# Appendix A

# Los Peñasquitos Watershed Activity Sheets

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# Los Peñasquitos Watershed Water Quality Activity Sheets

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**TITLE:** San Diego Coastkeeper Trash Cleanup Sponsorship
**ID #:** LP-WQA1

## ACTIVITY DESCRIPTION

Each fall, San Diego Coastkeeper conducts the Coastal Cleanup Day event to target various inland and coastal sites in San Diego County in need of trash and debris removal. Coastkeeper recruits and organizes site captains and groups of volunteers for each site. A media center is also designated, which promotes environmental stewardship, including the importance of keeping litter and debris from spoiling the region's watersheds. The whole event is marketed throughout San Diego County through a variety of media, including television, radio public service announcements, newspapers, newsletters, electronic mail, bulletin boards, community outreach activities, calendar listings, and word of mouth.

## TMDL APPLICABILITY

San Diego Region Beaches and Creeks Bacteria TMDL (Miramar Reservoir HA)

## TIME SCHEDULE FOR IMPLEMENTATION

Coastal Cleanup Day has historically been held in September of each year. Prior to that month, the City will coordinate with Coastkeeper staff to ensure that sites within the Los Peñasquitos WMA are included in the list for cleanups and that proper sponsorship arrangements are made.

## PARTICIPATING WATERSHED COPERMITTEE(S)

- City of San Diego

## OTHER PARTICIPATING ENTITIES

- San Diego Coastkeeper
- I Love A Clean San Diego
- Volunteers from general public

## HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED

- Bacteria

## OTHER WATER QUALITY PROBLEM(S) ADDRESSED

- Trash

## CONSISTENCY WITH THE COLLECTIVE WATERSHED STRATEGY

The Collective Watershed Strategy for the Los Peñasquitos WMA identifies bacteria as a high priority water quality problem throughout the WMA and recommends implementing load reduction/source abatement activities to address it. Sponsorship of Coastal Cleanup Day will result in load reduction of trash and debris directly and of bacteria indirectly. Therefore, this activity is consistent with the Los Peñasquitos WMA Strategy.

## EXPECTED BENEFITS

Although Coastal Cleanup Day is focused on debris removal, it also addresses bacteria indirectly by removing a bacterial source: trash. Literature published by the United States Environmental Protection Agency on its website[1] states that debris may be contaminated by pathogens that have adverse effects on humans. By reducing the amount of trash and debris in the Los Peñasquitos WMA through cleanup events, bacteria loading are reduced.

[1] http://www.epa.gov/owow/oceans/debris/

## EFFECTIVENESS MEASUREMENTS

| | |
|---|---|
| Management Questions | • What is the load reduction associated with sponsorship?<br>• What is the efficiency of trash cleanup? ($/person or $/ton collected) |
| Targeted Measurable Outcome(s) | • Achieve load reduction of trash (any amount) due to trash cleanup sponsorship |
| Assessment Method(s) | • Tabulation (e.g., number of participants)<br>• Quantification (e.g., pounds of trash collected) |
| Assessment Measures, Assessment Outcome Levels & Data | • Money spent (USD) (Outcome Level 1 and 2)<br>• Tons of trash (Outcome Level 4)<br>• Number of participants (Outcome Level 1)<br>• Compliance (yes/no) (Outcome Level 1) |

**TITLE:** **Targeted Animal-Related Facility Inspections**
**ID #:** **LP-WQA2**

## ACTIVITY DESCRIPTION

The Storm Water Pollution Prevention Division (Storm Water Division) is developing a focused inspection activity to target animal-related facilities within the Los Peñasquitos WMA. The purpose of the activity is to:

- Determine the most efficient frequency of inspections to ensure proper BMP implementation and reduce pollutant loading (e.g., once vs. twice per fiscal year)
- Determine the most efficient type of inspection to ensure proper BMP implementation and reduce pollutant loading (e.g., random inspections vs. scheduled inspections)
- Determine the most efficient combination of enforcement action to ensure proper BMP implementation and reduce pollutant loading (e.g., education/flyers vs. monetary fines vs. onsite direct interactions)
- Characterize activities at animal-related facilities to determine which activities cause the greatest pollutant discharges to better direct focused education/outreach and enforcement efforts
- Track and analyze inspection and enforcement actions to estimate load reductions resulting from inspections

The Storm Water Division will delineate a specific area within the Los Peñasquitos WMA to conduct the targeted inspections based on factors, such as monitoring data, facility clustering, and proximity to other watershed activities being conducted. Discharges cleaned up, behaviors corrected, and sources abated will also be reported. The Storm Water Division anticipates using the knowledge and experienced gained through this activity to optimize the City's jurisdictional industrial and commercial facility inspection program to meet Municipal Permit and TMDL requirements.

## TMDL APPLICABILITY

San Diego Region Beaches and Creeks Bacteria TMDL (Miramar Reservoir HA)

## TIME SCHEDULE FOR IMPLEMENTATION

Activity planning began in July 2007. The Storm Water Division anticipates selecting and hiring a consultant on board by the end of calendar year 2007 to help develop and implement the activity within FY 2008 through FY 2010.

## PARTICIPATING WATERSHED COPERMITTEE(S)

- City of San Diego

## HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED

- Bacteria

## CONSISTENCY WITH THE COLLECTIVE WATERSHED STRATEGY

The Collective Watershed Strategy for the Los Peñasquitos WMA identifies bacteria as a high priority water quality problem throughout the WMA and recommends implementing load reduction/source abatement activities to address it. Implementation of this focused inspection activity will contribute to addressing discharges, correct behaviors, and abate sources associated with bacteria. Therefore, this activity is consistent with the Los Peñasquitos WMA Strategy.

## EXPECTED BENEFITS

This focused inspection activity will contribute to reducing discharges, characterizing activities, correcting behaviors, and abating sources associated with bacteria at animal-related facilities. Knowledge and experience gained through this activity would help the City optimize its jurisdictional industrial and commercial facility inspection program.

## EFFECTIVENESS MEASUREMENTS

| | |
|---|---|
| Management Questions | • Do inspections increase rate of BMP implementation?<br>• Does increased rate of BMP implementation affect load reduction?<br>• What is the optimal frequency of inspection (point of diminishing returns)?<br>• Are spot inspections more effective than scheduled inspections?<br>• Does enforcement alter future behavior (implementing BMPs)?<br>• Does education increase rate of BMP implementation?<br>• How can an estimate of load reduction be made from inspection data? |
| Targeted Measurable Outcome(s) | • Achieve load reduction from optimized inspection rate<br>• Achieve greater BMP implementation from optimized inspection rate |
| Assessment Method(s) | • Inspections (e.g., track number of BMPs implemented, increased number of BMPs, number of follow-up inspections)<br>• Quantification (e.g., use frequency of BMP implementation to calculate estimated load reduction)<br>• Monitoring (e.g., collect special study information to collect concentrations and flows to estimate load reduction)<br>• Tabulation (e.g., amount of money spent on inspections, amount of money spent on educational materials)<br>• Reporting (e.g., estimates of load reduction for BMPs from 3rd party data) |
| Assessment Measures, Assessment Outcome Levels & Data | • Number of inspections (spot and scheduled) (Outcome Level 1)<br>• Number of BMPs implemented (Outcome Level 1)<br>• Change (%) in BMP implementation pre and post-education (Outcome Level 3)<br>• Number of missing BMPs (Outcome Level 1)<br>• Number of follow-up inspections (Outcome Level 1)<br>• Number of enforcement follow-ups (Outcome Level 1)<br>• Number of educational information items passed out (Outcome Level 1)<br>• How much money spent on inspections (follow ups, initial inspections, enforcement actions)? (Outcome Level 1)<br>• Literature review or other information to provide data to estimate load reductions (Outcome Level 3)<br>• Dataset of load contributions for specific activities (Outcome Level 4) |

**TITLE:** **Targeted Landscaping-Related Facility Inspections**
**ID #:** **LP-WQA3**

## ACTIVITY DESCRIPTION

The Storm Water Pollution Prevention Division (Storm Water Division) is developing a focused inspection activity to target landscaping-related facilities within the Los Peñasquitos WMA. The purpose of the activity is to:

- Determine the most efficient frequency of inspections to ensure proper BMP implementation and reduce pollutant loading (e.g., once vs. twice per fiscal year)
- Determine the most efficient type of inspection to ensure proper BMP implementation and reduce pollutant loading (e.g., random inspections vs. scheduled inspections)
- Determine the most efficient combination of enforcement action to ensure proper BMP implementation and reduce pollutant loading (e.g., education/flyers vs. monetary fines vs. onsite direct interactions)
- Characterize activities at landscaping-related facilities to determine which activities cause the greatest pollutant discharges to better direct focused education/outreach and enforcement efforts
- Track and analyze inspection and enforcement actions to estimate load reductions resulting from inspections

The Storm Water Division will delineate a specific area within the Los Peñasquitos WMA to conduct the targeted inspections based on factors, such as monitoring data, facility clustering, and proximity to other watershed activities being conducted. Discharges cleaned up, behaviors corrected, and sources abated will also be reported. The Storm Water Division anticipates using the knowledge and experienced gained through this activity to optimize the City's jurisdictional industrial and commercial facility inspection program to meet Municipal Permit and TMDL requirements.

## TMDL APPLICABILITY

San Diego Region Beaches and Creeks Bacteria TMDL (Miramar Reservoir HA)

## TIME SCHEDULE FOR IMPLEMENTATION

Activity planning began in July 2007. The Storm Water Division anticipates selecting and hiring a consultant on board by the end of calendar year 2007 to help develop and implement the activity within FY 2008 through FY 2012.

## PARTICIPATING WATERSHED COPERMITTEE(S)

- City of San Diego

## HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED

- Bacteria

## CONSISTENCY WITH THE COLLECTIVE WATERSHED STRATEGY

The Collective Watershed Strategy for the Los Peñasquitos WMA identifies bacteria as a high priority water quality problem throughout the WMA and recommends implementing load reduction/source abatement activities to address it. Implementation of this focused inspection activity will contribute to addressing discharges, correct behaviors, and abate sources

associated with bacteria. Therefore, this activity is consistent with the Los Peñasquitos WMA Strategy.

## EXPECTED BENEFITS

This focused inspection activity will contribute to reducing discharges, characterizing activities, correcting behaviors, and abating sources associated with bacteria at landscaping-related facilities. Knowledge and experience gained through this activity would help the City optimize its jurisdictional industrial and commercial facility inspection program.

## EFFECTIVENESS MEASUREMENTS

| | |
|---|---|
| Management Questions | • Do inspections increase rate of BMP implementation?<br>• Does increased rate of BMP implementation affect load reduction?<br>• What is the optimal frequency of inspection (point of diminishing returns)?<br>• Are spot inspections more effective than scheduled inspections?<br>• Does enforcement alter future behavior (implementing BMPs)?<br>• Does education increase rate of BMP implementation?<br>• How can an estimate of load reduction be made from inspection data? |
| Targeted Measurable Outcome(s) | • Achieve load reduction from optimized inspection rate<br>• Achieve greater BMP implementation from optimized inspection rate |
| Assessment Method(s) | • Inspections (e.g., track number of BMPs implemented, increased number of BMPs, number of follow-up inspections)<br>• Quantification (e.g., use frequency of BMP implementation to calculate estimated load reduction)<br>• Monitoring (e.g., collect special study information to collect concentrations and flows to estimate load reduction)<br>• Tabulation (e.g., amount of money spent on inspections, amount of money spent on educational materials)<br>• Reporting (e.g., estimates of load reduction for BMPs from 3rd party data) |
| Assessment Measures, Assessment Outcome Levels & Data | • Number of inspections (spot and scheduled) (Outcome Level 1)<br>• Number of BMPs implemented (Outcome Level 1)<br>• Change (%) in BMP implementation pre and post-education (Outcome Level 3)<br>• Number of missing BMPs (Outcome Level 1)<br>• Number of follow-up inspections (Outcome Level 1)<br>• Number of enforcement follow-ups (Outcome Level 1)<br>• Number of educational information items passed out (Outcome Level 1)<br>• How much money spent on inspections (follow ups, initial inspections, enforcement actions)? (Outcome Level 1)<br>• Literature review or other information to provide data to estimate load reductions (Outcome Level 3)<br>• Dataset of load contributions for specific activities (Outcome Level 4) |

**TITLE:** **Targeted Municipal Facility Inspections**
**ID #:** **LP-WQA4**

## ACTIVITY DESCRIPTION

The Storm Water Pollution Prevention Division (Storm Water Division) is developing a focused inspection activity to target municipal facilities within the Los Peñasquitos WMA. The purpose of the activity is to:

- Determine the most efficient frequency of inspections to ensure proper BMP implementation and reduce pollutant loading (e.g., once vs. twice per fiscal year)
- Determine the most efficient type of inspection to ensure proper BMP implementation and reduce pollutant loading (e.g., random inspections vs. scheduled inspections)
- Determine the most efficient combination of enforcement action to ensure proper BMP implementation and reduce pollutant loading (e.g., education/flyers vs. monetary fines vs. onsite direct interactions)
- Characterize activities at municipal facilities to determine which activities cause the greatest pollutant discharges to better direct focused education/outreach and enforcement efforts
- Track and analyze inspection and enforcement actions to estimate load reductions resulting from inspections

The Storm Water Division will delineate a specific area within the Los Peñasquitos WMA to conduct the targeted inspections based on factors, such as monitoring data, facility clustering, and proximity to other watershed activities being conducted. Discharges cleaned up, behaviors corrected, and sources abated will also be reported. The Storm Water Division anticipates using the knowledge and experienced gained through this activity to optimize the City's municipal facility inspection program to meet Municipal Permit and TMDL requirements.

## TMDL APPLICABILITY

San Diego Region Beaches and Creeks Bacteria TMDL (Miramar Reservoir HA)

## TIME SCHEDULE FOR IMPLEMENTATION

Activity planning began in July 2007. The Storm Water Division anticipates selecting and hiring a consultant on board in FY 2008 to help develop and implement the activity beginning in FY 2009.

## PARTICIPATING WATERSHED COPERMITTEE(S)

- City of San Diego

## HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED

- Bacteria

## CONSISTENCY WITH THE COLLECTIVE WATERSHED STRATEGY

The Collective Watershed Strategy for the Los Peñasquitos WMA identifies bacteria as a high priority water quality problem throughout the WMA and recommends implementing load reduction/source abatement activities to address it. Implementation of this focused inspection activity will contribute to addressing discharges, correct behaviors, and abate sources associated with bacteria at municipal facilities. Therefore, this activity is consistent with the Los Peñasquitos WMA Strategy.

## EXPECTED BENEFITS

This focused inspection activity will contribute to reducing discharges, characterizing activities, correcting behaviors, and abating sources associated with bacteria at municipal facilities. Knowledge and experience gained through this activity would help the City optimize its municipal facility inspection program.

## EFFECTIVENESS MEASUREMENTS

| | |
|---|---|
| Management Questions | • Do inspections increase rate of BMP implementation?<br>• Does increased rate of BMP implementation affect load reduction?<br>• What is the optimal frequency of inspection (point of diminishing returns)?<br>• Are spot inspections more effective than scheduled inspections?<br>• Does enforcement alter future behavior (implementing BMPs)?<br>• Does education increase rate of BMP implementation?<br>• How can an estimate of load reduction be made from inspection data? |
| Targeted Measurable Outcome(s) | • Achieve load reduction from optimized inspection rate<br>• Achieve greater BMP implementation from optimized inspection rate |
| Assessment Method(s) | • Inspections (e.g., track number of BMPs implemented, increased number of BMPs, number of follow-up inspections)<br>• Quantification (e.g., use frequency of BMP implementation to calculate estimated load reduction)<br>• Monitoring (e.g., collect special study information to collect concentrations and flows to estimate load reduction)<br>• Tabulation (e.g., amount of money spent on inspections, amount of money spent on educational materials)<br>• Reporting (e.g., estimates of load reduction for BMPs from 3rd party data) |
| Assessment Measures, Assessment Outcome Levels & Data | • Number of inspections (spot and scheduled) (Outcome Level 1)<br>• Number of BMPs implemented (Outcome Level 1)<br>• Change (%) in BMP implementation pre and post-education (Outcome Level 3)<br>• Number of missing BMPs (Outcome Level 1)<br>• Number of follow-up inspections (Outcome Level 1)<br>• Number of enforcement follow-ups (Outcome Level 1)<br>• Number of educational information items passed out (Outcome Level 1)<br>• How much money spent on inspections (follow ups, initial inspections, enforcement actions)? (Outcome Level 1)<br>• Literature review or other information to provide data to estimate load reductions (Outcome Level 3)<br>• Dataset of load contributions for specific activities (Outcome Level 4) |

**TITLE:** **Targeted Restaurant Facility Inspections**
**ID #:** **LP-WQA5**

## ACTIVITY DESCRIPTION

The Storm Water Pollution Prevention Division (Storm Water Division) is developing a focused inspection activity to target restaurant facilities within the Los Peñasquitos WMA. The purpose of the activity is to:

- Determine the most efficient frequency of inspections to ensure proper BMP implementation and reduce pollutant loading (e.g., once vs. twice per fiscal year)
- Determine the most efficient type of inspection to ensure proper BMP implementation and reduce pollutant loading (e.g., random inspections vs. scheduled inspections)
- Determine the most efficient combination of enforcement action to ensure proper BMP implementation and reduce pollutant loading (e.g., education/flyers vs. monetary fines vs. onsite direct interactions)
- Characterize activities at restaurant facilities to determine which activities cause the greatest pollutant discharges to better direct focused education/outreach and enforcement efforts
- Track and analyze inspection and enforcement actions to estimate load reductions resulting from inspections

The Storm Water Division will delineate a specific area within the Los Peñasquitos WMA to conduct the targeted inspections based on factors, such as monitoring data, facility clustering, and proximity to other watershed activities being conducted. Discharges cleaned up, behaviors corrected, and sources abated will also be reported. The Storm Water Division anticipates using the knowledge and experienced gained through this activity to optimize the City's jurisdictional industrial and commercial facility inspection program to meet Municipal Permit and TMDL requirements.

## TMDL APPLICABILITY

San Diego Region Beaches and Creeks Bacteria TMDL (Miramar Reservoir HA)

## TIME SCHEDULE FOR IMPLEMENTATION

Activity planning began in July 2007. The Storm Water Division anticipates selecting and hiring a consultant on board by the end of calendar year 2007 to help develop and implement the activity within FY 2008 through FY 2011.

## PARTICIPATING WATERSHED COPERMITTEE(S)

- City of San Diego

## HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED

- Bacteria

## CONSISTENCY WITH THE COLLECTIVE WATERSHED STRATEGY

The Collective Watershed Strategy for the Los Peñasquitos WMA identifies bacteria as a high priority water quality problem throughout the WMA and recommends implementing load reduction/source abatement activities to address it. Implementation of this focused inspection activity will contribute to addressing discharges, correct behaviors, and abate sources associated with bacteria. Therefore, this activity is consistent with the Los Peñasquitos WMA Strategy.

## EXPECTED BENEFITS

This focused inspection activity will contribute to reducing discharges, characterizing activities, correcting behaviors, and abating sources associated with bacteria at restaurant facilities. Knowledge and experience gained through this activity would help the City optimize its jurisdictional industrial and commercial facility inspection program.

## EFFECTIVENESS MEASUREMENTS

| | |
|---|---|
| Management Questions | • Do inspections increase rate of BMP implementation?<br>• Does increased rate of BMP implementation affect load reduction?<br>• What is the optimal frequency of inspection (point of diminishing returns)?<br>• Are spot inspections more effective than scheduled inspections?<br>• Does enforcement alter future behavior (implementing BMPs)?<br>• Does education increase rate of BMP implementation?<br>• How can an estimate of load reduction be made from inspection data? |
| Targeted Measurable Outcome(s) | • Achieve load reduction from optimized inspection rate<br>• Achieve greater BMP implementation from optimized inspection rate |
| Assessment Method(s) | • Inspections (e.g., track number of BMPs implemented, increased number of BMPs, number of follow-up inspections)<br>• Quantification (e.g., use frequency of BMP implementation to calculate estimated load reduction)<br>• Monitoring (e.g., collect special study information to collect concentrations and flows to estimate load reduction)<br>• Tabulation (e.g., amount of money spent on inspections, amount of money spent on educational materials)<br>• Reporting (e.g., estimates of load reduction for BMPs from 3rd party data) |
| Assessment Measures, Assessment Outcome Levels & Data | • Number of inspections (spot and scheduled) (Outcome Level 1)<br>• Number of BMPs implemented (Outcome Level 1)<br>• Change (%) in BMP implementation pre and post-education (Outcome Level 3)<br>• Number of missing BMPs (Outcome Level 1)<br>• Number of follow-up inspections (Outcome Level 1)<br>• Number of enforcement follow-ups (Outcome Level 1)<br>• Number of educational information items passed out (Outcome Level 1)<br>• How much money spent on inspections (follow ups, initial inspections, enforcement actions)? (Outcome Level 1)<br>• Literature review or other information to provide data to estimate load reductions (Outcome Level 3)<br>• Dataset of load contributions for specific activities (Outcome Level 4) |

**TITLE:** **Alpha Project for the Homeless, Inc. Trash Cleanups**
**ID #:** **LP-WQA6**

## ACTIVITY DESCRIPTION

The City's Storm Water Pollution Prevention Division has partnered with Alpha Project for the Homeless, Inc., through a Memorandum of Understanding to conduct trash and debris cleanups and potentially homeless encampment removals throughout the City's jurisdiction in various watersheds in FY 2007 and FY 2008.

## TMDL APPLICABILITY

San Diego Region Beaches and Creeks Bacteria TMDL (Miramar Reservoir HA)

## TIME SCHEDULE FOR IMPLEMENTATION

The City will coordinate with Alpha Project to ensure that sites within the Los Peñasquitos WMA are included in the list of sites to target for cleanups in FY 2008.

## PARTICIPATING WATERSHED COPERMITTEE(S)

- City of San Diego

## OTHER PARTICIPATING ENTITIES

- Alpha Project for the Homeless, Inc.

## HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED

- Bacteria

## OTHER WATER QUALITY PROBLEM(S) ADDRESSED

- Trash

## CONSISTENCY WITH THE COLLECTIVE WATERSHED STRATEGY

The Collective Watershed Strategy for Los Peñasquitos WMA identifies bacteria as a high priority water quality problem throughout the WMA and recommends implementing load reduction/source abatement activities to address it. Cleanups by Alpha Project will result in load reduction of trash and debris directly and of bacteria indirectly. Therefore, this activity is consistent with the Los Peñasquitos WMA Strategy.

## EXPECTED BENEFITS

Although the cleanups conducted by Alpha Project focus on debris removal, it also addresses bacteria indirectly by removing a bacterial source: trash. Literature published by the United States Environmental Protection Agency on its website[2] states that debris may be contaminated by pathogens that have adverse effects on humans. By reducing the amount of trash and debris in the Los Peñasquitos WMA through cleanup events, bacteria loading are reduced.

## EFFECTIVENESS MEASUREMENTS

| | |
|---|---|
| Management Questions | • What is the load reduction associated with sponsorship?<br>• What is the efficiency of trash cleanup? ($/person or $/ton collected) |

[2] http://www.epa.gov/owow/oceans/debris/

| | |
|---|---|
| Targeted Measurable Outcome(s) | • Achieve load reduction of trash (any amount) due to trash cleanup sponsorship |
| Assessment Method(s) | • Tabulation (e.g., number of participants)<br>• Quantification (e.g., pounds of trash collected) |
| Assessment Measures, Assessment Outcome Levels & Data | • Money spent (USD) (Outcome Level 1 and 2)<br>• Tons of trash (Outcome Level 4)<br>• Number of participants (Outcome Level 1)<br>• Compliance (yes/no) (Outcome Level 1) |

**TITLE:** **Hydrodynamic Separator Installation**
**ID #:** **LP-WQA7**

## ACTIVITY DESCRIPTION

This activity will involve the installation of a hydrodynamic separator in the Los Peñasquitos WMA to treat dry weather flows. Hydrodynamic separators, or baffle boxes, are composed of a series of chambers that clean contaminated water in two ways. The first chamber collects water and allows contaminants, such as trash and sediment, to settle at the bottom before the water overflows into the following chamber to repeat the process. As water flows from chamber to chamber, it also passes through screens to filter out additional pollutants. Eventually, clean water leaves the device and discharges into designated receiving waters. Exact location of installation will be based on monitoring considerations, proximity to other BMPs being implemented, site availability, land use, etc. The pollutant load reduction resulting from this activity will contribute to meeting requirements under the Municipal Permit and current and anticipated TMDLs in the receiving waters of the WMA.

## TMDL APPLICABILITY

San Diego Region Beaches and Creeks Bacteria TMDL (Miramar Reservoir HA)

## TIME SCHEDULE FOR IMPLEMENTATION

Project planning began in July 2007, and project design is anticipated to continue through FY 2009. Construction is anticipated to occur in FY 2010. Water quality monitoring will be conducted before and after construction to assess the effectiveness in reducing runoff volume and pollutant loading.

## PARTICIPATING WATERSHED COPERMITTEE(S)

- City of San Diego

## OTHER PARTICIPATING ENTITIES

- San Diego Coastkeeper – project supporter

## HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED

- Bacteria
- Sediment

## CONSISTENCY WITH THE COLLECTIVE WATERSHED STRATEGY

The Collective Watershed Strategy for the Los Peñasquitos WMA identifies bacteria as a high priority water quality pollutant throughout the entire watershed and sediment as a high priority water quality pollutant in the Miramar Hydrologic Area (906.1). The Strategy also recommends implementing load reduction/source abatement activities to address the high priority water quality problems. Implementation of this activity will address both high priority water quality problems by capturing dry weather flows and slowly releasing them to allow for the settlement of pollutants for later removal. Therefore, this activity is consistent with the Los Peñasquitos WMA Strategy.

## EXPECTED BENEFITS

Implementation of this activity will reduce pollutant loading by capturing dry weather flows and slowly releasing them to allow for the settlement of sediment and trash for later removal.

Also, this activity will address bacteria indirectly by removing a bacterial source: trash. Literature published by the United States Environmental Protection Agency on its website[3] states that debris may be contaminated by pathogens that have adverse effects on humans. By reducing the amount of trash and debris in the Los Peñasquitos WMA via collection by the hydrodynamic separator, bacteria loading are reduced.

In addition, implementation of this activity is in accordance with the City's *Strategic Plan for Watershed Activity Implementation* (November 2007), which calls for the piloting of hydrodynamic separators to reduce urban runoff pollution. Knowledge and experience gained through this activity will help the City document the benefits, limitations, and challenges of hydrodynamic separators as an urban runoff pollution control before implementation on a broader scale throughout its jurisdiction in meeting Municipal Permit and TMDL requirements.

## EFFECTIVENESS MEASUREMENTS

| | |
|---|---|
| Management Questions | • Which type of separator provides the most efficient removal of trash and debris?<br>• What is the load reduction efficiency of hydrodynamic separators in reducing trash?<br>• How effective are hydrodynamic retrofits at reducing loads of trash? |
| Targeted Measurable Outcome(s) | • Determination of most efficient and effective hydrodynamic separator<br>• Reduction in trash based on amount removed from hydrodynamic separator<br>• Receiving water quality improvement (less observed trash in receiving water downstream) |
| Assessment Method(s) | • Inspections (e.g., ensure the retrofit is working as designed)<br>• Quantification (e.g., use drainage area and rainfall information to calculate estimated load reduction)<br>• Monitoring (e.g., collect special study information to collect concentrations and flows to estimate load reduction)<br>• Tabulation (e.g., amount of money spent on implementation and maintenance, amount of money spent on educational materials) |
| Assessment Measures, Assessment Outcome Levels & Data | • Number of inspections (Outcome Level 1)<br>• Change (%) in load reduction pre and post-implementation (Outcome Level 4)<br>• How much money spent on inspections and maintenance (Outcome Level 1)<br>• Dataset of load contributions for specific activities (Outcome Level 4) |

[3] http://www.epa.gov/owow/oceans/debris/

**TITLE:** **I Love A Clean San Diego Trash Cleanup Sponsorship**
**ID #:** **LP-WQA8**

## ACTIVITY DESCRIPTION

Each spring, I Love A Clean San Diego (ILACSD) conducts its Creek to Bay Cleanup event to target various inland and coastal sites in San Diego County in need of trash and debris removal. ILACSD recruits and organizes site captains and groups of volunteers for each site. A media center is also designated, which promotes environmental stewardship, including the importance of keeping litter and debris from spoiling the region's watersheds. The whole event is marketed throughout San Diego County through a variety of media, including television, radio public service announcements, newspapers, newsletters, electronic mail, bulletin boards, community outreach activities, calendar listings, and word of mouth.

## TMDL APPLICABILITY

San Diego Region Beaches and Creeks Bacteria TMDL (Miramar Reservoir HA)

## TIME SCHEDULE FOR IMPLEMENTATION

Creek to Bay Cleanup has historically been held in April of each year. Prior to that month, the jurisdictions will coordinate with ILACSD staff to ensure that sites within the Los Peñasquitos WMA are included in the list for cleanups and that proper sponsorship arrangements are made.

## PARTICIPATING WATERSHED COPERMITTEE(S)

- City of San Diego
- City of Poway

## OTHER PARTICIPATING ENTITIES

- ILACSD
- Volunteers from general public

## HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED

- Bacteria

## OTHER WATER QUALITY PROBLEM(S) ADDRESSED

- Trash

## CONSISTENCY WITH THE COLLECTIVE WATERSHED STRATEGY

The Collective Watershed Strategy for the Los Peñasquitos WMA identifies bacteria as a high priority water quality problem throughout the WMA and recommends implementing load reduction/source abatement activities to address it. Sponsorship of Creek to Bay will result in load reduction of trash and debris directly and of bacteria indirectly. Therefore, this activity is consistent with the Los Peñasquitos WMA Strategy.

## EXPECTED BENEFITS

Although Creek to Bay Cleanup is focused on debris removal, it also addresses bacteria indirectly by removing a bacterial source: trash. Literature published by the United States Environmental Protection Agency on its website[4] states that debris may be contaminated by pathogens that have adverse effects on humans. By reducing the amount of trash and debris in the Los Peñasquitos WMA through cleanup events, bacteria loading are reduced.

[4] http://www.epa.gov/owow/oceans/debris/

## EFFECTIVENESS MEASUREMENTS

| | |
|---|---|
| Management Questions | • What is the load reduction associated with sponsorship?<br>• What is the efficiency of trash cleanup? ($/person or $/ton collected) |
| Targeted Measurable Outcome(s) | • Achieve load reduction of trash (any amount) due to trash cleanup sponsorship |
| Assessment Method(s) | • Tabulation (e.g., number of participants)<br>• Quantification (e.g., pounds of trash collected) |
| Assessment Measures, Assessment Outcome Levels & Data | • Money spent (USD) (Outcome Level 1 and 2)<br>• Tons of trash (Outcome Level 4)<br>• Number of participants (Outcome Level 1)<br>• Compliance (yes/no) (Outcome Level 1) |

**TITLE:** **Infiltration BMP Retrofit**
**ID #:** **LP-WQA9**

## ACTIVITY DESCRIPTION

This activity will involve the implementation of an infiltration project in the Los Peñasquitos WMA to reduce runoff volume. The activity may be implemented in a municipal parking lot ("Green Mall"), an industrial/commercial right-of-way ("Green Mall"), or a residential right-of-way ("Green Street"). Exact location and type will be based on monitoring and geotechnical considerations, proximity to other BMPs being implemented, site availability, land use, etc. The pollutant load reduction resulting from this activity will contribute to meeting requirements under the Municipal Permit and current and anticipated TMDLs in the receiving waters of the WMA.

## TMDL APPLICABILITY

San Diego Region Beaches and Creeks Bacteria TMDL (Miramar Reservoir HA)

## TIME SCHEDULE FOR IMPLEMENTATION

Project planning began in July 2007, and project design is anticipated to continue through FY 2010. Construction is anticipated to occur in FY 2011. Water quality monitoring will be conducted before and after construction to assess the effectiveness in reducing runoff volume and pollutant loading.

## PARTICIPATING WATERSHED COPERMITTEE(S)

- City of San Diego

## OTHER PARTICIPATING ENTITIES

- San Diego Coastkeeper – project supporter

## HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED

- Bacteria

## CONSISTENCY WITH THE COLLECTIVE WATERSHED STRATEGY

The Collective Watershed Strategy for the Los Peñasquitos WMA identifies bacteria as a high priority water quality problem in the WMA and recommends implementing load reduction/source abatement activities to address them. Implementation of this activity will address the high priority water quality problem by reducing and treating runoff volume via infiltration/retention. Therefore, this activity is consistent with the Los Peñasquitos WMA Strategy.

## EXPECTED BENEFITS

Implementation of this activity will reduce pollutant loading by reducing and treating runoff volume of pollutants via infiltration/retention.

In addition, implementation of this activity is in accordance with the City's *Strategic Plan for Watershed Activity Implementation* (November 2007), which calls for the piloting of infiltration/retention BMPs to reduce urban runoff pollution. Knowledge and experience gained through this activity will help the City document the benefits, limitations, and challenges of infiltration/retention as an urban runoff pollution control before implementation on a broader scale throughout its jurisdiction in meeting Municipal Permit and TMDL requirements.

## EFFECTIVENESS MEASUREMENTS

| | |
|---|---|
| Management Questions | • What is the load reduction efficiency of LID BMP retrofits?<br>• How effective are LID BMP retrofits at reducing loads of priority pollutants?<br>• Does the implementation of LID BMP retrofits result in a detectible receiving water quality improvement? |
| Targeted Measurable Outcome(s) | • Reduction in priority pollutant loads<br>• Receiving water quality improvement |
| Assessment Method(s) | • Inspections (e.g., ensure the retrofit is working as designed)<br>• Quantification (e.g., use drainage area and rainfall information to calculate estimated load reduction)<br>• Monitoring (e.g., collect special study information to collect concentrations and flows to estimate load reduction)<br>• Tabulation (e.g., amount of money spent on implementation and maintenance, amount of money spent on educational materials)<br>• Reporting (e.g., estimates of load reduction from 3rd party data) |
| Assessment Measures, Assessment Outcome Levels & Data | • Number of inspections (Outcome Level 1)<br>• Change (%) in load reduction pre and post-implementation (Outcome Level 4)<br>• Number of educational information items passed out (Outcome Level 1)<br>• How much money spent on inspections and maintenance (Outcome Level 1)<br>• Literature review or other information to provide data to estimate load reductions (Outcome Level 3)<br>• Dataset of load contributions for specific activities (Outcome Level 4) |

**TITLE:** **Municipal Rain Barrel Installation and Downspout Disconnects**
**ID #:** **LP-WQA10**

## ACTIVITY DESCRIPTION

This activity will involve the installation of rain barrels and/or the disconnection of downspouts to direct runoff from municipal facility roofs into pervious areas (such as landscaping) for infiltration. Rain barrels, downspout disconnects, and rainwater harvesting/reuse systems help to capture, store, and divert urban runoff to reduce the volume thereof, thus contributing to reduced flooding, erosion, and the contamination of surface water with sediment, fertilizer, metals, and pesticides. In addition, this activity has the added benefit of water conservation; runoff collected and diverted to landscaping would help reduce the amount of potable water needed for irrigation. Roof runoff solutions can be used both in large-scale landscapes, such as municipal buildings, community centers, schools, and commercial sites, as well as in small residential landscapes.

## TMDL APPLICABILITY

San Diego Region Beaches and Creeks Bacteria TMDL (Miramar Reservoir HA)

## TIME SCHEDULE FOR IMPLEMENTATION

Project planning began in July 2007 and is anticipated to continue until the end of calendar year 2007. Procurement of rain barrels and other items and installation are anticipated to occur from beginning in March 2008.

## PARTICIPATING WATERSHED COPERMITTEE(S)

- City of San Diego

## OTHER PARTICIPATING ENTITIES

- San Diego Coastkeeper – project supporter

## HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED

- Bacteria
- Sediment

## CONSISTENCY WITH THE COLLECTIVE WATERSHED STRATEGY

The Collective Watershed Strategy for the Los Peñasquitos WMA identifies bacteria as a high priority water quality pollutant throughout the entire watershed and sediment as a high priority water quality pollutant in the Miramar Hydrologic Area (906.1). The Strategy also recommends implementing load reduction/source abatement activities to address the high priority water quality problems. Implementation of this activity will address both high priority water quality problems by reducing runoff volume via capture, retention, and infiltration. Therefore, this activity is consistent with the Los Peñasquitos WMA Strategy.

## EXPECTED BENEFITS

Implementation of this activity will reduce pollutant loading by reducing runoff volume via capture, retention, and eventual infiltration.

In addition, implementation of this activity is in accordance with the City's *Strategic Plan for Watershed Activity Implementation* (November 2007), which calls for the piloting of rain barrels, downspout disconnects, and rainwater harvesting/reuse systems to reduce urban runoff volume and pollution. Knowledge and experience gained through this activity will help the City

document the benefits, limitations, and challenges of rain barrels and downspout disconnects as urban runoff pollution controls before implementation on a broader scale throughout its jurisdiction in meeting Municipal Permit and TMDL requirements.

## EFFECTIVENESS MEASUREMENTS

| | |
|---|---|
| Management Questions | • What is the effectiveness/efficiency of rain barrel/rain-harvesting systems in reducing stormwater runoff volume?<br>• What is the loading reduction of different systems?<br>• Which system is most efficient in collecting and/or diverting rainwater?<br>• Which system results in the largest load reductions? |
| Targeted Measurable Outcome(s) | • Reduction in pollutant loads due to rain barrel installation |
| Assessment Method(s) | • Monitoring (e.g., load reduction estimation)<br>• Quantification (e.g., calculation of load reductions, or estimates of change)<br>• Tabulation (e.g., number of rain barrel systems installed, amount of money spent)<br>• Reporting (e.g., 3rd party data to estimate load reductions) |
| Assessment Measures, Assessment Outcome Levels & Data | • Cost of rain barrel systems (Outcome Level 1 and 2)<br>• Cost of maintenance/upkeep (Outcome Level 1 and 2)<br>• Cost of implementation (Outcome Level 1 and 2)<br>• Volume of stormwater captured/diverted (Outcome Level 4)<br>• Concentrations of COCs in rainwater or runoff (measured in rain barrel systems) (Outcome Level 4)<br>• Compare 3rd party data to measured data for load reduction comparisons (Outcome Level 3)<br>• What is the percent capture of the different systems (acres drained) (Outcome Level 4) |

**TITLE:** **Aubrey Street Continuous Deflective Separation (CDS) Device**
**ID #:** **LP-WQA11**

## ACTIVITY DESCRIPTION

The City will install a continuous deflective separation (CDS) device system in the intersection of Aubrey Street and York Avenue as part of the Aubrey Park street improvements, otherwise known as Old Poway Park Neighborhood. The street improvements include Norwalk Street, York and Sycamore Avenues, and the alley east of York Avenue. Once installed, the CDS system will effectively screen, separate, and trap debris, sediment, oil and grease, floatables and neutral buoyant material from stormwater runoff. Ultimately the CDS unit will enhance the treatment of runoff from existing land uses in the 41.9 acre project area. In order to maintain the effectiveness of the CDS unit, the City of Poway's Drainage/Storm Water Maintenance staff will inspect, clean, and maintain the CDS unit quarterly and after any major storm event(s).

## TMDL APPLICABILITY

While it may be supportive of TMDL goals, this activity is not specifically implemented as part of a TMDL compliance program at this time.

## TIME SCHEDULE FOR IMPLEMENTATION

The CDS Device will be completed in FY 2008.

## PARTICIPATING WATERSHED COPERMITTEES

- City of Poway

## HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED

- Sediment

## OTHER WATER QUALITY PROBLEM(S) ADDRESSED

- Trash, debris, and floatables
- Oil and grease

## CONSISTENCY WITH THE COLLECTIVE WATERSHED STRATEGY

The Collective Watershed Strategy for the Los Peñasquitos WMA identifies sediment as a high priority water quality problem in the Miramar HA (906.2) and recommends implementing load reduction/source abatement activities to reduce them. Implementation of this activity will address the high priority water quality problems by reducing the amount of sediment entering the receiving waters. Therefore, this activity is consistent with the collective strategy for the Los Peñasquitos WMA.

## EXPECTED BENEFITS

Implementation of this activity will reduce pollutant loading by screening, separating and trapping sediment along with other pollutants for subsequent removal.

## EFFECTIVENESS MEASUREMENTS

The effectiveness of this activity will be assessed through the amount of material removed from the CDS system with regard to the project area and existing land uses. This will be a direct measurement of the amount of material captured by the CDS system and removed from the stormwater runoff of the project area (Level 4 Outcome).

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**TITLE:** **Gate Drive Detention Basin Modification.**
**ID #:** **LP-WQA12**

## ACTIVITY DESCRIPTION

The City of Poway is retrofitting the Gate Drive flood control detention basin to remove pollutants from storm water. The Gate Drive basin is located in the South Poway Business Park, and could be installed as part of the typical SUSMP requirements; however the basin's design goes above and beyond the normal requirements. Rather than requiring every business in the drainage area to separately capture and treat the first 0.6 inches of storm water on their property, the City has devised a plan to regionally capture and treat this water with over 38 businesses draining to this basin. With the modification to the basin to have a regional effect, the actual costs have increased. The total cost is $131,000, with the City paying $67,400 and the developer paying $63,900. The City is also managing the construction of the project to ensure it meets the standards of a watershed water quality project.

## TMDL APPLICABILITY

While it may be supportive of TMDL goals, this activity is not specifically implemented as part of a TMDL compliance program at this time.

## TIME SCHEDULE FOR IMPLEMENTATION

Scheduled for completion in April 2008

## PARTICIPATING WATERSHED COPERMITTEES

- City of Poway

## HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED

- Bacteria
- Sediment

## CONSISTENCY WITH THE COLLECTIVE WATERSHED STRATEGY

The Collective Watershed Strategy for the Los Peñasquitos WMA identifies sediment as high priority water quality problem in the Miramar HA and bacteria throughout the WMA. Existing development has been identified as a potential source of sediment and bacteria. This activity addresses high priority water quality problems and potential source of the problems within the watershed, therefore the activity is consistent with the Los Peñasquitos WMA strategy.

## EXPECTED BENEFITS

The reduction in pollutant loads through the regional detention basin will result in continuation of exploring the benefits of regional detention basins in other areas in the City.

## EFFECTIVENESS MEASUREMENTS

Activity effectiveness will be assessed by analyzing the load reductions of the non-SUSMP areas tributary to the treatment BMP (Level 4 outcome).

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**TITLE:** **Median Irrigation System Replacement**
**ID #:** **LP-WQA13**

## ACTIVITY DESCRIPTION

The Water Conservation in Landscaping Act of 2006 requires the State Department of Water Resources to update a model Water Efficient Landscape ordinance for adoption by local agencies. While the new ordinance is not yet adopted, one key element has been identified, and that key element is to replace timed irrigation controllers with "smart" controllers which adjust the amount of water used based on weather conditions. This activity provides for automated irrigation controllers and irrigation system repairs and retrofits of manual valves and drip systems in the City of Del Mar rights-of-way. The City of Del Mar has allocated $60,000.00 of grant and general fund monies for the implementation of this program. These controllers are beneficial from an NPDES perspective as they operate more efficiently, conserve water, and reduce the potential for runoff from over irrigation.

## TMDL APPLICABILITY

None presently identified.

## TIME SCHEDULE FOR IMPLEMENTATION

This project is budgeted for FY 2007/2008 and FY 2008/2009.

## PARTICIPATING WATERSHED COPERMITTEES

- City of Del Mar

## OTHER PARTICIPATING ENTITIES

This project involves monies and support from the State Department of Water Resources.

## HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED

- Bacteria
- Sediment

## OTHER WATER QUALITY PROBLEMS ADDRESSED

- Nutrients
- TDS

## CONSISTENCY WITH THE COLLECTIVE WATERSHED STRATEGY

The Los Peñasquitos Watershed Management Area collaborative watershed strategy identified bacteria as a high priority water quality pollutant in all areas of the watershed, and sediment in the Miramar Hydrologic Area. Landscaping for parks and open space areas has been identified as potential discharges of bacteria and sediment from over-irrigation. In addition, other non-priority pollutants have been identified including nutrients and TDS as potential discharges from over-irrigation. This activity addresses a high priority water quality problem and potential source of the problems within the watershed, therefore the activity is found to be consistent with the Los Peñasquitos WMA strategy.

## EXPECTED BENEFITS

Primary Activity Goal – Dry Weather Load Reductions: A reduction in runoff from over-irrigation will reduce the pollutant loads in urban runoff.

**EFFECTIVENESS MEASUREMENTS**

Once implemented, the City of Del Mar can track water consumption through the use of flow metering and other use management techniques which demonstrates a Level 4 Outcome (Quantifiable Load Reduction).

**TITLE:** **Park and Open Space Irrigation and Controllers**
**ID #:** **LP-WQA14**

## ACTIVITY DESCRIPTION

The Water Conservation in Landscaping Act of 2006 requires the State Department of Water Resources to update a model Water Efficient Landscape ordinance for adoption by local agencies. While the new ordinance is not yet adopted, one key element has been identified, and that key element is to replace timed irrigation controllers with "smart" controllers which adjust the amount of water used based on weather conditions. This activity provides for the use of these irrigation controllers in City parks and open space areas. The City of Del Mar has allocated $60,000.00 of grant and general fund monies for the implementation of this program. These controllers are beneficial from an NPDES perspective as they operate more efficiently, conserve water, and reduce the potential for runoff from over irrigation.

## TMDL APPLICABILITY

None presently identified.

## TIME SCHEDULE FOR IMPLEMENTATION

This project is budgeted for FY 2007/2008 and FY 2008/2009.

## PARTICIPATING WATERSHED COPERMITTEES

- City of Del Mar

## OTHER PARTICIPATING ENTITIES

This project involves monies and support from the State Department of Water Resources.

## HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED

- Bacteria
- Sediment

## OTHER WATER QUALITY PROBLEM(S) ADDRESSED

- Nutrients
- TDS

## CONSISTENCY WITH THE COLLECTIVE WATERSHED STRATEGY

The Los Peñasquitos Watershed Management Area collaborative watershed strategy identified bacteria as a high priority water quality pollutant in all areas of the watershed, and sediment in the Miramar hydrologic area. Landscaping for parks and open space areas has been identified as potential discharges of bacteria and sediment from over-irrigation. In addition, other non-priority pollutants have been identified including TDS and nutrients as potential discharges from over-irrigation. This activity addresses a high priority water quality problem and potential source of the problems within the watershed, therefore the activity is found to be consistent with the Los Peñasquitos WMA strategy.

## EXPECTED BENEFITS

Primary Activity Goal – Dry Weather Load Reductions: A reduction in runoff from over-irrigation will reduce the pollutant loads in urban runoff.

**EFFECTIVENESS MEASUREMENTS**

Once implemented, the City of Del Mar can track water consumption through the use of flow metering and other use management techniques which demonstrates a Level 4 Outcome (Quantifiable Load Reduction).

**TITLE:** **Over Irrigation/Dry Weather Runoff Reduction**
**ID #:** **LP-WQA15**

## ACTIVITY DESCRIPTION

The Los Peñasquitos watershed has seen exceedances for various pollutants during the Dry Weather Monitoring Program. A pilot homogenous source type area will be selected to evaluate the load reduction potential related to reducing irrigation runoff and dry weather runoff. The homogenous source type area will also have an isolated drainage area and will be an appropriate size for analyzing targeted outcomes to determine if implemented BMPs are effective. Planned activities in the pilot area include:

- Identify all of the sources within the focus area (any entity that uses water or conducts activities) and determine the initial threat to water quality profiles. The threat to water quality will include assumed pollutant generating activities, assumed runoff generating activities, and assumed pollutant types.
- Monitor urban runoff flows based upon the drainage system. This may involve installing flow meter(s) downstream of the focus area, visual observations during and after regular business hours, grab samples for watershed water quality problem constituents, and other methods yet to be determined to assist in this activity.
- Obtain water use information. This will consist of coordinating with the water department to collect historic water use information regarding all of the sources within the focus area.
- Perform inspections/investigations to gather information for the assessment and refinement of the threat to water quality profiles. If applicable, changes will be made to inspection/investigation forms to refine the process and collect appropriate information in a more effective manner.

## TMDL APPLICABILITY

While it may be supportive of TMDL goals, this activity is not specifically implemented as part of a TMDL compliance program at this time.

## TIME SCHEDULE FOR IMPLEMENTATION

This activity is scheduled for plan development during FY 2009 and implementation in FY 2010.

## PARTICIPATING WATERSHED COPERMITTEES

- City of Poway

## OTHER PARTICIPATING ENTITIES

All Los Peñasquitos Watershed Copermittees will provide insight and advice on planning the pilot program, and feedback on how the program is going during the implementation process.

## HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED

- Bacteria
- Sediment

## OTHER WATER QUALITY PROBLEM(S) ADDRESSED

- Nutrients

## CONSISTENCY WITH THE COLLECTIVE WATERSHED STRATEGY

The Collective Watershed Strategy for the Los Peñasquitos WMA identifies bacteria as a high priority water quality problem throughout the watershed and sediment in the Miramar hydrologic area. Bacteria and sediment have been identified as potential discharges from over-irrigation. This activity addresses a high priority water quality problem and potential source of the problems within the watershed, therefore the activity is found to be consistent with the Los Peñasquitos WMA strategy.

## EXPECTED BENEFITS

Beneficial impact to watershed water quality through the reduction in urban runoff, from over-irrigation in the focus area.

## EFFECTIVENESS MEASUREMENTS

To be determined once the pilot activity planning is completed.

**TITLE:** **Residential Rain Barrel and Xeriscaping Incentive Program**
**ID #:** **LP-WQA16**

## ACTIVITY DESCRIPTION

This activity will involve launching a pilot incentive program to encourage the use of residential rain barrels and low impact gardens, or xeriscaping, to reduce over-irrigation and the overall need for landscaping irrigation. Specific residential areas will be targeted and monitored to assess the efficiency of the incentive program in reducing runoff volume and pollutant loads. It is also anticipated that the program will include a component to investigate the challenges to getting residents to participate in this incentive program to better focus subsequent education and outreach efforts and determine whether broad-scale implementation should be pursued.

## TMDL APPLICABILITY

San Diego Region Beaches and Creeks Bacteria TMDL (Miramar Reservoir HA)

## TIME SCHEDULE FOR IMPLEMENTATION

Project planning and coordination is anticipated to begin in July 2009. Program launch is anticipated to occur in FY 2012.

## PARTICIPATING WATERSHED COPERMITTEE(S)

- City of San Diego

## OTHER PARTICIPATING ENTITIES

- San Diego Coastkeeper – project supporter
- City of San Diego Water Department (to be invited to participate)
- San Diego County Water Authority (to be invited to participate)

## HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED

- Bacteria
- Sediment

## OTHER WATER QUALITY PROBLEM(S) ADDRESSED

- Dissolved Minerals

## CONSISTENCY WITH THE COLLECTIVE WATERSHED STRATEGY

The Collective Watershed Strategy for the Los Peñasquitos WMA identifies bacteria and sediment as high priority water quality problems in the WMA and recommends implementing load reduction/source abatement activities to address them. Implementation of this activity will address the high priority water quality problems by reducing dry weather flows resulting from over-irrigation.

## EXPECTED BENEFITS

Implementation of this activity will reduce pollutant loading by reducing dry weather flows resulting from over-irrigation. Reduction of runoff means less pollutants conveyed into the storm drain system and out into receiving waters. Water conservation will also be an added benefit as program participants waste less water on irrigation.

In addition, implementation of this activity is in accordance with the City's *Strategic Plan for Watershed Activity Implementation* (November 2007), which calls for the piloting and monitoring of an irrigation runoff reduction program to combat urban pollution. Knowledge and experience

gained through this activity will help the City document the benefits, limitations, and challenges of irrigation runoff reduction programs as an urban runoff pollution control before implementation on a broader scale throughout its jurisdiction in meeting Municipal Permit and TMDL requirements.

## EFFECTIVENESS MEASUREMENTS

| | |
|---|---|
| Management Questions | • What is the effectiveness/efficiency of rain barrel/rain-harvesting systems in reducing stormwater runoff volume?<br>• What is the loading reduction of different systems?<br>• Which system is most efficient in collecting and/or diverting rainwater?<br>• Which system results in the largest load reductions? |
| Targeted Measurable Outcome(s) | • Reduction in pollutant loads due to rain barrel installation |
| Assessment Method(s) | • Monitoring (e.g., load reduction estimation)<br>• Quantification (e.g., calculation of load reductions, or estimates of change)<br>• Tabulation (e.g., number of rain barrel systems installed, amount of money spent)<br>• Reporting (e.g., 3rd party data to estimate load reductions) |
| Assessment Measures, Assessment Outcome Levels & Data | • Cost of rain barrel systems (Outcome Level 1 and 2)<br>• Cost of maintenance/upkeep (Outcome Level 1 and 2)<br>• Cost of implementation (Outcome Level 1 and 2)<br>• Volume of stormwater captured/diverted (Outcome Level 4)<br>• Concentrations of COCs in rainwater or runoff (measured in rain barrel systems) (Outcome Level 4)<br>• Compare 3rd party data to measured data for load reduction comparisons (Outcome Level 3)<br>• What is the percent capture of the different systems (acres drained) (Outcome Level 4) |

**TITLE:** **Increase Trash Receptacles and Dogi-Pot Stations**
**ID #:** **LP-WQA17**

## ACTIVITY DESCRIPTION

This activity will increase the number of pet waste and trash receptacles within the Los Peñasquitos watershed. Pet waste and trash receptacles provide pet owners with litter bags and trash receptacles for easy disposal of pet waste, reducing the amount of pollutants entering receiving waters. The City of Poway plans to increase the number of trash cans and Dogi-Pot stations around popular trails in the watershed. The City intends to focus these efforts on popular trails utilized by hikers with dogs; and trails where trash or animal wastes are found frequently by City staff.

## TMDL APPLICABILITY

While it may be supportive of TMDL goals, this activity is not specifically implemented as part of a TMDL compliance program.

## TIME SCHEDULE FOR IMPLEMENTATION

Plan development will occur in FY 2010 and implementation will occur in FY 2011

## PARTICIPATING WATERSHED COPERMITTEES

- City of Poway

## HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED

- Bacteria

## OTHER WATER QUALITY PROBLEM(S) ADDRESSED

- Nutrients

## CONSISTENCY WITH THE COLLECTIVE WATERSHED STRATEGY

The Los Peñasquitos Watershed Management Area collective watershed strategy identified bacteria as a high priority water quality pollutant throughout the watershed. Pet waste has been identified as a potential source of bacteria. This activity addresses a high priority water quality problem and potential source of the problem within the watershed. Therefore, this activity is consistent with the Los Peñasquitos WMA Strategy.

## EXPECTED BENEFITS

This proposed activity is designed to provide pet owners with a convenient means to dispose of pet waste, thereby reducing pollutants in runoff to receiving waters. As a result, Copermittees hope to see a reduction in concentrations of pollutants associated with pet waste in receiving waters.

## EFFECTIVENESS MEASUREMENTS

This activity is designed to raise awareness of the potential water quality impacts associated with pet waste and change pet owner behavior by providing a means for pet waste disposal (Levels 2 and 3). Proper disposal of pet waste will reduce pollutant loads (Level 4).

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# Los Peñasquitos Watershed Education Activity Sheets

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**TITLE:** **Mobile Advertising**
**ID #:** **LP-WQEA1**

## ACTIVITY DESCRIPTION

The City of San Diego's Storm Water Division has retained a mobile advertising company to advertise "Think Blue" messages in both English and Spanish on its static billboard trucks in the Los Peñasquitos WMA. The City will coordinate with its Printing Services Division in the design of the advertisements and intends to create advertisements that target behaviors associated with bacteria and/or sediment. The trucks will drive pre-determined routes in the Los Peñasquitos WMA in an effort to reach targeted, high priority areas within the WMA to increase awareness and promote behavior change.

## TMDL APPLICABILITY

This activity is not specifically implemented in compliance with a TMDL.

## TIME SCHEDULE FOR IMPLEMENTATION

The advertisements will be developed and displayed on the billboard trucks in FY 2008.

## PARTICIPATING WATERSHED COPERMITTEE(S)

- City of San Diego

## HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED

- Bacteria
- Sediment

## CONSISTENCY WITH THE COLLECTIVE WATERSHED STRATEGY

The Collective Watershed Strategy for the Los Peñasquitos WMA identifies bacteria and sediment as high priority water quality problems in the WMA and recommends implementing load reduction/source abatement activities to address it. Utilizing the static billboard trucks will result in increased knowledge and awareness directly and will promote behavior change.

## EXPECTED BENEFITS

The billboard advertisements will address bacteria and/or sediment to increase knowledge awareness and promote behavior change.

## EFFECTIVENESS MEASUREMENTS

| | |
|---|---|
| Management Questions | • What changes in awareness /attitude regarding trash and bacteria was achieved after implementation?<br>• How efficient is this education activity based on total cost versus number of people (targeted audience) reached? |
| Targeted Measurable Outcome(s) | • Reach pre-set percentage of residents within target watershed<br>• Increased level of knowledge/attitude based on post-activity surveys |
| Assessment Method(s) | • Survey (e.g., administer survey to assess knowledge and attitude of participants)<br>• Quantification (e.g., number of residents reached by PSA) |

| | |
|---|---|
| Assessment Measures, Assessment Outcome Levels & Data | • Number of public reached (Outcome Level 1)<br>• Change in knowledge or attitude (Outcome Level 2) |

**TITLE:** **Public Service Announcements: *Karma* and *Karma Second Chance***
**ID #:** **LP-WQEA2**

## ACTIVITY DESCRIPTION

The City of San Diego's Storm Water Pollution Prevention Division has retained a contract with a production company to produce two Public Service Announcements (PSAs) specifically focused on bacteria, with gross pollutants (trash) profiled as a vector. The PSAs are entitled, *Karma* and *Karma Second Chance*, and the goal of the PSAs is to educate the public about causes of pollution and to encourage positive behavioral change. These PSAs were developed in FY 2007 and FY 2008, and will be broadcast on several TV and radio stations throughout the Los Peñasquitos WMA in FY 2008. The PSAs will be broadcast in both English and Spanish.

## TMDL APPLICABILITY

This activity is not specifically implemented in compliance with a TMDL.

## TIME SCHEDULE FOR IMPLEMENTATION

The City will coordinate with a production company to complete production in FY 2008 and will then work with various broadcast media outlets to distribute and air the PSAs in FY 2008 and FY 2009.

## PARTICIPATING WATERSHED COPERMITTEE(S)

- City of San Diego

## OTHER PARTICIPATING ENTITIES

- Various Television and Radio Stations in San Diego

## HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED

- Bacteria

## OTHER WATER QUALITY PROBLEM(S) ADDRESSED

- Trash

## CONSISTENCY WITH THE COLLECTIVE WATERSHED STRATEGY

The Collective Watershed Strategy for the Los Peñasquitos WMA identifies bacteria as a high priority water quality problem in the WMA. The *Karma* and *Karma Second Chance* PSAs will result in increased knowledge and awareness regarding bacteria, and trash as a vector, and result in future load reduction of trash and debris directly and of bacteria indirectly. Therefore, this activity is consistent with the Los Peñasquitos WMA Strategy.

## EXPECTED BENEFITS

The PSAs address bacteria directly by focusing on pet waste, food waste and organic matter, and indirectly by removing a bacterial source: trash. Literature published by the United States Environmental Protection Agency on its website[5] states that *pathogens* are microscopic organisms like bacteria and viruses. They come from untreated or poorly treated sewage, pet and farm animal waste, and improperly handled medical waste. Pathogens in the water in unsafe amounts result in beach closures; shellfish bed closures, fish kills, and human health problems.

[5] http://www.epa.gov/owow/oceans/debris/

## EFFECTIVENESS MEASUREMENTS

| | |
|---|---|
| Management Questions | • What changes in awareness/attitude regarding trash and bacteria was achieved after implementation?<br>• How efficient is this education activity based on total cost versus number of people (targeted audience) reached? |
| Targeted Measurable Outcome(s) | • Reach goal of number of listeners (radio) and homes (television) reached, based on survey results<br>• Increased level of knowledge/attitude based on post-activity surveys |
| Assessment Method(s) | • Survey (e.g., administer survey to assess knowledge and attitude of participants)<br>• Quantification (e.g., number of residents reached by PSA) |
| Assessment Measures, Assessment Outcome Levels & Data | • Number of listeners (radio) or homes (television) reached (Outcome Level 1)<br>• Change in knowledge or awareness (Outcome Level 2) |

**TITLE:** **Restaurant Inspection Outreach**
**ID #:** **LP-WQEA3**

## ACTIVITY DESCRIPTION

The City of San Diego (City) proposes Restaurant Inspection Outreach in support of the planned inspection activity to target restaurant facilities within the Los Peñasquitos WMA. The purpose of the activity is to characterize activities at restaurant facilities to determine which activities cause the greatest pollutant discharges to better direct focused education/outreach efforts. The City's Storm Water Division will delineate a specific area within the Los Peñasquitos WMA to conduct the targeted inspections based on factors, such as monitoring data, facility clustering, and proximity to other watershed activities being conducted. Discharges cleaned up, behaviors corrected, and sources abated will also be reported.

Education and outreach methods, activities and materials will then be developed to supplement the inspections, with the goal of increasing awareness and compliance which will lead to load reductions. The City has retained several professional outreach consultants to assist, develop and initiate the public participation and education campaign. Activities will include recommendations for education and outreach strategies, which may include education, structural interventions, public participation, incentives and specific messaging.

## TMDL APPLICABILITY

San Diego Region Beaches and Creeks Bacteria TMDL

## TIME SCHEDULE FOR IMPLEMENTATION

In Fiscal Year 2008, the City retained several outreach consultants, including at least one firm that specializes in Community Outreach. Specific outreach planning will occur in FY09, with implementation, outreach, and evaluation continuing through FY 2011.

## PARTICIPATING WATERSHED COPERMITTEE(S)

- City of San Diego

## HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED

- Bacteria

## CONSISTENCY WITH THE WATERSHED STRATEGY

The Los Peñasquitos Watershed Management Area collective watershed strategy identifies bacteria as a high priority water quality problem. Restaurant facilities have been identified as potential discharges of bacteria. This activity addresses a high priority water quality problem and potential source of the problem within the watershed, therefore the activity is found to be consistent with the Los Peñasquitos WMA strategy.

## EXPECTED BENEFITS

The Restaurant Inspection Outreach will address bacteria indirectly by removing bacterial sources observed in the Watershed, which may include trash and food debris. Literature published by the United States Environmental Protection Agency on its website[6] states that p*athogens* are microscopic organisms like bacteria and viruses. They come from untreated or poorly treated sewage, pet and farm animal waste, and improperly handled medical waste. Pathogens in the water in unsafe amounts result in beach closures; shellfish bed closures, fish

[6] http://www.epa.gov/owow/oceans/factsheets/fact1.html

kills, and human health problems.

## EFFECTIVENESS MEASUREMENTS

| | |
|---|---|
| Management Questions | • To what extent is there an observable difference in the level of either pollutants or polluting behaviors pre- and post- outreach?<br>• How much change in awareness was achieved?<br>• What changes in levels of behavior was achieved after implementation?<br>• How does the target area compare to other areas (based on surveys, observations and self-report result comparisons)<br>• How do the survey results change pre and post activity implementation? |
| Targeted Measurable Outcome(s) | • Achieve increased awareness of bacteria and TMDL issues (e.g., reach 50% of the businesses in the target watershed)<br>• Achieve higher incidence of knowledge and attitude in target group when compared to general public<br>• Achieve increasing rates of knowledge and attitude or change in behavior with increased outreach (based on repeated survey results) |
| Assessment Method(s) | • Survey (e.g., administer survey to assess knowledge and attitude of participants )<br>• Quantification (e.g., count observable pollution and behavior of participants in program)<br>• Monitoring (e.g., water quality monitoring at base of targeted watershed )<br>• Tabulation (e.g., amount of money spent one education and outreach, number of residents and households reached)<br>• Reporting (e.g., estimates of load reduction based on 3rd party data, number of individuals or households reached) |
| Assessment Measures, Assessment Outcome Levels & Data | • Number of number of stakeholders reached (Outcome Level 1)<br>• Change in knowledge and attitude based on survey data (Outcome Level 2)<br>• Change in behavior based on survey data (Outcome Level 3)<br>• Dataset of load contributions for specific activities (Outcome Level 3)<br>• Volume of pollutants removed from study area (Outcome Level 4) |

**TITLE:** **LID and Watershed Planning Education**
**ID #:** **LP-WQEA4**

## ACTIVITY DESCRIPTION

This activity involves educating local planning and sponsor groups for the unincorporated County and the development community in the City of Del Mar on low impact development (LID) and watershed planning principles, practices, and requirements.

In the unincorporated County, local planning and sponsor groups act in an advisory capacity to local decision makers on a variety of issues, primarily discretionary planning projects. Because their input is valuable to the discretionary process, it is important that they have a strong understanding of regulations and guidelines that may affect the way watersheds are developed. Ultimately, the recommendations of local planning and sponsor groups have some influence over whether, and under what conditions, development projects are approved. LID and watershed planning education will aid local planning and sponsor groups in making informed recommendations on aspects of development projects that would affect watershed water quality.

Local planning and sponsor groups within the Los Peñasquitos Watershed include:

- Lakeside
- Ramona

## TMDL APPLICABILITY

This activity is not specifically implemented in compliance with a TMDL.

## TIME SCHEDULE FOR IMPLEMENTATION

County of San Diego:

- Develop Education Program – FY 2007-08
- Begin Education Efforts – FY 2007-08
- Complete Education Efforts – FY 2008-09

City of Del Mar:

- Community Outreach Workshops will be implemented in FY 2008

## PARTICIPATING WATERSHED COPERMITTEES

- County of San Diego
- City of Del Mar

## HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED

- Bacteria

## CONSISTENCY WITH THE COLLECTIVE WATERSHED STRATEGY

The Los Peñasquitos Watershed Management Area collaborative watershed strategy identified bacteria as a high priority water quality pollutant in all areas of the watershed. New development has been identified as potential discharges of bacteria. This activity addresses a high priority water quality problem and potential source of the problems within the watershed. As such, this activity is consistent with the collective watershed strategy.

**EXPECTED BENEFITS**

This activity is expected to result in better decision-making through increased understanding of watershed planning and LID principles, practices, and requirements.

**EFFECTIVENESS MEASUREMENTS**

Activity effectiveness will be assessed by tracking the number of presentations conducted, the number of participants in attendance, and the number and type of materials distributed (Level 1 Outcome). The County and the City of Del Mar will also consider distributing post-presentation evaluation forms that ask attendees to assess whether they learned something valuable (Level 2 Outcome).

**TITLE:** **Infiltration BMP Retrofit Outreach**
**ID #:** **LP-WQEA5**

## ACTIVITY DESCRIPTION

This Infiltration BMP Education and Outreach Activity will support the planned implementation of an infiltration project in the Los Peñasquitos WMA to reduce runoff volume. The activity may be implemented in a municipal parking lot ("Green Mall"), an industrial/commercial right-of-way ("Green Mall"), or a residential right-of-way ("Green Street"). Exact location and type will be based on monitoring and geotechnical considerations, proximity to other BMPs being implemented, site availability, land use, etc. Educational materials, outreach strategies and methods will be developed and implemented once a location and project is finalized. The pollutant load reduction resulting from this activity will contribute to meeting requirements under the Municipal Permit and current and anticipated TMDLs in the receiving waters of the WMA.

## TMDL APPLICABILITY

San Diego Region Beaches and Creeks Bacteria TMDL (Miramar Reservoir HA)

## TIME SCHEDULE FOR IMPLEMENTATION

In Fiscal Year 2008, the City retained several outreach and research consultants, including at least one firm that specializes in Community Outreach. Planning will occur in FY09, with implementation, outreach, and evaluation continuing through FY 2011.

## PARTICIPATING WATERSHED COPERMITTEE(S)

- City of San Diego

## OTHER PARTICIPATING ENTITIES

- San Diego Coastkeeper – project supporter

## HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED

- Bacteria

## CONSISTENCY WITH THE COLLECTIVE WATERSHED STRATEGY

The Collective Watershed Strategy for the Los Peñasquitos WMA identifies bacteria as a high priority water quality problem in the WMA and recommends implementing load reduction/source abatement activities to address them. Implementation of this activity will address the high priority water quality problem by reducing and treating runoff volume via infiltration/retention. Therefore, this activity is consistent with the Los Peñasquitos WMA Strategy.

## EXPECTED BENEFITS

Infiltration BMP Education and Outreach will address bacteria indirectly by removing bacterial sources observed in the Watershed, which may include trash, pet waste and other debris. Literature published by the United States Environmental Protection Agency on its website[7] states that p*athogens* are microscopic organisms like bacteria and viruses. They come from untreated or poorly treated sewage, pet and farm animal waste, and improperly handled medical waste. Pathogens in the water in unsafe amounts result in beach closures; shellfish bed closures, fish kills, and human health problems.

[7] http://www.epa.gov/owow/oceans/factsheets/fact1.html

## EFFECTIVENESS MEASUREMENTS

| | |
|---|---|
| Management Questions | • What changes in awareness are reported as a result of the targeted outreach?<br>• What changes in behavior are detected as a result of the targeted outreach?<br>• What amount of reduction of trash and debris are observed in the targeted education area?<br>• Can changes be attributed to the changes in awareness and behavior resulting from the education/outreach component of the activity?<br>• How do the survey results change pre and post activity implementation? |
| Targeted Measurable Outcome(s) | • Achieve increased awareness of bacteria and TMDL issues (e.g., involve 50% of local households during LID development and construction)<br>• Achieve higher incidence of knowledge and attitude in local population (by comparing survey results) |
| Assessment Method(s) | • Survey (e.g., administer survey to assess knowledge and attitude of participants )<br>• Quantification (e.g., count observable behavior of participants in program)<br>• Monitoring (e.g., water quality monitoring at base of targeted watershed )<br>• Tabulation (e.g., amount of money spent one education and outreach, number of residents and households reached)<br>• Reporting (e.g., estimates of load reduction based on 3rd party data, number of individuals or households reached) |
| Assessment Measures, Assessment Outcome Levels & Data | • Number of stakeholders, residents, and business reached (Outcome Level 1)<br>• Change in knowledge and attitude based on survey data (Outcome Level 2)<br>• Change in behavior based on survey data (Outcome Level 3)<br>• Dataset of load contributions for specific activities (Outcome Level 3)<br>• Volume of trash removed from study area (Outcome Level 4)<br>• Reduction of bacteria and trash entering LID (Outcome Level 4) |

**TITLE:** **Residential Water Conservation Outreach**
**ID #:** **LP-WQEA6**

## ACTIVITY DESCRIPTION

The Water Conservation in Landscaping Act of 2006 requires the State Department of Water Resources to update a model Water Efficient Landscape ordinance for adoption by local agencies. While the new ordinance is not yet adopted, one key element has been identified: the replacement timed irrigation controllers with "smart" controllers which adjust the amount of water used based on weather conditions. While this planned activity does not directly replace controllers in the residential zones of the City, it provides for outreach through direct mail and utility bill enclosures to encourage water-wise approaches to landscaping, including the use of native plants, smart controllers and drip irrigation systems. This is beneficial from an NPDES perspective since any reduction in water usage, including the use of efficient irrigation systems, reduces the potential for runoff from over irrigation.

## TMDL APPLICABILITY

None presently identified.

## TIME SCHEDULE FOR IMPLEMENTATION

This project proposed for FY 2008/2009 and FY 2009/2010.

## PARTICIPATING WATERSHED COPERMITTEES

- City of Del Mar

## HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED

- Bacteria

## OTHER WATER QUALITY PROBLEM(S) ADDRESSED

- TDS
- Nutrients
- Sediment

## CONSISTENCY WITH THE COLLECTIVE WATERSHED STRATEGY

The Los Peñasquitos Watershed Management Area collaborative watershed strategy identified bacteria as a high priority water quality pollutant in all areas of the watershed. Landscaping for parks and open space areas has been identified as potential discharges of bacteria and sediment from over-irrigation. In addition, other non-priority pollutants have been identified including TDS and nutrients as potential discharges from over-irrigation. This activity addresses a high priority water quality problem and potential source of the problems within the watershed, therefore the activity is found to be consistent with the Los Peñasquitos WMA strategy.

## EXPECTED BENEFITS

Primary Activity Goal – Dry Weather Load Reductions: Education and outreach to the community regarding water quality benefits that couple with water conservation activities should result in an overall reduction in runoff from over-irrigation and will reduce the pollutant loads in urban runoff.

## EFFECTIVENESS MEASUREMENTS

Quantification of contacts with the residents regarding water conservation water quality activities can be tracked demonstrating a Level 2 outcome (Change in Knowledge).

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**TITLE:** **Over Irrigation/Dry Weather Runoff Reduction Education**
**ID #:** **LP-WQEA7**

## ACTIVITY DESCRIPTION

This activity will be implemented in conjunction with LP-WQA15 - A pilot homogenous source type area will be selected to evaluate the load reduction potential related to reducing irrigation runoff and dry weather runoff. Education and outreach will be conducted as part of the pilot project and will include educating residents and/or businesses in the project area on ways to reduce irrigation runoff.

## TMDL APPLICABILITY

While it may be supportive of TMDL goals, this activity is not specifically implemented as part of a TMDL compliance program at this time.

## TIME SCHEDULE FOR IMPLEMENTATION

This activity is scheduled for plan development during FY 2009 and implementation in FY 2010.

## PARTICIPATING WATERSHED COPERMITTEES

- City of Poway

## OTHER PARTICIPATING ENTITIES

All Los Peñasquitos Watershed Copermittees will provide insight and advice on planning the pilot program, and feedback on how the program is going during the implementation process.

## HIGH PRIORITY WATER QUALITY PROBLEM(S) ADDRESSED

- Bacteria

## OTHER WATER QUALITY PROBLEM(S) ADDRESSED

- Nutrients
- Sediment

## CONSISTENCY WITH THE COLLECTIVE WATERSHED STRATEGY

The Collective Watershed Strategy for the Los Peñasquitos WMA identifies bacteria as a high priority water quality problem and recommends implementing load reduction/source abatement activities to address it. Bacteria have been identified as potential discharges from over-irrigation. This activity addresses a high priority water quality problem and potential source of the problem within the watershed, and therefore, the activity is consistent with the Los Peñasquitos WMA strategy.

## EXPECTED BENEFITS

Beneficial impact to watershed water quality through the reduction in urban runoff, from over-irrigation as well as a positive impact to the community through watershed education in the focused areas.

## EFFECTIVENESS MEASUREMENTS

To be determined once the pilot activity planning is completed.

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