

Evaluation Plan

GROSS Grant G1400551

Grant objective: (Based on Project Summary)

This project seeks to build awareness of the connections between individual behaviors and land-based activities to stormwater pollution and surface water quality.

Grant Project Goals and Outcomes

B. Water Quality and Environmental Outcomes

Anticipated water quality and environmental improvements from the project:

Improve water quality by increasing awareness of impacts from stormwater pollution and impervious surfaces in surface waters, low impact development principles, and create knowledge of stormwater stewardship opportunities for children and adults.

C. Performance Items and Deliverables

8. Develop and measure the understanding of water and land-based, stormwater impact monitoring investigations and hands-on stormwater projects to a minimum of ten percent of participating students.

Task 2-Develop New Land-Based, Stormwater Impact Monitoring Investigations

B. The RECIPIENT will develop an Evaluation Plan that outlines the project goals, metrics of success and identification of areas to improve. Measurements will include the understanding and adoption (if any) of the targeted behaviors. Self-reporting is acceptable.

2. Submit a final draft of the Evaluation Plan to the Department

Task 4: Implement Land-Based, Stormwater Impact Monitoring Investigations

1. Submit the educator training documents to the DEPARTMENT
2. Submit results from surveys and measuring of the participants according to the Evaluation Plan to the DEPARTMENT

Project Goals for Tasks 2 and 4:

1. To add plant and soil student monitoring investigations to water investigations of streams, rivers, wetlands and bioswales in Clark County. These and existing investigations will be aligned to state standards.
2. To take students from diverse schools outdoors to a water body and lead them in monitoring land and water to increase understanding of their watershed and natural neighborhood.
3. By developing investigations that explore soil and water, student will begin to understand that what happens on the land impacts water quality in the watershed.
4. To help students make the connection between rain water and stormwater; to suggest ways that student and family activities impact water quality.

5. To inform and train teachers to understand the significance of land monitoring to water quality.
6. To encourage students and teachers in identifying ways to improve the habitat and water quality at their monitoring site.

Metrics of success

Goal 1: To add plant and soil student monitoring investigations to water investigations of streams, rivers, wetlands and bioswales in Clark County. The new investigations will be used by monitoring students.

- Add 8 soil and plant investigations that allow students to collect data on the land for water quality impacting parameters. Example: Soil texture and plant inventory.
- Observe students using new investigations so that edits can be made before the final packet is completed

Products:

- Soil and plant investigations
- Videotape of at least one class showing competence in investigating soil or plants.

Goal 2: To take students from diverse schools outdoors to a water body and lead them in monitoring land and water to increase understanding of their watershed and natural neighborhood.

- Analyze free and reduced lunch program school numbers
- Document anecdotes and observations of contract educators about student attitudes towards the outdoor monitoring experience
- Give a pre and post survey to at least 260 students (10%) in 2 urban schools and 2 rural schools.
Survey plan: To do this, about 300 students from 2600 students participating in Watershed Monitoring Network during the 2014-2015 school year will take a pre-field experience survey to assess what they know before participating in the Network. Since many schools and districts have participated in the Monitoring Network over many school years, we will try to select classes for this survey that are either new to the Network and have probably not participated in monitoring in previous school years. We will obtain permission from teachers to give the test. The same test will then be given to these students before the end of February 2015. Results from both surveys will then be compared and results shared.
- Analyze survey results to see if students show marked increase in understanding after doing the investigations

Products:

- Anecdotes and observations of contract educators
- Pre/post survey
- School/student percentages of participation in free and reduced lunch

Goal 3: By developing investigations that explore soil and water, student understanding that what happens on the land impacts water quality in the watershed will increase.

- Pre/post survey (See Goal 1)
- Document anecdotes and observations of contract educators

Products:

- Graphs of pre/post surveys
- Survey example

Goal 4: To help students make the connection between rain water and stormwater; to suggest ways that family activities impact water quality.

- Hold 3 Family Watershed Festivals for students and families
- Evaluate attendees
- Pre/post survey (See Goal 1).
- Document anecdotes and observations of contract educators.

Products:

- Pre/post survey (See Goal 1).
- Summaries and evaluations of Watershed Festivals
- Anecdotes and observations of contract educators

Goal 5: To inform and train teachers to understand the significance of land monitoring to water quality.

- Involve teachers in evaluating the new investigations.
- For each investigation, describe the relationship between that monitoring parameter and water quality

Products:

- Teacher “reviews” of investigations from Kickoff, October 2013
- Investigations (includes the “why” of each Investigation as it relates to stormwater.

Goal 6: To encourage students and teachers in finding stewardship opportunities to improve the habitat and water quality at their monitoring site.

- Document anecdotes and observations of contract educators
- Provide information about Toolkit, a funding opportunity during the Grant period that can improve water quality at their site or school.

Products:

- Anecdotes and observations of contract educators
- Communication to teachers inviting application for toolkit funding

Areas of improvement

NOTE: Due to the time period of the grant, the post survey could not be given towards the end of the monitoring season which is the end of the school year. Therefore, post results can only include field visits from September 2014 through February 2015 rather than through mid-June 2015. A longer time to observe student interaction with the new investigations and their understanding of the relevance of land and plant investigations to stormwater quality is desirable.

At the end of February, a retrospective of the grant period and work completed will be done.