

Meeting Post-Construction Stormwater Requirements in Marin: A Watershed-Friendly, Low Impact Development Approach

FREE WORKSHOP: Wednesday, April 30, 2007

9:00 am – 12:30 pm (Continental breakfast from 8:30 to 9:00 am)

Marin Art & Garden Center – 30 Sir Francis Drake Blvd., Ross, CA 94957

(Directions: http://www.magc.org/map_direc.htm)

Workshop Purpose

Stormwater runoff from newly created impervious surfaces impacts water quality in our creeks and can increase downstream erosion. Workshop attendees will learn how to protect water quality and meet NPDES phase II permit & Attachment 4 requirements by controlling stormwater from development projects. The Marin County Stormwater Program will present a new [Guidance Manual](#) designed to assist project applicants and municipal staff to meet permit requirements using a Low Impact Development approach. Agenda & info: <http://www.mcstoppp.org/events.htm>.

Photo by CSW Stuber-Stroeh



Photo by Dan Cloak



Who Should Attend

- Land development professionals
- Landscape architects and designers
- Municipal planning, engineering, and stormwater staff
- Students
- Interested public

About the Trainers: Dan Cloak, P.E. is a consultant to Bay Area stormwater pollution prevention programs. Harold Bexton is a Marin County Architect with Bexton Associates. David Harlan, P.E., is a civil engineer for the City of Novato and is Novato's local MCSTOPPP coordinator. Terri Fashing is the Program Manager for MCSTOPPP.

Sponsored by the Marin County Stormwater Pollution Prevention Program (MCSTOPPP)

REGISTRATION REQUESTED BY APRIL 24

Please complete the registration form below and return to: Howard Bunce, MCSTOPPP, 65 Mitchell Blvd., Suite 100E, San Rafael 94903. You may also FAX to 415-499-7221 or EMAIL: hbunce@co.marin.ca.us. For more information, call 415-499-3748.

Name _____

Address _____

Phone _____ Email _____



If you require accommodations to participate in this activity, call Howard Bunce at 499-3748 or email hbunce@co.marin.ca.us at least 72 hours in advance. Copies of the documents used in this meeting are available in accessible formats upon written request.



**Meeting Post-Construction Stormwater Requirements in Marin: A Watershed-Friendly,
Low Impact Development Approach: Evaluations Summary**

MCSTOPPP Workshop, April 30, 2008

| Workshop Title | Very Useful | Useful | Not Useful | Total Answered |
|--|--------------------|---------------|-------------------|-----------------------|
| I. Welcoming Address | 31% | 69% | 0% | 13 |
| II. MCSTOPPP's New Guidance for Applicants LID Manual | 77% | 23% | 0% | 13 |
| III. Low Impact Development (LID) Design in Marin | 93% | 7% | 0% | 14 |
| IV. Planter Boxes: A Design for the Single-Family Hillside Residence | 50% | 50% | 0% | 14 |
| V. The City Perspective? | 23% | 77% | 0% | 13 |
| VI. How Long is Perpetuity? | 70% | 30% | 0% | 10 |
| VII. Exercise: Practice LID Design and Plan Check | 71% | 29% | 0% | 14 |
| VIII. Q & A | 50% | 50% | 0% | 6 |

I. Welcoming Address:

Though very few commented, a few thought it could be shortened and could focus on the permit reissue and how to comply. In addition, perhaps this was a good place to have Dan introduce himself.

II. MCSTOPPP's New Guidance for Applicants LID Manual

One comment was received that it was a good overview. Another indicated that the time spent on the "Background of Guidance Manual" could be reduced.

III. Low Impact Development (LID) Design in Marin

A number of people commented that more examples would be helpful.

IV. Planter Boxes: A Design for the Single-Family Hillside Residence

Many found this portion interesting, but several people are concerned with the expenses associated with this solution. Alternatives would be something to discuss. In addition, one person wished there was more information on learned lessons and suggested bringing in someone who was further into the process.

V. The City Perspective?

A number of people suggested this presentation was repetitive, possibly of Dan's presentation. Though one mentioned it was nice to hear a city perspective. Also, a copy of a complete

submittal to use as template/example would be helpful.

VI. How Long is Perpetuity?

It was stated that this is a challenging issue and maybe more could be incorporated on appropriate irrigation and plantings.

VII. Exercise: Practice LID Design and Plan Check

Not only was this a good opportunity to chat with other attendees, people thought this was an effective workshop. In the future, examples of actual treatments in place could be included.

VIII. Q & A

Only one commented on the Question and Answer session and expressed an interest in a facilitated discussion with the audience instead.

IX. Workshop as a Whole

What information or topics would you like us to cover in future Stormwater & New Development workshops?

People mentioned a general satisfaction with the overview, but would have liked more exercises. The following were topics included for future discussion:

- the affect of stormwater pollution on streams and aquatic life
- hydro-modification
- how facilities could be pushed to do better due to attrition over time
- who handles inspections during construction and how reporting happens
- methods of streamlining submittals
- audience specific: Land Development Engineers, developers, planners...

What is your general assessment of Marin County's direction towards meeting Phase II Stormwater Permit Requirements for New Development?

There was an overwhelming sense that the direction is very positive and that it will continue to progress. The short version was well organized but there could be more of a focus on the design/construction issues. There was one mentioned concern that MCSTOPPP seems tentative about enforcement and implementation.

What additional guidance and clarification do you need to better understand stormwater requirements for development projects in Marin County?

There was an interest in more exercises, maybe even on-line. Shorter presentations and handouts available for the presentations were included suggestions.

I. Welcoming Address:

- Don't need too much background on Regulations; future permit reissue information important
- a bit long, we can assume people know the history and spend more time on "how to comply"
- Terri could introduce or I wish Dan would introduce himself and his qualifications/background

II. MCSTOPPP's New Guidance for Applicants LID Manual

- reduce the time spent on 'Background of Guidance Manual'
- great introduction/overview

III. Low Impact Development (LID) Design in Marin

- 4% bioretention area seems like a low bar re hydrograph mod. in clay soils
- good overview, history of reg's kept short and could be shorter
- It was helpful to hear the solution to the very difficult 100% impervious site. Include more examples.
- real world examples are best teaching tool

IV. Planter Boxes: A Design for the Single-Family Hillside Residence

- expensive solution, -Ecoroot/Greenroof discussion would be appropriate, also rainwater harvesting – both increasingly cost effective
- very interesting
- include other examples, less expensive alternatives
- needed more info on lessons learned. If possible find someone further into the process. Didn't get a sense of how useful guidance was to him
- appropriate length presentation

V. The City Perspective?

- suggestion: have a copy of a complete submittal to use as template/example
- somewhat repetitive
- seemed repetitive of Dan Cloak's presentation. Dan's secondary slide with white explanations of each item was good.
- nice to hear city perspective

VI. How Long is Perpetuity?

- more on appropriate irrigation and plantings, -annual inspection and report makes sense
- very challenging issue

VII. Exercise: Practice LID Design and Plan Check

- Suggest more emphasis on this for future workshops
- maybe have examples of actual treatments that have been in place

- still a little difficult to understand, but I appreciate the exercise as a good way to learn
- simple exercise but useful practical application. Also a nice opportunity to chat with other attendees

VIII. Q & A

- a facilitated discussion with audience would have been nice. Would have liked to hear what issues audience member has come across.

IX. Workshop as a Whole

What information or topics would you like us to cover in future Stormwater & New Development workshops?

- Talk about how stormwater pollution affects streams and aquatic life a bit more. Encourage people to do better than minimum requirements where appropriate. I think setting the bar higher, maybe 6% or...would address the attrition that will/might happen to facilities over time.
- Who handles inspections during construction and how does reporting of Operation and Maintenance happen?
- Handout of presentation would have been helpful for notes. Perhaps shorter length of workshops.
- address some requirements a Land Development Engineer needs to implement, during their plan review
- hydro modification
- methods to streamline submittals
- very good overview
- more exercises
- workshop was a great overview. Could imagine that future workshops could target specific audiences (developers, planners, engineers, etc.)

What is your general assessment of Marin County's direction towards meeting Phase II Stormwater Permit Requirements for New Development?

- excellent
- focus more on design/construction issues
- overall a useful workshop
- very well organized "short version" overview of requirements. Helps get a good grasp of the regulations.
- it is making steady progress
- slowly getting on track, Seattle/Puget Sound is much further ahead
- still seems too complicated. MCSTOPPP seems tentative about enforcement and implementation. Maybe there is too much information?
- it can be done
- good 1st step – next to capture water for use in overall landscape irrigation
- very positive direction. Keep up the good work.
- thank you!

-guidance manual seems like a great step forward. Makes the various requirements much less confusing.

What additional guidance and clarification do you need to better understand stormwater requirements for development projects in Marin County?

-more exercises...maybe on-line?