

Certified Stormwater Manager Examination Content Outline

1. PROGRAM MANAGEMENT: 67 items (Recall:16, Application: 40, Analysis:11)

A. Overall Storm water Management : 22 items (Recall:5, Application: 13, Analysis:4)

1. Identify the common sources and impact of non-point source pollutants caused by stormwater runoff (e.g., nitrogen, phosphorous, pesticides, fecal coliforms).
2. Maintain knowledge the

3. Educate stakeholders on environmental regulations (e.g., communicate violations, deficiencies, or noncompliance).
4. Educate stakeholders on matters pertaining to equipment, construction, and operations.

D. Planning and Design: 23 items (Recall:5, Application: 14, Analysis: 4)

1. Determine the most cost-effective mix of structural vs. non-structural stormwater management practices that can meet the subwatershed goals.
2. Determine the primary stormwater pollutants of concern (e.g., phosphorus, bacteria, sediment, metals, hydrocarbons, or trash and debris).
3. Determine stormwater management practices that should be used or avoided in the subwatershed because of their environmental impacts.
4. Identify property as needed for the stormwater management program.
5. Develop capital improvement projects.
6. Evaluate low impact development alternatives for stormwater.
7. Review plans for impact of stormwater runoff from highways, parking lots, residential developments, and other impervious surfaces.
8. Review individual plans to ensure compliance and consistency with other plans (e.g., master plans for development).
9. Utilize GIS or other mapping techniques.

2. WATER QUALITY and QUANTITY: 68 items (Recall:16, Application: 32, Analysis:20)

A. Regulatory Programs: 30 items (Recall: 6, Application:18, Analysis: 6)

1. Administer various pollution abatement management programs.
2. Implement programs to determine which local businesses require inspections for other pollutants such as oil and grease.
3. Conduct site inspections of businesses and private properties:
 - a. inspections for other pollutants.
 - b. discharge permits.
 - c. non-stormwater discharges.
4. Conduct illicit discharge inspections and surveys for:
 - a. cross connections.
 - b. pollutant tracking.
5. Ensure construction projects are in compliance with applicable local, state, provincial, and federal stormwater regulations, laws, ordinances, policies, and specifications:
 - a. grading.
 - b. stormwater ponds and sewers.
 - c. erosion control measures.
6. Investigate and resolve environmental matters related to contamination of the sewer and stormwater.

- f. sewer to storm drain crossconnections in compliance with existing legislation.
- 7. Determine and implement remedial and enforcement procedures.
- 8. Interpret sampling/monitoring data.
- 9. Demonstrate knowledge of the household hazardous waste program.

B. Structural Best Management Practices : 23 items (Recall:4, Application: 5, Analysis:14)

- 1. Address stormwater quality and quantity in:
 - a. ponds (e.g., micro-pool extended detention pond, wet pond, wet extended detention pond, multiple pond system, "pocket" pond).
 - b. wetlands (e.g., shallow wetlands, extended detention, pond/wetland system, "pocket" wetland).
 - c. infiltration (e.g., infiltration trench,

3. OPERATIONS and MAINTENANCE: 15 items (Recall:6, Application: 9, Analysis:0)

1. Administer the storm and/or sewer drain TV viewing program.
2. Coordinate with various internal city departments to enact BMPs.
3. Develop operational procedures for maintenance and repair of the stormwater infrastructure, drainage channels, and stormwater ponds.
4. Respond to drainage complaints, recommend solutions, and coordinate the implementation.
5. Analyze maintenance methods, equipment used, and performance to find new ways of increasing compliance, effectiveness, and high productivity (e.g., street sweeper, vacuum truck).