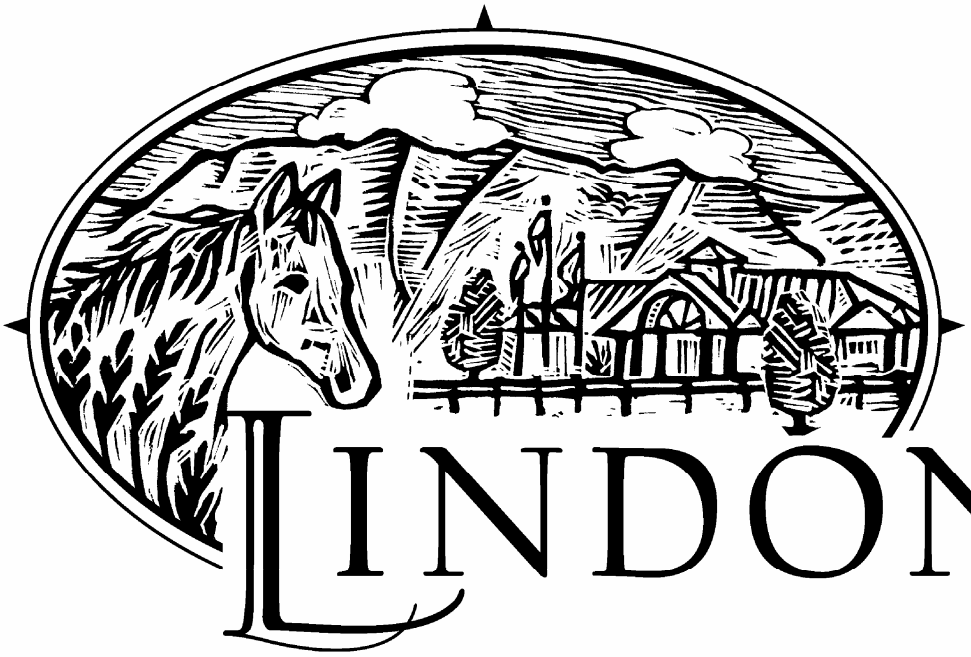


STORM WATER MANAGEMENT PROGRAM

ADOPTED BY THE LINDON CITY COUNCIL
SEPTEMBER 16, 2003
LAST UPDATED JANUARY 16, 2007

J-U-B
Engineers, Inc.

LINDON

STORM WATER MANAGEMENT PROGRAM

ADOPTED BY THE LINDON CITY COUNCIL
SEPTEMBER 16, 2003
LAST UPDATED JANUARY 16, 2007

J-U-B Engineers, Inc.

TABLE OF CONTENTS

PART 5. STORM WATER TECHNICAL MANUAL

PART 1
INTRODUCTION

The Lindon Storm Water Management Program was first developed in April 2003 in response to the EPA Storm Water Phase II Rule. It consists of practices intended to reduce storm water runoff quantity and to improve storm water runoff quality in Lindon. Incorporated into the Program are certain storm drainage design criteria and development plan requirements that were previously contained in the Lindon Land Development Policies, Standard Specifications and Drawings Manual.

A. STORM WATER PHASE II OVERVIEW

The Environmental Protection Agency (EPA) published the Storm Water Phase II Rule on December 8, 1999. The Utah Department of Environmental Quality acts as the administrator of the program for the EPA in the State of Utah. To comply with the requirements of the Phase II Rule, municipalities must obtain an "Authorization to Discharge Municipal Storm Water Under the Utah Pollutant Discharge Elimination System (UPDES)" from the State of Utah.

The Storm Water Phase II Rule requires municipalities in urbanized areas to develop and implement a Storm Water Management Program (SWMP). The SWMP is the most substantial part of the UPDES Permit.

The SWMP must address six minimum control measures:

1. Public education and outreach on storm water impacts
2. Public involvement/participation
3. Illicit discharge detection and elimination
4. Construction site storm water runoff control
5. Post-construction storm water management in new development and redevelopment
6. Pollution prevention/good housekeeping for municipal operations

Municipalities must develop best management practices (BMPs) to address the requirements of each of these six minimum control measures. They must also establish measurable goals for the BMPs. Municipalities must conduct a review of the effectiveness of the SWMP, and submit a corresponding report to the State annually. The SWMP must be updated every 5 years.

B. OVERVIEW OF STORM WATER MANAGEMENT PROGRAM

The Lindon Storm Water Management Program (SWMP) is organized to fit the organization and needs of Lindon City. The plan consists of the following parts:

Part 1. Introduction

Part 2. Public Education and Outreach Practices

These are practices of Lindon City to educate and involve the public and targeted groups on storm water issues.

Part 3. Storm Water System Management Practices

These are the regulatory, planning and physical system practices that provide the framework of the City's storm drainage system.

Part 4. Storm Water Operations Practices

These are practices that the Lindon City Public Works Department Staff follows that are intended to result in a storm water benefit.

Part 5. Storm Water Technical Manual

This contains technical requirements for land development and construction activities.

Part 6. Construction and Post Construction Best Management Practices

This contains the BMP fact sheets that would be used during land development and construction activities.

Part 7. Summary of Best Management Practices and Measurable Goals

This part contains the text of the Storm Water Phase II Rule, summarizes how the Lindon SWMP meets the Phase II Rule, and provides forms for recording and reporting progress.

Part 8. Annual Progress Reports

This part contains space to keep copies of the annual reports that are submitted to the State.

Appendix A. Utah County Storm Water Coalition Contributions

The Lindon Storm Water Management Program (SWMP) was developed over the course of nearly two years. A Steering Committee consisting of Lindon City Staff and J-U-B Engineers first met in January 2001 to begin development of the SWMP. The Steering Committee met on about a monthly basis from that time through completion of the SWMP in September, 2003. Lindon City asked 8 citizens, representing different interests in the community, to serve on an Advisory Committee. The Advisory Committee first met in May 2002 to receive an introduction to the Storm Water Phase II Rule and the task of preparing a Storm Water Management Program. They met again in June 2002 to provide input to the development of the Program, and again in November 2002 to provide feedback on a draft program. In February and March of 2003 two public open houses were held to educate the public on storm water issues and to solicit public comment on the Program. The City Council adopted the Lindon City Storm Water Management Program on September 16, 2003.

C. DESCRIPTION OF LINDON

The Lindon area was first established in 1850 as an outgrowth of settlement in the Pleasant Grove area. Lindon was incorporated in April 1924, at which time it had a population of 458 people. The 2000 census listed the population at 8,300.

Lindon stretches from the Wasatch mountains on the east to Utah Lake on the West, and is bordered on the north by Pleasant Grove and on the south by Orem. It is approximately 8.5 square miles in size, with about 6.5 square miles between the foot of the Wasatch Mountains and Utah Lake. Three significant transportation corridors pass through Lindon: Interstate 15, State Street and Geneva Road. Two irrigation canals traverse the City: the Murdock Canal and the North Union Canal. Three aqueducts also traverse the City: the Salt Lake Aqueduct, the Jordan Aqueduct, and the Alpine Aqueduct.

Land along State Street is partially developed commercially; Land along Geneva Road is partially developed industrially. Land east of Geneva Road is mostly developed residentially, with few large tracts of developable land remaining. There is considerable industrial and manufacturing development west of Geneva Road. Most of the remaining undeveloped land in Lindon is in agricultural use. Residential lot sizes in Lindon are fairly large, with minimum lot sizes in the two residential zones being 20,000 square feet and 12,000 square feet.

Lindon City operates a culinary water system throughout the City, and a secondary water system east of Geneva Road. Nearly all development in Lindon is connected to the sanitary sewer system, which discharges to the Orem Wastewater Treatment Plant.

Lindon's storm drainage conveyance system consists of curbed streets, piped storm drains and open drainages. On the westerly part of the City there are fewer pipes and more open drainages. Storm water from Pleasant Grove and Cedar Hills (on the north) runs through the Lindon drainages on its way to Utah Lake, as does some from Orem (on the south).

The land in Lindon slopes steeply at the foothills on the east side of Lindon, and gradually flattens to slopes of less than 1% approaching Utah Lake. While there are no long term precipitation measuring stations in Lindon, Lindon likely averages around 12 inches of precipitation at Utah Lake, and around 20 inches of precipitation at the foot of the Wasatch Mountains.

Soils in Lindon vary considerably. The westerly soils are mostly silt and clay, with a bench of sand between Geneva Road and State Street. Soils on the east include sand, silt and clay, with some areas of cobble. Soils at the foot of the Wasatch Mountains consist of alluvial deposits. There are numerous springs in Lindon, with seasonally high groundwater, particularly on the west side.

PART 2
PUBLIC EDUCATION
AND OUTREACH PRACTICES

A. INTRODUCTION

The objective of Lindon City's Public Education and Outreach Practices is to educate the public and targeted groups about the impacts of storm water discharge, what steps they can take to reduce storm water pollution, and how they can get involved to make a difference in reducing storm water pollution. It also includes activities to involve the public in development and review of the Lindon Storm Water Management Program.

This chapter describes the best management practices (BMPs) that make up Lindon City's Public Education and Outreach Practices. It also lists measurable goals for each best management practice, and the planned schedule of meeting the goals. Note that for best management practices that are already established practices in Lindon, the measurable goal consists of continuing the practice, and the implementation schedule simply indicates that the BMP is "ongoing".

All of the best management practices contained in Lindon City's Public Education and Outreach Practices apply to activities of Lindon City or the Utah County Storm Water Coalition, as opposed to the activities of those in the private construction industry.

B. BEST MANAGEMENT PRACTICES

The following pages describe the best management practices contained in the Public Education and Outreach Practices, and the associated measurable goals, planned implementation schedules, and anticipated resource requirements.

Some of the best management practices in the Public Education and Outreach Practices depend on participation by the Utah County Storm Water Coalition. See APPENDIX A. UTAH COUNTY STORM WATER COALITION CONTRIBUTIONS for a letter from Utah County containing their committed contributions and a copy of a portion of the Utah County Storm Water Management Program.

1. Informational Materials/Activities to Educate the Public

Best Management Practice	Justification	Measurable Goal	Implementation Schedule	Resource Requirements	Min Control Measure					
					1	2	3	4	5	6
A. Sponsor educational programs	Educational materials promote public awareness of storm water issues.	Present educational materials at two events per year.	January 2005 Ongoing thereafter	Materials provided by Utah County.	X					
B. Include informational brochures in City utility bill mailings	Educational materials promote public awareness of storm water issues.	Distribute each informational brochure provided by the Utah County Storm Water Coalition	January 2005 Ongoing thereafter	Materials provided by Utah County. Copies & postage funded by Storm Water Drainage Fund.	X					
C. Participate with Utah County Storm Water Coalition in their efforts to provide information on proper practices for disposal of household materials and chemicals	Educational materials promote public awareness of storm water issues.	Distribute each informational brochure provided by the Utah County Storm Water Coalition	January 2005 Ongoing thereafter	Materials provided by Utah County. Copies & postage funded by Storm Water Drainage Fund.	X					
D. BMPs performed by Utah County Storm Water Coalition. See the Utah County Storm Water Management Program	The Utah County Storm Water Management Program developed by the Utah County Storm Water Coalition contains BMPs in behalf of Lindon City	See Utah County Storm Water Management Program	See Utah County Storm Water Management Program	Lindon City's annual contribution to the Coalition is $705, funded by Storm Water Drainage Fund.	X					

2. Community-Based Outreach Activities to Involve the Public

Best Management Practice	Justification	Measurable Goal	Implementation Schedule	Resource Requirements	Min Control Measure					
					1	2	3	4	5	6
A. Lindon City formed and has used an Advisory Committee made up citizens of Lindon City to assist in the development of the Storm Water Management Program	An Advisory Committee provides opportunity for representatives of variety of community interests to be involved in forming the SWMP	Form the Advisory Committee	Completed During SWMP Development	Already satisfied		X				
B. The Advisory Committee was actively involved in identifying BMPs & reviewing the SWMP	Broad input from a diverse group resulted in a more effective SWMP	Hold 3 meetings of the Advisory Committee	Completed During SWMP Development	Already satisfied		X				
C. Lindon City solicited input from residents during the period of development of the Storm Water Management Program using a flier mailed out with the utility bills	Soliciting information gives the public an opportunity to comment during the development of the SWMP	Include mailing in utility bill during program development	Completed During SWMP Development (August 2002)	Already satisfied		X				
D. Hold a public open house to educate the public and provide them with a forum to offer input on the Storm Water Management Program	Public open houses give the public an opportunity to comment and be educated during the development of the SWMP	Hold 2 public open houses during the period of development of the SWMP	Conducted February 13, 2003 and March 13, 2003	Already satisfied	X	X				

Best Management Practice	Justification	Measurable Goal	Implementation Schedule	Resource Requirements	Min Control Measure					
					1	2	3	4	5	6
E. The Lindon City Council Meeting having the Storm Water Management Program on the agenda for approval will be a public meeting, properly advertised	Advertised public meetings provide the public an opportunity to comment on the SWMP	Include proposed adoption of the SWMP on the agenda of a regularly advertised City Council Meeting	October 2003	Already satisfied		X				
F. Sponsor clean up service projects	In clean-up projects, volunteers collect and dispose of debris that might otherwise enter the storm water system	Sponsor clean-up projects at least once per year	June 2003 Annually thereafter	Dumping costs paid from Storm Water Drainage and General Funds. Existing City staff and equipment.	X	X				X
G. Encourage residents to watch for storm drainage system maintenance needs and help with maintenance	Public assistance with storm water system maintenance will improve storm water quality	Include related information in utility bill mailings at least once every 2 years	January 2005 Ongoing thereafter	Materials provided by Utah County. Copies & postage funded by Storm Water Drainage Fund.	X	X				X
H. Provide a storm water decal program for the public to participate in	Marking the inlets will increase awareness of storm water pollution potential	Have decals installed on all identified inlets	August 2003	Decals funded by Storm Water Drainage Fund. Volunteer labor.	X	X	X			
I. BMPs performed by Utah County Storm Water Coalition. See the Utah County Storm Water Management Program	The Utah County Storm Water Management Program developed by the Utah County Storm Water Coalition contains BMPs in behalf of Lindon City	See Utah County Storm Water Management Program	See Utah County Storm Water Management Program	Lindon City's annual contribution to the Coalition is $705, funded by Storm Water Drainage Fund.	X	X	X			

3. Education and Training for Developers, Contractors and their Employees

Best Management Practice	Justification	Measurable Goal	Implementation Schedule	Resource Requirements	Min Control Measure					
					1	2	3	4	5	6
A. Include storm water related requirements on building permits that contractors sign	Increased awareness of storm water issues by contractors should reduce storm water pollution	Modify building permit materials to include storm water related requirements	January 2005	No additional resources required.	X		X	X		
B. Provide informational materials to homeowners when they sign up for utility service	Increased homeowner awareness of storm water issues should reduce pollution	Prepare informational materials to distribute	Completed	City Staff & costs are covered by existing City budgets.	X		X	X	X	
C. Provide informational materials for specialty contractors/suppliers on construction site runoff control issues	Educating specialty contractors & suppliers should reduce storm water impacts.	Mail materials to specialty contractors and suppliers	January 2005 Annually thereafter	Materials funded by Storm Water Drainage Fund.	X		X	X		
D. Discuss storm water issues and requirements in annual meeting with builders, contractors, engineers & developers	Educating builders, contractors, engineers & developers should reduce storm water impacts.	Invite local builders, contractors, engineers, & developers to a meeting to discuss storm water issues	January 2004 Annually thereafter	Already satisfied	X		X	X	X	
E. BMPs performed by Utah County Storm Water Coalition. See the Utah County Storm Water Management Program	The Utah County Storm Water Management Program developed by the Utah County Storm Water Coalition contains BMPs in behalf of Lindon City	See Utah County Storm Water Management Program	See Utah County Storm Water Management Program	Lindon City's annual contribution to the Coalition is $705, funded by Storm Water Drainage Fund.	X		X	X	X	

4. A Program to Promote Public Reporting of Violations of Storm Water-Related Regulations

Best Management Practice	Justification	Measurable Goal	Implementation Schedule	Resource Requirements	Min Control Measure					
					1	2	3	4	5	6
A. Publicize information to help the public know how to report violations	Publicizing the hotline should promote more timely response to spills and reduce illegal dumping to storm water facilities	Include hotline information in utility bill mailings at least once per year	January 2005 Annually thereafter	None			X			
B. BMPs performed by Utah County Storm Water Coalition. See the Utah County Storm Water Management Program	The Utah County Storm Water Management Program developed by the Utah County Storm Water Coalition contains BMPs in behalf of Lindon City	See Utah County Storm Water Management Program	See Utah County Storm Water Management Program	Lindon City's annual contribution to the Coalition is $705, funded by Storm Water Drainage Fund.			X			

C. CONCLUSION

Lindon City will measure progress towards each of the goals outlined in the Public Education and Outreach Practices. Forms for recording progress are found in PART 7, SUMMARY OF BEST MANAGEMENT PRACTICES AND MEASURABLE GOALS. These forms will then be used to compile the annual report to the State.

Lindon City's Public Education and Outreach Practices satisfies, in part, all of the six minimum control measures established by the Storm Water Phase II Rule. PART 7, SUMMARY OF BEST MANAGEMENT PRACTICES AND MEASURABLE GOALS, shows how the best management practices correlate with the six minimum control measures.

PART 3
STORM WATER
SYSTEM MANAGEMENT PRACTICES

A. INTRODUCTION

The Lindon City Storm Water System Management Practices are the regulatory, planning and physical system practices that provide the framework of the City's storm drainage system.

The regulatory practices consist of the storm water ordinance and the storm water technical manual, which establishes the requirements of developing and developed land relative to storm water.

Planning practices relate to mapping and master planning the storm drainage system.

Physical system practices consist of activities associated with preserving and improving the storm drainage system in a way consistent with the storm drainage master plan.

This chapter describes the best management practices (BMPs) that make up Lindon City's Storm Water System Management Practices. It also lists measurable goals for each best management practice, and the planned schedule of meeting the goals. Note that for best management practices that are already established practices in Lindon, the measurable goal consists of continuing the practice, and the implementation schedule simply indicates that the BMP is "ongoing".

All of the best management practices contained in Lindon City's Storm Water System Management Practices apply to activities of Lindon City, as opposed to the activities of those in the private construction industry.

B. BEST MANAGEMENT PRACTICES

The following pages describe the best management practices contained in the Storm Water System Management Practices, and the associated measurable goals, planned implementation schedules, and anticipated resource requirements.

1. Regulatory Practices

Best Management Practice	Justification	Measurable Goal	Implementation Schedule	Resource Requirements	Min Control Measure					
					1	2	3	4	5	6
A. Develop an Ordinance to regulate storm water discharge	An ordinance establishes legislative authority for enforcement of BMPs	Ordinance adopted by City Council	January 2005	Funded by Storm Water Drainage Fund.			X	X	X	
B. Develop a Storm Water Technical Manual to document storm water requirements for land development and construction activities	Provide specific guidelines for implementation of BMPs	Storm Water Technical Manual adopted by City Council	January 2004	Funded by Storm Water Drainage Fund.			X	X	X	

2. Planning Practices

Best Management Practice	Justification	Measurable Goal	Implementation Schedule	Resource Requirements	Min Control Measure					
					1	2	3	4	5	6
A. Master Plan the storm drainage system	Master planning enhances management of a system	Publish Master Plan document	July 2006	Funded by Storm Water Drainage Fund.			X		X	X
B. Map existing and planned future public storm drain pipes, open ditches and detention areas	Mapping enhances management of a system	Print system maps	July 2005 Annually thereafter	Funded by Storm Water Drainage Fund.			X			
C. Map inlets and points of private discharge of storm water to the public system	Mapping enhances management of a system	Print system maps showing mapped features	July 2005 Annually thereafter	Funded by Storm Water Drainage Fund. Volunteer labor.			X			
D. Coordinate with upstream cities to address storm water issues	Coordinating with upstream cities reduces storm water impacts in Lindon from upstream cities	Hold four storm water coordination meetings with representatives of Pleasant Grove and Cedar Hills	March 2005	Costs included in existing City budgets.			X		X	X

3. Physical System Practices

Best Management Practice	Justification	Measurable Goal	Implementation Schedule	Resource Requirements	Min Control Measure					
					1	2	3	4	5	6
A. Preserve and utilize the existing open channels on the lower end of Lindon that provide a water quality benefit	Reduced velocities in open channels allow sediment to drop out; vegetation and wildlife in open channels can help improve quality	Maintain existing open channels open as indicated below: <u>Proctor Ditch</u> Maintain channel open except at crossings <u>2000 West Ditch</u> 1. Maintain channel as open as possible (at least 70%) throughout City. 2. Maintain channel open where east of 2000 West street, except at crossings. <u>Lower Ditch</u> Maintain channel as open as possible (at least 70%) from Geneva Road to the west <u>Main Ditch</u> 1. Maintain channel as open as possible (at least 70%) from Geneva Road to the west. 2. Encourage maintaining the channel as open as possible from State Street to 200 South Street; review piping proposals on a case-by-case basis.	Ongoing	No additional resources required.					X	X

Best Management Practice	Justification	Measurable Goal	Implementation Schedule	Resource Requirements	Min Control Measure					
					1	2	3	4	5	6
B. Incorporate linear detention into open channels	This provides flood control, economic (crossing size), and quality (sediment drops out and vegetation can help clean water) benefits	1. Develop channel cross sections for all areas to remain open 2. Identify right-of-way needed for detention in open channels 3. Include dedication of right-of-way and construction of the needed cross section in the requirements of developments adjacent to the channel	As adjacent land develops or is improved	No additional resources required					X	X
C. Utilize dry detention basins	This provides the benefits of flood control, economic (crossing size), quality (sediment drops out and vegetation can help clean water)	Keep the existing dry detention basins that the City has, and construct new ones per the storm drain master plan.	Ongoing	No additional resources required					X	X
D. Make capital improvements to the storm drainage system	This provides the benefits of flood control, confined flow, and structures that can trap sediment, thus improving water quality	1. Follow construction projects shown in the storm drain master plan 2. Implement impact fees and storm water utility to fund improvements	1. Ongoing 2. Already Complete	Funded by Storm Water Drainage Fund.					X	X

C. CONCLUSION

Lindon City will measure progress towards each of the goals outlined in the Public Education and Outreach Practices. Forms for recording progress are found in PART 7, SUMMARY OF BEST MANAGEMENT PRACTICES AND MEASURABLE GOALS. These forms will then be used to compile the annual report to the State.

Lindon City's Storm Water System Management Practices satisfies, in part, four of the six minimum control measures established by the Storm Water Phase II Rule. PART 7, SUMMARY OF BEST MANAGEMENT PRACTICES AND MEASURABLE GOALS, shows how the best management practices correlate with the six minimum control measures.

PART 4
STORM WATER OPERATION PRACTICES

A. INTRODUCTION

Lindon City's Storm Water Operation Practices contains practices that the Lindon City Public Works Department Staff follows that are intended to result in a storm water benefit. It documents the storm water related operation and maintenance procedures that are expected to produce a storm water quantity and quality benefit. It also outlines inspection procedures intended to improve compliance with storm water requirements. Finally, it establishes a schedule of public employee training and includes a spill prevention plan.

This chapter describes the best management practices (BMPs) that make up Lindon City's Storm Water Operation Practices. It also lists measurable goals for each best management practice, and the planned schedule of meeting the goals. Note that for best management practices that are already established practices in Lindon, the measurable goal consists of continuing the practice, and the implementation schedule simply indicates that the BMP is "ongoing".

All of the best management practices contained in Lindon City's Storm Water Operation Practices apply to activities of Lindon City, as opposed to the activities of those in the private construction industry.

B. BEST MANAGEMENT PRACTICES

The following pages describe the best management practices contained in the Storm Water Operation Practices, and the associated measurable goals, planned implementation schedules, and anticipated resource requirements.

1. Operation & Maintenance Procedures

Best Management Practice	Justification	Measurable Goal	Implementation Schedule	Resource Requirements	Min Control Measure					
					1	2	3	4	5	6
A. Operate and maintain the public storm drainage conveyance system	This maintains the ability of the system to function efficiently	Develop and implement maintenance plan	July 2006	Funded by Storm Water Drainage Fund.					X	X
B. Operate and maintain regional detention basins	This maintains the ability of the system to function efficiently	Develop and implement maintenance plan	July 2006	Funded by Storm Water Drainage Fund and General Fund.					X	X
C. Perform street sweeping	This reduces the discharge of material from street surfaces to storm drain system	1. Develop and follow a schedule 2. sweep when incidents require it	1. October 2004 2. Ongoing	Funded by Storm Water Drainage Fund and General Fund.					X	X
D. Cover salt stockpiles	This prevents the discharge of salt from storage locations to storm drain system	Construct covered salt storage bins	June 2003	Already satisfied					X	X
E. Recycle used motor oil from City vehicles	This keeps used motor oil out of the storm drainage system	All used oil is picked up by a commercial recycler	Ongoing	No additional resources required					X	X
F. Review operation and maintenance procedures with Public Works Staff	Following operation and maintenance procedures will help prevent storm water pollution	Review procedures annually	July 2006, Annually thereafter	No additional resources required					X	X

2. Inspection & Enforcement Procedures

Best Management Practice	Justification	Measurable Goal	Implementation Schedule	Resource Requirements	Min Control Measure					
					1	2	3	4	5	6
A. The Planning Director, Engineer, and Public Works Inspector participate in preconstruction conferences for newly approved developments having unusual issues	This coordination will help prevent potential unnecessary problems	Conduct such meetings for developments in which staff deems the meeting is warranted	Ongoing	No additional resources required				X	X	
B. Inspect construction sites for compliance with approved plans	Improved inspection should result in better compliance with storm water requirements	1. Hire drainage superintendent 2. Provide training on how to look for and respond to storm water pollution problems to Public Works and Building Department employees twice per year 3. Document delayed inspections due to unresolved construction site runoff controls problems	1. Sept 2005 2. February 2006 3. February 2006	Funded by Storm Water Drainage Fund.				X	X	

C. Develop a program to provide penalties for violations of storm water related requirements on construction and post construction sites and to improve the consistency of enforcement	Penalties and a written policy should result in better compliance with storm water requirements	1. Develop ordinance including penalties 2. Develop a written policy regarding enforcement	1. January 2005 2. January 2005	Funded by Storm Water Drainage Fund.				X	X	
D. Conduct visual inspection of private discharge points	Such an inspection may reveal problems in runoff regulation	Conduct annual inspections of known private points of discharge to the storm drainage system in conjunction with business license renewal	February 2006	Funded by Storm Water Drainage Fund.			X		X	X
E. Identify more likely areas of illicit discharge and try to identify illicit connections	Identifying illicit discharge facilitates eliminating them	1. Create prioritized list of sites to visit 2. Visit each site on list	1. February 2006 2. February 2006	Funded by Storm Water Drainage Fund.			X			
F. Inspect outfalls during dry weather periods to identify non-storm water discharges	These inspections may reveal illicit materials in the storm drainage system	1. Create list of locations to inspect 2. Inspect sites on list annually	1. February 2006 2. February 2006 Annually thereafter	Funded by Storm Water Drainage Fund.			X			

3. Public Employee Training Program

Best Management Practice	Justification	Measurable Goal	Implementation Schedule	Resource Requirements	Min Control Measure					
					1	2	3	4	5	6
A. Provide public employee training on storm water issues	Such training should result in better storm water pollution prevention by public employees	Provide training twice per year	February 2005	No additional resources required						X

4. Spill Prevention Plan

Best Management Practice	Justification	Measurable Goal	Implementation Schedule	Resource Requirements	Min Control Measure					
					1	2	3	4	5	6
A. Participate with Utah County Storm Water Coalition in their efforts to provide information on proper disposal of wastes	Public education materials should reduce improper disposal of waste by the public	Mail out information at least twice per year with utility bills	January 2005	Materials provided by Utah County. Copies & postage funded by Storm Water Drainage Fund.						X
B. Inspect above ground tanks for adequacy of spill control measures	This should reduce pollution in the event of a tank failure	1. Inventory above ground tanks 2. Verify adequacy and capacity of spill controls	1. February 2006 2. February 2006	Funded by Storm Water Drainage Fund.						X

C. CONCLUSION

Lindon City will measure progress towards each of the goals outlined in the Public Education and Outreach Practices. Forms for recording progress are found in PART 7, SUMMARY OF BEST MANAGEMENT PRACTICES AND MEASURABLE GOALS. These forms will then be used to compile the annual report to the State.

Lindon City's Storm Water Operation Practices satisfies, in part, four of the six minimum control measures established by the Storm Water Phase II Rule. PART 7, SUMMARY OF BEST MANAGEMENT PRACTICES AND MEASURABLE GOALS, shows how the best management practices correlate with the six minimum control measures.

PART 5
STORM WATER TECHNICAL MANUAL

A. INTRODUCTION

The Storm Water Technical Manual contains requirements for land development and construction activities, as well as design criteria and guidelines for those performing such activities. It includes best management practices applicable to development and construction activities. It also includes the plan submittal requirements. The City Engineer has authority to modify the requirements of the Storm Water Technical Manual as needed to accomplish reasonable and effective storm water pollution prevention objectives.

B. REQUIREMENTS FOR PROPOSED DEVELOPMENTS

Requirement for proposed developments are found in Section 13.23.200 of the Lindon City Code. It describes the following requirements:

1. Incorporate best management practices (BMPs) into development design to limit quantity of runoff and preserve quality of runoff
2. Prepare Construction Site Storm Water Management Plan
3. Provide financial guarantee that improvements contained in the Construction Site Storm Water Management Plan will be installed and maintained
4. Prepare Post Construction Storm Water Management Plan
5. Obtain UPDES Permit

C. REQUIREMENTS FOR CONSTRUCTION ACTIVITIES (OTHER THAN THOSE ASSOCIATED WITH INDIVIDUAL RESIDENTIAL STRUCTURES)

Requirement for construction activities (excluding construction of a single family residence) are found in Section 13.23.210 of the Lindon City Code. It describes the following requirements:

1. Provide instruction to construction site operators regarding the Construction Site Storm Water Management Plan
2. Following Construction Site Storm Water Management Plan
3. Monitor effectiveness of the elements included in the Construction Site Storm Water Management Plan, and make improvements as necessary to achieve the plan objectives.
4. Provide verification that improvements were constructed as approved

D. REQUIREMENTS FOR CONSTRUCTION ACTIVITIES ASSOCIATED WITH INDIVIDUAL RESIDENTIAL STRUCTURES

Requirement for construction activities associated with individual residential structures are found in Section 13.23.220 of the Lindon City Code. It describes the following requirements:

1. Construction Site Storm Water Management Plan
2. Sediment Control on Small Construction Sites
3. Owner or operator shall make adjustments to practices as needed to prevent storm water pollution

E. REQUIREMENTS FOR EXISTING DEVELOPMENTS

Requirement for construction activities associated with individual residential structures are found in Section 13.23.220 of the Lindon City Code. It describes the following requirements:

1. Following approved Post Construction Storm Water Management Plan
2. Operator or owner makes adjustments to practices or improvements when necessary to achieve Post Construction Storm Water Management Plan objectives

F. STORM WATER PERFORMANCE CRITERIA AND DESIGN GUIDELINES

The following storm drainage criteria and design guidelines apply to all storm drainage plans in Lindon and shall be used in storm drainage calculations. The City Engineer has authority to modify the criteria and guidelines as needed to meet changing or unusual needs or conditions.

1. Storm water quantity criteria & design guidelines

A. Design Storm

i. Frequency
   a. Design piping system and detention for a 10 year storm
   b. Control the point of discharge and the flooding hazard of a 100 year storm

ii. Intensity—per the following table:

Rainfall Intensities (inches/hour)

Duration	2 Year	5 Year	10 Year	25 Year	50 Year	100 Year
5 min	1.80	2.52	3.12	3.84	4.20	4.68
10 min	1.38	1.98	2.40	2.94	3.30	3.66
15 min	1.20	1.68	2.04	2.48	2.80	3.12
30 min	0.82	1.16	1.40	1.72	1.92	2.14
60 min	0.52	0.74	0.89	1.09	1.22	1.36
2 hours	0.31	0.43	0.52	0.62	0.70	0.77
3 hours	0.23	0.32	0.40	0.45	0.50	0.56
6 hours	0.14	0.19	0.23	0.26	0.30	0.33
12 hours	0.09	0.12	0.14	0.16	0.18	0.20
24 hours	0.05	0.07	0.08	0.10	0.11	0.12

B. Runoff Coefficients

Two approaches are available in establishing composite runoff coefficients:

i. Lindon City encourages the design engineer to calculate a composite runoff coefficient based on surface type and associated runoff coefficient, weighted by the area of each surface type.

ii. In traditional single family residential subdivisions, the engineer may use the following runoff coefficients:
   a. R1-12 Zone: 0.42
   b. R1-20 Zone: 0.32

C. Inlet Spacing

Two criteria must be met:

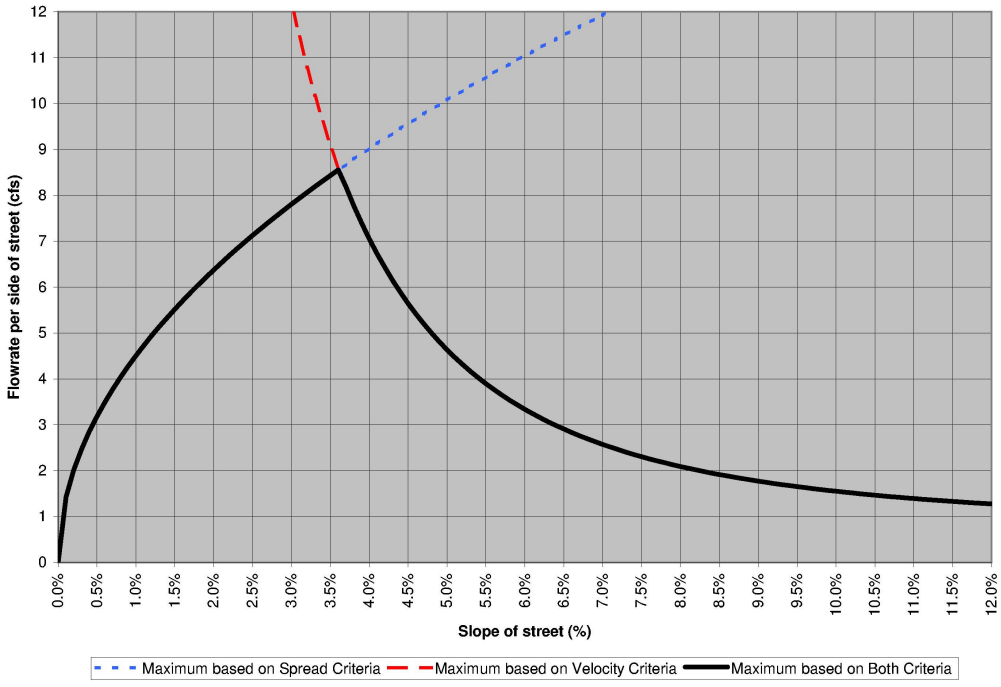
i. Spread of water in the street

Storm water must be delivered from the street into an underground piped system when the spread of water in the street covers the outside 10 feet of asphalt. This will leave two 7-foot traffic lanes in local streets (that have 34 feet of asphalt) and three 10-foot lanes in collector streets (that have 50 feet of asphalt) that are not submerged.

ii. Gutter velocity

Water must be delivered from the street into an underground piped system when the velocity of water in the deepest part of the gutter reaches 10 feet per second (as a safety consideration).

Both of these requirements are a function of street slope and storm water flow rate. Storm water must be delivered from the street to storm drains when flows reach amounts shown in the following graph. This means that for a given longitudinal street slope, flows on the street surface must be delivered into the underground piped system when they reach the amount indicated on the graph by the solid line.



Note: The spread of water in the street is calculated using the Manning equation in the form developed by Izzard, with a roughness coefficient of 0.013 and the standard street cross section. The velocity criteria is based on the velocity at the deepest part of the gutter with the Manning Equation, with a roughness coefficient of 0.013, and using a depth at a point six inches from the face of the curb as the hydraulic radius.

D. Inlet Capacity

The designer is to assume 50% blockage of inlets when considering storm drain inlet capacity.

E. Detention

Storm water must be detained such that the peak flow rate released from the site does not exceed 0.2 cubic feet per second per acre of development (cfs/acre). The following limitations apply to detention basins:

i. No part of the bottom of a landscaped detention basin may have a slope flatter that 3%.
ii. Within 10 feet of the outlet, the slope of the basin bottom must not be flatter than 5% unless a concrete apron is constructed around the outlet.
iii. Excluding areas within 10 feet of the outlet, the maximum allowable depth of water in the basin is 3 feet.
iv. Storm drain pipes are to be continuous through detention areas to allow low flows to proceed through the storm drainage system without having to come to the surface. These flows must still pass through the outlet restriction that limits runoff rates.
v. Basins are to be designed such that water does not run into them after storm water reaches a maximum depth (unless a free flowing overflow is provided)—this can usually be controlled by the elevation of an inlet box in the street adjacent to the basin.
vi. Basins are to be designed such that when runoff exceeds design values or when restrictions plug, excess storm water will be directed to the street system or bypass the restriction by entering the piped system via a free flowing overflow.

2. Storm water quality criteria

A. Storm Water Treatment

Prior to discharging storm water, it must be treated to reduce illicit discharges of sediment, oils, floatables and other pollutants. In public facilities the treatment system shown in the Standard Drawings should normally be used. On private sites other methods may be proposed.

B. Use of Best Management Practices

Lindon City encourages the use of the BMP fact sheets included in PART 6, CONSTRUCTION AND POST CONSTRUCTION BEST MANAGEMENT PRACTICES. **The following BMPs are required to be a part of all Construction Site Storm Water Management Plans:**

* BMP Inspection & Maintenance	BMPIM
* Contaminated or Erodible Surface Areas	CESA
* Concrete Waste Management	CWM
* Dust Controls	DC
* Portable Toilets	PT
* Spill Clean-Up	SCU
* Vehicle and Equipment Fueling	VEF
* Waste Disposal	WD

There is no list of BMPs that is required on all Post Construction Storm Water Management Plans.

In addition to the required BMPs listed above, other BMPs from PART 6 that apply to a given development should be used. Lindon City also encourages the use of practices in addition to those contained in the Lindon Storm Water Management Program that may be suitable for a given development. Engineering judgment must be used in selecting BMPs for a given development.

C. Prohibited Practices

The following practices are specifically prohibited:

- Piling soil or construction materials in streets
- Constructing soil bridges over curb and gutter

G. CONSTRUCTION SITE STORM WATER MANAGEMENT PLAN CONTENTS

1. Purpose of the Construction Site Storm Water Management Plan

The purpose of the Construction Storm Water Management Plan is to control storm water runoff and reduce pollutants in storm water runoff during construction by accomplishing the following:

A. Controlling soil erosion
B. Controlling discharge of sediment into storm drainage facilities or off-site
C. Prevent illicit discharges into on-site soils, into storm drainage facilities or off-site
D. Prevent uncontrolled discharge of storm water to adjacent property
E. Controlling construction waste
F. Controlling dust

2. Contents of the Construction Site Storm Water Management Plan

The Construction Storm Water Management Plan is to be submitted with the site plans or improvement plans, and is to contain at least the following elements:

A. Existing and proposed contours as shown on the grading plan
B. Existing and proposed storm drainage improvements
C. Best management practices to accomplish the purpose of the plan--show the following for each BMP specified, as applicable:
    i. Location and extent of specified BMP
    ii. Timing of implementation
    iii. Duration of implementation
    iv. Any information in addition to or different from that shown on the BMP fact sheet as necessary to employ the BMP on the site
D. BMP Fact sheets or other descriptive material for all specified BMPs
E. Proposed re-vegetation—show the following:
    i. Location and type of re-vegetation proposed
    ii. Timing of re-vegetation, possibly in terms of planting season or number of days following commencement of grading
F. Sequencing of construction activities and BMPs
G. Name, address & telephone number of individual who has responsibility for implementation and maintenance of the plan.
H. If there are lots within the area that are subject to the Hillside Protection Zone (as defined in Section 17.57.220 of the Lindon City Code), the plan also must meet the requirements of Sections 17.57.100 and 17.57.120 of the Lindon City Code.

H. POST CONSTRUCTION STORM WATER MANAGEMENT PLAN CONTENTS

1. Purpose of the Post Construction Storm Water Management Plan

The purpose of the Post Construction Storm Water Management Plan is to control storm water runoff and reduce pollutants in storm water runoff after construction is complete and the developed site is in operation. This is achieved by accomplishing the following:

A. Controlling soil erosion
B. Controlling discharge of sediment into storm drainage facilities or off-site
C. Preventing illicit discharges into on-site soils, into storm drainage facilities or off-site

2. Contents of the Post Construction Storm Water Management Plan

The Post Construction Storm Water Management Plan is to be submitted with the site plans or improvement plans. It shall be contained on a plan sheet of its own, rather than being a part of another plan sheet, and is to contain at least the following:

A. The site plan, including vicinity map, proposed contours, permanent storm drainage improvements, and landscaping.
B. Best management practices to accomplish the purpose of the plan. Examples of appropriate BMPs may include those addressing operation and maintenance of storm drainage quality control facilities, operation and maintenance of storm water discharge control facilities, maintenance of landscaping, good housekeeping practices, etc.
C. Show the following for each BMP specified:
    i. Location and extent of specified BMPs, as appropriate
    ii. Detailed schedule of execution for each specified BMP, in terms of starting time, duration, frequency, etc., as appropriate
    iii. Any information in addition to or different from that shown on the BMP fact sheets as necessary to employ the BMPs on the site
D. BMP fact sheets or other descriptive material for all specified BMPs. BMP fact sheets associated with the Post Construction Storm Water Management Plan are to be on a separate sheet from those that are part of the Construction Site Storm Water Management Plan.

E. The following statement shall prominently appear on all Post Construction Storm Water Management Plans:

> The holders of the business license at this site (or owner of the lot if there is no business license) are responsible to perpetually follow this Post Construction Storm Water Management Plan. Failure to follow the plan may result in the City refusing to renew business licenses or take other action against the property owner.
>
> The objectives of the Plan are to:
> 1. Control soil erosion
> 2. Control discharge of sediment into storm drainage facilities or off-site
> 3. Prevent illicit discharges into on-site soils, into storm drainage facilities or offsite
>
> If the objectives of the Plan are not being met, the site operator or owner shall make adjustments to the Plan as needed to accomplish its purposes.
>
> Lindon City encourages adjustments to the plan that enhance effective storm water management. However, significant reduction of practices contained in the plan is to be accomplished through formal modification of the plan and resubmission to the Development Review Committee for approval.

I. PROPOSED CONSTRUCTION AND POST CONSTRUCTION STORM WATER MANAGEMENT PLAN REVIEW PROCEDURES

The Construction Storm Water Management Plan and Post Construction Storm Water Management Plan will be submitted to Lindon City with the development plans. They will be reviewed along with the development plans, with storm water quantity and quality benefits in mind. The review procedure will be the same as for subdivision improvement plans and site plans, as outlined in the Development Flow Charts found in the Lindon Land Development Policies, Standard Specifications and Drawings Manual.

J. CONCLUSION

Inasmuch as the construction and post construction related best management practices will generally be carried out by those in the private construction industry, they will be implemented as specified in specific construction site and post construction storm water management plans as development occurs. The BMPs found in the Inspection and Enforcement Procedures of PART 4, OPERATION AND MAINTENANCE PRACTICES, cover Lindon City's efforts to assure that the plans are followed.

Lindon City's Storm Water Technical Manual satisfies, in part, two of the six minimum control measures established by the Storm Water Phase II Rule. PART 7, SUMMARY OF BEST MANAGEMENT PRACTICES AND MEASURABLE GOALS, shows how the best management practices correlate with the six minimum control measures.

PART 6
CONSTRUCTION
AND POST CONSTRUCTION
BEST MANAGEMENT PRACTICES

A. BMP INDEX

Lindon City encourages the use of the following best management practices on Construction Site and Post Construction Site Storm Water Management Plans. As established in Section F.2.B of PART 5, STORM WATER TECHNICAL MANUAL, **BMPs with an asterisk are required to be a part of all Construction Site Storm Water Management Plans.**

Best Management Practice	BMP Code
Benching	BE
Biofilters	BF
* BMP Inspection & Maintenance	BMPIM
Brush or Rock Filter	BRF
Building Repair, Remodeling & Construction	BRRC
Catch Basin Cleaning	CBC
* Contaminated or Erodible Surface Areas	CESA
Construction Road Stabilization	CR
Construction Sequencing	CS
Constructed Wetlands	CW
* Concrete Waste Management	CWM
* Dust Controls	DC
Diversion Dike	DD
Detention/Infiltration Device Maintenance	DIDM
Earth Berm Barrier	EB
Erosion Control Blanket	ECB
Extended Detention Basins	EDB
Filter Strips	FS
Geotextiles and Mats	GM
Grading Practices	GP
Grassed Swales	GS
Hydromulching	HM
In-Line Storage	ILS
Inlet Protection – Concrete Block	IPC
Inlet Protection – Excavated	IPE
Inlet Protection – Gravel	IPG

Inlet Protection – Silt Fence or Straw Bale	IPS
Level Spreaders	LS
Minimize Directly Connected Impervious Areas	MDCIA
Media Filtration	MF
Material Storage	MS
Mulching	MU
Outlet Protection	OP
Oil/Water Separators & Water Quality Inlets	OWS
Preservation of Existing Vegetation	PEV
Parking Lot Design	PLD
Parking Lot Sweeping/Vacuuming	PLSV
* Portable Toilets	PT
Rock Check Dams	RCD
Riprap	RR
Sediment Basin	SB
Sand Bag Barrier	SBB
Stabilized Construction Entrance and Wash Area	SCEWA
Sediment Control on Small Construction Sites	SCSCS
* Spill Clean-Up	SCU
Slope Drain	SD
Storm Drain Flushing	SDF
Silt Fence	SF
Seeding and Planting	SP
Surface Roughening	SR
Sediment Trap	ST
Straw Bale Barrier	STB
Temporary Drains and Swales	TDS
Temporary and Permanent Seeding	TPS
Temporary Stream Crossing	TSC
Vehicle and Equipment Cleaning	VEC
* Vehicle and Equipment Fueling	VEF
* Waste Disposal	WD
Wet Ponds	WP

B. BMP FACT SHEETS

The following sheets contain BMP Fact Sheets for use in Lindon.

PART 7
SUMMARY OF
BEST MANAGEMENT PRACTICES
AND MEASURABLE GOALS

A. SIX MINIMUM CONTROL MEASURES OF THE STORM WATER PHASE II RULE

The following pages contain the regulatory text of the EPA Phase II Rule for each of the six minimum control measures and guidance from the EPA on satisfying the requirements of each. This information was taken directly from the EPA web site (http://cfpub.epa.gov/npdes/stormwater/menuofbmps/menu.cfm).

1. Minimum Control Measure #1 Public Education & Outreach on Storm Water Impacts

Regulatory Text

You must implement a public education program to distribute educational materials to the community or conduct equivalent outreach activities about the impacts of storm water discharges on water bodies and the steps that the public can take to reduce pollutants in storm water runoff.

EPA Guidance

You may use storm water educational materials provided by your state; tribe; EPA; environmental, public interest, or trade organizations; or other MS4s. The public education program should inform individuals and households about the steps they can take to reduce storm water pollution, such as ensuring proper septic system maintenance, ensuring the proper use and disposal of landscape and garden chemicals including fertilizers and pesticides, protecting and restoring riparian vegetation, and properly disposing of used motor oil and household hazardous wastes. EPA recommends that the program inform individuals and groups how to become involved in local stream and beach restoration activities, as well as activities that are coordinated by youth service and conservation corps or other citizen groups. EPA recommends that the public education program be tailored, using a mix of locally appropriate strategies, to target specific audiences and communities. Examples of strategies include distributing brochures or fact sheets, sponsoring speaking engagements before community groups, providing public service announcements, implementing educational programs targeted at school age children, and conducting community-based projects such as storm drain

stenciling and watershed and beach cleanups. In addition, EPA recommends that some of the materials or outreach programs be directed toward targeted groups of commercial, industrial, and institutional entities likely to have significant storm water impacts. For example, providing information to restaurants on the impact of grease clogging storm drains, and to garages on the impact of oil discharges. You are encouraged to tailor your outreach program to address the viewpoints and concerns of all communities, particularly minority and disadvantaged communities, as well as any special concerns relating to children.

2. Minimum Control Measure #2 Public Involvement/Participation

Regulatory Text

You must, at a minimum, comply with state, tribal, and local public notice requirements when implementing a public involvement/participation program.

EPA Guidance

EPA recommends that the public be included in developing, implementing, and reviewing your storm water management program, and that the public participation process should make efforts to reach out and engage all economic and ethnic groups. Opportunities for members of the public to participate in program development and implementation include serving as citizen representatives on a local storm water management panel, attending public hearings, working as citizen volunteers to educate other individuals about the program, assisting in program coordination with other pre-existing programs, or participating in volunteer monitoring efforts. (Citizens should obtain approval where necessary for lawful access to monitoring sites.)

3. Minimum Control Measure #3 Illicit Discharge Detection & Elimination

Regulatory Text

You must develop, implement and enforce a program to detect and eliminate illicit discharges (as defined at Sec. 122.26(b)(2)) into your small MS4.

You must:

- Develop, if not already completed, a storm sewer system map, showing the location of all outfalls and the names and location of all waters of the United States that receive discharges from those outfalls;
- To the extent allowable under State, Tribal or local law, effectively prohibit, through ordinance, or other regulatory mechanism, non-storm

water discharges into your storm sewer system and implement appropriate enforcement procedures and actions;
- Develop and implement a plan to detect and address non-storm water discharges, including illegal dumping, to your system; and
- Inform public employees, businesses, and the general public of hazards associated with illegal discharges and improper disposal of waste.

You need address the following categories of non-storm water discharges or flows (i.e., illicit discharges) only if you identify them as significant contributors of pollutants to your small MS4: water line flushing, landscape irrigation, diverted stream flows, rising ground waters, uncontaminated ground water infiltration (as defined at 40 CFR 35.2005(20)), uncontaminated pumped ground water, discharges from potable water sources, foundation drains, air conditioning condensation, irrigation water, springs, water from crawl space pumps, footing drains, lawn watering, individual residential car washing, flows from riparian habitats and wetlands, dechlorinated swimming pool discharges, and street wash water (discharges or flows from fire fighting activities are excluded from the effective prohibition against non-storm water and need only be addressed where they are identified as significant sources of pollutants to waters of the United States).

EPA Guidance

EPA recommends that the plan to detect and address illicit discharges include the following four components: procedures for locating priority areas likely to have illicit discharges; procedures for tracing the source of an illicit discharge; procedures for removing the source of the discharge; and procedures for program evaluation and assessment. EPA recommends visually screening outfalls during dry weather and conducting field tests of selected pollutants as part of the procedures for locating priority areas. Illicit discharge education actions may include storm drain stenciling; a program to promote, publicize, and facilitate public reporting of illicit connections or discharges; and distribution of outreach materials.

4. Minimum Control Measure #4 Construction Site Storm Water Runoff Control

Regulatory Text

You must develop, implement, and enforce a program to reduce pollutants in any storm water runoff to your small MS4 from construction activities that result in a land disturbance of greater than or equal to one acre. Reduction of storm water discharges from construction activity disturbing less than one acre must be included in your program if that construction activity is part of a larger common plan of development or sale that would disturb one acre or

more. If the NPDES permitting authority waives requirements for storm water discharges associated with small construction activity in accordance with Sec. 122.26(b)(15)(i), you are not required to develop, implement, and/or enforce a program to reduce pollutant discharges from such sites.

Your program must include the development and implementation of, at a minimum:

A. An ordinance or other regulatory mechanism to require erosion and sediment controls, as well as sanctions to ensure compliance, to the extent allowable under State, Tribal, or local law;
B. Requirements for construction site operators to implement appropriate erosion and sediment control (ESC) best management practices;
C. Requirements for construction site operators to control waste such as discarded building materials, concrete truck washout, chemicals, litter, and sanitary waste at the construction site that may cause adverse impacts to water quality;
D. Procedures for site plan review which incorporate consideration of potential water quality impacts;
E. Procedures for receipt and consideration of information submitted by the public, and
F. Procedures for site inspection and enforcement of control measures.

EPA Guidance

Examples of sanctions to ensure compliance include nonmonetary penalties, fines, bonding requirements, and/or permit denials for non-compliance. EPA recommends that procedures for site plan review include the review of individual pre-construction site plans to ensure consistency with local (ESC) requirements. Procedures for site inspections and enforcement of control measures could include steps to identify priority sites for inspection and enforcement based on the nature of the construction activity, topography, and the characteristics of soils and receiving water quality.

You are encouraged to provide appropriate educational and training measures for construction site operators. You may wish to require a storm water pollution prevention plan for construction sites within your jurisdiction that discharge into your system. See Sec. 122.44(s) (NPDES permitting authorities' option to incorporate qualifying State, Tribal and local erosion and sediment control programs into NPDES permits for storm water discharges from construction sites). Also see Sec. 122.35(b) (The NPDES permitting authority may recognize that another government entity, including the permitting authority, may be responsible for implementing one or more of the minimum measures on your behalf).

5. Minimum Control Measure #5 Post-Construction Storm Water Management in New Development & Redevelopment

Regulatory Text

You must develop, implement, and enforce a program to address storm water runoff from new development and redevelopment projects that disturb greater than or equal to one acre, including projects less than one acre that are part of a larger common plan of development or sale, that discharge into your small MS4. Your program must ensure that controls are in place that would prevent or minimize water quality impacts.

You must:

- Develop and implement strategies which include a combination of structural and/or non-structural best management practices (BMPs) appropriate for your community;
- Use an ordinance or other regulatory mechanism to address post-construction runoff from new development and redevelopment projects to the extent allowable under State, Tribal or local law;
- Ensure adequate long-term operation and maintenance of BMPs.

EPA Guidance

If water quality impacts are considered from the beginning stages of a project, new development and potentially redevelopment provide more opportunities for water quality protection. EPA recommends that the BMPs chosen: be appropriate for the local community; minimize water quality impacts; and attempt to maintain pre-development runoff conditions. In choosing appropriate BMPs, EPA encourages you to participate in locally-based watershed planning efforts which attempt to involve a diverse group of stakeholders including interested citizens.

When developing a program that is consistent with this measure's intent, EPA recommends that you adopt a planning process that identifies the municipality's program goals (e.g., minimize water quality impacts resulting from post-construction runoff from new development and redevelopment), implementation strategies (e.g., adopt a combination of structural and/or non-structural BMPs), operation and maintenance policies and procedures, and enforcement procedures. In developing your program, you should consider assessing existing ordinances, policies, programs and studies that address storm water runoff quality. In addition to assessing these existing documents and programs, you should provide opportunities to the public to participate in the development of the program. Non-structural BMPs are preventative actions that involve management and source controls such as: policies and

ordinances that provide requirements and standards to direct growth to identified areas, protect sensitive areas such as wetlands and riparian areas, maintain and/or increase open space (including a dedicated funding source for open space acquisition), provide buffers along sensitive water bodies, minimize impervious surfaces, and minimize disturbance of soils and vegetation; policies or ordinances that encourage infill development in higher density urban areas, and areas with existing infrastructure; education programs for developers and the public about project designs that minimize water quality impacts; and measures such as minimization of percent impervious area after development and minimization of directly connected impervious areas. Structural BMPs include: storage practices such as wet ponds and extended-detention outlet structures; filtration practices such as grassed swales, sand filters and filter strips; and infiltration practices such as infiltration basins and infiltration trenches. EPA recommends that you ensure the appropriate implementation of the structural BMPs by considering some or all of the following: pre-construction review of BMP designs; inspections during construction to verify BMPs are built as designed; post-construction inspection and maintenance of BMPs; and penalty provisions for the noncompliance with design, construction or operation and maintenance. Storm water technologies are constantly being improved, and EPA recommends that your requirements be responsive to these changes, developments or improvements in control technologies.

6. Minimum Control Measure #6 Pollution Prevention/Good Housekeeping for Municipal Operations

Regulatory Text

You must develop and implement an operation and maintenance program that includes a training component and has the ultimate goal of preventing or reducing pollutant runoff from municipal operations. Using training materials that are available from EPA, your State, Tribe, or other organizations, your program must include employee training to prevent and reduce storm water pollution from activities such as park and open space maintenance, fleet and building maintenance, new construction and land disturbances, and storm water system maintenance.

EPA Guidance

EPA recommends that, at a minimum, you consider the following in developing your program: maintenance activities, maintenance schedules, and long-term inspection procedures for structural and nonstructural storm water controls to reduce floatables and other pollutants discharged from your separate storm sewers; controls for reducing or eliminating the discharge of pollutants from streets, roads, highways, municipal parking lots, maintenance

and storage yards, fleet or maintenance shops with outdoor storage areas, salt/sand storage locations and snow disposal areas operated by you, and waste transfer stations; procedures for properly disposing of waste removed from the separate storm sewers and areas listed above (such as dredge spoil, accumulated sediments, floatables, and other debris); and ways to ensure that new flood management projects assess the impacts on water quality and examine existing projects for incorporating additional water quality protection devices or practices. Operation and maintenance should be an integral component of all storm water management programs. This measure is intended to improve the efficiency of these programs and require new programs where necessary. Properly developed and implemented operation and maintenance programs reduce the risk of water quality problems.

B. BEST MANAGEMENT PRACTICES SUMMARY

The following summarize the best management practices contained in the Lindon City Storm Water Management Program and illustrate how the Plan satisfies the requirements of the six minimum control measures of the Storm Water Phase II Rule.

Best Management Practices	Min Control Measure					
	1	2	3	4	5	6
PART 2. PUBLIC EDUCATION AND OUTREACH PRACTICES						
1. Informational Materials/Activities to Educate the Public						
A. Sponsor educational programs	X					
B. Include informational brochures in City utility bill mailings	X					
C. Participate with Utah County Storm Water Coalition…practices for disposal of household materials and chemicals	X					
D. BMPs performed by Utah County…Coalition. See the Utah County Storm Water Management Program	X					
2. Community-Based Outreach Activities to Involve the Public						
A. Lindon City…has used an Advisory Committee…in the development of the Storm Water Management Program		X				
B. The Advisory Committee was actively involved in identifying BMPs & reviewing the SWMP		X				
C. Lindon City solicited input from residents during…development of the Storm Water Management Program…		X				
D. Hold a public open house to educate the public and provide them with a forum to offer input…	X	X				
E. The Lindon City Council Meeting having the Storm Water Management Program on the agenda…public meeting		X				
F. Sponsor clean up service projects	X	X				X
G. Encourage residents to watch for storm drainage system maintenance needs and help with maintenance	X	X				X
H. Provide a storm water decal program for the public to participate in	X	X	X			
I. BMPs performed by Utah County…Coalition. See the Utah County Storm Water Management Program	X	X	X			

3. Education and Training for Developers, Contractors and their Employees						
A. Include storm water related requirements on building permits that contractors sign	X		X	X		
B. Provide informational materials to homeowners when they sign up for utility service	X		X	X	X	
C. Provide informational materials for specialty contractors/suppliers on construction site runoff control issues	X		X	X		
D. Discuss storm water issues and requirements in annual meeting with builders, contractors, engineers & developers	X		X	X	X	
E. BMPs performed by Utah County…Coalition. See the Utah County Storm Water Management Program	X		X	X	X	
4. A Program to Promote Public Reporting of Violations of Storm Water-Related Regulations						
A. Publicize information to help the public know how to report violations			X			
B. BMPs performed by Utah County…Coalition. See the Utah County Storm Water Management Program			X			
PART 3. STORM WATER SYSTEM MANAGEMENT PRACTICES						
1. Regulatory Practices						
A. Develop an Ordinance to regulate storm water discharge			X	X	X	
B. Develop a Storm Water Technical Manual…requirements for land development and construction activities			X	X	X	
2. Planning Practices						
A. Master Plan the storm drainage system			X		X	X
B. Map existing and planned future public storm drain pipes, open ditches and detention areas			X			
C. Map inlets and points of private discharge of storm water to the public system			X			
D. Coordinate with upstream cities to address storm water issues			X		X	X
3. Physical System Practices						
A. Preserve and utilize the existing open channels on the lower end of Lindon that provide a water quality benefit					X	X
B. Incorporate linear detention into open channels					X	X
C. Utilize dry detention basins					X	X
D. Make capital improvements to the storm drainage system					X	X

PART 4. STORM WATER OPERATIONS PRACTICES						
1. Operation & Maintenance Procedures						
A. Operate and maintain the public storm drainage conveyance system					X	X
B. Operate and maintain regional detention basins					X	X
C. Perform street sweeping					X	X
D. Cover salt stockpiles					X	X
E. Recycle used motor oil from City vehicles					X	X
F. Review operation and maintenance procedures with Public Works Staff					X	X
2. Inspection & Enforcement Procedures						
A. The Planning Director, Engineer, and Public Works Inspector participate in preconstruction conferences…				X	X	
B. Inspect construction sites for compliance with approved plans				X	X	
C. Develop a program to provide penalties for violations…and to improve the consistency of enforcement				X	X	
D. Conduct visual inspection of private discharge points			X		X	X
E. Identify more likely areas of illicit discharge and try to identify illicit connections			X			
F. Inspect outfalls during dry weather periods to identify non-storm water discharges			X			
3. Public Employee Training Program						
A. Provide public employee training on storm water issues						X
4. Spill Prevention Plan						
A. Participate with Utah County…Coalition in their efforts to provide information on proper disposal of wastes						X
B. Inspect above ground tanks for adequacy of spill control measures						X
PARTS 5 & 6. STORM WATER TECHNICAL MANUAL & CONSTRUCTION AND POST CONSTRUCTION BMPs						
Construction and Post Construction BMPs				X	X	

C. BMP IMPLEMENTATION SCHEDULE

The following is a tabulation of the implementation schedules of all of the best management practices. It illustrates the order of implementation of all of the BMPs, and shows when each must be implemented.

D. PROGRESS TOWARDS MEASURABLE GOALS

The following pages contain forms for recording and reporting progress towards the measurable goals associated with the best management practices contained in the Lindon Storm Water Management Program.

BMP REPORTING FORM

BMP REQUIREMENTS

PART 2, PUBLIC EDUCATION AND OUTREACH PRACTICES

1. Informational Materials/Activities to Educate the Public

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
A. Sponsor educational programs	Educational materials promote public awareness of storm water issues.	Present educational materials at two events per year.	January 2005 Ongoing thereafter

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 2, PUBLIC EDUCATION AND OUTREACH PRACTICES

1. Informational Materials/Activities to Educate the Public

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
B. Include informational brochures in City utility bill mailings	Educational materials promote public awareness of storm water issues.	Distribute each informational brochure provided by the Utah County Storm Water Coalition	January 2005 Ongoing thereafter

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 2, PUBLIC EDUCATION AND OUTREACH PRACTICES

1. Informational Materials/Activities to Educate the Public

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
C. Participate with Utah County Storm Water Coalition in their efforts to provide information on proper practices for disposal of household materials and chemicals	Educational materials promote public awareness of storm water issues.	Distribute each informational brochure provided by the Utah County Storm Water Coalition	January 2005 Ongoing thereafter

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 2, PUBLIC EDUCATION AND OUTREACH PRACTICES

2. Community-Based Outreach Activities to Involve the Public

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
A. Lindon City formed and has used an Advisory Committee made up citizens of Lindon City to assist in the development of the Storm Water Management Program	An Advisory Committee provides opportunity for representatives of variety of community interests to be involved in forming the SWMP	Form the Advisory Committee	Completed During SWMP Development

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 2, PUBLIC EDUCATION AND OUTREACH PRACTICES

2. Community-Based Outreach Activities to Involve the Public

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
B. The Advisory Committee was actively involved in identifying BMPs & reviewing the SWMP	Broad input from a diverse group resulted in a more effective SWMP	Hold 3 meetings of the Advisory Committee	Completed During SWMP Development

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 2, PUBLIC EDUCATION AND OUTREACH PRACTICES

2. Community-Based Outreach Activities to Involve the Public

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
C. Lindon City solicited input from residents during the period of development of the Storm Water Management Program using a flier mailed out with the utility bills	Soliciting information gives the public an opportunity to comment during the development of the SWMP	Include mailing in utility bill during program development	Completed During SWMP Development (August 2002)

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 2, PUBLIC EDUCATION AND OUTREACH PRACTICES

2. Community-Based Outreach Activities to Involve the Public

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
D. Hold a public open house to educate the public and provide them with a forum to offer input on the Storm Water Management Program	Public open houses give the public an opportunity to comment and be educated during the development of the SWMP	Hold 2 public open houses during the period of development of the SWMP	Conducted February 13, 2003 and March 13, 2003

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 2, PUBLIC EDUCATION AND OUTREACH PRACTICES

2. Community-Based Outreach Activities to Involve the Public

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
E. The Lindon City Council Meeting having the Storm Water Management Program on the agenda for approval will be a public meeting, properly advertised	Advertised public meetings provide the public an opportunity to comment on the SWMP	Include proposed adoption of the SWMP on the agenda of a regularly advertised City Council Meeting	October 2003

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 2, PUBLIC EDUCATION AND OUTREACH PRACTICES

2. Community-Based Outreach Activities to Involve the Public

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
F. Sponsor clean up service projects	In clean-up projects, volunteers collect and dispose of debris that might otherwise enter the storm water system	Sponsor clean-up projects at least once per year	June 2003 Annually thereafter

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 2, PUBLIC EDUCATION AND OUTREACH PRACTICES

2. Community-Based Outreach Activities to Involve the Public

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
G. Encourage residents to watch for storm drainage system maintenance needs and help with maintenance	Public assistance with storm water system maintenance will improve storm water quality	Include related information in utility bill mailings at least once every 2 years	January 2005 Ongoing thereafter

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 2, PUBLIC EDUCATION AND OUTREACH PRACTICES

2. Community-Based Outreach Activities to Involve the Public

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
H. Provide a storm water decal program for the public to participate in	Marking the inlets will increase awareness of storm water pollution potential	Have decals installed on all identified inlets	August 2003

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 2, PUBLIC EDUCATION AND OUTREACH PRACTICES

3. Education and Training for Developers, Contractors and their Employees

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
A. Include storm water related requirements on road cut and building permits that contractors sign	Increased awareness of storm water issues by contractors should reduce storm water pollution	Modify building permit materials to include storm water related requirements	January 2005

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 2, PUBLIC EDUCATION AND OUTREACH PRACTICES

3. Education and Training for Developers, Contractors and their Employees

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
B. Provide informational materials to homeowners when they sign up for utility service	Increased homeowner awareness of storm water issues should reduce pollution	Prepare informational materials to distribute	Completed

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 2, PUBLIC EDUCATION AND OUTREACH PRACTICES

3. Education and Training for Developers, Contractors and their Employees

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
C. Provide informational materials for specialty contractors/suppliers on construction site runoff control issues	Educating specialty contractors & suppliers should reduce storm water impacts.	Mail materials to specialty contractors and suppliers	January 2005 Annually thereafter

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 2, PUBLIC EDUCATION AND OUTREACH PRACTICES

3. Education and Training for Developers, Contractors and their Employees

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
D. Discuss storm water issues and requirements in annual meeting with builders, contractors, engineers & developers	Educating builders, contractors, engineers & developers should reduce storm water impacts.	Invite local builders, contractors, engineers, & developers to a meeting to discuss storm water issues	January 2004 Annually thereafter

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 2, PUBLIC EDUCATION AND OUTREACH PRACTICES

4. A Program to Promote Public Reporting of Violations of Storm Water-Related Regulations

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
D. Publicize information to help the public know how to report violations	Publicizing the hotline should promote more timely response to spills and reduce illegal dumping to storm water facilities	Include hotline information in utility bill mailings at least once per year	January 2005 Annually thereafter

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 3, STORM WATER SYSTEM MANAGEMENT PRACTICES

1. Regulatory Practices

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
A. Develop an Ordinance to regulate storm water discharge	An ordinance establishes legislative authority for enforcement of BMPs	Ordinance adopted by City Council	January 2005

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 3, STORM WATER SYSTEM MANAGEMENT PRACTICES

1. Regulatory Practices

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
B. Develop a Storm Water Technical Manual to document storm water requirements for land development and construction activities	Provide specific guidelines for implementation of BMPs	Storm Water Technical Manual adopted by City Council	January 2004

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 3, STORM WATER SYSTEM MANAGEMENT PRACTICES

2. Planning Practices

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
A. Master Plan the storm drainage system	Master planning enhances management of a system	Publish Master Plan document	July 2006

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 3, STORM WATER SYSTEM MANAGEMENT PRACTICES

2. Planning Practices

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
B. Map existing and planned future public storm drain pipes, open ditches and detention areas	Mapping enhances management of a system	Print system maps	July 2005 Annually thereafter

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 3, STORM WATER SYSTEM MANAGEMENT PRACTICES

2. Planning Practices

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
C. Map inlets and points of private discharge of storm water to the public system	Mapping enhances management of a system	Print system maps showing mapped features	July 2005 Annually thereafter

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 3, STORM WATER SYSTEM MANAGEMENT PRACTICES

2. Planning Practices

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
D. Coordinate with upstream cities to address storm water issues	Coordinating with upstream cities reduces storm water impacts in Lindon from upstream cities	Hold four storm water coordination meetings with representatives of Pleasant Grove and Cedar Hills	March 2005

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 3, STORM WATER SYSTEM MANAGEMENT PRACTICES

3. Physical System Practices

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
A. Preserve and utilize the existing open channels on the lower end of Lindon that provide a water quality benefit	Reduced velocities in open channels allow sediment to drop out; vegetation and wildlife in open channels can help improve quality	Maintain existing open channels open as indicated below: <u>Proctor Ditch</u> Maintain channel open except at crossings <u>2000 West Ditch</u> 1. Maintain channel as open as possible (at least 70%) throughout City. 2. Maintain channel open where east of 2000 West street, except at crossings. <u>Lower Ditch</u> Maintain channel as open as possible (at least 70%) from Geneva Road to the west <u>Main Ditch</u> 1. Maintain channel as open as possible (at least 70%) from Geneva Road to the west. 2. Encourage maintaining the channel as open as possible from State Street to 200 South Street; review piping proposals on a case-by-case basis.	Ongoing

(Continued on following sheet)

BMP REPORTING FORM

(Continued from previous sheet)

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 3, STORM WATER SYSTEM MANAGEMENT PRACTICES

3. Physical System Practices

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
B. Incorporate linear detention into open channels	This provides flood control, economic (crossing size), and quality (sediment drops out and vegetation can help clean water) benefits	1. Develop channel cross sections for all areas to remain open 2. Identify right-of-way needed for detention in open channels 3. Include dedication of right-of-way and construction of the needed cross section in the requirements of developments adjacent to the channel	As adjacent land develops or is improved

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 3, STORM WATER SYSTEM MANAGEMENT PRACTICES

3. Physical System Practices

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
C. Utilize dry detention basins	This provides the benefits of flood control, economic (crossing size), quality (sediment drops out and vegetation can help clean water)	Keep the existing dry detention basins that the City has, and construct new ones per the storm drain master plan.	Ongoing

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 3, STORM WATER SYSTEM MANAGEMENT PRACTICES

3. Physical System Practices

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
D. Make capital improvements to the storm drainage system	This provides the benefits of flood control, confined flow, and structures that can trap sediment, thus improving water quality	1. Follow construction projects shown in the storm drain master plan 2. Implement impact fees and storm water utility to fund improvements	1. Ongoing 2. Already Complete

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 4. STORM WATER OPERATION PRACTICES

1. Operation & Maintenance Procedures

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
A. Operate and maintain the public storm drainage conveyance system	This maintains the ability of the system to function efficiently	Develop and implement maintenance plan	July 2006

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 4. STORM WATER OPERATION PRACTICES

1. Operation & Maintenance Procedures

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
B. Operate and maintain regional detention basins	This maintains the ability of the system to function efficiently	Develop and implement maintenance plan	July 2006

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 4. STORM WATER OPERATION PRACTICES

1. Operation & Maintenance Procedures

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
C. Perform street sweeping	This reduces the discharge of material from street surfaces to storm drain system	1. Develop and follow a schedule 2. sweep when incidents require it	1. October 2004 2. Ongoing

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 4. STORM WATER OPERATION PRACTICES

1. Operation & Maintenance Procedures

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
D. Cover salt stockpiles	This prevents the discharge of salt from storage locations to storm drain system	Construct covered salt storage bins	June 2003

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 4. STORM WATER OPERATION PRACTICES

1. Operation & Maintenance Procedures

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
E. Recycle used motor oil from City vehicles	This keeps used motor oil out of the storm drainage system	All used oil is picked up by a commercial recycler	Ongoing

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 4. STORM WATER OPERATION PRACTICES

1. Operation & Maintenance Procedures

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
F. Review operation and maintenance procedures with Public Works Staff	Following operation and maintenance procedures will help prevent storm water pollution	Review procedures annually	July 2006, Annually thereafter

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 4. STORM WATER OPERATION PRACTICES

2. Inspection & Enforcement Procedures

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
A. The Planning Director, Engineer, and Public Works Inspector participate in preconstruction conferences for newly approved developments having unusual issues	This coordination will help prevent potential unnecessary problems	Conduct such meetings for developments in which staff deems the meeting is warranted	Ongoing

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 4. STORM WATER OPERATION PRACTICES

2. Inspection & Enforcement Procedures

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
B. Inspect construction sites for compliance with approved plans	Improved inspection should result in better compliance with storm water requirements	1. Hire drainage superintendent	1. Sept 2005
		2. Provide training on how to look for and respond to storm water pollution problems to Public Works and Building Department employees twice per year	2. February 2006
		3. Document delayed inspections due to unresolved construction site runoff controls problems	3. February 2006

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 4. STORM WATER OPERATION PRACTICES

2. Inspection & Enforcement Procedures

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
C. Develop a program to provide penalties for violations of storm water related requirements on construction and post construction sites and to improve the consistency of enforcement	Penalties and a written policy should result in better compliance with storm water requirements	1. Develop ordinance including penalties 2. Develop a written policy regarding enforcement	1. January 2005 2. January 2005

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 4. STORM WATER OPERATION PRACTICES

2. Inspection & Enforcement Procedures

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
D. Conduct visual inspection of private discharge points	Such an inspection may reveal problems in runoff regulation	Conduct annual inspections of known private points of discharge to the storm drainage system in conjunction with business license renewal	February 2006

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 4. STORM WATER OPERATION PRACTICES

2. Inspection & Enforcement Procedures

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
E. Identify more likely areas of illicit discharge and try to identify illicit connections	Identifying illicit discharge facilitates eliminating them	1. Create prioritized list of sites to visit 2. Visit each site on list	1. February 2006 2. February 2006

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 4. STORM WATER OPERATION PRACTICES

2. Inspection & Enforcement Procedures

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
F. Inspect outfalls during dry weather periods to identify non-storm water discharges	These inspections may reveal illicit materials in the storm drainage system	1. Create list of locations to inspect 2. Inspect sites on list annually	1. February 2006 2. February 2006 Annually thereafter

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 4. STORM WATER OPERATION PRACTICES

3. Public Employee Training Program

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
A. Provide public employee training on storm water issues	Such training should result in better storm water pollution prevention by public employees	Provide training twice per year	February 2005

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 4. STORM WATER OPERATION PRACTICES

4. Spill Prevention Plan

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
A. Participate with Utah County Storm Water Coalition in their efforts to provide information on proper disposal of wastes	Public education materials should reduce improper disposal of waste by the public	Mail out information at least twice per year with utility bills	January 2005

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

BMP REPORTING FORM

BMP REQUIREMENTS

PART 4. STORM WATER OPERATION PRACTICES

4. Spill Prevention Plan

Best Management Practice	Justification	Measurable Goal	Implementation Schedule
B. Inspect above ground tanks for adequacy of spill control measures	This should reduce pollution in the event of a tank failure	1. Inventory above ground tanks 2. Verify adequacy and capacity of spill controls	1. February 2006 2. February 2006

PERFORMANCE

ACTIVITY CONDUCTED	DATE CONDUCTED
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

OTHER DOCUMENTATION

_____

_____

PART 8
ANNUAL PROGRESS REPORTS

PART 8, ANNUAL PROGRESS REPORTS is available to keep each year's annual progress reports to the State in the same place. This will facilitate long term evaluation of progress.

APPENDIX A
UTAH COUNTY STORM WATER COALITION CONTRIBUTIONS

The following pages of Appendix A contain a letter from Utah County and the Public Education and Outreach Program of the Utah County Storm Water Coalition's Storm Water Management Plan. The letter establishes the commitment of the Utah County Storm Water Coalition to perform the activities in their Public Education and Outreach Program in behalf of member agencies. These activities will help Lindon City satisfy some of the requirements of the Storm Water Phase II Rule.

UTAH COUNTY
County Engineer-Surveyor

Clyde R. Naylor, Engineer-Surveyor

2855 South State Street
Provo, Utah 84606
Phone 801-373-6600

Utah County Storm Water Coalition Member Agency:

Utah County, as part of it's responsibilities to the Utah County Storm Water Coalition, and in accordance with the EPA Storm Water Phase II Final Rule regulations for operators of Municipal Separate Storm Sewer Systems (MS4s), agrees to fulfill the following items required under the Public Education and Outreach Best Management Practice in order to obtain National Pollutant Discharge Elimination System (NPDES) Phase II permit coverage:

- Schedule and conduct Utah County Storm Water Coalition meetings which are necessary to correlate activities, set proposed budgets, and provide training opportunities.

- Produce a quarterly countywide, storm water newsletter and provide copies to member agencies for distribution to the public.

- Provide a scripted outline and training information for volunteers, students, and public employees who will present the Utah County Storm Water Educational Program. Scheduling of training exercises will be the responsibility of each member agency.

- Produce and distribute a Utah County storm water educational video. Copies of this video will be made available to each member agency.

- Become a central warehouse for other storm water educational materials. These materials could include informational pamphlets, activity books, pencils, note pads, magnets, etc.

- Provide materials for display and demonstration in information booths for city and county activities and events.

- Provide information for and promote to the public an information system for the disposal of household materials and chemicals. Citizens will be able to call a local, countywide phone number where gathered information for disposal sites will be collected.

Signed: Clyde R. Naylor

Date: 2-4-03

Clyde R. Naylor, P.E.
Utah County Public Works Director

PUBLIC EDUCATION AND OUTREACH PROGRAM

The Public Education and Outreach Program of the Stormwater Management Plan will address increasing public and professional awareness of water quality concerns and Best Management Practices (BMPs) that may be implemented with respect to protection of stormwater. The BMPs described in this section of the Stormwater Management Plan (SWMP) include training of professionals and municipal employees and education of the public sector. These education and training programs will introduce the UPDES program and focus on identifying contaminant sources and how to control these sources.

This program also integrates many other facets of the SWMP to provide information and up-to-date BMPs to the end user. The following BMPs describe implementation tasks and assessment tasks to be completed by the Utah County Stormwater Coalition for the Public Education and Outreach Program.

EDUCATIONAL PROGRAM

Description: Provide students with educational materials, demonstrations and outreach activities regarding the impact of daily activities on stormwater quality.

Utah County Stormwater Program: The Utah County Stormwater Program is a stormwater quality lesson taught by city personnel and volunteers. The lesson is interesting, easy to present, and lasts approximately 25 minutes. The presentation begins with a container of clean water (tap water) that represents the rainwater that produces stormwater runoff. Step by step different "contaminants" are added to the container, such as vegetable oil (oil), food coloring (grease), dirt (sediment), twigs (floatables), and paper (litter). The presentation demonstrates the importance of preventing litter and keeping the storm drain system clean. The purpose of the presentation is to visually display the types of pollutants in stormwater, the sources of each pollutant, and the their impacts.

High School Mentor Program: City personnel work with high school students to teach them the Utah County Stormwater Program and some basic information about how to prevent stormwater pollution. The high school students, in turn, present the information to 5th grade elementary classes throughout the county. All materials are to be supplied to the high school students by the Utah County Stormwater Coalition through the participating cities. The number of high school students involved with the program and the number of 5th graders who attend the presentation will be documented.

Educational Materials: Educational materials designed to inform communities of the impacts of stormwater discharges on local water bodies are to be distributed by the Utah County Stormwater Coalition through the participating cities. These materials include activity books, pencils, note pads, magnets, etc. The materials are presented to 5th graders in both public and private schools within Utah County. The materials are to be distributed once a year when students can practice what they learn and more easily visualize stormwater runoff (i.e., spring and fall). The type and quantity of materials that are distributed are to be documented by the Utah County Stormwater Coalition.

Storm Drain Marking Program: A program utilizing community groups to paint stencils or glue markers on storm drain inlets to prevent illicit dumping and littering. Common groups that participate in the Storm Drain Marking Program are Eagle Scouts, Girl Scouts, and church and school groups. The Utah County Stormwater Coalition through and the cities will supply the groups who wish to participate the materials necessary and will identify the locations where the stencils or markers are needed. The Utah County Stormwater Coalition will document the number of participants and storm drains that are marked.

Objective: Reduce pollutants to receiving waters by increased public awareness of problems and solutions.

Resource Allocation: Funding for this BMP represents approximately 30% of the management and oversight for the Utah County Stormwater Management Program.

Implementation and Assessment: The table below represents measurable goals for this BMP to be implemented and assessed during the permit term. The purpose of measurable goals is to gauge permit compliance and program effectiveness following the schedule identified.

Year	Implementation	Assessment
04/04	Establish inter-local agreements with Member agencies	Document number of member agencies In agreement
09/04	High School Mentor Program	Document the number of student attendees/participants
09/04	Utah County Stormwater Program Presentations	Document the number of student attendees
09/04	Develop and distribute educational materials to hand out to schools	Document materials distributed
07/03	Storm Drain Marking Program	Document the number of participants And storm drain inlets marked

COMMUNITY/RESIDENTIAL PROGRAM

Description: Inform the public on the impacts of stormwater discharges on water bodies and steps that can be taken to reduce pollutants in stormwater runoff through outreach activities and/or educational materials. Inform the general public about the hazards associated with illegal discharges and improper disposal of waste. Promote, publicize, and facilitate the proper management and disposal of used oil and household hazardous wastes. Develop educational material on the proper use of pesticides, herbicides, and fertilizers.

Public Reporting: Promote public reporting of illegal dumping and illicit discharges. The purpose of public reporting is to enable the Utah County Health Department to respond to citizen complaints regarding water quality. Reports may be called into a local, countywide phone number. Procedures for formal complaints are in place. As necessary, the Utah County Stormwater Coalition will work in conjunction with the Utah County Health Department to investigate the source of the pollution. Investigation and enforcement measures, including any fee penalties, are to be documented by the Utah County Stormwater Coalition.

Information Booths: Information booths are to be held at various community and educational events such as the county fair, city celebrations, college events, high school events, shopping mall activities, etc. The booth display includes a graphic panel illustrating the hydrologic cycle in an urban setting and is accompanied by a series of pamphlets or other educational materials that explain how the public can help reduce pollutants exposed to rainfall. The materials that are handed out at the booths primarily consist of the current information developed by the Utah County Stormwater Coalition.

Mass Educational Materials: Mass educational materials are designed to educate the public about stormwater quality issues and are through the Utah County Stormwater Coalition. This includes quarterly newsletters, web sites, radio commercials, videos, stickers, pads of paper, pencils, magnets, etc. The types of educational materials that will be the most successful are discussed in Utah County Stormwater Coalition meetings. The Utah County Stormwater Coalition will document the quantity of each type of educational material (i.e., number of radio commercials, number of pencils, and magnets distributed at the information booths)

Household Hazardous Waste Program: The Utah County Stormwater Coalition assists in distributing information to the public regarding proper disposal of used oil and household hazardous wastes. The program is to be administered by the Utah County Health Department and the South County and North Pointe Solid Waste Management Facilities. However, the Utah County Stormwater Coalition helps to educate the general public regarding the requirements for disposing of household hazardous wastes in the other educational materials such as key chains, activity book, and magnets.

Leaf Bag Collection Program: Distribution of leaf bags to residents for the purpose of composting leaves during the fall. The Leaf Bag Collection Program is to be implemented by the cities in conjunction with the Utah County Stormwater Coalition and the South County and North Pointe Solid Waste Management Facilities. The public can place full leaf bags on their parking strip or take them to a central, advertised location during spring clean-up where they are to be transported by city volunteer groups to the solid waste management facilities and/or green waste facilities to be composted. The Utah County Stormwater Coalition will coordinate with these agencies to document the number of leaf bags that are distributed.

Public Survey: The Utah County Stormwater Coalition will administer public surveys. The initial survey will determine what type of information should be conveyed to the public. The follow-up survey will question the public about their actions, rather than just their knowledge. The purpose of the survey will be to give the Utah County Stormwater Coalition an idea as to how effectively the education program is working. Examples of questions are: what do you do with your grass clippings; where do you dispose of your household hazardous wastes, etc. The survey will be developed and implemented with the assistance of a survey consultant.

Objective: Reduce pollutants to receiving waters by increased public awareness of problems and solutions. Discourage discharge of pollutants to the stormwater system and receiving waters through enforcement actions taken against violators. Reduce the impact to water quality through timely clean-up actions. Educate residents and landowners on the potential impacts to receiving waters due to the over-application and/or misapplication of pesticides, herbicides, and fertilizers.

Resource Allocation: Funding for this BMP represents approximately 30% of the management and oversight for the Utah County Stormwater Management Program.

Implementation and Assessment: The table below represents measurable goals for this BMP to be implemented and assessed during the permit term. The purpose of measurable goals is to gauge permit compliance and program effectiveness following the schedule identified.

Year	Implementation	Assessment
07/03	Public Reporting – follow up on reports and take enforcement action Establish countywide phone number	Document number of reports received through the mail Document enforcement actions taken
05/04	Attend community events with information booths	Document representation at local events and assess the response (# visitors, etc.)
01/05	Develop mass educational materials via web site and radio commercials, stickers, etc.	Document advertisements and other means of informing the public
07/04	Promote, publicize, and facilitate the proper management and disposal of used oil and household hazardous wastes	Document information booths where information is distributed
09/04	Leaf Bag Collection Program	Document number of leaf bags distributed
05/04 And 07/07	Complete a public survey regarding actions that affect stormwater runoff	Document survey questions, responses, and any proposed changes to the SWMP

COMMERCIAL PROGRAMS

Description: Develop a program to inform businesses, industries, and public employees about water quality concerns in urban stormwater runoff. Develop educational material on the proper use of pesticides, herbicides, and fertilizers.

Pesticide, Herbicide, and Fertilizer Educational Program: Presentations along with educational materials are to be presented to businesses and industries regarding the potential impact to receiving waters due to the over-application and misapplication of pesticides, herbicides, and fertilizers. General information regarding pesticide, herbicide, and fertilizer application can be distributed via a brochure at garden stores, information booths, commercial sprayers, or other central locations as well as advertising web sites like the Department of Agriculture.

Commercial Training: Guidelines and materials to inform specific businesses and industries located in our area of the causes and effects of polluted stormwater will be provided by the Utah County Stormwater Coalition and distributed by the participating cities.

Objective: Educate public employees and businesses about the hazards associated with illegal discharges and improper disposal of waste. Additionally, to provide information regarding the potential impacts to receiving waters due to the over-application and misapplication of pesticides, herbicides, and fertilizers.

Resource Allocation: Funding for this BMP represents approximately 15% of the management and oversight for the Utah County Stormwater Management Program.

Implementation and Assessment: The table below represents measurable goals for this BMP to be implemented and assessed during the permit term. The purpose of measurable goals is to gauge permit compliance and program effectiveness following the schedule identified.

Year	Implementation	Assessment
03/06	Review the Pesticide, Herbicide and Fertilizer Educational Program	Assess the current program and determine what changes need to be implemented
03/07	Implement changes identified in prior task	Document changes made to PHF program
03/07	Educational materials with information About PHF disposal. Establish countywide hotline.	Document number of materials distributed Document number of calls to hotline.

UTAH COUNTY STORMWATER COALITION

Description: Continue coordinating and participating in the Utah County Stormwater Coalition for the purpose of providing further education and training for professionals and municipal employees with regards to stormwater quality.

Utah County Stormwater Coalition: A coalition of local agencies whose purpose is to reduce the load of pollutants entering storm drains and receiving waters, and enforcing the appropriate regulations. The Coalition meets to coordinate new educational materials and programs, further stormwater program development and inform all members of new regulations or stormwater workshops.

The Utah County Stormwater Coalition shall provide the following:

1. An educational booth will be available to be scheduled and manned by the participating cities for city festivities, the county fair, college events, shopping mall activities, etc.
2. A countywide, quarterly stormwater newsletter to be written and distributed by the participating cities. The newsletter is to be published by the Utah County Stormwater Coalition.
3. Supply a scripted outline for the Utah County Stormwater Program. The presentation shall include a video and other educational materials. Target audiences could include school groups, church groups, businesses, clubs, planning commission meetings, etc.

A budget for the educational program is to be established annually based upon the population of the participating members. The type of media and the distribution schedule are to be discussed by Utah County Stormwater Coalition members to more effectively target the public during the spring and fall months. Another factor that is to be taken into consideration in choosing the type of media is the average number of times that a person will see the advertisement. Examples of the types of educational materials that are to be developed through the Utah County Stormwater Coalition are:

Television commercials	Pencils
Educational booths	Videos
Radio commercials	Pads of papers
Newspaper advertisements	Magnets
Bus board advertisements	Activity books
Public surveys	Quarterly Newsletters

The Utah County Stormwater Coalition will document the number and type of materials that are distributed. Current Utah Stormwater Coalition members are:

Alpine City	American Fork City
Cedar Hills City	Draper City
Highland City	Lehi City
Lindon City	Mapleton City
Orem City	Payson City
Pleasant Grove City	Provo City
Salem City	Spanish Fork City
Springville City	Utah County

Objective: Increase public and professional awareness of stormwater quality concerns.

Resource Allocation: Funding for this BMP represents approximately 30% of the management and oversight for the Utah County Stormwater Management Program.

Implementation and Assessment: The table below represents measurable goals for this BMP to be implemented and assessed during the permit term. The purpose of measurable goals is to gauge permit compliance and program effectiveness following the schedule identified.

Year	Implementation	Assessment
03/03	Continued participation in the Coalition	Document Coalition meetings, number of attendees and publications
04/04	Expand participants involved in Coalition issues	Document new members and attendees

EDUCATIONAL WORKSHOPS FOR PROFESSIONALS

Description: Hold educational workshops and distribute appropriate material to architects, engineers, planners, consultants, field personnel, law enforcement officials and local government officials on the water quality problems associated with urban runoff and the basic principles behind reducing runoff volumes and treating stormwater.

Objective: Ensure professionals have an understanding of the UPDES program and are knowledgeable about the need for BMPs to be included in the planning, design, and construction phases.

Resource Allocation: Funding for this BMP represents approximately 15% of the management and oversight for the Utah County Stormwater Management Program.

Implementation and Assessment: The table below represents measurable goals for this BMP to be implemented and assessed during the permit term. The purpose of measurable goals is to gauge permit compliance and program effectiveness following the schedule identified.

Year	Implementation	Assessment
04/04	Attend professional conferences or seminars	Document seminars attended Document workshops
07/03	Give presentations at conferences or workshops	Document presentations