



## Evaluation Form

### Annual C3 Workshop Low Impact Development and Green Stormwater Infrastructure: Design and Maintenance

Number of Evaluations: 84

Number of Attendees: 126

Community Center, Campbell

Tuesday, April 29, 2025

---

#### 1. Review of Provision C.3 Requirements in MRP 3.0 – Jill Bicknell, SCVURPPP

Very Useful - 71

Somewhat Useful - 10

Not Useful - 1

Did Not Attend - 2

##### Comments:

- Always good review. (2)
- Always helpful to be walked through C.3 requirements, especially for newer staff in stormwater.
- As a newer engineer, I wish the presentation was longer.
- Excellent explanation, and would be so beneficial to have the recording posted on the website. Would be very cool to see an actual project sample and see which category the project falls into.
- Excellent explanation and would be so beneficial.
- Expand using a parcel-based development example showing all unique possible considerations.
- Feel like I've heard the same presentation three times.
- Good to point out the frontage requirements and utilities trenching for parcel projects.
- Great details.
- Great overview of changes. (3)
- Great overview of what is C.3. (3)
- I am not in the design stage.
- I recommend having a slide or key in the beginning with all the acronyms used.
- I would like to learn more about roadway-related projects requirements.
- 
- Presentations are very clear and easy to comprehend.
- The retrofit and alternative compliance was a great refresher.
- Very help to see new regulations being introduced.

#### 2. GSI Handbook Updates and Details – Renee Crawford, SCVURPPP

Very Useful - 61

Somewhat Useful - 22

Not Useful - 0

##### Comments:

- Going through the list of updates was perfect to know what changes to expect. (4)
- Good resources, great seeing Renee.
- Good to see the future GSI details.

- Great overview.
- I don't design, so it is not very helpful for my field.
- I recommend including page numbers for where to find certain information in the GSI handbook.
- More on complete street details.
- Nice to go over the changes and updates.
- Provided good guidance for design of C.3 treatment measures.
- Use laser pointer to point out changes in the detail itself, explain why changes were added.
- Was missing for me at least, the connection point on when to use this guide/who the audience is for this resource. How to use it in conjunction with the C.3 Handbook.

### 3. Suspended Pavement Systems for Stormwater Treatment – Shawn Freedberg, DeepRoot

**Very Useful - 72**

**Somewhat Useful - 13**

**Not Useful - 1**

**Comments:**

- Add more time to speak.
- Awesome discussion. I thought Shawn did a great job emphasizing the flexibility and customization of Silva Cells, and the design input needed for each project.
- Excellent discussion and questions. (2)
- Felt a bit defensive, but I get it. Still very useful to better our understanding of the product.
- Good to see successful projects.
- Good to see the different treatment options.
- I have a lot of questions about suspended pavement and some design flaws, so it was nice to have Shawn available to answer.
- I regulate the Arques property mentioned in the presentation and it gave me a better insight on its function. It also went in depth on other types of projects that Silva Cells could be used for.
- I would love to see these in person.
- I'm glad this was covered because I had a lot of design questions answered.
- Interesting concept for non-roadway use
- It would be helpful to see case studies of the system failing so we can prevent it happening. Also, reasons for system failure.
- Love the option of Silva Cells in tight spaces. (2)
- My dept doesn't have many of these projects but it is a very interesting topic.
- Revelation-Silva Cells isn't a stormwater treatment device, rather facilitates stormwater treatment.
- Silva Cell is not allowed in our jurisdiction.
- The maintenance component still requires more information. It sounds like a great concept, but unsure of its use within residential settings.
- This was a great walk through on these systems and Silva Cells; really improved my understanding.
- Try to have the presenter wait to answer questions until the end or have people contact him directly. Too many personal/specific questions cut into his presentation, and we couldn't hear.
- Very informative. (3)

#### 4. **Cost-Effective Bioretention Maintenance and Design** – Peter Schultze-Allen, SCVURPPP

**Very Useful - 70**

**Somewhat Useful - 13**

**Not Useful - 0**

##### **Comments:**

- Always a pleasure hearing Peter talks plants in bioretention. His example pictures and “right plant, right place” is a fantastic tool for better bioretention design.
- Didn’t feel the cost side was directly discussed enough.
- Great ideas for design options.
- I like the good/bad photo examples.
- I think by this point of the day; I was a bit tired I can’t retain much by this time.
- I’m not in maintenance, but good see what’s not working.
- It was very helpful to hear about the maintenance issues. (2)
- It would be great to hear/see actual cost breakdown of staff time/equipment /materials needed to maintain bioretention areas.
- Nice ideas that I can discuss with my inspection sites/contracts.
- Provided good high-level ideas on what to consider for bioretention maintenance would be good to review the challenges w/civil aspect of maintenance.
- The plant list was helpful!
- Understand which plants are best to use. (2)
- Very good overall information. (2)
- Very important topic.

#### 5. **Southgate Neighborhood: A Partnership to Revitalize Bioretention Areas** – Brad Hunt, City of Palo Alto and Junko Bryant, Grassroots Ecology

**Very Useful - 70**

**Somewhat Useful - 14**

**Not useful - 0**

##### **Comments:**

- A great example of an approach to rehab bioretention areas.
- Brad and Junko are fun presenters. (2)
- Excellent example! Great to see the lessons learned and the established camaraderie between the vendor – Grassroots – and the community! What an educational and successful hands-on campaign/opportunity!
- Good case study for non-regulated bioretention system.
- Great to see specific plants and how they function in real life situations. (4)
- Fun! Appreciate the honesty on what was successful and what was not. Also, good points on the importance of plants, Refreshing.
- Helpful to see what the issues were, the scope, outcome, maintenance, challenges, and lessons learned. Native plant overview was very helpful. The presentation layout was good too.
- I loved the case study, found it very interesting and useful.
- Love Brad’s delivery and way to get the community involved in the project; Junko’s take on plant was informative.
- Nice topic! It is interesting to learn how the community was used for restoration support. (2)
- Such an inspiring program. I enjoyed seeing the contributions Grassroots volunteers and the neighbors provided.
- This presentation was super informative. (4)
- Use splash pad instead of cobble stones.
- Very cool project; loved hearing about the design features. Junko’s pollinator graphs were

fascinating to see.

- Very interesting presentation to show interaction with the public.

## 6. Bioretention Area Maintenance Challenges - Panel Discussion

**Very Useful - 55**

**Somewhat Useful - 17**

**Not useful - 2**

### Comments:

- A lot of repeat topics and discussions.
- Appreciate real world experiences. (2)
- Great examples, full of great information.
- Great panel and spread of expertise. Mahmoud is the best! All three were very knowledgeable and had great lessons to share.
- It was informational to see different cities' issues and approaches.
- It's always useful to learn about other cities' maintenance practices and challenges. (2)
- Lively discussion, great moderator, great ideas. (2)
- Not involved with maintenance but still good to hear.
- Nothing better than sharing lessons learned from respective program coordination - all great lessons learned – keep offering!
- This gave a good perspective on maintenance and challenges that people maintaining these bioretention systems face. Refreshing to see other cities have similar issues.
- Wish we had more time for questions from the audience.

## 7. Did this training meet your expectations?

**Yes - 74**

**No - 1**

- It was super!

## 8. What parts of the training were most useful to you?

- All (5)
- Both maintenance discussions.
- Deeproot (5)
- Good balance of info versus case studies.
- GSI design, bioretention. (2)
- GSI Handbook updates because I use the Handbook often.
- Hearing new ideas pertaining to GSI and panel discussion.
- Hearing about maintenance issues and design considerations.
- I enjoyed learning about how other cities are tackling O&M issues that arise in the field of GSI.
- I enjoyed the case study presented by the City of Palo Alto. It was interesting to see program implementation and issues. (2)
- I enjoyed the MRP provision review and suspended pavement discussion.
- It was interesting to learn more about Silva Cells and tree spacing. (4)
- Jill's MRP C.3 requirement review. (13)
- Learning about updates to materials.
- Learning more about Silva Cells and plant types.
- Lunch.
- Pros/cons with various native plant species.
- Southgate neighborhood project. (2)
- Standard details.

- Suspended pavement, cost effective bioretention. (8)
- The discussions that came with or after each presentation.
- The question and answers portion.
- The Silva Cell presentation. I like the slower pace of his presentation. (3)
- There was something for all phases of development – design, construction, and maintenance. Very helpful and useful for all entities.
- Updates and refresher to MRP 3.0. Examples/photos of discussion topics. Experience sharing with other jurisdictions.
- Updates to the GSI Handbook.

#### 9. What would have made this training more useful?

- Applying bioretention and when it doesn't work due to site constraints.
- Better integration between all topics. Some aspects were too broad.
- More examples used in the field. Many ideas used were ideal hypothetical scenarios.
- Discussion groups.
- Discussion with field crew for maintenance issues.
- Education for the public.
- Everything was very useful already.
- For the first segment it would be nice for the group to do an activity and apply information that was introduced at the beginning. This will be good practice.
- Ground Squirrels vs GSI.
- Having a key of acronyms and a checklist of requirements.
- I think there could have been more time allowed to ask questions after the Silva cells presentation.
- I would love to see the actual maintenance cost for a specific project or multiple projects. (2)
- If the training was done on a more consistent basis (Quarterly or semiannual). (2)
- It would have been helpful to have the presentations printed.
- Learning more about the minimum requirements for C.3.
- Maybe a walk outside. Hard to concentrate sometimes.
- More and longer breaks between presentations. Also, presentations that were one hour, one hours plus, were too big. Please condense them in the future.
- More discussion on the C.3 requirements and the Builder's Remedy.
- More discussion to see what other cities are struggling with/ excelling with.
- More group discussions. (3)
- More time for audience questions after each presentation. (2)
- More information on alternative compliance and frontage C3 treatment requirements. (3)
- More interactive panels/group networking.
- More practical - show some products.
- More review of the 2-year-old permit. I know it's been around for some time, but as a new engineer, it would've been appreciated.
- More visual examples. (2)
- More information on how to apply C.3 to projects and key things to look out for review.
- Not sure, well done.
- Sample of a real project review.
- Trip to see Hacienda.

## 10. What topics would you recommend for a future training?

- Alternative compliance – provide a how-to for offsite projects in-lieu payment fee; how's it coordinated. What does a credit bank look like? How do monitor credits when they expire? What is a good database to trace activity?
- Another topic would be MRP 4.0 - what to expect, and asset management - how to collect information.
- C.3 inspection discussion and enforcement steps.
- C.3 requirements for subdivisions.
- C3 design rather than maintenance. (2)
- Complete street design.
- Compliance enforcement. (3)
- Design of C.3 in the ROW and the challenges for municipalities to require parcel -based bioretention design per city preferences. (2)
- Equivalent treatment design for both public row and private land.
- Examples of road reconstruction projects.
- Going over maintenance contracts language to be included in contract negotiations.
- Ground Squirrels vs GSI.
- Hands on examples outside.
- How jurisdictions are dealing with SB9 Builder's Remedy. (2)
- Impervious vs pervious calculations.
- Including a larger variety of stormwater treatment measures would be helpful.
- Issues and challenges in maintaining Silva cells and their maintenance cost compared to other treatment methods.
- Maybe a study of the GSI handbook. Go through each chapter and summarize key points, just an idea.
- More about explanation of plants used in bioretention areas. (2)
- More different treatment type talks like the Silva cells.
- More in-depth discussion of treatment system design (siting, sizing, etc.)
- More open Q&A for policy questions related to the permit.
- More presenters from different municipalities showcasing what they are doing within their organizations.
- Other below-grade treatment systems like Silva Cells as LID treatment.
- Outreach and funding
- Outreach efforts aimed at informing the property owners of their regulated devices. (2)
- Pavement improvement.
- Practical example that includes design samples.
- Requirements for trail projects.
- Review biotreatment soil approval process, how to get funding.
- Specific site design.
- State of the art practices, what is on the horizon.
- Treatment of ROW impervious areas.
- Trees in bioretention – pluses and minuses.

## 11. General Comments

- City staff all go through training but handoff O&M to contractors, how are contractors trained? They meet MRP requirements. Where would landscape contractors learn LID O&M? ReScape should have a certification.
- Great to have in-person; certainly recommend annual training, if possible, on C.3 and inter-related topics.
- Great training, looking forward to next year's training. (2)
- Great workshop. (4)
- I thoroughly enjoyed this workshop; it was great to see other industry professionals and make new connections as well as have an opportunity to discuss the implementation of MRP requirements with so much professional knowledge in one room.
- I wasn't expecting so much talk about specific plant species.
- It was great and very organized.
- Need additional information on alternative green infrastructure.
- One of the better C.3 workshops.
- Overall good workshop.
- Presentations are a bit long; poor time management lunch was cut short by 15 minutes. There were no breaks in the afternoon.
- Really enjoyed the suspended pavement presentation – very useful.
- Thank you for providing food.
- Thank you. (5)
- Thanks to SCVURPPP and all the presenters.
- The broad topics of design, landscaping, and inspection loses the attention of attendees that are not involved in some aspects. A more focused workshop would better help attendees decide what to stay for.
- The maintenance discussions are useful, but also discouraging. The specs for GSI are so detailed, but the reality in the ground doesn't seem close to satisfying it at all. The cost is also high.
- Very informative. (2)
- Very nicely coordinated and appreciated. Please continue to offer this session and thank you for snacks and lunch.