**Action Plan I**
Implementing Solutions to Urban Runoff

**Action Plan II**
Regional Monitoring

**Action Plan III**
Marinas and Boating

**Action Plans IV**
Agriculture and Rural Lands

**Action Plan V**
Beach Closures and Microbial Source Tracking

**Action Plan**
Desal and Cruise Ships
Action Plan I
Implementing Solutions to Urban Runoff

1996
Public Education/ Outreach
Technical Training
Regional Urban Runoff Management
Structural/ Non-structural Controls
Sediment/ Erosion
Storm Drain Inspections
CEQA Additions
Prior to MS4 Phase I and II permits

Radio spots, bus ads, storm drain stenciling
Brochures: Monterey Bay Begins on Your Street, Urban Watch

Restaurant outreach and surveys
Video: Make the Connection

Best Management Practices (BMP) posters: Auto and Restaurant

Regional MURP 1998
Urban Watch, First Flush, source tracking
Post MS4 Permit Initiation

First Flush/ Dry Run
Urban Watch in Pacific Grove
ASBS Monitoring Assistance
Illicit Discharge Detection Monitoring
BMP Effectiveness Monitoring
Emergency Response
Technical Advisory Committees
First Flush

MBNMS-wide
Coastal Watershed Council
San Mateo County RCD

Monterey Peninsula area
funded through MRSWMP

E. coli, enterococcus
copper, zinc, lead
nitrate, phosphate, ammonia, urea
total suspended solids, turbidity
fluoride, potassium, color, hardness
10 Year Data Analysis

Pre and post permit concentrations
85\textsuperscript{th} percentile
Trend analysis
Instantaneous load
City consultations
Urban Watch

Individual cities
Pacific Grove since 1998
Detergents
Ammonia
Phosphate
Chlorine
Bacteria
Trash (2014)
MS4 Permit - E9c

Pacific Grove Illicit Discharge Detection
Annual inspection
Outfalls leading to ocean
>72 hours from rain
Volunteer assisted
2015 and 2016

E. coli, enterococcus
copper, zinc, lead
nitrate, phosphate, ammonia, urea total
suspended solids, turbidity fluoride,
potassium, color, hardness
ASBS
Areas of Special Biological Significance

Urban runoff sampling
Reference site sampling
Mooring field sampling
BMP Effectiveness

Phase 1, 2, 3, Diversion installation
System effectiveness
Receiving water monthly

Greenwood Park Watershed
Infrastructure improvement
CDS unit installation
Bacteria reduction effectiveness
BMP Effectiveness

Prop 50 - Clean Beach Initiative Grant

Lovers Watershed
Infrastructure improvements
Sanitary & storm drain systems
Bacteria reduction effectiveness
Emergency Response

Sewage Spills
Source tracking
Technical Advisory Committees

San Mateo ASBS Grant
Ecology Action LID Grant
CCWG Storm Water Planning Grant
Greenwood Park TAC
Carmel River Watershed Conservancy
Management Plan Update…

Outreach and Education

Facilitate coordination of regional efforts: WQPP, AWQA, IRWM, storm water

Better understand Land-Sea Connections

Identify effectiveness of BMPs and reduce pollutant loads

Communicate and promote water quality status and trends
What should MBNMS’ role be in the future?

Are there areas that MBNMS should address that we currently are not?

Are there data gaps that MBNMS could address?
Lisa Emanuelson
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