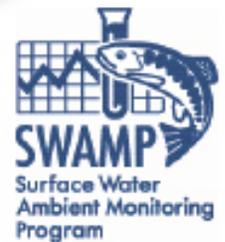


CONDUCTING RAPID TRASH ASSESSMENTS: JUST THE BASICS

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Introduction

Rapid Trash Assessment is a useful survey for monitoring trash. This document has been prepared to educate, encourage and assist Citizen Monitors, Watershed Stewardship Organizations and the general public to conduct Rapid Trash Assessments.

This is an abbreviated form of the Clean Water Team's document "Conducting Rapid Trash Assessments". Within this document you will find:

- The mechanics of conducting a Rapid Trash Assessment.
- A pictorial overview of a Rapid Trash Assessment.

Material has been organized for classroom instruction and field training purposes.

Additional information regarding information on trash as a pollutant and its impacts on California's waters, trash prevention measures and references on trash and marine debris. Can be found in the Clean Water Team's document 'Conducting Rapid Trash Assessments', The Clean Water Team's Compendium for Water Quality Monitoring and SWAMP Region 2 Rapid Trash Assessments.



Rapid Trash Assessment:

This trash assessment includes a **visual survey** of the waterbody (e.g., stream bed and banks) and adjacent areas from which trash elements can be carried to the waterbody by wind, water, gravity or human activity.

The delineation of these adjacent areas is **site-specific** and requires some judgment and documentation. The rapid trash assessment worksheet is designed to represent the range of effects that trash has on the physical, biological, and chemical integrity of water bodies, in accordance with the goals of the Clean Water Act and the California Water Code.

The worksheet also provides a record for **evaluating** management of trash discharges, by documenting sites that receive **direct discharges** (i.e., dumping or chronic littering) and those that **accumulate** trash from upstream locations.



Monitoring Design

The **Rapid Trash Assessment** can be used for a number of purposes:

- Ambient monitoring
- Evaluation of management actions,
- Analyze land uses
- Comparing sites with and without public access
- Identifying possible trash sources
- Assist the State in acquiring other useful data related to trash



Ambient Monitoring Efforts

Ambient monitoring efforts should provide information at sites distributed throughout a waterbody, and through several seasons to characterize spatial and temporal variability.

Additionally, the ambient sampling design should document the effects of episodes that affect trash levels such as storms or even community cleanup events.



Evaluating Management Practices

Pre- and post-project assessments can assist in evaluating the effectiveness of management practices ranging from public outreach to structural controls, or to document the effects of public access on trash levels in waterbodies (e.g., upstream/downstream). Such evaluations should consider trash levels over time and under different seasonal conditions.



Monitoring Design Wrap-up

This methodology was developed by the San Francisco Regional Water Quality Control Board for sections of wadeable streams, but it can be adapted for the assessment of trash along shorelines of lakes, beaches, or estuaries.

Ultimately, the monitoring design will strongly affect the usefulness of any rapid trash assessment information



Site Definition

Upon arrival at a designated monitoring site, a team of two or more people defines, or verifies, a 100-foot section of the stream or shoreline to analyze (station).

When a site is first established, it is recommended that the 100-foot distance be accurately measured with a tape measure (or rope of predetermined length). The length should be measured not as a straight line, but as 100 feet of the actual stream or shore length that follows the streams sinuous curves.

The starting and ending points of the survey should be easily identified landmarks, such as an oak tree, boulder, fence post, or lifeguard tower and noted on the worksheet (“Upper/Lower Boundaries of Reach”), or documented using global positioning system (GPS), so that each future assessment is made at the same location.

The team should confirm and document the upper boundary of the banks or shore to be surveyed, based on evaluation of whether trash can be carried to the water body by wind or water (e.g., an upper terrace in the stream bank).

The team should also document the location of the high water line based on site-specific physical indicators such as location of the low flow channel. Defining these characteristics of the site will facilitate comparing assessments conducted at the same site at different times of the year.



Survey Introduction

The survey should not take more than 20 minutes, and with practice it may take 15 minutes or less to complete.

The team begins the survey at one end of the selected reach. One team member (the “**streambank person**”) begins walking along the bank (where possible), looking for any trash on the stream (or shore) bank, or above the high water line, and tallies any trash items found on the trash assessment sheet.

The other person (the “**streambed person**”) walks along the stream bed, or in the water at shorelines, and shouts out any trash items found in the water body for the person on land to tally on the trash assessment sheet.

The person tallying the trash notes on the sheet whether the trash was found in the stream and below the high water line, or above the high water line (i.e., tally lines for below high water line (|), and tally dots or circles (•) for above the high water line). This will help for assigning scores for the worksheet.

A pole or similar lifting tool should be used to help look under bushes, logs, and other plant growth to see if trash has accumulated underneath. The ground or substrate should be carefully inspected to ensure that small items such as cigarette butts and pieces of broken glass or Styrofoam are being included. Because this is a rapid assessment, the tally is not exact, but it is important not to miss items that can affect human health, because such items can strongly affect the total score.

Optional: The person in the stream can carry a garbage bag and collect trash as it is located, making sure to avoid injuries by wearing protective footwear and using gloves. Avoid touching trash with unprotected hands!



Survey Introduction Continued

At stream sites, when the team has finished surveying the stream bed and one bank, the “bank person” crosses to the other bank. Continuing the assessment, the team works their way back along the reach, with the bank person surveying the opposite bank and the “bed person” re-examining the stream bed or collecting trash, making sure not to count items twice.

When the surveyors are finished with the tallying, they should fill out the worksheet before leaving the site. While everything is still fresh in their memory, they should discuss each number so that they agree on every score. They should discuss and document the factors affecting trash levels at the site, such as a park, school, nearby residences or businesses.

The system provides a range of 5 numbers within a given condition category, allowing for the range of conditions expected in the field. For instance, trash located in the water leads to lower scores than trash above the stream bank. Under each of the six trash assessment parameters, the narrative language is provided to assist with choosing a score within the range. Not all specific trash conditions mentioned in the narratives need to be present to fit in a specific condition category (e.g., “site frequently used by people”), nor do the narratives describe all possible conditions. The “Poor” condition category has a range of 6 numbers (0-6), unlike the other 3 condition categories. Scores of “0” should be reserved for the most extreme conditions. Once the scores are assigned for the 6 categories, they should be totaled up and any specific notes on the site should be written in the designated space at the end of the sheet.

A given site should be assessed several times through the year, during different seasons, to characterize the variability and persistence of trash occurrence for water quality assessment purposes.



Trash Assessment Parameters

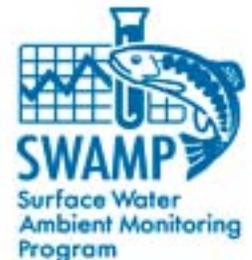
The rapid trash assessment includes a range of parameters that capture the breadth of issues associated with trash and water quality.

The first two parameters (1 & 2) focus on **qualitative and quantitative levels of trash**.

The second two parameters (3 & 4) estimate **actual threat to water quality**. (Other parameters can be added that would more specifically address threats of your concern (navigation, water supply, wetland habitat....))

The last two parameters (5 & 6) represent **how trash enters the water body** at a site, through direct dumping or accumulation.

The following pages will present each parameter more fully.



1. Level of Trash.

This assessment parameter is intended to reflect a qualitative “first impression” of the site, after observing the entire length of the reach. Sites scoring in the “poor” range are those where trash is one of the first things that is noticeable about the waterbody. No trash should be obviously visible at sites that score in the “optimal” range.



2. Actual Number of Trash Items Found.

Based on the tally of trash along the 100-foot stream reach, total the number of items both above and below the high water mark, and choose a score within the appropriate condition category based on the range of items provided. Choose a score among the 5 numbers that is adjusted based on where the tally lies in the provided range. Where more than 50 items have been tallied, assign the following scores: 5: 51-75 items; 4: 76-100 items; 3: 101-150 items; 2: 151-200 items; 1: 201-250 items; 0: over 250 items. Since these tallies do not significantly affect the overall score, it is ok to estimate the tally at sites with more than 100 items, making sure to identify trash items that can affect human health like diapers, pet or human waste, or medical waste.

Sometimes items are broken into many pieces. **Fragments with higher threat to aquatic life such as plastics should be enumerated, while ripped paper and broken glass, with lower threat and/or mobility, should be counted based on the parent item(s).** The judgment whether to count all fragments or just one item depends on the potential exposure to downstream fish and wildlife, and waders and swimmers at a given site. Concrete is trash when it is dumped, but not when it is placed as part of an engineered structure. Consider tallying only those items that would be removed in a restoration or cleanup effort.



3. Threat to Aquatic Life.

Certain characteristics of trash make it more harmful to aquatic life. If the trash items are persistent in the environment, buoyant (floatable), and relatively small, they can be transported long distances and be mistaken by wildlife as food items. Larger items can cause entanglement. Some discarded debris may contain toxic substances (e.g. batteries, cigarette butts...). All of these factors are considered in the narrative descriptions in this assessment parameter.



4. Threat to Human Health.

Items that are more dangerous to people that wade or swim in the water weight this category of trash assessment. The worst conditions are associated with the potential for presence of dangerous bacteria or viruses, such as medical waste, diapers, and human or pet waste.

Also included in this category are sources of pollutants that could accumulate in fish in the downstream environment, such as mercury.



5. Illegal Dumping and Littering.

This assessment category relates to direct placement of trash items at the site, and the “poor” conditions are ascribed to sites that are obviously chronic dumping locations or “trash hotspots.”



6. Accumulation of Trash.

This assessment category relates to accumulation of trash items from upstream locations.

Accumulated trash is distinguished from dumped trash by indications of age and transport. For instance, faded colors, silt marks, trash wrapped around roots, and signs of decay indicate accumulated trash. Trash accumulation is an indicator that the local drainage system facilitates conveyance of trash to water bodies, in violation of clean water laws and policies.



RAPID TRASH ASSESSMENT WORKSHEET

Surface Water Ambient Monitoring Program, San Francisco Bay Regional Water Quality Control Board

WATERSHED/STREAM: _____ DATE/TIME: _____
 MONITORING GROUP, STAFF: _____ SAMPLE ID NO. _____
 SITE DESCRIPTION (Station Name, No., etc.): _____

RAPID TRASH ASSESSMENT WORKSHEET SIDE ONE

Trash Assessment Parameter	CONDITION CATEGORY			
	Optimal	Sub optimal	Marginal	Poor
1. Level of Trash	On first glance, no trash visible; little or no trash evident when streambed and streambanks are closely examined for litter and debris, for instance by looking under leaves.	On first glance, little or no trash visible; after close inspection small levels of trash evident in streambank and streambed.	Trash is evident in low to medium levels on first glance. Streambank surfaces and immediate riparian zone contain litter and debris. Evidence of site being used by people: scattered cans, bottles, blankets, and/or clothing.	Trash distracts the eye on first glance. Streambank surfaces and immediate riparian zone contain substantial levels of litter and debris. Evidence of site being used frequently by people: many cans & bottles, food wrappers, manmade shelters, blankets, and/or piles of clothing.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
2. Actual Number of Trash Items Found	0 to 5 trash items based on a rapid survey of a 100-foot stream reach.	6 to 25 trash items based on a rapid survey of a 100-foot stream reach.	26 to 50 trash items based on a rapid survey of a 100-foot stream reach.	Over 50 trash items based on a rapid survey of a 100-foot stream reach.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
3. Threat to Aquatic Life	Trash, if any, is mostly paper or wood products or other biodegradable materials. Note: A large amount of rapidly biodegradable material like food waste creates high oxygen demand, and should not be scored as optimal.	Little or no persistent, buoyant, and small litter or debris. Presence of settleable, degradable, and non-toxic debris such as wood, glass, metal, and degradable plastics such as foamed plastics.	Medium prevalence of persistent (plastic, synthetic rubber or cloth), toxic, buoyant, and small litter such as: plastic bags; pellets; cigarette butts; large deposits of settleable debris such as glass or metal; and any evidence of small clumps of deposited yard waste or leaf litter.	Large amount of persistent (plastic, synthetic rubber or cloth), toxic, buoyant, and small (transportable) trash such as: cigarette butts; plastic bags; plastic pellets; batteries or other toxic substances; and large clumps of yard waste or dumped leaf litter.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0
4. Threat to Human Health	Observable trash contains no evidence of bacteria or virus hazards such as medical waste, diapers, pet or human waste, no evidence of toxic substances such as pesticides or batteries, no ponded water for mosquito production & no evidence of puncture or laceration hazards associated with the observed litter or debris.	No medical waste or sources of toxic substances, but any presence of puncture or laceration hazards such as broken glass and metal debris. Or presence of ponded water in trash items such as tires or containers that could facilitate mosquito production.	Presence of one of the following: hypodermic needles, pipettes, or other medical waste ; any used diapers or pet waste within the stream channel or where runoff could carry materials to waterbody; any toxic substance such as pesticides, batteries, or fluorescent light bulbs (mercury).	Presence of more than one of the following: any hypodermic needles, pipettes, or other medical waste; used diapers or pet waste within the stream channel or where runoff could carry materials to waterbody; any toxic substances such as pesticides, batteries, or fluorescent light bulbs (mercury); ponded water in trash items.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0



RAPID TRASH ASSESSMENT WORKSHEET

Surface Water Ambient Monitoring Program, San Francisco Bay Regional Water Quality Control Board

Trash Assessment Parameter	CONDITION CATEGORY																				
	Optimal					Sub optimal					Marginal					Poor					
5. Illegal Dumping and Littering	Any observed trash is incidental litter (less than 5 items) or carried downstream from another location. No evidence of illegal dumping.					Some evidence of in-stream or shoreline littering; and/or some evidence of illegal dumping, such as a sign prohibiting dumping along with observed garbage bags of material. Limited vehicular access limits the amount of potential dumping, or material dumped is diffuse paper-based debris (e.g., convenience stores or fast food).					Prevalent in-stream or shoreline littering; and/or the presence of one of the following: furniture, appliances, or bags of garbage or yard waste, coupled with vehicular access that facilitates in-and-out dumping of materials to avoid landfill costs.					Significant litter on shoreline or stream banks and streambed; and/or evidence of chronic dumping, with more than one of the following items: furniture, appliances, shopping carts, garbage bags, or yard waste. Easy vehicular access for in-and-out dumping of materials to avoid landfill costs.					
SCORE	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
6. Accumulation of Trash	There does not appear to be a problem with trash accumulation from downstream transport. Observable trash, if any, appears to have been directly deposited at the stream location.					Some evidence that litter and debris have been transported from upstream areas to the location. Less than 5 trash items have been transported from upstream locations, based on evidence such as silt marks, faded colors or location near high water marks.					5 to 20 items of observable trash are carried to the location from upstream, as evidenced by its location near high water marks and siltation marks on the debris.					Trash appears to have accumulated in substantial quantities at the location based on delivery from upstream areas, and is in various states of degradation based on its persistence in the waterbody. Over 20 items of observable trash have been carried to the location from upstream.					
SCORE	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

Total Score _____

SITE DEFINITION:

UPPER/LOWER BOUNDARIES OF REACH: _____

HIGH WATER LINE: _____

UPPER EXTENT OF BANKS OR SHORE: _____

NOTES:

RAPID TRASH ASSESSMENT WORKSHEET SIDE TWO



TRASH ITEM TALLY (Tally with () if found below high water line, and (•) if above)

PLASTIC	METAL
Plastic Bags	Aluminum Foil
Plastic Bottles	Aluminum or Steel Cans
Plastic Bottle Caps	Bottle Caps
Plastic Cup Lid/Straw	Metal Pipe Segments
Plastic Pipe Segments	Auto Parts (specify below)
Plastic Six-Pack Rings	Wire (barb, chicken wire etc.)
Plastic Wrapper	Metal Object
Soft Plastic Pieces	LARGE (specify below)
Hard Plastic Pieces	Appliances
Styrofoam cups pieces	Furniture
Styrofoam Pellets	Garbage Bags of Trash
Fishing Line	Tires
Tarp	Shopping Carts
Other (write-in)	Other (write-in)
BIOHAZARD	TOXIC
Human Waste/Diapers	Chemical Containers
Pet Waste	Oil/Surfactant on Water
Syringes or Pipettes	Spray Paint Cans
Dead Animals	Lighters
Other (write-in)	Small Batteries
CONSTRUCTION DEBRIS	Vehicle Batteries Cigarette Butts
Concrete (not placed)	Other (write-in)
Rebar	BIODEGRADABLE
Bricks	Paper
Wood Debris	Cardboard
Other (write-in)	Food Waste
MISCELLANEOUS	Yard Waste (incl. trees)
Synthetic Rubber	Leaf Litter Piles
Foam Rubber	Other (write-in)
Balloons	GLASS
Ceramic pots/shards	Glass bottles
Hose Pieces	Glass pieces
Golf Balls	FABRIC AND CLOTH
Tennis Balls	Synthetic Fabric
Other (write-in)	Natural Fabric (cotton, wool)
Other (write-in)	Other (write-in)

SPECIFIC DESCRIPTION OF ITEMS FOUND (if any):

RAPID TRASH ASSESSMENT WORKSHEET TRASH ITEM TALLY



Describe Monitoring Activity:

RAPID TRASH ASSESSMENT WORKSHEET

Surface Water Ambient Monitoring Program, San Francisco Bay Regional Water Quality Control Board

WATERSHED/STREAM: _____ DATE/TIME: _____
MONITORING GROUP, STAFF: _____ SAMPLE ID NO. _____
SITE DESCRIPTION (Station Name, No., etc.): _____



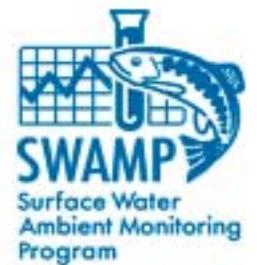
Site Definition:

SITE DEFINITION:

UPPER/LOWER BOUNDARIES OF REACH: _____

HIGH WATER LINE: _____

UPPER EXTENT OF BANKS OR SHORE: _____

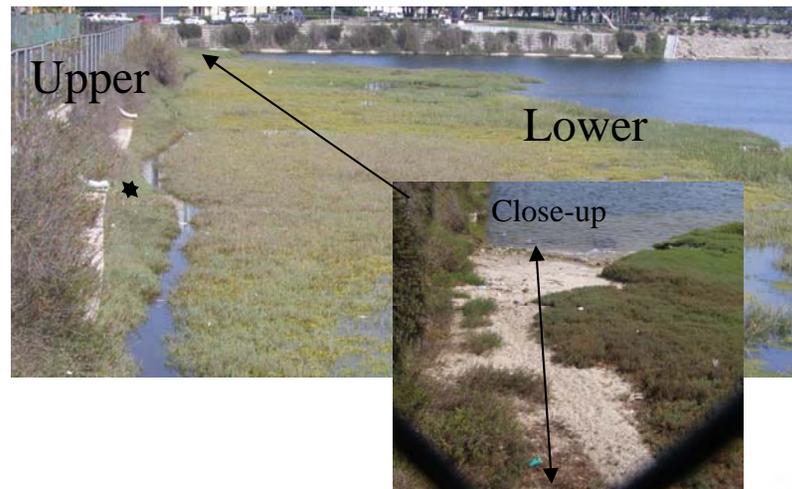
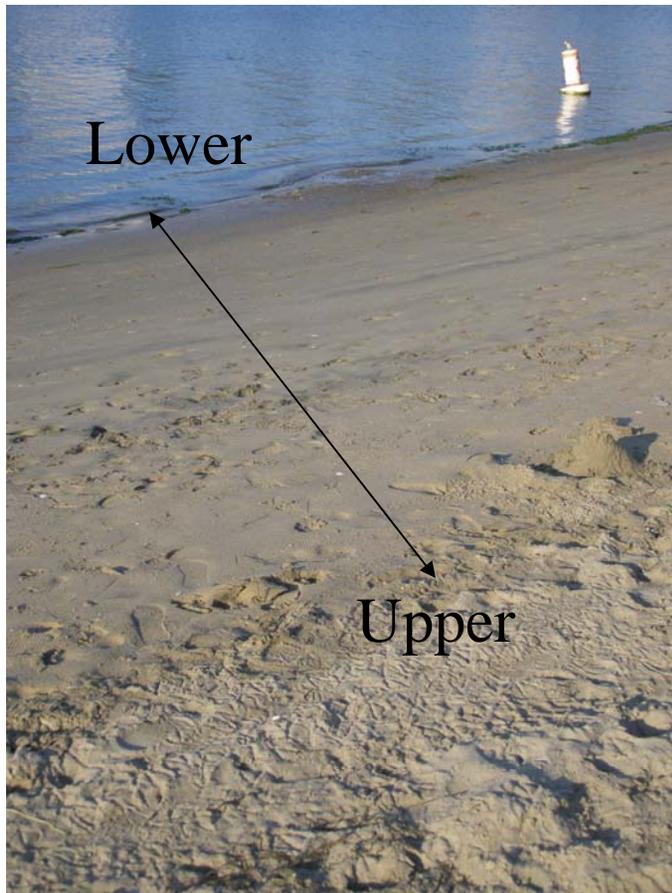


Survey Landmarks



Waters Edge to High-water (Upper Depositional Area)

TRASH ITEM TALLY (Tally with (◻) if found below high water line, and (◉) if above)



Actual Number of Trash Items Found:

2. Actual Number of Trash Items Found	0 to 5 trash items based on a rapid survey of a 100-foot stream reach.	6 to 25 trash items based on a rapid survey of a 100-foot stream reach.	26 to 50 trash items based on a rapid survey of a 100-foot stream reach.	Over 50 trash items based on a rapid survey of a 100-foot stream reach.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0



Least # of Trash Items



Greater # of Trash Items



Trash Items*:

	PLASTIC	METAL	
	Plastic Bags	Aluminum Foil	
	Plastic Bottles	Aluminum or Steel Cans	
	Plastic Bottle Caps	Bottle Caps	
	Plastic Cup Lid/Straw	Metal Pipe Segments	
	Plastic Pipe Segments	Auto Parts (specify below)	
	Plastic Six-Pack Rings	Wire (barb, chicken wire etc.)	
	Plastic Wrapper	Metal Object	
	Soft Plastic Pieces	LARGE (specify below)	
	Hard Plastic Pieces	Appliances	
	Styrofoam cups pieces	Furniture	
	Styrofoam Pellets	Garbage Bags of Trash	
	Fishing Line	Tires	
	Tarp	Shopping Carts	
	Other (write-in)	Other (write-in)	
	BIOHAZARD	TOXIC	
	Human Waste/Diapers	Chemical Containers	
	Pet Waste	Oil/Surfactant on Water	
	Syringes or Pipettes	Spray Paint Cans	
	Dead Animals	Lighters	
	Other (write-in)	Small Batteries	
	CONSTRUCTION DEBRIS	Vehicle Batteries	
	Concrete (not placed)	Other (write-in)	
	Rebar	BIODEGRADABLE	
	Bricks	Paper	
	Wood Debris	Cardboard	
	Other (write-in)	Food Waste	
	MISCELLANEOUS	Yard Waste (incl. trees)	
	Synthetic Rubber	Leaf Litter Piles	
	Foam Rubber	Other (write-in)	
	Balloons	GLASS	
	Ceramic pots/shards	Glass bottles	
	Hose Pieces	Glass pieces	
		FABRIC AND CLOTH	
	Golf Balls	Synthetic Fabric	
	Tennis Balls	Natural Fabric (cotton, wool)	
	Other (write-in)	Other (write-in)	

* Proper field identification is critical to minimize variability.

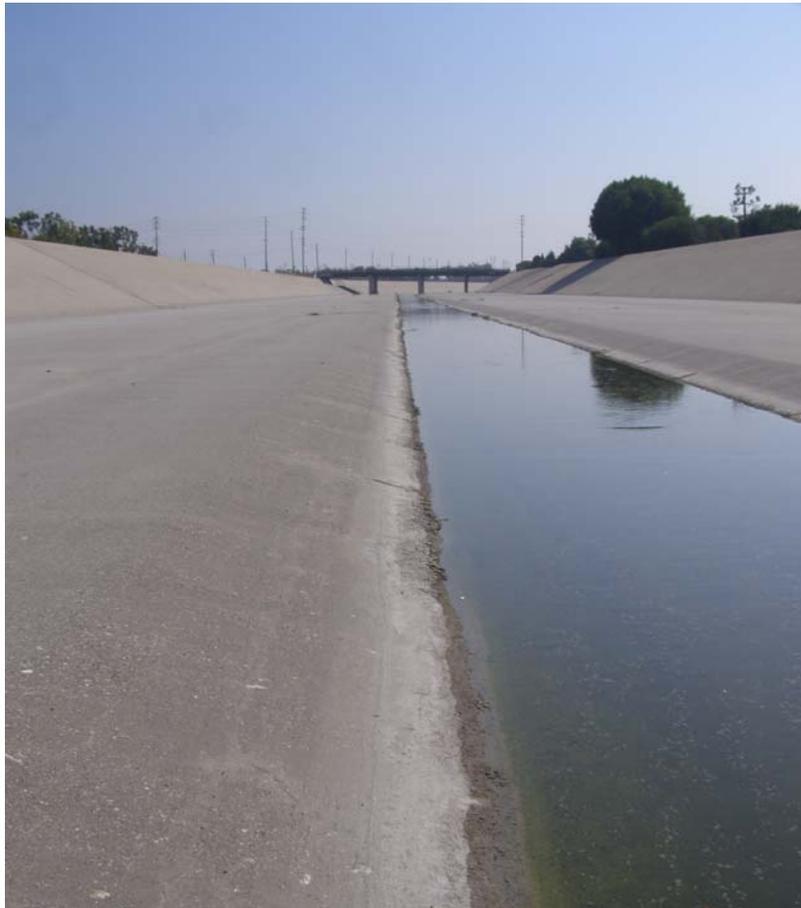


Level of Trash:

Trash Assessment Parameter	Optimal	Sub optimal	Marginal	Poor
1. Level of Trash	On first glance, no trash visible; little or no trash evident when streambed and streambanks are closely examined for litter and debris, for instance by looking under leaves.	On first glance, little or no trash visible; after close inspection small levels of trash evident in streambank and streambed.	Trash is evident in low to medium levels on first glance. Streambank surfaces and immediate riparian zone contain litter and debris. Evidence of site being used by people: scattered cans, bottles, blankets, and/or clothing.	Trash distracts the eye on first glance. Streambank surfaces and immediate riparian zone contain substantial levels of litter and debris. Evidence of site being used frequently by people: many cans & bottles, food wrappers, manmade shelters, blankets, and/or piles of clothing.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0



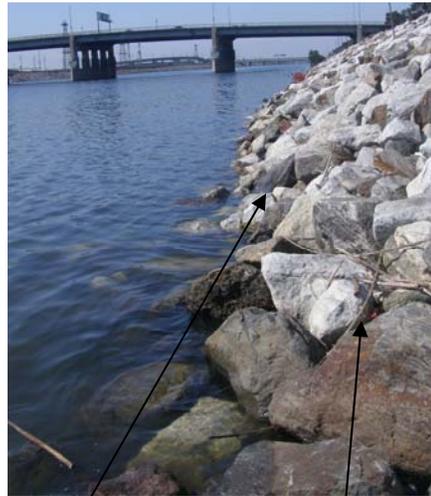
Level of Trash: Appear Clean



Level of Trash: Appear Clean, But Have Trash



Bottles and Cinderblocks



Styrofoam, Plastics, Arundo



Styrofoam, Wood, Plastic Film



Threat to Aquatic Life:

3. Threat to Aquatic Life	<p>Trash, if any, is mostly paper or wood products or other biodegradable materials.</p> <p>Note: A large amount of rapidly biodegradable material like food waste creates high oxygen demand, and should not be scored as optimal.</p>	<p>Little or no persistent, buoyant, and small litter or debris. Presence of settleable, degradable, and non-toxic debris such as wood, glass, metal, and degradable plastics such as foamed plastics.</p>	<p>Medium prevalence of persistent (plastic, synthetic rubber or cloth), toxic, buoyant, and small litter such as: plastic bags; pellets; cigarette butts; large deposits of settleable debris such as glass or metal; and any evidence of small clumps of deposited yard waste or leaf litter.</p>	<p>Large amount of persistent (plastic, synthetic rubber or cloth), toxic, buoyant, and small (transportable) trash such as: cigarette butts; plastic bags; plastic pellets; batteries or other toxic substances; and large clumps of yard waste or dumped leaf litter.</p>
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0

Trash in San Jose's Coyote Creek. Photo by Larry Johmann



Adjacent to the mouth of the Los Angeles River



Threat to Human Life:

4. Threat to Human Health	Observable trash contains no evidence of bacteria or virus hazards such as medical waste, diapers, pet or human waste, no evidence of toxic substances such as pesticides or batteries, no ponded water for mosquito production & no evidence of puncture or laceration hazards associated with the observed litter or debris.	No medical waste or sources of toxic substances, but any presence of puncture or laceration hazards such as broken glass and metal debris. Or presence of ponded water in trash items such as tires or containers that could facilitate mosquito production.	Presence of one of the following: hypodermic needles, pipettes, or other medical waste ; any used diapers or pet waste within the stream channel or where runoff could carry materials to waterbody; any toxic substance such as pesticides, batteries, or fluorescent light bulbs (mercury).	Presence of more than one of the following: any hypodermic needles, pipettes, or other medical waste; used diapers or pet waste within the stream channel or where runoff could carry materials to waterbody; any toxic substances such as pesticides, batteries, or fluorescent light bulbs (mercury); ponded water in trash items.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0

Bio-hazards must be carefully tallied to allow consistent scoring.



Illegal Dumping & Littering:

Trash Assessment Parameter	CONDITION CATEGORY			
	Optimal	Sub optimal	Marginal	Poor
5. Illegal Dumping and Littering	Any observed trash is incidental litter (less than 5 items) or carried downstream from another location. No evidence of illegal dumping.	Some evidence of in-stream or shoreline littering; and/or some evidence of illegal dumping, such as a sign prohibiting dumping along with observed garbage bags of material. Limited vehicular access limits the amount of potential dumping, or material dumped is diffuse paper-based debris (e.g., convenience stores or fast food).	Prevalent in-stream or shoreline littering; and/or the presence of one of the following: furniture, appliances, or bags of garbage or yard waste, coupled with vehicular access that facilitates in-and-out dumping of materials to avoid landfill costs.	Significant litter on shoreline or stream banks and streambed; and/or evidence of chronic dumping, with more than one of the following items: furniture, appliances, shopping carts, garbage bags, or yard waste. Easy vehicular access for in-and-out dumping of materials to avoid landfill costs.
SCORE	20 19 18 17 16	15 14 13 12 11	10 9 8 7 6	5 4 3 2 1 0



Accumulation of Trash:

<p>6. Accumulation of Trash</p>	<p>There does not appear to be a problem with trash accumulation from downstream transport. Observable trash, if any, appears to have been directly deposited at the stream location.</p>	<p>Some evidence that litter and debris have been transported from upstream areas to the location. Less than 5 trash items have been transported from upstream locations, based on evidence such as silt marks, faded colors or location near high water marks.</p>	<p>5 to 20 items of observable trash are carried to the location from upstream, as evidenced by its location near high water marks and siltation marks on the debris.</p>	<p>Trash appears to have accumulated in substantial quantities at the location based on delivery from upstream areas, and is in various states of degradation based on its persistence in the waterbody. Over 20 items of observable trash have been carried to the location from upstream.</p>
<p>SCORE</p>	<p>20 19 18 17 16</p>	<p>15 14 13 12 11</p>	<p>10 9 8 7 6</p>	<p>5 4 3 2 1 0</p>



Trash Accumulation Over Time:

Look for Signs of:

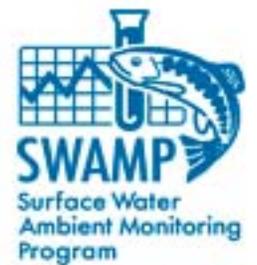
- Aging
- Decomposition
- Layering
- Dates on trash items



Total Score:

Total Score _____

Add up all Parameter scores.



Equipment:



- Tape Measure or 100 Ft Rope
- Survey Markers, GPS or Landmarks
- Stick for Lifting Up Vegetation
- Gloves, Litter Grabbers and Trash Bags When Removing Trash
- Optional – GPS, Camera



Health and Safety

Conducting Rapid Trash Assessments requires additional health and safety concerns.

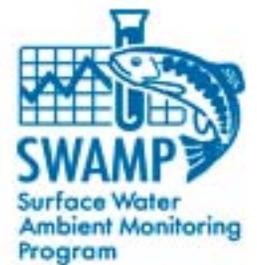
- Sharp and or pointed objects may be encountered. These objects might be hidden from view (underwater, covered by sediments, mixed with other litter...).
- Biohazards might be encountered (used hypodermic needles, diapers, feces...).

AVOID: Homeless encampments, clandestine drug labs, or other dangerous areas. Alert/coordinate with authorities as necessary.

If you encounter illegal activities such as the disposal of hazardous waste or unidentifiable waste, do not enter the area. Contact the proper authorities ASAP.



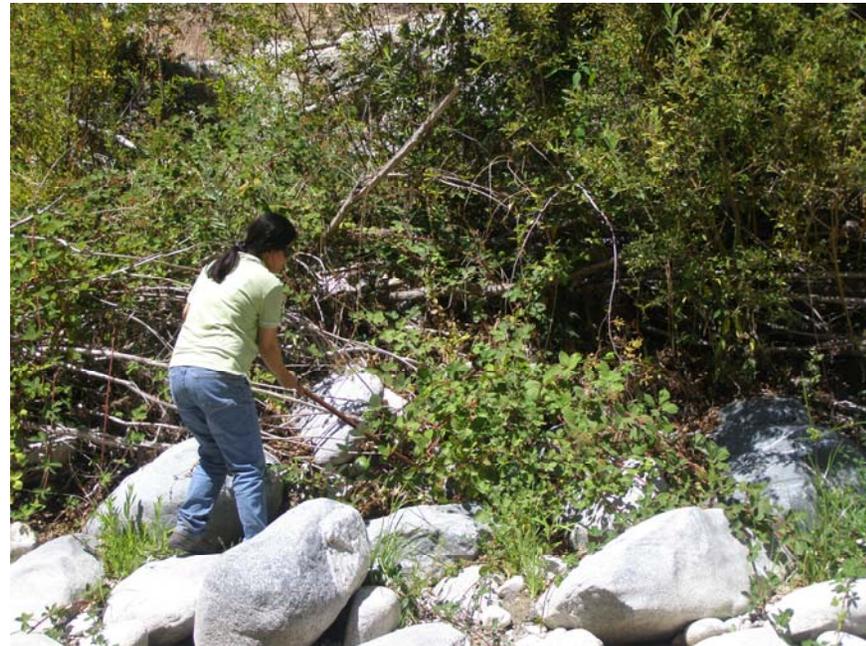
Pictorial Overview/Review of a Rapid Trash Assessment



Streambank Person:

One team member begins walking along the bank or in the water (wear waders) at the edge of the stream or shore, looking for trash on the bank up to the upper bank boundary, and above and below the high water line.

This person picks up trash and if there is no recorder, tallies the items on the trash assessment worksheet as either above or below the high water line based on the previously determined boundary.



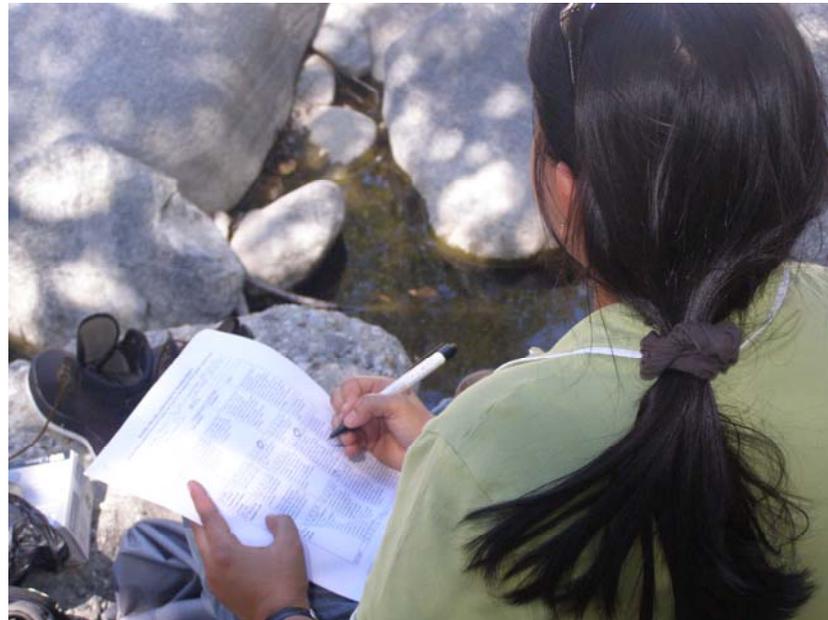
Streambed Person:

The streambed person person walks in the streambed and up and down the opposite bank, picking up and calling out specific trash items found in the water body and on the opposite bank both above and below the high water line, for the tally person to mark down appropriately on the trash assessment sheet.



Recorder:

The recorder tallies all information collected by the bank person and the bed person.



Laying Out Transect:

The 100-foot distance be accurately measured. The length should be measured not as a straight line, but as 100 feet of the actual stream or shore length, including sinuous curves.



Conducting the Assessment

Follow the steps previously outlined and conduct the assessment.

Record all findings.

Review field data sheets.

Dispose of trash collected.



References:

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