

# HYBRID MEETING NOTICE

## Truckee Meadows Stormwater Permit Coordinating Committee

DATE: October 26, 2023  
TIME: 9:15 a.m.  
PLACE: Reno City Hall, 6<sup>th</sup> Floor Conference Room  
1 East First Street  
Reno NV 89501 (There is parking available in Parking Garage  
above the First Floor)

### Members

James Pehrson, Chair	Theresa Jones
Alex Mayorga	Robert Wimer
Ashley Elson	Cody McDougall

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**Public Notice:** This agenda has been physically posted at Reno City Hall, Sparks City Hall, and the Washoe County Administration Complex. Further, in compliance with NRS 241.020, this agenda has been electronically posted to the official website for the City of Reno at <https://www.reno.gov>, the City of Sparks at <https://cityofsparks.us>, and a link to this agenda has been posted to the State of Nevada website at <https://notice.nv.gov>. To obtain further documentation regarding posting, please contact Leslie Griffin at Reno City Hall, 1 East First Street, 7<sup>th</sup> Floor, Reno, NV 89501, or at [griffinl@reno.gov](mailto:griffinl@reno.gov). Members of the Committee may participate in this meeting using the zoom video conference platform.

**Members of the public may participate in the meeting by registering through the below zoom link which will provide the meeting ID number and call-in phone number.**

**Virtual link:** <https://us06web.zoom.us/meeting/register/tZlqd-qpjkkqEtdok3vfLtrWvAlMX76mQbc>

**In Person:** 1 East First Street, 6th Floor Conference Room, Reno, NV 89501

### **Supporting Material:**

Staff reports and supporting material for the meeting are available by contacting Leslie Griffin at (775) 657-4595 or [griffinl@reno.gov](mailto:griffinl@reno.gov) and on the City's website at [reno.gov](http://reno.gov). Pursuant to NRS 241.020(9), supporting material is made available to the general public at the same time it is provided to the public body.

### **Order of Business:**

The presiding officer shall determine the order of the agenda and all questions of parliamentary procedure at the meeting. Items on the agenda may be taken out of order. The public body may combine two or more agenda items for consideration; remove an item from the agenda; or delay discussion relating to an item on the agenda at any time. See, NRS 241.020(2)(c)(6). Items scheduled to be heard at a specific time will be heard no earlier than the stated time, but may be heard later.

### **Accommodations:**

Reasonable efforts will be made to assist and accommodate individuals with disabilities attending the meeting. Please contact Leslie Griffin at (775) 657-4595 at least 48 hours in advance so that arrangements can be made.

### **Public Comment:**

#### **In-Person**

Public comment, whether on items listed on the agenda or general public comment, is limited to three (3) minutes per person. Unused time may not be reserved by the speaker, nor allocated to another speaker. No action may be taken on a matter raised under general public comment until the matter is included on an agenda as an item on which action may be taken.

#### **Virtual**

No action may be taken on a matter raised under general public comment until the matter is included on a subsequent agenda as an action item.

Pursuant to NRS 241.023, those wishing to submit public comment may do so by sending an email to Theresa Jones at [jonest@reno.gov](mailto:jonest@reno.gov) or by leaving a voicemail at (775) 657-4595 or at the meeting during virtual public comment. Public comment is limited to three (3) minutes per person. Comments received prior to 4:00 p.m. on the day preceding the meeting will be transcribed, provided to the Committee for review, and entered into the record. Comments received after 4:00 pm on the day preceding the meeting will be provided to the Committee for review prior to adjournment, and entered into the record.

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**A. Introductory Items**

**A.1 Call To Order/Roll Call**

**A.2 Public Comment** – This item is for either public comment on any action item or for any general public comment and is limited to no more than three (3) minutes for each commentator.

**A.3 Approval Of The Agenda (For Possible Action)** – October 26, 2023

**A.4 Approval Of The Minutes (For Possible Action)** – September 28, 2023

**B. Business Items**

**B.1** Review and possible approval for payment of below invoices. The City will pay the invoices and seek 75% reimbursement from the Water Management Fund from the Western Regional Water Commission and 25% reimbursement from the Nevada Department of Transportation per the Interlocal Agreements. (For Possible Action)

- (i) Balance invoice # 213136-0923, dated August 31, 2023, in the amount of \$2,914.27, related to Stormwater Monitoring for FY23/24.

**B.2** Update on the FY23/24 Watershed Assessments including NCE's scope of work and WRWC/NDOT funding. (Not for Action)

**B.3** Educational presentation - CASQA Conference Training Recap, by City of Reno's David Lake and Daniel Moss, highlighting unique and relevant Stormwater-related projects from the conference. (Not for Action)

**B.4** Review of amended 1<sup>st</sup> quarter SWPCC budget. (Not for Action)

**C. Standing Agenda Items (Not For Action)**

**C.1** Stormwater Management Program activities including but not limited to Construction, Industrial, Monitoring, Public Outreach, Maintenance, IDDE, and Post Construction elements in support of the Truckee Meadows Storm Water Program.

- (i) TRIG (Truckee River Info Gateway) Updates
- (ii) Status update for TMSWMP Annual Report to NDEP

**C.2** Updates on grants and funding opportunities and projects, public presentations, volunteer opportunities and events, trainings, workshops, and conferences.

**D.** Discussion and possible direction on setting the next regular meeting for November 16, 2023 at 9:15 a.m. (For Possible Action).

**E. Public Comment** - This is for general public comment limited to items that do not appear on the agenda and is limited to no more than three (3) minutes for each commentator.

**F. Adjournment** (For Possible Action)

**MEETING MINUTES**  
**TRUCKEE MEADOWS STORMWATER PERMIT**  
**COORDINATING COMMITTEE**

**Thursday, September 28, 2023**

The regular meeting of the Truckee Meadows Stormwater Permit Coordinating Committee (SWPCC) was held virtually and in person in the City Hall 6<sup>th</sup> Floor Conference Room at 1 East First Street, Reno, Nevada, and conducted the following business:

**A. Introductory Items**

**A.1 Call to Order/Roll Call**

The meeting was called to order by Chair Pehrson at 9:17 a.m. and a quorum was present.

*Members Present:* James Pehrson, Chair; Theresa Jones, SWPCC Coordinator; Ashley Elson (online); Alex Mayorga; Cody McDougall; Robert Wimer

*Members Absent:* None

*Staff and Guests Present:* Susan Ball Rothe, Legal Counsel; Daniel Moss, City of Reno; Scott Kobs, NCE; David Lake, City of Reno; Brian Hastings, Balance Hydrologics; Kara Steeland, TMWA; Kristie Black, NDEP; Nick Brothers, City of Reno

**A.2 Public Comment**

None

**A.3 Approval of Agenda (For Possible Action) – September 28, 2023**

COORDINATOR JONES MADE A MOTION TO APPROVE THE AGENDA, SECONDED BY MEMBER MAYORGA. THE MOTION CARRIED UNANIMOUSLY WITH SIX (6) MEMBERS PRESENT.

**A.4 Approval of the Minutes (For Possible Action) - August 24, 2023**

MEMBER WIMER MADE A MOTION TO APPROVE THE MINUTES, SECONDED BY MEMBER MCDUGALL. THE MOTION CARRIED UNANIMOUSLY WITH SIX (6) MEMBERS PRESENT.

**B. Business Items**

**B.1 Review and possible approval for payment of below invoice(s). The City will pay the invoice(s) and seek 75% reimbursement from the Water Management Fund from the Western Regional Water Commission (WRWC) and 25% reimbursement from the Nevada Department of Transportation per the Interlocal Agreements. (For Possible Action)**

- (i) Balance invoice #213136-0823, dated August 31, 2023, in the amount of \$19,129.87, related to Stormwater Monitoring for FY23/24

COORDINATOR JONES MADE A MOTION TO APPROVE THE INVOICE, SECONDED BY MEMBER WIMER. THE MOTION CARRIED UNANIMOUSLY WITH SIX (6) MEMBERS PRESENT.

**B.2 Review and possible approval for payment of below invoice(s). The City will seek reimbursement from the Water Management Fund from the Western Regional Water Commission (WRWC) per the Interlocal Agreement. (For Possible Action)**

- (i) AGC Building Corp invoice #2050, dated September 7, 2023, in the amount of \$350.00 for rental of training rooms and facilities for November 1 and 2 BMP training
- (ii) Home Depot receipts dated September 14, 2023 and September 18, 2023 in the total amount of \$38.12 for purchasing materials related to storm drain stenciling

Daniel Moss explained we have not been charged in the past for the use of the AGC training room facilities because the training was offered to AGC people as well. This training was an in-house training for the Washoe County Maintenance and Operations crews so we were charged for the rental. It was also noted that there are no Washoe County training facility large enough to accommodate this training.

COORDINATOR JONES MADE A MOTION TO APPROVE, SECONDED BY MEMBER MAYORGA. THE MOTION CARRIED UNANIMOUSLY WITH SIX (6) MEMBERS PRESENT.

**B.3 Review, discussion and possible approval of the Stormwater Management Plan Effectiveness Evaluation for the FY22/23 MS4 Annual Report. (For Possible Action)**

Mr. Moss reviewed highlighted areas in the evaluation where information has been changed. SWPCC members discussed and agreed on the changes and rankings. Mr. Moss will add information under the notes section of the Construction 2.4 line item explaining the ranking change.

MEMBER MAYORGA MADE A MOTION TO APPROVE WITH THE CHANGE NOTED, SECONDED BY MEMBER WIMER. THE MOTION CARRIED UNANIMOUSLY WITH SIX (6) MEMBERS PRESENT

**B.4 Review, discussion, and possible approval of purchasing refreshments for the November 1 and 2, 2023 BMP Stormwater Training classes, in the amount not to exceed \$100.00. (For Possible Action)**

COORDINATOR JONES MADE A MOTION TO APPROVE, SECONDED BY MEMBER MAYORGA. THE MOTION CARRIED UNANIMOUSLY WITH SIX (6) MEMBERS PRESENT.

**B.5 Review 2<sup>nd</sup> Quarter FY23/24 SWPCC annual budget. (For Information Only)**

Coordinator Jones reviewed information included in the report on the 2<sup>nd</sup> Quarter FY23/24 budget. There were two places in the report where the FY is listed incorrectly and will be corrected.

**B.6 Review and Update of Water Quality Crediting Program by Nick Brothers. (For Information Only)**

Nick Brothers, City of Reno, gave a presentation on the Water Quality Crediting Program. The program development was on hold due to high staff turnover at the Nevada Division of Environmental Protection (NDEP). NDEP does have staff available now and they are ready to re-

engage with the project. He is in the process of extending the reimbursement funding for this project from the Western Regional Water Commission (WRWC).

**B.7 Educational presentation by TMWA (Kara Steeland, Sr. Hydrologist & Watershed Coordinator) on Integrated Source Water Protection Program Implementation. (For Information Only)**

Kara Steeland, Truckee Meadows Water Authority (TMWA), gave a presentation on the Source Water Protection Program.

**C. Standing Agenda Items (Not For Action)**

**C.1 Stormwater Management Program activities including but not limited to Construction, Industrial, Monitoring, Public Outreach, Maintenance, IDDE, and Post Construction elements in support of the Truckee Meadows Stormwater Program.**

(i) Annual Report Updates

Mr. Moss reported he is still working on this and has a lot of good data so far. He thanked those that have provided information for the Annual Report.

(ii) SWPCC/NDOT/KTMB Storm Drain Stenciling follow-up report

Mr. Moss reported they stenciled about 220 storm drains in the neighborhood to the east of the University. He thanked Keep Truckee Meadows Beautiful (KTMB) for helping to advertise the activity. There were 22 volunteers that showed up to help. NDOT was there and gave a ten-minute presentation on stormwater education.

(iii) CASQA 2023

A report on the presentations attended will be provided at the next SWPCC meeting.

(iv) Fall 2023 BMP Training Workshop for Washoe County Maintenance and Operations employees

Mr. Moss reported the BMP Training Workshop will be given in early November. The workshop will include construction BMPs as well as salt and sand management.

(v) City of Sparks Community Day (Fall)

Member McDougall explained that this event will probably not be happening this time.

**C.2 Update on Nevada Division of Environmental Protection's (NDEP) activities regarding federal, state, and local matters.**

Kristie Black, NDEP, stated they do not have any updates to report.

**C.3 Update on Nevada Department of Transportation (NDOT) activities regarding MS4 activities.**

None

**C.4 Updates on grants and funding opportunities and projects, public presentations, volunteer opportunities and events, trainings, workshops, and conferences.**

Nothing to report other than what was covered under Agenda Item C.1.

**D. Discussion and possible direction on setting the next regular meeting for October 26, 2023 at 9:15 a.m. (For Possible Action)**

COORDINATOR JONES MADE A MOTION TO APPROVE, SECONDED BY MEMBER WIMER. THE MOTION CARRIED UNANIMOUSLY WITH SIX (6) MEMBERS PRESENT.

**E. Public Comment**

None

**F. Adjournment (For Possible Action)**

COORDINATOR JONES MADE A MOTION TO ADJOURN AT 10:25 AM, SECONDED BY MEMBER MAYORGA. THE MOTION CARRIED UNANIMOUSLY WITH SIX (6) MEMBERS PRESENT.

Respectfully submitted by,  
Christine Birmingham, Recording Secretary



### Invoice

**Theresa Jones**  
**City of Reno**  
1 East First Street  
7th Floor  
Reno, NV 89501

<u>Invoice #</u>	<u>Date</u>	<u>Amount Due</u>
213136-0923	10/19/23	<b>\$ 2,914.27</b>

**Project Manager:** Brian K. Hastings  
**Project Number:** 213136:Ph10  
**Job Description:** City of Reno Stormwater  
**Billing Through:** 09/16/23  
**Contract/PO#:**

**Terms: Due Upon Receipt**

#### SUMMARY OF CHARGES

	<b>Amount</b>
<b>01 Data Analysis and Annual Report (FY2024)</b>	\$405.75
<b>04 Streamflow gaging (5 gages)</b>	\$556.50
<b>05 Committee Meetings and Presentations</b>	\$1,471.75
<b>06 Project Management and Correspondence</b>	\$386.25
<b>Expenses</b>	\$94.02
<b>Amount Due This Invoice: <u>\$2,914.27</u></b>	

- Task 1
  - 1) Data analysis for report
- Task 4
  - 1) Troubleshooting H-19 station telemetry
  - 2) work up flow measurements
- Task 5
  - 1) prep for meeting
  - 2) prepare presentation
  - 3) attend meeting
- Task 6
  - 1) correspondence with City of Reno
  - 2) project management activities
- Expenses: miles; AT&T-Telemetry



## Invoice

**Theresa Jones**  
**City of Reno**  
 1 East First Street  
 7th Floor  
 Reno, NV 89501

<u>Invoice #</u>	<u>Date</u>	<u>Amount Due</u>
213136-0923	10/19/23	<b>\$ 2,914.27</b>

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**Job Description:** City of Reno Stormwater  
**Billing Through:** 09/16/23  
**Contract/PO#:**

**Terms: Due Upon Receipt**

<b>BREAKDOWN OF TIME CHARGES</b>	<b>Rate</b>	<b>Hours</b>	<b>Amount</b>
<b>01 Data Analysis and Annual Report (FY2024)</b>			
Senior Professional	\$201.00	0.25	\$50.25
Staff Professional	\$158.00	2.25	<u>\$355.50</u>
			<b>\$405.75</b>
<b>04 Streamflow gaging (5 gages)</b>			
Principal	\$237.00	0.50	\$118.50
Senior Professional	\$201.00	1.00	\$201.00
Staff Professional	\$158.00	1.50	<u>\$237.00</u>
			<b>\$556.50</b>
<b>05 Committee Meetings and Presentations</b>			
Senior Professional	\$201.00	5.75	\$1,155.75
Staff Professional	\$158.00	2.00	<u>\$316.00</u>
			<b>\$1,471.75</b>
<b>06 Project Management and Correspondence</b>			
Senior Professional	\$201.00	1.25	\$251.25
Senior Project Administrator	\$135.00	1.00	<u>\$135.00</u>
			<b>\$386.25</b>
<b>Total Time Charges:</b>			<b>\$2,820.25</b>

<b>BREAKDOWN OF EXPENSES</b>	<b>Quantity</b>	<b>Rate</b>	<b>Amount</b>
Field Phone	3.00	\$10.46	\$31.38
Mileage Reimbursement - Personal Vehicle	87.00	\$0.720	<u>\$62.64</u>
<b>Total Expenses:</b>			<b>\$94.02</b>

PLEASE REMIT TO THE BERKELEY ADDRESS ABOVE

Questions regarding progress of work may be directed to the Project Manager (name above). Questions regarding billing, payment and certificates of insurance should be directed to Rachel Boitano @ (510) 704-1000 x245.



Truckee Meadows Stormwater Monitoring  
 City of Reno  
 Balance Project # 213136 PH10  
 Billing Aug 20-Sept 16, 2023

**Tasks & Allocation of Budget**

Task	\$ Allocated	Previous	Invoice	Total Expended		Budget Remaining	
		Expenditures	(#213136-0923)	\$ amt	\$ amt	\$ amt	%
<b>01 Data Analysis and Annual Report (FY2023)</b>	\$47,861	\$8,700.50	<b>\$405.75</b>	\$9,106.25	19%	\$38,754.75	81%
<b>02 Stormwater Sampling (outfalls and tributaries)</b>	\$50,276	\$2,290.25	<b>\$556.50</b>	\$2,846.75	6%	\$47,429.25	94%
<b>03 Tributary Ambient Sampling (2x)</b>	\$14,090	\$158.00		\$158.00	1%	\$13,932.00	99%
<b>04 Streamflow Gaging (5 gages)</b>	\$28,504	\$6,432.50		\$6,432.50	23%	\$22,071.50	77%
<b>05 Committee Meetings and Presentations</b>	\$10,628	\$696.50	<b>\$1,471.75</b>	\$2,168.25	20%	\$8,459.75	80%
<b>06 Project Management and Correspondence</b>	\$9,076	\$603.00	<b>\$386.25</b>	\$989.25	11%	\$8,086.75	89%
<b>Total Labor</b>	\$160,435.00	\$18,880.75	\$2,820.25	\$21,701.00	14%	\$138,734.00	86%
<b>Direct Costs</b>	\$3,778.00	\$249.12	\$94.02	\$343.14	9%	\$3,434.86	91%
<b>Analytical Costs</b>	\$31,000.00			\$0.00	0%	\$31,000.00	100%
<b>Contingency</b>	\$19,521.00			\$0.00	0%	\$19,521.00	100%
		<b>\$19,129.87</b>	<b>\$2,914.27</b>	<b>\$22,044.14</b>	<b>10%</b>		
<b>Total Allocated (including contingency)</b>		<b>\$214,734.00</b>					
<b>Total Expended (including current invoice)</b>				<b>\$22,044.14</b>			
<b>Total remaining</b>						<b>\$192,689.86</b>	



Page: 2 of 13  
Issue Date: Sep 12, 2023  
Account Number: 995679142  
Foundation Account: 02637349  
Invoice: 995679142X09202023

## Service activity

### Wireless

Number	User	Page	Monthly charges		Company fees & surcharges	Government fees & taxes	Total
			Plan	Add-ons			
510.387.2921	213136 RENO	7	\$5.00	\$3.00	\$1.51	-	\$9.51

Wireless continues...



October 16, 2023

Theresa Jones, MSc, PE  
Associate Civil Engineer  
City of Reno  
1 E. First Street  
Reno, Nevada 89505

**RE: Scope of Work for 2023 Watershed Assessments**

Dear Mrs. Jones,

NCE appreciates the opportunity to provide this scope of work to conduct the 2023 Watershed Assessments. This scope focuses on reaches in Alum Creek, Somerset Creek, Galena Creek, Thomas Creek, and Whites Creek.

**Scope of Work**

**Task 1 Conduct Watershed Assessments**

NCE will conduct an assessment on the following creek reaches:

- Alum Creek
  - Lower Reach (S McCarren Blvd to Truckee River, ~3,000 Linear Feet)
  - Middle Reach (Caughlin Pkwy to S McCarren Blvd, ~9,500 Linear Feet)
- Somerset Creek
  - Middle Reach (Del Webb Pkwy to Mogul Mountain, ~7,700 Linear Feet)
- Galena Creek
  - Middle Reach (Callahan Ranch Rd to I-580, ~11,900 Linear Feet)
  - Upper Reach (Mt. Rose Hwy to Callahan Ranch Rd, ~12,900 Linear Feet)
- Thomas Creek
  - Lower Reach (Ventana Pkwy to South Virginia, ~9,800 Linear Feet)
  - Middle Reach (Timberline Dr to Ventana Pkwy, ~20,300 Linear Feet)

NCE will use the existing pre-determined reaches that were used in the 2015-2017 field assessments for the 2023 field assessments.

The drainages will be assessed using the Proper Functioning Condition according to methodology presented in the U.S. Department of the Interior Bureau of Land Management document titled *Riparian Area Management, A User Guide to Assessing Proper Functioning Condition and the Supporting Science for Lotic Areas* (BLM, 1998). In addition, representative

**Reno, NV**  
300 E. 2<sup>nd</sup> Street, Suite 1210  
Reno, NV 89501  
(775) 329-4955

photographs will be taken, and observation points will be recorded with a GPS unit. The data collected will include problem areas such as noxious weeds and drainage erosion and/or deposition locations. The noxious weeds will be identified, the coverage will be estimated, and the extent will be mapped.

### **Task 2 Watershed Assessments Report**

Using the data collected in **Task 1**, NCE will prepare a 2023 watershed assessment report. The report will include a description of the drainage and the reach surveyed using the existing descriptions from the 2017 watershed assessment report. The report will also include a summary of the field data collected, specific problem areas identified in the field, recommendations, photographs, and a set of maps. The maps will include an overview map, and a map of the surveyed reach with the observation points, the location of noxious weed colonies, and the GPS points of erosion and/or degradation.

A GIS geodatabase will be created and provided to the City of Reno. The GIS database will include photo points, field observation points, points of erosion and/or deposition, extents of invasive/noxious weeds, and the PFC ratings.

The draft 2023 watershed assessment report will be provided to the City of Reno for review and comment. The City of Reno will solicit comments from the City of Sparks, and Washoe County, and provide a summary of comments to NCE.

### **Task 3 Conduct Additional Watershed Assessments and Reporting**

NCE will conduct an assessment on the following additional creek reaches:

- Whites Creek
  - Upper Reach (Mountain Ranch Road to Whites Creek Park, ~8,400 Linear Feet)
  - Middle Reach - North (White Creek Park to S Virginia St, ~12,800 Linear Feet)

NCE will use the approach and assumptions outlined in **Task 1** to complete the additional assessment of the creek reaches listed above. Data collected from the additional creek reaches will be incorporated into **Task 2** Watershed Assessments Report. **Task 3** will be conducted in addition to **Task 1** and **2**. Task 3 will be paid for through a different funding source than Tasks 1 and 2; Task 3 funding source is SWPCC/NDOT.

**Deliverables:**

- Draft and Final 2023 Watershed Assessment Report (electronic copy: Word and PDF; GIS data with Final submittal)

**Assumptions:**

- Field work will be completed by two NCE scientists within five 10-hour days for all of the reaches
- If required, access to private property will be secured by the City

**ESTIMATED FEE**

NCE proposes the above-described scope of work on a time and materials basis in accordance with our attached Schedule of Charges 2023. NCE proposes to perform the scope of work for Tasks 1 and 2, as described above not to exceed the amount of **\$65,000**. Task 3 will be completed in addition Task 1 and 2 as described above not to exceed the amount of **\$13,500**. Completion of all tasks (1 – 3) will not exceed the amount of **\$78,500**.

We appreciate the opportunity to provide these services to the City of Reno and look forward to working with you and your team on this project. If you have any questions or additional needs, please call our office at (775) 329-4955.

Sincerely,

**NCE**



Kevin Senn  
Principal



Debra Lemke, PWS, CPESC  
Associate Scientist

Attachments: Schedule of Charges 2023



## SCHEDULE OF CHARGES 2023

### PROFESSIONAL SERVICES

Principal .....	\$310/hour
Associate.....	\$245/hour
Senior II.....	\$215/hour
Senior I.....	\$205/hour
Project II.....	\$195/hour
Project I.....	\$180/hour
Staff II.....	\$170/hour
Staff I.....	\$155/hour

### TECHNICAL SERVICES

Senior Construction Manager*.....	\$160/(\$185-PW)/hour
Construction Inspector* .....	\$140/(\$165-PW)/hour
Senior Designer.....	\$170/hour
CADD Designer .....	\$150/hour
CADD/GIS Technician.....	\$130/hour
Senior Field Scientist.....	\$135/hour
Field Scientist .....	\$115/hour
Senior Technician* .....	\$140/(\$165-PW)/hour
Field/Engineering Technician* .....	\$115/(\$140-PW)hour
Project Administrator .....	\$130/hour
Technical Editor.....	\$115/hour
Clerical.....	\$105/hour

### CONTRACT LABOR

From time to time, NCE retains outside professional and technical labor on a temporary basis to meet peak workload demands. Such contract labor will be charged at regular Schedule charges.

### LITIGATION SUPPORT

Engineer/Scientist .....	\$380/hour
Court Appearances & Depositions .....	\$575/hour

### EQUIPMENT

Plotter Usage .....	(separate fee schedule)
Truck .....	\$115/day
Automobile .....	IRS Standard Mileage Rate+15%
Falling Weight Deflectometer Testing .....	\$4,000/Day
Coring.....	\$5,000/Day
Environmental Equipment.....	(separate fee schedule)

### OUTSIDE SERVICES

Rental of equipment not ordinarily furnished by NCE and all other costs such as special printing, photographic work, travel by common carrier, subsistence, subcontractors, etc..... cost + 15%

### COMMUNICATION/ REPRODUCTION

In-house costs for postage, printing and copying .....	.....project labor charges x 5%
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\*A surcharge of \$25/hour applied for technicians and construction inspectors to comply with Prevailing Wage (PW) per requirements of California Department of Industrial Relations.

# CASQA Conference 2023

San Diego, CA

Rain Ready California  
Protecting and Collecting Water for Our Future



Presented by:  
David Lake, PE  
Daniel Moss, PE

CASQA 2023 Annual Conference  
Rain Ready California  
Protecting and Collecting Water for Our Future

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“Now, more than ever, the work in the stormwater management field is critical to achieving a more resilient future.”

---

“Collectively, our actions can lead to a *Rain Ready California*.”

---

“CASQA is at work for our members, each and every day.”

←  
– Karen Cowan and Dalia Fadl

# Agenda



- Conference Experience
- Seminar Tracks
- Highlights in Courses:
  - BMP effectiveness
  - Modeling Forecasting
  - Applications of GIS software
  - Outreach
- Vendors
- Conclusion



# Tracks

Track	Topic	Monday	Tuesday	Wednesday
1	Anniversary (CASQA, Clean Water Act and Amendments)	x		
2	BMP Effectiveness	x	x	
3	Construction General Permit		x	x
4	Funding		x	
5	Industrial General Permit	x	x	
6	Modeling and Data Tools	x	x	
7	Monitoring and Special Studies		x	
8	Municipal Programs		x	x
9	Outreach, Engagement, and Education	x		x
10	Pollutants of Concern	x		
11	Resiliency and Sustainability	x		
12	Stormwater Capture, Use, and Green Infrastructure		x	x
	<b>Total Tracks =</b>	<b>7</b>	<b>8</b>	<b>4</b>

# Conference Experience- The Venue



# Conference Experience

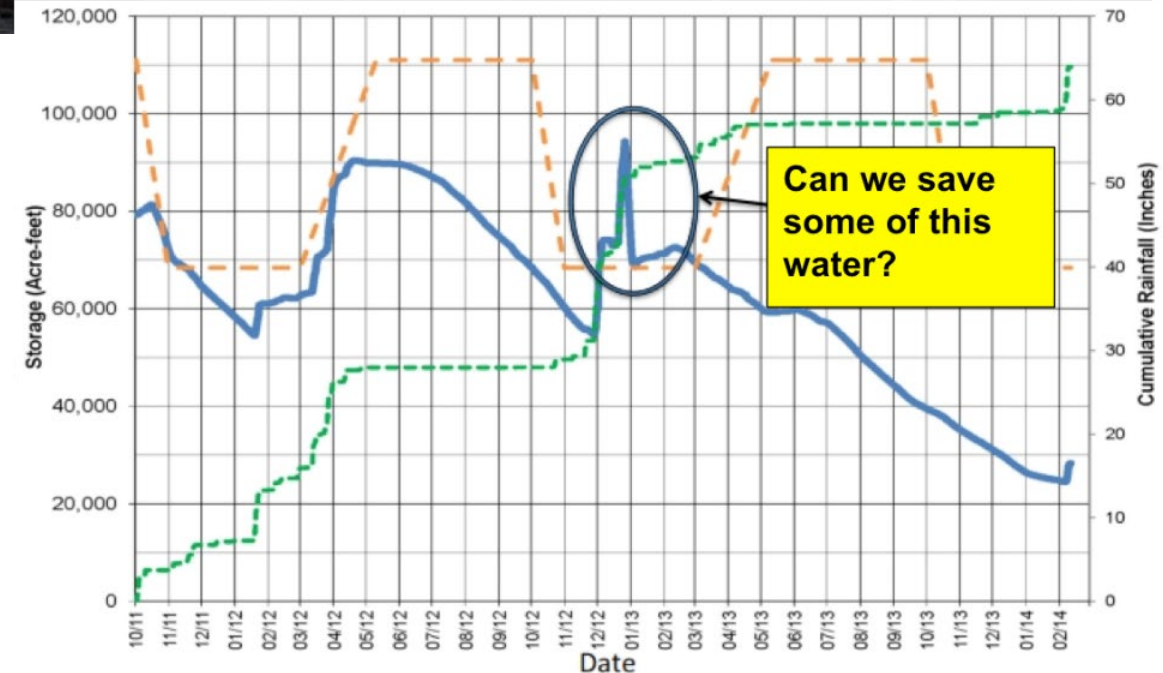
- Great Food
  - Unique outdoor meetings and meals
- Networking
  - Lawn games, buffet Mexican catered food



# Extreme Weather & Reservoirs

## Key takeaways

- ▶ **Dec/Jan W.Y. 2023** - Very strong grouping of strong storms; Trending in future.
- ▶ **FIRO** - Forecast Informed Reservoir Operations
- ▶ A.R. naming conventional created, matches hurricanes categories
  - ▶ weak ~ AR1, AR2...
  - ▶ AR5 ~ very strong

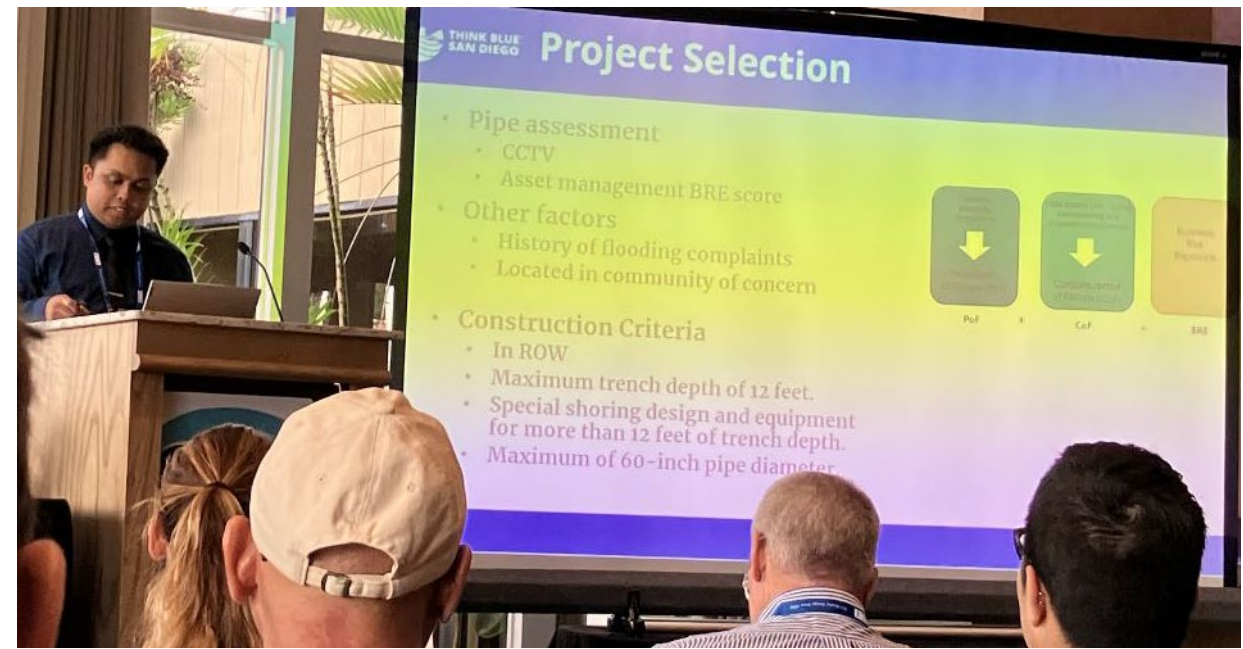


Source: <https://cw3e.ucsd.edu/firo/>

# City of San Diego: Storm Drain replacement more Cost Effective

## Key takeaways

- ▶ **Cost Comparison:** Contractor or In-House?
- ▶ CMP failures/repairs vs. preventative replacement
- ▶ **Conclusions:**
  - ▶ CIP cost is 140% to 190% more than in-house costs
  - ▶ CIP project duration 4.5 years slower than in-house timeframe

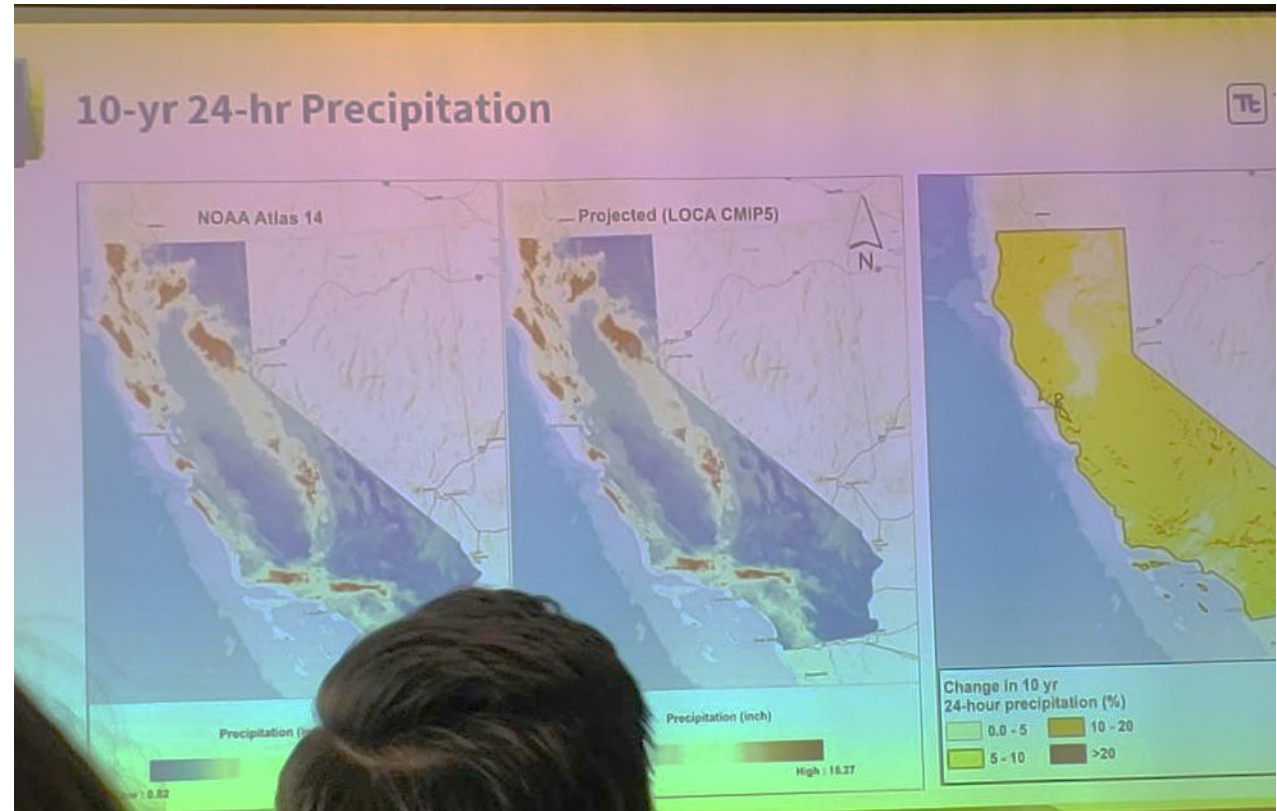
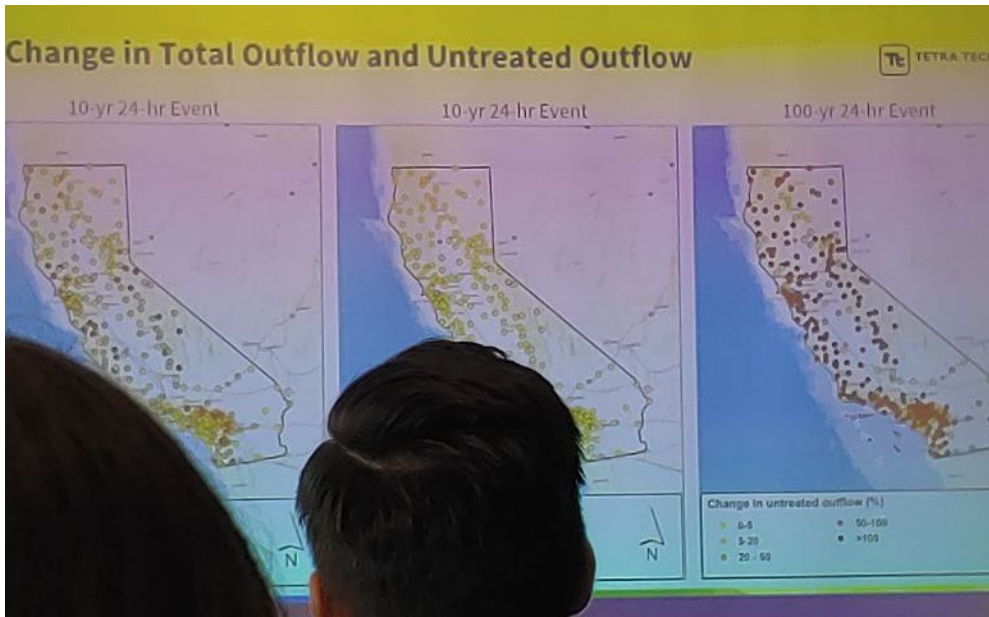


Source: [https://www.researchgate.net/figure/Typical-invert-corrosion-of-corrugated-metal-culvert-Eastern-Ontario\\_fig10\\_268259398](https://www.researchgate.net/figure/Typical-invert-corrosion-of-corrugated-metal-culvert-Eastern-Ontario_fig10_268259398)

# Climate Change & BMP Design

## Key takeaways

- Storms becoming more intense
- Bioretention/detention basins may need to be upsized



# Envision Sustainability Rating System Framework

(for rating Infrastructure projects)



## Key takeaways

- Created in 2012, updated frequently
- Similar to LEED for building certification
- USA not graded high (C-)
- 64 Credits earned in 5+ categories
- <https://sustainableinfrastructure.org/envision/use-envision/>

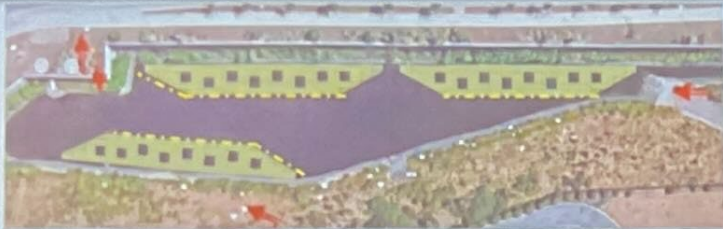


# Floating Wetlands (FW)

## Key takeaways

Features	Specifics
Cost approximately	\$50/sqft.
maximum allowable effective coverage of water body	38%.
Add-ons incorporate for enhanced functionality	solar panels and pumps

- FWs enable effective treatment without the need for land acquisition.
- FWs come in a variety of shapes and sizes, much like LEGOs, allowing for the creation of a more natural landscape.
- They can be intentionally designed to promote specific flow patterns.



Redmond, Washington (Herrera)



Snoqualmie, Washington (Herrera)



Ribic Island, Queensland, Australia (SPEI /Athen Stormwater)



# Schools w/ BMPs

## Key takeaways

- Explore engaging outdoor learning opportunities.
- Utilize QR codes to enhance the educational experience.
- Create comfortable and inviting play environments.
- Research indicates improved student performance in outdoor spaces featuring Best Management Practices (BMPs).



# Addressing Stormwater Challenges and Climate Policy



## Key takeaways

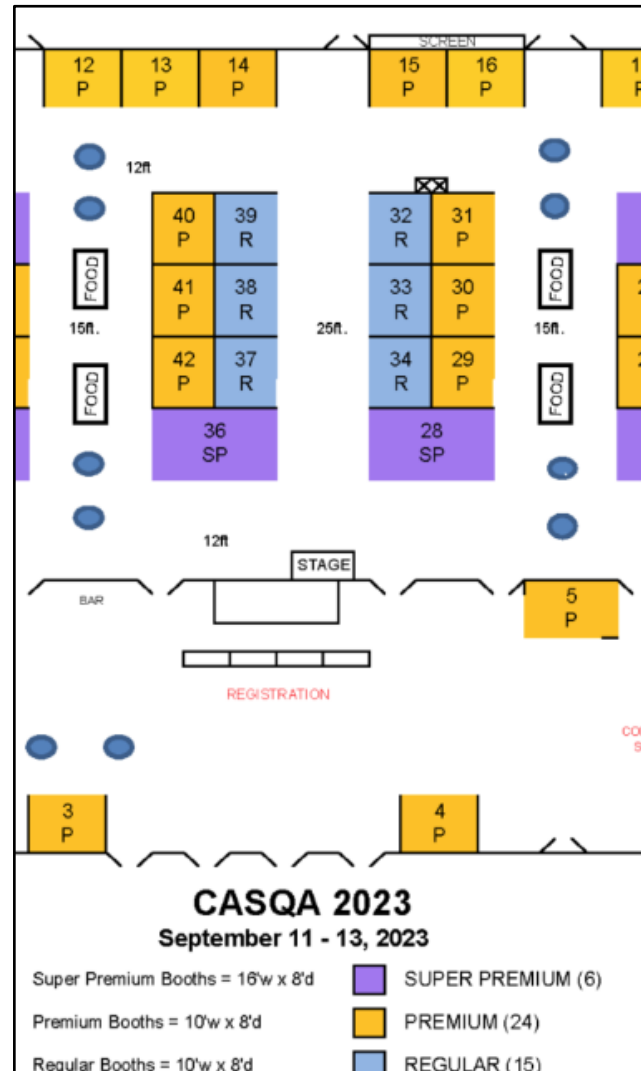
- Stormwater management might not be a crowd-pleaser, but Climate Action Plan (CAP) can be.
  - Stormwater mgt plays a crucial role in addressing CAP.
  - Treating stormwater serves as a 2<sup>nd</sup> benefit in CAP; primary focus is maximizing public advantages.
- Communities look to us for leadership.
  - It's our responsibility to pave the way for change.
  - Adaptation is key. We must take the lead in directing our CAP.

Green Infrastructure	Promoting Sustainability
more shade trees	-Prevent Erosion -Cooling off cities
landscaping	BMPs, flood control
outdoor spaces	Basins

# Vendors

## Types of products Showcased

- Flocculants
- Geotextile
- Soil Stability Additives/lining/mats
- Inlet protection inserts
- Treatment vaults
- Culvert liners
- Sediment logs (with additives)
- Monitoring equipment/ devices
- Compliance tracking and GIS software



## Super Premium

- Booth 20 - Advanced Drainage Systems, Inc.
- Booth 23 - Pre-Con Products
- Booth 28 - Jensen Water Resources
- Booth 36 - Contech Engineered Solutions
- Booth 44 - Downstream Services, Inc.
- Booth 47 - CloudCompli, Inc.

## Premium

- Booth 1 - County of San Diego
- Booth 2 - Porous Technologies, LLC
- Booth 3 - Enviropod, Inc.
- Booth 4 - Clear Creek Systems, Inc.
- Booth 5 - Stormwater Biochar, LLC
- Booth 6 - LSC Environmental Products, LLC
- Booth 11 - Oldcastle Infrastructure
- Booth 12 - Layfield USA
- Booth 13 - Triverus, LLC
- Booth 14 - ABT, Inc. - Permavoid
- Booth 15 - United Storm Water, Inc.
- Booth 16 - California Filtration Specialists, LLC
- Booth 17 - FODS, LLC
- Booth 19 - XERXES
- Booth 25 - StormTrap
- Booth 26 - Frog Creek Partners
- Booth 29 - Pacific Advanced Civil Engineering, Inc. (PACE)
- Booth 30 - 2NDNATURE Software
- Booth 31 - Applied Polymer Systems, Inc.
- Booth 40 - CULTEC
- Booth 41 - Storm Water Inspection & Maintenance Services (SWIMS)
- Booth 42 - AquaShield, Inc.
- Booth 45 - Soil Retention Products, Inc.
- Booth 46 - Ferguson Waterworks

# Vendors

SERVICES OVERVIEW ABOUT US CONTACT US PROJECTS CAREERS



- Downstream Services, Inc.



## CCTV Inspection + Pipeline Condition Assessment

Advanced camera systems and certified technicians provide crucial condition assessment data to plan maintenance and repair projects.

[More >>](#)



## Pipeline Cleaning + Maintenance

Our hydrojetting and mechanical cleaning methods effectively remove the toughest debris.

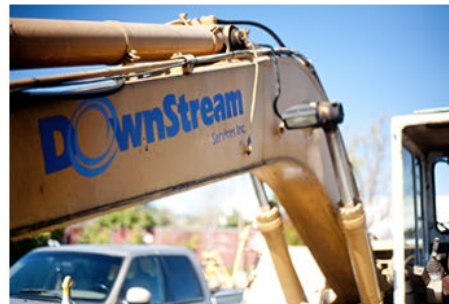
[More >>](#)



## Stormwater Compliance + Pollution Prevention

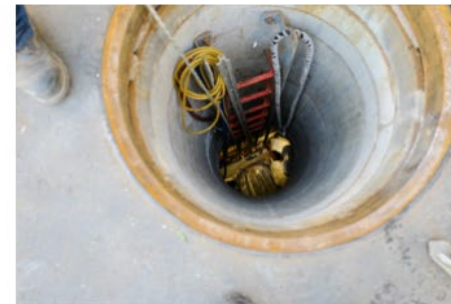
Addressing stormwater pollution prevention with compliance and maintenance programs.

[More >>](#)



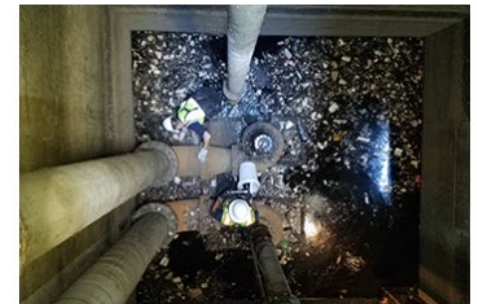
## Underground Construction

Providing installation, repair and rehabilitation of wet utilities for municipal agencies, governments and private entities.



## Trenchless Technologies + Rehabilitation

Various no-dig rehabilitation services including UV-cured fiberglass pipe liners, carbon fiber repairs, and mortar and epoxy coatings.



## Instrumentation + Pump Station Maintenance

We plan and implement preventative maintenance for stormwater and wastewater pump stations.

# Vendors

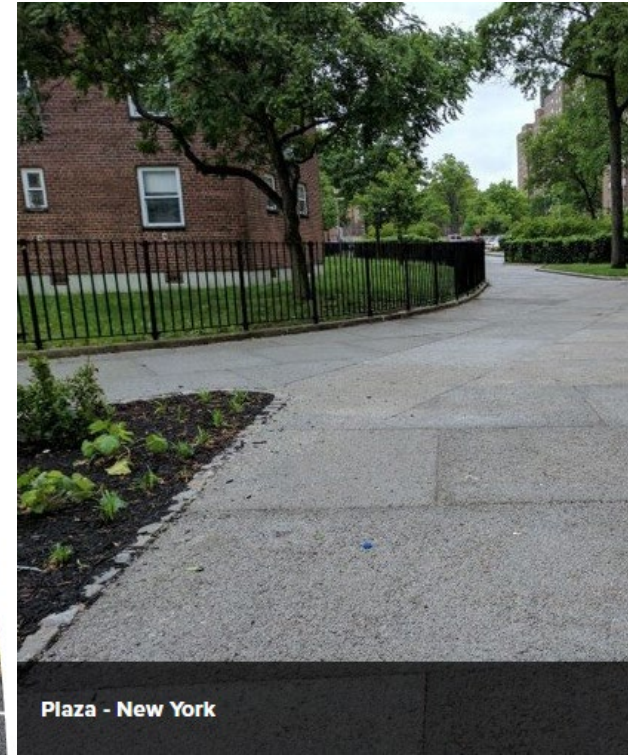
- Porous Technologies, LLC



Primary Product Lines:

## *Porous Pavement Restoration Device*

This device is the most powerful porous pavement restoration device on the market. This manufactured system has 15 high pressure nozzles that when coupled with a combination vacuum/jet truck is unstoppable at restoring porous pavement.



# Conclusion

- Fun conference!
- Vendors showcased new ideas
- Social events and networking were awesome!
- Public Works and County related presentations
- Content is cutting edge of our industry
  - Software
  - BMPs
  - Climate change research
- Future CASQA conferences:  
Sacramento, Oct 21-23, 2024  
Pasadena, Sept 15-17, 2025



# Questions



**TMSWPCC Storm Water Management Program Budget Fiscal Year 2023-2024  
1st Quarter Summary REV**

Category	Budget Items	Program Budget	WRWC Contribution	NDOT Participation	Total Billed WRWC	Total Billed NDOT	Total Budget Remaining	% Spent	% Remain	Notes
Stormwater Quality	USGS	\$ 13,780.00	\$ 10,335.00	\$ 3,445.00	\$ (2,535.00)	\$ (845.00)	\$ 10,400.00	-25%	125%	
	Field Supplies Equipment misc	\$ 3,000.00	\$ 3,000.00		\$ -	\$ -	\$ 3,000.00	0%	100%	
	Balance Hydro	\$ 214,734.00	\$ 161,050.50	\$ 53,683.50	\$ (16,533.08)	\$ (5,511.03)	\$ 192,689.89	-10%	110%	
	Misc. Stormwater Support	\$ 27,500.00	\$ 27,500.00		\$ -	\$ -	\$ 27,500.00	0%	100%	
	<b>Subtotal</b>	<b>\$ 259,014.00</b>	<b>\$ 201,885.50</b>	<b>\$ 57,128.50</b>	<b>\$ (19,068.08)</b>	<b>\$ (6,356.03)</b>	<b>\$ 233,589.89</b>	<b>-10%</b>	<b>110%</b>	
Outreach	Unallocated		\$ -		\$ -		\$ -			
	KTMB	\$ 1,750.00	\$ 1,750.00		\$ -		\$ 1,750.00	0%	100%	
	SWAG	\$ 588.00	\$ 588.00				\$ 588.00			
	TMPF	\$ 2,000.00	\$ 2,000.00		\$ -		\$ 2,000.00			
	Misc		\$ -		\$ (388.12)		\$ 388.12			
<b>Subtotal</b>	<b>\$ 4,338.00</b>	<b>\$ 4,338.00</b>	<b>\$ -</b>	<b>\$ (388.12)</b>	<b>\$ -</b>	<b>\$ 4,726.12</b>	<b>-9%</b>	<b>109%</b>		
Administration and Support	NDEP	\$ 1,276.00	\$ 1,276.00		\$ -		\$ 1,276.00	0%	100%	
	City of Reno/Staffing	\$ 55,000.00	\$ 55,000.00		\$ -		\$ 55,000.00	0%	100%	
	<b>Subtotal</b>	<b>\$ 56,276.00</b>	<b>\$ 56,276.00</b>	<b>\$ -</b>	<b>\$ -</b>		<b>\$ 56,276.00</b>	<b>0%</b>	<b>100%</b>	
<b>Total</b>	<b>Totals</b>	<b>\$ 319,628</b>	<b>\$ 262,500</b>	<b>\$ 57,129</b>	<b>\$ 19,456</b>	<b>\$ 6,356</b>	<b>\$ 294,592</b>			Total Budget/Billed WRWC/NDOT
Check		\$ 332,500	\$ 262,500	\$ 70,000	\$ (19,456)	\$ (6,356)	\$ 294,592			Totals check
	OK		OK	OK	OK	OK				Over budget check
					OK	OK				Invoice Tab Check

Percent Total Budget Spent	8%
Percent WRWC Budget Spent	7%
Percent NDOT Budget Spent	11%
Unallocated Budget WRWC	\$ 27,500.00
Total Budget Remaining	\$ 293,816.00
Total WRWC Budget Remaining	\$ 243,044.00
Total NDOT Budget Remaining	\$ 50,773.00