

LAR Dry Weather Bacteria TMDL Implementation Section Development Update

July 29, 2009

Background

- Implementation section is under development and will include:
 - Approaches to dry weather Load Allocations (non-point sources) and Waste Load Allocations (point sources)
 - Method for determining TMDL compliance
 - Process for reconsideration of LAs and WLAs
 - Potential load reduction strategy
 - Implementation schedule
 - Implementation costs
- General approach for section was discussed at June SC/TC meeting

Follow-up Issues for Today's Meeting

- Alternative approaches to load reduction strategy
- Scheduling of individual projects
- Methods of compliance for tributaries and schedule implications

LOAD REDUCTION STRATEGY

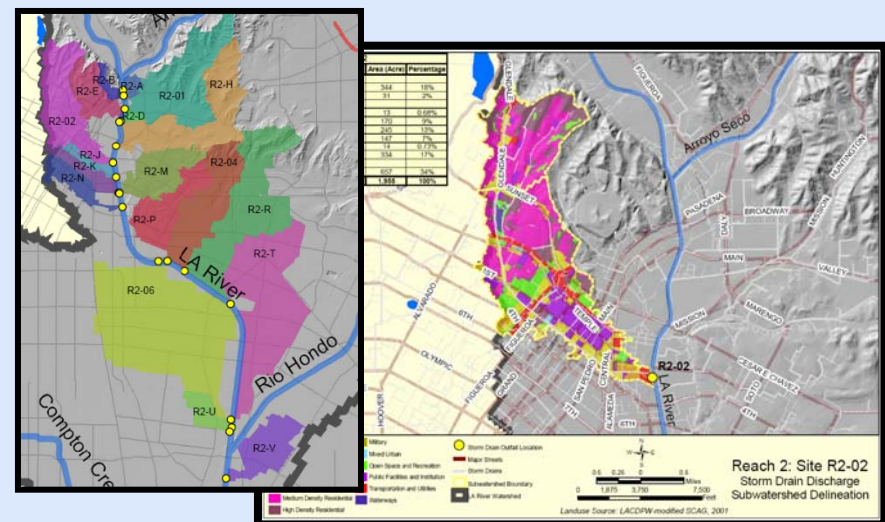
Alternative Approaches to Load Reduction

- Approaches can include:
 - Source control or elimination
 - Runoff management – not all sources can be minimized or eliminated
- Approaches can be
 - “System-wide” (e.g. enhanced education, enforcement); or
 - Targeted at specific storm drain outfalls or the associated drainage areas

Source Control Approaches	Reduce		Examples
	Bacteria	Flow	
Increased or focused outreach and education	X	X	<ul style="list-style-type: none"> ■ Further target specific sources (e.g. horse properties, pet owner outreach) ■ Business outreach/incentives (e.g. trash hauler, restraints) ■ Septic tank management
Ordinance changes or expanded enforcement	X	X	<ul style="list-style-type: none"> ■ Increase inspection ■ Increase penalties
Revised/ tiered water rate structure		X	<ul style="list-style-type: none"> ■ Further increase tiered rates to discourage excess irrigation/other uses ■ Coordinate with water purveyors
Modified or expanded public works activities	X	X	<ul style="list-style-type: none"> ■ Strengthen emergency spill management ■ Additional/focused trash pick-up and/or street sweeping ■ Increased drainage system maintenance

Runoff Management

- Many dry weather sources cannot be fully eliminated
- There will still be runoff with bacteria to manage
- Focus on high priority storm drains



Runoff Management Approaches

- Potentially viable options
 - Diversion to wastewater collection system
 - LID/distributed approaches (e.g. green street projects)
 - Subwatershed BMPs
 - Infiltration
 - Reuse/irrigation/evapotranspiration
 - Treatment and discharge (least likely)
- Where feasible, couple with options being considered for wet weather metals TMDL to gain multiple benefits
- Options that address wet weather flows should easily manage dry weather flows

Developing Implementation Section

- Summarize and encourage all approaches
- Tie into multi-pollutant approach (more applicable for wet weather)
- Describe a typical “time line” for both a diversion project and alternative strategies
- Describe a “typical” example of several approaches
- Describe potential issues (schedule, degree of certainty, etc) associated with meeting bacteria TMDL with different approaches

BUILDING A SCHEDULE AND COST ESTIMATE

Building an Overall Schedule and Cost Estimate

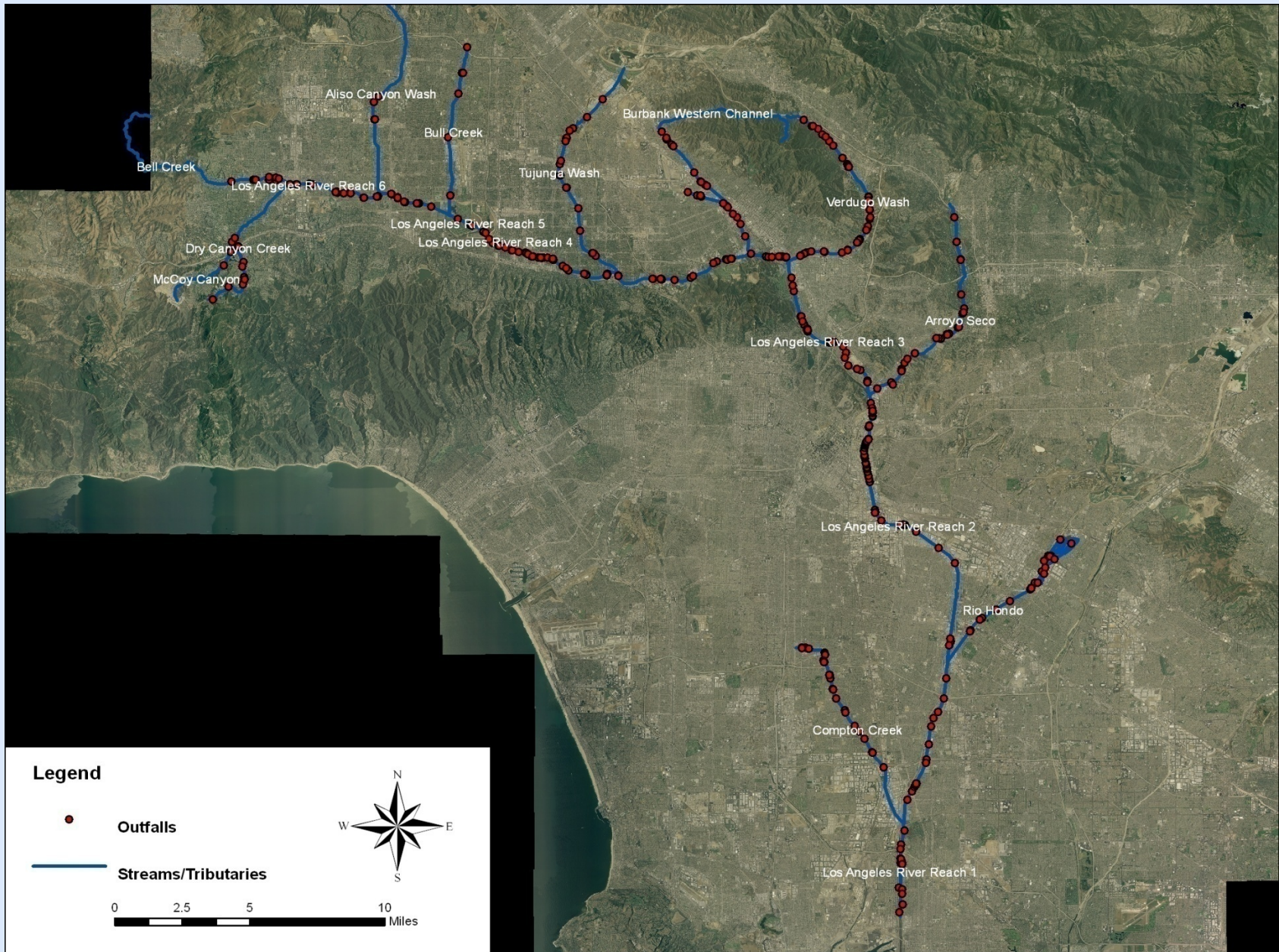
- Develop overall schedule and estimate using diversion as default model
 - Provides a defined process with actual history that can be used to develop schedule and cost
 - Diversions can still indirectly contribute to reuse since City of LA is committed to major expansion of recycled water use and diverted flows contribute to the available resource
- Other approaches, while encouraged are much more watershed/location specific

Time Line for Typical Project

- A “typical” implementation time line for completion a single project or other BMP or load reduction actions includes:
 - Planning/permits/agreements/pre-design (9-12 months)
 - Design (6-8 months)
 - Approval, bid and award (6 months)
 - Construction (6-8 months)
 - Post-construction and turn-over to O&M (3 months)

TRIBUTARY CONSIDERATIONS

Preliminary Identification of Significant Outfalls



Preliminary Identification of Significant Outfalls

Reach/ Tributary	Total # Outfalls	
	Mainstem	Tributaries
Los Angeles River Reach 1 (Estuary to Carson Street)	7	
Compton Creek		26
Los Angeles River Reach 2 (Carson to Figueroa Street)	69	
Arroyo Seco Reach 1 (LA River to West Holly Ave.)		23
Arroyo Seco Reach 2 (Figueroa St. to Riverside Dr.)		8
Rio Hondo Reach 1 (Confl. LA River to Santa Ana Fwy)		13
Rio Hondo Reach 2 (At Spreading Grounds)		12
Los Angeles River Reach 3 (Figueroa St. to Riverside Dr.)	33	
Burbank Western Channel		27
Verdugo Wash Reach 1 (LA River to Verdugo Rd.)		7
Verdugo Wash Reach 2 (Above Verdugo Road)		36
Los Angeles River Reach 4 (Riverside Dr. to Sepulveda Dam)	63	
Tujunga Wash (LA River to Hansen Dam)		25
Los Angeles River Reach 5 (within Sepulveda Basin)	6	
Bull Creek		6
Los Angeles River Reach 6 (Above Sepulveda Flood Control Basin)	41	
Aliso Canyon Wash		5
Bell Creek		11
Dry Canyon Creek		11
McCoy Canyon Creek		5
Total	219	208

Identifying Number of Outfalls Requiring “Action” for Mainstem

- Based on BSI/Monte Carlo analysis, assume that up to LFD’s or other BMPs/load reduction actions would be required at from 5 -10 outfalls to meet the initial load reduction target for both Upper portion of reaches 2 and 4.
- This represents roughly 15 % of the total “significant” outfalls in each segment
- Accounts for some in-stream reduction

Identifying Number of Outfalls Requiring “Action” for Mainstem

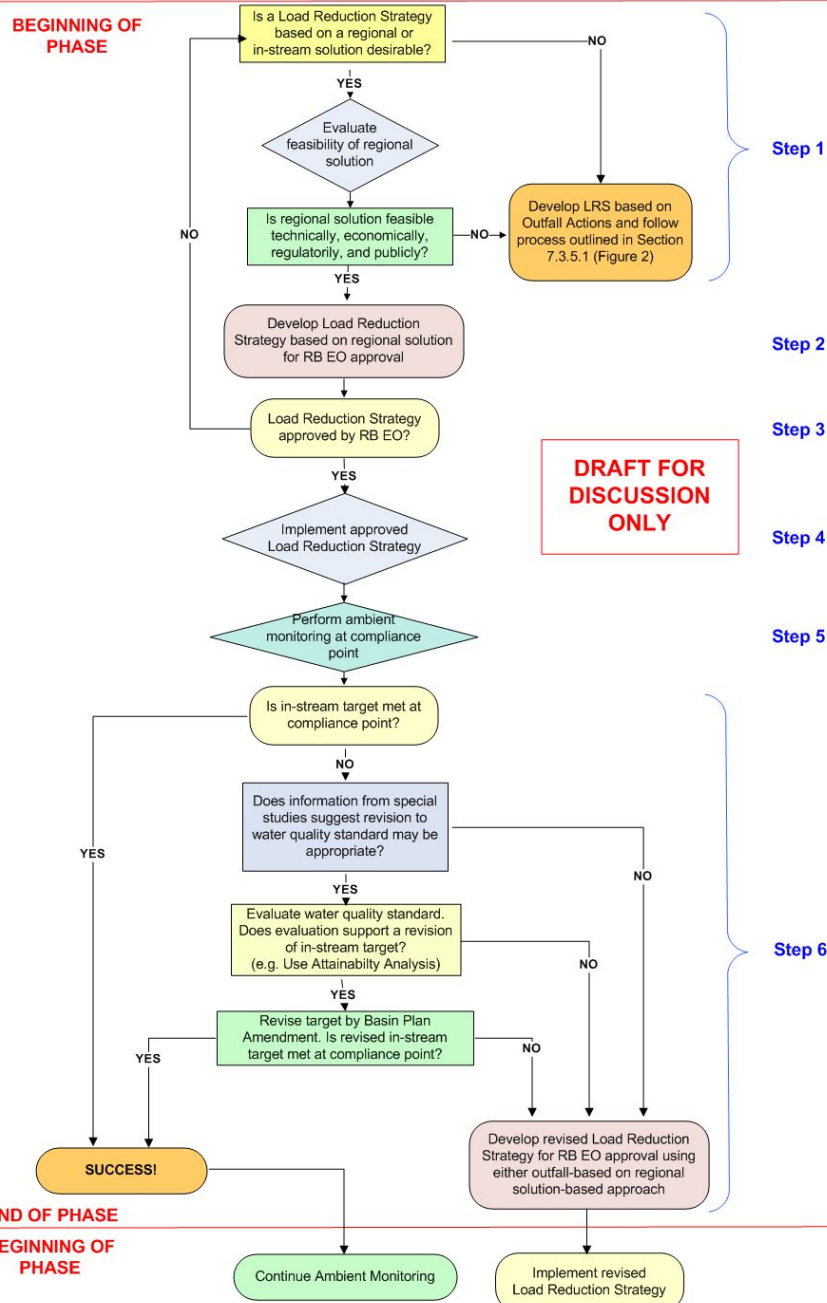
- Use 15% to develop estimate of total number of outfalls requiring action by mainstem reach
- Also assume there may be additional outfalls that may need addressing through follow-up actions if post-implementation monitoring indicates waste load reduction not fully met with initial implementation

Identifying Number of “Actions” for Tribs

- No good basis for estimating of total number of outfalls requiring action for tribs
 - No POTW discharges (except lower end of Burbank Western Channel and Bull Creek)
 - No basis for estimating in-stream reductions/allowances
 - Potential that many more projects might be required if in-stream WQOs have to be achieved everywhere
- See flow chart for tribs

DRAFT FOR DISCUSSION ONLY

BEGINNING OF PHASE



END OF PHASE

BEGINNING OF PHASE

DRAFT FOR DISCUSSION ONLY

Wide range of potential outcome for Tribs

Assumption	Number of Projects/ “Actions”
Address through single downstream solution near junction with LAR	10
Address at outfalls assuming 15% of outfalls require actions	30+
Address at outfalls assuming 50% of outfalls require action	100+