



# **City of Flagstaff**

## **STORMWATER MANAGEMENT PROGRAM (SWMP) BMP GOALS SUMMARY**

**Small Municipal Separate Storm Sewer System (MS4)  
General Permit AZG2002-002**

**Table 1 Public Education and Outreach on Stormwater Impacts**

Table 1.1 Public Education and Outreach: BMP's and Measurable Goals						
Minimum Control Measures	BMP	Measurable Goal (steps to measure progress)	Start Date	Target Completion Date	New or Revised	Implementation Status/ Frequency/ Achievement Date (completed, in progress, not started)
<b>V.B.1.a</b> <b>Public Education &amp; Outreach</b>	Collect brochures, fact sheets, and other educational materials from federal, state, and local agencies or other MS4 web sites.	City staff will contact agencies and review web page quarterly to ensure that the most current information is available.	April 2003	December 2007		<b>In Progress.</b> This is an on-going element of the Stormwater program that will continue for the life of the permit.
	Distribute information to the general public and to specific targeted audiences defined in <i>V.B.1. b. i.</i>	City staff will write articles for publication in <i>City Scope</i> (identified in Table 1.2) once during each permit year and place the information on the City's webpage	April 2003	December 2007		<b>In Progress.</b> This is an on-going element of the Stormwater program that will continue for the life of the permit.
	Provide educational materials to the general public, specific targeted audiences and City employees on: The hazards of illegal dumping and illicit discharges to water quality and public health and safety.	City staff with input from various departments will define goals and messages for the public employees' communication strategy.	April 2003	October 2003		<b>Completed</b> January 2004
		The City will train public employees on illicit connections, construction site management and good housekeeping practices within existing training sessions and in targeted training sessions as needed, annually updating training.	April 2004	December 2007		<b>In Progress.</b> This is an on-going element of the Stormwater program that will continue for the life of the permit. Environmental Services provides annual training every January.
	The importance of construction site management to protect water quality and reduce or eliminate sediment and erosion problems.	The City staff will print materials (brochure) on construction site management for general public and construction site operator's use. Construction site requirements adopted by Council.	Aug. 2004	December 2004		<b>Completed</b> June 2005
		City Staff will print and distribute	July	December		<b>Completed</b> June 2005

**Table 1.1 Public Education and Outreach: BMP's and Measurable Goals**

Minimum Control Measures	BMP	Measurable Goal (steps to measure progress)	Start Date	Target Completion Date	New or Revised	Implementation Status/ Frequency/ Achievement Date (completed, in progress, not started)
		information directly to construction managers and development community on construction site requirements adopted by City Council	2004	2007		
	Pollution prevention strategies for daily operations including the impacts of improper disposal of household chemicals and provide support for the City's program for collection and disposal of such pollutants.	City staff will collect PR materials on illicit discharge programs developed by Phase I communities and EPA and select materials for use in Flagstaff; place on website as appropriate.	March 2004	June 2004		<b>Completed</b> June 2004
		City staff will print and distribute PR materials on illicit discharge hazards. These materials will be placed in library, City Hall and other appropriate public buildings.	October 2004	December 2007		<b>In Progress.</b> This is an on-going element of the Stormwater program that will continue for the life of the permit.
		City staff will incorporate water quality messages in existing household chemical management program	July 2003	December 2007		<b>Complete.</b> April 2004
	Educate children on the importance of water quality and how they can help protect the environment.	City staff will create a pilot program for education of grade-school children working with local school system to finalize program and gain approval to test in local school system. Based on approval of school system, implement pilot program for grade school children and evaluate; expand depending on outcome.	July 2004	May 2005		<b>In Progress.</b> Staff have met with Environmental Services Education Coordinator, Water Conservation Education Trainer, Willow Bend teachers resource center and participated in a Master Watershed Steward program (train the trainer). In addition staff have contributed 35 hours of staff time to Project WET where we demonstrated a watershed model to 600 elementary school students. Additionally, staff contributed 8

**Table 1.1 Public Education and Outreach: BMP's and Measurable Goals**

Minimum Control Measures	BMP	Measurable Goal (steps to measure progress)	Start Date	Target Completion Date	New or Revised	Implementation Status/ Frequency/ Achievement Date (completed, in progress, not started)
						hours to Arizona Water Education for Teachers.
	Establish stormwater page on City's webpage using it to provide information and to receive input and complaints in support of construction site management and post construction controls as well as to provide electronic reporting capability for Illicit Discharge Detection & Elimination notification.	City staff will coordinate internally with Information Technologies staff to draft page layout, links and email capability.	April 2004	June 2004		<b>Completed</b> June 2004
		City staff will create a stormwater page on the City's website and track the number of hits to evaluate use.	October 2003	December 2007		<b>Completed:</b> June 2004. Hits to site during this reporting period are 75,140.
		City staff will update website throughout permit period, placing current information on site at least monthly.	June 2004	December 2007		<b>In Progress.</b> This is an on-going element of the Stormwater program that will continue for the life of the permit.

# 1. Public Information and Outreach on Stormwater Impacts (continued)

<b>TABLE 1.2</b> <b>Public Education and Outreach: Additional Information</b>	
Permit Citation	Plan
<b>Part V.B.1.b.i.</b>	<p>The City of Flagstaff will focus on several key messages in the first five-year period of the permit. These will include:</p> <ul style="list-style-type: none"> <li>A. Communicate the hazards of illegal dumping and illicit discharges to water quality and for public safety, to the public at large and to targeted businesses that utilize or dispense hazardous chemicals and petroleum products. (required by minimum control measure three)</li> <li>B. Communicate to the public at large the importance of site controls for construction activities and advise them on how they can report concerns to the City for follow up. (required by minimum control measure four)</li> <li>C. Communicate NPDES permit requirements and internal operations issues for pollution prevention to all City employees (required by minimum control measure six)</li> <li>D. Communicate to the residential public, the impacts of improper use of and disposal of household chemicals, landscape products and trash.</li> <li>E. Work with the school system to develop an education program on water resource issues with a focus on water quality and water use.</li> </ul>
<b>Part V.B.1.b.iii.</b>	<p>The target audiences are identified below. They were chosen because they were mandated in other parts of the General Permit or because they represent the potential for the greatest support from the general public.</p> <ul style="list-style-type: none"> <li>• <b>The General Public.</b> The City will provide stormwater information using existing communication tools.</li> <li>• <b>The Development Community.</b> The City will focus efforts on educating the development community on new development regulations and stormwater quality through their website and other materials developed specifically for the development community. As the Construction Site Runoff and Post-Construction Runoff Control programs are adopted, the City will focus efforts on educating the development community on the specific program requirements.</li> <li>• <b>Public Employees:</b> Two minimum control measures require the education and involvement of public employees. The employees of the City are ambassadors to the community and will continue to be important conduits of information. They will receive training and information on illicit discharge hazards as well as appropriate good housekeeping strategies.</li> <li>• <b>Construction Contractors:</b> Minimum control measure four will only be successful if the construction community understands the objectives and approved strategies for managing wastes on construction sites.</li> </ul> <p><i>Targeted pollutants.</i> The education plan will specifically target floatables including trash, household hazardous waste, and illegal pollutant dumping since these are widespread sources of polluting discharge. The City will also target sediment from construction site runoff along with other construction wastes in the education program targeting the development community.</p>
<b>Part V.B.1.b.iv.</b>	<p>The City will feature annual articles in Cityscape, a magazine published quarterly by the City and distributed through the newspaper as well as being available in public buildings. In addition, Stormwater Section Staff will host public outreach and education programs as well as participate in on-going educational programs provided by professional organizations and educational affiliates. Communication tools such as <i>Cityscape</i> reach out to the entire community. Material printed in the <i>Cityscape</i> will reach 33,000 individuals each year. Over the five-year period, it is estimated that all permanent residents will directly receive information that will assist them in making positive decisions</p>

	regarding the protection of water quality within Flagstaff. An additional 25,000 individuals will likely hear messages through their place of business, Northern Arizona University, local newspaper and/or public meetings.
<i>Parts V.B.1.b.v. and V.B.1.b.vi.</i>	A list of measurable goals and dates scheduled to begin activities and to achieve the goals are specified in Table 1.1.
<i>Part V.B.1.b.vii.</i>	Eileen Hamlin, Stormwater Analyst in the Stormwater Management Section within the Community Development Department will be responsible for this minimum control measure.

**End of Table 1.2**

**Table 2 Public Involvement and Participation**

Table 2.1 Public Involvement & Participation: BMP's and Measurable Goals						
Minimum Control Measures	BMP	Measurable Goal (Steps to measure progress)	Start Date	Target Completion Date	New or Revised	Implementation Status/ Frequency/ Achievement Date (completed, in progress, not started)
<b>V.B.2 Public Involvement &amp; Participation</b>	Comply with public notice requirements for any newly created or revised ordinances. Conduct public meetings to discuss the permit and its renewal in year 5 as well as any significant changes to the proposed program over the remaining term of the permit.	The City will provide public notices pursuant to standard requirements and procedures regarding meetings and opportunities for participation in the development and implementation of the permit program.	March 2004	December 2007	<b>X</b>	<b>In Progress.</b> This is an on-going element of the Stormwater program that will continue for the life of the permit.  <b>X Revised.</b> Corrected process regarding public meetings.
	Stormwater Staff will organize and actively participate in a Citizens Advisory Committee to receive citizen input and to assist in dissemination of program objectives to the Community.	Stormwater staff will host monthly meetings of a Citizens advisory committee. This committee will be composed of 9 voting members. To include representation from commercial and residential property owners, retail & service business, consulting & engineering, home builders, non-profit organizations, environmental groups, NAU and Flagstaff City Council. As stated in resolution No. 2005-81.	December 2000	December 2007	<b>X</b>	<b>In Progress.</b> This is an on-going element of the Stormwater program that will continue for the life of the permit.  <b>X SWAC</b> originally enabled by resolution in 2000. Once terms expired re-appointed by resolution No. 2005-81. This item was under Table 1.1 at request of ADEQ moved to Table 2.1.
	Develop a volunteer-based program, similar to the "Adopt a Highway" program utilized throughout the nation for litter control on roadways, to address the clean up of local washes.	City staff will research structure and legal requirements necessary to establish a volunteer program with the assistance of the City Attorney.	October 2004	October 2004		<b>Complete.</b>
		City staff will create program structure & policies and then publicize using Public Education and Outreach communication	November 2004	April 2005		<b>In Progress.</b> This is an on-going element of the Stormwater program that will continue for the life of the

**Table 2.1 Public Involvement & Participation: BMP's and Measurable Goals**

Minimum Control Measures	BMP	Measurable Goal (Steps to measure progress)	Start Date	Target Completion Date	New or Revised	Implementation Status/ Frequency/ Achievement Date (completed, in progress, not started)
		tools.				permit. Environmental Services conducts an extensive volunteer program within both the Adopt-a-Highway program as well as an Adopt-a-Wash Program.
		City will establish up to 10 wash adoptions each year, providing training materials and advice to the volunteer groups as well as receiving input on any concerns identified by the volunteers.	July 2005	Dec. 2007		<b>In Progress.</b> This is an on-going element of the Environmental Services program that will continue for the life of the permit.
	Provide public input into the SWMP throughout the permit period and during renewal of the permit in year 5.	City staff will publish the SWMP, the NOI & the annual report on the website and accept public comment or suggestions for improvement.	Sept. 2004	Sept. 2007		<b>In Progress.</b> This is an on-going element of the Stormwater program that will continue for the life of the permit.
		City staff will hold public meetings during renewal of permit in the fall of 2007 and City Council will hold a hearing on the renewal application.	September 2007	Dec. 2007		<b>Not Started.</b> No action is scheduled on this program element during the reporting period.



## 2 Public Involvement/Participation (continued)

<b>TABLE 2.2</b>	
<b>Public Involvement/Participation: Additional Information</b>	
<b>Permit Citation</b>	<b>Plan</b>
<i>Part V.B.2.c.i.</i>	The City is committed to involving the general public in the implementation of the Stormwater Management Program (SWMP). In order to accommodate public input and comment, the City has posted the SWMP and the City of Flagstaff Notice of Intent to Comply (NOI) on the Stormwater Section website and provided a contact list and an e-mail resource to receive public input on the SWMP. In addition, there is a dedicated stormwater message line for citizens to leave voice mails regarding the program, the utility and also illicit discharges that may be observed. Messages are checked daily, responses where appropriate, are provided within 24 hours. The Stormwater website can be accessed by either going to the City of Flagstaff homepage and then choose Stormwater Management from the bottom of the left hand column or by going directly to the Stormwater pages at <a href="http://64.58.140.30/">http://64.58.140.30/</a> The SWMP is on the NPDES page and the NOI is available as a pdf file on the Newsletter page of the Stormwater section website.
<i>Part V.B.2.c.ii.</i>	The City has worked since December of 2000 with a citizen-based stormwater advisory committee (SWAC) to review stormwater services and programs, gain public input and receive direction and advice as well as recommendations to Council. The SWAC is actively involved in building and implementing a plan for a comprehensive approach to drainage as well as prioritizing the individual drainage improvement projects.
<i>Part V.B.2.c.ii.</i>	<p>The Stormwater Management Plan, the NOI and the annual report as submitted to ADEQ are posted on the Stormwater Section website and public comment is encouraged, offering an opportunity for the public to give advice and guidance on Best Management Practices and the overall Stormwater Management Plan.</p> <p>The City has established and manages an “Adopt a Wash” program for volunteers to directly assist the City in trash removal. By the end of the permit term there will also be a means for identification of improper connections to the drainage system. Program will include an opportunity to educate volunteers and to remove “floatables”. Target audience includes neighborhood associations, improvement districts. Target audience includes multiple volunteer groups, church groups, scouting associations, and other organizations. There are currently 49 local organizations involved in this program.</p> <p>During the renewal of this permit in Year 5 or on the schedule for renewal as established by ADEQ, the City will provide an opportunity for the public to provide input into the management program for the next permit cycle and will meet all public notice requirements.</p> <p>The City will follow all public notice requirements for City Council actions on this permit. The public will be notified through publication of the Council agenda, in newspapers when public hearings are involved, and through electronic communication to individuals and businesses maintained in a database of interested parties.</p>
<i>Part V.B.2.c.iii.</i>	The City will involve the public through open meetings with the City Council, through public hearings and in volunteer activities coordinated with other environmental services initiatives. In addition, the City’s webpage established under Table 1.1 provides for two-way communication with the public. Staff have established a dedicated message phone line. Messages are checked daily and responded to within 24 hours.

<i>Part V.B.2.c.vii.</i>	Eileen Hamlin, Stormwater Analyst is responsible for implementing and coordinating public involvement/participation activities and is responsible for this minimum control measure.
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**End of Table 2.2**

**Table 3 Illicit Discharge Detection & Elimination**

Table 3.1 Illicit Discharge Detection & Elimination: BMP's and Measurable Goals						
Minimum Control Measures	BMP	Measurable Goal (steps to measure progress)	Start Date	Target Completion Date	New or Revised	Implementation Status/ Frequency/ Achievement Date (completed, in progress, not started)
<b>V.B.3.</b>  <b>Illicit Discharge Detection &amp; Elimination</b>	The City staff researches, defines, and drafts a City ordinance prohibiting illicit discharges and illegal dumping to the City of Flagstaff stormwater system.	City staff will research other communities' existing ordinances as well as model ordinances available through ADEQ and professional organizations to identify structure, content, enforcement procedures, etc. for the ordinance.	June 2003	Sept. 2003	<b>X</b>	<b>Completed.</b> September 2003  <b>X</b> Revised BMP to read "draft ordinance"
		City staff will seek public input from the general public as well as the Citizens Stormwater Advisory Committee (SWAC) into the draft ordinance. The general public will be able to comment and provide input at the first reading of the ordinance.	June 2006	November 2006	<b>X</b>	<b>Not Started.</b> Revised start date to June 2006.  <b>X</b> - Revised start date from 10/03 to 6/06. Pending Council approval of rate increase, determination of enforcement authority and hiring of additional staff to perform job functions. In the interim period city staff who are mapping outfalls as well as citizen volunteers are observing and reporting IDD concerns.
		Staff will finalize ordinance language. City Council will adopt and City staff will implement the ordinance.	Oct. 2006	November 2006	<b>X</b>	<b>Not Started.</b>  <b>X</b> - Revised start date from 10/03 to 10/06. Pending determination of enforcement authority and hiring of additional staff to perform job functions.
	Complete an inventory of the City of Flagstaff storm sewer system, identifying all outfalls	The City will inventory and map the MS4 within 65% of the jurisdictional boundary.	March 2006	December 2006	<b>X</b>	<b>In Progress.</b> Performed concurrently with inventory & mapping project. Pilot project

**Table 3.1 Illicit Discharge Detection & Elimination: BMP's and Measurable Goals**

Minimum Control Measures	BMP	Measurable Goal (steps to measure progress)	Start Date	Target Completion Date	New or Revised	Implementation Status/ Frequency/ Achievement Date (completed, in progress, not started)
	and names and locations of Waters of the United States as defined by ADEQ creating a map of the MS4.					currently underway.  <b>X</b> Revised start date from October 2003 to March 2006 in order to be able to utilize the deliverable due date for an existing project.
		The City will inventory and map the MS4 within 35% of the jurisdictional boundary in the final year of the permit.	Dec. 2006	July 2007	<b>X</b>	<b>Not Started.</b>  <b>X</b> - Revised start date from 7/05 to 12/06.
	Receive and investigate complaints concerning illicit discharges and dumping, providing public access to staff and reports on the resolution of complaints and concerns.	The City staff will establish a direct phone line to the Stormwater Services Division for receipt of input from the public, 24 hours a day.	April 2004	December 2007		<b>Complete.</b> Phone line established August 2003. Receiving & investigating as well as general comments. This is an on-going element of the Stormwater program that will continue for the life of the permit.
		The City staff will put an email contact on the webpage to receive information directly.	June 2004	December 2007		<b>Complete.</b> August 2003. This is an on-going element of the Stormwater program that will continue for the life of the permit.
	The City will train employees in the detection, collection, and identification of illicit discharges.	The City will train public employees on illicit connections, and good housekeeping practices within existing training sessions and in targeted training sessions as needed, annually updating training.	April 2004	December 2007		<b>In Progress.</b> Environmental Services provides annual training every January.
	Notify City employees, of the hazards and costs of illicit discharges and improper disposal of waste through seminars and/or published and distributed information.	The City will train public employees on illicit connections, and good housekeeping practices within existing training sessions and in targeted training sessions as needed, annually	April 2004	December 2007		<b>In Progress.</b> Environmental Services provides annual training every January.

**Table 3.1 Illicit Discharge Detection & Elimination: BMP's and Measurable Goals**

Minimum Control Measures	BMP	Measurable Goal (steps to measure progress)	Start Date	Target Completion Date	New or Revised	Implementation Status/ Frequency/ Achievement Date (completed, in progress, not started)
		updating training.				
	The City staff will inspect stormwater outfalls during dry weather to identify illicit discharges and locate illegal dumping with follow up investigation to identify sources and eliminate problems.	The City staff will develop and test inspection procedures, including creation of a database to track and maintain activity and results of inspections.	June 2006	August 2007	X	<p><b>Not Started.</b> No activity scheduled during this reporting period.</p> <p>X - Revised start date this activity is dependent upon the completion, and approval of the Illicit Discharge Ordinance and pending hiring of additional staff. We anticipate approval in October 2006. Further note this activity will be performed concurrently with outfall mapping.</p>
		The City staff will inspect all outfalls within 65 percent of Flagstaff corporate boundary and initiate investigation of potential discharge problems based on adopted ordinance.	June 2006	August 2007	X	<p><b>Not Started.</b> Activity not scheduled during this reporting period.</p> <p>X - Revised start date this activity is dependent upon the completion, and approval of the Illicit Discharge Ordinance and pending hiring of additional staff. We anticipate approval in October 2006. This function will be performed concurrently with outfall mapping.</p>
		The City staff will inspect all outfalls within remaining 35 percent of Flagstaff corporate boundary and initiate investigation of potential discharge problems based on adopted ordinance.	Dec. 2006	July 2007	X	<p><b>Not Started.</b> No activity scheduled during this reporting period.</p> <p>X - Revised start date this activity is dependent upon the completion, and approval of the Illicit Discharge Ordinance</p>

<b>Table 3.1 Illicit Discharge Detection &amp; Elimination: BMP's and Measurable Goals</b>						
<b>Minimum Control Measures</b>	<b>BMP</b>	<b>Measurable Goal (steps to measure progress)</b>	<b>Start Date</b>	<b>Target Completion Date</b>	<b>New or Revised</b>	<b>Implementation Status/ Frequency/ Achievement Date (completed, in progress, not started)</b>
						and pending hiring of additional staff. We anticipate approval in October 2006. This function will be performed concurrently with outfall mapping.

**End of Table 3.1**

### 3 Illicit Discharge Detection and Elimination

<b>TABLE 3.2 Illicit Discharge Detection and Elimination: Additional Information</b>	
<b>Permit Citation</b>	<b>Plan</b>
<i>Part V.B.3.a</i>	The program envisioned by the City of Flagstaff will be based on a new ordinance that will define and prohibit illicit discharges to the City's stormwater system. The plan will rely on dry weather inspection of the stormwater system supplemented by other testing if necessary to evaluate the source of a discharge. Educational efforts for the public and employees related to the hazards of illegal discharges and improper waste disposal are included in the Public Education and Pollution Prevention/Good Housekeeping Minimum Control Measures. The City plans to initiate a program of inspections of the stormwater system during dry weather in order to detect illicit discharges to the system. Any dry weather flow will be scrutinized for evidence of contamination. The flow will be traced upstream in the stormwater system to determine a source, if possible. If necessary, this inspection will include entry to private property. These inspections may also include contacting the Fire Department Hazardous Materials team, and/or performing chemical tests if necessary to determine the nature and source of discharges. The City will initiate investigation of any illicit discharges within 15 working days of identifying a concern at an outfall and take action to eliminate the discharge.
<i>Part V.B.3.g.i.</i>	The City of Flagstaff will utilize visual inspection of outfalls, in-field testing when appropriate, reports from the public, reports from public employees, and reports from the volunteers in the Adopt a Wash program to detect illicit discharges. In addition, the City will maintain a feedback process through the website for general reporting by the public on issues of concern.
<i>Part V.B.3.g.ii.</i>	The City does not have in place an ordinance or other regulatory mechanism to specifically prohibit illicit discharges to the drainage system. The City will initiate the development of the necessary ordinance tools in 2006. The City will evaluate appropriate methods for enforcement and a process for identification of problem outfalls and incorporate them in the ordinance. The ordinance will address the process that will be followed.
<i>Part V.B.3.g.iii.</i>	Enforcement authority will be developed in the drafting of the ordinance and will be based on the City's Charter and empowerments for enforcement defined by State law. The City has enforcement authority within the jurisdictional boundary only. The inspection program will be defined during the development of the ordinance.
<i>Part V.B.3.g.iv.</i>	The City considers the discharges listed in Part I.C.2. of the General Permit to be allowable non-stormwater discharges. These discharges will be allowed to the small MS4 unless the City identifies them as a significant contributor of pollutants to the MS4.
<i>Part V.B.3.g.v.</i>	The City will allow all discharges identified in Part I.C.2 of Permit AZG-2002-002 until and unless the City identifies any one or all of them as a significant contributor of pollutants to or from the municipal separate storm sewer system.
<i>Part V.B.3.g.vi.</i>	The City will utilize existing training that is held in various parts of the organization and integrate the messages regarding the risks of illegal discharges as well as illegal dumping and will provide an internal process for public employees to report concerns and potential illicit discharges to the system.
<i>Part V.B.3.g.vii.</i>	The City will utilize its Public Education and Outreach program identified in Table 1.1 and Table 1.2 to provide information to the public on the hazards of illicit discharges and illegal dumping.

<i>Parts V.B.3.g.viii. and V.B.3.g.ix.</i>	A list of measurable goals and dates scheduled to begin activities and to achieve the goals are specified in Table 3.1.
<i>Part V.B.3.g.x.</i>	Malcolm Alter, Stormwater Manager is responsible for overseeing implementing and coordinating illicit discharge detection and elimination activities and will be responsible for this minimum control measure. He may delegate this authority to other City staff.

**End of Table 3.2**



**Table 4 Construction Site Stormwater Run-off Control**

Table 4.1 Construction Site Stormwater Run-off Control							
Minimum Control Measures	BMP	Measurable Goal (steps to measure progress)	Start Date	Target Completion Date	New or Revised	Implementation Status/ Frequency/ Achievement Date (completed, in progress, not started)	
<b>V.B.4.a &amp; b Construction site run-off control</b>	The City requires grading permits for land disturbing activities to meet the requirements of the AZPDES General Permit. The City will adopt an ordinance to address construction activities as defined in Part V. Section 4. It will establish the process; plan review, inspection procedures and enforcement strategies for construction site management.	City staff will research the policies and strategies that will be included in program processes, enforcement strategies and inspection procedures, involving key stakeholders as appropriate.	August 2003	March 2004		<b>Complete.</b> July 2005 See attachment B. Revision to International Building Code and Attachment C Requirements of SWPPP	
		City Council will hold public hearing on program and ordinance.	April 2004	June 2004		<b>Complete.</b> June 2005.	
		City Council will adopt ordinance and City staff will implement plan review, site inspection and enforcement procedures	June 2004	July 2005		<b>Complete.</b> July 2005 See attachment B. Revision to International Building Code and Attachment C Requirements of SWPPP.	
		The City will develop and implement policies and procedures for plan review regarding construction site management in compliance with local ordinance, incorporating them into current plan review practices for new construction	City staff and stakeholders will define plan review procedures in conjunction with ordinance development in BMP 1, above.	March 2004	June 2004		<b>Complete.</b> July 2005 See attachment B. Revision to International Building Code and Attachment C Requirements of SWPPP.
			City staff will be trained on procedural changes.	June 2004	June 2004		<b>Complete.</b> July 2005 See attachment B. Revision to International Building Code and Attachment C Requirements of SWPPP.
			City staff will implement plan	July	Dec 2007		<b>Complete.</b> July 2005

**Table 4.1 Construction Site Stormwater Run-off Control**

Minimum Control Measures	BMP	Measurable Goal (steps to measure progress)	Start Date	Target Completion Date	New or Revised	Implementation Status/ Frequency/ Achievement Date (completed, in progress, not started)
		review process and adjust as needed to provide an effective review	2004			See attachment B. Revision to International Building Code and Attachment C Requirements of SWPPP.
	Develop and adopt technical guidance materials for the design and maintenance of erosion and sediment control measures as well as other strategies to address construction site wastes.	City staff will research technical guidance materials from other communities in semi-arid climates as part of the program development.	August 2003	March 2004		<b>Complete.</b> June 2004. See attachment D
		City staff will develop materials specific to Flagstaff construction environment.	April 2004	April 2004		<b>Complete.</b> July 2005 See attachment B. Revision to International Building Code and Attachment C Requirements of SWPP
		City of Flagstaff staff will develop technical guidance materials in conjunction with new ordinance and distribute to development community and staff.	June 2004	June 2004		<b>Completed.</b> July 2005 See Attachment B & reference to ADOT manual.
	The City will review current practices for inspection of construction sites as carried out by building inspectors and grading inspectors as well as research practices utilized in other communities. Working with the City Attorney, the City will determine the most effective enforcement of the ordinance; train inspectors on these procedures and implement with adoption of the ordinance.	City staff will research current practices internal and external to the City and identify potential practices for Flagstaff.	March 2004	March 2004		<b>Complete.</b> See attachment B. Revision to International Building Code and Attachment C Requirements of SWPP.
		Working with City Attorney, City staff will identify enforcement	April 2004	May 2004		

Table 4.1 Construction Site Stormwater Run-off Control						
Minimum Control Measures	BMP	Measurable Goal (steps to measure progress)	Start Date	Target Completion Date	New or Revised	Implementation Status/ Frequency/ Achievement Date (completed, in progress, not started)
		strategies for construction site management practices.				
		City of Flagstaff staff will develop inspection practices in conjunction with ordinance development that are compatible with ordinance language.	June 2004	June 2004		<b>Complete.</b> July 2005. See attachments B & C.
		City will implement and update inspection and enforcement practices as needed. Track inspections and enforcement actions taken, maintaining annual records of activity.	July 2004	December 2007		<b>Complete.</b> July 2005. See attachments B & C.
	The City will notify the public on how to interact with staff to provide input on construction site management issues. The staff will respond to public inquiry and complaints concerning construction site runoff issues with follow up on the action taken.	City staff will write procedures and provide education materials to the general public on overall construction site management program, explaining how the public can assist in providing input on concerns.	April 2004	August 2004		<b>Complete.</b> August 2003 and July 2005
		City staff will track input and resolution of issues, maintaining annual records of activity and analyze complaints over the permit period to improve the process and oversight.	July 2004	December 2007		<b>Complete.</b> August 2003 and July 2005.

**End of Table 4.1**

#### 4. Construction Site Stormwater Run-off Control (continued)

<b>TABLE 4.2</b>	
<b>Construction Site Stormwater Run-off Control: Additional Information</b>	
<b>Permit Citation</b>	<b>Plan</b>
<i>Part V.B.4.a</i> <i>Part V.B.4.e.i.</i>	The City of Flagstaff will adopt a program to control erosion and sedimentation on new development sites affecting one acre or more as defined by Part V, Section 4, of this General Permit to the maximum extent practicable. The program will incorporate regulatory requirements, technical guidance materials, inspections, plan review, enforcement provisions, and an educational initiative. In addition, the program incorporates provisions for addressing public concern through complaint hotlines. Much of the program depends on the ordinance provisions and technical guidance materials, defining the requirements for construction site operators and site plans.
<i>Part V.B.4.b</i> <i>Part V.B.4.e.i.</i> <i>Part V.B.4.e.ii.</i>	The City will prepare and adopt an ordinance governing construction site erosion and sediment control. The ordinance will include requirements for proper management and disposal of construction and sanitary waste at the construction site. In addition, the ordinance will require site plan review with documentation submitted to the City by the contractor(s) on the existence of the Notice of Intent for Coverage under either the existing general permit for construction site management or an amended general permit issued by ADEQ. (See Table 4.1, BMP 1)
<i>Part V.B.4.c</i>	The City will review all new development plans for compliance with the construction site management ordinance and technical guidance materials. The ordinance will require new development affecting one acre or more of land to obtain approval of their plan for erosion and sediment control as well as control of other wastes prior to beginning land-disturbing activities. The City will also require that developers document application for coverage under the Construction General Permit prior to approving the construction site management control plan. (See Table 4.1, BMP 2)
<i>Part V.B.4.d.</i> <i>Part V.B.4.e.iii.</i>	The City will develop policies and procedures for an ongoing construction site inspection and enforcement program. Inspectors will be trained in construction site management control inspections and the enforcement options in the ordinance. (See Table 4.1, BMP 3 and BMP 4).
<i>Parts V.B.4.e.v.</i> <i>and V.B.4.e.vi.</i>	A list of measurable goals and dates scheduled to begin activities and to achieve the goals are specified in Table 4.1.
<i>Part V.B.4.e.vii.</i>	Malcolm Alter, Stormwater Manager is responsible for overseeing implementing and coordinating construction site activities. He may delegate this authority to other City staff.

**End of Table 4.2**

**Table 5 Post Construction Stormwater Management in New Development and Redevelopment**

Table 5.1 Post Construction Stormwater Management in New Development & Redevelopment: BMP's and Measurable Goals						
Minimum Control Measures	BMP	Measurable Goal (steps to measure progress)	Start Date	Target Completion Date	New or Revised	Implementation Status/ Frequency/ Achievement Date (completed, in progress, not started)
<b>V.B.5.a</b>  <b>Post Construction Management</b>	In conjunction with the BMPs listed below, the City will create and implement an on-going post-construction BMP inspection program as part of the overall strategy to ensure long-term performance of controls for new development and redevelopment activities as defined in Part V. Section B 5	The City staff writes procedures for inspection and compare with other inspection procedures in the organization, coordinating where appropriate.	October 2005	January 2006		<b>Not Started.</b> This action item is not scheduled during this reporting period.
		The inspection procedures are adopted in conjunction with ordinance development and implementation.	January 2006	December 2007		<b>Not Started.</b> This action item is not scheduled during this reporting period
	Create and adopt a City of Flagstaff ordinance that addresses post-construction stormwater quality for new development and redevelopment projects that are greater than or equal to one acre, including requirements for plan review and enforcement of long-term maintenance strategies for structural controls. The City will have enforcement authority to ensure compliance by owners /developers if post development controls are not constructed as design or fail to protect or minimize run-off impacts to water quality.	The City will review all existing designs authorized in the City's Design Manual and in ordinance language and establish performance goals for programs in Flagstaff.	October 2004	December 2007		<b>Complete.</b> October 2004. See Attachment D  This is an on-going process that will be in place for the life of the permit.
		The City will update designs and create a draft ordinance to meet	March 2005	June 2005		<b>Complete.</b> October 2004. See Attachment D

**Table 5.1 Post Construction Stormwater Management in New Development & Redevelopment: BMP's and Measurable Goals**

Minimum Control Measures	BMP	Measurable Goal (steps to measure progress)	Start Date	Target Completion Date	New or Revised	Implementation Status/ Frequency/ Achievement Date (completed, in progress, not started)
		the regulatory objectives.				
		The City staff will provide opportunity for public input for ordinance and design criteria through public meetings with appropriate stakeholders.	April 2005	August 2005		<b>Complete.</b> October 2004. See Attachment D
		The City staff will finalize ordinance and design criteria; the City Council will adopt with staff implementing over life of permit.	September 2005 and January 2006	January 2006 & December 2007		<b>Complete.</b> October 2004. See Attachment D
	The ordinance addressing post construction controls will require long-term operation and maintenance BMPs. At change of ownership, the new owner must execute a formal agreement that the new owner is aware of the long-term operation and maintenance BMPs as required by the ordinance adopted to address this requirement and will continue to institute them.	The City will educate developers about the long-term maintenance requirements during pre-construction meetings.	January 2006	December 2007		<b>Complete.</b> October 2004. See Attachment D.
		When the City issues final occupancy permits, the owner/operator is required under the City Land Development code to maintain BMPs at the site.	January 2006	December 2007	<b>X</b>	<b>Complete.</b> October 2004. See Attachment D.  <b>X Revised.</b> Up-dated reference to letter writing process. This is covered under land development code.

## 5. Post Construction Stormwater Management in New Development and Redevelopment (continued)

<b>TABLE 5.2</b>	
<b>Post Construction Stormwater Management: Additional Information</b>	
<b>Permit Citation</b>	<b>Plan</b>
<i>Part V.B.5.e.i.</i>	The program will involve the revision of the City's existing ordinance stormwater at new construction sites affecting one acre or more as defined by Part V, Section 4, of this General Permit to the maximum extent practicable. The ordinance will contain long-term maintenance requirements, enforcement and inspection provisions. In addition, educational materials will be developed and distributed to contractors, developers and other appropriate parties. The program will include plan review for new development and redevelopment, as well as an inspection and enforcement program. The City will research appropriate post-construction runoff management strategies from new and redevelopment projects and tailor them to Flagstaff. This will be done in conjunction with the development of the regulatory mechanism(s) required to ensure compliance and long-term maintenance of the structural controls.
<i>Part V.B.5.e.ii.</i>	The City will develop an ordinance that will address runoff from new or redevelopment projects that ensure site design addresses long-term protection for water quality by use of structure or non-structural design features. The ordinance will address long-term maintenance for structural controls, defining responsibilities and enforcement strategies to ensure such maintenance occurs. The City will initiate the development of the ordinance or other regulatory mechanism in April 2004 and will develop the program of controls with the input of stakeholders within the community.
<i>Part V.B.5.e.iii.</i>	The City will utilize the authorities granted through local Charter and as established by State law to ensure compliance with local requirements. The City will initiate an inspection program, based on performance objectives for the approved structural controls. The inspection program will ensure that the control is constructed as planned and that it is maintained in the long-term. The City will incorporate into the existing plan review process appropriate procedures that will ensure evaluation and approval of water quality protection features, site designs, and other structures proposed for any site regulated under this minimum control measure.
<i>Part V.B.5.e.iv.</i>	The City will update its standards of design to include allowable controls for the long-term protection of water quality. The City will involve stakeholders in the development of the structural controls approved for Flagstaff and will provide training upon adoption of the regulatory control and updated design standards. The City will incorporate training in the public education and outreach program as well as incorporate specific training for local developers, architects, contractors and builders by holding working sessions on the new design standards and providing written materials available to the general public as well as the impacted stakeholders. BMPs identified in Table 1.1. and 1.2 address methods by which the regulated community (developers, architects, and the public) may learn about project designs that minimize water quality impacts.
<i>Parts V.B.5.e.v. and V.B.5.e.vi.</i>	A list of measurable goals and dates scheduled to begin activities and to achieve the goals are specified in Table 5.1.
<i>Part V.B.5.e.vii.</i>	Malcolm Alter, Stormwater Manager is responsible for overseeing implementing and coordinating post construction stormwater management activities. He may delegate this authority to other City staff.

End of Table 5.2

**Table 6 Pollution Prevention/Good Housekeeping for Municipal Operations**

<b>Table 6.1 Pollution Prevention Good Housekeeping for Municipal Operations: BMP's and Measurable Goals</b>						
<b>Minimum Control Measures</b>	<b>BMP</b>	<b>Measurable Goal (steps to measure progress)</b>	<b>Start Date</b>	<b>Target Completion Date</b>	<b>New or Revised</b>	<b>Implementation Status/ Frequency/ Achievement Date (completed, in progress, not started)</b>
<b>V.B.1.a</b>  <b>Pollution Prevention Good House keeping</b>	The City will revise City policies and documents to address pollution prevention that includes municipal maintenance activities, schedules and inspection procedures for structural and non-structural controls to reduce floatable and other pollutants dumped into washes etc. Pollution prevention plans will address storage of materials, proper materials handling, drainage and structural controls maintenance procedures and in-house environmental inspections.	The staff will meet to discuss current applicable documents and procedures as well as establishing the priorities for facilities assessment.	July 2003	December 2003		<b>Complete.</b> December 2003
		The City will utilize knowledgeable staff in the Environmental Services Division, Public Works Department as a trainer for public employees.	July 2004	December 2007		<b>In progress.</b> Environmental Services provides a comprehensive annual training each January as well as maintains an industrial permit for city sites that fall within the supervisory control of Public Works and Environmental Services.
		An initial training will be scheduled upon completion of site pollution prevention plan for facilities. Refresher training will occur on an annual basis. New employees will be trained along with training on safety and other aspects of the applicable Pollution Prevention Plan.	July 2004	December 2007		<b>In progress.</b> Environmental Services provides comprehensive annual training each January



**Table 6.1 Pollution Prevention Good Housekeeping for Municipal Operations: BMP's and Measurable Goals**

Minimum Control Measures	BMP	Measurable Goal (steps to measure progress)	Start Date	Target Completion Date	New or Revised	Implementation Status/ Frequency/ Achievement Date (completed, in progress, not started)
		The City will evaluate the 4 existing pollution prevention plans each year of the permit.	January 2005	December 2007	X	<p><b>In Progress.</b> Public Works, Environmental Services, performs a comprehensive audit as well as maintains an industrial permit for city sites that fall within the supervisory control of Public Works and Environmental Services.</p> <p><b>X Revised.</b> Changed misleading reference</p>
	Evaluate City operations and maintenance activities to determine if the risk of polluting stormwater is being reduced to the maximum extent practicable.	The City staff will establish priorities for evaluation of operations with particular attention to street and drainage system maintenance, street sweeping and parks maintenance. Other operations will be evaluated in later years of the permit based on priorities.	January 2005	April 2005		<p><b>In Progress.</b> Public Works, Environmental Services, performs a comprehensive audit as well as maintains an industrial permit for city sites that fall within the supervisory control of Public Works and Environmental Services. This is an on-going element of Public Works that will continue for the life of the permit</p>
		Evaluation of two operational activities will occur in each year of the permit.	Sept. 2005	December 2007		<p><b>In Progress.</b> Public Works, Environmental Services, performs a comprehensive audit as well as maintains an industrial permit for city sites that fall within the supervisory control of Public Works and Environmental Services. This is an on-going element of Public Works.</p>
		The City will implement changes in operations to improve water quality and stormwater runoff, programming budgetary impacts in the year following the	July 2005	December 2007		<p><b>In Progress.</b> Public Works, Environmental Services, performs a comprehensive annual training as well as addressing plan, procedure</p>

**Table 6.1 Pollution Prevention Good Housekeeping for Municipal Operations: BMP's and Measurable Goals**

Minimum Control Measures	BMP	Measurable Goal (steps to measure progress)	Start Date	Target Completion Date	New or Revised	Implementation Status/ Frequency/ Achievement Date (completed, in progress, not started)
		evaluation, on a priority basis.				and process up-dates as needed.
	The City will train staff on pollution prevention and revised policies and procedures for operations and maintenance activities as changes are made or new procedures are put into action. The Environmental Services Division of the Public Works Department will provide trainers and the City will obtain training materials from other communities and professional organizations, as appropriate.	Following site evaluations and changes in operations or practices each year, the City will train appropriate staff as well as new staff on practices as they are implemented.	July 2005	December 2007		<b>In Progress.</b> Public Works, Environmental Services, performs a comprehensive audit as well as plan, procedure and process up-dates as needed to maintain quality standards.
		City trainers will research appropriate materials needed to address changes and to meet needs of industrial NPDES permits for SWPPP implementation.	July 2004	December 2007		<b>In Progress.</b> Public Works, Environmental Services, performs a comprehensive audit as well as plan, procedure and process up-dates as needed to maintain quality standards.
	The City will evaluate practices in managing roadways, streets, bridges, highways and parking lots owned or operated by the City to identify impacts on water quality and to prioritize any changes in practices of maintenance or design necessary to reduce or eliminate discharge of pollutants.	The City staff will establish performance goals for the identified services/operations.	October 2004	January 2005		<b>In Progress.</b> This is an on-going work program element of the Public Works department that will continue for the life of the permit.
		The City staff will establish a team to assess current practices to determine if goals are met or if changes are needed.	Nov. 2006	December 2006	<b>X</b>	<b>Not started.</b> <b>X – Revised</b> start date to give stormwater staff the

**Table 6.1 Pollution Prevention Good Housekeeping for Municipal Operations: BMP's and Measurable Goals**

Minimum Control Measures	BMP	Measurable Goal (steps to measure progress)	Start Date	Target Completion Date	New or Revised	Implementation Status/ Frequency/ Achievement Date (completed, in progress, not started)
						opportunity to review program with Public works department
		The City will complete assessments of current operational procedures and make recommendations for changes needed to address runoff issues.	July 2006	December 2006	X	<b>Not started.</b>  X – Revised start date to give stormwater staff the opportunity to review program with Public works department.
		Based on assessment, implement changes to current services to meet goals in managing roadway and parking systems owned by the City.	Nov. 2006	December 2006		<b>Not Started.</b> Action is not scheduled on this element during the reporting period.
	The City will evaluate and make appropriate changes if needed in practices of disposal of wastes removed from the drainage system, with particular emphasis on dredge spoil, accumulated sediments, floatables and other debris.	City staff will establish a review process for evaluating current strategies for waste disposal.	Sept. 2004	December 2007		<b>In Process.</b> Public Works, Environmental Services, performs a comprehensive audit as well as plan, procedure and process updates as needed to maintain quality standards.
		Staff will assess the current standard operating procedures and recommend changes	July 2005	December 2006		<b>In Process.</b> Public Works, Environmental Services, performs a comprehensive audit as well as plan, procedure and process updates as needed to maintain quality standards. This is an on-going element of the Public Works program that will continue for the life of the permit. The evaluation team will continue to evaluate the process during the Nov. & Dec. '06 process review.
		City staff will Implement recommendations through the	January 2007	December 2007		<b>Not started.</b> No activity scheduled during this reporting

<b>Table 6.1 Pollution Prevention Good Housekeeping for Municipal Operations: BMP's and Measurable Goals</b>						
<b>Minimum Control Measures</b>	<b>BMP</b>	<b>Measurable Goal (steps to measure progress)</b>	<b>Start Date</b>	<b>Target Completion Date</b>	<b>New or Revised</b>	<b>Implementation Status/ Frequency/ Achievement Date (completed, in progress, not started)</b>
		budget process and re-evaluate.				period.

**End of Table 6.1**

## 6. Pollution Prevention/Good Housekeeping for Municipal Operations (continued)

**TABLE 6.2**  
**Pollution Prevention/Good Housekeeping: Additional Information**

Permit Citation	Plan
<i>Part V.B.6.a.</i>	The City plans to develop and implement a program that will involve evaluation and refinement of City maintenance and operations activities. Specifically, the City will identify operations that should be evaluated for their impact on stormwater quality, focusing on the operations and maintenance activities noted in the general permit in Part III.B.6.a-b. A comprehensive pollution prevention plan will be developed for City operations as needed. As pollution prevention plans are developed, City staff will be trained on practices for managing the sites. As part of this plan, procedures for construction and maintenance by City maintenance crews will be evaluated. Maintenance and operations at City of Flagstaff facilities, including parks, roads and storage facilities will also be evaluated.
<i>Part V.B.6.b.i.</i>	The following municipal operations impacted by this operation and maintenance program are: <ul style="list-style-type: none"> <li>• Street Maintenance <ul style="list-style-type: none"> <li>○ Street sweeping operations</li> </ul> </li> <li>• Parks Operations</li> <li>• Wastewater Treatment</li> <li>• Water Treatment</li> <li>• Airport Operations</li> <li>• City municipal facilities maintenance <ul style="list-style-type: none"> <li>○ Fleet Services</li> </ul> </li> <li>• Hazardous materials management</li> <li>• Landfill operations <ul style="list-style-type: none"> <li>○ Solid Waste collection including recycling</li> <li>○ Household hazardous waste management program</li> </ul> </li> </ul>
<i>Part V.B.6.b.ii.</i>	The City will develop and implement an employee training program for: <ol style="list-style-type: none"> <li>a. Individuals who work at City-owned sites that have NPDES Industrial permits for stormwater pollution prevention and protection.</li> <li>b. Individuals who apply chemicals or work with chemicals in their daily activities to ensure appropriate practices are followed to reduce or eliminate the risks of polluting stormwater runoff.</li> <li>c. Individuals involved in roadway and drainage maintenance, including snow removal to address appropriate strategies for runoff protection.</li> <li>d. Individuals who design, construct and/or maintain public facilities to address practices appropriate to water quality protection and pollution prevention.</li> </ol>
<i>Parts V.B.6.b.iii.</i>	A list of measurable goals and dates scheduled to begin activities and to achieve the goals are specified in Table 6.1.

<i>and V.B.6.b.iv.</i>	
<i>Part V.B.6.b.v..</i>	Malcolm Alter, Stormwater Manager is responsible for overseeing implementing and coordinating Pollution Prevention and Good Housekeeping activities. He may delegate this authority to other City staff.

**End of Table 6.2**

## **Qualifying State or Local Program**

The City has developed new best management practices in response to the need to apply for a municipal stormwater discharge permit. The City is not aware of any qualifying local or state programs that would address the requirements of the Small MS4 General Permit.

## **Sharing Responsibility**

The City will have the responsibility to implement all measures within this SWMP.

## **Reviewing and Updating the SWMP**

The City will review the SWMP in June of each year starting in June 2004 and evaluate the implementation status of the SWMP components as well as the effectiveness of each component or combination of components. The City will determine how the SWMP needs to be revised, if at all. If the SWMP needs to be revised, the City will notify ADEQ of any additions. If components of the SWMP need to be replaced, the City will submit to ADEQ the proposed revisions with an explanation of why the practice is ineffective and why the replacement is expected to achieve the goals of the management practice.

## **Monitoring**

The City will evaluate program compliance, the appropriateness of identified BMPs, and progress towards achieving identified measurable goals. The City storm sewer system drains to the Rio de Flag. At this time, a Total Maximum Daily Load (TMDL) has not been established for this receiving water. Also, Rio de Flag is not listed on Arizona's 303(d) list. Therefore, the City will not sample and analyze the discharge from the small MS4 at this time.

## **Annual Reports**

The City will submit an annual report to ADEQ by September 30, 2004 for the period of time between March 30, 2003 and June 30, 2004. Starting in 2005, the City will submit additional annual reports by September 30 of each year for the preceding period of July 1 through June 30. The City will report on the information required in Part V.G. of the permit.

## **Certification**

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Name (printed)

\_\_\_\_\_  
Title