Comments from Roger James and Larry Kolb
On February 11, 2009 Revised Municipal Regional Stormwater Permit
April 3, 2009

1. EXISTING PERMITS-page 3

The Tentative MRP is not regional in that it does not include Marin, Sonoma, Napa and Solano Counties and the non–CSO portion of the City and County of San Francisco, Caltrans, BART and the public agencies listed in Attachment 3 to the SWRCB's Phase II NPDES Permit as permittees. There are over 170 public agencies listed in Attachment 3 to the SWRCB's Phase II NPDES permit that are not regulated by storm water programs. Many of these facilities mimic smaller municipalities that are regulated by the Tentative Order and are primarily schools, community colleges and universities. They have extensive operations with impervious surfaces including buildings, roadways, large parking lots, paved playgrounds, athletic facilities, maintenance operations, etc. They generate huge volumes of traffic. In many cases the schools, community colleges and universities represent the single largest entity in a municipality with the largest area of impervious surface. It will be extremely difficult for the Permittees to comply with the MRP Prohibitions and Water Quality Standards unless these agencies implement programs comparable to those required by the MRP.

At a minimum the MRP should reference these agencies and describe expected actions of these agencies to achieve compliance with TMDL pollutant reductions and reduction of pollutants listed through the 303(d) listing process.

2. FINDING 11-page 5

This finding must be updated to reflect the recent listing of impaired water bodies. A table of the 26 water bodies impaired by trash and the Permittees in each water body's watershed must be included.

3. FINDING !6-page 7

While Permittees have limited jurisdiction over certain pollutants, they are the ultimate dischargers and responsible for compliance water quality standards and discharge prohibitions. This should also be noted in this finding.

4. PROVISION C.1.a.-page 9

This provision must also apply to "violation of discharge prohibitions" by adding this phrase after "exceedance of applicable WQS".

5. PROVISION C.2-page 10

A similar provision covering street and road repair, sidewalk/plaza maintenance and pavement washing and stormwater pump stations should be developed for these activities on private commercial property.

6. PROVISION C.2.d-page10

Change "explore" to "determine the technical and economic feasibility" to make this more meaningful.

7. PROVISION C.d.i.-page 11

Add "and discharge prohibitions".

8. PROVISION C.2.d.ii.(1)-page 11

Add a footnote for "characteristics" to indicate "Drainage area, land uses, dimensions and elevations of wet well, inlet and discharge pipes, bar screens and trash racks, high and low flow pump capacities, drya and wet weather flows".

9. PROVISION C.2.d.ii.(4)-page 12

This program must be started in 2009 rather than waiting for the 2010-11 wet weather season because earlier permits have already required enforceable programs.

10. PROVISION C.2.d.iii.-page 12

Change waste materials to "trash, vegetative material and sediments separately".

11. PROVISION C.3.a.v.(1)(k)-page 21

This must also include operation and maintenance procedures and costs, funding mechanisms, monitoring program protocols to determine when replacement/renovation is required.

12. PROVISION C.3.a.v.(2)-page 21

The information required must also include design criteria, as built drawings, replacement costs during a 50-year life cycle, monitoring program and results.

13. PROVISION C.3.c.i.(2)(d)-page 22

Mandating these specific design elements is a violation of Section 13360 of the California Water Code and must be avoided because of the dangers created by seismic hazards. The recent article in the March 24 edition of the Contra Costa Times must be of concern to the Regional Board and taken into consideration when mandating design elements that can result in property damage. The proposal for widespread application of site design measures involving infiltration lacks creditability considering the California Geological Survey's mapping of the Bay Area identified significant areas vulnerable to liquefaction and landslides during large seismic events. It is unrealistic to expect Permittees to require these design elements in all developments especially in these danger zones. This section must require Permittees to consider creation of seismic hazards when implementing this provision.

14. PROVISION C.3.c.i.(2)(i)-page23

Consideration of slope stability in the design must be a consideration in whether infiltration is feasible and if the design element should even be considered. If the Regional Board insists on mandating site designs that promote site instability and create seismic hazards then it must also be prepared to be held accountable for ensuing damages.

15. PROVISION C.3.c.i.(4), (5) and (6)- page 23

The glossary must include definitions of vault-based treatment systems, off vault-based systems and primary treatment. The rationale for this section must be presented because vault based systems are capable of capturing and removing pollutants for safe disposal in compliance with regulations while the mandated design elements only accumulate and concentrate pollutants that are removed when they reach hazardous levels or are flushed into water bodies during high flow events. The Regional Board staff must recognize that the vault based systems limit the exposure of the public, pets and wildlife to these hazardous levels while design systems expose the public, pets and wildlife to pollutants that can reach hazardous levels.

16. PROVISION C.3.d.i.(2)(c)-page 25

It is not clear that the Regional Board staff has carefully analyzed our comments and supporting information in Comment 30. submitted on the December 2007 draft MRP since there has not been a change in this provision or response to the February 29, 2008 comment. We expect an analysis of this issue however the issue can be addressed by adding the following footnote to this section of the provision: "Flow rates shall be based on rainfall intensities that correspond to the BMP catchment's time of concentration. The surface area of BMPs designed to retain storm water to mitigate this increase in flow shall be considered as impervious surface".

17. PROVISION C.3.d.iv.(1)-page 25

This section should require that proponents of these devices file reports required by the Safe Drinking Water Act UIC program with USEPA-IX. This section must also include unlined cisterns as an infiltration device.

18. PROVISION C.3.eFootnote 6-page 27

See comments 14 and 17 above.

19. PROVISION C.3.g.v.(3) Footnote 12-page 33

The percent of impervious area must be reduced to 25% based on studies by the Center for Watershed Protection. See Policy Comment 3. In our February 29, 2008 comments on the December 2007 draft of the MRP.

20. PROVISION C.3.g.v.(3)-page 33

The time schedule must be shortened by one year since the City of Vallejo has known for many years and certainly since the December 2007 tentative MRP was issued that the HMP would be required.

21. PROVISION C.3.h.-page 34

The February draft does not include two critical elements required to ensure that infiltration BMPs are sustainable during a projects life. A construction element must be added that verifies that a BMP has been constructed as designed by requiring as built drawings and verification of infiltration rates through field testing. The performance of BMPs that rely on infiltration will begin to deteriorate from the date of initial installation as the soils clog from accumulation of sediments and schmutzdecke. The second element that must be added is rehabilitation/replacement because the performance of all infiltration BMPs will eventually deteriorate requiring rehabilitation or replacement of the BMP. These two elements apply to all infiltration BMPs, but are especially critical for BMPs(IMPs) proposed by the Contra Costa County storm water program where flow through planters, swales, bioretention systems are only sized using infiltration rates that should be considered as the beginning point of non compliance.

22. PROVISION C.5-page 43

The requirements of this provision should not include development of illicit discharge detection and elimination and should be limited to implementation of the program since these programs have been required since the initial NPDES permits and should be in place and mature. This program should not rely on complaints and must be inspection driven.

23. PROVISION C.6.a.ii.(3)-page 48

The control program should extend beyond the finishing of lots because during the building construction phase activities result in disturbance of the finished lot exposing it to soil erosion. During this current building slowdown home construction has been suspended leaving lots finished, but not fully protected

from erosion. The program should extend until the site is fully stabilized by landscaping or installation of permanent erosion control measures.

24. PROVISION C.6.b.ii.(3)-page 48
This requirement should be limited to implementation of the program since these programs have been required since the initial NPDES permits and should be in place and mature. This program should also be implemented before this coming wet weather season.

25. PROVISION C.6.e.i.-page 49
"potential problems" should be changed to "threatened violations of local ordinances and/or erosion control plans" to make this more specific.

26. PROVISION C.6.e.ii.-page 49
Add "owner" after sites.

27. PROVISION C.6.e.ii.(4)-page 50
In the second sentence add after violation "of local ordinances and/or erosion control plan is observed or threatened" and change "problems" to "actual or threatened violation of local ordinances and/or erosion control."

28. PROVISION C.7.a.i. and ii.-page 53
This program must also include marking and maintaining storm drain inlets on private commercial and high density residential developments and public entities such as schools, universities, colleges, sport complexes, BART, etc.

29. PROVISION C.7.-page 53
Focused surveys of public information campaigns have been found to be minimally effective. The program outlined appears to be rather costly and could be scaled back with reallocation of funds to activities that result in the reduction of pollutants of concern.

30. PROVISION C.8.e.ii.-page 67
The Contra Costa program in its current NPDES permit is required to monitor 3 specific BMPs at 5 sites and this provision would relieve them of that requirement. That requirement must remain in place because of the significant concern with the Contra Costa programs BMP/IMP sizing criteria. The Regional Board should determine the status and results of that monitoring requirement and if not met should pursue enforcement action.

31. PROVISION C.8.h.i.-page 70
"Violation of Discharge Prohibitions" should be added to the title and elsewhere in this section.

32. PROVISION C.8.h.iii.(5)-page 71
"water quality problems" should be changed to "actual or threatened exceedance of water quality standards".

33. PROVISION C.9.a.i.-page 73
"threaten water quality" should be changed to "threaten beneficial water uses" because standards haven't been established for many pesticides and some of the existing standards are considered to be inadequate.

34. PROVISION C.10-page 77

The Trash Reduction program contained in the February 2009 MRP is considerably weaker that that contained in the December 2007 draft MRP, does not represent significant progress towards compliance with the ***Discharge Prohibitions*** and needs to be replaced with the elements discussed below. The discharge of trash and solid waste to the Bay Area's creeks, wetlands, Bay and Ocean have been prohibited in Water Board's water quality plans and policies since the mid 60's, Basin Plans since 1975 and have been prohibited in countywide NPDES permits for over 18 years. The Permittees have been implementing municipal maintenance practices and public education programs for over 15 years that are aimed at reducing the discharge of gross pollutants including trash. However, ongoing violations of the NPDES Permits discharge prohibitions and receiving water limitations have been well documented by the Water Board staff's Rapid Trash Assessment Protocol, testimony received by the Water Board on March 14, 2007 and 303(d) submittals of February 28, 2007. We find it disturbing that the February 2009 MRP makes no mention of the recent listing of 26 water bodies impaired by trash and doesn't use that list to prioritize the "hot spots" for initial enforcement action.

The Los Angeles Regional Water Quality Control Board has taken aggressive regulatory action to address trash in that region's waterways. Its actions have been appealed to the State Board; have been upheld by the courts and approved by the State Board and USEPA. The magnitude of and impacts on the environment from trash in the Bay Area's waterways are comparable or greater than found in Los Angeles. The Bay Area's trash control program should be at least as aggressive as that in Los Angeles and have compliance schedules at least as restrictive.

The National Research Council has recommended the adoption of a goal of zero discharge of waste into the marine environment including land-based marine debris, derelict fishing gear, shipborne waste and abandoned vessels.[1] The report addresses multiple types of marine debris and notes that plastics are now ubiquitous in the oceans and along coasts creating ecological and socioeconomic impacts.

GOAL STATEMENT – Provision C.10.a.i. (page 77)

The statement is extremely weak and needs to be replaced with Goals, Objectives and Implementation Strategy. The Goal must:

- Establish a target of zero trash in creeks, wetlands and the Bay and Ocean to be achieved by 2020.

The Objectives of the Permit must:

- State that implementation of this permit shall address water bodies listed in the recent 303(d) listing revisions and state that additional water bodies may be added as additional areas of impairment are identified.
- Require 10% annual reductions in the volume and mass of trash ***discharged*** by the Permittees through compliance with Discharge Prohibitions A with a 30% reduction to be achieved by 2014.
- Require documentation of the reductions in the volume and mass of trash through installation of full capture devices or an increased level of effort of municipal maintenance practices.

The Implementation Strategy must:

- State the RWQCB's intention to establish "acceptable" levels of trash in creeks, wetlands and Bay and Ocean that do not constitute a nuisance, adversely affect beneficial water uses and/or

[1] National Research Council, 2009, *Tackling Marine Debris in the 21st Century*

cause a contamination by 2019. SFEI should conduct the studies necessary to determine the "acceptable" levels of trash.

- Require Permittees to develop a Trash Control Program including identification of full capture devices, design and siting criteria, siting plans, funding for construction and long-term (say 50-years) life-cycle operation and maintenance costs of devices.
- Require Permittees to submit a monitoring plan that will document the reductions in the ***discharge*** of the volume and mass of trash and compliance with the Prohibitions .
- Require applicants for water quality certifications for storm water discharges to install full capture devices (new and rehabilitation of storm water pump stations, flood control projects and new outfalls serving high trash generation land uses).
- Include an enforcement program that encourages use of federal stimulus funds, state grants and State Water Pollution Cleanup and Abatement Account funds and state that failure to pursue these funding opportunities is failure to achieve the MEP standard.
- Urge Permittees to include and address gross pollutants including pollutant bound sediments and vegetation as part of the trash control program.

TRASH HOT SPOT SELECTION – Provision C.10.a.ii. – (page 77)

This section must be replaced with a finding that the RWQCB recently proposed revisions to the 303(d) list of impaired water bodies that added 26 water bodies where beneficial uses have been impaired by trash. The permit must contain a list of each water body and the Permitee in the water body's catchment/watershed. The focus of this permit must be on these water bodies and there is no need for further assessments by Permittees. Additions to this listing of water bodies should be permitted pending the next 303(d) update/revision if evidence is provided that meets the 303(d) listing criteria.

This section as written would allow Permittees to select trash hot spots based on population or a percentage of Retail/Wholesale Commercial Land Area. The previous draft permit required that Permittees to identify trash impacted areas in 10% of a significant portion of the urbanized area. An analysis of the ABAG data for Contra Costa County indicates that previous draft would require programs to control trash for over 14,000 acres while the proposed permit would require trash control programs in only about 1,500 acres – a very significant reduction in the trash control requirements.

The proposed revision would require development and implementation of trash control programs in those watersheds where impairment of beneficial water uses has been determined by the Regional Board through the 303(d) process rather than an arbitrary designation of a percent of an area.

Some Permittees have demonstrated that they cannot be objective in selecting sites and evaluating trash levels in their water bodies. The Santa Clara program in a recent annual report indicated significantly improved conditions over previous years whereas information provided by Larry Johnman and others clearly show ongoing significant levels of trash in creeks. Comments submitted by several Permittees on the recent proposed revisions to the 303(d) list suggested that their programs have resulted in significant reductions in the amount of trash. These contentions were made based in part on observations made during the summer months where trash discharged during the wet weather months had long become imbedded in sediments and vegetation making objective observations impossible. These assertions of significant improved conditions are disingenuous at best.

In summary there is no valid basis for another process to identify trash hot spots when the Regional Board has recently identified 26 water bodies that have been impaired by trash. Permittees should now

focus their efforts and resources on programs to comply with the prohibition of the ***discharge*** of trash in the watersheds of the 26 water bodies.

TRASH HOT SPOT CLEANUP TO TRASH ACTION LEVEL – Provision C.10.a.iv. – (page 79)

There is a danger that the proposed "Urban Optimal" Trash Action Level (TAL) will become a permanent standard even though the section indicates that the TAL does not represent full attainment of the Basin Plan (NPDES Permit) trash ***discharge*** prohibitions or water quality objectives. Historically interim standards become permanent standards unless there is a clear and concise scientific well funded process for refining a standard. The section should state the process that will be used to develop final acceptable levels of trash through SFEI. This section should also make it clear that the Transportable, Persistent, Bouyant Litter shall be <25 pieces and no Biohazard, Toxic or Sharp Objects shall be present as part of the TAL in addition to the <100 trash items.

TRASH CAPTURE REQUIREMENT- Provision C.10.a.v. – (page 79)

The definition of a Full Trash Capture Device is adequate provided there is not an implied acceptance of catch basin inserts that have been approved by the Los Angeles RWQCB (see Fact Sheet page 71 and later discussion on the effectiveness of catch basin inserts). The section should indicate that compliance with the Discharge Prohibitions can be achieved through the installation of Full Trash Capture Devices for 30% of the ABAG land use categories (high density residential ->8 units/acre, industrial, major infrastructure, military, commercial services)in those water bodies that have been 303(d) listed as impaired by trash by July 1, 2013 and 10% of the land uses annually until 2019 when 80% coverage would be achieved.

Permittees that have installed Full Capture Devices before the effective date of the permit should be able to claim credit. A number of cities and entities have installed CDS devices since 2003 that are effectively removing trash including Cities of Oakland, South San Francisco, San Francisco, Port of San Francisco, and Port of Oakland and should be given credit.

SMALL PERMITTEE EXEMPT FROM TRASH CAPTURE REQUIREMENTS – Provision C.10.a.vi. – (page 80)

Small Permittees discharging to trash impaired water bodies should only be exempt from installation of full capture devices if they document that no trash is ***discharged*** from their storm drain systems through end-of-pipe monitoring for a period of three years.

BOOMS OR SEA CURTINS – Provision C.10.a.vii. – (page 80)

Granting credit for booms and sea curtains endorses the acceptance of the ***discharge*** of trash and violation of the ***Discharge Prohibitions***. If these credits are given why not provide a similar credit for cleanup programs where trash is removed from creeks by volunteers. It is poor public policy to provide a reward for cleanup of pollutants that have been ***discharged*** in violation of an NPDES Permit when the emphasis must be on compliance with a prohibition. Any credit provided should be in the form of the type and level of enforcement actions or amount of civil monetary penalties assessed. If credits are to be given then the mass and volume of material removed must be determined and credited as part of the reduction.

TRASH SOURCE REDUCTION – Provision C.10.a.viii – (page 80)

The proposed actions to reduce solid waste and litter are commendable and must be part of every Permittee's compliance strategy and strongly encouraged by the RWQCB; however, unless these actions can be directly translated into compliance with the ***Discharge Prohibitions*** a Permittee should not be granted relief from the trash capture installation requirement. Any relief or credits provided should be

in the form of the type and level of enforcement actions or amount of civil monetary penalties assessed. If credits are to be given then the mass and volume of material removed must be determined and credited as part of the reduction and no rewards should be made for just making efforts.

TRASH HOT SPOT ASSESSMENT – Provision C.10.b.i. – (page 81)

Use of the Rapid Trash Assessment to monitor levels of trash in water bodies is contrary to the requirement to comply with the ***Discharge Prohibitions***. Permittees must focus their efforts on installation of Full Capture Devices and municipal maintenance practices that reduce the ***discharge*** of trash impaired water bodies and monitoring the reductions in the discharge of trash using Caltrans protocols. The Rapid Trash Assessment protocols will be a useful tool in establishing acceptable levels of trash that do not adversely affect beneficial water uses, cause a nuisance and/or contamination. The impairments to the water bodies 303(d) listed are so gross that Rapid Trash Assessments in these water bodies would be a waste of limited public resources that must be better spent on implementing trash control programs and not studies. The RWQCB should be developing through SFEI a program to determine acceptable levels of trash using g the Rapid Trash Assessment protocols as a beginning point. This program would be initiated only after there have been significant – 70-80% reductions in the mass and volumes of trash being currently ***discharged***.

This section should address the reductions in the mass and loading of trash reductions achieved through installation of full capture devices and other municipal maintenance programs by physically determining the mass and volume captured or removed and monitoring end-of pipe levels of trash where measurements cannot be made of the actual trash removed.

LONG-TERM PLAN FOR TRASH IMPACT ABATEMENT – Provision C.10.c. – (page 81)

This section should address compliance with the ***Discharge Prohibitions*** and Water Quality Standards and require that the Long-Term ***Program*** include the following elements:

- Full Capture Devices
    - Identification of full capture devices including siting and design criteria
    - Funding for construction and long-term operation and maintenance for a long-term (say 50-years) life cycle of the devices.
    - Implementation schedule
- Municipal Maintenance Practices
    - Monitoring program to document reductions in mass and volume of trash ***discharges***
    - Evaluation of new and improved maintenance practices to reduce ***discharges*** of trash
    - Long-term funding program
- Relevant Laws and Ordinances
    - Monitoring/evaluation program to document reductions in mass and volume of trash ***discharges***
    - Funding for long-term oversight of the program

REPORTING – C.10.d – (page 81)

This section should be modified to reflect the above program

COSTS OF TRASH CONTROL – FACT SHEET – (page 70)

The Fact Sheet contains information on the costs of Full Capture Devices (CDS Units) installed by the City of Oakland at Lake Merritt and describes the City of Los Angeles storm drain catch basin program to control trash.

The Fact Sheet contains information on two of the four Full Capture Devices (CDS Units) installed by the City of Oakland at Lake Merritt. The City of Oakland installed two additional CDS units at Lake Merritt at Grand and Euclid in 2002 and at Bellevue and Stanton in 2004. The unit at Grand and Euclid has a capacity of 3-cfs, treats runoff from a 16.5-acre catchment and cost $44,000. The unit at Bellevue and Stanton has a capacity of 9-cfs and treats runoff from a 26.5-acre catchment and cost $85,000.

The City of Los Angeles has implemented a program to control trash using catch basin inserts as explained in the Fact Sheet. An investigation of the City's claim on the .90% efficiency and overall performance of the catch basin inserts and trash excluders raises significant questions about the effectiveness of the City's program to control trash. The basis of the Los Angeles RWQCB's approval of catch basin inserts is highly questioned as it appears that the City submitted and the RWQCB accepted erroneous information.

The City's report "Catch Basin Inserts; Method to Determine CB Inserts Act as Full Capture Devices" and "Technical Report: Assessment of Catch Basin Inserts" can be found at http://www.lastormwater.org/Siteorg/download /pdfs/general_info/Request-Certification-10-06.pdf. Attempts to clarify and obtain more information on the protocols used to characterize the material removed by the catch basins and CDs unit and on the maintenance program from City staff have been unsuccessful. The reports and field observations in the enclosed CD raise very significant questions about the effectiveness of that program:

- The >90% effectiveness of the catch basin inserts was determined dividing the weight of material removed from the catch basins by the weight of the material removed from the catch basins plus the weight of only the ***floatables*** removed from the CDS units. The material removed from the catch basins included the ***floatables***, sediment and vegetation while only ***floatables*** were removed from the CDS unit. Data from a number of cleanouts of CDS units and studies by Caltrans and others to determine the relative percent of the total mass that can be attributed to ***floatables***, indicates that it is less than 5%. Based on data from cleanout of CDS units it is estimated that the catch basin inserts were no more than 10-15% effective rather than the >90% asserted by the City.
- The efficiency of catch basin inserts cannot possibly be the 90% reported by the City because significant amounts of trash were collected in the CDS unit down stream of the catch basins even with storms that were only 0.28-inch and 0.31-inch. A >90% catch basin efficiency for design storms should produce no trash in the CDS unit and someone should have picked up on this.
- During the efficiency study catch basins were cleaned after storms with depths greater than 0.25-inch while in actual practice the City apparently only performs maintenance two to three times a year. An analysis of rainfall data for Los Angeles indicates that there are about 12 storms a year where rainfall exceeds 0.25-inch. In the Bay Area we have about double that number of storm events so maintenance based on the Los Angles criteria would have to be significantly increased.
- Field observations of the catch basin screening systems and deflectors indicate that maintenance requirements may be greater than anticipated because of screen blinding and clogging by with "scumutzdecke" (a mix of oil and grease and fine sediments and by saps from trees) , plastic bags and vegetation. A maintenance program would require frequent power washing or replacement of screens and management of water and pollutants from power washing operations to control dry weather nuisance flows. Screens will be subject to damage when clogged or from maintenance using vacuum trucks and require frequent replacement.

- It is hard to believe that the catch basin screens meet the full capture design criteria that "the device or system be designed to prevent plugging or blockage of the screening module".
- The field investigations found that the catch basin inlet deflectors to be held open by trash allowing trash to enter the storm drain systems. Trash deflectors leave trash in the street for extended periods of time adding to the "broken glass" syndrome in a community and creating rodent and vector problems.

Maintenance requirements and frequency of maintenance of catch basin inserts has been the subject of multiple studies and depending on the design and physical features it is reasonable to expect that maintenance frequencies of significantly greater than three times per year are required. Several studies suggested that maintenance is required on a storm event basis and even during storm events may be required.

Another factor that seems to have been overlooked when considering catch basin inserts is that many land uses such as high density residential, commercial, industrial, schools, sport complexes, etc have extensive drainage systems with multiple storm drain inlets. A field visit to three commercial shopping centers and two schools found that the number of storm drain inlets in each case to significantly exceed those on the adjacent public streets. In order for catch basin inserts to be effective municipalities would be required to develop and implement programs that would require installation on private property and at schools where they currently may not have authority. It is highly questionable whether the municipalities have the resources to provide periodic replacement and the required maintenance on their own systems much less provide the oversight of catch basin inserts on private properties.

35. <u>PROVISION 11.c.-page 83; C.11.d.-page 84 and C.12.d-page93</u>

A strategy of addressing a host of pollutants of concern through implementation of BMPs is strongly supported and this strategy should be aggressively pursued rather than multiple programs targeting individual pollutants. Several of the devices including the CDS technology used to capture trash also are effective in capturing and retaining sediments. Over 600 of these types of devices have been installed in the Bay Area and quantification and characterization of the sediments can provide an initial and early assessment of the devices capability to remove sediment bound TMDL pollutants. Devices installed at Oakland, San Leandro, Port of Oakland, South San Francisco, San Francisco and Port of San Francisco can be used for this initial assessment from samples collected during routine maintenance operations.