

From: Shahriar Eftekhazadeh <shahriar.eftekhazadeh@seitecinc.com>
Sent: Friday, November 5, 2021 1:46 PM
To: DPW-SafeCleanWaterLA
Cc: Ambrose, Richard F.; Glickfeld, Madelyn; Deborah Deets; Carlos Moran; Teresa Villegas
Subject: RE: Gaffey Nature Center Study - Questions and Clarifications
Attachments: Community-CenteredOptimizationofNature-BasedBMPsStartingwiththeGaffeyNatureCenterFacility.pdf; CimisRefEvapZones.pdf

CAUTION: External Email. Proceed Responsibly.

Dear Safe, Clean Water Program,

This email and attached material are response to questions raised during the ULAR WASC meeting of Nov. 4, 2021 regarding our proposed study "Community-Centered Optimization of Nature-Based BMPs Starting with the Gaffey Nature Center". Given that this study will benefit all watershed areas, this is to request that the DPW Safe Clean Water send this material to all of the WASC members, so they can review it.

Thank you,

Shahriar Eftekhazadeh, PhD, PE, PMP

O: 310 375 0342, C: 310 879 9376

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From: Glickfeld, Madelyn <madelyn.glickfeld@ioes.ucla.edu>
Sent: Friday, November 5, 2021 1:34 PM
To: Shahriar Eftekhazadeh <shahriar.eftekhazadeh@seitecinc.com>; Carlos Moran <carlos@watershedhealth.org>; Teresa Villegas <Teresa.Villegas@lacity.org>
Cc: DPW-SafeCleanWaterLA <SafeCleanWaterLA@dpw.lacounty.gov>; Ambrose, Richard F. <rambrose@ucla.edu>
Subject: RE: Gaffey Nature Center Study - Questions and Clarifications

I am sorry, I am not able to look at materials that are not sent through the North Santa Monica Bay Watershed Area Stakeholder Committee. Please ask the DPW Safe Clean Water to send this material to all of the WASC members, so we can all review it.

From: Shahriar Eftekhazadeh <shahriar.eftekhazadeh@seitecinc.com>
Sent: Friday, November 5, 2021 1:27 PM
To: Carlos Moran <carlos@watershedhealth.org>; Teresa Villegas <Teresa.Villegas@lacity.org>
Cc: DPW-SafeCleanWaterLA <SafeCleanWaterLA@dpw.lacounty.gov>; Glickfeld, Madelyn <madelyn.glickfeld@ioes.ucla.edu>; Ambrose, Richard F. <rambrose@ucla.edu>
Subject: FW: Gaffey Nature Center Study - Questions and Clarifications

Dear Carlos and Madam Chair,

Please note Ms. Deborah Deets responses below and kindly admit to the meeting minutes.

Thank you,

Shahriar Eftekhazadeh, PhD, PE, PMP

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From: Deborah Deets <deborah.deets@lacity.org>

Sent: Friday, November 5, 2021 12:34 PM

To: shahriar.eftekhazadeh@seitecinc.com

Cc: deborah.deets@lacity.org

Subject: Fwd: Gaffey Nature Center Study - Questions and Clarifications

Dear Dr. Eftekhazadeh,

Please review, and if you are in agreement I ask that you request public disclosure and share with:

Potential partners

SCW WASCs

SCW (& BOS as relevant)

Teresa Villegas <Teresa.Villegas@lacity.org>

"madelyn.glickfeld@ioes.ucla.edu" <madelyn.glickfeld@ioes.ucla.edu>

Carlos Moran <carlos@watershedhealth.org>

"Richard F. Ambrose" <rambrose@ucla.edu>

1. *Your study site is located in a cool coastal zone. How do you extrapolate the results of your study to the hot dessert climates in the other watersheds?*

I understand that this proposal will install a weather station to collect real-time climate data for its micro-climate. Collected information will refine the available yet dated information such as currently available from Cimis (see attached). Data will either corroborate cultivation factors, or refute anecdotal information such as the "inability to grow desert plant species in a cool coastal environment".

Cultivation will also address other factors such as:

The community process whereby an "internet dashboard" shares data to demystify Eto and evaporation for community gardeners who will learn to collect and refine data in their own microclimates--and share it with other communities. Plant selections will generate community ownership, and rely on scientific principles over expert or "anecdotal" plant survival information; thereby adding cultural knowledge and ethnobotany that enriches stormwater plant selections.

The study will consider vegetation as surrogates for biodiversity; and for enhanced phytoremediation in the bioswale. Community input is essential for these analyses, and deliverables.

2. *Do I represent LASAN?*

My *Letter of Support* comes from a single job class at LASAN represents a uniquely qualified resource.

I have represented my profession adequately to be named a National Fellow.

To the degree that SCW gives weight to "Natural Solutions", my profession holds a significant role in directing SCW towards more scientific and equitable principles.

To that degree I have designed award winning stormwater projects, and standards, my role is to be LASAN's expert in speaking for the needs of my job class.

Years as a sole landscape architect in an engineering bureau of 3500 staff has led to thousands of "connections that create and collaborate" for public benefit. It has increasingly called for speaking out---to balance the bias towards "Pump and Treat" in engineering projects and to deliver adaptive and operable solutions for the future.

Adapting hydrological, biological, and landscape operational protocol -- is not a task of engineers alone, but of public servants who resist political pressure to deliver more coherent self-regulating projects for the SCW program. If this view does not represent LASAN, it is mine alone.

To the degree that LASAN's mission is EQUITY, and ENVIRONMENT; and that I report from the City's LASAN WPD to SCW I will take every opportunity to call out the need for storage and recirculation of "sustainable water supplies" for equity; and increased pollutant insights through vegetative data, and scientific protocols for bioswales and adaptive NATURAL SOLUTIONS.

As LASAN management staff, my letter of support represents essential stormwater management skills, decades of collaboration with skilled engineers, and unique professional experience.

3. Deborah's NOTES on SEITEC's leadership of this study:

SEITEC, a highly successful innovator and private consulting firm, is led by a PhD hydrogeologist who has been retained for consulting by LASAN on major wastewater and solid resources contracts. He was assigned by LASAN executives to work with me on the successful SCW R1 MacArthur lake Rehabilitation funding proposal.

We have seen his innovative, cost efficient, technical solutions presented at this WASC. This same input is essential to operate the City standards adopted by City of Los Angeles DPW (BOE and LASAN).

Respectfully,

Deborah Deets, Landscape Architect II
LASAN/WPD
CA RLA 4839 FASLA QSP/QSD

* See Greenways to Rivers Arterial Stormwater System (GRASS) planning page 11 for "Developing a sustainable stormwater network", and pp. 20-21.
<https://nacto.org/publication/urban-street-stormwater-guide/>

I am out of the office. For transparency, I hope this communication will be shared with the SCW Committee as disclosure for all SCW WASCs'.

----- Forwarded message -----

From: **Shahriar Eftekhazadeh** <shahriar.eftekhazadeh@seitecinc.com>

Date: Thu, Nov 4, 2021 at 12:22 PM

Subject: Gaffey Nature Center Study - Questions and Clarifications

To: Carlos Moran <carlos@watershedhealth.org>, Teresa Villegas <Teresa.Villegas@lacity.org>

Cc: DPW-SafeCleanWaterLA <SafeCleanWaterLA@dpw.lacounty.gov>, Deborah Deets <deborah.deets@lacity.org>

Dear Carlos and Madam Chair,

Further to our presentation at the ULAR WASC meeting yesterday, Nov. 3, 2021, this email is to respond to the questions asked and provide the necessary clarifications.

Q: Your study site is located in a cool coastal zone. How do you extrapolate the results of your study to the hot desert climates in the other watersheds?

A: I have copied Ms. Deborah Deets, who is the subject expert in this area, for her response.

Q: Is SEITec the "Study Developer" or LASAN?

A: As noted in the study application (attached), SEITec is the "Study Developer". LASAN is a study collaborator since the proposed study site (The Gaffey Nature Center) is in custody of LASAN under a 20-year lease from Caltrans.

Q: Does Ms. Deborah Deets represent LASAN for this study?

A: No. Not officially. However, The Gaffey Nature Center is the brain child of Ms. Deborah Deets. She negotiated and obtained the lease from Caltrans for the site and is the LASAN chief architect and Project Manager, who oversaw the construction and successful completion of the project.

Ms. Deborah Deets is the technical lead for the proposed study. She is a nationally recognized expert in nature-based stormwater BMPs and a Fellow of the American Society of Landscape Architects (FASLA). Her “Greenway to Rivers Arterial Stormwater System (GRASS)” plan, that she collaboratively developed for Los Angeles, has been adopted by the National Association of City Transportation Officials ([NACTO](#)) and is published in their [Urban Street Stormwater Guide](#). So, she is a critical resource for the proposed study.

I believe the above covers the questions raised. Please do not hesitate to let me know if there are any further questions.

Thank you and best regards,

Shahriar Eftekharzadeh, PhD, PE, PMP

Principal Engineer

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Deborah Deets, FASLA, CA RLA 4839, QSP/QSD

Landscape Architect II

LA Sanitation and Environment

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A weather station is mounted on a white tripod in an open field. The station includes a wind vane, a cup anemometer, a radiation shield, and a solar panel. The background shows a clear blue sky and a green field.

CEMIS

REFERENCE EVAPOTRANSPIRATION ZONES

CALIFORNIA IRRIGATION MANAGEMENT INFORMATION SYSTEM

The color map inside shows the reference evapotranspiration zones in California. It may be used to help in urban and agricultural water management planning and water budgeting, as well as designing irrigation systems, planning irrigation schedules, and designing open water evaporation systems.

The map was developed as a cooperative project between the Department of Land, Air and Water Resources, University of California, Davis and the Office of Water Use Efficiency, California Department of Water Resources; Baryohay Davidoff.

The map was prepared by David W. Jones, 1999. The data was developed by Richard L. Snyder, Simon Eching, and Helena Gomez-MacPherson. The background data came from Teale and USGS sources.

CALIFORNIA IRRIGATION MANAGEMENT INFORMATION SYSTEM (CIMIS)
REFERENCE EVAPOTRANSPIRATION ZONES



DEPARTMENT OF
 WATER RESOURCES



UNIVERSITY OF
 CALIFORNIA, DAVIS

STATE OF CALIFORNIA
 ARNOLD SCHWARZENEGGER, GOVERNOR

DEPARTMENT OF WATER RESOURCES
 LESTER A. SNOW, DIRECTOR

Lambert Conformal Conic Projection
 1927 North American Datum

Reference EvapoTranspiration (ETo) Zones

- | | |
|---|---|
| <p>1 COASTAL PLAINS HEAVY FOG BELT lowest ETo in California, characterized by dense fog</p> <p>2 COASTAL MIXED FOG AREA less fog and higher ETo than zone 1</p> <p>3 COASTAL VALLEYS & PLAINS & NORTH COAST MOUNTAINS more sunlight than zone 2</p> <p>4 SOUTH COAST INLAND PLAINS & MOUNTAINS NORTH OF SAN FRANCISCO more sunlight and higher summer ETo than zone 3</p> <p>5 NORTHERN INLAND VALLEYS valleys north of San Franciaco</p> <p>6 UPLAND CENTRAL COAST & LOS ANGELES BASIN higher elevation coastal areas</p> <p>7 NORTHEASTERN PLAINS</p> <p>8 INLAND SAN FRANCISCO BAY AREA inland area near San Francisco with some marine influence</p> <p>9 SOUTH COAST MARINE TO DESERT TRANSITION inland area between marine & desert climates</p> <p>10 NORTH CENTRAL PLATEAU & CENTRAL COAST RANGE cool, high elevation areas with strong summer sunlight; zone has limited climate data & the zones selection is somewhat subjective</p> | <p>11 CENTRAL SIERRA NEVADA mountain valleys east of Sacramento with some influence from delta breeze in summer</p> <p>12 EAST SIDE SACRAMENTO-SAN JOAQUIN VALLEY low winter & high summer ETo with slightly lower ETo than zone 14</p> <p>13 NORTHERN SIERRA NEVADA northern Sierra Nevada mountain valleys with less marine influence than zone 11</p> <p>14 MID-CENTRAL VALLEY, SOUTHERN SIERRA NEVADA, TEHACHAPI & HIGH DESERT MOUNTAINS high summer sunshine and wind in some locations</p> <p>15 NORTHERN & SOUTHERN SAN JOAQUIN VALLEY slightly lower winter ETo due to fog and slightly higher summer ETo than zones 12 & 14</p> <p>16 WESTSIDE SAN JOAQUIN VALLEY & MOUNTAINS EAST & WEST OF IMPERIAL VALLEY</p> <p>17 HIGH DESERT VALLEYS valleys in the high desert near Nevada and Arizona</p> <p>18 IMPERIAL VALLEY, DEATH VALLEY & PALO VERDE low desert areas with high sunlight & considerable heat advection</p> |
|---|---|

Monthly Average Reference Evapotranspiration by ETo Zone (inches/month)

Zone	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1	0.93	1.40	2.48	3.30	4.03	4.50	4.65	4.03	3.30	2.48	1.20	0.62	32.9
2	1.24	1.68	3.10	3.90	4.65	5.10	4.96	4.65	3.90	2.79	1.80	1.24	39.0
3	1.86	2.24	3.72	4.80	5.27	5.70	5.58	5.27	4.20	3.41	2.40	1.86	46.3
4	1.86	2.24	3.41	4.50	5.27	5.70	5.89	5.58	4.50	3.41	2.40	1.86	46.6
5	0.93	1.68	2.79	4.20	5.58	6.30	6.51	5.89	4.50	3.10	1.50	0.93	43.9
6	1.86	2.24	3.41	4.80	5.58	6.30	6.51	6.20	4.80	3.72	2.40	1.86	49.7
7	0.62	1.40	2.48	3.90	5.27	6.30	7.44	6.51	4.80	2.79	1.20	0.62	43.3
8	1.24	1.68	3.41	4.80	6.20	6.90	7.44	6.51	5.10	3.41	1.80	0.93	49.4
9	2.17	2.80	4.03	5.10	5.89	6.60	7.44	6.82	5.70	4.03	2.70	1.86	55.1
10	0.93	1.68	3.10	4.50	5.89	7.20	8.06	7.13	5.10	3.10	1.50	0.93	49.1
11	1.55	2.24	3.10	4.50	5.89	7.20	8.06	7.44	5.70	3.72	2.10	1.55	53.1
12	1.24	1.96	3.41	5.10	6.82	7.80	8.06	7.13	5.40	3.72	1.80	0.93	53.4
13	1.24	1.96	3.10	4.80	6.51	7.80	8.99	7.75	5.70	3.72	1.80	0.93	54.3
14	1.55	2.24	3.72	5.10	6.82	7.80	8.68	7.75	5.70	4.03	2.10	1.55	57.0
15	1.24	2.24	3.72	5.70	7.44	8.10	8.68	7.75	5.70	4.03	2.10	1.24	57.9
16	1.55	2.52	4.03	5.70	7.75	8.70	9.30	8.37	6.30	4.34	2.40	1.55	62.5
17	1.86	2.80	4.65	6.00	8.06	9.00	9.92	8.68	6.60	4.34	2.70	1.86	66.5
18	2.48	3.36	5.27	6.90	8.68	9.60	9.61	8.68	6.90	4.96	3.00	2.17	71.6

Variability between stations within single zones is as high as 0.02 inches per day for zone 1 and during winter months in zone 13. The average standard deviation of the ETo between estimation sites within a zone for all months is about 0.01 inches per day for the 200 sites used to develop the map.



STATE OF CALIFORNIA
THE NATURAL RESOURCES AGENCY
DEPARTMENT OF WATER RESOURCES

CIMIS Information
www.cimis.water.ca.gov