

Quality of Life Funding Strategy Water Quality Enhancement Element



Water Quality Working Group Meeting

June 29, 2010

Needs Assessment Update / Process

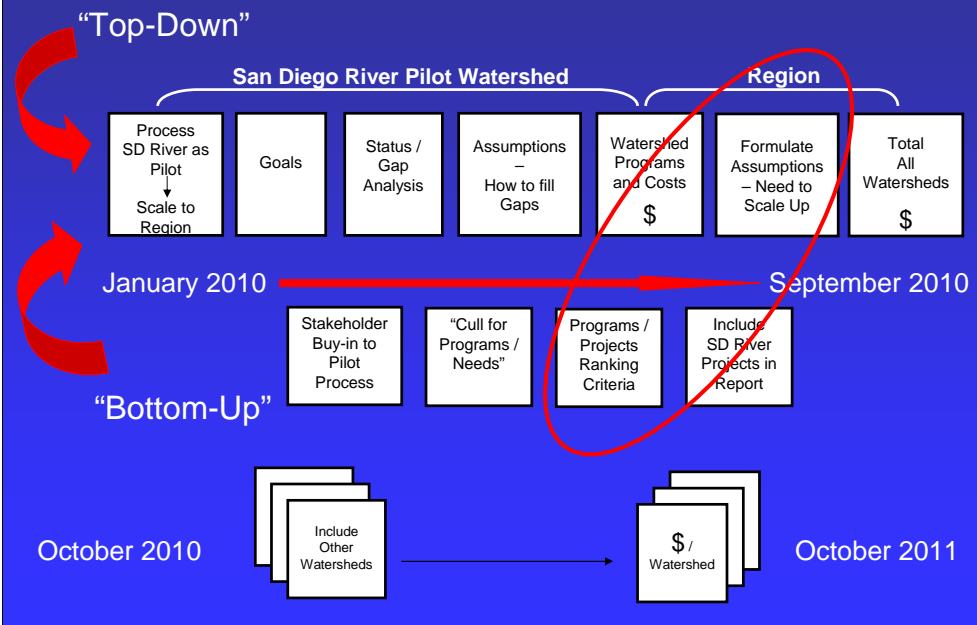
Draft Criteria Creation

Bottom Up Approach

Needs Assessment Process

Nov 2009	Form WQWG
Jan 2010	Quality of Life Briefing
Feb	Discussed Water Quality Framework
Mar	Adopt Process / Approach
Apr	Finalize Framework, Review Process and Report Outline, Discuss Funding Mechanisms
May	Discuss Scaling Assumptions / Program & Project Examples
Jun	Needs Assessment Approach, Develop Draft Criteria, Example Projects & Programs
July	Finalize Criteria & "Bottom Up" Process
Aug	No Meeting – Finalize Draft Report
Sept	WQWG Review of Draft Report
October ↓	Finalize Report/Present Cost Estimate to SANDAG

Needs Assessment Progress



Process and Scaling Assumptions - Review

- Achieve the goals of the Planning Framework
- Use the 85th percentile storm event
- Use Bacteria as a primary target pollutant for BMP selection
- Assume pollutants generated only from urban and agricultural land uses
- Assume 3 sizes of BMPs (small, medium, regional)
- Evaluate existing costs of 3 sizes of BMPs to develop cost estimates for each size
- Distribute sizes across the watershed (small – 20%, medium – 30%, and regional – 50%)

Feedback from Previous Meeting

1. Assume that pollutants are only being generated from urban and agricultural land uses. Acknowledge the % of land in the pilot watershed that is “undeveloped”.
2. Reference the requirements in the SUSMP and compare to the assumptions being used for the design storm.
3. Agreed to base the cost estimate for managing stormwater quality on the amount of existing urban and agricultural land use. Assumed that future development will be responsible for financing its stormwater runoff source control/treatment.

The Group made the following informal recommendations to the Needs Assessment Report:

1. The group supported the concept that we are going to assume that pollutants are only being generated from urban and agricultural land uses. They requested that the report acknowledge the percentage of land in the pilot watershed that is “undeveloped”.
2. The group recommended that the assumptions/requirements in the SUSMP requirements be referenced and compared to the assumptions we are using for design storm.
3. The issue of population growth was discussed. We agreed that the cost estimate for managing stormwater quality should be based on the amount of existing urban and agricultural land use. The report should acknowledge this assumption, and mention that it is assumed that future development will be responsible for the financing of stormwater runoff from that future development.

Feedback from Previous Meeting

4. Change the word “regional” to “large” (BMP).
5. Consider re-evaluating the distribution of all BMPs based upon available land for installation of large-scale BMPs.

Identify three types of watersheds based upon amount of development, urban vs. agricultural land uses. Develop general assumptions for distribution based upon these land types and include in the final countywide estimate.

6. Define the components that might be included in an example small, medium and large BMP, and include those examples in the report.

- The group recommended we change the word “regional” BMP to “large” BMP.
- Consider re-evaluating the distribution of small, medium and large BMPs, based on analysis of land available for installation of large BMPs. The group suggested we consider identifying three types of watersheds based on amount of more developed versus less developed land uses, and urban versus agricultural (see attached graphic). Develop some general assumptions about distribution based on these three types, and then plug that distribution into the final countywide cost estimate.
- The group requested that we define the components that might be included in an example small, medium and large BMP, and include those examples in the report.

At this point we would want to tie in the feedback to our “new” concept – discuss our meeting with the City of SD – re: costs information –

- Realize that Chollas Creeks’ strategy was a good example to follow
- Suggest the group allow us to use this strategy in our Needs Assessment / Cost Analysis



Introduce three “buckets” approach

1. Non-Structural BMPs
2. Structural BMP's
3. Restoration and Treatment BMPs

Not stand-alone “treatments” – these are intended to be used in concert with one another ~

Note the approximate costs associated with each bucket are consistent with the level of effort/cost of BMPs (as the levels of treatment increase, so does the cost)

Proposed Strategy

Legislative Controls

- Enhanced Development Standards
- Product Substitution

Education & Outreach

- Advertisements
- Targeted Outreach Materials

Enforcement

- Targeted Enforcement

Special Studies

- Pollutant Source ID & Other Special Studies



Bucket #1

Non Structural BMPs –

Includes 4 main topic areas – (describe)

Proposed Strategy

Targeted Source Control BMPs

- Trash / Debris Clean-Up
- Homeless Encampment Removal

Runoff Reduction BMPs

- Smart Irrigation Control Incentive Program
- Rain barrel Incentive Program
- Landscape Retrofit Programs

Aggressive Street Sweeping

- Specialize Equipment / Increased Efforts

LID Projects

- Green Mall / Green Lot / Green Streets



Bucket #2 – Structural BMPs (Describe)

Proposed Strategy

Dry Weather Diversion

- Inlet System Diversion (to sewer for treatment)

COC Treatment

- Treatment Devices, e.g.: Filters, Screens, UV
 - Use with Systems Approach
- Erosion & Sediment Control BMPs

Restoration

- Creek, Wetland, Habitat Restoration

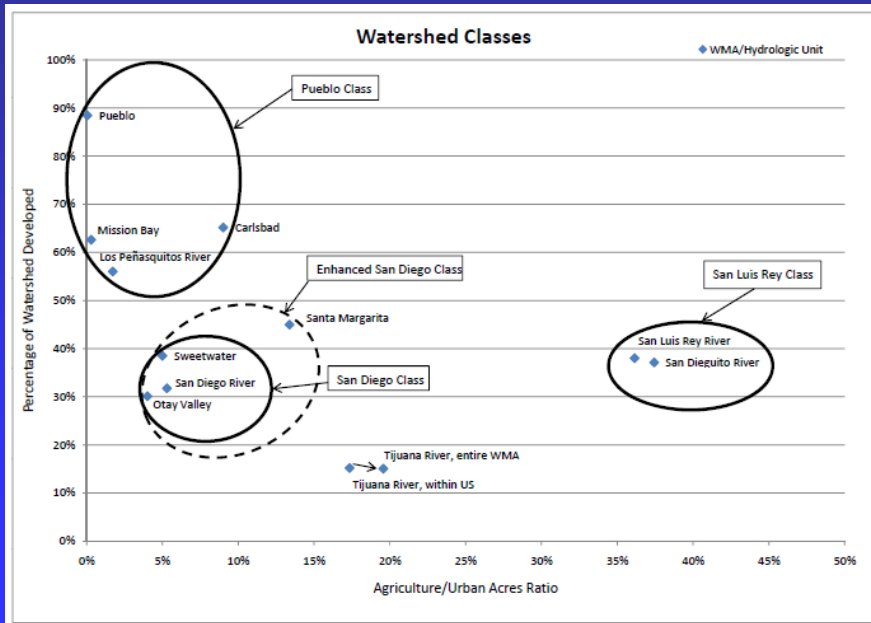
Sustainable Approaches (Ancillary Benefits)

- Sustainable Canyons
- Large Scale Multi-Treatment Train Projects



Bucket #4 – Restoration and Treatment BMPs (Describe)

Proposed 'Scaling Up' Strategy



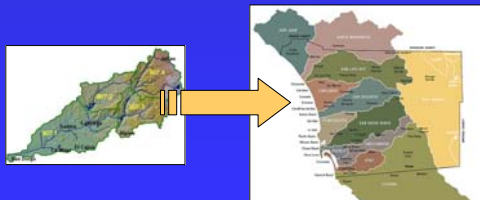
Discuss scaling up approach and how we plan to group watersheds to establish cost more efficiently and uniformly ~

Initially proposed by Jeff Pasek, City Pub. Works Dept.

Agreement on Terms & Assumptions

BMP category “Buckets”

Use concept to facilitate cost estimate for report



Scaling Up Process

Use 'process' for scaling-up model watershed costs to regional level

Obtain agreement on new terminology, new approach to cost estimate/needs assessment/ scaling up process

Development of SWG Criteria

Stakeholder Working Group (SWG) Criteria

Element criteria

To act as a “filter” to determine whether an element should or should not be considered for funding through a potential Quality of Life Funding Strategy

Program criteria

To be applied to determine relative funding priority of potential programs within the element

Development of SWG Criteria

SWG Element criteria

- A. Has a clearly demonstrable nexus to region's quality of life, as defined by the "Three E's," Economy, Equity and Environment (CB)
- B. Moves region toward sustainable growth and long-term solutions, i.e., is not a short-term "fix" (S)
- C. Addresses unfunded or underfunded needs (U/U)
- D. Benefits are quantifiable, measurable and/or transparent (Q)

Development of SWG Criteria

SWG Program criteria

- 1.Addresses underlying causes versus symptoms in terms of affecting quality of life (S)
- 2.Has a high cost-benefit ratio (Q)
- 3.Benefits a larger number of communities in the region (CB)
- 4.Is equitable in its benefits and impacts and addresses social justice concerns (CB)
- 5.Helps leverage / obtain other funding (S) (U/U)
- 6.Addresses a previously deferred program need or activity (CB) (Q)

Development of SWG Criteria

SWG Program criteria

7. Anticipates evolving regulatory trends (S)
8. Benefits are important to those who are being asked to help fund (CB)
9. Program's operational and maintenance costs are anticipated (S) (U/U)
10. Consequences of not funding are significant and/or costly for region (S) (CB)
11. Has credibility in terms of its ability to be implemented and achieve promised benefits (CB) (Q)

IRWM Process and Criteria

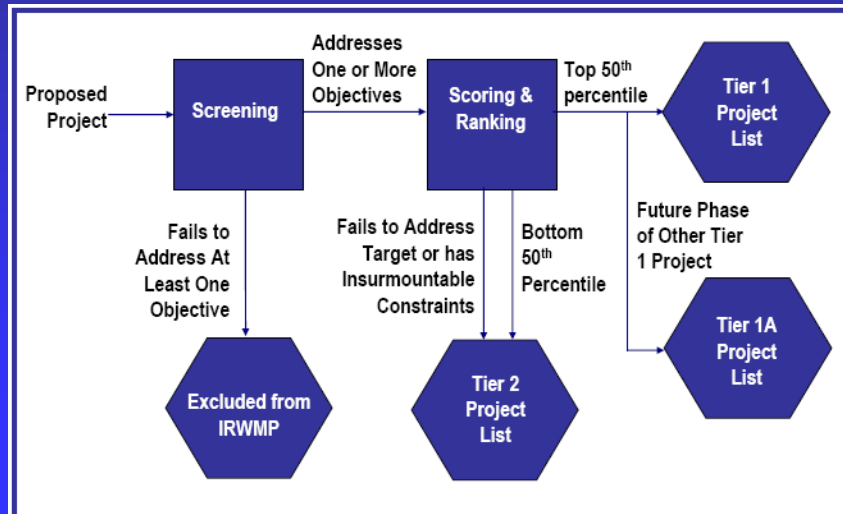
- “Filter” Process -
 - Numeric (generic) used as filter to determine projects with best benefits to plan
 - Project selection (specific) distribution, funding, addresses priorities and is adaptable
- 3-Step Process



- Developed objectives and Reg. Advisory Committee (RAC) voted not to rank them (meeting #5)
- The RWMG brought proposed Plan prioritization process to the RAC. RAC provided feedback which was incorporated into the prioritization process. (meeting #6)
- The RAC helped draft the criteria for the workgroup to consider when selecting projects for the funding package. These criteria consist of project level and proposal level criteria.
- The Project Selection workgroup convened and selected a group of projects. They initially categorized projects into like groupings such as stormwater management, reliability projects (both potable and non-potable water), recycled water projects, Land acquisition, etc..
- Once project were reviewed by the workgroup, selection occurred, questions answered, and the selected projects were thematically categorized to organize and present projects. (meeting #4 of workgroup)
- Project recommendation brought to the RAC, RAC voted and

IRWM Process and Criteria

Process for Identifying Projects for Consideration



IRWM Process and Criteria

Step 1: Screening

- Screening Criteria
 - Pass / Fail
 - Addresses an IRWM Plan Objective
 - Addresses and IRWM Plan Target
 - Is NOT a Follow-On Phase of Another Project
 - Free From Insurmountable Constraints

IRWM Process and Criteria

Step 2: Project Scoring

Criterion	% of Score
1 Address Multiple IRWM Plan Objectives	23%
2 Integrates Multiple Strategies	23%
3 Spans Multiple Hydrologic Units	10%
4 Creates New Water	10%
5 Linked to Other Projects	10%
6 Involves more than One Entity	6%
7 Identified in Existing Plan	6%
8 Directly Benefits Disadvantaged Community	6%
9 Addresses Environmental Justice Concern	6%

IRWM Process and Criteria

Step 3: Ranking

- Top 50th Percentile = Tier 1 or Tier 1A
 - Moves on to Project Selection Workgroup for Consideration in Current Grant Application
- Bottom 50th Percentile = Tier 2
 - Remains in IRWM Project List for Future Grant Cycles

Water Quality Criteria Discussion

Does / is the project...

- Provide qualitative water quality benefits?
- Provide quantitative water quality benefits?
- Reduce priority pollutants in the watershed?
- Integrated with other projects in the watershed?
- Provide additional ancillary benefits?
- What is the cost of the project?
- What are the benefits of the project?

Questions to begin discussion –

- Should there be 2 levels of criteria (as SWG developed?)
- Should we utilize “management questions” to help develop criteria?
 - E.g. are there ‘barriers’ to the project / program? What are they and how can they be mitigated?
- Other issues that need to be addressed?
- How do these relate to the Planning Framework?
- How will these be used?

Bottom Up Approach - July Workshop



Following are example projects and programs that may be able to be funded through the Quality of Life Funding Strategy.

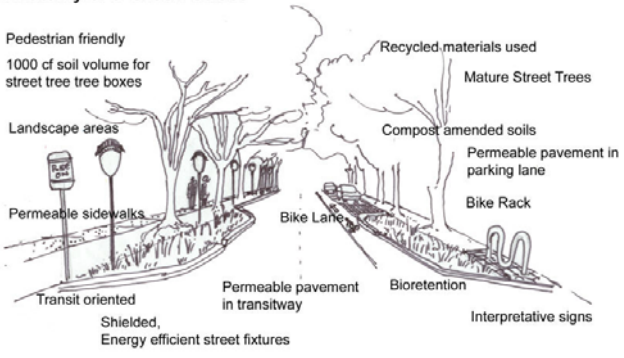


Project Examples

Green Streets

New = \$1.11 Million vs. \$1.42 Million
Retrofit = \$148 K vs. \$1.264 Million
Culvert = \$21 K vs. \$83 K
Estimate Annual Maintenance = \$700

Anatomy of a Green Street



Project Examples

Neighborhood Rain Garden, Retrofit

Cost: \$147,000

O & M: Agreement with residents through MOU, Monitoring through local agency

Benefit: 90% runoff reduction, pollutant load to nearby lake reduced



Project Examples

Restoration Project, Ruxton Avenue

Cost: \$790,000 (Original bid ~ \$1 Million)

Benefit: Restore 500' linear trapezoidal channel to natural condition - Remove corrugated metal pipe, replace with 3-box culvert (concrete)



- Removing about **500 feet of existing concrete trapezoidal channel** and restoring it with a more natural vegetated channel. The project also included **replacing existing double 58" x 36" Corrugated Metal Pipe Arch (CMPA) culverts** under Ruxton Avenue with a Triple Box Culvert.

- Benefits including **conveyance of the 100-year flood event, water quality treatment through infiltration and natural biofiltration**, and esthetics with a natural meandering channel of gentle side slopes and **adjacent pedestrian walkways**.

- Costs - **Construction Cost was \$790,000**, though it came in under the original budget because of the highly competitive nature during the recession. Original estimate and most bids came in closer to \$1,000,000. approx. 35% related to culvert.

- ASCE Award of Excellence winner

Program Examples



Monitoring and Assessment

Beach Water Testing using “Rapid Indicators”

Impacts: Bacteria / other pollutants entering beach water, especially after storm events

Cost: Bi-annual program previously funded for \$600,620 from the Regional Water Quality Control Board. New equipment ranges between \$50-100,000 (1 X costs)

Benefits: “Rapid Indicators” provide results in 2-4 hours.

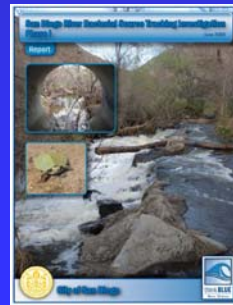
- Beach Water Quality monitoring program, which consists of 44 stations and includes 20 wet weather monitoring sites. Although there is some remaining Prop 13 money, as of late 2010 the state’s funding is suspended “indefinitely” for beach water quality monitoring (“as long as there is money in the state’s budget, the law is in effect”). These data are used for a variety of performance measures such as TMDLs, the Clean Beaches Initiative and public health.
- future (water quality) testing methods include a new (EPA) program using “rapid indicators”, which will provide results in 2-4 hours, thus providing a mechanism for real-time decisions related to public health. This process requires expensive equipment, approximately \$50,000-\$100,000 in one-time equipment costs, in addition to the cost to perform the analysis.

Program Examples

Monitoring and Assessment

Special Studies

- Parcel-based Characterization Study – Santa Margarita Watershed (Rainbow Creek)
- Source ID Study for Bacteria – San Diego River Watershed
- Hydrology Studies



Program Examples

Education and Outreach

Agriculture

- Special Study in Conjunction with New Outreach Program to Local Farmers
- Peer Mentoring and BMP Subsidies
- Regional Water Quality Testing
- Estimated Program Costs: \$300,000



Project Examples

Treatment Control BMPs:

- Wet Ponds, Swales, Buffer Strips, Detention Basins
- Hydrodynamic Separators



Source Control BMPs:

- Site Design
- Managing Work Areas

- Many treatment control BMPs are “natural” – wet ponds, swales, buffer strips, detention basins
- Hydro screen – curb insert

Source Control –

- Site Design
- Efficient Irrigation practices
- Managing work areas – trash, materials storage, clean up, etc.

Bottom Up Approach - July Workshop



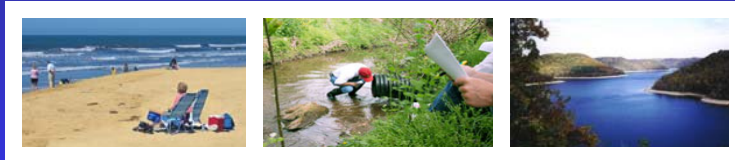
Stakeholder Tasks

Using the Planning Framework as a guide - provide a project or program you would like to see funded, including:

- Description
- Water Quality Benefit
- Cost (estimate)
- 2 MB photo or graphic

Quality of Life Funding Strategy

Water Quality Enhancement Element



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