



Financial Implications of the Municipal Regional Permit

Report to the

Transportation, Water, and Infrastructure
Committee

October 13, 2016

By

Public Works Department

**2015 Municipal Regional Permit
Report to the Transportation, Water, and Infrastructure Committee
October 13, 2016**

I. Introduction

This Financial Report to the Transportation Water and Infrastructure Committee explores the financial implications of implementing the recently adopted Municipal Regional Permit (MRP). This is the second of three reports on this topic. The first report to the Committee on June 9, 2016, provided an overall background and history of past stormwater permits that have led to the current permit, and the policy implications of implementing the new MRP. Those implications, briefly, result in the following:

- Constructing new stormwater infrastructure treatment systems rather than relying on education programs and studies to reduce pollutants
- Increasing maintenance costs for a new system of stormwater infrastructure
- Integrating Green Infrastructure into all County capital improvement programs
- Coordinating requirements that span multiple departments
- Rebuilding existing facilities to incorporate stormwater infiltration and treatment capacity

These new permit requirements also have fiscal implications, which were reviewed in the first report and are summarized as follows:

- Reduced Road Funds available for the Road Program as a result of including Green Infrastructure elements into road projects
- Reduced funding available for the Community Drainage Program as a result of more stormwater assessment funds used for pollutant load reduction measures
- Reduced funding available for the Facilities Capital Program as a result of including Green Infrastructure elements into building projects
- Reduced funding available for the Flood Protection Program as a result of increased compliance costs to the Flood Control District
- Increased costs to the County as other departments integrate permit requirements into their business procedures

This report will provide an in-depth analysis of the financial implications of MRP 2.0.

II. Background

The first Municipal Regional Permit (MRP 1.0) was issued by the Regional Water Quality Control Board in 2009. That permit's new approach, requiring specific activities with measurable results, resulted in a dramatic increase in compliance costs. Last year (FY 2014/15), compliance costs for the County exceeded the annual revenue amount for the first time. The County has a small reserve remaining, which is expected to be consumed in fiscal year 2016/17. This report quantifies the projected costs to comply with the new Municipal Regional Permit issued in 2015 (MRP 2.0), reviews how funds are apportioned in the Stormwater Program, and discusses the various funding sources available to meet compliance costs and the impact to County programs and services.

The requirements in MRP 2.0 include all of the requirements for MRP 1.0 plus four major additional provision requirements. To determine the expected compliance costs for MRP 2.0, the costs for MRP 1.0 were added to the expected costs for the four additional requirements. Those four additional requirements in MRP 2.0 are: Green Infrastructure, Trash, PCBs, and Mercury. The compliance costs estimated in this Financial Report are for full compliance, not for compliance constrained by current revenue streams. A more detailed analysis of revenue streams and strategic methods of more cost effectively complying with permit requirements will be the subject of the third report to the Committee.

III. Compliance Costs for MRP 1.0

Compliance costs for MRP 1.0 and MRP 2.0 are made up of several components. Costs incurred in meeting permit requirements are from Public Works Department staff, staff from other County departments, contract work (for example street sweeping), annual dues to the Contra Costa Clean Water Program, and fees to the Regional Board. The year before MRP 1.0, in fiscal year 2009/10, compliance costs were \$1.66 million. Compliance costs for the first year of MRP 1.0 in 2010/11 was \$1.97 million, and compliance costs for the last year of the permit in 2014/15 was \$2.98 million. The major driver of increasing costs in MRP 1.0 was the trash requirement. Chart 1 shows the implementation costs for MRP 1.0.

IV. Compliance Costs for MRP 2.0

The additional compliance costs for MRP 2.0 include the new requirement for Green Infrastructure, and the added requirements beyond those in MRP 1.0 for Trash, Mercury, and PCBs. The costs for each one of these additional requirements as described below.

Green Infrastructure. In the Regional Board's view, Green Infrastructure represents a comprehensive approach to stormwater treatment and infiltration. Although it is a

relatively new term, the regulatory concept is incorporation of Low Impact Development (LID) design elements into public projects, design elements that have been utilized in private development projects for many years. Green Infrastructure includes grassy swales, bio-retention ponds, infiltration basins, and other similar facilities designed to increase stormwater storage and infiltration to recharge groundwater basins and facilitate stormwater treatment to remove pollutants. The following are the Regional Board's objectives in requiring Green Infrastructure, which may help to understand the regulations:

- Provide a long range vision and strategy to convert gray infrastructure to green infrastructure
- Include LID drainage design into public projects
- Provide a planning tool to meet TMDL requirements
- Create a comprehensive Green Infrastructure Master Plan that incorporates individual waste load reduction plans for pollutants of concern

Green infrastructure facilities serve multiple purposes. In addition to increasing groundwater recharge, these facilities settle out and capture sediment particles. PCBs and Mercury molecules attach themselves to sediment particles, so Green Infrastructure facilities are an effective tool at removing these two pollutants of concern. The vegetation in these facilities is also effective at capturing trash where it can be picked up before it reaches the storm drain system. The Green Infrastructure requirements outline a detailed process for the County to establish a Green Infrastructure Plan, incorporate these design elements into County project development processes and foundational planning documents, develop a financing plan, conduct training of staff, planning commissioners, and elected officials, advocate/promote green infrastructure projects, and track and monitor progress and effectiveness. The requirements also include an early implementation clause to ensure Green Infrastructure features are included in every County project now that the permit is in effect, regardless of where the project is in the planning – permitting – design continuum.

Attached is Table 1 that shows the estimated costs to implement Green Infrastructure requirements for each year of the permit term. Table 1 summarizes a detailed cost analysis of each requirement within the Green Infrastructure provision (C.3.j), which is included in Appendix A of this report.

The total estimated cost to implement Green Infrastructure requirements over the permit term is \$1,064,500.

Trash. The objective of this provision is to eliminate trash in our waterways and receiving water bodies. To achieve this goal, MRP 2.0 requires the County to reduce trash 60% by July 2016, 70% by July 2017, and 80% by July 2019. These reductions are measured from baseline trash amounts established in 2009. The County has

currently reduced trash by 43%. This reduction did not meet the 60% requirement for this July, which triggered a subsequent requirement to develop a detailed plan to achieve 70% reduction by July 2017. While Green Infrastructure is the control measure of choice for stormwater treatment, full trash capture devices are the preferred control measure to reduce trash. There is a requirement to install a minimum number of full trash capture devices in drainage systems, which range from trash screens placed in drainage inlets to trash collection facilities installed at the end of drainage pipes. In addition, if the County does not meet the 70% trash load reduction by 2017 or the 80% load reduction by 2019 all drainage systems would have to be outfitted with full trash capture devices (or an equivalent measure). Conducting creek cleanups with volunteer groups and cleaning up homeless encampments has been one of the County's strategies for reducing trash. MRP 2.0 gives less credit for these activities, devaluing them as a load reduction measure.

The County has developed a plan to achieve a 70% trash load reduction by July 2017. The plan proposes to install more full trash capture devices in storm drain inlets, increase the contract for on-land cleanup to increase pickup of trash along County roads and in unincorporated communities, expand the clean-up of homeless encampments in creeks, implement a community-based trash abatement program, such as Adopt-a-Spot, and with Committee approval explore the issues and process involved in banning polystyrene food containers.

Attached is Table 2 that shows the estimated costs to implement the additional Trash requirements in MRP 2.0 for each year of the permit term. Table 2 summarizes a detailed cost analysis of each requirement within the Trash provision (C.10), which is included in Appendix A of this report.

The total estimated cost to implement the additional Trash requirements over the permit term is \$2,076,000.

Polychlorinated Biphenyls (PCBs). The Environmental Protection Agency requires the Regional Board to establish Total Maximum Daily Load (TMDL) requirements for certain pollutants. A TMDL represents the maximum amount of that pollutant a receiving water body can accept and still meet water quality standards. Along with the TMDL is an implementation plan to reduce current levels of the pollutant to meet the maximum amount. In the Bay Area the Regional Board has a TMDL and implementation plan for PCBs and Mercury, both of which have been incorporated into the Basin Plan, the foundational planning document of the Regional Board. MRP 2.0 provisions for PCBs and Mercury are designed to meet the TMDL requirements. Contra Costa County's share of the PCB load reduction for the Bay Area is 90 grams per year by 2018 and 560 grams per year by 2020. The County's share, based on population (15.26%), is 13.73 grams per year by 2018 and 85.45 grams per year by 2020.

PCBs are dispersed throughout the landscape but are concentrated in building caulk in older structures (built before 1980) and on industrial parcels that stored or utilized PCBs in their industrial processes ("source properties"). As a result, MRP 2.0 gives the County a 67% load reduction credit to develop and implement a program to ensure proper handling of PCBs during building demolition. MRP 2.0 also includes an accounting system to calculate load reduction that establishes "land-use yields" for four land-use types: Old Industrial, Old Urban, New Urban, and Open Space, and gives a high premium for identifying source properties that have high concentrations of PCBs. Old Urban is development that occurred before 1980 and New Urban is development that occurred after 1980. Land-use yields are used to calculate the load reduction for treating a drainage area within the different land-use types. For example, to meet the entire 13.73 grams per year by treating stormwater drainage, the County would have to treat 159 acres of sediment laden stormwater draining from Old Industrial land uses, 453 acres of stormwater draining from Old Urban land uses, or 3,923 acres of stormwater draining from New Urban land uses, or 3193 acres of stormwater draining from Open Space areas. Based on the load reduction yields per acre, it makes sense to focus on areas with Old Industrial and Old Urban land uses. Alternatively, the County could meet the same requirements by remediating 7 acres of source properties.

MRP 2.0 requires the County to use Green Infrastructure to meet at least 3.51 grams per year of the load reduction target. The amount of acreage needed to be treated is shown on attached Table 5. Besides Green Infrastructure, the County has three other control measures: identifying source properties, constructing a large-scale treatment facility in the North Richmond Pump Station drainage, and constructing curb and gutter in and around Old Industrial land uses and implementing street sweeping on a regular basis.

Attached is Table 3 that shows the estimated costs to implement the additional PCB requirements in MRP 2.0 for each year of the permit term. Table 3 summarizes a detailed cost analysis of each requirement within the PCB provision (C.12), which is included in Appendix A of this report.

The total estimated cost to implement the additional PCB requirements over the permit term is \$198,980,000.

Mercury. The requirements for meeting the waste load reductions specified in the Mercury TMDL are also included in the MRP 2.0 and are very similar to the discussion on PCBs above. Like PCBs, there is a requirement to use Green Infrastructure to reduce loads, in this case by at least 1.37 grams per year. Table 5 shows the treated acreage for PCBs is much higher than for Mercury, so meeting the Green Infrastructure requirement for PCBs also meets the Green Infrastructure requirement for Mercury.

Attached is Table 4 that shows the estimated costs to implement the additional Mercury requirements in MRP 2.0 for each year of the permit term. Table 4 summarizes a detailed cost analysis of each requirement within the Mercury provision (C.11), which is included in Appendix A of this report. The costs in Table 4 are somewhat misleading as all the compliance costs are included in the PCB compliance costs. To meet the Mercury requirements alone would result in costs comparable to the PCB costs, although the acreage needed to be treated would be less.

The total estimated cost to implement the additional Mercury requirements over the permit term is included in the costs for PCBs.

V. Summary. Adding up the estimated costs for implementing the Green Infrastructure, Trash, PCBs, and Mercury provisions (additional provisions) results in total expenditures of \$86,000 in 2016, \$821,500 in 2017, \$14,003,000 in 2018, \$14,639,000 in 2019, and \$172,571,000 in 2020. These costs are shown in Table 6.

The total cost for MRP 2.0 over the permit term is estimated at \$202 million (rounded to the appropriate level of accuracy).

Note: It should be noted that these costs are based on limited comparable data, as these requirements are relatively new and untested. In addition, the intent was to invest enough time to give a sense of scale to the costs involved rather than expend an inordinate amount of time to achieve, for example, a 95% accuracy level. These estimates were prepared by staff and peer-reviewed by consultants working in the stormwater field, so they are adequate for the planning stage we are currently in. It should also be noted the consultant indicated that costs to treat 1 acre using Green Infrastructure varied from \$200,000 up to \$365,000. The estimates in this report are based on \$215,000 per acre, which is the cost of a Public Works Department Green Infrastructure project. If anything, the costs in this report may be low.

VI. MRP 2.0 Estimated Costs versus Revenue

In fiscal year 2014/15, the last year of implementing the MRP 1.0 stormwater permit, Stormwater Program costs exceeded revenue. The Stormwater Program work consists of MRP compliance, Community Drainage maintenance, and flood protection in several West County and far East County communities. Chart 1 shows the expenditures of these three elements of the Stormwater Program. The additional costs from MRP 2.0 will certainly exceed current revenue sources and require a realignment of existing funding, an injection of new funds, or both. The Stormwater Program is funded primarily with a dedicated stream of revenue referred to as Stormwater Utility Assessment 17 (SUA 17). The Flood Control District collects an assessment on each parcel in the County and then disperses to each municipality the assessments collected within their jurisdiction. Each jurisdiction is assigned an assessment number, the

County's being 17. The County's parcel assessment is currently at its maximum amount of \$30 (based on a standard residential unit) that generates about \$2.76 million per year. This assessment cannot be raised without a majority vote of all property owners or two-thirds vote of registered voters in the County's unincorporated communities. The County and the Flood Control District took the lead in 2012 to sponsor an initiative of the Contra Costa Clean Water Program to increase funding. This funding measure was defeated by a 20% margin. At this point, there is no plan to attempt another funding measure to increase revenue.

In addition to the \$2.76 million in revenue from SUA 17, the Stormwater Program receives approximately \$280,000 in developer fees each year, which fluctuates depending upon development. From time to time the County is successful in receiving grant funds, which is also a source of revenue but is unpredictable and unreliable for program planning purposes.

SUA 17 is a restricted revenue source that can only fund stormwater services, primarily MRP compliance costs. It can also be used to fund drainage maintenance. There are three types of drainage maintenance in the County. First is maintenance of Flood Control District drainage facilities (regional-scale infrastructure that serves cities and communities throughout the County) funded with Flood Control District revenue. Second is maintenance of road drainage facilities (facilities that drain County roads) funded with Road Fund revenue. Third is maintenance of Community Drainage facilities (pipes and ditches that serve unincorporated communities and are not in the road right-of-way), which has no dedicated revenue source. Years ago Community Drainage was funded with General Fund revenue. When the Stormwater Utility Assessments were initiated in 1993, the County was experiencing revenue shifts from the State and decided to remove General Fund from Community Drainage maintenance and use the new SUA 17 revenue instead. For the last two fiscal years General Fund revenue has been appropriated to help pay for Community Drainage maintenance.

VII. Available Funds for Compliance Costs

To meet the compliance costs for MRP 2.0 will require possible realignment of existing program funding and an infusion of new revenue from other fund sources. This section will describe the various fund sources available to pay for compliance costs and the realignment options.

Road Fund. Road Funds are restricted revenue that can only be used on roads and transportation facilities within the road right-of-way. Compliance costs that meet that test can be funded with Road Fund revenue. With the requirement to integrate Green Infrastructure into department capital project programs, the County's road rights-of-way will become priority areas. One reason for including Green Infrastructure into road projects and reconstructing roads to include stormwater treatment is that roads

produce some of the most polluted runoff. The County's Road Funds are used to pay for road and transportation improvements and maintenance. The Road Program is currently underfunded. For example, the pavement maintenance backlog is running approximately \$25 million per year and our Pavement Condition Index has been falling for the last several years. If Road Funds are diverted to fund new MRP 2.0 requirements, then there will be an investment reduction in our already underfunded transportation infrastructure. This will result in increased traffic congestion and a decrease in the structural quality of the transportation system.

Over the past several years the Road Program in the Public Works Department received approximately \$25 million per year in Road Funds from the State. This revenue source has been dwindling over the last two years due to increased vehicle gas mileage efficiencies and sales of hybrid and fully electric vehicles, and reduced sales tax revenue from lower priced gas. Adding to that a requirement to pay debt service for State general obligation transportation bonding has all resulted in a much reduced Road Fund disbursement this year of about \$19 million (projected). Chart 2 shows the Road Funds the County has received each year since 2010.

Community Drainage. Community Drainage systems are the pipes and ditches in the County's 17 unincorporated communities that protect property from flooding. For many years now the Community Drainage program has been funded with SUA 17 funds. A realignment of funding to shift more SUA 17 revenue to pollution reduction measures instead of community drainage maintenance would provide more funding for MRP compliance. Historically, the County spends about \$375,000 per year on Community Drainage maintenance. In fiscal year 2015/16 General Fund revenue was budgeted to help pay for Community Drainage maintenance. If this becomes a long term commitment of funding, it would help meet MRP 2.0 requirements. Reducing the Community Drainage maintenance program would lead to long-term problems, as community drainage infrastructure is getting old and facilities are beginning to fail. A recent \$740,000 sinkhole repair created by failure of an old pipe in Hazel Avenue in Kensington suggests an increase in funding is needed rather than a decrease. The cost of this project was shared with the City of Richmond (\$610,000 County, \$130,000 City).

Flood Control District Fund. The Flood Control District provides flood protection services to many cities and communities in the County. Some of the watersheds have inadequate funding due to low tax rates that were locked in when Proposition 13 was passed in 1978. In these cases the Flood Control District looks to the city being served to help fund flood protection services. For unincorporated communities the Flood Control District turns to the County. Since 1993, the County has been using SUA funds to help pay for flood protection services in the Wildcat, San Pablo, Rodeo, and Kellogg Creek watersheds. Each year the County spends about \$350,000 per year to fund flood protection services in the unincorporated communities in these watersheds. A realignment of this funding would free up additional SUA 17 revenue for MRP permit

compliance. However, the County or Flood Control District would need to backfill with other funds or there would be a reduction in flood protection services in these communities.

Similar to community drainage, Flood Control District facilities are reaching the end of their service life and a dramatic increase in investment will be required when they begin to fail. The Flood Control District has estimated the current asset value of their infrastructure system at \$1 billion and future replacement costs at \$2.4 billion. To determine a more accurate replacement cost and schedule, the District has embarked on a multi-year conditions assessment to determine the remaining service life of its flood protection infrastructure. The District has been reporting for several years now the need for increased investment in flood protection infrastructure, and not backfilling any revenue realignment would be going in the opposite fiscal direction.

County General Fund. This funding source is the most flexible source of funding available to the County. Naturally, there are a lot of demands placed on the General Fund to pay for County services. Any request for General Funds to help pay for MRP 2.0 permit compliance would have to be considered in the context of all other requests during the annual budget cycle.

VIII. Recommended Next Steps

The following are suggested next steps recommended by staff to fully understand the implications of MRP 2.0 and develop a plan to finance implementation costs:

Regional Board. Staff intends to meet with Regional Board staff and go over this report to ensure that County staff is correctly interpreting the MRP 2.0 permit provisions and their resultant costs.

Strategic Plan. Staff has been working for several months now on developing a Strategic Plan to implement MRP 2.0 in the most cost-effective manner that achieves the overall objective of improving stormwater quality. Elements of the Strategic Plan are becoming evident with the analysis prepared for this Financial Report. As we work our way through the implementation issues, with direction from the Committee and the Board, staff will be able to complete the Strategic Plan.

Options Report. With all the financial analysis done, staff can start putting together options for the Committee and the Board to consider in order to meet MRP 2.0 permit compliance. Staff will bring back an Options Report for the committee to consider by the end of the year. This report will include funding options to meet full compliance of MRP 2.0, options to perform compliance activities within the existing Stormwater Program budget, and options somewhere in between.

Feedback. Staff would appreciate any feedback, thoughts, and comments the Committee can offer on this approach to developing an implementation plan for MRP 2.0, and when to bring this to the full Board.

RMA:lz
G:\fldctl\Mitch\MRP\ TWIC Report. Final. October 13, 2016.docx