



July 6, 2009

**Mr. Sergio Bosques**  
Regional Storm Water Coordinator  
Caribbean Environmental Protection Division  
US Environmental Protection Agency, Region II  
Centro Europa Building, Ste 417  
1492 Ponce de Leon Avenue  
San Juan, PR 00907-4127

**NOTICE OF INTENT-NOI- MUNICIPALITY OF CAYEY, NPDES PERMIT NO. PRR040000,  
FOR STORM WATER DISCHARGES FROM SMALL MS4s IN URBANIZED AREAS**

As part of the provisions of the Clean Water Act, Section 402 (p), requires that storm water discharges, associated with municipal separate storm sewer system (MS4s) in urbanized areas, to waters of the US must be authorized by a National Pollutant Discharge Elimination System (NPDES) permit. In order to comply with this requirement, we are submitting our Notice of Intent for the NPDES Permit no. PRR040000. The document includes a plan to manage storm waters, pursuant to Title 40, Part 122.34 Subpart B, or Permit Application and Special NPDES Program Requirements.

The Municipality of Cayey has the intention of comply with the Permit's provisions and EPA requirements.

In you need additional information, do not hesitate to contact us at the Planning, Economic Development and Engineering Office at 787-263-2385 or via e-mail at [planecayey@gmail.com](mailto:planecayey@gmail.com).

Cordially,



Rolando Ortiz Velázquez

Mayor

enclosure

## NOTICE OF INTENT

### MUNICIPALITY OF CAYEY, PUERTO RICO NPDES PERMIT NO. PRR040000, FOR STORM WATER DISCHARGES FROM SMALL MS4s IN URBANIZED AREAS

1. The Municipality of Cayey operates a Municipal Separate Storm Sewer System and was listed as a regulated MS4 in Puerto Rico.
  
2. **Responsible Official-** Mr. Rolando Ortiz Velázquez  
 Title: Mayor of the Municipality of Cayey  
 Address: PO Box 371330 Cayey, PR 00737  
 Telephone: 787-263-2385, 738-3211  
 E-mail address: [plancayey@gmail.com](mailto:plancayey@gmail.com)
  
3. **Designated Storm Management Program Contact:**  
 Victoria Núñez Sierra, Esq.  
 Title: Director of Planning, Economic Development and Engineering  
 Address: PO Box 371330 Cayey, PR 00737  
 Telephone: 787-263-2385, 263-0880, 263-0889  
 E-mail address: [plancayey@gmail.com](mailto:plancayey@gmail.com); [planningcayey@gmail.com](mailto:planningcayey@gmail.com)
  
4. **SIC Number:** 9199
  
5. **List of Environmental Permits (including state)**

AGENCY	PERMIT NUMBER	TYPE	FACILITY
EQB-Environmental Quality Board of PR	DBR-18-94-03-0009	Biomedical	Municipal Hospital
EQB-Environmental Quality Board of PR	SR-18-0372	Permit to Transport Non-Hazardous Solid Wastes	Municipal Landfill
EQB-Environmental Quality Board of PR	AU-01-18-0530	Used Oil Generator Permit	Municipal Public Works
Puerto Rico Department of Natural Resources	O-R3-PSE01-GU-00249-17092007 O-R3-PSE01-GU-00250-17092007 O-R3-PSE01-GU-00252-17092007 O-R3-PSE01-GU-00252-17092007	Permits to remove vegetation and sediment accumulated on municipal streams:	Municipal Public Works

	O-R3-PES01-GU-00254-17092007			
	O-R3-PES01-GU-00314-13052008			
	O-R3-PES01-GU-00315-13052008			

**6. Topographic Map- Appendix A**

**7. Description of MS4**

The Municipality of Cayey is located in the mountain range to the south coast of the island at Latitude 18°06'47" N and Longitude 66°03'092" W. It has a territorial extension of 52 square miles. Cayey is bounded by north with Cidra and Caguas municipalities; south with Salinas and Guayama; west with Aibonito and Salinas; and by the east with Caguas and San Lorenzo municipalities.

Cayey is divided into 22 wards: Beatriz, Cayey Pueblo, Cedro, Cercadillo, Culebras Altas, Culebras Bajas, Farallón, Guavate, Jájome Alto, Jájome Bajo, Lapa, Matón Abajo, Matón Arriba, Monte Llano, Pasto Viejo, Pedro Ávila, La Piedra, Quebrada Arriba, Rincón, Sumido, Toita and Vegas.

Cayey is about a half hour drive south of San Juan, traffic permitting. It is located on Route 52, beyond Caguas, and lies more or less in the geographic center of the eastern half of Puerto Rico. The city possesses a population of 47,370 inhabitants, according to the 2000 Census. The city is changing, and rapidly. Cayey is now considered within commuting distance of the expanding urban economies of San Juan and Caguas. It presents an appealing natural environment and a peaceful residential setting for those who work in the busy urban areas to the north.

Cayey now finds itself at a point of time and confronted with a set of circumstances that make it necessary for it to engage in the process of defining its future. The Municipality recognizes the negative implications of the city's declining historic core, and has reluctantly observed the town's rapid growth, creating sprawling gated communities in its agricultural valleys and scattered constructions all over its hills. Cognizant of the danger to its greatest treasure - the natural environment - and the seemingly reduced control it has over new developments, the town's political leadership recognizes the need for formulating strategies that will mould the town's growth in directions that it and residents are more comfortable with. To this end, the Municipality of Cayey commissioned the development of a Strategic Plan, aware that a holistic effort that encompasses economic issues, land uses and density, transportation and infrastructure networks, services and open space will best serve in recapturing control over its future. The Municipality also set about gaining autonomy in its planning and permitting processes from the Central Planning Board, and commissioned the development of the a comprehensive Land Use Plan for the entire Municipality. This Land Use Plan was approved on February 2008 by the Planning Board and the Governor of Puerto Rico and classifies the land of the

Municipality to accommodate future development, and to preserve our most valuable areas and resources. A total of 60%+ of the land in our Municipality was protected and impose development restrictions in order to control suburban sprawl and protect our natural resources and quality of life.

The Strategic Plan defines the image of Cayey for the year 2040. It identifies the strategic development initiatives - physical, economic, and social - that need to be programmed and executed immediately, in the short-term (2010), the medium-term (2025) and the long term (2040) for achieving a well considered set of goals. The document, emerge from a comprehensive public process that engaged citizens, political leaders, professionals, and key stakeholders. The Strategic Plan also establishes Cayey's role in the regional economy. It highlights its assets - especially those that are distinctive and unique - and outlines a marketing strategy that will best utilize and simultaneously preserve them. This Strategic Plan was recognized by the Boston Society of Architects, and is the planning document that guides our planning decisions.

The Municipality of Cayey Store Sewer System (MS4s) in the urban area in general consists of a series of open channel culverts and match basins, typically located within the right-of-way of municipal and state roads, interconnected by underground concrete or PVC pipes which normally discharge into the municipal creeks and streams, specially, specially into the Santo Domingo, Morillos and Los Novillos Creeks. As a summary, the Urban Area of the Cayey Municipality is part of two (2) watersheds. As the Cayey Municipality implements the proposed Storm Water Management Program a more accurate map will be provided.

The Urban Area of the Cayey Municipality is part of two (2) watersheds basically divided into the west and east part of the urban zone:

Watershed no. 1 consist on the west side of the urban area, it is located west of the intersection of PR-171 with PR-14. Runoff on this area discharges on Santo Domingo and Morillo Creeks. Basically the areas west of PR-731, north of PR-52 will discharge on Santo Domingo Creek while, areas east of PR-731, northeast and southeast of PR-171 will run towards Morillos Creek.

Watershed no. 2 consist on the east side of the urban area, located east of the intersection of PR-171 with PR-14. Runoff on this area discharges on Los Novillos Creek. Basically, the area north of PR-14 which runs southeast; the area south of PR-14 and north of PR-1 which runs east; the area south of PR-1 which runs north and the area south of PR-52 which also runs north, all towards Los Novillos Creek.

#### **8. Estimated square miles served by the MS4**

The Cayey's urban zone is located north of PR-52. It includes its traditional urban center (Pueblo Ward) and also integrates some areas of the Rincon Ward. The municipal urban area has a population of 19,940 and a territorial extension of approximately 2.52 square miles.

The municipality has a territorial extension of 52 miles of which 2.52 square miles are classified as urban area (for purposes of our MS4 management plan, only the delineated urban area is considered the services area of the municipality storm sewer system).

## **9. Description of the Best Management Practices to be implemented by the Municipality**

As required by the 40 CFR 122.34, Subpart B, the Municipality of Cayey will develop a Storm Water Management Program (SWMP) in harmonization with the Clean Water Act. This SWMP, will be based on the minimum control measures included in the paragraph (b) of the referred section. There are six minimum control measures that includes: 1) Public education and outreach on storm water impacts, 2) Public Involvement and Participation, 3) Illicit discharge detection and & elimination, 4) Construction, 5) Post-Construction, 6) Pollution Prevention/Good Housekeeping. The Municipality of Cayey will develop, implement and enforce actions in each of the minimum controls measures to protect our water quality, and reduce the discharge of pollutants in our Municipality.

The Best Management Practices for the SWMP of the Municipality of Cayey will be based on the National Menu of Stormwater Best Management Practices, which is a complete website that provides abundant information about the best practices implemented by other MS4 around the country.

### **Six Minimum Control Measures and its BMP to be implemented by the MS4-Cayey**

#### ***1) PUBLIC EDUCATION AND OUTREACH PROGRAM***

This measure consist in educate the people and provide them with simple actions and guidance that they can implement at their houses or business to make a difference and make its contribution to our quality of water. It is creating an awareness of the activities with pollution-potential for the storm water system and how they can avoid those activities.

##### **1.1 Distribution of Storm Water related materials: Pamphlets, Booklets, and Flyers**

As recommended in the National Menu of Stormwater BMP the Municipality of Cayey will develop a comprehensive public outreach strategy as a first step to begin an effective outreach campaign and this constitute our first BMP for the public education. In partnership with the U.S. Environmental Protection Agency (EPA) and State Agencies, the municipality will develop storm water related pamphlets, booklets, and flyers intended to solicit interest in a specific storm water event or activity and to promote storm water education, to make the public sufficiently aware and concerned about the significance of their behavior for storm water pollution. Through information and education, the municipality expects to change improper behaviors. Pamphlet racks will be set up at libraries, schools and municipal offices.

The Cayey municipality must focus their educational pamphlets into measures to minimize and eliminate illegal dumping activities.

### **1.2 Newspaper Campaign**

Through the media, a campaign can educate a targeted or mass audience about the problems of and solutions to storm water pollution. This effort will increase the exposure of citizens to information relating how to prevent storm water pollution.

### **1.3 Radio Campaign**

The municipality will produce a 30-second public service announcement (PSA) at the WLEY 1080 AM. The PSA's will highlight the impacts of storm water in the community.

### **1.4 School Educational Campaign**

The municipality will develop a storm water outreach program for a general age-range target. This includes that development of information materials and brochures for distribution to the schools. The educational outreach program shall include videos and classrooms presentations local government agencies to offer presentations and provide educational material.

### **1.5 Web Page (Segment in Municipal Web Page)**

The municipality will develop a stormwater Web page associated with its existing Web site [www.cayey.gobierno.pr](http://www.cayey.gobierno.pr). This Web site shall have counters to monitor number of monthly visits.

## **2) PUBLIC INVOLMENT AND PARTICIPATION PROGRAM**

The Municipality of Cayey understands the importance of the public participation in the planning process and in the implementation of any project. Because we need to engage our population in this process, and we need to spread the message to a diverse population, this effort will require a comprehensive approach in coordination with state level agencies and our community groups among other partners that will be identified.

However, it is important to mention that the Municipality of Cayey already has several programs and initiatives in place that as part of the Stormwater Management Program will be evaluated in order to improve them. We have as a goal to convert our Municipality in a "Green City", in order to achieve that, we had implemented several programs including: a reforestation program, recycling program, and urban forestry program, landscaping, among others. Initiatives such as: installation of trash cans around the city, campaigns for the population to eliminate trash on the streets, constant painting and cleaning of the city sidewalk and streets, and communities and students received

educational trainings on subjects related to preserving a healthy environment: recycling, solid waste, reforestation and others are some initiatives that we already have in place. We are one of the few Municipalities' with our own garden center "Vivero" administered by our employees with the purpose of cultivate trees, plants and flowers for our Municipality. These are some of the several initiatives that the Municipality is working and monitoring on a daily basis.

Best Management Practices that may be evaluated and included in the Stormwater Management Program of the Municipality includes:

**2.1. Annual Cleanup and monitoring (streams, catch basins)**

The municipality shall promote and annual cleanup that will directly involve citizens in water pollution prevention and make the community aware that most storms drains discharge untreated waters directly into the river and ocean. The municipality will solicit the cooperation of public and private entities to conduct a cleanup of the streams. The cleanup will elicit volunteers from community and environmental groups as well as teachers to guide the cleanup and identify the types of trash collected. The municipality will coordinate the disposal of the collected garbage. Recyclable materials will be separated from trash and taken to the recycling center.

**2.2. Reforestation Programs**

The municipality has selected candidate sites for reforestation programs, such as: streams corridors, public and emblematic places and green areas within the urban zone.

**3) ILLICIT DISCHARGE DETECTION AND ELIMINATION**

As recommended in the National Menu of Stormwater BMP the Municipality of Cayey will develop an Illicit Discharge Detention and Elimination Program. This program will be developed following the Illicit Discharge Detention and Elimination: A Guidance Manual for Program Development and Technical Assessments. This section of the plan has been developed to detect and eliminate illicit discharges, as defined in 40 CFR §122.26(b) (2), into the MS4 of the urban area in the Municipality of Cayey. The plan includes procedures for locating priority areas likely to have illicit discharge, procedures for removing the source of the discharge, and procedures for program evaluation and assessment.

In order to meet the permit requirements and objectives established by the EPA, the following best management practices are to be implemented by the Municipality of Cayey:

### **3.1. Program to Detect Failing Septic Systems**

The Puerto Rico Environmental Quality Board (EQB) has current regulations for the proper siting, sizing and maintenance of septic systems. The municipality will develop a program to detect failing septic systems and notify its findings to the EQB for proper enforcement. Inspection will be performed on an annual basis to those residential areas not served by the State Aqueducts and Sewer Authority. The sanitary sewer system at the cayey municipality is limited to a portion of the urban area. Rural communities usually lack this service which obligates the use of septic tanks.

### **3.2. Program to Direct, Identify, and Eliminate Illegal Dumping**

Illegal dumping is a major pollution problem faced by the municipality. Beatriz and Mogote creeks are the most affected.

Trough current ordinances (#29- year 1987-1988), the municipality has prohibited illegal disposal of waste in an unpermitted area such as creeks and rivers or into a storm drain system. The municipality will develop and implement all procedures, programs, and actions required to appropriately enforce these regulations.

### **3.3. Program to Detect, Identify, and Eliminate Illicit Discharges**

The plan to detect and address illegal discharges to the system will included four main steps: locate problem areas, find the source, remove or correct illicit connections and document the ensuing course of action.

### **3.4. Program to Detect, Identify, and Eliminate Wastewater Connections to the Storm Drain System**

Current state laws prohibit unwarranted connection of a wastewater system to a storm drain system. The municipality will implement all actions required to appropriately enforce this law.

### **3.5. Storm Sewer System Map**

A comprehensive infrastructure map has not yet been created. A storm drain system map will be developed in the first year. Once completed, this map will aid the municipality in targeting outfalls with dry weather flows and other suspicious discharges for more in-depth inspection and monitoring and will help coordinate management activities to remove illicit connections and track storm drain system maintenance.

#### **4) CONSTRUCTION SITE STORM WATER RUNOFF CONTROL**

The SWMP activities implemented under Minimum Control Measure (MCM) 4 will focus on developing, implementing, and enforcing a program that will reduce or eliminate the impacts of storm water runoff from construction activities that result in a land disturbance of greater than or equal to one acre into the storm sewer system during the permit term throughout the community.

In order to meet the permit requirements and objectives established by the EPA, the following best management practices are to be implemented by the Municipality of Cayey:

- 4.1. Procedures for reviewing construction site plans**
- 4.2. Inspection and Enforcement of Storm Water Requirements at Construction Sites**
- 4.3. Inspection of Sanitary Sewer Connections**
- 4.4. Require Electronic copies of Sanitary and Sewer Systems Layouts**

#### **5) POST-CONSTRUCTION STORM WATER MANAGEMENT IN DEVELOPMENT AND REDEVELOPMENT**

In order to mitigate Stormwater impacts from new developments within our Municipal boundaries we will evaluate as BMP the recommended in the National Menu of Stormwater BMP under the **Municipal Program Elements**. As part of the post-construction Plan review the Municipality will revised the existing way of evaluation of the development projects and integrates the recommendations of EPA into this process. In terms of the zoning measurements, the Municipality of Cayey during the past years work in the development of our Land Use Plan for the all Municipality. This Land Use Plan was approved by the Planning Board of Puerto Rico and the Governor of Puerto Rico, and is the document that the agencies in charge of the permitting process in the island will utilize to evaluate every development within our municipality. The Land Use Plan for our Municipality of Cayey protects 60%+ of our territory, this after a conscientious analysis of our available land. Additional zoning restriction that the municipality can apply will be carefully analyzed as part of the development of our SWMP.

#### **6) POLLUTION PREVENTION (GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS)**

In order to protect our storm water system within our MS4, we will undertake as a BMP a **Municipal Employee Training and Education program**, with the purpose of educate our own employee of the best practices utilized to protect our quality of water and oversee the daily activities conducted by our employees. This educational program will be a comprehensive one, and should include written materials, conferences, workshops, and other.

**10. Description of Measurable goals for each BMP**

<b><u>1. PUBLIC EDUCATION AND OUTREACH PROGRAM</u></b>		<b>Control Measures/Goals</b>
<b>Permit Term</b>	<b>Activity</b>	
Year 1	<ul style="list-style-type: none"> <li>▪ Distribution of storm water related materials: pamphlets, booklets, and flyers</li> <li>▪ Newspaper Campaign</li> <li>▪ Radio Campaign</li> <li>▪ Web Page</li> </ul>	
Year 2	<ul style="list-style-type: none"> <li>▪ Newspaper Campaign</li> <li>▪ School Educational Campaign</li> <li>▪ Web Page</li> </ul>	
Year 3	<ul style="list-style-type: none"> <li>▪ Distribution of storm water related materials: pamphlets, booklets, and flyers</li> <li>▪ Newspaper Campaign</li> <li>▪ Radio Campaign</li> <li>▪ Web Page</li> <li>▪</li> </ul>	
Year 4	<ul style="list-style-type: none"> <li>▪ Newspaper Campaign</li> <li>▪ School Educational Campaign</li> <li>▪ Web Page</li> </ul>	
Year 5	<ul style="list-style-type: none"> <li>▪ Distribution of storm water related materials: pamphlets, booklets, and flyers</li> <li>▪ Newspaper Campaign</li> <li>▪ Radio Campaign</li> <li>▪ Web Page</li> </ul>	
<b><u>2. PUBLIC INVOLMENT AND PARTICIPATION PROGRAM</u></b>		
<b>Permit Term</b>	<b>Activity</b>	
Year 1	<ul style="list-style-type: none"> <li>• Annual Cleanup and monitoring (streams and catch basins).</li> </ul>	
Year 2	<ul style="list-style-type: none"> <li>• Annual Cleanup and monitoring (streams and catch basins).</li> <li>• Reforesting Programs.</li> </ul>	
Year 3	<ul style="list-style-type: none"> <li>• Annual Cleanup and monitoring (streams and catch basins).</li> </ul>	
Year 4	<ul style="list-style-type: none"> <li>• Annual Cleanup and monitoring (streams and catch basins).</li> <li>• Reforestation Programs.</li> </ul>	

Year 5		<ul style="list-style-type: none"> <li>• Annual Cleanup and monitoring (streams and catch basins).</li> </ul>
<b><u>3. ILLICIT DISCHARGE DETECTION AND ELIMINATION</u></b>		
<b>Permit Term</b>		<b>Activity</b>
Year 1		<ul style="list-style-type: none"> <li>• Visual Inspection in communities served by Septic tanks.</li> <li>• Dry Weather Test on critical manholes.</li> <li>• Urban area outfalls visual inspection.</li> <li>• Storm Sewer System Map.</li> <li>• Visual inspection to old sanitary pipelines.</li> </ul>
Year 2		<ul style="list-style-type: none"> <li>• Visual inspection to industries.</li> <li>• Urban area outfalls visual inspection.</li> <li>• Information booklets on septic system's proper maintenance.</li> <li>• Visual inspections to old sanitary pipelines.</li> </ul>
Year 3		<ul style="list-style-type: none"> <li>• Visual Inspection in communities served by Septic tanks.</li> <li>• Dry Weather Test on critical manholes.</li> <li>• Urban area outfalls visual inspection.</li> <li>• Storm Sewer System Map.</li> <li>• Visual inspection to old sanitary pipelines.</li> </ul>
Year 4		<ul style="list-style-type: none"> <li>• Urban area outfalls visual inspection.</li> <li>• Storm Sewer System Map.</li> <li>• Visual Inspection to old sanitary pipelines</li> </ul>
Year 5		<ul style="list-style-type: none"> <li>• Dry Weather Test on critical manhole.</li> <li>• Urban area outfalls visual inspection.</li> <li>• Visual Inspection to old sanitary pipelines.</li> </ul>

<b><u>4. CONSTRUCTION SITE STORM WATER RUNOFF CONTROL</u></b>		
<b>Permit Term</b>		<b>Activity</b>
Yearly		<ul style="list-style-type: none"> <li>▪ Review construction site plans</li> <li>▪ Construction site inspections</li> <li>▪ Assuring proper sanitary connections</li> <li>▪ Require electronic copies of sanitary and sewer lines</li> </ul>
<b><u>5. POST-CONSTRUCTION STORM WATER MANAGEMENT IN DEVELOPMENT AND REDEVELOPMENT</u></b>		
<b>Permit Term</b>		<b>Activity</b>
Yearly		<ul style="list-style-type: none"> <li>▪ Coordinate with contractors, developers, and state regulatory agencies to assure the project is in compliance with state and federal laws and with any other regulatory agency requirements.</li> <li>▪ Construction site plan reviews.</li> </ul>
<b><u>6. POLLUTION PREVENTION (GOOD HOUSEKEEPING FOR MUNICIPAL OPERATIONS)</u></b>		
<b>Permit Term</b>		<b>Activity</b>
Year 1		<p>Develop SPCC Plan for DTPW facility.  Install grease trap on mechanical shop drain system at DTPW facility.  Install secondary containment to both diesel and used oil tanks.</p>
Year 2		<p>Municipal employee trainings (every two years).  Improve storm water management from the sanitary landfill.</p>

**11. Person Responsible for implementation**

Victoria Núñez Sierra, Director of the Planning, Economic Development and Engineerig Office.

**12. 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 gather and evaluate 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.”*

  
\_\_\_\_\_  
**Rolando Ortiz Velazquez, Mayor**  
**Signature of Responsible Official**

\_\_\_\_\_  
**Date**

# APPENDIX A

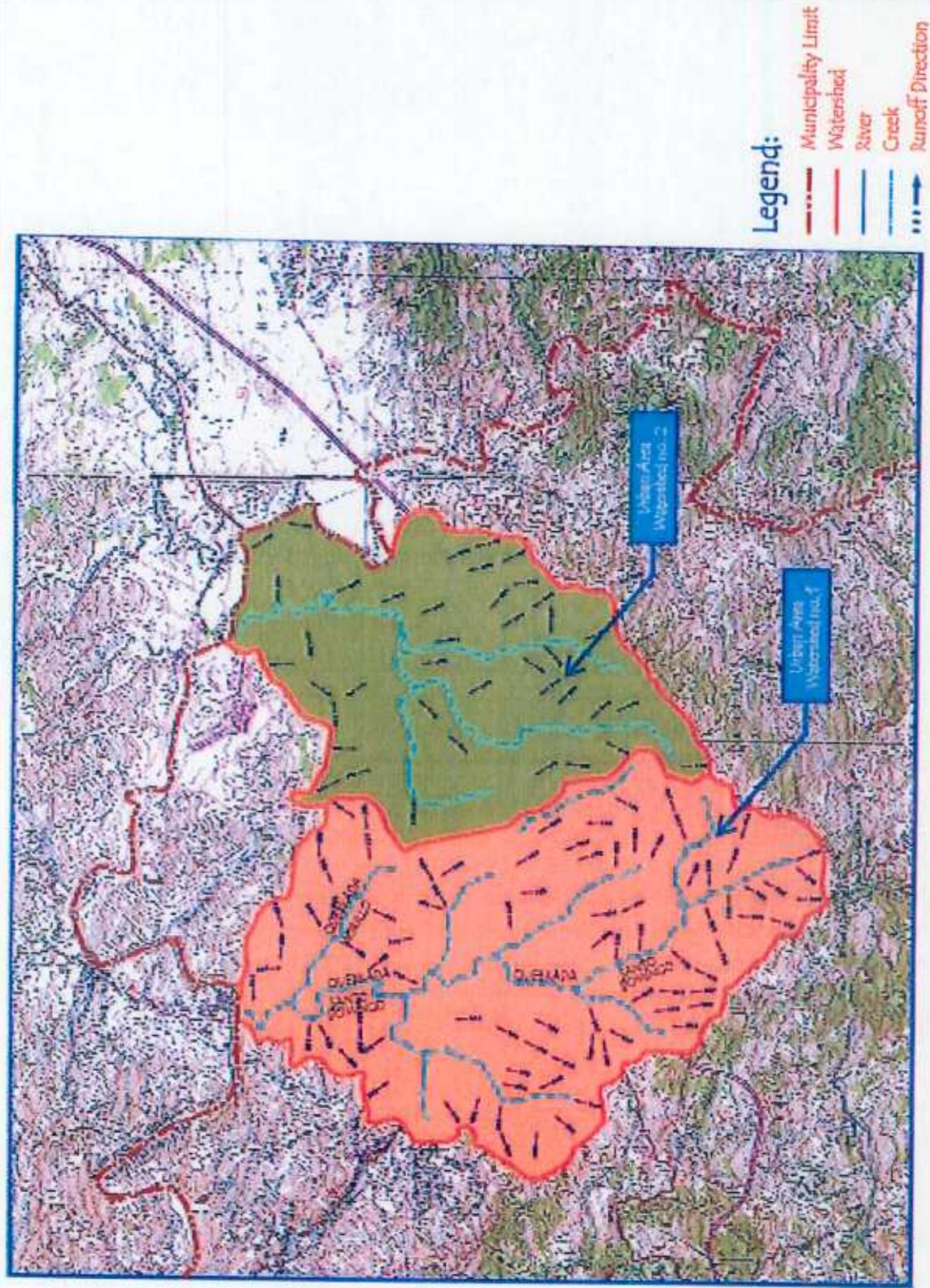


FIGURE 6: TOPOGRAPHIC MAP DEPICTING THE WATERSHEDS AND RUNOFF BEHAVIOR

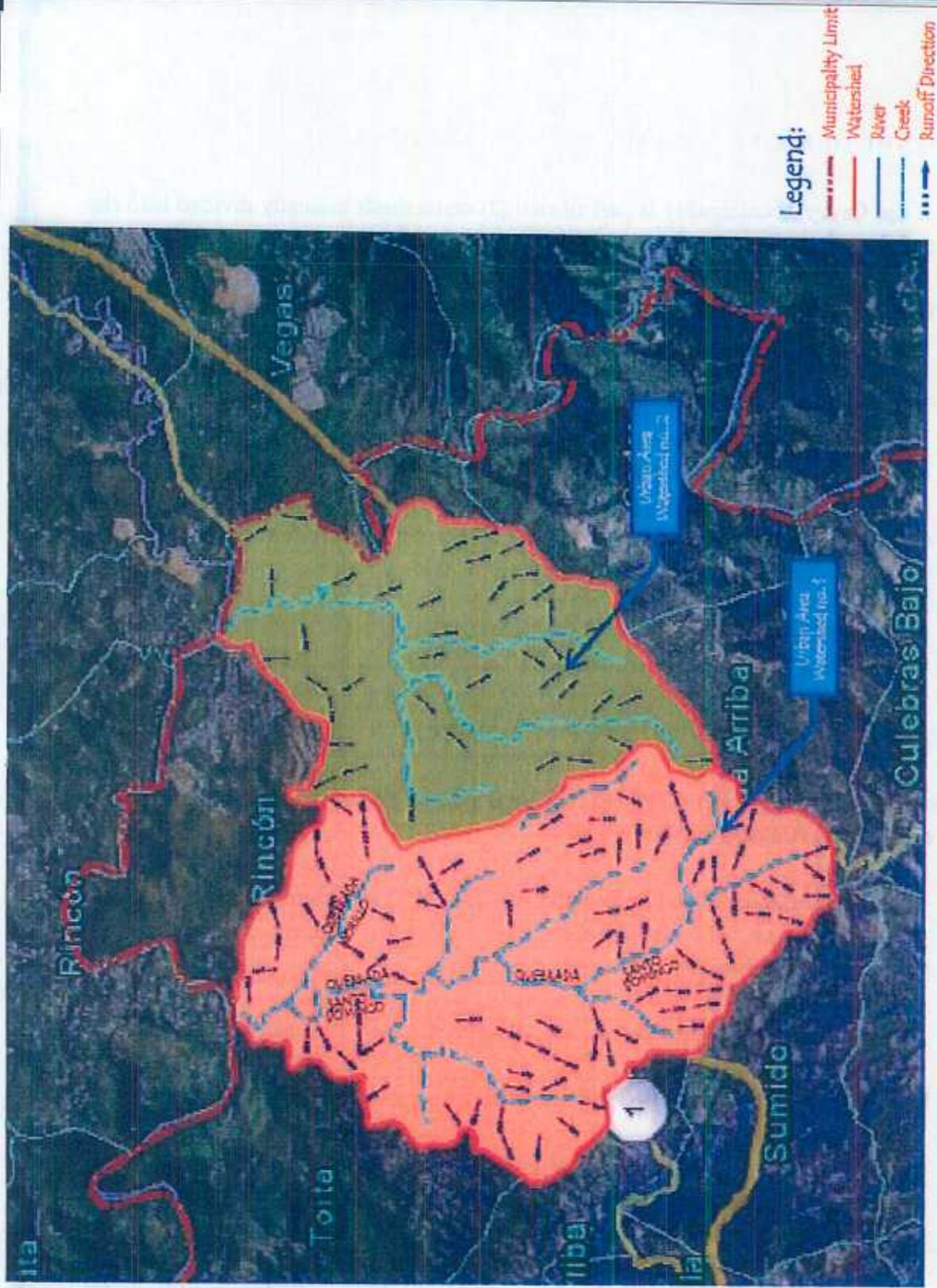


FIGURE 7: AERIAL PHOTO DEPICTING THE WATERSHEDS AND RUNOFF BEHAVIOR