



MEMORANDUM

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TO: C3PO Ad Hoc Task Group

FROM: Peter Schultze-Allen and Jill Bicknell, Program Staff

DATE: March 20, 2017

SUBJECT: Mechanisms for Green Infrastructure Plan Implementation

The purpose of this memorandum is to describe and suggest tools, policies and other methods by which Co-permittee staff may implement their municipal Green Infrastructure (GI) Plans. The list of mechanisms described below is not meant to be all-inclusive, limiting or exclusionary of other means and methods by which a Co-permittee may implement their GI Plan and/or comply with the Municipal Regional Permit (MRP).

Background

Provision C.3.j of the MRP requires each Permittee to “complete and implement” a Green Infrastructure (GI) Plan for their jurisdiction. Per Provision C.3.j.i.(5)(b), the GI Plan is to be submitted with the Permittee’s Annual Report by September 30, 2019. Furthermore, Provision C.3.j.i.(3) of the MRP requires permittees to:

“Adopt policies, ordinances, and/or other appropriate legal mechanisms to ensure implementation of the Green Infrastructure Plan in accordance with the requirements of this provision.”

And finally, Provision C.3.j.i.(5)(c), requires that:

“Each Permittee shall submit documentation of its legal mechanisms to ensure implementation of its Green Infrastructure Plan with the 2019 Annual Report.”

Permittees generally already have legal authority to require new development projects that are regulated under the MRP – both private and public – to comply with the permit. However, as the GI Plan is a new type of municipal plan and was intended by the Regional Water Board under the MRP to shape and change the way standard operating procedures related to infrastructure are performed within a jurisdiction, municipal staff may need additional mechanisms to implement the GI Plan and modify various policies, historical practices, regulations and other municipal methods of implementing programs and projects.

Implementation Mechanisms

There are a multitude of mechanisms that permittees can consider for implementing green infrastructure. A base level of implementation is recommended in the options described in Section 1 below. The other instruments and programs listed in Sections 2 and 3 below are additional measures that could be considered as exceeding the requirements of the MRP, but may be desirable to better engage the private development sector and/or facilitate funding and maintenance.

A list of possible implementation measures is also included as Appendix A. Based on feedback from Co-permittee staff, this memorandum focuses on the smaller list of options described below. For each option, a description of the activity is included. Where an example of a jurisdiction that has instituted the option has been identified, the jurisdiction is described with a link to the website or document. Example reference documents and reports are described with weblinks, where available.

The options are divided into three spheres of activity:

1. Municipal GI Program Adoption (primarily capital improvement projects)
2. Private Development Programs, Incentives and Policies (primarily parcel-based projects)
3. Maintenance of GI Systems and Landscapes (Private and Municipal)

1) Municipal Green Infrastructure Program Adoption

This option can be instituted by any or a combination of:

- a) Modification of rules, metrics, or standard operating procedures by the Public Works Director and other department heads:
 - i) Require that permittee engineering, public safety, maintenance, transportation and/or stormwater program staff evaluate all Capital Improvement Projects for GI opportunities. One tool that engineering staff may need is hydraulic sizing software or other computational tools that include GI measures in calculating outputs for capital projects and retrofits. For example, the system would include bioretention as an alternative or in addition to the upsizing of stormdrain pipes. A similar change in engineering methodologies has arisen as a need in balancing the impacts from motor vehicles with other transportation modes in response to complete streets policies. For example, in 2005, the City of San Jose revised its policy established in 1978 for analyzing impacts of motor vehicles.

Example: City of San Jose

<https://www.sanjoseca.gov/DocumentCenter/View/3870>

- ii) Require that new, or updates to existing, Storm Drain Master Plans (SDMPs) include GI elements with an analysis of capacity and comparisons of cost between gray infrastructure and GI alternatives.

Example: City of San Jose's Storm Drain Master Plan (in progress)

- iii) Commissions and committees, either new or existing, can assist with implementation of GI. They can review and comment on projects that have potential for GI and make

recommendations that GI be incorporated to the extent feasible in accordance with local adopted policies and codes. If needed, the purpose and authority assigned to those commissions and committees can be amended to allow them to direct staff to provide the information needed to make their review, such as project plans.

Examples: Bicycle and Pedestrian Advisory Committee, Transportation Committee, Public Works Committee, Planning Commission, Sustainability/Environment Committee, Urban Forestry Committee, Finance Committee or new GI Committee

b) Approval of a policy by the Permittee's agency or city manager:

- i) Require that all staff reports for agendas of the agency's public hearings of elected officials for discussion of or appropriation of funds for infrastructure projects have a section with a title such as "Green Infrastructure Impact" with discussion of the proposed project's relation to the GI Plan and if GI measures can be incorporated into the project in a feasible manner. One example of this is how some jurisdictions have added "Environmental Impact" or "Sustainability Impact" to staff report templates as a mechanism for elected officials to more easily gauge the progress and implementation of sustainability plans and policies.

Example, City of Albany, Staff Report "Funding Capital Improvement Projects"
http://albanyca.granicus.com/MetaViewer.php?view_id=&event_id=519&meta_id=88314

c) Adoption of a resolution by the elected body:

- i) Require that all capital improvement projects over a determined threshold implement green infrastructure treatment controls as applicable and appropriate. For example, the City of Manhattan Beach adopted a Green Streets resolution in 2015.

Example, Manhattan Beach Green Streets Resolution
<http://legistar.granicus.com/daystar.legistar6.sdk.ws/View.ashx?M=F&GovernmentGUID=MANH&LogicalFileName=a9a35cba-4a29-481b-b99e-d4c55a9a2b5e.pdf&From=Granicus>

- ii) Require that project design staff use GI-related rating tools such as the Envision Sustainable Infrastructure Scorecard or the Greenroads Scorecard. The Board of Supervisors of the County of Los Angeles and the City Council of the City of Los Angeles recently voted (respectively) to adopt a requirement that all County and City infrastructure projects use the Envision rating tool. (See Appendix B for more information). For local examples, the City of Campbell used the Greenroads scorecard for the Hacienda Ave project and certified the project at the silver level. Additionally Caltrans and the City of San Jose have used the Greenroads scorecard.

Reference: Envision Rating System Program
<http://sustainableinfrastructure.org/envision/>

Reference: Greenroads Rating System Program
www.greenroads.org/

Example: County of Los Angeles requires Envision rating system

<http://file.lacounty.gov/SDSInter/bos/supdocs/106671.pdf>

Example: City of Los Angeles requires Envision rating system

http://clkrep.lacity.org/online/docs/2016/16-1176_rpt_pwgr_11-1-16.pdf

Example: City of Campbell – Hacienda Ave certified Greenroads Silver

<https://www.greenroads.org/141/92/hacienda-green-street-improvements.html>

- iii) Require that applicable municipal projects achieve a minimum score using tools such as those described above. The City of Tacoma passed a resolution requiring Greenroads for its roadway projects.

Example: City of Tacoma requires Greenroads certification

http://cms.cityoftacoma.org/sustainability/Resolution_No_38945.pdf

- d) Enactment of an ordinance by the elected body:

- i) Require implementation of LID control measures in “covered” municipal roadway, landscaping and/or other capital improvement projects (with the term “covered” being defined by the Co-permittee per local priorities and goals) as feasible (and/or in accordance with the projects listed in the GI Plan and/or using the prioritization tools in the GI Plan) when a defined project budget threshold is exceeded or when other project criteria trigger compliance with the local ordinance. Some municipalities in the Bay Area have adopted green building ordinances that require LEED™ green building certification and/or Bay-Friendly Landscaping rating/certification of “covered” municipal and/or private development projects.

Reference: ReScape California – Model Bay-Friendly Policies and Ordinances

<http://rescapeca.org/resources/for-community-leaders-landscape-professionals/model-policies-and-ordinances/>

Example: City of Hayward, Bay-Friendly Landscaping Ordinance/Municipal Code

https://www.municode.com/library/ca/hayward/codes/municipal_code?nodeId=HAYWARD_MUNICIPAL_CODE_CH10PLZOSU_ART20BIELAOR

Example: City of Oakland, Green Building and Bay-Friendly Landscaping Ordinance

<http://www2.oaklandnet.com/oakca1/groups/ceda/documents/form/oak026334.pdf>

2) Private Development Programs, Incentives and Policies

The implementation of green infrastructure in the private development sphere can be achieved by regulation, incentive and/or alternative compliance.

- a) Regulation

- i) Require new and redevelopment projects to obtain a “Stormwater” or “C.3” permit for any project that will be constructing improvements that create or replace exterior impervious surfaces (all or above a defined threshold) and tie into the municipality’s stormdrain system. The permit can also assess fees that cover the costs of municipal staff providing plan check, inspection and administration services.

Examples: Alameda County, City of Emeryville and City of Burlingame (C.6 permit)
www.acpwa.org/other-permits
www.ci.emeryville.ca.us/335/Stormwater
www.burlingame.org/index.aspx?page=3604

- ii) Require, through a standard condition of approval, new and typically larger development projects that are already being required to construct new sidewalk, landscaping, curb, gutter, pavement and/or other improvements on the frontages of their properties in the public right of way to construct GI systems in those areas to control run-off from the impervious surfaces within and adjacent to the project boundary. For example, a project could be required to install a stormwater curb extension in the street fronting their property that treats the roadway runoff upstream from it. The private property owner could also be required to maintain the system as part of the landscape maintenance of their frontage. Site-specific conditions of approval can be used to require redevelopment projects to repair, reconstruct and/or take over the maintenance of existing GI systems that the jurisdiction has previously constructed in the public right of way. The jurisdiction can also allow in some circumstances for run-off from the private property to be treated in GI systems in the public right of way in exchange for construction and/or maintenance of the systems.

Example: City of Emeryville
Various projects including: City Storage, 3900 Adeline, Maz, Marketplace and Pixar.
www.ci.emeryville.ca.us/308/Major-Projects

- iii) Refine the C.3.i site design requirements for certain single family home and small projects such as requiring roof areas to drain to landscaping.

Example: City of Cupertino
<http://www.cupertino.org/index.aspx?page=170>

b) Incentives

- i) Provide expedited permitting and/or reduced permit fees for projects meeting the jurisdiction's goals. The example below is not directly related to stormwater, but could be modified to incentivize non-regulated projects that voluntarily include GI measures, or for regulated projects that install measures exceeding the level required by the MRP.

Example: City of San Francisco, Green Building Expedited Permitting Policy
<http://sfenvironment.org/article/larger-projects-commercial-amp-multifamily/priority-permitting>

- ii) Develop density, height and/or floor area ratio (FAR) bonuses for projects including GI measures beyond any required by the MRP or for certain more challenging GI measures such as green roofs that the jurisdiction determines are of greater benefit to the community.

Example: City of Chicago, Greenroof Incentive Program
www.cityofchicago.org/city/en/depts/dcd/supp_info/sustainable_development.html

www.cityofchicago.org/content/dam/city/depts/zlup/Sustainable_Development/Publications/Sustainable_Development_Policy_Matrix.pdf

Example: City of Emeryville, FAR, Density and Height Bonus Program
www.codepublishing.com/CA/Emeryville/#!/emeryville09/Emeryville094.html#9-4.204

- iii) Allow stormwater treatment systems to be constructed in the public right of way for treatment of run-off from adjoining privately-owned property when the project meets goals of the jurisdiction such as the preservation of buildings deemed of interest in a redevelopment project making on-site treatment challenging.

Example: City of Emeryville, Maz project at 3800 Adeline
www.ci.emeryville.ca.us/308/Major-Projects

- iv) Establish a market for “stormwater credits” that may be used in offsetting the water quality or quantity impacts of existing development not proposed for construction.

Reference: National Resources Defense Council: 2016: Stormwater Credit Trading
www.nrdc.org/sites/default/files/stormwater-credit-trading-programs-ib.pdf
<https://www.nrdc.org/sites/default/files/green-infrastructure-pa-report.pdf>

Example: City of Philadelphia
www.phillywatersheds.org/whats_in_it_for_you/reduce-your-stormwater-fees

c) Alternative Compliance

- i) Establish an alternative compliance program to allow for development and use of an in-lieu fee to implement new regional projects and reimbursement of existing regional projects. One challenge is the development of a nexus study providing reasoned calculations for the amount of fee to be included in the Co-permittee’s master fee schedule. No jurisdiction in the Bay Area has done this yet, but the City of Watsonville adopted an LID ordinance in 2014 that included alternative compliance language and was the subject of reports and model documents produced by the Central Coast Low Impact Development Initiative and the San Francisco Estuary Project. Additionally, the City of San Diego has instituted an alternative compliance program. See the discussion of Impact Fees below for more information.

Reference: San Francisco Estuary Project Report
www.sfestuary.org/our-projects/water-quality-improvement/greenplanning/
www.sfestuary.org/wp-content/uploads/2015/09/Alternative-Compliance-Memo-FINAL.pdf

Reference: Central Coast Low Impact Development Initiative
<http://centralcoastlidi.org/alternative-compliance.php>

Example: The City of Watsonville LID Ordinance
<http://cityofwatsonville.org/public-works-utilities/sewer-storm-drains>

Example: The City of San Diego’s Alternative Compliance Program
<https://app.box.com/s/usxyhwkyjriw5f0bl671m51vbjs74kly>
www.sandiego.gov/stormwater/regulations/newpermitprog/newdev

- ii) Develop a stormwater crediting system for private projects that have on-site implementation challenges:

Example: Washington DC, District Department of the Environment (DDOE)
Stormwater Retention Credit (SRC) Program
<http://doee.dc.gov/src>

- iii) Assess Development Impact Fees on development projects to fund complete and green street projects. Typically the Transportation Element of the jurisdiction's General Plan is updated and/or municipal code amendments are needed to assess and accept funds from impact fees for regional projects. The City of San Mateo is in the process of instituting a Sustainable Streets Impact Fee to replace its existing Traffic Impact Fee. The City/County of San Francisco replaced its Traffic Impact Fee with a Transportation Sustainability Fee, but it is not clear if it funds green infrastructure systems.

Example: City of San Mateo
<http://sustainablestreetssanmateo.com/>

Example: City and County of San Francisco
<http://sf-planning.org/invest-transportation-sustainability-fee>

3) Maintenance of Green Infrastructure Systems and Landscapes

Maintenance of GI control measures is an important aspect of any GI program. The funding of the maintenance and requirements to ensure proper functioning of those systems can be regulated and implemented in various ways.

- a) Private contractors maintaining publicly or privately owned landscapes:
 - i) Require contracted landscape maintenance firms to be qualified in sustainable landscaping practices in RFPs for those services.

Example: City of Emeryville, Emery Park and other municipal landscapes
<http://www.stopwaste.org/resource/joseph-s-emery-park-walking-biking-path-bay-friendly-attitude>
http://emeryville.granicus.com/MetaViewer.php?view_id=2&clip_id=450&meta_id=25472

- ii) Require in the jurisdiction's standard Stormwater Operation and Maintenance Agreement that green infrastructure control measures located on the pertinent private property be maintained by landscape maintenance contractors who have received certification of training in a sustainable landscaping program such as the Green Gardener program or Bay-Friendly Landscaping program.

Example: City of Emeryville (confirmed per verbal communication with staff.)
Documents available upon request.

- iii) Require private property owners to maintain the GI measures fronting their property that are in bulb-outs, the planter strip, and/or sidewalk area using sustainable landscaping procedures.

Example: City of Emeryville, Pixar maintains the green street system on Park Ave.
http://www.scvurppp-w2k.com/pdfs/1213/Green_Street_Summary_Report-Final_080713.pdf

b) Municipal maintenance staff:

- i) Require all municipal landscape maintenance staff to be trained in sustainable landscaping practices such as by becoming a Certified Green Gardener or a Bay-Friendly Qualified Professional in landscape maintenance.

Example: City of Oakland

<http://agency.governmentjobs.com/oaklandca/default.cfm?action=viewclassspec&classSpecID=812970&agency=2209&viewOnly=yes>

- ii) Require that maintenance staff being consider for promotion achieve accreditation in a sustainable landscaping program such as the Green Gardener training or Bay-Friendly Landscaping program.

Example: City of Oakland (confirmed per verbal communication with staff.)

c) Funding of maintenance:

- i) Develop a Green Benefit District to fund and maintain the public-realm landscaping in the area. The landscape maintenance staff can be trained in green infrastructure practices and qualified in sustainable landscaping services such as described above.

Example: San Francisco, Dogpatch & Northwest Potrero Hill Green Benefit District
<http://dnwph-gbd.org/>