



**CITY OF SAN DIMAS**  
**MEMORANDUM**  
*Public Works Department*

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DATE: February 7, 2013

TO: Honorable Mayor and City Council Members

FROM: Krishna Patel, Director of Public Works *KP*

SUBJECT: **Waste Discharge Requirements for Municipal Separate Storm Sewer System (MS4) Discharges - National Pollutant Discharge Elimination System (NPDES) Permit and Associated Programs**

At the January 22<sup>nd</sup> City Council meeting, Council Member Templeman requested staff to apprise Council members of the upcoming NPDES Program changes set forth by the new NPDES Permit, totaling over 500 pages, which became effective December 28, 2012. Staff will begin by discussing the Los Angeles County Flood Control District (LAFCD) v. National Resource Defense Council (NRDC) Supreme Court Decision as many cities and consultants felt that the ruling by the Supreme Court may have favored the agencies. In addition included is an update on the filing of the Administrative Petitions for the new NPDES Permit.

LA County Flood Control District (LAFCD) v. National Resource Defense Council (NRDC)

In 2008, the NRDC sued the LAFCD in Federal District Court for exceeding water quality standards and total maximum daily loads (TMDLs) from 2002 to 2008. According to the NRDC, these exceedances violated the MS4 permit adopted in 2001. The District Court ruled that the LAFCD was not in violation because "[t]here is no evidence showing that discharges from the District portions of the MS4 are contributing to the exceedances at the [Monitoring Stations]." The NRDC appealed to the 9<sup>th</sup> Circuit Court. The 9<sup>th</sup> Circuit Court ruled against LAFCD concluding that LAFCD was liable for the discharge that occurred when polluted water detected at monitoring stations flowed out of the concrete-lined portions of the rivers, where the monitoring stations are located, into lower, unlined portions of the same rivers.

The case was heard by the US Supreme Court in December 2012. The Supreme Court Held: The flow of water from a lined portion of a navigable waterway into an unlined portion of the same waterway does not qualify as a "discharge of a pollutant" under the Clean Water Act (CWA). This ruling only addressed the non-ability to discharge pollutants in the same waterbody. That being said, as mentioned many have interpreted the Supreme Court Ruling as an indication that Cities do not have to comply with TMDL requirements in the receiving water. This assumption was later dismissed by both the US EPA and the Executive Officer of the LA Regional Board. Nonetheless, cities are still required to comply with the new NPDES Permit.

New NPDES Permit Administrative Petition Update:

The State Water Board recently acknowledged the receipt of several petitions requesting to be held in abeyance. However, due to the number of active petitions also seeking review of the Los Angeles Regional Water Quality Control Board's (Regional Board) action, State Board has declined to hold these petitions in abeyance.

### Previous (2001) and New (2012) NPDES Program Compliance Requirements

The City has consistently implemented the NPDES programs as mandated in the previous NPDES Permit. Although, the current NPDES Permit requires continual implementation of these programs, the County is no longer designated as the "Principal Permittee" and program compliance is now measured in a more structured, stringent and costly manner as outlined below.

The option provided to develop a Watershed Management Plan (WMP) and/or an Enhanced Watershed Management Plan (EWMP) is a new means for compliance under the new Permit. The WMP and EWMP require demonstration that a low impact development (LID) ordinance and Green Streets Policy is in place or in development by February 28, 2013. Requirements from the 2001 NPDES Permit as well as additional NPDES Program requirements set forth in the 2012 Permit are outlined below.

#### **1. Public Information and Participation Program (PIPP)**

##### **2001:**

- The Principal Permittee (LA County) shall implement a PIPP to include the following:
  - Develop a Corporate Outreach program to educate and inform corporate managers about storm water regulations.
  - Measure the effectiveness of in-school educational programs.
  - Coordinate with cities to develop outreach programs that focus on the watershed-specific pollutants
- Each municipality shall conduct educational activities within its jurisdiction and participate in countywide events.
  - Make outreach materials available to the general public and target audiences, such as schools, community groups, contractors and developers, and
  - At appropriate public counters and events.

##### **2012:**

- Cities must distribute activity specific stormwater pollution prevention public education materials at, but not limited to, the following points of purchase:
  - Automotive parts stores
  - Home improvement centers / lumber yards / hardware stores/paint stores
  - Landscaping / gardening centers
  - Pet shops / feed stores
- Develop and implement a Residential Outreach Program by:
  - Working in conjunction with a County-wide or Watershed Group sponsored PIPP or individually
  - Conducting storm water pollution prevention public service announcements and advertising campaigns
  - Distributing activity specific storm water pollution prevention public education materials
  - Maintaining the stormwater website
  - Providing independent, parochial, and public schools with materials to educate school children (K-12) on stormwater pollution.

#### **2. Industrial/Commercial Facilities Program**

##### **2001:**

- Cities must maintain a watershed-based inventory or database of all jurisdictional facilities that are critical sources of stormwater pollution.
- Implement a Progressive Enforcement Policy to ensure that facilities are brought into compliance with all stormwater requirements within a reasonable time period

- Inspect industrial/commercial facilities twice during the 5-year term of the Order, provided that the first inspection occurs no later than 32-months (August 2004) after permit adoption, and that there is a minimum interval of one (1) year in between the first compliance inspection and the second compliance inspection.

#### **2012:**

- Track Critical Industrial/Commercial sources via a watershed-based inventory or database containing the latitude/longitude coordinates of all industrial and commercial facilities. Update annually.
- Continually implement the Progressive Enforcement Policy to ensure that Industrial / Commercial facilities are brought into compliance with all stormwater requirements within a reasonable time period.
- Inspect industrial/commercial facilities twice during the 5-year term of the Order, provided that the first inspection occurs no later than 24-months (December 2014) after permit adoption, and that there is a minimum interval of six (6) months in between the first compliance inspection and the second compliance inspection.
- Implement a Business Assistance Program to provide technical information to businesses and facilitate efforts to reduce discharge of pollutants in stormwater
- Effective source control best management practices (BMPs) for the activities listed in Table 10 (p. 93) of the Permit for specific Pollutant-Generating Activity shall be implemented at commercial and industrial facilities, unless the pollutant generating activity does not occur.

### **3. Planning and Land Development Program**

#### **2001:**

- Implement a development-planning program that includes requirements listed below.
- A Standard Urban Stormwater Mitigation Plan (SUSMP) must be implemented for the following categories of developments:
  - Ten or more unit homes (includes single family homes, multifamily homes, condominiums, and apartments);
  - A 100,000 or more square feet of impervious surface area industrial/ commercial development;
  - Automotive service facilities (SIC 5013, 5014, 5541, 7532-7534, and 7536-7539);
  - Retail gasoline outlets;
  - Restaurants (SIC 5812);
  - Parking lots 5,000 square feet or more of surface area or with 25 or more parking spaces; and
  - Redevelopment projects in subject categories that meet Redevelopment thresholds.
    1. Land-disturbing activity that results in the creation or addition or replacement of 5,000 square feet or more of impervious surface area on an already developed site.
    2. Where Redevelopment results in an alteration to more than 50% of impervious surfaces of an existing development, and the existing development was not subject to post development storm water quality control requirements, the entire project must be mitigated.
    3. Where Redevelopment results in an alteration to less than 50% of impervious surfaces of a previously existing development, and the existing development was not subject to post development storm water quality control requirements, only the alteration must be mitigated, and not the entire development.

4. Redevelopment does not include routine maintenance activities that are conducted to maintain original line and grade, hydraulic capacity, original purpose of facility or emergency redevelopment activity required to protect public health and safety.
- Each Permittee shall require that post-construction Treatment Control BMPs incorporate, at a minimum, either a:
    - Volumetric Treatment Control BMP:
      1. 85th percentile 24-hour runoff event; or
      2. Volume of annual runoff based on unit basin storage water quality volume, to achieve 80 percent or more volume treatment; or
      3. Volume of runoff produced from a 0.75 inch storm event, prior to its discharge to the MS4; or
      4. Volume of runoff produced from a historical-record based reference 24-hour rainfall criterion for "treatment" (0.75 inch average for the Los Angeles County area) that achieves approximately the same reduction in pollutant loads achieved by the 85th percentile 24-hour runoff event.
    - Flow Based Treatment Control BMP:
      1. The flow of runoff produced from a rain event equal to at least 0.2 inches per hour intensity; or
      2. The flow of runoff produced from a rain event equal to at least two (2) times the 85th percentile hourly rainfall intensity for Los Angeles County; or
      3. The flow of runoff produced from a rain event that will result in treatment of the same portion of runoff as treated using volumetric standards above.

### **2012:**

- Develop and implement a Planning and Land Development Program for all New Development and Redevelopment projects subject to this Order to:
  - Employ Low Impact Development (LID) design principles to mimic predevelopment hydrology through infiltration, evapotranspiration and rainfall harvest and use.
  - Prioritize the selection of best management practices (BMPs)
    1. On-site infiltration, bioretention and/or rainfall harvest and use.
    2. On-site biofiltration, off-site ground water replenishment, and/or off-site retrofit.
- In addition to the categories listed under SUSMP requirements for the 2001 Permit the following projects are subject to City conditioning and approval for the design and implementation of post-construction controls:
  - All development projects equal to 1 acre or greater of disturbed area **and** adding more than 10,000 square feet of impervious surface area;
  - Industrial parks 10,000 square feet or more of surface area
  - Commercial malls 10,000 square feet or more surface area
  - Street and road construction of 10,000 square feet or more of impervious surface area shall follow USEPA guidance regarding Managing Wet Weather with Green Infrastructure: Green Streets
  - Existing single-family dwelling and accessory structures are exempt from the Redevelopment requirements unless such projects create, add, or replace 10,000 square feet of impervious surface area.
- Projects that have been deemed complete by **March 28, 2013** are not subject to the new requirements below:
  - Control pollutants, pollutant loads, and runoff volume from the project site by:
    1. Minimizing the impervious surface area **and**
    2. Controlling runoff from impervious surfaces through infiltration, bioretention and/or rainfall harvest and use.

- Retain on-site the Stormwater Quality Design Volume (SWQDV) defined as the runoff from:
  1. The 0.75-inch, 24-hour rain event or
  2. The 85th percentile, 24-hour rain event, as determined from the Los Angeles County 85th percentile precipitation isohyetal map, whichever is greater.
- Bioretention and biofiltration systems shall meet the design specifications provided in Attachment H of the Permit.
- Consider the maximum potential for evapotranspiration from green roofs and rainfall harvest and use.
- Should infiltration and on-site retention prove to be technically infeasible the following Alternative Compliance Measures may become applicable:
  - On-site Biofiltration
  - Offsite Infiltration
  - Ground Water Replenishment Projects
  - Offsite Project - Retrofit Existing Development
  - Regional Storm Water Mitigation Program
    1. A city or group of cities may apply to the Regional Board for approval of a regional or sub-regional stormwater mitigation program to substitute some or all of the New and Redevelopment requirements.
- Develop and implement a tracking system for new and redevelopment post construction stormwater BMPs
  - Implement a GIS or other electronic system for tracking projects that have been conditioned for post-construction BMPs.
- Develop and implement an inspection and enforcement program for new and redevelopment post construction stormwater BMPs
  - Inspect all development sites upon completion of construction and prior to the issuance of occupancy certificates to ensure proper installation of LID measures, structural BMPs, treatment control BMPs and hydromodification control BMPs.
  - The post-construction BMP maintenance inspection program shall incorporate the following elements:
    1. The development of a Post-construction BMP Maintenance Inspection checklist
    2. Inspection at least once every 2 years after project completion.
    3. Require documentation of proper maintenance and operations of BMPs.
- In the Annual Report - provide a list of mitigation project descriptions and estimated pollutant and flow reduction analyses (compiled from design specifications submitted by project applicants and approved by the City).

#### 4. Development Construction Program

##### **2001:**

- Implement a program to control runoff from construction activity at all construction sites. Minimum program requirements include:
  - Sediments generated on the project site shall be retained
  - Construction-related materials, wastes, spills, or residues shall be retained at the project site
  - Non-storm water runoff from equipment and vehicle washing and any other activity shall be contained at the project site
  - Erosion from slopes and channels shall be controlled by
  - implementing an effective combination of BMPs
- For construction sites one acre and greater:

- Inspect for stormwater quality requirements a minimum of once during the wet season.
- A follow-up inspection to ensure compliance should occur within 2 weeks after the initial inspection.

### **2012:**

- Increased construction site inspection frequency
  - All construction sites one (1) acre or greater that discharge to a tributary listed as impaired for sediment or turbidity under the CWA § 303(d) or determined to be a significant threat to water quality shall be inspected as follows:
    1. When two (2) or more consecutive days with greater than 50% chance of rainfall predicted by NOAA
    2. Within 48 hours of a ½-inch rain event and
    3. At least once every two (2) weeks
  - All other construction sites with one (1) acre or more of soil disturbance not meeting the criteria above inspected at least monthly.
  - inspect all phases of construction as follows:
    1. Prior to Land Disturbance
    2. During Active Construction, including Land Development & Vertical Construction
    3. Final Landscaping/Site Stabilization
- Develop, implement, and enforce a construction program that:
  - Prevents illicit construction-related discharges of pollutants into the storm drains and receiving waters.
  - Implements and maintains structural and non-structural BMPs to reduce pollutants in stormwater runoff from construction sites.
- Establish an enforceable erosion & sediment control city ordinance for all construction sites that disturb soil.
- Develop and implement a checklist to document review of each Erosion Sediment Control Plan (ESCP) for construction sites 1-acre and greater.
- Implement technical standards for the selection, installation and maintenance of construction BMPs for all construction sites 1-acre and greater.
  - The BMP technical standards shall require the use of BMPs that are tailored to the risks (based on the potential for erosion from the site) and the sensitivity of the receiving water body posed by the project. The following best management practices (BMPs) are examples referenced in the Permit:
    1. Preservation of Existing Vegetation
    2. Silt Fence
    3. Sand Bag Barrier
    4. Stabilized Construction Site Entrance/Exit
    5. Water Conservation Practices
    6. Stockpile Management
    7. Spill Prevention and Control
- Develop, implement, and revise as necessary, standard operating procedures that identify the inspection procedures the City will follow.
- Ensure all staff whose primary job duties are related to implementing the construction stormwater program are adequately trained.

## **5. Public Agency Activities Program (PAAP)**

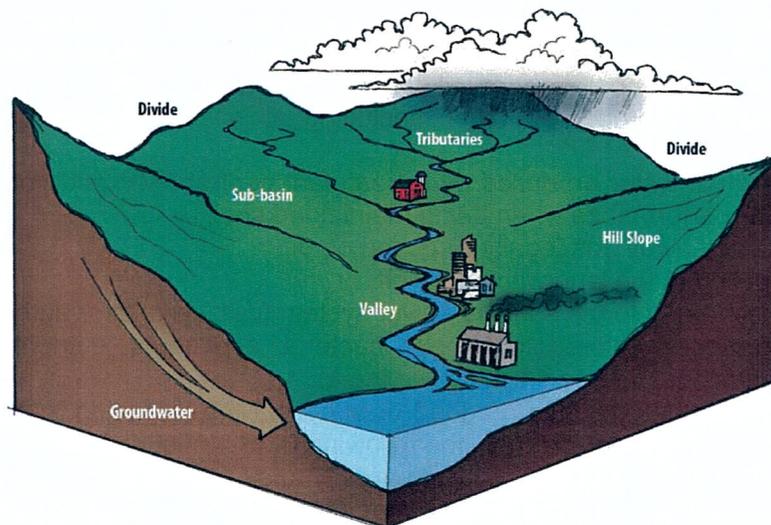
### **2001:**

- Develop and implement a Public Agency program to minimize stormwater pollution impacts from public agency activities.
- Develop and implement a response plan for overflows of the sanitary sewer system.
- Develop and implement a standardized protocol for the routine and non-routine application of pesticides, herbicides (including pre-emergents), and fertilizers;
- Designate catch basin inlets as priority A, B, or C based on the amount of trash generated.
- Clean catch basins according to the following schedule:
  - Priority A: A minimum of three times during the wet season and once during the dry season every year.
  - Priority B: A minimum of once during the wet season and once during the dry season every year.
  - Priority C: A minimum of once per year.

*The City of San Dimas has approximately 692 priority C catch basins, no priority A or B catch basins.*
- For any special event that can be reasonably expected to generate substantial quantities of trash and litter, include provisions that require for the proper management of trash and litter generated, as a condition of the special use permit issued for that event.
- Inspect the legibility of the catch basin stencil or label nearest the inlet. Catch basins with illegible stencils shall be recorded and re-stenciled or re-labeled within 180 days of inspection.
- Evaluate, determine, and designate streets and/or street segments based on trash generation: A (highest), B (moderate), C (low)

### 2012:

- Screen existing areas of development to identify candidate areas for retrofitting using watershed models (pictured below) or other screening level tools.
  - Watershed models are driven by precipitation, landuse, impervious areas, slope, soil types and drainage area. GIS programs like BASINS and WCS provide the data that is needed for watershed models to predict both water and pollutant runoff from a watershed.



- Implement an Integrated Pest Management (IPM) Program that includes the following:
  - Pesticides are used only if monitoring indicates they are needed,
  - Treatments are made with the goal of removing only the target organism.
  - Pest controls are selected and applied in a manner that minimizes risks to human health, beneficial non-target organisms, and the environment.
  - The use of pesticides, including Organophosphates and Pyrethroids, does not threaten water quality.
  - Adopt and verifiably implement policies, procedures, and/ or ordinances requiring the minimization of pesticide use and encouraging the use of IPM techniques (including beneficial insects) for Public Agency Facilities and Activities.
  - Policies, procedures, and ordinances shall include commitments and a schedule to reduce the use of pesticides that cause impairment of surface waters.
  - Ensure there is no application of pesticides or fertilizers
    1. When two or more consecutive days with greater than 50% chance of rainfall are predicted by NOAA34,
    2. Within 48 hours of a ½-inch rain event, or
    3. When water is flowing off the area where the application is to occur.
  - Ensure that no banned or unregistered pesticides are stored or applied.
  - Ensure that all staff applying pesticides are certified in the appropriate category by the California Department of Pesticide Regulation, or are under the direct supervision of a pesticide applicator certified in the appropriate category.
- Determine priority areas and update existing map or list of Catch Basins with GPS coordinates and priority based on trash generation: A (highest), B (moderate), C (low) include rationale/ data to support designations.
- Label all City owned storm drain inlets with a legible “no dumping” message.
- Implement program for Storm Drain Maintenance that includes the following:
  - Visual monitoring of city-owned open channels and other drainage structures for trash and debris at least annually.
  - Removal of trash and debris from open channels a minimum of once per year before the wet season.
  - Elimination of the discharge of contaminants during MS4 maintenance and clean outs.
  - Proper disposal of debris and trash removed during storm drain maintenance.
- Implement controls to limit infiltration of seepage from sanitary sewers to the waterways
- Implement an inspection and maintenance program for all Permittee owned treatment control BMPs; including post construction treatment control BMPs.
  - Ensure proper operation of all treatment control BMPs and maintain them as necessary for proper operation, including all post-construction treatment control BMPs.
  - Any residual water produced by a treatment control BMP and not being internal to the BMP performance when being maintained shall be:
    1. Hauled away and legally disposed of; or
    2. Applied to the land without runoff; or
    3. Discharged to the sanitary sewer system (with permits or authorization); or
    4. Treated or filtered to remove bacteria, sediments, nutrients, and meet the limitations, prior to discharge to the MS4
  - Any project that includes roadbed or street paving, repaving, patching, digouts, or resurfacing roadbed surfaces, the following BMPs must be implemented:
    1. Restrict paving and repaving activity to exclude periods of rainfall or predicted rainfall unless required by emergency conditions.

2. Install sand bags or gravel bags and filter fabric at all susceptible storm drain inlets and at manholes to prevent spills of paving products and tack coat;
3. Prevent the discharge of release agents including soybean oil, other oils, or diesel into the MS4 or receiving waters.
4. Prevent non-storm water runoff from water use for the roller and for evaporative cooling of the asphalt.
5. Clean equipment over absorbent pads, drip pans, plastic sheeting or other material to capture all spillage and dispose of properly.
6. Collect liquid waste in a container, with a secure lid, for transport to a maintenance facility to be reused, recycled or disposed of properly.
7. Collect solid waste by vacuuming or sweeping and securing in an appropriate container for transport to a maintenance facility to be reused, recycled or disposed of properly.
8. Cover the "cold-mix" asphalt (i.e., pre-mixed aggregate and asphalt binder) with protective sheeting during a rainstorm.
9. Cover loads with tarp before haul-off to a storage site, and do not overload trucks.
10. Minimize airborne dust by using water spray during grinding.
11. Avoid stockpiling soil, sand, sediment, asphalt material and asphalt grindings materials or rubble in or near MS4 or receiving waters.
12. Protect stockpiles with a cover or sediment barriers during a rain.

#### 6. Illicit Connections (IC) and Illicit Discharges (ID) Elimination Program

Illicit Connection (IC)



Illicit Discharge (ID)



#### 2001:

- Develop and maintain a listing of all permitted connections to the storm drain system.
- Train all targeted employees who are responsible for identification, investigation, termination, cleanup, and reporting of illicit connections and discharges.
- Field Screen the storm drain system for illicit connections
- Complete a review of all permitted connections to the storm drain system, to confirm compliance.
- Upon confirmation of an illicit connection the City shall ensure termination of the connection within 180 days,.
- Respond to illicit discharges within one business day of discovery or a report of a suspected illicit discharge.

**2012:**

- Continue to implement an (IC/ID) Program to detect, investigate, and eliminate IC/IDs to the MS4.
- Develop written procedures for conducting investigations to identify the source of and eliminate all suspected illicit discharges
- Maintain formal records for all illicit connection investigations and the formal enforcement taken to eliminate illicit connections.
- Develop and maintain written procedures that document how complaint calls for non-stormwater discharges and spills are received, documented, and tracked to ensure that all complaints are adequately addressed.

**7. Total Maximum Daily Load Provisions**

As defined by the Regional Board, Total Maximum Daily Loads (TMDLs) are the sum of the individual waste load allocations for point sources and load allocations for nonpoint sources and natural background. Basically, a TMDL is the maximum amount of a designated pollutant that a water body could receive and maintain its beneficial uses.

The City of San Dimas is subject to the following TMDLs:

- San Gabriel River
  - Walnut Creek (3 impairments)
    1. Benthic-Macroinvertebrate Bioassessments
    2. Indicator Bacteria
    3. pH
  - San Jose Creek (1 impairment)
    1. Coliform Bacteria

As some of the City's outfalls (as pictured below) drain to Puddingstone we are responsible for its associated TMDLs.

- Puddingstone Reservoir
  - 25-in lake Parameters
  - 21- Stormwater Parameters

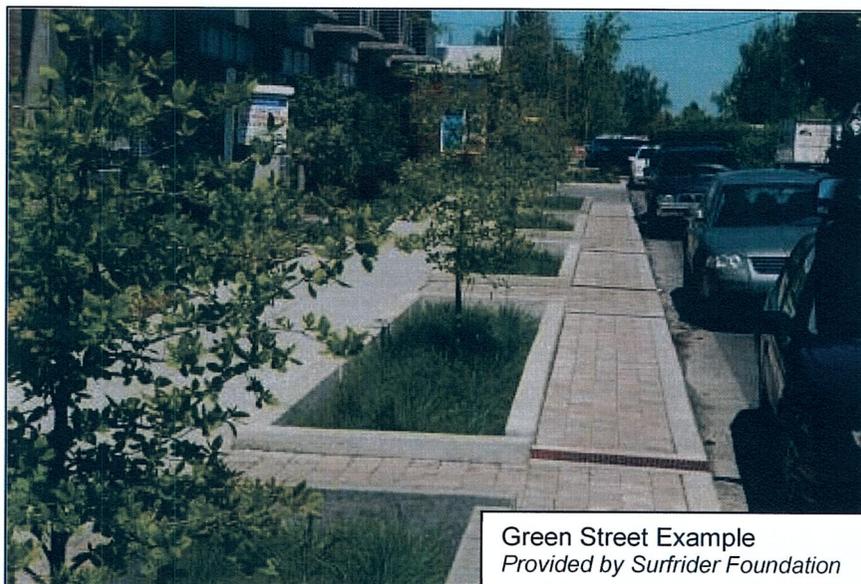


Next Steps:

Most of the requirements set forth in the new Permit must be implemented in the next six (6) months. Staff will meet with LA County and other SGR watershed cities to prioritize watershed compliance measures and determine cost. Staff is also coordinating with the LA Permit group to obtain a consultant to prepare the LID Ordinance, Green Streets<sup>1</sup> Policy, memorandum of understanding (MOU) for permittees wishing to collectively participate in either a Watershed Management Plan (WMP) or an Enhanced Watershed Management Plan (EWMP), and other general Permit requirements.

Staff is working with the Planning Department to implement some of the upcoming requirements that will affect current protocols and will continue coordination to implement new requirements. Furthermore, staff has developed a 13 page compliance matrix to detail program requirements and the associated compliance deadlines which is available to all upon request.

Although costs have not been finalized, in analyzing the increase in management, responsibility, development, tracking, and reporting for each of the NPDES Programs costs will likely increase hundreds of thousands of dollars. However, once costs are determined Staff will prepare and provide a matrix for review.



cc: Blaine Michaelis, City Manager  
Kenneth Duran, Assistant City Manager/Treasurer/City Clerk  
Lawrence Stevens, Assistant City Manager of Community Development  
Theresa Bruns, Director of Parks and Recreation  
J. Kenneth Brown, City Attorney

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<sup>1</sup> A green street can be defined as a street designed to integrate a system of stormwater management within its right of way to reduce the amount of water that is piped directly to streams and rivers.