all levels of the company leading to consistent improvement and program success.

The superior performance of Fransen Pittman while fully utilizing the majority of the Pilot systems and tools serves to bolster the case for not only requiring the use of the eight core accountability systems and tools, which brought about positive change in all Pilot participants, but strongly encouraging the use of the other available systems and tools in conjunction.

Continuum Partners, LLC (Continuum) was the lone commercial property developer among Pilot participants, and they began with a very minimal environmental program. Continuum had hired outside consulting firms to

perform all aspects of their stormwater compliance responsibilities, including outside third-party permit required inspections, but had no performance data measurement system or training system in place. Prior to the Pilot, Continuum relied on word-of-mouth information from their consultants, along with MS4 feedback, to determine program success. Continuum implemented all aspects of the Pilot Stage I systems and tools and achieved very impressive results. The first column of Table E shows that Continuum started the program well below the participant average in almost all measured categories. By the end of the Pilot program, Continuum ranked at near the top in performance for all categories. Most notable is their performance gains in the responsiveness categories involving follow-up scores and in correction of more severe initial findings. Continuum definitely achieved the “most improved” status out of all Pilot participants.

Table E			
CONTINUUM PERFORMANCE RESULTS			
Category Measured (Considers average for all jobsites)	Baseline	Completion	% Improvement
Average number of initial findings	31	9	70.5%
Average number of initial “more severe” findings	16	0	100%
Average number of uncorrected items found on follow-up	7	0	100%
Average number of “no attempt to correct” items found on follow-up	2	0	100%
Average initial E-Impact performance score	108.3	4.5	95.5%
Average follow-up E-Impact score	33	0	100%

Continuum had an excellent corporate attitude toward the environment even in the beginning of the program, but had employed compliance assurance systems and tools that did not work well and provided little or no performance accountability. According to Continuum’s Property Manager in charge of stormwater, the most important tool that led to their successful results in the Pilot was the objective scoring systems that allowed them to benchmark and quantify their environmental performance, and the photo driven reports that allowed clear and rapid communication to their BMP repair crews. These two tools added the needed effectiveness to the unbiased outside third-party inspection process that they already recognized as important.

In the short four-month duration of the Pilot, Continuum’s outstanding performance achievements demonstrated the power of properly employing the systems and tools of the Pilot when corporate commitment to environmental excellence is also present. In Continuum’s case, as with Fransen Pittman mentioned earlier, the challenge will be in maintaining this level of excellence over the long-term and finding new ways to achieve their goals of continuous environmental improvement.

Waner Construction, Inc. (Waner) also showed great improvement in their stormwater compliance during the Pilot in every measured category, as documented in Table F. Over the duration of the Pilot, Waner demonstrated continuous performance score improvements by implementing ongoing training classes that addressed areas that the performance data indicated needed improvement. Prior to the Pilot, Waner did not perform regular internal third-party oversight inspections on *all* of their permitted projects, but instead chose what they believed to be the “higher risk” projects to run through the SRMI SWCP. Prior to the Pilot, each project team was responsible for the compliance programs on their site. Once the Pilot began, a Senior Manager with Waner was tasked with overseeing the stormwater program and was diligent in monitoring the

company-wide performance summary scores on behalf of the executive team. The company’s performance scores were very closely monitored as well as individual project scores to look for opportunities for improvement through providing additional compliance support or targeted training. Waner began the program with what could be described as a “hit or miss” compliance program that was slightly better than the industry average. Waner’s corporate commitment to develop a stormwater compliance program that exceeded the norm and to create one that would dramatically limit their regulatory exposure provided the impetus to exceed their initial expectations for performance during the Pilot.

Waner’s performance achievements as seen in the “completion” column of Table F were better than the average scores of all participants in Table A, with dramatic improvements in the “initial, more severe” findings and “no attempt to correct” items. They also had one of the lowest follow-up E-Impact scores of all participants. In general, Waner’s final scores for all follow-up categories measured indicate excellent responsiveness to initial findings and a positive corporate attitude toward stormwater compliance while showing steady improvement in the initial finding categories.

Table F			
WANER PERFORMANCE RESULTS			
Category Measured (Considers average for all jobsites)	Baseline	Completion	% Improvement
Average number of initial findings	14.83	12.5	15.5%
Average number of initial “more severe” findings	4.333	.5	88.5%
Average number of uncorrected items found on follow-up	3.33	2	40%
Average number of “no attempt to correct” items found on follow-up	3.167	0	100%
Average initial E-Impact performance score	24.17	6.5	73%
Average follow-up E-Impact score	32.17	3	90.5%

I.C.2.ii: Performance Results – Conclusions

The CSEP-Pilot, Stage I was a tremendous success and may hold great promise as a model for similar programs, not only in Colorado, but also across the country. Questions, such as which elements of the program were *most* important to its success, or why a particular element was required, have been common. The program that eventually became the CSEP-Pilot was originally structured to contain a number of elements in the form of basic principles and standardized operational systems and tools that complimented, supported and relied on each other. No element was created for the program that did not serve a specific function on its own and also strongly support at least one other program element. The eight mandatory systems and tools #4 through #11 each played a vital role in promoting the unusually high levels of accountability that were created in the program and ultimately led to its success. For example, the most controversial and costly element for participants during the Pilot was the *outside* third-party inspection (Tools #4 & #5). The outside and relatively unbiased third-party inspection process is one element that supports the effectiveness and credibility of the environmental impact scoring (Tool #7), which in turn supports the performance summary reports (Tool #10) that are important in creating the high level of accountability that is needed for the program to succeed as it did.

Identifying the single most decisive program element, or elements, that led to the impressive participant performance improvements and to the obvious success of the Pilot is difficult. Comparatively little effort was put toward documenting the relative importance of one element against another during the CSEP-Pilot, Stage I. Much more emphasis will be placed on collecting data on the proposed next stage of the CSEP that will help answer the question of exactly why the program works as well as it does. Fortunately, the CSEP is built around the core premise that participation in the program is entirely voluntary. If the CSEP were created as a mandatory government program, the burden of proof for the necessity of each system would be much greater.

II.D – Task 4: Develop an Initial Draft Guidance Document for Implementation of an EMS-based compliance program at construction sites

This Final Report does not address TASK 4, which will be a separate submittal to the Division. However, an important aspect of developing useful guidance for a successful continuation of the EMS-based program is translating the experiences and stakeholder feedback over the four-month Pilot Program period into program improvements. Part II of this Final Report summarizes the most important lessons learned, and presents the case for recommended program enhancements should the Division choose to continue the CSEP.

PART II – CSEP Pilot, Results

II.A: Pilot Lessons Learned

One of the primary goals of the Pilot Stage I was to demonstrate that a standardized program containing many of the elements of an Environmental Management System could be developed for the construction industry, that it would have wide appeal, and that it would produce excellent and measurable stormwater compliance results with relatively few regulatory resources required for oversight. While convincing five companies to participate in the Pilot does not explicitly prove “wide appeal”, the documented results from the program certainly confirm that the CSEP has tremendous potential. If properly expanded in scope, the program could substantially increase Stormwater Construction Permit compliance within the construction industry and provide a proven methodology for operators seeking to avoid the liabilities that result from permit violations. Based on the unanimous interest of the Stage I participants to continue with the CSEP, it is reasonable to anticipate wider participation, should the Division decide to continue to offer the program and broaden availability.

Most of the initial objectives and expectations of the Pilot were either met or exceeded during the course of the program. It is, however, still important to identify, evaluate and implement changes to the program to better assure long-term success should the CSEP be continued. Part of the process employed while implementing the original concept, systems and tools of the Pilot was to constantly evaluate the program results and stakeholder feedback for areas that the CSEP could be improved. The following are recommended adjustments that may serve to enhance the program’s effectiveness.

II.A.1: Industry Sector or Trade Association Approach

During the administration of the Pilot, one participant expressed concern that the role of the private consultant tasked with administering the program might be construed by others in the industry as self-serving and financially motivated, and that too much power and influence resting in the hands of one privately-held company might make some participants uncomfortable. Although no impropriety was cited or occurred, even the perception that too much influence rests in the hands of one for-profit entity would be potentially detrimental to the long-term success of the CSEP. While there are many alternatives to circumvent this potential situation while still directly involving a private company to administer the CSEP, creating an organizational structure that avoids the concern altogether is probably the best alternative.

Trade associations are often called upon to help provide solutions to the stormwater concerns of the industry sectors and members they represent. The Home Builders Association (HBA), for example, was one organization that proposed to the Division on behalf of its members an alternative program for consideration to meet similar goals as SRMI's program. The Associated General Contractors (AGC) was also working on the local and national levels with the EPA to represent their membership's interest in finding compromises to the myriad of regulatory concerns that were arising from the recent increase in enforcement of the NPDES regulations. Both organizations were already providing training and education programs to help their members deal with the stormwater requirements. These are only two examples of industry sectors relying on the trade associations they create to represent their interests in regards to stormwater regulations.

It was recognized early in the Pilot implementation that an effective approach for CSEP expansion might be to create mutually beneficial alliances with trade associations and the Division, to take advantage of the already established trust and resources that members place in these organizations. The challenge would be to create a program structure that worked effectively, provided significant benefits to the membership as well as the association, and was flexible enough to be duplicated from industry sector to industry sector.

For trade associations to achieve their purpose of effectively representing the interests of their membership, they must have good organizational structures that deliver essential industry-specific tools or services such as training, promotion and regulatory or legislative representation. While many trade associations have expressed interest in providing programs to help their members deal with the stormwater regulatory compliance problem, these trade associations have lacked a proven system that they could utilize to deliver an effective program.

The relatively easy-to-implement CSEP could be the system trade associations need, but they will be hesitant to implement it unless beneficial results that outweigh the costs can be shown to their association members. To ease their concerns, another pilot program could be commissioned to prove the CSEP will work when implemented in a trade association environment.

“Businesses are often more comfortable receiving information and guidance from their state or local trade association and many rely on their trade associations for much of their current regulatory information and assistance.” “State environmental agencies could transfer current funding for technical and regulatory assistance to local or regional trade associations. Trade associations might use this funding to establish regulatory hotlines, develop guidance documents or establish training programs for their members. Federal government could provide funding to the states to encourage such action.”

Global Environmental Management Initiative

Fortunately, the Associated General Contractors, Colorado Chapter (AGC) is already interested in implementing the CSEP for its industry sector, which could be an excellent opportunity for a formalized Pilot Program to prove the concept's effectiveness for other trade associations. Well-established trade associations such as the AGC bring with them many assets in addition to credibility that can be very helpful in effective CSEP program implementation, such as not-for-profit and non-regulated status, training facilities, successful awards and recognition programs and political influence. The AGC is only one of many associations in Colorado and across the nation that could implement an EMS-based compliance system such as the CSEP if the concept proves successful.

Trade associations, depending on their structure, could serve a number of essential CSEP functions very effectively. For example:

- Providing their industry with training or education programs (this is already being provided to some extent in most industries impacted by stormwater regulations)
- Acting as the unbiased administrator and coordinator of Construction Reviewers, including overseeing their certifications and their inspection schedules and addressing disputes should they arise

- Assuring the fairness of the measurement systems used to decide awards and recognition for the members in their sectors and addressing related disputes
- Coordinating awards programs, either singularly or in conjunction with other trade associations
- Promoting industry awareness of the CSEP, and general public promotion and awareness of the CSEP
- Promoting legislative and regulatory support of the CSEP, if needed

Trade association administration of the CSEP could facilitate industry sector standardization and acceptance of most of the implementation tools needed to improve stormwater regulatory compliance. This could dramatically reduce one barrier to regulatory compliance, by eliminating the costly duplication of efforts required if each of their member companies had to create its own EMS-based program. Once the CSEP is established at a trade association it will be relatively simple for members to join the program and experience almost immediate environmental compliance improvement. The benefit to trade associations is that they will be providing a valuable service to their members that may also provide a stable revenue stream if managed properly.

II.A.2: CSEP Advisory Board

There are numerous stakeholders in Colorado, both public and private, who have an interest in the State's water quality and who may be impacted by the CSEP. Many of these stakeholders are identified throughout this Final Report. To effectively administer and oversee a successful statewide program will require the efforts of many as the program grows. To maintain the credibility of the CSEP in the eyes of all water quality stakeholders, there should be a representative body of stakeholders where the interests or ideas of any single stakeholder can be considered, debated and acted upon if that action will benefit the whole. This representative body or advisory board could serve many other functions in the development and administration of the CSEP, such as:

- Evaluate and approve program minimum requirements and standards
- Dispute resolution between stakeholders
- Determine criteria for awards and recognition
- Determine and uphold ethical standards of the CSEP

A properly structured CSEP Advisory Board will lend credibility to the program and insulate individual stakeholders from political fallout should disputes arise. The main purpose of the CSEP Advisory Board will be to create and administer a program that best serves the needs of both the regulated and regulatory community and the water quality interests of Colorado.

II.A.3: Incentives

Participation in the Pilot demanded a substantially greater outlay of resources as compared to the non-participating competition. The standards of CSEP compliance were set very high and in many cases they exceeded the Stormwater Construction Permit requirements. Many of the criticisms that Pilot participants had of the program were related to the high cost of involvement in both money and manpower, and the lack of tangible benefits other than achieving compliance. In the highly competitive construction industry, budgeting for stormwater compliance costs that are higher than your competition when bidding on a project could result in the loss of that project and of substantial revenues.

Attracting widespread participation in a voluntary program of regulatory over-compliance is difficult when tangible benefits are not readily apparent. This is especially true if the perceived added program cost makes participants less competitive in their market. The Division could have a tremendous impact on interest and participation in the CSEP by establishing clear incentives. Some ideas to consider that have been utilized in other states are:

- Officially recognized enforcement consideration based on a participant's track record
- Relief from some permitting requirements for participants in good standing
- Official regulatory backing of awards and recognition programs
- Well-publicized enforcement actions against those that are not in compliance to level the industry playing field
- Regular opportunities for high-performing participants to interact with the Division
- Positions of influence on the CSEP Advisory Board for representatives from the highest performing participants
- Division involvement in education and training programs to support and build program continuity and credibility

II.A.4: Corporate Commitment

During the course of the Pilot Program, a pattern of slightly diminished enthusiasm for the program occurred with some participants in the third month in both the field and the home office. This pattern was temporary for those that remained in the program following the pilot but was concerning because it is commonly understood that one of the most important elements to long-term environmental program success is corporate commitment to continuous improvement. From participant feedback received, it was surmised that for some participants, the short four-month length of the Pilot Program placed too strong an emphasis on immediate results and too little on the more important element of long-term continuous improvement. Some company stakeholders in the compliance effort felt they had "arrived" at environmental excellence when the first Pilot Program results were shared and dropped their guard temporarily, which resulted in diminished later month results. Other participants expressed concern that a significant effort was necessary initially to improve their compliance and were afraid that the same work effort would have to continue indefinitely. It became evident that introducing a program structure that emphasized longer-term commitment would be useful in directing focus toward continuous environmental improvement rather than short and relatively costly immediate results.

It is also more difficult to administer a program like the CSEP when participation levels are allowed to fluctuate greatly. If elements to stabilize participation were added to the CSEP, program administration such as is proposed with trade associations would be far more appealing because required resources could be better planned for. If program participants are allowed to vary their level of participation in the "voluntary" CSEP based on how they feel about their environmental compliance from month to month, or job to job, it will be more difficult to cost-effectively administer the program.

Establishing two rules will provide great benefit to the program and to the participants. First, any benefits of participation in the CSEP beyond that of compliance improvement should only be available to those companies that commit to full company-wide participation. The "cherry-picking" of projects, if allowed, will cause problems with the validity and credibility of the scoring used to award incentives such as recognition or enforcement prioritization. Second, a minimum commitment period of one year should be required, along with a mandatory waiting period to re-enter the CSEP should they prematurely drop out. Participants would be more likely to examine their level of commitment before they voluntarily enroll in the CSEP and would be less likely to prematurely drop out. These two rules should add stability to the CSEP and level the playing field for participants competing for incentives, especially as the incentives become more valuable. It should also create a longer-term focus for CSEP participants by placing a greater emphasis on continuous improvement.

II.A.5: CSEP Emphasis on Pre-planning

Throughout the Pilot Program, it was common to find participant resistance to compliance recommendations because of project budget concerns. This was often due to inadequate or even non-existent stormwater budgets established prior to the start of the project. Budget shortfalls tie the hands of those tasked with field implementation of BMPs, forcing them to decide between regulatory noncompliance and spending money that was not in the budget. Either way, they lose.

The Pilot Program was implemented after many of the projects were already underway. It was evident that many companies did not put adequate thought into stormwater compliance in the pre-construction phase of the project. This could be because of numerous factors such as competitive pressure, ignorance to the regulatory requirements, or because they did not perceive the financial risk of non-compliance to be very high. Many of the estimators did not participate in the stormwater education and training when provided to the field forces and may not have possessed the tools or knowledge to properly anticipate the costs of adequate stormwater compliance measures. While this was fairly common, it can not be said to be the case with all companies as SRMI, as stated earlier, did not have access to the full compliance programs of all participants.

It was, however, prevalent enough a problem to justify stating that a major emphasis on stormwater pre-planning and budgeting must be incorporated throughout the CSEP system to reduce the negative effects of this problem.

II.A.6: Outside Third-party Inspections

The requirement that outside third-party inspectors be used during the Pilot was probably the most controversial element of the Pilot Program. Most of the participants saw the benefit of the process while some felt its costs were redundant because they already had the internal resources to self-audit. *Outside* third party audits appeared to be an extremely successful and essential element of the CSEP. Without the outside third-party inspection requirement, many of the important elements of the current program would be relatively ineffective and yield results that lack credibility. Each element of the current program relies in some way on the other elements. One program element that was generally agreed by all participants to have a profoundly positive impact on performance improvements was the standardized performance scoring system. The scoring system allowed participants to objectively and easily compare the performance of their employees and compare their performance against other participants. Although companies could use this standardized system of scoring internally, its usefulness on any larger scale would be virtually eliminated if companies were allowed to assess their own scores. Standardizing of performance scores between companies scoring their own performance would not be possible without far greater resources required of the Division to assess the accuracy and consistency of the scoring methods used.

Delaware Construction Reviewer Program:

1. Third party inspections free up the state personnel from the time consuming efforts to inspect each construction site.
2. If the permit is reviewed by a regulatory agency or third party and the site is inspected on a regular basis, then it is assumed that the contractor certification is a success.
3. For construction reviewers, the state of Delaware has produced a program that has proven both beneficial in protecting the environment and cost effective.
4. The agency and its program illustrate how an aggressive inspection program depending on privately employed inspectors can limit the water quality impacts of construction.
5. The result is a win-win situation in which the environment is protected, developers have less downtime, and the agency's workload is more reasonable.
6. The program has been a successful component of the overall stormwater management program and has served to leverage the agency's inspection coverage and increase compliance with federal, state, and local construction requirements.
7. The agency has saved thousands of dollars while the rate of compliance with Delaware's Sediment and stormwater program requirements has increased.

EPA, 2002

As outlined in the preceding performance data summary section, results from the Pilot Program revealed significant improvements for even those companies claiming to employ internal self-inspections prior to the pilot, demonstrating that self-inspecting leaves room for improvement. Within most organizations, the working relationship that exists between employees would make a thorough and unbiased assessment of the company's projects by an internal auditor difficult and unreliable. Although it is not impossible for an internal inspector to remain unaffected by the politics of the company he is directly employed by, it is highly unlikely and would be impossible to ensure the credibility of the inspection results over a multi company program. Even the claim of impropriety, whether founded or not, could damage the credibility of the currently proposed CSEP scoring system and even the program as a whole, and should be avoided.

II.A.7: Environmental Impact (E-Impact) Scoring System

The E-Impact scoring system was another critical element in the Environmental Management System-based Pilot. It was originally designed to measure both the potential risk to the environment of Stormwater Construction Permit non-compliance findings and the participant's response to those observations as well. The scores were weighted more heavily on the follow-up inspection to penalize failure to correct observations of permit non-compliance in a timely manner, even on minor BMP maintenance items. The scores were intentionally used to encourage field responsiveness during the Pilot Program and promote a heightened sense of accountability.

One of the pilot participants recommended that with minor modifications to the scoring system, additional environmental risk assessment data could be gathered while still promoting responsiveness to correcting initial findings. The E-Impact scoring system has since been modified to incorporate the participant's recommendations. The new CSEP scoring system will now score the potential environmental risk of observed Stormwater Construction Permit violations the same on initial inspections as on follow-up inspections, with no punitive weighting factor assessed on uncorrected initial findings. Environmental risk will still be assessed on a scale of one to five with one being the least risk and five being the greatest. The new E-Impact scoring will be more objective, simpler for inspectors to use and easier for participants to understand. It will also record a wealth of information that may prove to be useful for watershed groups and other water quality agencies to correlate land development activities with water quality. In addition, the new scoring system will still allow assessment of a participant's responsiveness to observed violations by referring directly to the reported uncorrected items in the monthly reports and summaries.

See Appendix D for the proposed revised scoring system

II.A.8: Photo Documentation Effectiveness

The standardized use of a photo-driven and paperless process for inspections proved to be very effective during the Pilot Program. Very few disputes over the validity of field observations were experienced. The photo-driven process allowed for quality reviews of every inspection report by a second inspector before it was sent to the participant, usually within 24 hours. Participants rarely had difficulty accessing the reports online, and in the rare cases where the jobsites did not have Internet access, other arrangements were made for report delivery. The photo documentation aspect of the CSEP is a tremendous communication enhancement tool and should be fully incorporated into the ongoing CSEP.

II.A.9: MS4 as Critical Stakeholder

MS4s are playing an increasingly prominent and important role in statewide water quality protection. The Pilot Program is already designed to support MS4 efforts and even more can be done. The inspection system database used in the Pilot Program contains the regulations of all MS4s that have had a CSEP project within their boundaries. CSEP inspectors are trained to review the local requirements of the MS4 before they perform any inspection, and the MS4 regulations are cited when they apply to any violation observation, even if they are the same as State regulations. CSEP inspectors educate participant field personnel about the MS4's requirements and reinforce the fact that corrective actions must be taken promptly on any MS4 inspection findings.

Although every effort was made in the design of the Pilot to incorporate program elements that support MS4 compliance efforts, more MS4 input is needed. Despite the effort, some MS4s expressed concerns that the CSEP is intended replace local level compliance evaluations and authority. Although the opposite is actually true, this misunderstanding must be addressed through additional communication with and inclusion of MS4s.

MS4s should have strong representation on the proposed CSEP Advisory Board, and have significant influence in the administration of the overall program commensurate with their growing stormwater regulatory role.

II.B: CSEP-Pilot – Conclusions

The concepts behind the Pilot are based solidly in the concepts of the Environmental Management System, but were purposely modified and standardized to promote widespread construction industry acceptance and use. It is hoped that widespread implementation of the five principles and twelve systems and tools incorporated in this program will lead a number of construction companies a step closer to implementing a full, self-directed EMS that eventually addresses all of a company's environmental concerns, not just stormwater, with the CSEP remaining as their environmental program foundation.

The measured performance results of the CSEP-Pilot, Stage I were positive beyond anyone's hopes or expectations, and all of the participants and stakeholders should be commended for their extra efforts. The interest expressed by so many in the construction industry to see the CSEP program extended, improved and expanded is certainly justified by the impressive results of this innovative program.

The benefits for those involved in the program were many. The following is a recap of some of the CSEP benefits as they were experienced during the Pilot Program, Stage I.

The Division:

- Demonstrated that prioritizing State enforcement inspections may be possible and justified, potentially minimizing future regulatory enforcement resource needs
- Proved that innovative public and private partnerships can be utilized to improve CDPS compliance
- Demonstrated that dramatic compliance improvements can be achieved through a well-structured program of self-policing
- Demonstrated that the potential exists to collect large amounts of non company-specific compliance performance data that may be used to enhance future compliance improvement efforts
- Improved perception of Division within the regulated community
- Improved perception of Division within the EPA

Industry Participants:

- Improved their relationship and reputation with all regulators
- Insulated themselves from regulatory enforcement by achieving compliance improvements through the use of a standardized, relatively easy-to-implement EMS-based program
- Avoided negative environmental impacts and their consequences
- Started the process of building a strong compliance history and reputation as environmental stewards
- Positioned themselves for positive environmental recognition and potential future job awards where environmental performance is considered important.
- Saved financial resources that would have been required to create their own compliance program of equal effectiveness, as well as through improved BMP planning and utilization

MS4s:

- Detailed education and training on MS4 regulatory requirements was provided for CSEP participants working in their jurisdictions at no additional cost to the MS4
- Improved Stormwater Construction Permit compliance on CSEP projects within the MS4 jurisdiction
- Demonstrated that the CSEP may help the MS4 achieve some of their own environmental program goals at little or no cost
- Demonstrated that prioritized enforcement inspections may be possible for CSEP participants within their jurisdictions

The CSEP-Pilot, Stage I demonstrated tremendous potential to be of great benefit to water quality in Colorado. However, much work must still be done to further develop a CSEP that is sustainable and maximizes the benefits to all stakeholders. The Division is encouraged to consider the extension of the CSEP-Pilot, Stage I into a second, longer Pilot stage to allow the incorporation of the recommended program improvements from the lessons learned in Stage I.

Appendix A – Description of Field Process and Scoring Matrix

NOTE: Appendix A contains the information that was given to the field participants upon initiation into the CSEP-Pilot, Stage I, and does not reflect modifications made to the program during or after the program.



Colorado Stormwater Excellence Program (CSEP)

Stage I – Pilot

March 10, 2005

Description of Field Process and E-Impact™ Scoring Matrix

The CSEP is a totally **voluntary program**, offered initially to only a few participants. This program is the first of its kind in the nation for the construction industry, and when proven successful, will be offered to other contractors in Colorado, and could be used as a model for other programs across the country. SRMI is committed to maximizing the many important benefits the CSEP provides your company and will be your partner in this process. SRMI will do whatever it can to help you be successful but will always report accurately to the home office the results of your monthly audit inspections. **Only summary data, and not detailed reports, will be provided to the State.**

The CSEP is in Stage I of its pilot implementation. The goal of the pilot is to demonstrate that construction related companies can show **measurable** environmental improvement by utilizing an Environmental Management System (EMS)-based structure tailored specifically to the unique needs of the construction industry.

Third party monthly audits are a requirement for participation in the CSEP, and are used to independently measure a company's corporate commitment, accountability systems/procedures and documentation systems/procedures. SRMI utilizes a scoring system to measure the severity of observations. SRMI acknowledges in advance that there is a level of subjectivity in the scoring, but reminds everyone that the scoring is heavily weighted in favor of those projects that respond rapidly and thoroughly to correct initial findings. Final project scores assessed on the follow-up inspections are what are recorded, and **are in your project's control.**

Participant projects in good standing will be allowed to post a banner at the entrance of their jobsite to notify regulators of their involvement in the CSEP. The names and addresses of each project in the CSEP will also be forwarded to the State and the EPA per the Memorandum of Understanding between the two.

“Projects in good standing” means that the project maintains an E-Impact score of 50 or less based on the monthly follow-up inspection. See Scoring Criteria below for details on the scoring practices and procedures for the CSEP, and for the procedures used for removal of non-conforming projects and companies.

The monthly audit process will work generally as follows:

- Project audits will be scheduled through the participant's home office each month. An attempt will be made to avoid project meeting days and Qualified Person planned vacations.
- The Qualified Persons should receive notice of the pending monthly audit the day prior in most cases, but this is not a requirement or obligation of the third party auditor.

- The Qualified Person may participate in the monthly audit but is not required to do so. Reasonable, minor concerns during the audit process can be brought to the attention of the third party auditor, but serious disputes should be brought up to your company executives for resolution. Please remember we are working for your company's overall best interest and at their request.
- Baseline (or first) inspections on a project will usually take the auditor between two and five hours depending, on the size and complexity of the project. A major focus of the baseline inspection will be to evaluate the SWMP documentation for Stormwater Construction Permit compliance. After a thorough review of the documentation, a field BMP evaluation will be performed and digitally recorded. When possible, a closing conference will be held with the Qualified Person to discuss the audit results and to allow them additional time to correct findings prior to the follow-up inspection.
- Upon completion of the initial monthly inspection the auditor will compile the inspection results into report form. SRMI will perform an internal quality assurance check on the report using a separate inspector. An email notice will be sent to the Qualified Person and to the home office of the participating company, **usually within 24 hours of the inspection completion.**
- The Qualified Person will have **five working days** from the completion of the initial inspection to correct all findings.
- At five working days following the initial inspection, a follow-up inspection will be performed by SRMI to document the completion of the initial findings. Matching digital photos that correspond to the initial photos will be taken to document the completion of corrective actions.
- SRMI will compile and score the follow-up inspection report per the attached scoring criteria and perform an internal quality assurance check. An email notification will be sent to the Qualified Person and their home office stating that a follow-up inspection is available for review. **It is the responsibility of the CSEP participant to coordinate the delivery of inspection reports to the Qualified Person if email is not available to the jobsite.** Based on the follow-up findings, a final E-Impact score will be given to the project for that period. **It is important to note that failure to correct items brought to your attention in the initial report will be heavily weighted against your follow-up score. (see scoring criteria following this section)**
- On at least a monthly basis, company executives should review the summary reports for the company and provide positive or negative feedback to the Qualified Person responsible for each project.

INITIAL INSPECTION SCORING

E-Impact™ Number	E-Impact™ Weighted Score	<u>Initial Inspection</u> – E-Impact™ Scoring Criteria
1	0.25	Item is not compliant with permit requirements; minor (but required) BMP maintenance items; little or no risk for discharge to the environment. Examples: Documentation item is missing such as a minor SWMP update; Silt fence is torn at the top but functional.
2	1	Item is not compliant with permit requirements; lacking maintenance on a BMP that will likely result in a preventable discharge from the project during the next runoff event.
3	4	A preventable discharge from the site HAS occurred. Example: Mud tracking onto streets, dirt entering inlet
4	10	Serious neglect has occurred that is likely to result in a preventable discharge from the site or there is serious neglect which indicates a disregard for environmental regulations. Examples: Failure to correct or address an item that was brought to the attention of the company representative in a reasonable amount of time; failure to pull the appropriate secondary environmental permits such as fugitive dust, MS4 permits; Missing major sections of SWMP documentation requirements; failure to complete all inspections in accordance with the frequency required by the permit, including storm event inspections.
5	50	Willful neglect or a knowing discharge into the environment. Examples: Failure to obtain required NPDES permit, dumping or improper storage of materials that could reasonably be expected to enter the State's water system and cause damage; serious, preventable discharges have occurred due to intent or neglect. IMMEDIATE PROJECT PROGRAM SUSPENSION!

FOLLOW-UP INSPECTION SCORING

E-Impact™ Number	E-Impact™ Weighted Score	<u>Follow-up Inspection</u> E-Impact™ Scoring Criteria
0	0	Initial inspection finding was corrected and now meets minimum permit requirements.
1	1	Initial inspection item is still not compliant with permit requirements but a reasonable attempt to correct the item was made . Qualified Person agrees to have the item corrected immediately. Very little threat for a discharge off the site but still does not meet the permit requirements.
2	3	Initial inspection item is still not compliant with permit requirements but a reasonable attempt to correct the item was made . Qualified Person agrees to have the item corrected immediately. Still lacking maintenance on a BMP that could very likely result in a <u>preventable</u> discharge from the project during the next runoff event.
3	5	Initial inspection item is still not compliant with permit requirements but a reasonable attempt to correct the item was made . Qualified Person agrees to make further corrections immediately. A <u>preventable</u> discharge from the site HAS already occurred from this location and will very likely occur again during the next runoff event if further corrective actions are not taken.
4	10	Failure to make a reasonable attempt, before the follow-up inspection, to correct or address an item that was brought to the attention of the company representative in the initial inspection. Indicates a general disregard for stormwater compliance and the voluntary CSEP.

Probation, Suspension and Removal from the CSEP

It is imperative for the long-term success of the CSEP that all companies and their projects maintain a high standard of excellence in stormwater management and permit compliance. Projects within the CSEP will be randomly chosen for fourth-party outside audits on behalf of the WQCD, or may be inspected by the WQCD itself to verify the legitimacy of the scores assessed by the third-party auditors hired by the CSEP participants. Nothing in the CSEP prohibits the EPA from also verifying the legitimacy of the program by performing random audits on participants. The EPA has agreed, however, to remand enforcement of any findings to the WQCD for CSEP participants in good standing. It is therefore essential that the following process be implemented in the CSEP that allows for removal of a project or company that does not properly represent the intent or the goals of the CSEP.

When a project follow-up score is **above 50**, it usually indicates a disregard for environmental laws and the project will be placed on 30-day CSEP **probation**. After a second consecutive follow-up score above 50, the project will be **suspended** from the active projects list and a letter will be sent to the WQCD notifying them. The CSEP banner must be removed from the entrance of the jobsite. Monthly audit inspections must continue, however, to keep an active status in the CSEP. If the project scores below 50 on the next follow-up inspection it returns to probation status. A second consecutive E-Impact score below 50 returns the project to normal active status.

If the suspended project receives a third consecutive E-Impact™ follow-up score above 50, it indicates a lack of corporate concern, and **the entire company will be suspended** from the CSEP and a letter will be sent to the WQCD notifying them. All CSEP banners must be removed from all company projects within 5 calendar days of the date of the suspension notice. The company must re-apply for participation in the CSEP within 10 calendar days from the date of the suspension notice or it will be assumed that they formally withdraw from the program. Re-application shall include sending a letter to the WQCD for its approval outlining the root causes the company believes led to the suspension, and the steps the company is taking over the next 60 days to affect the needed changes needed to remain active in the program.

Participants must maintain the monthly auditing process during the 60-day waiting period to demonstrate that they are still working toward compliance. During this waiting period, if any company project is assessed an E-Impact™ score above 50 the company's involvement in the CSEP will be terminated for a period of no less than one year from the date of the last failed inspection. Additionally, after one corporate suspension occurs, participants will be allowed to re-apply no more than once in a 12 month period. A second corporate suspension in any 12 month period will result in removal from the CSEP for a period of no less than 12 months from the date of the last failed inspection.

The focus of the Pilot is on measuring improved project team response to the inevitable initial findings that occur on every construction site, and on measuring your company's commitment to continuous environmental improvement overall. With your help we hope to build a solid track record that documents your company's environmental leadership in the industry.

APPENDIX B – CSEP to EMS Comparison

EMS ELEMENTS <i>(Second Edition, Environmental Management Systems Implementation Guide, Pg. 14)</i>	CSEP PRINCIPLES <i>(Final report, principles)</i>	CSEP RELATED SYSTEMS & TOOLS <i>(Final report, tools)</i>
1. Environmental policy — Develop a statement of your organization's commitment to the environment. Use this policy as a framework for planning and action.	1	<ul style="list-style-type: none"> • CSEP-Pilot participation verbal commitment
2. Environmental aspects — Identify environmental attributes of your products, activities and services. Determine those that could have significant impacts on the environment.	2 (Related: 3 & 5) As related to stormwater	<ul style="list-style-type: none"> • CSEP-Pilot standardized management system plan • Pre-construction project planning systems
3. Legal and other requirements — Identify and ensure access to relevant laws and regulations, as well as other requirements to which your organization adheres.	2 (Related: 4 & 5)	<ul style="list-style-type: none"> • Regulation database (State, Watersheds & MS4's) • Pre-construction project planning system
4. Objectives and targets — Establish environmental goals for your organization, in line with your policy, environmental impacts, the views of interested parties and other factors.	1 (Related: 2 & 3) As related to stormwater	<ul style="list-style-type: none"> • CSEP-Pilot participation verbal commitment •
5. Environmental management program — Plan actions necessary to achieve your objectives and targets.	3 (Related: 1 & 5) As related to stormwater	<ul style="list-style-type: none"> • CSEP-Pilot Standardized management system
6. Structure and responsibility — Establish roles and responsibilities for environmental management and provide appropriate resources.	5 (Related: 1,2,4)	<ul style="list-style-type: none"> • CSEP-Pilot Standardized management system • Pre-construction project planning system
7. Training, awareness and competence — Ensure that your employees are trained and capable of carrying out their environmental responsibilities.	5 (Related: 2,3,4) As related to stormwater	<ul style="list-style-type: none"> • Segmented training programs • Third party inspections and jobsite training • Pre-construction project planning system • CSEP-Pilot standardized management system Regulation database
8. Communication — Establish processes for internal and external communications on environmental management issues.	1 (Related: 2,3,4,5) As related to stormwater	<ul style="list-style-type: none"> • Third party inspections • Photo-driven inspection reports • 24-hour database access & storage • Standardized E-impact scoring system
9. EMS documentation — Maintain information on your EMS and related documents.	5 (Related: 2,3,4)	<ul style="list-style-type: none"> • Database access & storage • Standardized performance reports • Third party inspections
10. Document control — Ensure effective management of procedures and other system documents.	5 (Related: 2 & 4)	<ul style="list-style-type: none"> • CSEP-Pilot Standardized management system • 24-hour database access & storage • Third party inspections
11. Operational control — Identify, plan and manage your operations and activities in line with your policy, objectives and targets.	1 (Related: 3,4,5) As related to stormwater	<ul style="list-style-type: none"> • CSEP-Pilot standardized management system • Pre-construction project planning system • Standardized performance reports
12. Emergency preparedness and response — Identify potential emergencies and develop procedures for preventing and responding to them.	4 (Related: 5)	<ul style="list-style-type: none"> • Pre-construction project planning systems • CSEP-Pilot standardized management systems
13. Monitoring and measurement — Monitor key activities and track performance. Conduct periodic assessments of compliance with legal requirements.	3 (Related: 4 & 5)	<ul style="list-style-type: none"> • Third party inspections • Standardized E-impact scoring systems • Standardized performance reports • Regulation database
14. Nonconformance and corrective and preventive action — Identify and correct problems and prevent their recurrence.	4 (Related 5)	<ul style="list-style-type: none"> • Third party initial inspections • Third party Follow-up inspections • Photo-driven inspections • Standardized E-impact scoring system • Standardized performance reports • 24-hour database access • Segmented training program
15. Records — Maintain and manage records of EMS performance.	5 (Related: 4) As related to stormwater	<ul style="list-style-type: none"> • 24-hour database access & storage • Third party inspections • Standardized performance reports • Standardized E-impact scoring system •
16. EMS audit — Periodically verify that your EMS is operating as intended.	4 (Related: 5)	<ul style="list-style-type: none"> • Third party inspections • Standardized Performance reports • CSEP-Pilot Administrator
17. Management review — Periodically review your EMS with an eye to continual improvement.	3 (Related: 4 & 5)	<ul style="list-style-type: none"> • CSEP-Pilot Administrator • Standardized performance reports • Standardized E-impact scoring system • Third party inspections

Second Edition-Environmental Management Systems: "An Implementation Guide for Small and Medium-Sized Organizations"

Appendix D – Revised E-Impact™ Scoring System



Colorado Stormwater Excellence Program (CSEP)

Description of Field Process and E-Impact Scoring Matrix

Third party monthly audits are a requirement for participation in the CSEP and are used to independently measure a company's corporate commitment, accountability systems/procedures and documentation systems/procedures. The CSEP utilizes a scoring system to measure the relative level of severity of environmental compliance observations. The CSEP acknowledges in advance that there is always a level of subjectivity in the scoring but reminds everyone that final project scores assessed on the follow-up inspections are what are recorded and **are well within the project team's control**.

Participant projects in good standing will be allowed to post a banner at the entrance of their jobsite to notify regulators of their involvement in the CSEP. The names and addresses of each project in the CSEP will also be forwarded to the State and the EPA per the Memorandum of Understanding between the two.

"Projects in good standing" means that the project or company is not under suspension. See Scoring Criteria below for details on the scoring practices and procedures for the CSEP and for the procedures used for removal of non-conforming projects and companies.

The monthly audit process will work generally as follows:

- Project audits will be scheduled through the participant's home office each month. An attempt will be made to avoid project meeting days and Qualified Person planned vacations.
- The Qualified Persons should receive notice of the pending monthly audit the day prior in most cases, but this is not a requirement or obligation of the third party auditor.
- The Qualified Person may participate in the monthly audit but is not required to do so. Reasonable, minor concerns during the audit process can be brought to the attention of the third party auditor but serious disputes should be brought up to your company executives for resolution.
- Baseline (or first) inspections on a project will usually take the auditor between two and five hours depending on the size and complexity of the project. A major focus of the baseline inspection will be to evaluate the SWMP documentation for permit compliance. After a thorough review of the documentation, a field BMP evaluation will be performed and digitally recorded. When possible, a closing conference will be held with the Qualified Person to discuss the audit results and to allow them additional time to correct findings prior to the follow-up inspection.

- Upon completion of the initial monthly inspection the auditor will compile the inspection results into report form. An internal quality assurance check will be performed on the report using a separate inspector. An email notice will be sent to the Qualified Person and to the home office of the participating company, **usually within 24 hours of the inspection completion.**
- The Qualified Person will have **five working days** from the completion of the initial inspection to correct all findings.
- At five working days following the initial inspection, a follow-up inspection will be performed to document the completion of the initial findings. Matching digital photos that correspond to the initial photos will be taken to document the completion of corrective actions.
- SRMI will compile and score the follow-up inspection report per the attached scoring criteria and perform an internal quality assurance check. An email notification will be sent to the Qualified Person and their home office stating that a follow-up inspection is available for review. **It is the responsibility of the CSEP participant to coordinate the delivery of inspection reports to the Qualified Person if email is not available to the jobsite.** Based on the follow-up findings, a final E-Impact score will be given to the project for that period. **It is important to note that failure to correct items brought to your attention in the initial report will be tracked separately. If more than 25% of initial findings are not corrected and more than 3 findings are left uncorrected than the project will be placed on probation (See scoring matrix)**
- On at least a monthly basis, company executives should review the summary reports for the company and provide positive or negative feedback to the Qualified Person responsible for each project.

INSPECTION SCORING

E-Impact Number	E-Impact Weighted Score	<u>Inspection</u> – E-Impact Scoring Criteria
1	0.25	Item is not compliant with permit requirements; minor (but required) BMP maintenance items; little or no risk for discharge to the environment. Examples: Documentation item is missing such as a minor SWMP update; Silt fence is torn at the top but functional.
2	2	Item is not compliant with permit requirements; lacking maintenance on, or implementation of a BMP indicated in the SWMP that will likely result in a preventable discharge from the project during the next runoff event. Example: A BMP noted in SWMP is not implemented and is needed to prevent discharges, or, poor maintenance/installation of BMP that will likely result in a discharge.
3	5	A preventable discharge HAS occurred to outside the permitted boundary of the site but CAN be remedied if immediate action is taken. Example: Mud tracking onto streets, but, caught before the next wet weather event and cleaned up.
4	15	A preventable discharge HAS occurred to outside the permitted boundary of the site and can NOT be easily remedied. Pollutants have been discharged into an enclosed MS4 or State Water. Examples: Mud tracking onto the street and subsequently washed into the MS4 or State Water. Concrete wash water entering a storm inlet. Soil amendment leachate allowed into the surface water stream and has discharged from the site.
5	30	A preventable discharge HAS occurred to outside the permitted boundary of the site and can NOT be easily remedied. Pollutants (including sediment) have been discharged into an enclosed MS4 leading directly to a protected water of the US or have been discharged directly into protected State Waters. Examples: Same as a 4 point observation above, but impacts any waterway designated as “at risk” or “wetlands” or containing endangered species.

Projects in Good Standing

Probation, Suspension and Removal from the CSEP

It is imperative for the long-term success of the CSEP that all companies and their projects maintain a high standard of excellence in stormwater management and permit compliance. Projects within the CSEP may be randomly chosen for forth-party outside audits on behalf of the WQCD or may be inspected by the WQCD themselves to verify the legitimacy of the scores assessed by the third-party auditors hired by the CSEP participants. Nothing in the CSEP prohibits the EPA from also verifying the legitimacy of the program by performing random audits on participants. The EPA has agreed, however, to remand enforcement of any findings to the WQCD for CSEP participants in good standing. It is therefore essential that the following process be implemented in the CSEP that allows for removal of a project or company that does not properly represent the intent or the goals of the CSEP.

When a project follow-up E-Impact score is **above 30, or more than 25% of the findings from the initial inspection are uncorrected and more than 3 findings are left uncorrected**, the project will be placed on 30-day CSEP **probation**. If the project improves its E-Impact performance in the next follow-up score to a non-probationary level, than the probation will be lifted. Should a second consecutive follow-up score occur that exceeds the probation criteria above, the project will be **suspended** from the active projects list and the CSEP banner must be removed from the entrance of the jobsite. Monthly audit inspections must continue, however, to keep an active status in the CSEP. If the suspended project improves its performance and scores **below the probationary level** on the next follow-up inspection it returns to **probation** status. A second consecutive E-Impact score below the probationary level returns the project to normal active status.

If the suspended project receives a third consecutive E-Impact follow-up score exceeding the aforementioned probation criteria, it indicates a lack of corporate concern and **the entire company will be suspended** from the CSEP. All CSEP banners must be removed from all company projects within 5 calendar days of the date of the suspension notice. The company must re-apply for participation in the CSEP within 10 calendar days from the date of the suspension notice or it will be assumed that they are formally withdrawing from the program. Re-application shall include sending a letter to the WQCD for its approval outlining the root causes the company believes led to the suspension and the steps the company is taking over the next 60 days to affect the needed change to remain active in the program.

Participants must maintain the monthly auditing process during the 60-day waiting period to demonstrate that they are still working toward compliance. During this waiting period, if any company project is assessed an E-Impact score above the probationary criteria the company's involvement in the CSEP will be terminated for a period of no less than one year from the date of the last failed inspection. Additionally, after one corporate suspension occurs, participants will be allowed to re-apply no more than once in a 12 month period. A second corporate suspension in any 12 month period will result in removal from the CSEP for a period of no less than 12 months from the date of the last failed inspection.

One focus of the CSEP pilot is on measuring improved project team response to the inevitable initial findings that occur on every construction site and on measuring your company's commitment to continuous environmental improvement overall. With your help we hope to build a solid track record that documents your company's environmental leadership in the industry.