

City of Flint, Michigan

*Third Floor, City Hall
1101 S. Saginaw Street
Flint, Michigan 48502
www.cityofflint.com*



Meeting Agenda - Final

Wednesday, June 9, 2021

5:00 PM

ELECTRONIC PUBLIC MEETING

GOVERNMENTAL OPERATIONS COMMITTEE

*Eva L. Worthing, Chairperson, Ward 9
Maurice D. Davis, Vice Chairperson, Ward 2*

*Eric Mays, Ward 1
Kate Fields, Ward 4
Herbert J. Winfrey, Ward 6*

*Santino J. Guerra, Ward 3
Jerri Winfrey-Carter, Ward 5
Monica Galloway, Ward 7*

Allan Griggs, Ward 8

Inez M. Brown, City Clerk

Davina Donahue, Deputy City Clerk

SPECIAL PUBLIC NOTICE -- ELECTRONIC PUBLIC MEETING

PUBLIC NOTICE FLINT CITY COUNCIL ELECTRONIC PUBLIC MEETING

On Friday, October 5, 2020, the Michigan Supreme Court (MSC) issued an order declaring that the Emergency Powers of Governor (EPG) Act as an unconstitutional delegation of legislative authority, which was the primary authority relied on by Governor Whitmer for her COVID-19 related executive orders. Subsequently, Governor Whitmer requested that the MSC clarify that their order does not go into effect until October 30, 2020. On Monday October 12, 2020, the Michigan Supreme Court rejected Governor Whitmer's request to delay the effect of its decision to strike down the EPG. On, Tuesday, October 13, 2020, Senate Bill 1108 passed, amending the Open Meetings Act to allow municipalities to hold electronic meetings. On Friday, October 16, 2020, Governor Whitmer signed into law Senate Bill 1108 amending the Open Meetings Act. Subsequently, on December 22, 2020, Public Act 267 of 1976 was amended through Senate Bill 1246 extending the electronic meetings with no reason through March 31, 2021. The act also allows that after March 31, 2021, electronic meetings may be held if a local state of emergency was declared. On March 23, 2020, the Flint City Council extended Mayor Neeley's declaration of emergency indefinitely due to the COVID-19 pandemic. Therefore, this meeting will be held electronically.

Pursuant to Act 267 of the Public Acts of 1976 Open Meetings Act as amended and Flint City Charter Section 3-202, notice is hereby given that the Flint City Council hereby calls for Regular Meetings of the Flint City Council scheduled to be held as follows:

Flint City Council Committee Meetings (Finance, Governmental Operations, Legislative & Grants) Wednesday, June 9, 2021, at 5 p.m.

The public and media may listen to the meeting online by live stream at <https://www.youtube.com/channel/UCp2cWTuocUM3awU4xXWzwaw> or through Start Meeting by dialing (617) 944-8177. If unable to call in, please dial (206) 451-6011.

1. In order to speak during the PUBLIC SPEAKING PERIOD of each meeting by telephone, participants will also call (617) 944-8177 (if unable to call in, please dial (206) 451-6011):

- All callers will be queued and muted until the Public Speaking portion of each agenda;
- Public speakers will be unmuted in order and asked if they wish to address the City Council ON ANY SUBJECT;

c. Public speakers should state and spell their name for the record and will be allowed two (2) minutes for public speaking during each meeting;

d. The speaker will be returned to mute after the 2 minutes have expired;

e. After the telephonic public speakers for the last committee meeting are completed, emailed public comments will be read by the City Clerk. All emailed public comments will be timed for 2 minutes;

f. Per Rules Governing Meetings of the Council (Rule 7.1 VII), there will only be one speaking opportunity per speaker per meeting.

Consequently, public participants who call in and speak during the public speaking period of the meetings WILL NOT have written comments as submitted read by the City Clerk.

2. The public may send public comments by email to CouncilPublicComment@cityofflint.com no later than 10 minutes prior to the meeting start time of 5 p.m.

3. Persons with disabilities may participate in the meeting by the above-mentioned means or by emailing a request for an accommodation to CouncilPublicComment@cityofflint.com, with the subject line Request for Accommodation, or by contacting the City Clerk at (810) 766-7418 to request

accommodation - including but not limited to interpreters.

If there are any questions concerning this notice, please direct them to City Council office at (810) 766-7418.

ROLL CALL

MEMBER REMOTE ANNOUNCEMENT

Pursuant to the newly revised Open Meetings Act, each Council member shall state that they are attending the meeting remotely and shall state where he or she is physically located (county or city and state).

MEMBER CONTACT INFORMATION

Eric Mays - (810) 922-4860; Maurice Davis - mdavis@cityofflint.com; Santino Guerra - sguerra@cityofflint.com; Kate Fields - kfields@cityofflint.com; Jerri Winfrey-Carter - jwinfrey-carter@cityofflint.com; Herbert Winfrey - (810) 691-7463; Monica Galloway - mgalloway@cityofflint.com; Allan Griggs - agriggs@cityofflint.com; Eva Worthing - eworthing@cityofflint.com.

PROCEDURES ON CONDUCTING ELECTRONIC MEETINGS

All boards and commissions must adhere to all laws established under the Michigan Compiled Laws and in accordance with the revisions to the Open Meetings Act adopted in Senate Bill 1246, as passed on December 17, 2020, and signed into law on December 22, 2020, and subsequent amendments that may be adopted.

READING OF DISORDERLY PERSONS CITY CODE SUBSECTION

Section 31-10, Disorderly Conduct, Assault and Battery, and Disorderly Persons, and will be subject to arrest for a misdemeanor. Any person who prevents the peaceful and orderly conduct of any meeting will be given one warning. If they persist in disrupting the meeting, that individual will be subject to arrest. Violators shall be removed from meetings.

PUBLIC SPEAKING

COUNCIL RESPONSE

SPECIAL ORDERS

- 210239 Special Order/Codification of City Ordinances/Written Report
A Special Order as requested by Council President Fields to receive a written report from the City Clerk of progress made towards codification of ordinances.
- 210276 Special Order/Master Fee Schedule/Street Light Fees
A Special Order as requested by Council Vice President Davis to discuss street light fees in the Master Fee Schedule.
- 210277 Special Order/Rental Inspections/City of Flint
A Special Order as requested by Councilperson Galloway to discuss rental

inspections in the City of Flint.

RESOLUTIONS

210268 Setting a Public Hearing/Rezoning Request/448 South Saginaw Street/From D-4 Metropolitan Business District to D-5 Metropolitan Commercial Services District

Resolution resolving that authorized officials will do all things necessary to schedule and hold a Public Hearing on the _____ day of _____ 2021, [via electronic meeting], for the purposes of allowing for public comment on the rezoning request for 448 South Saginaw Street. [NOTE: Shaltz Acquisitions, LLC requests a rezoning from D-4 Metropolitan Business District to D-5 Metropolitan Commercial Services District at 448 South Saginaw Street to use the property for a Provisioning Center. Provisioning Centers, a Group E Special Regulated Use, require properties to be located in D-5, D-6, E, F or G zoning districts, which requires a public hearing.]

210270 Charitable Gaming License/State of Michigan Lottery Charitable Gaming Division/Back to the Bricks, Inc.

Resolution resolving that Back to the Bricks, Inc. is recognized as a non-profit organization operating in the city of Flint for the purpose of obtaining a charitable gaming license, as issued by the State of Michigan Lottery Charitable Gaming Division, relative to conducting charity and fundraising events, as allowed by Act 382 of the Public Acts of 1972, as amended. [NOTE: Back to the Bricks, Inc. plans to conduct a 50/50 raffle on August 17 through August 21 in downtown Flint and the US-23 Drive-In.]

210271 Approval/Include Public Servants/City of Flint Policies, Procedures & Regulations

Resolution resolving that the Flint City Council includes and incorporates by reference that all city policies, procedures and regulations shall uniformly apply to public servants, as defined in the City Charter, and, furthermore authorizes the Human Resources Director to enforce current and future city policies, procedures and regulations equally and uniformly to public servants.

210272 Approval/City of Flint/Policy/Multi-Year Contracts

Resolution resolving that the Purchasing policy regarding multi-year contracts allows for the original resolution to serve as approval for each year of the contract, assuming no changes in price or terms.

APPOINTMENTS

210157 Appointment/Water System Advisory Council/Nancy Love

Resolution resolving that Mayor Neeley hereby appoints Nancy Love (1351 Beal

(Avenue, Ann Arbor, MI 48109) to serve on the Water System Advisory Council. [NOTE: Pursuant to the State of Michigan's administrative rules, water suppliers serving a population of 50,000 or more, shall create a Water System Advisory Council. The purpose of the Council is to improve transparency in the City of Flint community by developing materials and advising the water system on public awareness and education efforts.]

210229 Appointment/Water System Advisory Council/Shawn P. McElmurry

Resolution resolving that Mayor Neeley hereby appoints Shawn P. McElmurry (2153 Engineering Building, 5050 Anthony Wayne Drive, Detroit, MI 48202) to serve on the Water System Advisory Council. [NOTE: Pursuant to the State of Michigan's administrative rules, water suppliers serving a population of 50,000 or more, shall create a Water System Advisory Council. The purpose of the Council is to improve transparency in the City of Flint community by developing materials and advising the water system on public awareness and education efforts.]

210273 Appointment/Ethics and Accountability Board/Edna N. Sabucco

Resolution resolving that the Flint City Council approves the appointment of Edna N. Sabucco (1426 Maplewood Avenue, Flint, MI 48506) to the Ethics and Accountability Board for a six-year term commencing immediately and expiring June 26, 2026, as recommended by 4th Ward Councilperson Kate Fields. [NOTE: By way of background, Mr. D'Aigle resigned in December 2020 from a six-year term he was appointed to on June 25, 2020.]

210274 Reappointment/Hurley Board of Hospital Managers/Christopher Flores

Resolution approving the reappointment of Christopher Flores (1502 Brookwood Drive, Flint, MI, 48503) to the Hurley Board of Hospital Managers for an additional five-year term, commencing immediately, and expiring April 30, 2026, as requested by Mayor Sheldon Neeley. [NOTE: By way of background, Mr. Flores' term on the Hurley Board of Hospital Managers expired April 30, 2020, although he continued to serve.]

DISCUSSION ITEMS

OUTSTANDING DISCUSSION ITEMS

210205 Discussion Item/Names of Those Driving City-Owned Vehicles

Referral by Councilperson Mays to ADMIN/FLEET, re: He would like the names of employees/appointees driving city-owned vehicles. [Referral Action Date: 4/14/2021 @ City Council Electronic Public Meeting.]

210208 Referral/Conversion to LED Lights

Referral as requested by Councilperson Fields to ADMINISTRATION: re, She

asks that the administration look into large-scale conversion to LED lights. [Referral Action Date: 4/22/2021 @ City Council Governmental Operations Committee Electronic Public Meeting.]

210210 Referral/Monthly Reports/Drinking Water Quality

Referral by Councilperson Griggs to PUBLIC HEALTH ADVISOR, re: He would like for the city's Public Health Advisor to provide monthly drinking water quality reports. [Referral Action Date: 4/22/2021 @ City Council Grants Committee Electronic Public Meeting.]

210099 Discussion Item/Community Updates/City of Flint Web Site

A discussion item as requested by Councilperson Mays to discuss what constitutes a community update on the City of Flint's Web site. [Referral Action Date: 2/22/2021 @ City Council Electronic Public Meeting.]

210100 Discussion Item/Multi-Member Bodies

A discussion item as requested by Councilperson Mays to discuss multi-member bodies. [Referral Action Date: 2/22/2021 @ City Council Electronic Public Meeting.]

210114 Discussion Item/Eighteen (18) Properties in the City of Flint Pilot Program

A Discussion Item as requested by Councilperson Mays to review the 18 properties City Council retained from the Genesee County Land Bank, including a history of the finances for Jefferson School. [Referral Action Date: 2/17/2020 @ Electronic Governmental Operations Committee Meeting.]

210116 Discussion Item/Job Requirements/Salaries

A Discussion Item as requested by Councilperson Galloway to talk about job requirements and salaries for appointees. [Referral Action Date: 2/22/2020 @ Electronic City Council Meeting.]

210118 Discussion Item/Snow Plowing Strategy

A Discussion Item as requested by Councilperson Winfrey-Carter to talk about the city's snow plowing strategy with Transportation Director John Daly. [Referral Action Date: 2/22/2020 @ Electronic City Council Meeting.]

ADJOURNMENT



RESOLUTION NO.: 210268

PRESENTED: JUN - 6 2021

ADOPTED: _____

**Resolution to Set a Public Hearing to consider a rezoning request for 448 S Saginaw St.
(PID 41-18-107-019) from D-4 Metropolitan Business District to
D-5 Metropolitan Commercial Services District.**

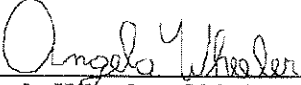
BY THE CITY ADMINISTRATOR:

The applicant, Shaltz Acquisitions LLC, requests a rezoning from D-4 to D-5 at 448 S. Saginaw Street. The applicant intends to use the property for a Provisioning Center. Provisioning Centers, a Group E Special Regulated use, require properties to be located in D-5, D-6, E, F, or G, zoning districts. This requires a public hearing.

A public hearing will be held on _____ at 5:30 pm p.m at the scheduled City Council Meeting. Pursuant to the amended Michigan Open Meetings Act and COVID 19 related Executive Orders, all City Council meetings are currently scheduled to be conducted electronically through StartMeeting by dialing (617)944-8177. This hearing is being held to provide for the opportunity for public comment on the rezoning request.


IT IS RESOLVED, that authorized officials will do all things necessary to schedule and hold a Public Hearing on _____ for the purposes of allowing for public comment on the rezoning request for 448 S. Saginaw St.

APPROVED AS TO FORM:



Angela Wheeler, Chief Legal Officer

FOR THE CITY OF FLINT:



Clyde Edwards, City Administrator

APPROVED BY CITY COUNCIL:

Kate Fields, City Council President

RESOLUTION STAFF REVIEW FORM

TODAY'S DATE: 02/08/2021

BID/PROPOSAL#: N/A

AGENDA ITEM TITLE: Resolution to Set a Public Hearing on xxx at 5:30 pm at the City of Flint Council Meeting to consider a rezoning request for 448 S Saginaw St. (PID 41-18-107-019) from D-4 Metropolitan Business District to D-5 Metropolitan Commercial Services District.

PREPARED BY: Planning and Zoning Staff
(Please type name and Department)

VENDOR NAME: N/A

BACKGROUND/SUMMARY OF PROPOSED ACTION:

The applicant, Shaltz Acquisitions LLC, requests a rezoning from D-4 to D-5 at 448 S. Saginaw Street. The applicant intends to use the property for a Provisioning Center. Provisioning Centers, a Group E Special Regulated use, require properties to be located in D-5, D-6, E, F, or G, zoning districts. This requires a public hearing.

FINANCIAL IMPLICATIONS: N/A

BUDGETED EXPENDITURE? YES NO **IF NO, PLEASE EXPLAIN:** Public Hearing Only

Dept.	Name of Account	Account Number	Grant Code	Amount
FY20/21 GRAND TOTAL				

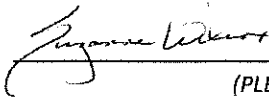
PRE-ENCUMBERED? YES NO **REQUISITION NO:** N/A

ACCOUNTING APPROVAL: N/A **Date:** _____

WILL YOUR DEPARTMENT NEED A CONTRACT? YES NO
(If yes, please indicate how many years for the contract) N/A YEARS

OTHER IMPLICATIONS (i.e., collective bargaining): Public Hearing to meet the requirements set forth as an ordinance requirement for rezoning requests.

STAFF RECOMMENDATION: (PLEASE SELECT): **APPROVED** **NOT APPROVE**

DEPARTMENT HEAD SIGNATURE:  Director, DPD
(PLEASE TYPE NAME, TITLE)



RESOLUTION NO.: _____

210270
JUN - 6 2021

PRESENTED: _____

ADOPTED: _____

RESOLUTION RECOGNIZING BACK TO THE BRICKS INC., AS A NONPROFIT ORGANIZATION OPERATING IN THE CITY OF FLINT FOR THE PURPOSE OF OBTAINING A CHARITABLE GAMING LICENSE, ISSUED BY THE MICHIGAN LOTTERY CHARITABLE GAMING ORGANIZATION.

BY THE MAYOR:

Back to the Bricks Inc., a non-profit organization, produces family focused events that educate the public about Flint, Michigan's automobile heritage and its impact upon the global automobile industry.

The City of Flint, being the local governing body with authority to grant local charitable gaming licenses that also conform to requirements set forth by the State of Michigan, and Back to the Bricks Inc., a non-profit organization, having made proper application for a Charitable Gaming License to conduct a 50/50 raffle on August 17, 2021 through August 2, 2021, in downtown Flint and the US -23 Drive in. Ticket prices are \$1.00 for 1 ticket and \$5.00 for 6 tickets. This resolution is submitted in accordance with the qualification process pursuant to the State of Michigan, Bureau of State Lottery, as allowed by Act 382 of the Public Act of 1972, as amended.

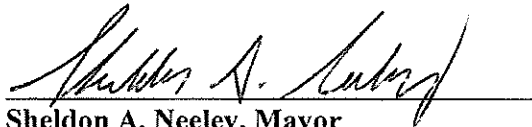
NOW THEREFORE BE IT RESOLVED, that Back to the Bricks Inc., is recognized as a non-profit organization operating in the City of Flint for the purpose of obtaining a charitable gaming license, issued by the State of Michigan Lottery Charitable Gaming Division, relative to conducting charity and fundraising events, as allowed by Act 382 of the Public Act of 1972, as amended.

APPROVED AS TO FORM:

FOR THE CITY OF FLINT:



Angela Wheeler, City Attorney



Sheldon A. Neeley, Mayor

APPROVED BY CITY COUNCIL:

Kate Fields, City Council President

Documentation Needed for Preparation of Charitable Gaming License Resolution

Full name of organization requesting Charitable Gaming Resolution

Mission Statement

Date(s) of event and type of event

Location of event: Name of event center with the complete address

Tax Exemption Letter

Price of Raffle Tickets and how many raffles will be taking place and what is the prize

Return all to Victoria Cooper, Litigation Assistant/Paralegal
City Attorney's Office
Telephone: 766-7146

S:\Bag\Charitable Gaming Licenses\Documents needed for processing reso.doc

April 29, 2021

City of Flint Attorney's Office
1101 S. Saginaw Street
Flint, MI 48501

Attention: Victoria Cooper

Dear Ms. Cooper,

Please be advised that I represent the Back to the Bricks, Inc. Enclosed please find the following documents which are being submitted pursuant to my client's request for a charitable gaming license which will allow it to conduct 50/50 raffles during certain events:

1. The full name of the organization is, "Back to the Bricks, Inc., a Michigan non-profit corporation".
2. Mission Statement: "To produce family-focused events that educate the public about Flint, Michigan's automobile heritage and its impact upon the global automobile industry."
3. Dates and types of events:
 - a. "Dust'em Off Car Show"
May 23 2021
Dort Event Center
 - b. Back to the Bricks annual car show
August 17 - 21, 2021
Downtown Flint and U.S. 23 Drive-in
4. IRS Tax Exemption letter: see included document.
5. Raffles will be the "50/50" type. Ticket cost: \$1 for 1 ticket and \$5 for 6 tickets.

GEORGE KILLEEN

Attorney at Law, 218 Athlone Beach, Bay City, MI, 48706, Telephone (810) 240-4600

Thank you for your anticipated cooperation. If you have any additional questions or need any further documentation, please advise me at your earliest opportunity.

Sincerely,



George Killeen

Attorney for Back to the Bricks

GEORGE KILLEEN

Attorney at Law, 218 Alhambra Beach, Bay City, MI, 48706, Telephone (810) 240-4600

INTERNAL REVENUE SERVICE
P. O. BOX 2508
CINCINNATI, OH 45201

DEPARTMENT OF THE TREASURY

Date:

MAR 07 2019

BACK TO THE BRICKS AUTOMOTIVE
HERITAGE FUND
4178 CALKINS RD
FLINT, MI 48532-0000

Employer Identification Number:
83-3244716
DLN:
26053437005809
Contact Person:
CUSTOMER SERVICE ID# 31954
Contact Telephone Number:
(877) 829-5500
Accounting Period Ending:
December 31
Public Charity Status:
509(a)(2)
Form 990/990-EZ/990-N Required:
Yes
Effective Date of Exemption:
September 28, 2018
Contribution Deductibility:
Yes
Addendum Applies:
No

Dear Applicant:

We're pleased to tell you we determined you're exempt from federal income tax under Internal Revenue Code (IRC) Section 501(c)(3). Donors can deduct contributions they make to you under IRC Section 170. You're also qualified to receive tax deductible bequests, devises, transfers or gifts under Section 2055, 2106, or 2522. This letter could help resolve questions on your exempt status. Please keep it for your records.

Organizations exempt under IRC Section 501(c)(3) are further classified as either public charities or private foundations. We determined you're a public charity under the IRC Section listed at the top of this letter.

If we indicated at the top of this letter that you're required to file Form 990/990-EZ/990-N, our records show you're required to file an annual information return (Form 990 or Form 990-EZ) or electronic notice (Form 990-N, the e-Postcard). If you don't file a required return or notice for three consecutive years, your exempt status will be automatically revoked.

If we indicated at the top of this letter that an addendum applies, the enclosed addendum is an integral part of this letter.

For important information about your responsibilities as a tax-exempt organization, go to www.irs.gov/charities. Enter "4221-PC" in the search bar to view Publication 4221-PC, Compliance Guide for 501(c)(3) Public Charities, which describes your recordkeeping, reporting, and disclosure requirements.

Letter 947

BACK TO THE BRICKS AUTOMOTIVE

Sincerely,

Stephen A. Martin

Director, Exempt Organizations
Rulings and Agreements

For Internal Use Only

QUALIFICATION INFORMATION

Complete this form and submit with the required qualification documents listed on the attached Qualification Requirements sheet. A Bingo, Raffle, or Charity Game Ticket license application and fee may also be submitted with this information. See box #5 below for mailing instructions.

1. ORGANIZATION INFORMATION

Organization Name Back to the Bricks, Inc.			
Organization Physical Street Address 4400 S. Saginaw St.			
City Flint	State Mi.	Zip Code 48507	County Genesee
Organization Mailing Address P.O. Box 500,			<input type="checkbox"/> Same as Physical Address
City Flint	State Mi	Zip Code 48501	County Genesee
Organization Telephone Number 810-877-8383			

2. ORGANIZATION PURPOSE

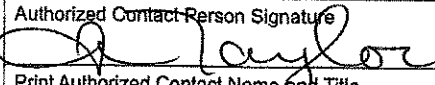
Briefly describe the purpose of your organization.

The purpose is to educate the public about the history of the automotive industry and evolution in Genesee County and to in furtherance to erect statutes and other lasting memorabilia of the original founders and inventors; to conduct automobile shows and events for the education and entertainment of the public so as to inspire the next generations of automotive leaders.

3. LICENSE APPLICATION

Enclosed is a completed application and fee for a Bingo Raffle Charity Game Ticket license
 Make checks payable to STATE OF MICHIGAN.

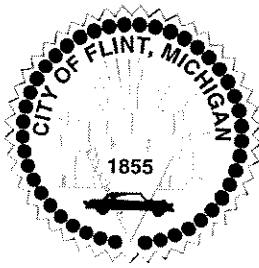
4. AUTHORIZED CONTACT PERSON

First Name Amber		Last Name Taylor		Position/Role with Organization Executive Director	
Mailing Address P.O. Box 500				City Flint	
State Mi.	Zip Code 48501	Telephone Number (Day) 810-877-8383	Telephone Number (Evening) same		
By signing below, I hereby certify that the representations, information, and data presented are true, accurate, and complete to the best of my knowledge. I understand that failure to answer truthfully, completely, and accurately could preclude the organization from receiving an approval to obtain a gaming license.					
Authorized Contact Person Signature 				Date 3/9/2021	
Print Authorized Contact Name and Title Amber Taylor, Executive Director					

5. MAILING INSTRUCTIONS

Mail this completed Qualification Information form, the required qualification documentation listed on the Qualification Requirements sheet, and the completed license application and fee (if also applying for a gaming license) to Charitable Gaming Division, PO Box 30023, Lansing, MI 48909. If submitting by overnight carrier (FedEx, UPS, etc.), send to Charitable Gaming Division, 101 East Hillsdale, Lansing, MI 48933.





RESOLUTION NO.:

210271

PRESENTED:

JUN - 6 2021

ADOPTED:

**RESOLUTION TO INCLUDE PUBLIC SERVANTS IN THE APPLICATION OF ALL
CITY OF FLINT POLICIES, PROCEDURES AND REGULATIONS**

BY THE CITY ADMINISTRATOR:

WHEREAS, The City of Flint enacts policies, procedures and regulations to protect the rights of public servants and the public; and

WHEREAS, public servants are "all persons employed or otherwise engaged by the corporation of the City of Flint to conduct business on its behalf including but not limited to elected officials, appointed employees, members of boards and commissions, classified employees, contractual employees, and volunteers." in Section 1-405 of the Flint Charter; and

WHEREAS, the City desires to make all policies, procedures and regulations applicable to public servants as defined under the City Charter; and

WHEREAS, the Human Resources Department is responsible for developing and maintaining policies and procedures for those acting on behalf of the City of Flint; and

WHEREAS, some City policies, procedures and regulations omit their applicability to public servants; and

WHEREAS, the Human Resources Department recommends that all City policies, procedures and regulations apply uniformly to public servants and that the term "public servant" shall be incorporated by reference in the enforcement of current and future City policies, procedures and regulations;

THEREFORE, BE IT RESOLVED that the Flint City Council approves and incorporates by reference that all City policies, procedures and regulations shall uniformly apply to public servants as defined in the City Charter and furthermore authorizes the Human Resources Director to enforce current and future City policies, procedures and regulations equally and uniformly to public servants.

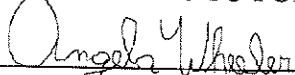
FOR THE CITY OF FLINT:


Clyde D. Edwards, City Administrator

APPROVED BY CITY COUNCIL:

Kate Fields, City Council President

APPROVED AS TO FORM:


Angela Wheeler, Chief Legal Officer



CITY OF FLINT

RESOLUTION STAFF REVIEW FORM

TODAY'S DATE: 06/01/2021

BID/PROPOSAL# NA

AGENDA ITEM TITLE: Resolution to incorporate by reference that all City of Flint policies, procedures and regulations shall apply to public servants uniformly and enforced by the Human Resources Department

PREPARED BY JoAnne Gurley
Legal Department

VENDOR NAME: NA

BACKGROUND/SUMMARY OF PROPOSED ACTION:

Resolution to incorporate by reference that approved City of Flint policies, procedures and regulations shall apply to public servants, who "are all persons employed or otherwise engaged by the corporation of the City of Flint to conduct business on its behalf including but not limited to elected officials, appointed employees, members of boards and commissions, classified employees, contractual employees, and volunteers;" as defined under Section 1-405 of Flint Charter.

While researching various City policies and procedures, the Human Resources Department discovered that many only apply to employees. However, other individuals act on the City's behalf such as members of boards and commissions, volunteers and elected officials.

By incorporating by reference that City policies, procedures and regulations are applicable to public servants, the Human Resources Department can enforce authorized rules and regulations uniformly among all who act on the City's behalf.

Therefore, it is the Human Resources Department's recommendation that the City of Flint incorporate by reference that all current and future City of Flint policies, procedures and regulations apply to public servants as defined in the Flint City Charter.

FINANCIAL IMPLICATIONS: NA

BUDGETED EXPENDITURE? YES NO **IF NO, PLEASE EXPLAIN:**



CITY OF FLINT

Dept.	Name of Account	Account Number	Grant Code	Amount
FY20/21 GRAND TOTAL				

PRE-ENCUMBERED? YES NO REQUISITION NO:

ACCOUNTING APPROVAL: _____ Date: _____

WILL YOUR DEPARTMENT NEED A CONTRACT? YES NO
(If yes, please indicate how many years for the contract) _____ YEARS

WHEN APPLICABLE, IF MORE THAN ONE (1) YEAR, PLEASE ESTIMATE TOTAL AMOUNT FOR EACH BUDGET YEAR: (This will depend on the term of the bid proposal)

- BUDGET YEAR 1 NA
- BUDGET YEAR 2 NA
- BUDGET YEAR 3 NA

OTHER IMPLICATIONS (i.e., collective bargaining): NA

STAFF RECOMMENDATION: (PLEASE SELECT): APPROVED NOT APPROVED

DEPARTMENT HEAD SIGNATURE: Angela Y. Wheeler
(PLEASE TYPE NAME, TITLE)



RESOLUTION NO.: 210272

PRESENTED: JUN - 6 2021

ADOPTED: _____

BY THE CITY ADMINISTRATOR:

RESOLUTION TO ADOPT A PURCHASING POLICY FOR MULTI-YEAR CONTRACTS

WHEREAS, the Purchasing division frequently solicits quotes, bids, or proposals for multi-year contracts. Multi-year contracts allow for continuity of services and cost savings. Contracts over the \$75,000 approval threshold require a Council Resolution, which details out the cost and price per year of the contract. Pending the adoption of the budget, each year of the contract is approved in the resolution.

IT IS RESOLVED, the Purchasing policy regarding multi-year contracts allows for the original resolution to serve as approval for each year of the contract, assuming no changes in price or terms.

APPROVED AS TO FORM:

Angela Wheeler
Angela Wheeler (Jun 1, 2021 12:25 EDT)

Angela Wheeler, Chief Legal Officer

APPROVED AS TO FINANCE:

Shelbi Frayer
Shelbi Frayer (Jun 1, 2021 13:22 EDT)

Shelbi Frayer, Chief Financial Officer

FOR THE CITY OF FLINT:

CLYDE D EDWARDS
CLYDE D EDWARDS (Jun 2, 2021 12:50 EDT)

Clyde Edwards, City Administrator

APPROVED BY CITY COUNCIL:

Kate Fields, City Council President

APPROVED AS TO PURCHASING:

Jennifer Ryan
Jennifer Ryan (Jun 1, 2021 11:49 EDT)

Jenn Ryan, Deputy Finance Director

RESOLUTION: 210273

PRESENTED: JUN = 6 2021

ADOPTED:

**RESOLUTION OF APPOINTMENT
TO THE ETHICS & ACCOUNTABILITY BOARD**

BY THE CITY COUNCIL:

Nicholas D'Aigle resigned his position on the Ethics & Accountability Board in December 2020; and

4th Ward Councilwoman Kate Fields recommends the appointment of Edna N. Sabucco (1426 Maplewood Avenue, Flint, MI 48506) to fill Mr. D'Aigle's unexpired term.

THEREFORE, BE IT RESOLVED that the Flint City Council approves the appointment of Edna N. Sabucco to serve Mr. D'Aigle's remaining six-year term on the Ethics and Accountability Board, commencing immediately, and expiring June 26, 2026.

APPROVED AS TO FORM:



Angela Wheeler, Chief Legal Officer

APPROVED BY FLINT CITY COUNCIL:

Kate Fields, City Council President

Edna N. Sabucco
1426 Maplewood Ave. Flint MI 48506-3753
(810) 908-7654
edna.sabucco@att.net

Dear Sir or Madam:

Please accept this letter and my resume as an expressed interest in a position on the Ethics and Accountability Board. For the past few years I have been serving the community by serving on the Citizens Advisory Committee for the Genesee County Land Bank, working with various entities throughout the city, i.e. Neighborhood Engagement Hub, Ruth Mott Foundation, Community Foundation of Greater Flint, many other neighborhood groups, and have served as the president as the Eastside Franklin Park neighborhood association.

I am interested in whatever is necessary to make Flint a better community for everyone and would like an opportunity to make a difference by serving on the board. Additional experience in customer service, call centers, medical billing and claims, health care delivery, and technology focused businesses, as well as raising a family, allow me the ability to appreciate and relate to all types of people. I have a strong sense of dedication and a desire to be productive in Flint as feelings of civic obligation run deep within me.

I look forward to an opportunity to discuss possible employment with your organization and hope to speak with you soon. Thank you for your time and consideration.

Sincerely,
Edna N. Sabucco

Edna N. Sabucco
1426 Maplewood Ave. Flint MI 48506-3753
(810) 908-7654
edna.sabucco@att.net

Career Objective

To obtain a position that allows growth potential, for the utilization and further development of my experience and skills.

Employment History

- 3/2011 – 5/2012 Memorial Healthcare Owosso, MI
Health Unit Coordinator/Patient Registration Clerk
- Entering physician orders, scheduling Lab, Rad, and other procedures / disciplines
 - Registration of patients for in-patient, out-patient, and emergency services
 - Updating patient demographics and verification of services to be rendered
 - Coding for services rendered, verification of insurances and coverage
 - Operation of switchboard for hospital and satellite offices
- 4/2010-8/2010 United States Census Bureau Flint, MI
Crew Leader (temporary position)
- Train enumerators for field work and assess job performance
 - Distribute, collect, and assess questionnaires for quality and correctness
 - Daily collection of payroll for assessment and processing
 - Daily and weekly meetings with enumerators assist with any problems in the field
- 3/2006 – 8/2008 Tender Loving Care/Amedisys Flint, MI
Field Services Coordinator
- Processing payroll for staff and management
 - Liaison for staff, clients, and other facilities
 - Coordination and scheduling of all staffing needs
 - Maintaining proper documentation of services
- 1/2001 – 3/2006 E.D.S./Convergys, Inc., G.M. OnStar Troy, MI
Reacquisition Advisor
- Facilitate and correct account discrepancies for subscriber retention
 - Selling OnStar services to new and original subscribers with closed accounts
 - Assist GM dealers in enrolling and activating services for new vehicle owners
 - Directly involved with training and mentoring new employees to the department
 - Participated in focus groups, with GM Engineers, to improve products

Education

- Mott Community College
- Certificate of Achievement, Health Unit Coordinator Program 2010
- Associate Degree in Arts, Honors Graduate 2010
- Health Science Major, Certificate of Achievement Dental Assisting 1993
- Associate Degree in Applied Science, Honors Graduate 1993
- BLS Certified

Edna N. Sabucco
1426 Maplewood Ave. Flint MI 48506-3753
(810) 908-7654
edna.sabucco@att.net

References

Mark Berdan, Executive Director (Ret.)
(Michigan Works, Region 7-B)
402 N. First Street
Harrison, MI 48625
Res. (989) 685-8363
Cell (989) 685-0161

Lisa Squier
Psych. Instructor, MCC
1301 Maplewood Ave.
Flint, MI 48506
Cell (810) 292-2655

Marta Whysall
1717 Ohio Avenue
Flint, MI 48506
Cell (810) 513-5323

Kate Fields
4th Ward Council Person
2501 Maryland Ave.
Flint MI 48506
(810) 766-7418 x 3164

Jaime Martin-Wenzlick, MSW
10163 Deerpath, S.
Traverse City, MI 49685
Cell (989) 284-7993

Cherie Palmer, RN, BSN
(Heartland Health Care)
309 Blanchard Avenue
Flint, MI 48503
Res. (810) 620-3241

Sandra Sprague, RN, BSN
2954 N. 45th Road
Manton, MI 49663
Cell (231) 884-6066

Ashley Everhart, Director
Neighborhood Engagement Hub
3216 ML King Ave.
Flint MI 48505
(810) 620-1299 x 2

210274

RESOLUTION NO.: _____

PRESENTED: JUN 6 2021

ADOPTED: _____

RESOLUTION RECOMMENDING THE RE-APPOINTMENT OF CHRIS FLORES TO THE HURLEY BOARD OF HOSPITAL MANAGERS

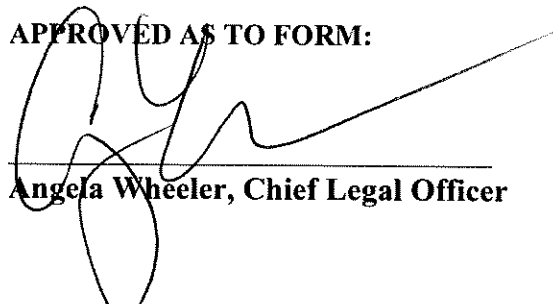
BY THE MAYOR:

WHEREAS, Chris Flores' term of office on the Hurley Board of Hospital Managers expired on April 30, 2021, although he continues to serve; and

WHEREAS, Mayor Sheldon A. Neeley recommends the re-appointment of Chris Flores to complete the five-year term on the Hurley Board of Hospital Managers, with such term that commenced on April 30, 2021, and expires April 30, 2026.

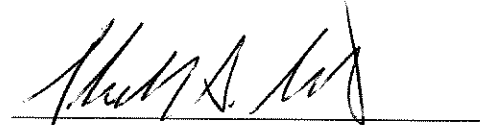
THEREFORE, BE IT RESOLVED that the Flint City Council approves the re-appointment of Chris Flores (1502 Brookwood Dr., Flint, MI 48503) to continue serving the five-year term on the Hurley Board of Hospital Managers, with such term commencing immediately and expires April 30, 2026.

APPROVED AS TO FORM:



Angela Wheeler, Chief Legal Officer

FOR THE CITY OF FLINT:



Sheldon A. Neeley, Mayor

APPROVED BY CITY COUNCIL:

Kate Fields, City Council President

CHRISTOPHER J. FLORES

He is currently District Director for U.S. Congressman Dan Kildee Michigan 5th Congressional District. Mr. Flores is the former Vice President Healthcare Integration with the Sacred Heart Rehabilitation Center (SHRC) and Team Leader for Sacred Heart Outpatient and medication assisted programming in Flint Mi. SHRC is the State of Michigan largest substance abuse woman's specialty program. Mr. Flores has been very active in the health care field. Some of his accomplishments include the founding of Community Recovery Services Model for the Michigan Prisoner Re Entry Initiative, Co-Founder Hopeful Hearts a hospital based specialized opiate dependent pregnancy program. Executive Director of Insight Recovery Centers and Odyssey House Inc. Mr. Flores' education includes a Paralegal Certificate in 1977 from the Adelphi University in New York, NY, and past certifications and training in Substance Use Disorders in 1978. Mr. Flores has extensive training in Neonatal Abstinence Syndrome (NAS) Board governance, conflict mediation, labor relations, strategic planning, community health planning, coalition building and public speaking. Mr. Flores completed the Mich. Health and Hospital Association Excellence in Governance Fellowship in 2009.

In addition to his accomplishments, Mr. Flores is quite active in community affairs as well as at the State and Federal levels. Christopher J. Flores has been a member of the Hurley Medical Center Board of Managers since 1990 and current chair of quality. Former Board member of Health Plus of Michigan where he served as chair of Health Plus Partners Medicaid Plan. Greater Flint Chamber of Commerce strategic advisory member, Flint Institute of Arts Board Member, Current Food Bank of Eastern Michigan Board Member and Hurley Representative to the MSU School of Research, Current Greater Flint Health Coalition Board Member, and current Finance Committee Chair Court Street United Methodist. He has received several awards, including; Donald Riegler Community Service Award, the Genesee County Hispanic Leadership Award in 1997 & 2010, the Clayton Stroup Foundation Award in 1989, and the Distinguished Person of the Year – Michigan Association of Alcohol and Addiction in 1989. In 2008 he was appointed by the Governor of Michigan to serve on the Michigan State Board of Psychology (2008-2011).



RESOLUTION NO.: 210229
PRESENTED: MAY 19 2021
ADOPTED: _____

RESOLUTION FOR THE APPOINTMENT OF SHAWN P. MCELMURRY TO THE WATER SYSTEM ADVISORY COUNCIL

BY THE MAYOR:

WHEREAS, pursuant to the State of Michigan's administrative rules section 325.10410(7), water supplies serving a population of 50,000 or more, and consecutive systems serving a population of 50,000 or more, shall create a water system advisory council;

WHEREAS, the council shall consist of at least five members, appointed by the community supply;

WHEREAS, the purpose of this council is to improve transparency in the City of Flint community by developing materials and advising the water system on public awareness and education efforts.


WHEREAS, to be eligible for appointment to the council, an individual shall have a demonstrated interest in or knowledge about lead in drinking water and its effects;

WHEREAS, the council will develop plans for continuing public awareness about lead in drinking water, even when the action level is not exceeded,; review public awareness campaign materials provided by the statewide drinking water advisory council to ensure the needs and interest of the community, considering the economic and cultural diversity of its residents, are addressed; advise and consult with the water supply on the development of appropriate plans for remediation and public education to be implemented if a lead action level is exceeded; advise and consult with the water supply on efforts to replace private lead service lines at locations where the owner declined service line replacement; assist in promoting transparency of all data and documents related to lead in drinking water within the water supply service area

WHEREAS, Mayor Neeley desires to appoint Shawn P. McElmurry to the Water System Advisory Council (See Attached Resume).

NOW THEREFORE BE IT RESOLVED, that Mayor Neeley hereby appoints Shawn P. McElmurry, address 2153 Engineering Building 5050 Anthony Wayne Drive, Detroit, MI 48202 to serve on the Water System Advisory Council.

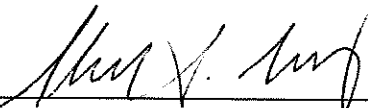
APPROVED AS TO FORM:



Angela Wheeler (May 13, 2021 13:09 EDT)

Angela Wheeler, City Attorney

FOR THE CITY OF FLINT:



Sheldon A. Neeley, Mayor

APPROVED BY CITY COUNCIL:

Kate Fields, City Council President



CITY OF FLINT

RESOLUTION STAFF REVIEW FORM

TODAY'S DATE: 05/13/2021

BID/PROPOSAL#

AGENDA ITEM TITLE: RESOLUTION APPOINT MEMBERS TO THE WATER SYSTEM ADVISORY COUNCIL

PREPARED BY: Lottie Ferguson, Chief Resilience Officer
(Please type name and Department)

VENDOR NAME: N/A

BACKGROUND/SUMMARY OF PROPOSED ACTION:

In July 2018, the State of Michigan's Department of Environment, Great Lakes and Energy (EGLE) established the Lead and Copper Rule (LCR) under the Michigan Safe Water Drinking Act 399.

The purpose of the LCR is to minimize lead and copper in drinking water and indicates that a Water System Advisory Council (WSAC) is to be established on behalf of cities with 50,000 or more people served by its municipal water system. The WSAC is responsible for assisting with public awareness to create transparency and consumer confidence through statewide efforts of public education and action steps to ensure water quality through: water sampling, water treatment and lead service line replacement. A Council shall consist of a least five members appointed by the community supply. To be eligible for appointment to Council, an individual must have a demonstrated interest in or knowledge about lead in drinking water and its effects. At least one member must be a local resident who does not formally represent the interest of any incorporated organization.

In June 2019, the City of Flint began to establish a board for the WSAC by sending letters of interest to various community partners and members. The process of establishing the board did not see completion and was then put on hold due to a change in City administration. The open public meeting was also delayed due to the COVID-19 pandemic.

In February 2021, the Office of Public Health (OPH) sent notices of participation to public health community partners and community members and requested resumes of those individuals in order to submit an approval to Flint City Council to officially establish the Water System Advisory Council. The WSAC will be hosted by the City's OPH, who will organize and oversee the annual meeting, according to the Open Meetings Act 267. This annual meeting will inform and include the public on the City's lead and copper status, progress and next steps.

The names of the individuals who are Mayoral appointed to the Water System Advisory Council are: Dr. Lawrence Reynolds, Shawn P. McElmurry, PhD, and Benjamin Pauli, PhD, Environmental The designated Appointees have either lived or worked within the Flint community during the Flint Water



CITY OF FLINT

BUDGET YEAR 1 \$0

BUDGET YEAR 2 \$0

BUDGET YEAR 3 \$0

OTHER IMPLICATIONS (*i.e., collective bargaining*):

STAFF RECOMMENDATION: (PLEASE SELECT): X APPROVED NOT APPROVED

DEPARTMENT HEAD SIGNATURE: Lottie Ferguson, Chief Resilience Officer
(PLEASE TYPE NAME, TITLE)

SHAWN P. MCELMURRY, PhD, PE

2158 Engineering Building
5050 Anthony Wayne Dr
Detroit, MI 48202

Office: (313) 577-3876
E-mail: s.mcelmurry@wayne.edu

EDUCATION

- Ph.D. Environmental Engineering, Michigan State University, 2008
Dissertation: *Characterization of Dissolved Organic Carbon: Assessment of Copper Complexation and Export of Carbon from Watersheds as a Function of Land Use*
Co-Advisors: *Thomas C. Voice and David T. Long*
- M.S. Environmental Engineering, Michigan State University, 2002
- B.S. Chemistry major, Central Michigan University, 1998

EXPERIENCE

- 2014-current *Associate Professor*, Department of Civil & Environmental Engineering, Wayne State University
- 2008-2014 *Assistant Professor*, Department of Civil & Environmental Engineering, Wayne State University

RESEARCH PROJECTS IN LAST 5 YEARS (PI listed first, otherwise co-PI unless noted)

- 2018-2022 McElmurry, S.P.; Seeger, M.; O'Donnovan, K.; Sobek, J.; Smith, R.; Kilgore, P.; Love, N.G.; Kerkez, B.; MacDonald Gibson, J.A. *CRISP 2.0 Type 2: Collaborative Research: Water and Health Infrastructure Resilience and Learning (WHIRL)*. National Science Foundation. Award #1832692 (\$1,570,000), 9/1/2018-8/31/2022
- 2020-2021 Harris, A.; Crouch, P.; McElmurry, S.P. *Urban Residential Soil Lead Remediation Strategies Project*. Erb Family Foundation, subcontract through EcoWorks, Cayuse Award #A17-0555. 1/1/2020-12/31/2021.
- 2018-2019 Dittrich, T.; Allen, M.; Boukhalfa, H.; Migdisov, A.; Mohanty, S.; McElmurry, S.P. *AOI 2 Coupled Hydrothermal Extraction and Ligand-Associated Organosilica Media Recovery of REEs from Coal Fly Ash*. U.S. Department of Energy. Award #DE-FE0031565 (\$538,849 total)
- 2017-2019 Harris, A.; Crouch, P.; McElmurry, S.P. *Urban Residential Soil Lead Remediation Strategies Project*. Erb Family Foundation, subcontract through EcoWorks, Cayuse Award #A17-0555. 6/1/2017-12/31/2019. (subcontract \$64,646)
- 2016-2017 McElmurry, S.P.; Kilgore, P.; Sobek, J.; Seeger, M.; Zervos, M.; Sullivan, L. (+17 other investigators); *Flint Area Community Health and Environment Partnership (FACHEP) – PHASE II* State of Michigan, Contract #20163753-00. 6/1/2016-12/21/2017 (\$3,350,000 total)
- 2016-2017 McElmurry, S.P. *RAPID: Chemical treatment efficiency of point-of-use filters deployed in Flint, Michigan* National Science Foundation, Award #1633013 (\$49,992 total)
- 2016-2018 McElmurry, S.P.; Miller, C.J.; Pitts, D.K.; Sackey, D.J.; Seeger, M.; Masten, S.J.; Hanna-Attisha, M. *Rapid Response to Contaminants in Flint Drinking Water*. National Institute of Health; National Institute of Environmental Health Sciences. Award # 1R21ES027199-01 (\$422,110 total)
- 2016 McElmurry, S.P.; Kilgore, P. Seeger, M.; Zervos, M.; Sullivan, L. *Flint Area Community Health and Environment Partnership (FACHEP) – PHASE I* State of Michigan (\$123,091 total)
- 2015-2018 Nassauer, J., McElmurry, S.P., Sampson, J., Webster, J., Dewar, M., Alvarez, A., Schulz, A., Burton, A., Riseng, C. *Providing support for watershed based policy and management decisions: Lake Erie and City of Detroit*. Erb Family Foundation, subcontract through The University of Michigan (\$1,116,999 total; 82,392 subcontract)
- 2015-2018 Zhang, Y., Zhou, K., Lemke, L., McElmurry, S.P. (senior personnel) *An Integrated Approach to Ensuring Food Safety and Sustainability in Urban Agriculture in the Greater Detroit Area* US Department of Agriculture, grant # 2015-70001-23424 (\$272,532 total)
- 2015-2016 Zhang, Y., Lemke, L., Zhou, K., McElmurry, S.P. *Heavy metals and the development of antibiotic resistance in urban agriculture*. Center for Urban Responses to Environmental Stressors (CURES) Pilot Project funded through National Institute of Health Grant P30 ES020957 (\$80,000 total)

- 2015 Miller, C., Zhang, Y., **McElmurry, S.**, Lemke, L., Pothukuchi, K. *A Workshop for Integrative and Sustainable Food, Energy, and Water in Transitioning Urban Landscapes*. National Science Foundation, CBET Award # 1541869 (\$28,840 total)
- 2014-2016 Caruso, J.A.; **McElmurry, S.P.**; Moldenhauer, J.; Reynolds, R.; Sackey, D.; Schroeck, N; Stemmer, P; Westrick, J.; Zhang, K; Giblin, F. *Petcoke in an urban environment: A community-based participatory model*. Center for Urban Responses to Environmental Stressors (CURES) Pilot Project funded through National Institute of Health Grant P30 ES020957 (\$150,000 total)

AWARDS, CERTIFICATES, HONORS, and LICENSURE

- 2014, 2015 *Outstanding Reviewer Award*, Journal of Environmental Engineering, American Society of Civil Engineers
- 2013 *2013 ExCEED New Faculty Excellence in Teaching Award*, American Society of Civil Engineering
- 2012 *Outstanding Faculty Service Award*, Engineering Student and Faculty Board, College of Engineering, Wayne State University
- 2012 *Favorite Professor Award*, Wayne State University
- 2010, 2011 *Assistant Mentor ASCE ExCEED Teaching Workshop*–American Society of Civil Engineering (ASCE) – U.S. Military Academy, West Point, NY
- 2010 *Michigan Professional Engineering License* (#6201057641, date issued 09/24/2010)
- 2009 *ExCEED Fellow* –American Society of Civil Engineering (ASCE)

PEER REVIEWED PUBLICATIONS FROM LAST 5 YEARS

*corresponding author, §graduate student, †undergraduate student

- [48] §Alla, L.N.R.; §Monshi, M.; §Siddiqua, Z.; §Shields, J.; §Alame, K.; §Wahls, A.; §Akemann, C.; §Meyer, D.; §Crofts, E.J.; §Saad, F.; §El-Nachef, J.; §Antoon, M.; §Nakhle, R.; §Hijazi, N.; §Hamid, M.; §Gurdziel, K.; **McElmurry, S.P.**; Kashian, D.R.; Baker, T.R.; *Pitt, D.K. (2021) *Detection of endocrine disrupting chemicals in *Danio rerio* and *Daphnia pulex*: Step-one, behavioral screen*. *Chemosphere*, 271, p.129442. DOI:10.1016/j.chemosphere.2020.129442
- [47] Salim, A.; *Kilgore, P.; Mudall, G.; **McElmurry, S.P.**; Zervos, P.K.; (2020) *Trends in Legionnaires' disease-associated hospitalizations, United States, 2006–2010*. *Open Forum Infectious Diseases*. DOI: 10.1093/ofid/ofaa296
- [46] *§O'Shay-Wallace, S.; Day, A.M.; §Islam, K.; **McElmurry, S.P.**; Seeger, M.W. (2020) *Boil Water Advisories as Risk Communication: Consistency between CDC Guidelines and Local News Media Articles*. *Health Communication*. DOI: 10.1080/10410236.2020.1827540
- [45] *Sobeck, J.; Smith-Darden, J.; Hicks, M.; Kernsmith, P.; Kilgore, P.E.; Treemore-Spears, L.; **McElmurry, S.P.** (2020) *Stress, Coping, Resilience and Trust during the Flint Water Crisis*. *Behavioral Medicine*. 46(3-4) DOI: 10.1080/08964289.2020.1729085 (PMID: 32787730)
- [43] *§Day, A.M.; §O'Shay-Wallace, S.; Seeger, M.W.; **McElmurry, S.P.** (2020) *Gender and Presence of Children: Examining Media Uses, Informational Needs, and Source Preferences during the Flint, Michigan Water Crisis*. *Journal of International Crisis & Risk Communication Research* DOI: 10.30658/jicrcr.3.2.2.
- [42] *Zahran, S.; Mushinski, D.; **McElmurry, S.P.**; Keyes, C. (2020) *Water Lead Exposure Risk in Flint, Michigan after Switchback in Water Source: Implications for Lead Service Line Replacement Policy*. *Environmental Research*. 181, 108928. DOI: 10.1016/j.envres.2019.108928 (NIHMSID: 1552950; PMID: 31787215)
- [41] *§Day, A.M.; §O'Shay-Wallace, S.; Seeger, M.W.; **McElmurry, S.P.** (2019) *Informational Sources, Social Media Use, and Race in Flint, Michigan's Water Crisis*. *Communication studies*. DOI: 10.1080/10510974.2019.1567566 (NIHMS ID: 1518397)
- [40] Zahran, S., Iverson, T., **McElmurry, S.P.**, Weiler, S., & Levitt, R. (2019). *Hidden Costs of Blight and Arson in Detroit: Evidence from a Natural Experiment in Devil's Night*. *Ecological Economics*, 157, 266-277. DOI: 10.1016/j.ecolecon.2018.11.009
- [39] Zahran, S.; **McElmurry, S.P.**; Kilgore, P.; Mushinski, D.; §Press, D.; Love, N.; Sadler, R.; *Swanson, M.S. (2018) *Assessment of the Legionnaires' Disease outbreak in Flint, Michigan*. *Proceedings of the National Academy of Sciences*, February 201718679. DOI: 10.1073/pnas.1718679115
- [38] Byrne, B.G.; McColm, S.; **McElmurry, S.P.**; Kilgore, P.E.; Sobeck, J.; Sadler, R.; Love, N.G.; *Swanson, M.S. (2018) *Prevalence of infection-competent serogroup 6 *Legionella pneumophila* within premise plumbing in Southeast Michigan*. *mBio*. 9 (1), e00016-18. DOI:10.1128/mBio.00016-18
- [37] Zahran, S.; ***McElmurry, S.P.**, Sadler, R.C. (2017) *Four Phases of the Flint Water Crisis: Evidence from Blood Lead Levels in Children*. *Environmental Research*. 157, 160–172. DOI: 10.1016/j.envres.2017.05.028 (NIHMSID: 880419)

- [36] Zahran, S., Iverson, T., **McElmurry, S.P.**, Weiler, S. (2017) *The Effect of Leaded Aviation Gasoline on Blood Lead in Children*. Journal of the Association of Environmental and Resource Economists. 4:2, 575-610 DOI: [10.1086/691686](https://doi.org/10.1086/691686)
- [35] *Masten, S.J.; Davies, S.H.; **McElmurry, S.P.** (2016) Flint Water Crisis: What happened and why? *Journal of American Water Works Association*. 108:12, 22-34. DOI: [10.5942/jawwa.2016.108.0195](https://doi.org/10.5942/jawwa.2016.108.0195) (NIHMSID: 845813)
- [34] §Pathirathna, P., §Siriwardhane, T., **McElmurry, S.P.**, Morgan, S.L., *Hashemi, P. (2016) *Fast voltammetry of metals at carbon-fiber microelectrodes: towards an online speciation sensor*. Analyst. 141, 6432 – 6437 DOI: [10.1039/C6AN01807F](https://doi.org/10.1039/C6AN01807F)
- [33] §Siriwardhane, T., †Sulkanen, A., §Pathirathna, P., §Tremonti, A., **McElmurry, S.P.**, *Hashemi, P. (2016) *Voltammetric Characterization of Cu(II) Complexation in Real Time*. Analytical Chemistry. 88 (15), 7603–7608. DOI: [10.1021/acs.analchem.6b01312](https://doi.org/10.1021/acs.analchem.6b01312)
- [32] Watson, S., Miller, C.J., Wilhelm, S.W., Steffen, M., Depew, D., Carmichael, W., Boyer, G.L., Murray, M., **McElmurry, S.P.**, Confesor, R., Richards, R.P., Charlton, C., Matisoff, G., Arhonditsis, G., Yerubandi, R. (2016) *Lake Erie: Sentinel of Impairment and SOS for action*. Harmful Algae. 253-219-4514. DOI: [10.1016/j.hal.2016.04.010](https://doi.org/10.1016/j.hal.2016.04.010) (PMID: 28073496)
- [31] Song, L. Li, L.; Yang, S.; Lan, J.; He, H.; **McElmurry, S.P.**; Zhao, Y. *Sulfamethoxazole, Tetracycline and Oxytetracycline and Related Antibiotic Resistance Genes in a Large-scale Landfill, China*. (2016) *Science of the Total Environment*, 551, 9-15. DOI: [10.1016/j.scitotenv.2016.02.007](https://doi.org/10.1016/j.scitotenv.2016.02.007)
- [30] Chambers, L.G.; Chin, Y.-P.; Filippelli, G.M.; Gardner, C.B.; Herndon, E.M.; Long, D.T.; Lyons, W.B.; Macpherson, G.L.; **McElmurry, S.P.**; McLean, C.E.; Moore, J.; Moyer, R.P.; Nezat, C.A.; Soderberg, K.; Teutsch, N.; Widom, E. (2016) *Developing the scientific framework for urban geochemistry*. Applied Geochemistry. 67,1-20 DOI: [10.1016/j.apgeochem.2016.01.005](https://doi.org/10.1016/j.apgeochem.2016.01.005)
- [29] §Faust, K.M., *Abraham, D.D., **McElmurry, S.P.** (2015) *Sustainability of Water and Wastewater Infrastructure in Shrinking Cities*. Public Works Management & Policy, 1-29. DOI: [10.1177/1087724X15606737](https://doi.org/10.1177/1087724X15606737)
- [28] *Harris, A., §Rogers, M.M., Miller, C.J., Wang, C., **McElmurry, S.P.** (2015) *Residential emissions reductions through variable timing of electricity consumption* Applied Energy. 158, 484-489 DOI: [10.1016/j.apenergy.2015.08.042](https://doi.org/10.1016/j.apenergy.2015.08.042)
- [27] Caruso, J.A., Zhang, K., Schroeck, N.J., **McElmurry, S.P.** (2015) *Petroleum Coke in the Urban Environment: A Review of Potential Health Effects*. International Journal of Environmental Research and Public Health. 12, 6218-6231; DOI: [10.3390/ijerph120606218](https://doi.org/10.3390/ijerph120606218)
- [26] §Zein, M., ***McElmurry, S.P.**, Kashian, D., Savolainen, P.T., Pitts, D. (2015) *Toxic effects of combined stressors on Daphnia pulex: Interactions between diazinon, 4-nonylphenol, and wastewater*. Environmental Toxicology and Chemistry. 34(5), 1145-1153. DOI: [10.1002/etc.2908](https://doi.org/10.1002/etc.2908)
- [25] *Wang, C., Miller, C.J., Nehrir, M.H., Sheppard, J.W., **McElmurry, S.P.** (2015) *A Load Profile Management Integrated Power Dispatch Using a Newton-Like Particle Swarm Optimization Method*. Water and Energy of Sustainable Computing. 8, 8-17. DOI: [10.1016/j.suscom.2014.10.001](https://doi.org/10.1016/j.suscom.2014.10.001)
- [24] §Alighalehbabakhani, F., §Abkenar, S.M.S., Jin, S.X., *Miller, C.J., Fracasso, P.T., **McElmurry, S.P.** (2015) *Comparative evaluation of three distinct energy optimization tools applied to real water network (Monroe)*. Sustainable Computing: Informatics and Systems. 8, 29-35. DOI: [10.1016/j.suscom.2014.11.001](https://doi.org/10.1016/j.suscom.2014.11.001)
- [23] §Abkenar, S.M.S., §Stanely, S.D., Chase, D.V., Miller, C.J., **McElmurry, S.P.** (2015) *Evaluation of genetic algorithms using discrete and continuous methods for pump optimization of water distribution systems*. Sustainable Computing: Informatics and Systems. 8, 18-23. DOI: [10.1016/j.suscom.2014.09.003](https://doi.org/10.1016/j.suscom.2014.09.003)
- [22] §Rogers, M.M., §Xu, G., *Miller, C.J., **McElmurry, S.P.**, Shi, W., §Wang, Y., Miller, S.S., Wang, C., §Xu, C.Z. (2015) *HERO: A Smart-Phone Application for Location Based Emissions Estimates*. Sustainable Computing: Informatics and Systems. 8, 3-7. DOI: [10.1016/j.suscom.2014.09.001](https://doi.org/10.1016/j.suscom.2014.09.001)

For complete list go to: <https://scholar.google.com/citations?user=vtHjmu8AAAAJ&hl=en>

OTHER ACADEMIC OUTPUT AND UNIVERSITY SERVICE (select, last 5 years)

- Love, N.G.; Jackson, R.; McElmurry, S.P. (2019) *Water stays in the pipes longer in shrinking cities – a challenge for public health*. The Conversation. 24 May 2019. <https://theconversation.com/water-stays-in-the-pipes-longer-in-shrinking-cities-a-challenge-for-public-health-116119>
- Love, N.G., Gebrie, G.S., Adejumo, H.A., McElmurry, S.P. (2019) *Drinking Water Infrastructure in Shrinking and Expanding Cities: The Impact on Water Quality and Public Health*. In G. Magil and J. Benedict (Eds) *Cascading Challenges in the Global Water Crisis*. Chapter Three (p. 23-39), Cambridge Scholars Publishing, ISBN: 978-1-5275-2447-7
- Zarb, A.R, McElmurry, S.P., Moldenhauer, J.A. (2017) *Technical to Teachable: The Flint Water Crisis and the Design of Instructions for Assembling Water Sampling Kits*. In *Design, User Experience, and Usability: Theory, Methodology, and Management*, Springer.

- Zahran, S., Laidlaw, M.A.S., McElmurry, S.P., Filippeli, G.M., Taylor, M. (2015) Linking Source and Effect: Re-suspended Soil Lead, Air Lead, and Children's Blood Lead Levels in Detroit, Michigan. In A. Hassan (Ed) *Everyday Environmental Toxins: Children's Exposure Risks* (p. 163-181). Apple Academic Press: Waretown, NJ, ISBN: 978-1-77188-101-2
- US EPA Workshop titled Michigan Water, Public Health and Healthcare Coordination Workshop, 9/16/2019, Wayne State University, Detroit, MI (Organizer and presenter)
- US EPA Webinar titled A Critical Connection: The Water and Healthcare/Public Health Sectors Webinar - Healthcare/Public Health Sector Focus, 9/26/2019 (Presenter)
- US EPA Webinar titled A Critical Connection: The Water and Healthcare/Public Health Sectors Webinar - Water Sector Focus, 9/19/2019 (Presenter)

TEACHING AND ADVISING

Undergraduate Courses

- CE4210 – Introduction to Environmental Engineering (2014, 2015)
- CE4140 – Environmental Engineering Design (2017, 2018, 2019, 2020)
- CE5220 – Environmental Chemistry (2014, 2016)
- CE5230 – Water Supply and Wastewater Engineering (2017, 2019, 2021)
- CE5995 – Special Topics: Advanced Drinking Water Treatment (2016, 2019)

Graduate Courses

- CE 6150 – Hydrologic Analysis and Design (2015, 2018, 2020)
- PSC/CE6910 – Waste Pharmaceuticals: Environmental Impact and Management (2015)
- CE7260 – Surface Water Quality Modeling (2015)
- CE7580 – Environmental Remediation (2016)
- CE7995 – Special Topics: Advanced Drinking Water Treatment (2016, 2019)

Committee Chair of 4 Ph.D. and 4 M.S. Thesis Students

Committee Member of 15 Ph.D. and 4 M.S. Thesis Students

OTHER SERVICE

Committee Assignments

- Michigan State University Department of Civil and Environmental Engineering Professional Advisory Board (2016-current)
- Graduate Program Officer, Department Civil & Environmental Engineering (2014-2016, 2020-current)
- College of Engineering P&T Committee (2016-2019)
- Wayne State University Water Safety Committee (2018-current)
- Technical Advisory Committee, Flint, MI (2015-current)
- Great Lakes Science Advisory Board's Taking Action on Lake Erie (TAcLE) work group (2012-2013). Work resulted in the following report:

Lake Erie Ecosystem Priority | Scientific Findings and Policy: Recommendations to Reduce Nutrient Loadings and Harmful Algal Bloom, Draft Summary Report, August 2013. International Joint Commission. Available at: http://www.ijc.org/files/tiny_mce/uploaded/Draft%20I.EEP-Aug29Final.pdf

Public Presentations as an Expert in Discipline

- Featured in "Flint's Deadly Water" produced by FRONTLINE, SEASON 2019: EPISODE 16; premiered September 10, 2019 on PBS. Available at <https://www.pbs.org/wgbh/frontline/film/flints-deadly-water>.
- 67TH DISTRICT COURT FOR THE COUNTY OF GENESEE. THE PEOPLE OF THE STATE OF MICHIGAN v. NICHOLAS LYON (Nov. 15, Dec. 1, 2017)
- 67TH DISTRICT COURT FOR THE COUNTY OF GENESEE. THE PEOPLE OF THE STATE OF MICHIGAN v. EDEN WELLS (Dec. 11, 12, 2017)
- Featured technical expert on *Secrets of the Earth: Mother Nature Reclaims Buildings*, a TV show that premiered on the Weather Channel on October 27, 2014
- WJBK-TV Health Works, My Fox Detroit. Interviewed regarding Pb research (~133,000 viewers), Aired June 14, 2013 <http://www.myfoxdetroit.com/video?autoStart=true&topVideoCatNo=default&clipId=8991514>
- WDET-Radio Interview discussing resuspension of Pb, Aired March 19, 2013

Proposal Review Panels

- National Institute of Environmental Health Sciences – Special Emphasis Panel
- National Institute of Environmental Health Sciences – Research to Action: Assessing and Addressing Community Exposures to Environmental Contaminants
- National Institute of Health - Social Sciences and Population Studies Study Section

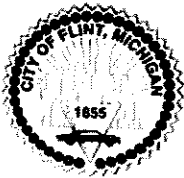
- National Science Foundation - Civil, Mechanical and Manufacturing Innovation
- National Science Foundation – Chemical, Bioengineering, Environmental, and Transport Systems
- National Science Foundation - Geography and Spatial Sciences

Editorial Board Memberships

- *Toxics* (ISSN 2305-63040; Impact Factor = 3.271)

Reviewer

- *Applied Geochemistry*
- *Aquatic Geochemistry*
- *Chemosphere*
- *Desalination Water Treatment*
- *Elementa: Science of the Anthropocene*
- *Environmental Geochemistry & Health*
- *Environmental Research*
- *Environmental Science & Technology*
- *Environmental Science & Technology Letters*
- *Environmental Science: Processes & Impacts*
- *Environmental Science: Water Research & Technology*
- *Geohealth*
- *International Journal of Distributed Sensor Networks*
- *Journal of Environmental Engineering*
- *Journal of Environmental Pollution*
- *Journal of Exposure Science and Environmental Epidemiology*
- *Journal of Health and Place*
- *Landscape Architecture*
- *Photogrammetric Engineering and Remote Sensing*
- *Proceedings of the National Academy of Sciences*
- *Science of the Total Environment*
- *Sustainable Chemistry*
- *Toxics*
- *Water Science and Technology: Water Supply*



RESOLUTION NO.: 210157
PRESENTED: APR - 7 2021
ADOPTED: _____

RESOLUTION FOR THE APPOINTMENT OF DR. NANCY LOVE TO THE WATER SYSTEM ADVISORY COUNCIL

BY THE MAYOR:

WHEREAS, pursuant to the State of Michigan's administrative rules section 325.10410(7), water supplies serving a population of 50,000 or more, and consecutive systems serving a population of 50,000 or more, shall create a water system advisory council;

WHEREAS, the council shall consist of at least five members, appointed by the community supply;

WHEREAS, the purpose of this council is to improve transparency in the City of Flint community by developing materials and advising the water system on public awareness and education efforts.

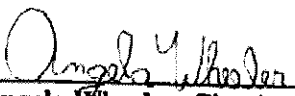
WHEREAS, to be eligible for appointment to the council, an individual shall have a demonstrated interest in or knowledge about lead in drinking water and its effects.;

WHEREAS, the council will develop plans for continuing public awareness about lead in drinking water, even when the action level is not exceeded,; review public awareness campaign materials provided by the statewide drinking water advisory council to ensure the needs and interest of the community, considering the economic and cultural diversity of its residents, are addressed; advise and consult with the water supply on the development of appropriate plans for remediation and public education to be implemented if a lead action level is exceeded; advise and consult with the water supply on efforts to replace private lead service lines at locations where the owner declined service line replacement; assist in promoting transparency of all data and documents related to lead in drinking water within the water supply service area

WHEREAS, Mayor Neeley desires to appoint Dr. Nancy Love to the Water System Advisory Council (See Attached Resume).

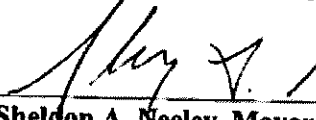
NOW THEREFORE BE IT RESOLVED, that Mayor Neeley hereby appoints Dr. Nancy Love address 1351 Beal Avenue, Ann Arbor, MI 48109 to serve on the Water System Advisory Council.

APPROVED AS TO FORM:



Angela Wheeler, City Attorney

FOR THE CITY OF FLINT:



Sheldon A. Neeley, Mayor

APPROVED BY CITY COUNCIL:

Kate Fields, City Council President

S:\AWO\Water System Advisory Council\Revised Documents\J.Gaskin (Clean Copy) Resolution to Appoint to the Water System Advisory Council (1).doc

NANCY G. LOVE, Ph.D., P.E., BCEE

Borchardt and Glysson Collegiate Professor

3BUniversity of Michigan, 4B183 EWRE, 1351 Beal Avenue, Ann Arbor, MI 48109-2125

0BVoice: (734) 763-9664; 2BE-mail: nglove@umich.edu; N-E-Wcycles.org (*under construction*)

RESEARCH OVERVIEW

In collaboration with my students, I work at the interface of water, infrastructure, and public health in both domestic and global settings. My group advances public and environmental health using chemical, biological, and computational approaches applied to water systems, and co-design methods in partnership with communities. Specific project areas include: evaluating the fate of chemicals, pathogens and contaminants of emerging concern in water with relevance to public health and the environment; using technologies to sense and remove these constituents; advancing technologies that recover useful resources from water, and developing approaches that enable local decision-making around water quality, resource efficiency, and equity.

EDUCATION

Doctor of Philosophy Environmental Systems Engineering, Clemson University Advisor: C. P. Leslie Grady Jr.	1994
Masters of Science Civil Engineering, University of Illinois at Urbana-Champaign Advisor: John T. Pfeffer	1986
Bachelors of Science Civil Engineering, University of Illinois at Urbana-Champaign	1984

PROFESSIONAL EXPERIENCE AND LICENSURE

Professor Department of Civil & Environmental Engineering, University of Michigan (U-M) Co-Founder and Co-PI, Environmental Biotechnology Lab, U-M	2008-present
U-M Faculty Affiliate Graham Sustainability Institute (http://graham.umich.edu/); Energy Institute (https://energy.umich.edu/); Poverty Solutions Institute (https://poverty.umich.edu/); African Studies Center (https://li.umich.edu/asc)	Present
Licensed Professional Engineer Environmental Engineering, State of Michigan, License No. 6201057483.	2010 - present
Adjunct Professor Institute of Biotechnology, Addis Ababa University, Ethiopia	2016 - 2019
Staff UNESCO-IHE (United Nations Water Education Institute), sabbatical	Feb – July 2014
Associate Dean for Academic Programs and Initiatives Horace H. Rackham School for Graduate Studies	2011 - 2012
Board Certified Environmental Engineer (BCEE) Certified by Eminence, American Academy of Environmental Engineers	2011-present
Department Chair Department of Civil and Environmental Engineering, University of Michigan	2008 – 2011
Professor Department of Civil and Environmental Engineering, Virginia Tech	2005 – 2007
Adjunct Professor Department of Biological Sciences, Virginia Tech	2002 – 2007

Associate Professor Department of Civil and Environmental Engineering, Virginia Tech	2000 – 2005
Assistant Professor Department of Civil and Environmental Engineering, Virginia Tech	1994 – 2000
Co-Founder and Co-Principal Investigator at Virginia Tech Environmental BioNanoTechnology Laboratory, Virginia Tech	2005 – 2007
Fralin Environmental Biotechnology Laboratory, Virginia Tech	1995 – 1999
Project Engineer CH2M Hill, Inc. (now Jacobs Engineering Group), Dallas, Texas	1986 – 1989

ADMINISTRATIVE ACCOMPLISHMENTS

- | | |
|---|----------------------|
| <ul style="list-style-type: none"> Became Diversity, Equity, and Inclusion (DEI) chair in the summer of 2020 to re- envision leadership around DEI and lead a collaborative team to develop an actionable roadmap for change. The committee was transformed to include voting members from across the department (students, staff, post-docs and faculty), all member categories were given equally visible leading positions in the committee, and structured the committee operating practices toward transparency and inclusion to serve as a model. A roadmap to drive systemic change was drafted, vetted, modified and is being finalized for publication. The roadmap includes efforts and goals across six pillars (recruiting a diverse community; building and valuing DEI skills; fostering a strong, connected, and successful community; developing a healthy and safe environment for mentoring, sponsorship, and advocacy; enabling an honest and transparent dialogue; and transforming our curriculum). In anticipation of an upcoming sabbatical and to ensure leadership continuity, I stepped down as lead once the roadmap was entering final production. This allows a new leader to be established in time for the public launch. | July 2020 - current |
| <ul style="list-style-type: none"> As a member of the board of the Association of Environmental Engineering and Science Professors (a position elected by the organization's membership), I was elected onto the Vice-President, President-Elect, and President path by the board. As president, I engaged international members by hosting the first AEESP-International Water Association (IWA) joint reception at the IWA World Congress in Quebec City, and appointed international members to key committee leadership positions. I also initiated the movement of the organization from being self-run to using a management company that continues to oversee the board's functions. This has allowed the board to act more as a visionary and less as a managing body. All these changes remain today. | 2007-2011 |
| <ul style="list-style-type: none"> As department chair of Civil and Environmental Engineering at the University of Michigan, I lead or oversaw: a significant transition in administrative staff; centralization of departmental operating management to enhance efficiencies; the development of procedures to achieve a balanced budget; the development of standard operating procedures and a governing document for the first time; the development of new strategic directions for the department; an increase in external funding of 40%; the doubling of student enrollments within a 5 year period; addition of \$8.5 million to the department's endowment; and hiring five faculty. | Jan 2008– Aug 2011 |
| <ul style="list-style-type: none"> As a co-PI of the \$3.5 million Virginia Tech NSF Advance Institutional Transformation Grant focused on women's leadership in academia, I lead activities associated with graduate student and post-doctoral engagement toward the professoriate. | July 2003– June 2008 |

MAJOR HONORS AND NOTABLE RECOGNITIONS

- American Society of Civil Engineers Wesley W. Horner Award for Daigger et al., Progress and Promise Transitioning to the One Water/Resource Recovery Integrated Urban Water Management Systems. *J Env Eng*, 2019. 2021
- American Academy of Environmental Engineers & Scientists Science Award 2020
- University of Illinois Urbana-Champaign Civil & Environmental Engineering Alumni Assoc. Distinguished Alumna Award 2020
- Kappe Lecture, American Academy of Environmental Engineers & Scientists 2019 - 2020
- AEESP/WEF Master Lecture: An Academic Perspective on Rethinking Urban Water Infrastructure Across the Classroom, Lab and Field. WEFTEC 2017, Chicago IL. October 2, 2017. 2017
- Distinguished Faculty Fellow in Sustainability, University of Michigan 2017-present
- Named Borchardt and Glysson Collegiate Professor, University of Michigan 2016
- Elected Fellow, Association of Environmental Engineering & Science Professors. 2015
- *Environmental Science and Technology Letters*, Best of the Best Paper Award for Delgado Vela et al. 2015 (see publications list). 2015
- Selected AEESP Distinguished Lecturer. 2015-2016
- Elected Fellow of the International Water Association. 2014
- Alec Gallimore Faculty Award from the Society of Minority Engineers and Scientists - Graduate (SMES-G) for being an effective advocate, ally and advisor to students of color, April 2012. 2012
- Gordon Maskew Fair Distinguished Engineering Educator, Water Environment Federation. 2011
- Elected Fellow of the Water Environment Federation. Inaugural class. 2011
- Certification by Eminence, Board Certified Environmental Engineer (BCEE). American Academy of Environmental Engineers. 2011
- President and Member of the Board, Association of Environmental Engineering and Science Professors. Position on Board of Directors is elected nationally, and position of president is then elected by the Board of Directors. 2007 - 2011
- Rudolfs Industrial Waste Management Medal for noteworthy accomplishments in industrial waste management research, Water Environment Federation. For Henriques et al. 2007. Activated sludge inhibition by chemical stressors – a comprehensive study. *Water Environment Research* 79(9):940-951. 2008
- CEE Alumni Teaching Excellence Award, Virginia Tech 2006
- Women's Center Advancing Women Award, Virginia Tech 2005
- Excellence in Research Award, College of Engineering, Virginia Tech 2005
- Faculty Fellow, \$15,000 over 3 years, College of Engineering, Virginia Tech 2003 – 2006
- Harrison Prescott Eddy Medal for outstanding contribution to wastewater principles/process research, Water Environment Federation. For Charles B. Bott and Nancy G. Love, for "Investigating a mechanistic cause for activated sludge deflocculation in response to shock loads of toxic electrophilic chemicals." *Water Environment Research*, 74:306-315 (2002). 2003
- Outstanding Young Alumni, College of Engineering & Science, Clemson Univ. 2002
- Paul L. Busch Award for Innovation in Applied Water Quality Research, Water Environment Research Foundation (\$100,000) 2001

- National Science Foundation CAREER Award Recipient 1995
- American Association of University Women Selected Professions Fellow 1993
- Chi Epsilon Civil Engineering Honor Society initiate 1985

PROFESSIONAL MEMBERSHIPS, ACTIVITIES AND APPOINTMENTS

Editorial Boards

- ACS ES&T Engineering, Associate Editor (inaugural) 2020 - present
- Water Environment Research
Editorial Board 2019 – present
Editor-in-Chief search committee 2009
Associate Editor 2002 - 2005
- Environmental Engineering Science, Editorial Board 2015 - present

Current Memberships and Activities

- American Association for the Advancement of Science
Member 2016 - present
- American Academy of Environmental Engineers and Scientist (AAEES)
Member 2011 – present
Board Certified Environmental Engineer (by eminence) 2012 – present
Environmental Engineering Science Awards Committee 2020 - present
Environmental Engineering and Science Foundation Board of Directors 2014-2016
- American Chemical Society
Member 2012 - present
- American Society of Civil Engineers (ASCE)
Member
Discontinuous
Active participant: ASCE Department Chair's meetings 1980's – present
EWRE Sustainability subcommittee 2008-2011
2007 - 2009
- American Society for Engineering Education
Member
Discontinuous
1994 - present
- Association of Environmental Engineering and Science Professors
Member and Fellow (2015) 1994 – present
Master's Thesis Awards Subcommittee (Chair, 1999) 1997 – 1999
Awards Committee (Chair, 2006-2007) 2004 – 2007
Board of Directors (Elected by membership; elected by board as Vice-President 2008-2009; President-Elect 2009-2010; President 2010-2011) 2007 – 2011
Co-Chair, AEESP 2017 Biannual Conference 2016-2017
AEESP Fellows Selection Committee 2018
- International Water Association
Member and Fellow (2014) 1989 – present
Environmental Engineering Education specialist's group, chair effective 2014 2006 - present
Microbial Ecology in Water Engineering (MEWE, formerly Activated Sludge
Population Dynamics) Specialty Group member 1995 – present
MEWE program committee 2005 - 2019
Chair, MEWE2013 conference, Ann Arbor, Michigan USA 2012 - 2013
Leading Edge Technology (LET) Program Committee 2007 – 2009
Instrumentation, Control and Automation Group 2001 – 2007
Organizing Committee, Nutrient Management 2007 Workshop 2005 – 2007

- MEGA working group member 2005 – 2008
 - Biofilms 2010 Conference Program Committee 2009 – 2010
 - **Water Environment Federation**
 - Member and Fellow (2011) 1986 – present
 - Awards Committee 2012 - present
 - Research Symposium Subcommittee 1999 – 2003
 - Virginia WEA Student Activities Committee 1997 – 2007
 - Work Force Task Force – WEF Presidential Appointment 2008 – 2009
 - Nutrient Specialty Conference Program Committee 2008 - 2009
 - Chair, Academic Committee 2009 – 2013
 - **Water Environment Research Foundation**
 - Leaders Innovation Forum for Technology (LIFT) Steering Committee 2015 – current
 - Chlorination Control and Monitoring Practices Project Advisory Committee 2000 - 2002
 - Wastewater Security Project Subcommittee 2003 – 2004
 - Sensors for Security in WWT Systems Project Advisory Committee 2005 – 2007
 - Paul L. Busch Award Selection Committee 2005 – 2011
 - Membrane Aerated Biofilm Reactor Project Advisory Committee, U2R14 2016-2018
- Current Board Appointments**
- **National Water Research Institute** Independent Science Advisory Panel for Metropolitan Water District 2019-present
 - **ReNUWit Engineering Research Center** Science Advisory Board, Stanford, UC-Berkeley, Colorado School of Mines, New Mexico State University 2015-2020
 - **University of Iowa NSF Sustainable Water Development Graduate Program** Advisory Board Member 2017-2019
- Prior Memberships, Activities and Board Appointments**
- **American Society for Microbiology**, Member 1991–2010
 - **Environmental Protection Agency**
EPA Science Advisory Board, Drinking Water Subcommittee 2010 - 2012
 - Appointed Member, Michigan Department of Agriculture/Michigan Department of Environmental Quality Food Processors Working Group 2009 - 2010
 - **Michigan Economic Development Corporation (MEDC) Water Cluster Committee**, establishing water-based technology investment goals for Michigan. 2008 – 2010
 - **National Society of Professional Engineers**
Member Discontinuous
1987 - 2019
 - **Member, NSF's CLEANER (later, WATERS Network) Initiative** as (a) planning phase participant, (b) Co-PI on environmental impacts to coastal margins planning grant and (c) Member, sensor sub-committee. 2002 – 2007
 - Appointed by Governors Warner and Kaine (Virginia) to the **Scientific and Technical Advisory Committee to the Chesapeake Executive Council** 2005 – 2007
Workshop co-chair and author, Establishing a Research Agenda for Assessing the Bioavailability of Wastewater-Derived Organic Nitrogen in Treatment Systems and Receiving Waters, September 27 and 28, 2007, Baltimore, Maryland.
[Hhttp://www.chesapeake.org/stac/Pubs/eonreport.pdf](http://www.chesapeake.org/stac/Pubs/eonreport.pdf)
 - **Women in Engineering Leadership Institute (WELI) Strategic Planning Committee** 2004 – 2005

MAJOR COMMUNITY SERVICE AND OUTREACH ACTIVITIES

- **N95DECON.org.** A consortium of volunteer researchers from universities across the United States and world who worked to decipher, evaluate, and disseminate technically accurate information about N95 respirators as well as other kinds of masks and face coverings, in response the coronavirus pandemic. A key member of the Heat Treatment sub-team and participant in other subcommittees, as needed. April 2020 - present
- **City of Flint Technical Advisory Committee.** Appointed by Mayors Weaver (2017-2019) and Neeley (2019 – current) to provide guidance on behalf of the city's efforts in response to the Flint Water Crisis and other environmental and public health needs. 2017 – present
- **Train-the-Trainers.** Designed, developed, and delivered a curriculum about faucet-mounted point-of-use filters to Flint residents who became trainers for other Flint residents. Syndicated the curriculum to other communities with input from Flint community and partners. 2018 - present
- **K-12 Drinking Water Filtration.** Working with multiple organizations in the following ways: (a) developing and providing technical guidance on assessing the performance of point-of-use filters and advanced hydration stations used in schools (Flint Community Schools, Ann Arbor Public Schools); (b) provided technical input to the development of a model law by the National Resources Defense Council; (c) serving in a technical advisory role to the FilterFirst grassroots initiative that has successfully introduced bipartisan legislation in the State of Michigan to require point-of-use filtration of drinking water in schools and daycare centers throughout the state. 2018 - present
- **Partnerships around Research and Education in Ethiopia.** Partnering with faculty in various Institutes at Addis Ababa University in Ethiopia to advance graduate education as new Ph.D. programs are implemented. Create opportunities for AAU students to visit U-M for beneficial research experiences and partner those students with U-M Ph.D. students who serve as peer collaborators. Serve on the Ph.D. committees of AAU students. 2017 - 2019
- **Community-Targeted Scholarship**
 N. G. Love, R. Jackson, S. P. McElmurry. Water Stays in the Pipes Longer in Shrinking Cities – A Challenge for Public Health. *The Conversation*, May 24, 2019. <http://theconversation.com/water-stays-in-the-pipes-longer-in-shrinking-cities-a-challenge-for-public-health-116119>
 N. G. Love. We All Deserve to Have Confidence in Our Water. *Medium*. May 10, 2019. https://medium.com/@nglove/we-all-deserve-to-have-confidence-in-our-water-6994b2f7e00c?source=friends_link&sk=a1703f45b60797717658138319b971b1

MAJOR UNIVERSITY, COLLEGE & DEPARTMENT SERVICE/PROGRAMMATIC RESPONSIBILITIES

University of Michigan

- President's Public Health Advisory Committee on COVID Fall 2020-present
- UM Center for Global Health Equity Leadership Council, and co-chair of Climate Vulnerability and Health group. \$20 million center that is launching in 2021. Aug 2020-present
- University of Michigan Scientific Reviewer, Institutional Biosafety Committee (IBC), appointed by Vice President for Research July 1, 2020 – June 30, 2023
- CEE Diversity, Equity, and Inclusion Chair (through 2020), then committee member Aug 2020–present
- CEE Executive Committee (elected position) 2019-2021
- Undergraduate Recruitment Committee 2019-2020
- Richart Lecture Committee 2017-2018

- 2019-2020
 - Advisory Group on University of Michigan activities in Ethiopia, Provost's office 2017-2019
 - Advisory Group: U-M Lead and Copper Rule Project, Graham Institute overseeing Mott Foundation project. 2018-2019
 - Civil and Environmental Engineering Strategic Plan Implementation and Development Committee, Revising plan in 2017-2018 2013-2018
 - College of Engineering Graduate Recruitment, Retention & Summer Programs Advisory Group 2017-2018
 - Internal Advisory Board Member, Center for Socially-Engaged Design 2017-2020
 - Administrative Structure Working Group, School of the Environment and Sustainability Transition Subcommittee 2017
 - U-M ADVANCE LAUNCH Committee Chair 2016-2017
 - College of Engineering Promotion, Tenure and Reappointment Process Review Committee, Chair 2017
 - UM Energy Institute Faculty Affiliate (<https://energy.umich.edu/>) 2018-present
 - College of Engineering Faculty Search Committee for positions in Engineering Education Research (EER) 2015-2016
 - Ethiopia – Michigan Collaborative Consortium (EMC2) Planning Committee, appointed by Assoc Provost James Holloway 2015-2018
 - Provost's Committee on Environment and Sustainability 2016
 - Provost's Poverty Visioning Committee 2015-2016
 - Integrated Training in Microbial Systems (ITiMS) (Burroughs Wellcome Fund training program) Faculty Affiliate 2015 - present
 - President's Advisory Commission on Women's Issues 2014-2015
 - President's Postdoctoral Fellowship Advisory Committee 2014-2015
 - Rackham Graduate School Dean Search Committee 2014
 - Provost's Promotion and Tenure Committee 2013
 - Mentoring Others Results in Excellence (MORE) Committee, Rackham Graduate School, Member and Chair 2012 - 2013
 - Alumni Liaison Committee, Civil and Environmental Engineering 2012-2014
 - Deans Advisory Committee on Female Faculty, College of Engineering 2012-2013
 - Faculty Search Committee Co-Chair, Civil and Environmental Engineering 2011-2012
 - Center for Molecular and Clinical Epidemiology of Infectious Diseases (MAC-EPID) Faculty Affiliate 2009 - present
 - Graham Sustainability Institute Faculty Affiliate 2009 - current
 - College of Engineering Alumni Awards Selection Committee 2011
 - Graham Environmental Sustainability Institute, Executive Committee 2009 - 2011
 - College of Engineering Dean's Advisory Committee on Faculty Diversity 2010 - 2012
 - Provost's Office - Classroom Emergency Training Video Planning Group Fall 2008 – 2009
 - College of Engineering *ad hoc* Committee on Graduate Student Excellence Summer 2008
- Virginia Tech**
- Chair, College of Engineering "Think Tank" Committee (6 faculty) 2006 – 2007
 - Space/Overhead Return Allocation *ad hoc* Committee, Provost apptmt 2005

- College of Engineering Dean's Search Committee 2005
- co-Coordinator, Via Academic Preparation Program for graduate student professional development, Dept of Civil and Environmental Engineering 2004 – 2007
- co-Principal Investigator and Advance Professor for \$3.5 million NSF Advance Institutional Transformation grant focused on increasing the participation and advancement of women in academic STEM careers. Chair: Advancing Women into the Profession 2003 – 2006
- Environmental Public Health Committee 2003 – 2004
- Provost's Implementation Committee, Biomedical & Public Health Institute 2002
- Board of Directors, WPI, Inc., a Virginia Tech affiliated company. 2001 – 2003
- Provost's Environmental Health Committee 2002
- Provost's Committee on Biomedical Research 2001 – 2002
- College of Engineering Diversity Committee 2001 – 2005
- Environmental Engineering Laboratory Coordinator & staff supervisor 1997 – 2005
- University Cross Cutting Initiatives Committee, Environment & Energy 1998 – 2000
- Fralin Biotechnology Center 5 Year Review Committee 2000
- Environmental Engineering Graduate Student Recruitment Officer 2000

UNIVERSITY TEACHING RESPONSIBILITIES

Introduction to Environmental Engineering; Models in Environmental Engineering; Water and Wastewater Treatment Design; Applied Biology of Environmental Systems; Biological Treatment Processes: Theory and Design; Environmental Microbiology; Introduction to Civil and Environmental Engineering; Engineering Solutions to Global Water Issues (Freshmen Design–Build–Test course); Decentralized Water Supply, Hygiene and Sanitation (co-produced with faculty at Addis Ababa University, Ethiopia); Urban Environmental Systems: Project-based Experiences for Students (focused on a diverse group of students in Engineering; Urban Planning, Public Health, Environment & Sustainability); Robots, Sensors and Smart Water Systems (co-developed Freshmen Design–Build–Test Course)

ADVISING RESPONSIBILITIES

Currently serving as advisor for 2 undergraduate research students, 1 master's students, and 8 Ph.D. students. Previously advised 44 M.S. students with thesis or significant project, 18 Ph.D. students, 7 post-doctoral research associates, and 36 undergraduate research projects/theses.

Major Undergraduate Research Projects

1. Harrison Suchyta. Summer 2019-current. Developing urine-derived fertilizers for flowering and woody plants at UM's Botanical Garden.
2. Leah Pifer. Fall 2019 – current. Developing an algorithm for a hand-held water quality monitoring strip.
3. Julia Raneses. Fall 2019 – Aug 2020. Building-Scale Urine Separation Systems.
4. Kensey Dahlquist. Spring 2019 – current. Projects in support of building-scale urine separation, collection and processing for nutrient-energy-water cycling.
5. Yen Jee Ooi. Summer 2018 (at Rich Earth Institute), then Fall 2018-2019. Nutrient analysis for NSF INFEWS project.
6. Brittany Brown. Summers 2017 and 2018. Characterization of *Stenotrophomonas maltophilia* from drinking water through culturing and qPCR, and bioavailability of high versus low water age carbon.
7. Myriam Sarment. 2018 summer. Bioavailability of high versus low water age carbon in drinking water isolates.
8. Alexi Sinanaj. 2017 – 2018. Pharmaceutical removal from urine through activated carbon adsorption.
9. Brady Nishimiya. 2017-2018. Disinfection residual effectiveness of point-of-use product.
10. Nicholas Lowe. 2017-2018. Automated flushing device to improve water quality through point-of-use drinking water filters.

11. Dylan Raye-Leonard. 2016-2018. Urine-derived fertilizer project.
12. Brittany Brown. 2016. Microbial ecology of novel nitrogen removal systems.
13. Ishi Keenum. 2015 – 2016. Plasma treatment of source-separated urine for fertilizer development (co-mentor with K. Wigginton).
14. Mariah Gnegy. 2015-2016. DNA-based analysis of bacteria and viruses in source separated urine (co-mentor with K. Wigginton).
15. Weitian Wang. 2010-2011. Microaerobic Removal of Pharmaceuticals from Wastewater
16. Celine Saucier. 2010-2011. Nitrate Removal to Enable the Effluent Organic Nitrogen Bioassay
17. Bryan VanDuinen. 2009. Life Cycle Assessment of Various Disposal Methods for Unused Pharmaceuticals.
18. Shayan Sengupta. 2009: Assessing the Toxicity of Pharmaceuticals at Doses Expected from Secondary Infections Experienced During a Pandemic.
19. Genevieve Ho. 2008-2009: First project - Assessing a Thin-Film pH Biosensor. Second project – Abiotic Ammonia release from Effluent Organic Nitrogen Along Salinity Gradients.
20. Brian Harris. 2007: Assessing Oxidative Stress Response Function of Alginate-Immobilized Bacteria
21. Zachary Frye. 2006. Assessing the Feasibility of Nanostructure-Enhanced Nitrifying Microbial Fuel Cells
22. Brian Segal. 2006-2007. Evaluation of Ammonia Oxidizing Bacterial Biofilms.
23. Stephanie Harris. 2005-2006. Development of a Microfluidic Immunomagnetic Separation Biosensor for Detecting Bacterial Pathogens.
24. Beth McConnell. 2003-2004. The Affect of Physiology on Bacterial Responses to Oxidative Uncouplers
25. Suzanne Ayers. 2002. VIA Undergraduate Scholar: Evaluating the Impact of Toxic Shocks on Wastewater Treatment Performance
26. Felicia Glapion. 2001-2002. NEM-Induced Potassium Efflux in *Pseudomonas aeruginosa*
27. Monica Mace. 2000-2001. GE Scholarship: Denitrification of Aquaculture Wastewaters
28. Denise Gillam. 2000. Water Center Undergraduate Fellowship: The Impact of Potassium Efflux on Biofilm Treatment Systems Exposed to Electrophilic Toxins
29. Mike Gatza. 1999-2000. Using Two-Dimensional Gel Electrophoresis to Characterize Stress Proteins (Co-advised with Dr. Ann Stevens)
30. Bethany McRae. 1999-2000. NSF REU: Induction of the Glutathione-Gated Potassium Efflux System in *Sphingomonas capsulata* Exposed to HOCl
31. Jennifer Abrajano. 1999-2000. NSF REU: Assessing the Metabolism of Xenobiotic Compounds by Microaerobically-Grown Magnetotactic Bacteria
32. Scott Phipps. 1998-1999. Dewatering of Oily Wastewater Sludges. (Co-advised with Dr. John Novak)
33. Katya Bilyk. 1998-1999. NSF REU: Nitrite Inhibition and Toluene Degradation Under Denitrifying Conditions
34. Julie Wheeler. 1997-1998. NSF REU: Impact of Xenobiotic Stressors on Activated Sludge System Performance
35. Mary Rust. 1996-1997. Water Center Undergraduate Fellowship and NSF REU: Development and Isolation of Acetaldehyde Oxime and Methylethyl Ketoxime Degrading Cultures
36. Elliott Wheeler. 1995-1996. The Role of Various Cations in Settling and Dewatering of Biological Wastewater Treatment Sludges
37. Jon Treadway. 1995. Determination of Proteins in Activated Sludge Using Commercial Assays
38. Kevin Gilmore. Fall 1995: The Impact of Oximes on the Degree and Rate of Nitrification in Activated Sludge Cultures. Spring 1996: Evaluation of Chemical Oxidation as Pretreatment for Wastewaters Containing Aldicarb Oxime

Masters Students with Theses, Extensive Research Project, or Project Report

1. Julia Raneses. 2019 – current. Nutrient balances at the community scale.
2. Nick J. Lowe. 2018 – 2019. Toxicological monitoring of SWIFT effluent from Hampton Roads Sanitation District.

3. Avery Carlson. 2016 – 2018. Isolating and identifying comma-shaped nuisance bacteria in Traverse City's membrane bioreactor treatment system. (co-advised with Glen Daigger)
4. Enrique Rodriguez. 2016 – 2018. Plasma as a platform for advanced oxidation of urine to generate safe fertilizers (co-advised with Krista Wigginton)
5. Zixu Zhao. 2016-2017. Optimizing flushing to reduce microbial contamination of point-of-use filtered drinking water.
6. Andrea McFarland. 2015 – 2018. NSF Fellowship Recipient. Water quality benefits due to green infrastructure. (Co-advised with Larissa Larsen, Urban Planning). National Achievement: NSF Graduate Research Fellowship.
7. Samayyah Williams. 2014-2015. Modeling, understanding, and assessing technologies for the Detroit Water and Sewerage Department (DWSD) Wastewater Treatment Plant.
8. Nigel Beaton. 2014-2015. Low energy-demanding nitrogen removal from anaerobic effluents using biofilm technologies.
9. Anton Dapcic. 2013 -- 2014. A performance evaluation of the WASAC™ energy recovery process.
10. Angelica Perez De La Rosa. 2010-2012. The impact of chlorinated phenols on the microbial ecology of point-of-use drinking water filters.
11. C. Davis Powell. 2011-2014. Evaluating the environmental impacts of urine source separation.
12. Chris Moline. 2010-2011. The fate of pharmaceuticals in microaerobic biological treatment processes.
13. Alexi Ernstoff. 2009 – 2011. The impact of culturing buffer on the ability of *Nitrosomonas europaea* to biotransform 17 α -ethinylestradiol. Current affiliation – Ph.D. student, Technical University of Denmark.
14. Sam Hardin. 2006-2011. The effectiveness of corrective action strategies on chemically stressed biological wastewater treatment systems. Current affiliation – environmental engineering consulting. National Achievement: WEFTEC Best Poster, 1st Place, 2008.
15. Romeo Capuno. 2005-2007. Modeling anaerobic ammonia oxidizing biofilms. Current affiliation – environmental engineering consulting.
16. Jason Beck. 2005-2007. Evaluating deammonification processes to achieve nitrogen removal from dairy waste. Current affiliation – environmental engineering consulting.
17. Jeremy Guest. 2005-2007. Laboratory testing of process controls for the mitigation of toxic shock events at enhanced biological phosphorus removal wastewater treatment plants. Current affiliation – Assistant Professor, University of Illinois.
18. Kaoru Ikuma. 2004-2007. The development of a bacterial biosensor designed to detect oxidative chemicals in water: correlating sensor relevance to mammalian brain cells and assessing bacterial cell immobilization strategies. Current affiliation – Assistant Professor, Iowa State University.
19. Mert Muftugil. 2004-2011. Enhanced Biological Phosphorus Removal of Dairy Manure using Sequencing Batch Reactors: Performance, Kinetics and Model Development. Current affiliation – environmental engineering consulting.
20. Anna Zaklikowski. 2004-2006. Evaluating the Effectiveness of Disinfection Strategies in the Inhibition and Inactivation of Ammonia Oxidizing Bacteria. Current affiliation – environmental engineering consulting.
21. Ka Man Chan. 2004-2005. Feasibility Study of In Situ Bioremediation of Bis(2-Chloroethyl) Ether and 1,2-Dichloroethane. Affiliation upon graduation – water utility.
22. Paul Sweetman. 2004-2005. Evaluating the Fate of Manure Nitrogen in Confined Dairy Waste Operations: A Full-Scale Waste Analysis and Start-up Protocol for an Anammox –Based Treatment Technology Applicable to Dairy Waste Management. Affiliation upon graduation – government position in Ireland.
23. Irina Chakraborty. (Degree from University of Helsinki, Finland) 2002-2005. Characterizing the Adaptation of a Subsurface Microbial Community using Biomolecular Tools (co-advised with Dr. Ann Stevens, Biology). Affiliation upon graduation – Ph.D. student in environmental microbiology.
24. Katharine Linares. 2002-2004. Development of a Biosensor for Detecting Toxic Electrophilic Chemicals in Waters. Current affiliation – environmental engineering consulting.

25. Jennifer Dauphinais. 2002-2003. Effects of Toxic Chemicals on Biological Wastewater Treatment Processes. Current affiliation – US government-based environmental services.
26. Rachelle Rhodes. 2002-2004. Subsurface Microbial Community Adaptation to Xenobiotic Influx. Current affiliation – environmental engineering consulting.
27. Susanna Leung. 2001-2003. Oxygen Transfer Efficiency in a Biological Aerated Filter (co-advised with John Little). Current affiliation – environmental engineering consulting.
28. Giacomo Sonzini. (Degree from Politecnico Di Milano, Italy) 2001. Investigation of K⁺ Efflux as Response to Intoxication for Nitrifying Activated Sludge. Affiliation upon graduating – financial analyst in Italy.
29. Kristina Yanosek (Biological Systems Engineering). 2000-2002. Enhanced Biological Phosphorus Removal from Dairy Manure to Meet Nitrogen and Phosphorus Crop Nutrient Requirements (co-advised with Dr. Mary Leigh Wolfe). Affiliation upon graduation – US Dept of Interior.
30. David Whichard. 2000-2001. Nitrogen Removal from Dairy Manure Wastewater Using Sequencing Batch Reactors. Affiliation upon graduating – environmental services in industry.
31. Kofi Asiedu. 2000-2001. Evaluating Biological Treatment Systems: I. Moving Bed Biofilm Reactor Versus Biological Aerated Filter. II. Sulfide-Induced Corrosion in Anaerobic Digester Gas Piping. Current affiliation – Engineer III, Prince William County, Virginia.
32. Melissa Fouratt (Biological Sciences). 1998-2001. Application of Molecular Techniques to the Characterization of a Nitrifying Bioaugmentation Culture (co-advised with Dr. Ann Stevens). Position upon graduation – pharmaceutical sales.
33. Scott Phipps. 1999-2001. Performance Evaluation and Yield Determination of a Full-Scale Biological Aerated Filter. Current affiliation – environmental engineering consulting.
34. Brian Brazil. 1999-2001. Evaluation of an Effluent Treatment Strategy to Control Nitrogen from a Recirculating Aquaculture Facility. Current affiliation – environmental engineering consulting.
35. Robert Wimmer. 1998-2001. Development of a Biosensor to Predict Activated Sludge Deflocculation and the Link Between Chlorination and Potassium Efflux. Current affiliation – environmental engineering consulting.
36. Arnaud Delahaye. 1997-1998. Distribution and Characteristics of Biomass in an Upflow Biological Aerated Filter. Affiliation upon graduation – Civil servant in France.
37. Kari Husovitz. 1997-1998. The Influence of Hydraulic Loading Rate on Nitrification Performance in a Two-Stage Biological Aerated Filter Pilot System. Current affiliation – environmental engineering consulting.
38. Kevin Gilmore. 1997-1999. Using Oligonucleotide Probes to Characterize Nitrification in a Two-Stage Pilot Plant Scale Biological Aerated Filter System. Current affiliation – Associate Professor, Bucknell University.
39. Jeff McGinnis. 1996-2003. Biodegradation and Dewatering of an Industrial Waste Oil. Current affiliation – environmental engineering consulting.
40. Jennifer Phillips. 1996-1997. Denitrification in Recirculating Aquaculture System Waters Using an Upflow Biofilter and a Fermented Substrate. Current affiliation – environmental engineering consulting.
41. Kristina Perri. 1996-1997. The Effectiveness of Multiple Redox Treatment Strategies on the Treatability of a High Strength Industrial Wastewater. Current affiliation – environmental engineering consulting.
42. James Drew Fettig. 1995-1998. A Study of the Patterns, Stoichiometry, and Kinetics of Microbial BTX Degradation Under Denitrifying Conditions by an Activated Sludge Consortium Receiving a Mixed Waste. Current affiliation – environmental engineering consulting.
43. Michelle Smith. 1995-1996. The Effect of Cation Addition on the Settling and Dewatering Properties of an Industrial Activated Sludge. Affiliation upon graduation – environmental engineering consulting in Canada.
44. Erika Lubkowitz (Bailey). 1995-1996. Biological Treatment Schemes for Preventing Oxime Inhibition of Nitrification. Current affiliation – environmental engineering consulting.

45. Patrick Brooks. 1995-1996. An Investigation of Temperature Effects on Denitrifying Bacterial Populations in a Biological Nutrient Removal System. Current affiliation – environmental engineering consulting.

Ph.D. Dissertations, Student Placement and Nationally Recognized Achievements by Mentees

1. Brittany Brown Hicks. 2019 – 2024 (anticipated). Project being defined. *National Achievement*: Ford Foundation Predoctoral Fellowship.
2. Alyssa Schubert. 2018 – 2023 (anticipated). Crowd-sourced water quality monitoring and community access to water monitoring.
3. Lucinda Li. 2018 – 2023 (anticipated). The impact of urine derived fertilizers on soil health (co-advised with Krista Wigginton).
4. Enrique Rodriguez. 2018 – 2022 (anticipated). Suspect screening, effect directed analysis and chemical risk of resource efficiency processes (co-advised with Krista Wigginton).
5. Hollie Adejumo. 2017 – 2022 (anticipated). The Toxicity and Transformation of Nitrogenated Disinfection Byproducts in the Human Gut (co-advised with Laura Rozek). *National Achievement*: NSF Graduate Research Fellowship.
6. Avery Carlson. 2018 – 2021 (anticipated). Project topic being developed (co-advised with Glen Daigger)
7. Brett Wagner. 2016 – 2021 (anticipated). Membrane aerated biofilm reactor technology (co-advised with Glen Daigger). *National Achievement*: NSF Graduate Research Fellowship.
8. Sara Troutman. 2015-2020. Integrated urban water infrastructure systems modeling at the green and grey infrastructure interface. (co-advised with Branko Kerkez). *Current Affiliation*: Xylem, Inc. *National Achievement*: NSF Graduate Research Fellowship.
9. Zerihun Bekele Alemayehu. 2015-2020. Use of sensor-mediated controls to achieve enhanced, low energy nitrogen removal during mainstream wastewater treatment. (Co-advised with Charles Bott, Hampton Roads Sanitation District). *Current Affiliation*: Engineer with BASF Corporation.
10. Chia-Chen Wu. 2013- 2018. Bacterial colonization of point-of-use (PoU) drinking water filters, selection of opportunistic pathogens and presence of antibiotic resistance genes. (Co-advised with Terese Olson). *Current Affiliation*: Postdoctoral Research Associate, Wayne State University
11. Heather Goetsch. 2014 –2018. Evaluating the benefits and risks of source separation as a nutrient management strategy. (Co-advised with Krista Wigginton). *Current Affiliation*: Department of Energy. *National Achievement*: AAAS Fellow with the Dept of Energy.
12. Jeseth Delgado-Vela. 2012 –2018. NSF Fellowship Recipient and Ford Foundation Fellow. Nitrogen and Sulfur Cycling During Wastewater Treatment. (Co-advised with Greg Dick). *Current Affiliation*: Assistant Professor, Howard University, Washington D.C. *National Achievements*: NSF Graduate Research Fellowship; Ford Foundation Fellowship; AEESP Conference Best Student Presentation.
13. Lauren Stadler. 2010 – 2015. Fate of trace contaminants in bacterial communities under low dissolved oxygen environments. *Current Affiliation*: Assistant Professor, Rice University, Houston. *National Achievement*: NSF Graduate Research Fellowship; 2016 CH2M/AEESP Best Dissertation Award; AEESP Conference Best Student Presentation.
14. Sherri M. Cook. 2008-2014. Sustainable Waste Management: Modeling and Decision Strategies for Unused Medications and Wastewater Solids (Co-advised with Steve Skerlos). *Current Affiliation*: Assistant Professor, University of Colorado, Boulder. *National Achievement*: NSF Graduate Research Fellowship
15. Jeremy S. Guest. 2007-2012. Sustainable design of wastewater treatment systems: Evaluations of operational flexibility and phototrophs for resource recovery. (Co-advised with Steve Skerlos). *Current Affiliation*: Associate Professor, University of Illinois, Urbana-Champaign. *National Achievements*: 2014 NSF CAREER Award Recipient; 2016 Paul L. Busch Award, Water Research Foundation.
16. Ameet J. Pinto. 2005-2009. Upset Events at Wastewater Treatment Plants: Implications for Mitigative Strategy Development and Bioreactor Microbial Ecology. *Current Affiliation*: Assistant Professor, Northeastern University, Boston. *National Achievements*: 2018 NSF CAREER Award Recipient; 2018 ISME/IWA Rising Star Bio Cluster Award; 2019 Paul L. Busch Award, Water Research Foundation .

17. Wendell Khunjar. 2004-2009. Elucidating Factors that Impact the Removal of Organic Microconstituents by Heterotrophic and Ammonia Oxidizing Bacteria. *Current Affiliation:* Hazen and Sawyer Consultants.
18. Martin Musabyimana. 2005-2008. Deammonification Process Kinetics and Inhibition Evaluation. *Current Affiliation:* East Bay Municipal Utility District, San Francisco, CA.
19. Kevin R. Gilmore. 2005-2008. Treatment of High-Strength Nitrogen Wastewater With a Hollow-Fiber Membrane-Aerated Biofilm Reactor: A Comprehensive Evaluation. *Current Affiliation:* Associate Professor, Bucknell University.
20. Jocelyn Fraga Muller. 2002-2006. The Role of Multidrug Efflux Pumps in the Stress Response of *Pseudomonas aeruginosa* to Organic Contamination. (Co-advised with Ann Stevens) *Current Affiliation:* Community College Instructor.
21. Ines D. S. Henriques. 2001-2006. The Response of Activated Sludge Cultures to Toxic Chemicals: Process Performance Effects, Role of Floc Structure, and Detection of Physiological Changes by Footprinting Methods. *Current Affiliation:* Business CEO, Portugal. National Achievement: WEFTEC Best Poster 1st Place, 2003.
22. Richard T. Kelly II. 2001-2005. Chemical Inhibition of Nitrification: Evaluating Methods to Detect and Characterize Inhibition and the Role of Selected Stress Responses Upon Exposure to Oxidative and Hydrophobic Toxins. *Current Affiliation:* Brown and Caldwell, Seattle, Washington.
23. R. David Holbrook. 2000-2003. The Role of Colloids in Defining the Fate of Endocrine System Disrupting Chemicals in Wastewater Treatment Systems (Co-advised with Dr. John Novak). *Current Affiliation:* Chief, Surface and Microanalysis Sciences Division, National Institute of Standards and Technology. *National Achievement:* 2010 PECASE (Presidential Early Career Award for Scientists and Engineers) recipient.
24. Charles B. Bott. 1997-2001. Elucidating the Role of Toxin-Induced Microbial Stress Responses in Biological Wastewater Treatment Process Upset. Affiliation upon graduation: environmental engineering consulting, then Assistant and Associate Professor at Virginia Military Institute. *Current Affiliation:* Director of Water Technology and Research, Hampton Roads Sanitation District, Virginia. *National Achievements:* Parsons Engineering Science/AEESP Doctoral Thesis Award; AEESP Fred Pohland Medal.
25. Guihua Ma. 1995-1999. The Kinetics, Biochemical Patterns, and Microbial Ecology in Multiredox Activated Sludge Systems Treating BTX Containing Wastewater. *Current Affiliation:* KCI, Inc., Baltimore, MD.

Post-Doctoral Research Associates

1. William Tarpeh, 2017-2018. Pharmaceutical transformation products through urine-derived fertilizer processing technologies. Co-advised with K. R. Wigginton. *Current Affiliation:* Assistant Professor of Chemical Engineering, Stanford University.
2. Rebecca Lahr, 2015-2016. Microbial fate in source-separated urine. Co-advised with K. R. Wigginton. *Prior Affiliation:* Assistant Professor, Michigan State University.
3. Dr. Kelly Martin. 2013 – 2015. Innovative, Low Energy Nitrogen Removal from Anaerobic Effluents. *Current Affiliation:* Black and Veatch, Inc.
4. Dr. Sudeshna Ghosh. 2008-2012. Chemical stressor-induced antibiotic resistance. *Current Affiliation:* Self Employed.
5. Dr. Kartik Chandran. 2004-2005. Chemical stress mechanisms in nitrifying bacteria. *Current Affiliation:* Associate Professor, Columbia University. *National Achievements:* NSF CAREER Award recipient; 2015 MacArthur Fellow; 2010 Paul L. Busch Award, Water Research Foundation.
6. Dr. Jane Duncan. 1998-1999. Heat shock protein expression in response to chemical stress in activated sludge. *Current Affiliation:* Research Scientist, Dept of Biochemistry, Virginia Tech.
7. Dr. Kathy Terlesky. 1996-1997. Heat shock protein expression in response to chemical stress in activated sludge. *Current Affiliation:* Vice President, Division Manager, SAIC, Inc., Charlottesville, Virginia.

PUBLICATIONS

Textbooks

1. Grady, C. P. L. Jr., G. T. Daigger, N. G. Love and C. Filipe. 2011. *Biological Wastewater Treatment*, 3rd Edition, Taylor and Francis Publishers.

Peer-Reviewed Journal Articles (undergraduate students; graduate students; post-doctoral research associates; *corresponding or senior author)

2. Wigginton, K. R., P. J. Arts, H. Clack, W. J. Fitzsimmons, M. Gamba, K. R. Harrison, W. LeBar, A. S. Lauring, L. Li, W. W. Roberts, N. Rockey, J. Torreblanca, C. Young, L. G. Anderegg, A. M. Cohn, J. M. Doyle, C. M. Meisenhelder, L. Raskin, N. G. Love*, and K. S. Kaye*. 2021. Validation of N95 filtering facepiece respirator decontamination methods available at a large university hospital. *Open Forum Infectious Diseases*. Accepted. DOI: 10.1093/ofid/ofaa610.
3. Delgado-Vela, J., L. A. Bristow, H. K. Marchant, N. G. Love and G. J. Dick*. 2021. Sulfide alters microbial functional potential in a methane and nitrogen cycling biofilm reactor. *Environmental Microbiology*. Accepted.
4. Hilton*, S., G. Keoleian, G. T. Daigger, B. Zhou, N. G. Love. 2021. Life-cycle assessment of urine diversion and conversion to fertilizer products at the city scale. *Environmental Science & Technology*. 55:593-603.
5. Anderegg, L., J. Doyle, M. L. Gardel, A. Gupta, C. Hallas, Y. Lensky, N. G. Love, B. A. Lucas, E. Mazenc, C. Meisenhelder, A. Pillarisetti, D. Ranard, A. H. Squires, J. Vechakul, N. B. Vilas, S. Williams, D. Wilson, *Chen, T. and the N95DECON consortium. 2021. Heat and humidity for bioburden reduction of N95 filtering facepiece respirators. *Applied Biosafety*. In press. DOI:10.1089/apb.20.0053.
6. Rockey, N., P.J. Arts, L. Li, K.R. Harrison, K. Langenfeld, W.J. Fitzsimmons, A.S. Lauring, N.G. Love, K.S. Kaye, L. Raskin, W.W. Roberts, B. Hegarty, K.R. Wigginton*. 2020. Humidity and deposition solution play a critical role in virus inactivation by heat treatment on N95 respirators. *mSphere*. 5(5):e00588-20. DOI:10.1128/mSphere.00588-20.
7. Admassu Abate, T., A. F. Desta, F. Assefa, N. G. Love*. 2020 The performance of an Ethiopian tannery wastewater treatment system based on chemical and microbiological water quality. *Water Environment Research*. In press. DOI:10.1002/wer.1364.
8. Segrè Cohen*, A., N. G. Love, J. Árvai. 2020. Communicating the risks and benefits of human urine-derived fertilizer. *Sustainability*. 12(23): 9973. DOI:10.3390/su12239973.
9. Troutman, S. C., N. G. Love and B. Kerkez*. 2020. Balancing water quality and flows in combined sewer systems using real-time control. *Environmental Science: Water Research & Technology*. 6:1357-1369. DOI: 10.1039/c9ew00882a.
10. Schreiber*, T., S. Opperman, K. Nace, A. N. Pallmeyer, N. Love and R. Hardin. 2020. Leveraging integrative research for inclusive innovation: urine diversion and re-use in agriculture. *Elementa Science of the Anthropocene*. 8:12. doi.org/10.1525/elementa.408
11. Cohen, A. S.*, N. G. Love, K. K. Nace and J. Arvai. 2020. Consumers' acceptance of agricultural fertilizers derived from diverted and recycled human urine. *Environmental Science & Technology*. 54(8):5297-5305. 10.1021/acs.est.0c00576.
12. Carlson, A. L., G. T. Daigger*, N. G. Love and E. Hart. 2020. Multi-year diagnosis of unpredictable fouling occurrences in a full-scale membrane bioreactor. *Water Science and Technology*. 82(3):524-536. DOI: 10.2166/wst.2020.354.
13. Bekele, Z. A., J. Delgado Vela, C. B. Bott, N. G. Love*. 2020. Sensor-mediated granular sludge reactor for nitrogen removal and reduced aeration demand using a dilute wastewater. *Water Environment Research*. 92(7):1006-1016. DOI: 10.1002/wer.1296. Honor: Editor selected for issue cover art
14. Goetsch, H. E., N. G. Love, K. R. Wigginton*. 2020. Fate of extracellular DNA in the production of fertilizers from source-separated urine. *Environmental Science & Technology*. 54 (3):1808-1815. DOI:10.1021/acs.est.9b04263.
15. Brown, M., F. Karimova, N. Love, K. Pagilla, C. Bott, Z. He, B. Liner and S. Merther. 2020. University-utility partnerships: Best practices for water innovation and collaboration. *Water Environment Research*. 92(3):314-319. DOI:10.1002/wer.1252.

16. Brouwer, A. F., M. C. Eisenberg, N. G. Love, J. N. S. Eisenberg*. 2019. Phenotypic variations in persistence and infectivity between and within environmentally transmitted pathogen populations impact population-level epidemic dynamics. *BMC Infectious Diseases*, 19(1):449-461. DOI:10.1186/s12879-019-4054-8.
17. Daigger*, G. T., S. Sharvelle, M. Arabi, N. G. Love. 2019. Progress and Promise Transitioning to One Water/Resource Recovery Integrated Urban Water Management Systems. *Journal of Environmental Engineering*. 145 (10), 10 pages. DOI: 10.1061/(ASCE)EE.1943-7870.0001552. *Recipient of the ASCE Wesley W. Homer Award*.
18. McFarland, A. R., L. Larsen*, K. Yeshitela, A. N. Engida and N. G. Love. 2019. Guide for using green infrastructure in urban environments for stormwater management. *Environmental Science: Water Research & Technology*, 5(4):643-659. DOI:10.1039/C8EW00498F.
19. Liang, S., S. Qu, Q. T. Zhao, X. L. Zhang, G. T. Daigger, J. P. Newell, S. A. Miller, J. X. Johnson, N. G. Love, L. X. Zhang, Z. F. Yang, M. Xu*. 2019. Quantifying the urban food-energy-water nexus: The case of the Detroit Metropolitan Area. *Environmental Science & Technology*, 53(2):779-788. DOI:10.1021/acs.est.8b06240.
20. Stadler, L. B. and N. G. Love*. 2019. Oxygen half-saturation constants for pharmaceuticals in activated sludge and microbial community activity under varied oxygen levels. *Environmental Science & Technology*. 53(4):1918-1927. DOI:10.1021/acs.est.8b06051.
21. Delgado Vela, J., G. J. Dick and N. G. Love*. 2018. Sulfide inhibition of nitrite oxidation in activated sludge depends on microbial community composition. *Water Research*. 138:241-249, DOI:10.1016/j.watres.2018.03.047.
22. Byrne, B. G., S. McColm, S. P. McElmurry, P. E. Kilgore, J. Sobeck, R. Sadler, N. G. Love, M. S. Swanson*. 2018. Prevalence of infection-competent serogroup 6 *Legionella pneumophila* within premise plumbing in Southeast Michigan. *mBio*, 9(1): DOI: 10.1128/mBio.00016-18.
23. Zahran, S., S. P. McElmurry, P. E. Kilgore, D. Mushinski, J. Press, N. G. Love, R. C. Sadler, M. S. Swanson*. 2018. Assessment of the Legionnaires' Disease Outbreak in Flint, Michigan. *Proceedings of the National Academy of Sciences USA*, 115(8):E1730-E1739. DOI: 10.1073/pnas.1718679115.
24. Goetsch, H. E., L. B. Zhao, M. Gnegy, M. J. Imperiale, N. G. Love, K. R. Wigginton*. 2018. The fate of urinary tract virus BK human polyomavirus in source-separated urine. *Applied and Environmental Microbiology*, 84(7): DOI:10.1128/AEM.02374-17.
25. Stadler, L. B.†, J. Delgado Vela†, S. Jain, G. J. Dick, and N. G. Love*. 2017. Elucidating the impact of microbial community biodiversity on pharmaceutical biotransformation during wastewater treatment. *Microbial Biotechnology*, 11(6):995-1007. DOI: 10.1111/1751-7915.12870. †These authors contributed equally to this work.
26. Mullen, R. A., K. R. Wigginton, A. Noe-Hays, K. Nace, N. G. Love, C. B. Bott and D. S. Aga*. 2017. Optimizing extraction and analysis of pharmaceuticals in human urine, struvite, food crops, soil, and lysimeter water by liquid chromatography-tandem mass spectrometry. *Analytical Methods*. 9(41):5952-5962.
27. Troutman, S. C., N. Schambach, N. G. Love and B. Kerkez*. 2017. A self-calibrating framework for the sensor-driven and dynamical modeling of combined sewer systems. *Water Research*, 126:88-100. DOI: 10.1016/j.watres.2017.08.065
28. Wu, C.-C., S. Ghosh, K. J. Martin, A. J. Pinto, V. J. Deneff, T. M. Olson, N. G. Love*. 2017. The microbial colonization of activated carbon block point-of-use (PoU) filters with and without chlorinated phenol disinfection byproducts. *Environmental Science: Water Research & Technology*, 3(5):830-843. DOI: 10.1039/C7EW00134G.
29. Cook, S.M., S. J. Skerlos, L. M. Raskin and N. G. Love*. 2017. A sustainability assessment tool for anaerobic digestion. *Water Research*. 112:19-28.
30. Daigger*, G. T., J. Sandino, S. Murthy, N. G. Love. 2017. Transforming environmental engineering and science education, research and practice. *Environmental Engineering Science*, 34(1):42-50.
31. Lahr, R.H., H. E. Goetsch, S. J. Haig, A. Noe-Hays, N. G. Love, D. S. Aga, C. B. Bott, B. Foxman, J. Jimenez, T. Luo, K. Nace, K. Ramadugu and K. R. Wigginton*. 2016. Urine bacterial community

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- Refereed Conference Presentations (presenter in bold)**
145. **Hicks, B.**, C. C. Wu, M. B. Perri, Z. Zhao, M. Zervos, S. P. McElmurry, N. G. Love. Isolating and characterizing *Stenotrophomonas maltophilia* from drinking water point-of-use filters in an aged distribution system. Poster presentation. International Water Association Microbial Ecology of Water Engineering (MEWE) Biannual Conference, Hiroshima, Japan, November 17-20, 2019.
 146. **Love, N. G.** The International Water Association Specialists Group on Environmental Engineering Education: History and Background. Podium Presentation for pre-conference workshop. International Water Association Microbial Ecology of Water Engineering (MEWE) Biannual Conference, Hiroshima, Japan, November 17-20, 2019
 147. Love, N.G., A. Noe-Hays, D. Aga, J. Arvai, A. Cohen, G. Daigger, A. Davis, R. Dickman, R. Hardin, S. Hilton, G. Keoleian, L. Li, N. Lowe, R. Mullen, K. Nace, E. Rodriguez, T. Schreiber, S. Skerlos, W. Tarpeh, K. Wigginton. Achieving Nutrient Resource Efficiency through Urine Separation, Processing and Reuse: A Comprehensive Study. Podium Presentation. 3rd IWA Resource Recovery Conference, Venice, Italy, September 2019.
 148. **Carma Lewis***, Elizabeth Burtch*, Nick J. Lowe, Audrey Rose Zarb, **Alyssa Schubert**, Janée Rankin*, Lydia Starrs*, Rochelle Kelly*, Richard Kelley*, Alyssa Schubert, Enrique Rodriguez, Lucinda Li, Audrey Palmeyer, Shawn P. McElmurry, Nancy G. Love (*community collaborators from Flint, Ms. Lewis and Ms. Schubert gave the talk). Community-driven Train-the-Trainers program for point-of-use

- filter maintenance in communities affected by drinking water lead contamination. Podium Presentation. Association of Environmental Engineering and Science Professors Biannual Conference, Arizona State University, Tempe, Arizona. May 15-16, 2019.
149. **Tarpeh, W., Y. Du, C. Carpenter, D. Helbling, N. G. Love, K. R. Wigginton.** Suspect screening of pharmaceuticals during urine treatment processes. Podium Presentation. Association of Environmental Engineering and Science Professors Biannual Conference, Arizona State University, Tempe, Arizona. May 15-16, 2019.
 150. **Goetsch, H., L. Li, N. G. Love and K. R. Wigginton.** Understanding microbial agents in source-separated urine for the production of urine-derived fertilizers. Podium Presentation. Association of Environmental Engineering and Science Professors Biannual Conference, Arizona State University, Tempe, Arizona. May 15-16, 2019.
 151. **A. Noe-Hays, A. Davis, N. J. Lowe, J. Eraci, Y. J. Ooi, A. Sabido, K. Nace, E. Rodriguez, K. Wigginton, N. Love.** Onsite production of concentrated urine-derived fertilizer in building-scale systems using remote process monitoring and control. Poster Presentation. Association of Environmental Engineering and Science Professors Biannual Conference, Arizona State University, Tempe, Arizona. May 15-16, 2019.
 152. **Kerkez, B., N. G. Love, R. L. McCaffery, M. Bartos, J. Montgomery, E. TerBeek.** A First Year College Course on Smart Water Systems. Poster Presentation. Association of Environmental Engineering and Science Professors Biannual Conference, Arizona State University, Tempe, Arizona. May 15-16, 2019.
 153. **Cohen, A. S., N. G. Love, J. Árvai.** Consumers' preferences and perceptions regarding the use of urine-derived fertilizer for domestic agriculture. Poster Presentation. Association of Environmental Engineering and Science Professors Biannual Conference, Arizona State University, Tempe, Arizona. May 15-16, 2019.
 154. **Pallmeyer, A. and N. G. Love.** Achieving Resource Efficiency with Resource Recovery: Introduction the NSF INFEWS Project on Urine-Derived Fertilizers. Podium Presentation. 91st Annual Water Environment Federation Technical Exhibition and Conference, New Orleans, LA, October 1-3, 2018.
 155. **Bekele, Z., J. Delgado Vela, C. B. Bott, N. G. Love.** Sensor-mediated Control for Aerobic Granular Sludge Process Treating Mainstream Anaerobic Effluent. Podium presentation. 91st Annual Water Environment Federation Technical Exhibition and Conference, New Orleans, LA, October 1-3, 2018.
 156. **Troutman, S.C., N. G. Love and B. Kerkez.** Evaluating market-based algorithms for system-level TSS control. 13th International Conference on Hydroinformatics. Palermo, Italy, July 1-6, 2018.
 157. **Troutman, S. C., N. G. Love and B. Kerkez.** Market-based real-time control of TSS across large sewer systems. World Environmental & Water Resources Congress, EWRI. Minneapolis, MN, USA. June 3-7, 2018.
 158. **Tarpeh, W., D. S. Aga, N. G. Love, K. Wigginton.** Assessing Risks from Pharmaceuticals and Transformation Products in Urine-Derived Fertilizers. Podium presentation. American Chemical Society Annual Meeting. New Orleans, LA. March 2018.
 159. **Troutman, S.C., N. G. Love and B. Kerkez.** Evaluating market-based algorithms for system-level TSS control. Podium presentation. 13th International Conference on Hydroinformatics. Palermo, Italy, July 1-6, 2018.
 160. **Wagner, B., G. T. Daigger, N. G. Love.** Partial nitrification/anammox membrane aerated biofilm reactor for nitrogen removal from aerobic secondary effluent. Podium presentation. Water Environment Federation Nutrient Removal and Recovery Conference, Raleigh North Carolina, June 18-21, 2018. Presentation with associated conference paper.
 161. **Love, N. G., A. Noe-Hays, K. R. Wigginton, L. Macpherson, D. S. Aga, C. B. Bott, G. T. Daigger, A. P. Davis, J. Eisenberg, A. Gagnon, Z. Getaneh, H. Goetsch, P. Gooding, R. Hardin, S. Hilton, J. Jimenez, G. Keoleian, N. J. Lowe, W. Mui, R. Mullen, K. Nace, A. Pallmeyer, N. Patel, D. Raye-Leonard, E. E. Rodriguez, T. Schreiber, A. Sinanaj, W. Tarpeh, R. Wombacher, B. Zhou.** Advancing Nutrient Recovery through Urine-Derived Fertilizers (UDF) in the United States. Podium presentation. Water

- Environment Federation Nutrient Removal and Recovery Conference, Raleigh North Carolina, June 18-21, 2018. Presentation with associated conference paper.
162. **Troutman, S. C., N. G. Love and B. Kerkez.** Market-based real-time control of TSS across large sewer systems. Podium presentation. World Environmental & Water Resources Congress, EWRI. Minneapolis, MN, USA. June 3-7, 2018.
 163. **Rodriguez, E., W. Tarpeh, H. Clack, N. G. Love, K. Wigginton.** 2018. Degradation of pharmaceuticals in synthetic urine treated with plasma. Poster Presentation. American Chemical Society Meeting, New Orleans, LA, March 18-22, 2018.
 164. **Zerihun A. Bekele, Imre Takacs, Charles B. Bott, and Nancy G. Love.** Harnessing biofilm models to advance nitrogen removal from mainstream anaerobic wastewater treatment processes. Poster presentation. WRRMod2018 conference, Quebec, Canada, March 2018.
 165. **Tarpeh, W., D. S. Aga, N. G. Love, K. Wigginton.** Assessing Risks from Pharmaceuticals and Transformation Products in Urine-Derived Fertilizers. Podium presentation. American Chemical Society Annual Meeting. New Orleans, LA. March 2018.
 166. **Carlson, A., N. G. Love, G. T. Daigger and E. Hart.** Trouble-shooting long-term biofouling in full-scale membrane bioreactor. International Water Association Young Water Professionals Conference, South Africa. December 10-14, 2017.
 167. **Goetsch, H.E., Love, N.G., Imperiale, M.J., Wigginton, K.** Fate of Human BK polyomavirus through urine diverted for fertilizer. 2nd International Resource Recovery Conference: New York City, NY, USA August 5-9, 2017.
 168. **Delgado Vela, J., Dick, Gregory J., Love, N.G.** The Impact of Sulfide on Nitrification: Implications for Nitrification Processes. Fifth International Conference on Nitrification and Related Processes (ICoN5): Early Career and Graduate Student Workshop. Vienna, Austria, July 23-27, 2017.
 169. **Zerihun A. Bekele, Jeseth Delgado Vela, Kelly J. Martin, Charles B. Bott, and Nancy G. Love.** Using sensor-mediated control and modeling to develop an aerobic granular sludge technology for low energy nitrogen. Podium presentation. AEESP Biannual Conference, Ann Arbor, Michigan, June 20-22, 2017.
 170. **Troutman, S. C., N. G. Love, B. Kerkez.** 2017. Controlling a Sewer Network as an Extension of the Wastewater Treatment Plant. Podium presentation. AEESP Biannual Conference, Ann Arbor, Michigan, June 20-22, 2017
 171. **Chia-Chen Wu, Katie Stroh, Shawn P. McElmurry, Terese M. Olson, and Nancy G. Love.** Understanding the transmission of planktonic and sessile bacteria across point-of-use (PoU) filters. Podium presentation. AEESP Biannual Conference, Ann Arbor, Michigan, June 20-22, 2017
 172. **Delgado Vela, J., Dick, Gregory J., Love, N.G.** Managing Healthy Activated Sludge Communities: Understanding the Impact of Sulfide on Nitrogen Removal. Podium presentation. AEESP Biannual Conference, Ann Arbor, Michigan, June 20-22, 2017
 173. **Bekele, Z. A., Jeseth Delgado Vela, Kelly J. Martin, Charles B. Bott, and Nancy G. Love.** Aerobic granular sludge process optimization and modeling for mainstream anaerobically treated wastewater. Poster presented at IWA Biofilm Reactors Conference, Dublin. Ireland, May 2017
 174. **Troutman, S. C., N. G. Love, B. Kerkez.** 2017. Understanding Combined Sewer Flow Dynamics through Data-Driven Modeling. World Environmental & Water Resources Congress, EWRI. Sacramento, CA, USA. May 21-25 2017.
 175. **Zerihun A. Bekele, Jeseth Delgado Vela, Kelly J. Martin, Charles B. Bott, and Nancy G. Love.** Aerobic granular sludge process optimization and modeling for mainstream anaerobically treated wastewater. Poster presented at IWA Biofilm Reactors Conference, Dublin. Ireland, May 2017
 176. **Goetsch, H., M. Imperiale, N. G. Love, K. R. Wigginton.** 2017. Fate of human polyomavirus in urine diverted for fertilizer use. American Chemical Society 253rd National Meeting, San Francisco, CA, April 2017.

177. **Goetsch, H., M. Imperiale, N. G. Love, K. R. Wigginton.** Refining liquid gold: Fate of human polyomavirus in urine diverted for fertilizer use. Oral presentation. Borchardt conference, Ann Arbor, Michigan, February 2017.
178. **Troutman, S., N. G. Love, B. Kerkez.** Use of Real-Time Sensor Data in City-Scale Water Modeling. Poster presentation presented at two different conferences: Borchardt conference, Ann Arbor, Michigan, February 2017; and CUAHSI Biennial Symposium
179. **Zhao, Z., M. P. Runho, C.-C. Wu, A. Zarb, T. M. Olson, S. P. McElmurry, and Nancy G. Love.** 2017 Effect of flushing on microbiological quality of water effluent from point-of-use filters. Poster presentation, Borchardt conference, Ann Arbor, Michigan, February 2017.
180. **Alemayehu, Z., C. B. Bott and N. G. Love.** 2017. Achieving nitrogen removal from mainstream anaerobically treated wastewater using aerobic granular sludge with low aeration rate. Poster presentation, Borchardt conference, Ann Arbor, Michigan, February 2017.
181. **Delgado Vela, J., Z. A. Bekele, A. McFarland, A. Arcelay, K. J. Martin, C. B. Bott, G. J. Dick and N. G. Love.** 2016. The membrane aerated biofilm reactor for nitrogen removal from mainstream anaerobic processes. 89th Annual Water Environment Federation Technical Exhibition and Conference (WEFTEC), New Orleans, LA, Sept 25-28, 2016.
182. **Desta, A. F., N. G. Love, K. R. Wigginton, H. Goetsch and R. Lahr.** 2016. Keynote lecture: Metagenomic analysis of biological contaminants in source-separated urine undergoing sanitization.: A way towards sustainable development in low-income countries. Microbial Ecology and Biofilm Specialists Conference, Copenhagen, Denmark, Sept 3-5, 2016.
183. **Stadler, L. and N. G. Love.** 2016. Associations between microbial community activity, pharmaceutical biotransformation rates, and DO concentration in wastewater treatment. Microbial Ecology and Biofilm Specialists Conference, Copenhagen, Denmark, Sept 3-5, 2016.
184. **Goetsch, H., M. Imperiale, N. G. Love and K. R. Wigginton.** 2016. Refining liquid gold: Fate of human polyomavirus in urine diverted for fertilizer use. Microbial Ecology and Biofilm Specialists Conference, Copenhagen, Denmark, Sept 3-5, 2016.
185. **Wu, C.-C., T. M. Olson and N. G. Love.** 2016. Prevalence of Antibiotic Resistance Genes (ARGs) in Point-of-Use (PoU) Drinking Water Filters. Microbial Ecology and Biofilm Specialists Conference, Copenhagen, Denmark, Sept 3-5, 2016.
186. **Troutman, S., N. G. Love, B. Kerkez.** 2016. Predicting combined sewer flow through use of real-time, city-scale sensor data. Oral presentation, World Environmental and Water Resources Congress, ASCE, West Palm Beach, Florida, May 2016.
187. **Goetsch, H., R. Mullen, R. Lahr, A. Noe-Hays, D. Aga, C. Bott, B. Foxman, J. Jimenez, N. Love, T. Luo, K. Nace, K. Ramadugu, K. Wigginton.** 2015. Fate of pharmaceutical and biological contaminants through the preparation and application of urine derived fertilizers. International Water Association First Resource Recovery Conference. Ghent, Belgium, Aug 30-Sept 2, 2015.
188. **Delgado Vela, J., Martin, K. J., McFarland, A., Beaton, N., Stadler, L.B., Skerlos, S.J., Raskin, L., Bott, C. B., Love, N.G.** Removing nitrogen from effluents of anaerobic wastewater treatment processes: Understanding control and operation through biofilm modeling. 250th American Chemical Society National Meeting and Exhibition. Boston, MA, August 16-20, 2015. (podium).
189. **Delgado Vela, J., K. J. Martin, A. R. McFarland, N. L. Beaton, L. B. Stadler, C. B. Bott, L. Raskin, S. J. Skerlos, N. G. Love, A. Salveson, T. Rauch-Williams.** 2015. Advancing energy neutral wastewater treatment: removing nitrogen and dissolved methane from dilute anaerobic effluents. AEESP Biannual Conference, Yale University, June 14-16 (poster presentation).
190. **Stadler, L. B., J. Delgado Vela and N. G. Love.** 2015. Elucidating the relationship between wastewater treatment plant microbial diversity and pharmaceutical fate. AEESP Biannual Conference, Yale University, June 14-16 (podium presentation), *winner of best student paper award*.
191. **Goetsch, H., R., Lahr, R. Mullen, A. Noe-Hays, D. Aga, C. B. Bott, J. Jimenez, N. G. Love, K. Nace and K. Wigginton.** 2015. Fate of organic contaminants in urine-derived fertilizers. AEESP Biannual Conference, Yale University, June 14-16 (poster presentation).

192. **Lahr, R., H., Goetsch, A. Noe-Hays, D. Aga, C. B. Bott, B. Foxman, J. Jimenez, N. G. Love, T. Luo, R. Mullen, K. Nace, K. Ramadugu and K. Wigginton.** 2015. Microbial communities in urine separated for nutrient recovery. AEEPS Biannual Conference, Yale University, June 14-16 (poster presentation).
193. **Stadler, L. B., J. Delgado Vela and N. G. Love.** 2015. Elucidating the relationship between wastewater treatment plant microbial diversity and pharmaceutical fate. American Society for Microbiology, New Orleans, LA, May 30-June 2 (Poster Presentation).
194. **Goetsch, H., R. Lahr, A. Desta, N. G. Love, C. Bott, A. Gagnon, K. Nace, A. Noe-Hays, D. S. Aga, R. Mullen, J. Jimenez, K. Wigginton,** 2015. Fate of pharmaceutical and biological contaminants through the preparation and application of urine-derived fertilizers. 88th Annual Water Environment Federation Technical Exhibition and Conference (WEFTEC), Chicago, IL, Sept 27-30, 2015.
195. **Stadler, L., J. Delgado Vela and N. G. Love.** 2015. Impact of low dissolved oxygen and microbial community on pharmaceutical biotransformations during wastewater treatment. 88th Annual Water Environment Federation Technical Exhibition and Conference (WEFTEC), Chicago, IL, Sept 27-30, 2015.
196. **Delgado-Vela, J., K. J. Martin, N. Beaton, A. McFarland, L. B. Stadler, C. B. Bott, S. J. Skerlos, L. Raskin, N. G. Love.** 2015. Nutrient removal from mainstream anaerobic processes using a membrane aerated biofilm reactor and a granular sludge sequencing batch reactor. 88th Annual Water Environment Federation Technical Exhibition and Conference (WEFTEC), Chicago, IL, Sept 27-30, 2015.
197. **Delgado Vela J., Martin, K. J., Beaton, N., McFarland, A., Stadler, L., Bott, C. B., Raskin, L., Skerlos, S.J., and Love, N.G.** 2014. Nitrogen Removal Downstream of an Anaerobic Membrane Bioreactor for Domestic Wastewater Treatment. IWA Global Challenges: Sustainable Wastewater Treatment and Resource Recovery. Kathmandu, Nepal, October 26-30.
198. **Delgado Vela, J., Martin, K.J., Stadler, L.B., Bott, C. Skerlos, S.J., Raskin, L., Love, N.G.,** 2014. Nutrient Removal from Mainstream Anaerobic Effluents: Linking Biofilm Modeling to Experimental Design. 87th Annual Water Environment Federation Technical Exhibition and Conference (WEFTEC), New Orleans, LA, September 28-October 1. (poster presentation)
199. **Stadler, L. B., Su, L., Aga, D. S., and Love, N. G.** 2014. Understanding the impact of low dissolved oxygen treatment on nitrifier community characteristics and micropollutant fate. 4th International Conference on Occurrence, Fate, Effects, and Analysis of Emerging Contaminants in the Environment. Iowa City, IA, August 19 – 22, 2014.
200. **Love, N. G.** 2014. Achieving resilience and sustainability in the global urban water sector – a role for environmental chemistry. Special Seminar Series: Women in Environmental Chemistry and Engineering, Abstract 312-ENVR, 248th American Chemical Society National Meeting. San Francisco, CA, August 10-14. (podium presentation)
201. **Stadler, L. B., Su, L., Aga, D. S., and Love, N. G.** 2014. Understanding the impact of low dissolved oxygen treatment on nitrifier community characteristics and micropollutant fate. Abstract 415-ENVR, 248th American Chemical Society National Meeting. San Francisco, CA, August 10 – 14, 2014. (podium presentation)
202. **Wu, C.-C., K. J. Martin, A. Perez De La Rosa, G. Ryskamp, N. G. Love and T. M. Olson.** 2014. Effect of disinfection by-products on antibiotic resistance in the bacterial communities of point-of-use (PoU) drinking water filters. Abstract 473-ENVR, 248th American Chemical Society National Meeting. San Francisco, CA, August 10 – 14, 2014. (podium presentation)
203. **Lester, Y., N. G. Love, D. S. Aga, R. Singh and K. G. Linden.** 2014. Demonstrating advanced oxidation/biofiltration to remove emerging contaminants from wastewater: A pilot study. Abstract 130-ENVR, 248th American Chemical Society National Meeting. San Francisco, CA, August 10 – 14, 2014. (podium presentation)
204. **Aga, D. S., K. G. Linden, N. G. Love, R. Singh, Y. Lester, O. S. Keen and S. Baik.** 2014. Identification of degradation products of carbamazepine and iopromide after UV/H₂O₂ advanced oxidation and

- biodegradation. 283-ENVR, 248th American Chemical Society National Meeting. San Francisco, CA, August 10 – 14, 2014. (podium presentation)
205. **Stadler, L. B.,** Smith, A. L., Jain, A. K., Martin, K. J., Delgado Vela, J., Puente, P., Cao, L., Frenette, S., Bott, C. B., Rauch-Williams, T., Shimada, T., Salvesson, A., Love, N. G., Raskin, L., and Skerlos, S. J. 2014. Integrating Life Cycle Assessment and Experimental Research: Evaluating Anaerobic Membrane Bioreactors in Domestic Wastewater Treatment for Energy Recovery. Borchardt Conference. Ann Arbor, MI, February 25 – 26, 2014. (podium presentation)
 206. **Stadler, L. B.,** Su, L., Aga, D. S., and Love, N. G. 2014. Understanding the impact of low dissolved oxygen treatment on nitrifier community characteristics and micropollutant fate. 4th International Conference on Occurrence, Fate, Effects, and Analysis of Emerging Contaminants in the Environment. Iowa City, IA, August 19 – 22. (podium presentation)
 207. **Stadler, L. B.,** Smith, A. L., Cao, L., Love, N. G., Raskin, L., and Skerlos, S. J. 2013. Life Cycle Comparison of Emerging and Established Wastewater Energy Recovery Systems. In *Mainstream Anaerobic Treatment Systems for Energy Neutral Wastewater Management Workshop at the 86th Annual Water Environment Federation Technical Exhibition and Conference (WEFTEC)*, Chicago, IL, October 5 – 9.
 208. **Stadler, L.B.,** A.L. Smith, L. Cao, N.G. Love, L. Raskin, and S.J. Skerlos, 2013. Energy Recovery from Wastewater: Life Cycle Comparison of Carbon Removal Technologies Upstream of Autotrophic Nitrogen Removal. *WEF/IWA Nutrient Removal and Recovery 2013: Trends in Resource Recovery and Use*, July 28-31, Vancouver, British Columbia, Canada.
 209. **Smith, A.L.,** T. Shimada, and L. Raskin, 2013. Syntrophic interactions in full-scale two-phase anaerobic digesters determined by pyrosequencing. *5th International Conference on Microbial Ecology and Water Engineering Conference*, July 7-10, Ann Arbor, Michigan.
 210. **Stadler, L.B.,** A.L. Smith, L. Cao, N.G. Love, L. Raskin, and S.J. Skerlos, 2013. Life cycle comparison of emerging and established wastewater energy recovery systems. Poster presentation. *2013 AEESP Education & Research Conference*, July 14-16, Denver, Colorado.
 211. **Delgado-Vela, J.,** Stadler, L.B., and Love, N. G. 2013. Elucidating Biotransformation of Pharmaceuticals by Methanotrophic Bacteria. Association of Environmental Engineering & Science Professors 50th Anniversary Conference. Golden, CO, July 14 – 16.
 212. **Moline, C. J.,** **Stadler, L. B.,** Su, L., Ernstoff, A. S., Dapcic, A. D., Vela, J. D., Aga, D., and Love, N. G. 2012. Pharmaceutical Fate Under Varying Redox Treatment Environments. Proceedings of the 85th Annual Water Environment Federation Technical Exhibition and Conference (WEFTEC), New Orleans, LA, September 29 - October 3.
 213. **Smith, A. L.,** **Stadler, L. B.,** Cao, L., Love, N. G., Raskin, L., and Skerlos, S. J. 2012. Performance and environmental impacts of anaerobic membrane bioreactor for low-strength wastewater treatment, Proceedings of the 85th Annual Water Environment Federation Technical Exhibition and Conference (WEFTEC), New Orleans, LA, September 29-October 3.
 214. **Jimenez, J.,** C. B. Bott, N. G. Love and J. Bratby. 2012. Source separation of urine as an alternative solution to nutrient management in wastewater treatment plants: a model-based analysis. Water Environment Federation Technical Exhibition and Conference. New Orleans, LA. Sept 30-Oct 3, 2012. Podium presentation.
 215. **Love, N.G.** 2012. Challenges in predicting micropollutant fate in biological processes. WWMod2012 workshop on modelling micropollutant fate in biological processes, Mont-Sainte-Anne, Québec, Canada, Feb 26-28, 2012. Podium presentation
 216. **Colby, A.,** Khunjar, W., Pinto, A., Ghosh, S., Raskin, L., Love, N. Impact of Copper Stress on Nitrification Performance and the Ammonia Oxidizer Community Structure in Activated Sludge. *2011 AEESP Education & Research Conference*, Tampa, Florida, July 10-12, 2011.

217. **Smith, A.L., H.J. Dorer, N.G. Love, S.J. Skerlos, and L. Raskin.** 2011. Psychrophilic anaerobic membrane bioreactor for domestic wastewater treatment. *2011 AEESP Education & Research Conference*, Tampa, Florida, July 10-12, 2011.
218. **Smith, A.L., N.G. Love, S. Skerlos, and L. Raskin,** 2012. Effects of changes in temperature and hydraulic retention time on performance and environmental impacts of anaerobic membrane bioreactors for domestic wastewater treatment. *Leading-Edge Conference on Water and Wastewater Technologies*, June 3-7, Brisbane, Australia.
219. **Smith, A.L., Z. Li, H. Dorer, N.G. Love, S. Skerlos, and L. Raskin,** 2011. Energy recovery from domestic wastewater using anaerobic membrane bioreactors. *2011 Borchardt Conference*, February 23-24, Ann Arbor, Michigan.
220. **Guest, J. S., N. G. Love, S. Snowling, C. B. Bott, G. T. Daigger and S. J. Skerlos.** Quantitative sustainable design of wastewater treatment plants. *Water Environment Federation Technical Exhibition and Conference*. Los Angeles, CA. October 15-19, 2011. Podium presentation.
221. **Keen, O., S. Baik, K. Linden, D. Aga and N. G. Love.** 2011. Degradation of carbamazepine during UV/H₂O₂ treatment of wastewater. *Water Environment Federation Technical Exhibition and Conference*. Los Angeles, CA. October 15-19, 2011. Podium presentation.
222. **Smith, A., N. G. Love, S. J. Skerlos, and L. Raskin.** Role of membrane biofilm in psychrophilic anaerobic membrane bioreactor for domestic wastewater treatment. *Water Environment Federation Technical Exhibition and Conference*. Los Angeles, CA. October 15-19, 2011. Podium presentation.
223. **Colby, A., Khunjar, W., Pinto, A., Ghosh, S., Raskin, L., Love, N.** Impact of Copper Stress on Ammonia Oxidizer Activity and Community Structure in Nitrifying Activated Sludge. *Water Environment Federation Technical Exhibition and Conference*. Los Angeles, CA. October 15-19, 2011. Podium presentation.
224. **Smith, A.L., N.G. Love, S. Skerlos, and L. Raskin,** 2011. Analysis of microbial communities in an anaerobic membrane bioreactor for domestic wastewater treatment at psychrophilic conditions. *2011 Biogas Microbiology Conference*, September 14-16, Leipzig, Germany.
225. **Colby, A., Khunjar, W., Pinto, A., Ghosh, S., Raskin, L., Love, N.** 2011. Effect of Copper Stress on Ammonia Oxidizer Community Structure and Nitrification Performance in a Nitrifying Activated Sludge Wastewater Treatment Process. *2nd International Conference on Nitrification*. Nijmegen, the Netherlands. July 1-7.
226. **Guest, J.S., S.J. Skerlos, N.G. Love.** 2011. Quantitative sustainable design of wastewater treatment plants. *Engineering Sustainability 2011*, Pittsburgh, PA, March 10-12, 2011, Podium presentation.
227. **Cook, S. M., B.J. VanDuijn, S.J. Skerlos, N.G. Love.** Life cycle comparison of environmental impacts from alternative pharmaceutical disposal methods. *Engineering Sustainability 2011 Conference*, Pittsburgh, PA, April 11, 2011
228. **Smith, A.L., N.G. Love, S.J. Skerlos, and L. Raskin.** 2010. Anaerobic membrane bioreactors for sustainable domestic wastewater treatment at psychrophilic temperatures. *Proceedings of the 12th World Congress on Anaerobic Digestion*, Guadalajara, Mexico, November 1-4, 2010
229. **Smith, A.L., H.J. Dorer, N.G. Love, S.J. Skerlos, and L. Raskin.** 2011. Role of membrane biofilm in psychrophilic anaerobic membrane bioreactor for domestic wastewater treatment. *Proceedings of the 84th Annual Water Environment Federation Technical Exhibition and Conference*, Los Angeles, California, October 15-19, 2011.
230. **Pinto, A.J. and N.G. Love.** Impact of chemical perturbation on trophic interactions and its implications for ecosystem function in an engineered environment. *13th International Symposium on Microbial Ecology 2010*, Seattle, Washington. August 22-27, 2010
231. **Love, N.G., W. O. Khunjar, S. Mackintosh, S. Baik, and D. Aga.** The Relative Roles of Ammonia Oxidizing and Heterotrophic Activated Sludge Bacteria in Biotransforming 17 α -Ethinylestradiol and Trimethoprim. Podium presentation, *AEESP Special Session. 83rd Water Environment Federation Technical Exposition and Conference 2010*, New Orleans, LA, October 3-6, 2010.

232. **Smith, A.L., N.G. Love, S. Skerlos, and L. Raskin, 2010.** Anaerobic membrane bioreactors for sustainable domestic wastewater treatment at psychrophilic temperatures. *12th World Congress on Anaerobic Digestion*, October 31 - November 4, Guadalajara, Mexico. International Water Association.
233. **N. G. Love, W. O. Khunjar, J. Skotnicka-Pitak, S. Mackintosh, S. Baik, D. S. Aga, T. Yi, and W. F. Harper Jr. 2010.** Elucidating the role of ammonia oxidizing bacteria versus heterotrophic bacteria during the biotransformation of 17 α -ethinylestradiol and trimethoprim. Podium presentation. International Water Association World Water Congress and Exposition, Montreal, Quebec, Canada, Sept 20-24, 2010.
234. **W.O. Khunjar, J. Skotnicka-Pitak, S. Mackintosh, S. Baik, N. G. Love, D.S. Aga, W.F. Harper Jr. 2010.** Elucidating factors that influence the biotransformation of 17 α -ethinylestradiol and trimethoprim. Poster presentation. International Water Association Leading Edge Technology Conference, Phoenix, AZ, June 1-4, 2010.
235. **Guest, J. S., S. J. Skerlos and N. G. Love. 2010.** An optimization methodology for elucidating locality-specific sustainability trade-offs in wastewater treatment plant process selection. Poster presentation. International Water Association Leading Edge Technology Conference, Phoenix, AZ, June 1-4, 2010.
236. **Pinto, A.J., Hardin, S.C., Love, N.G., Fairey, A., Earle, J., Washington, P., Iler, P., Doane-Weideman, T., and Lagrange, R.** Remedial Intervention Strategies for Wastewater Treatment Plant Exposed to Heavy Metal Stress: Laboratory and Pilot Scale Evaluations. Podium presentation. *Proceedings of the 82nd Water Environment Federation Technical Exposition and Conference 2009*, Orlando, Florida, October 10-14, 2009.
237. **Khunjar, W. O., Skotnicka-Pitak, J., Celiz, M.D., Baik, S., Love, N.G., Aga, D.S., Harper Jr., W.F.** The Impact of Physiological State and Residual Organic Carbon on the Biotransformation of 17 α -Ethinylestradiol and Trimethoprim by Heterotrophic Bacteria. Podium Presentation. *82nd Annual Water Environment Federation Technical Exposition and Conference*, Orlando, Florida, October 10-14, 2009.
238. **Guest, J. S.; Cook, S. M.; Skerlos, S. J.; Love, N. G. 2009.** A methodology to assess the environmental impacts of upgrading wastewater infrastructure: A case study to evaluate energy recovery from black water. Podium presentation. *Proceedings of the 82nd Annual Water Environment Federation Technical Exhibition and Conference (WEFTEC)*, Orlando, Florida, October 10-14, 2009.
239. **Thomas, W.A., Bott, C.B., Regmi, P., Schafran, G., Pinto, A., Love, N.G., McQuarrie, J., Rutherford, B., Baulmer, R., Waltrip, D.** Evaluation of Nitrification Kinetics for a 2.0 MGD IFAS demonstration project. Podium presentation. *Proceedings of the 82nd Water Environment Federation Technical Exposition and Conference 2009*, Orlando, Florida, October 10-14, 2009.
240. **Cook, S. M., J. S. Guest, S. J. Skerlos, N. G. Love. 2009.** Environmental characteristics of different energy recovery systems from the management of sewage sludge and food waste. Podium presentation, *IWA Sustainable Management & Technologies of Sludges Conference*, Harbin, China, August 8-11, 2009.
241. **Pinto, A.J., N. G. Love, A. Fairey, J. Earle, P. Washington, P. Iler, T. Doane-Weideman, and R. Lagrange. 2009.** Integration of online sensors with corrective action strategies to detect, monitor, and mitigate toxic shock events at nutrient removal wastewater treatment plants. *Water Environment Federation: Nutrient Removal Conference*. Washington, DC. June 28-July 1, 2009.
242. **Pinto, A.J. and N. G. Love.** Post-stress recovery of a complex ammonia oxidizing bacterial community following heavy metal cadmium stress. Short podium presentation and poster presentation. *International Conference on Nitrification 1*. Louisville, KY, July 5-9, 2009.
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 323. **Ma, G. and** **Love, N. G.** 2000. Creating Anoxic and Microaerobic Conditions in Sequencing Batch Reactors Treating Volatile BTX Compounds. 2nd International Symposium on Sequencing Batch Reactor Technologies, Narbonne, France [see associated *Water Science and Technology* publication above].
 324. **Fouratt, M.,** Smithers, C., Love, N. G., and Stevens, A. M. 2000. The characterization of nitrifying bioaugmentation cultures. Poster presentation. *Abstracts of the 100th General Meeting of the American Society for Microbiology*, Los Angeles, CA. p. 491.

325. **Fouratt, M., Smithers, C., Love, N. G., and Stevens, A. M.** 2000. The characterization of nitrifying bioaugmentation cultures. Poster presentation. *Abstracts of the 100th General Meeting of the American Society for Microbiology*, Los Angeles, CA. p. 491.
326. **Delahaye, A., Gilmore, K. R., Husovitz, K. J., Love, N. G., Holst, T., Novak, J. T.** 1999. Distribution and characteristics of biomass in pilot-scale upflow biological aerated filters treating domestic wastewater. Podium presentation. *Proceedings of the International Association on Water Quality Conference on Biofilm Systems*, New York, NY, October 17-21.
327. **Love, N. G., Gilmore, K. G., Husovitz, K. J., Delahaye, A. P., Novak, J. T. and Little, J. C.** 1999. Performance of a Biological Aerated Filter System Treating Domestic Wastewater for BOD, Ammonia and TSS Removal: Pilot Plant Results. Podium presentation. *Proceedings of the Water Environment Federation 72nd Annual Conference and Exposition*, New Orleans, LA, October 9-13, 1999.
328. **Husovitz, K. L., Gilmore, K. R., Delahaye, A. P., Love, N. G., and Little, J. C.** 1999. The influence of upflow liquid velocity on nitrification in a biological aerated filter. Podium presentation. *Proceedings of the Water Environment Federation 72nd Annual Conference and Exposition*, New Orleans, LA, October 9-13, 1999.
329. **Love, N. G., Bott, C. B., Duncan, A. J., Terlesky, K. C.** 1999. Using the molecular stress response as an indicator of system stress in complex environmental systems. Selected Podium Presentation, Association of Environmental Engineering and Science Professors Research Frontiers Conference, Pennsylvania State University, University Park, PA.
330. **Bott, C. B., Terlesky, K. C., Duncan, A. Jane, Wheeler, J., and Love, N. G.** 1998. The immunochemical detection of stress proteins as an indicator of toxic discharges to activated sludge systems. Podium presentation. *Proceedings of the Water Environment Federation 71st Annual Conference and Exposition*, Orlando, FL, October 3-7, 1998. 1:203-214.
331. **Phillips, J. B., and Love, N. G.** 1998. Biological denitrification using upflow biofiltration in recirculating aquaculture systems: pilot-scale experience and implications for full-scale. Podium presentation. *Proceedings of the Second International Conference on Successes and Failures in Commercial Recirculating Aquaculture*, Roanoke, VA. pp 171-178.
332. **Gilmore, K. R., K. J. Husovitz, T. Holst, and N. G. Love.** 1998. Influent of organic and ammonia loading on nitrifier activity and nitrification performance for a two-stage biological aerated filter system. 1998. *Proceedings of the International Specialty Conference on Microbial Ecology of Biofilms: Concepts, Tools, and Applications*, International Association on Water Quality, Lake Bluff, Illinois, October 8-10, 1998. 309-316.
333. **Terlesky, K. C. and Love, N. G.** 1998. Detection of Hsp60 in activated sludge following exposure to xenobiotic compounds. Poster Presentation, *Abstracts of the 98th General Meeting of the American Society for Microbiology*, Atlanta, Georgia, p. 444.
334. **Terlesky, K. C., and Love, N. G.** 1998. Photoheterotrophy in activated sludge, Poster Presentation, *Abstracts of the 98th General Meeting of the American Society for Microbiology*, Atlanta, Georgia, p. 423.
335. **Fettig, J. D., and Love, N. G.** 1997. BTX degradation in activated sludge culture under denitrifying conditions. Podium presentation. *Proceedings from the 2nd International Conference on Microorganisms in Activated Sludge and Biofilm Processes*, International Association on Water Quality, Berkeley, CA, pp 579-582.
336. **Lubkowitz, E. M. and Love, N. G.** 1997. Development of a single sludge biological treatment scheme that incorporates nitrogen removal for a wastewater containing compounds inhibitory to nitrification. Podium presentation. *Proceedings of the Water Environment Federation 70th Annual Conference and Exposition*, Chicago, IL, October 18-22, 1997. 3(2):577-588.
337. **Rasnake, W. J., Love, N. G., Black, W. L., and Gruber, D.** 1997. Application of a toxicity reduction evaluation at a seafood processing facility which emphasized source reduction and treatment

- efficiency to minimize environmental risk. Podium presentation. *Proceedings of the 29th Annual Mid-Atlantic Industrial and Hazardous Waste Conference*, Roanoke, VA, pp 263-269.
338. **Terlesky, K. C.** and Love, N. G. 1997. Analysis of total protein present in activated sludge: applicability to monitoring the induction of indicator proteins in a microbial consortium. Poster presentation. *Abstracts of the 97th General Meeting of the American Society for Microbiology*, Miami Beach, Florida, p. 469.
339. **Novak, J. T., Smith, M. L., and Love, N. G.** 1996. The impact of cationic salt addition on the settleability and dewaterability of an industrial activated sludge. Podium presentation. *Proceedings of the Water Environment Federation 69th Annual Conference and Exposition*, 2:211-222.
340. **Love, N. G.** and Grady, C. P. L. Jr., 1995. Impact of glucose and m-toluate on the rate and extent of benzoate-mediated TOL plasmid instability. Poster presentation. *Abstracts of the 95th General Meeting of the American Society for Microbiology*, Washington, D.C.
341. **Lu, Y.-T., Love, N. G., and Grady, C. P. L. Jr.** 1993. A microscopic technique to detect plasmid-free cells in a background of plasmid-containing cells. Poster presentation. *Abstracts of the 93rd General Meeting of the American Society for Microbiology*, Atlanta, Georgia.

Published Reports (not peer reviewed)

342. Margaret R. Mulholland*, Nancy G. Love*, Deborah A. Bronk, Vikram Pattarkine, Amit Pramanik, H. David Stensel. 2009. Establishing a research agenda for assessing the bioavailability of wastewater treatment plant-derived effluent organic nitrogen in treatment systems and receiving waters. Chesapeake Bay Scientific and Technical Advisory Committee Publication 09-002, <http://www.chesapeake.org/stac/Pubs/eonreport.pdf>. (*co-chairs)
343. Mulholland, M. R., Love, N. G., Pattarkine, V. M., Bronk, D. A. and Canuel, E. 2007. Bioavailability of Organic Nitrogen from Treated Wastewater. Chesapeake Bay Scientific and Technical Advisory Committee Publication 07-001.

Conference Presentations (not listed elsewhere; presenter in bold, student designations as defined previously)

344. Several posters to be presented at the Association of Environmental Engineering and Science Professors Biannual Conference, Arizona State University, Tempe, Arizona. May 15-16, 2019.
- **A. Noe-Hays, A. Davis, N. J. Lowe, J. Eraci, Y. J. Qoi, A. Sabido, K. Nace, E. Rodriguez, K. Wigginton, N. Love.** Onsite production of concentrated urine-derived fertilizer in building-scale systems using remote process monitoring and control.
 - **E. Rodriguez, W. Tameh, K. Wigginton, N. G. Love.** Comparative Examination of Pharmaceutical Degradation in Synthetic Urine by a Dielectric Barrier Discharge Plasma Jet and UV/H₂O₂ Reactor.
 - **Kerkez, B., N. G. Love, R. L. McCaffery, M. Bartos, J. Montgomery, E. TerBeek.** A First Year College Course on Smart Water Systems.
345. Several talks were given by invitation at the Rich Earth Institute's Urine Summit, August 16-17, 2017 in Brattleboro, VT. As PI, Nancy Love was involved with developing content for all these slides and overseeing their presentations.
- Malavika Sahai. Social Research for the UM INFEWS Project.
 - Heather Goetsch. Microbial risks in source-separated urine.
 - Enrique Rodriguez. Urine-derived fertilizer tool.
 - Dylan Raye-Leonard. Pilot-scale urine diversion and processing @ UMICH
346. **Enrique Rodriguez, Dylan Raye-Leonard and Heather Goetsch.** 2017. Overview and tour of the urine-diversion and urine processing @Michigan. AEESP Biannual Conference, June 21, 2017.
347. **McFarland, A., Larsen, L., Love, N.G.** Stormwater Management in Low-Resource Settings Using Green Infrastructure. Fall 2017. Dow Sustainability Symposium, Poster Presentation, Ann Arbor, MI.

348. Delgado Vela, J., Stadler, L., Love, N.G. 2014. Elucidating Biotransformation of Pharmaceuticals by the Methanotroph *Methylosinus trichosporium* Ob3b. Gordon Research Conference Environmental Sciences: Water, Plymouth, NH, June 22-27. (poster presentation)
349. Stadler, L. B., Su, L., Stevens, L., Delgado Vela, J., Aga, D. S., and Love, N. G. 2013. Impact of Redox Environment and Microbial Populations on Pharmaceutical Biotransformation. Poster presentation. IWA 5th International Conference on Microbial Ecology and Water Engineering, Ann Arbor, MI, July 7 – 10. (poster presentation)
350. Stadler, L. B., Su, L., Aga, D. S., and Love, N. G. 2013. Impact of Dissolved Oxygen Concentration on Pharmaceutical Biotransformations during Wastewater Treatment. Poster presentation. Engineering Graduate Symposium, University of Michigan, Ann Arbor, MI, November 15. (1st place in Civil & Environmental Engineering track poster competition).
351. Stadler, L. B., Su, L., Aga, D. S., and Love, N. G. 2013. Impact of Redox Environment and Microbial Populations on Pharmaceutical Biotransformation during Wastewater Treatment. Poster presentation. 86th Annual Water Environment Federation Technical Exhibition and Conference (WEFTEC), Chicago, IL, October 5 – 9.
352. Delgado Vela, J., Stadler, L., Love, N.G. 2013. Elucidating Biotransformation of Pharmaceuticals by Methanotrophic Bacteria. Association of Environmental Engineering & Science Professors (AEESP) 50th Anniversary Conference, Golden CO, July 14-16.
353. Stadler, L. B., Moline, C. J., Ernstoff, A. S., Su, L., Dapcic, A. D., Aga, D., and Love, N. G. 2012. Pharmaceutical Fate in Biological Treatment Reactors Across Varying Redox Environments. Poster presentation. Gordon Research Conference, Environmental Science: Water. Holderness, NH, June 25 - 29.
354. Love, N.G. Challenges in Predicting Micropollutant Fate in Biological Processes. WWTMod2012 Workshop on Modelling Micropollutant Fate in Biological Processes, Mont-Sainte-Anne, Québec, Canada, Feb 26-28, 2012.
355. Keen, O., Baik, S., Stadler, L. B., Linden, K. G., Aga, D. S., and Love, N.G. 2011. Assessing the Use of Advanced Oxidation and Biofiltration to Remove Recalcitrant Pharmaceuticals Downstream of Biological Treatment. Borchardt Conference, University of Michigan, Ann Arbor, MI, February 23.
356. Cook, S. M. and N.G. Love. A Regional Strategy for Managing Food Processing and Septage Waste: The Grand Traverse Region Collaboration. Oral presentation at *Biogas Summit*. Flint, MI, October 29, 2010.
357. Smith, A.L., H.J. Dorer, N.G. Love, S.J. Skerlos, and L. Raskin. Methane Production from Domestic Wastewater using Anaerobic Membrane Bioreactors. Oral presentation at *Biogas Summit*, Flint, Michigan, October 29, 2010.
358. Cook, S. M. and N.G. Love. A Regional Strategy for Managing Food Processing and Septage Waste: The Grand Traverse Region Collaboration. *Michigan Food Processors Summit*. Mt. Pleasant, MI, October 20, 2010
359. S. Ghosh, C. M. Cremers, U. Jakob, and N. G. Love. Chlorophenols modulate expression of the multidrug resistance efflux pump MexAB-OprM in *Pseudomonas aeruginosa*. Gordon Research Conference on Environmental Sciences: Water. Holderness, New Hampshire. June 20-25, 2010
360. Guest, J.S., S. J. Skerlos, N. G. Love. 2011. Quantitative sustainable design of wastewater treatment plants. Borchardt 2011 Conference: A Seminar on Advancements in Water and Wastewater, Ann Arbor, MI. February 24, 2011. Podium presentation.
361. Cook, S. M. and N.G. Love. 2011. Two-phase anaerobic codigestion of septage and food processing waste: designing a reliable, regional waste management strategy. *Borchardt 2011 Conference*, Ann Arbor, MI, February 23-24, 2011. Poster presentation.
362. S. Ghosh, J. F. Muller, A. M. Stevens and N. G. Love. Chlorinated phenols and multidrug resistance in *Pseudomonas aeruginosa*. *Borchardt 2011 Conference*, Ann Arbor, Michigan. February 23-34, 2011. Poster presentation

363. **Smith, A.L.**, Z. Li, H.J. Dorer, N.G. Love, S.J. Skerlos, and L. Raskin. 2011. Energy recovery from domestic wastewater using anaerobic membrane bioreactors. Presented at *Borchardt 2011 Conference*, Ann Arbor, Michigan, February 23-24, 2011. Podium presentation.
364. **Guest, J.S.**, S.J. Skerlos, N.G. Love. 2010. An optimization methodology for elucidating locality-specific sustainability trade-offs in wastewater treatment plant process selection. *IWA Leading Edge Conference on Water and Wastewater Technologies*, Phoenix, AZ, June 2, 2010. Poster presentation.
365. **Knowlton, K. F.**, Love, N. G., Thames, T. H., and **Z. Zhao**. 2010. Is manure turning boy fish into girl fish? An emerging environmental challenge for livestock producers. In *Proceedings of the Virginia State Feed Association Conference*, Roanoke, VA February 19, 2010, pp 83-89.
366. **Guest, J. S.**, Love, N. G., **Lamp, J.**, Ellis, M. W., Naha, S., and Puri, I. K. 2008. Development of a Nitrifying Microbial Fuel Cell for Sustainable Wastewater Treatment. Podium presentation. The Borchardt Conference, Ann Arbor, MI, Feb 27, 2008.
367. **Khunjar, W. O.**, **Love, N. G.**, **Skotnicka-Pitak, J.**, Aga, D. S., **Yi, T.**, and Harper, W. F. Jr. 2008. Biotransformation of pharmaceuticals and personal care products during nitrification: the role of ammonia oxidizing bacteria. Podium presentation. The Borchardt Conference, Ann Arbor, MI, Feb. 27, 2008.
368. **Aruguete, D.M.**, **Guest, J.S.**, ShROUT, J. D., Love, N. G., Hochella, Jr., M. F. 2008. Bacteria quantum dot interactions and their environmental implications. Poster presentation. *Environmental Nanoparticles: Science, Ethics and Policy*, University of Delaware, Newark, DE, November 10, 2008.
369. **Skotnicka-Pitak, J.**, Aga, D. S., **Khunjar, W. O.**, Love, N. G., **Yi, T.**, Harper Jr., W. F. 2007. Characterization of EE2 metabolite in bioreactors with pure cultures of *Nitrosomonas europaea* and in activated sludge using LC/ITMS. *56th ASMS Conference on Mass Spectrometry*.
370. **Aruguete, D.M.**, **J.S. Guest**, J.D. ShROUT, N.G. Love, and M.F. Hochella, Jr. 2007. Bacterial physiology and viability in the presence of quantum dot nanoparticles: towards an environmental perspective. American Geophysical Union Fall Meeting, San Francisco, California, December 10, 2007.
371. **Pinto, A.J.**, **Hardin, S.C.**, **Guest, J.S.**, Love, N.G., Shaw, A. 2007. Comparing toxic shock event response protocols for wastewater treatment plants. Podium Presentation. Virginia American Water Works Association and Virginia Water Environment Association Joint Annual Meeting (WaterJAM), Hampton, VA, September 16-20, 2007.
372. **Guest, J.S.**, **A.J. Pinto**, N.G. Love, and A. Shaw. Corrective action strategies for enhanced biological phosphorus removal wastewater treatment plants during short-term and prolonged toxic shock events. Podium Presentation. Virginia American Water Works Association and Virginia Water Environment Association Water Joint Annual Meeting 2007 (Water JAM), Hampton, Virginia, September 16-20, 2007. *Winner 2007 Best Student Paper Award*.
373. **Kelly, R. T.** and Love, N. G. 2007. Detecting nitrification problems: A comparison of methods. Podium presentation at the Pacific Northwest Clean Water Association Annual Conference, September 9-12, 2007, Vancouver, British Columbia.
374. **Guest, J. S.**, Naha, S., **Frey, S.**, **Sole, J.D.**, Love, N.G., Puri, I.K., Ellis, M. W. 2007. Development of a Nitrifying Microbial Fuel Cell for Sustainable Wastewater Treatment. Virginia Tech's Deans' Forum on the Environment. Blacksburg, VA. February 26, 2007, poster presentation. *First Place Student Poster – Environmental Technologies Category*.
375. **Zhao, Z.**, Knowlton, K. F., Love, N. G. 2007. Can we remove estrogens in dairy manure during storage? Virginia Tech's Deans' Forum on the Environment. Blacksburg, VA. February 26, 2007, poster presentation. *First Place Student Poster - Natural Environment Category*.
376. **Pinto, A.J.**, **Guest, J.S.**, Love, N.G., Shaw, A. 2007. Process controls at nutrient removal wastewater treatment plants during toxic shock events. Virginia Tech's Deans' Forum on the Environment. Blacksburg, VA. February 26, 2007, poster presentation.

377. Khunjar, W. O., Baik, S., Celiz, D., Yi, T., Henriques, I. D. S., Love, N. G., Aga, D. S., and Harper Jr., W. F. 2007. Evaluation of the fate of environmentally relevant micropollutants. Virginia Tech's Deans' Forum on the Environment. Blacksburg, VA. February 26, 2007, poster presentation.
378. Gilmore, K. R., Love, N. G. and Smets, B. F. 2007. Nitrification and autotrophic nitrogen removal in a hollow-fiber membrane-aerated biofilm reactor. Virginia Tech's Deans' Forum on the Environment. Blacksburg, VA. February 26, 2007, poster presentation.
379. Ikuma, K., Henriques, I. D. S., Rzigalinski, B. A., Love, B. J., and Love, N. G. 2007. Predicting the public health impact of oxidative toxins using a bacterial glutathione-gated potassium efflux stress response biosensor. Virginia Tech's Deans' Forum on the Environment. Blacksburg, VA. February 26, 2007, poster presentation.
380. Fraga-Muller, J., Ikuma, K., Stevens, A. M., and Love, N. G. 2007. Organic contaminants cause increased antibiotic resistance in *Pseudomonas aeruginosa*. Virginia Tech's Deans' Forum on the Environment. Blacksburg, VA. February 26, 2007, poster presentation.
381. Gungor, K., Arogo Ogejo, J., Knowlton, K. F., Love, N. G. 2007. Biological phosphorus removal to produce "Designer Manures" for dairy farms. Virginia Tech's Deans' Forum on the Environment. Blacksburg, VA. February 26, 2007, poster presentation.
382. Arogo Ogejo, J., Gungor, K., Wen, Z., Hu, Z., Yao, T., Love, N. G., Knowlton, K. F. 2007. Recovery of phosphorus from dairy manure as struvite. Virginia Tech's Deans' Forum on the Environment. Blacksburg, VA. February 26, 2007, poster presentation.
383. DeBusk, J., Arogo Ogejo, J., Love, N. G., Knowlton, K. F. 2007. Adjusting N:P ratios in liquid dairy manure through nitrification and chemical phosphorus removal to match crop fertilizer requirements. Virginia Tech's Deans' Forum on the Environment. Blacksburg, VA. February 26, 2007, poster presentation.
384. Beck, J., Gilmore, K. R., Knowlton, K. F., Arogo Ogejo, J., Love, N. G. 2007. Nitrogen removal from dairy waste using deammonification fueled by fermented dairy manure. Virginia Tech's Deans' Forum on the Environment. Blacksburg, VA. February 26, 2007, poster presentation.
385. Muller, J. F., Stevens, A. M. and Love, N. G. 2006. Organic contaminants cause increased antibiotic resistance in *Pseudomonas aeruginosa*. Poster presentation. Environmental Science – Water Gordon Research Conference, June 25-30, 2006, Holderness School, Plymouth, New Hampshire.
386. Zhao, Z., Knowlton, K. F., Love, N. G., and Fang, Y. 2006. Estrogen content of treated dairy manure. Virginia Water Science and Technology Symposium, November 1-3, 2006, Blacksburg, VA. 2006 Best Student Presentation Award.
387. Capuno, R. E., Love, N. G. and Smets, B. F. 2006. Mathematical modeling of nitrogen removal via a coupled nitrification:anaerobic ammonia oxidation biofilm in a hollow fiber membrane bioreactor. Virginia Water Environment Association Annual Meeting, May 1-3, 2006, Roanoke, VA. 2006 Best Student Paper Award.
388. Muftugil, M., Knowlton, K. F., and Love, N. G. 2005. Using enhanced biological phosphorus removal to minimize nutrient delivery from dairy farms to receiving waters. Presentation at AWWA/VWEA Joint Annual Meeting, Virginia Beach, Virginia, September 26-28, 2005.
389. Khunjar, W., Sweetman, P., Knowlton, K. F., Smets, B. F. and Love, N. G. 2005. Treatment of anaerobically stabilized dairy waste with an oxygen limited autotrophic nitrification plus denitrification (OLAND) fixed film reactor: startup and maintenance issues. Presentation at AWWA/VWEA Joint Annual Meeting, Virginia Beach, Virginia, September 26-28, 2005.
390. Haley, M., Grandstaff, J. and Love, N. G. 2005. Solving a mystery: a case study using root cause analysis to decipher a toxic upset event. Presentation at AWWA/VWEA Joint Annual Meeting, Virginia Beach, Virginia, September 26-28, 2005.
391. Muftugil, M. B., Love, N. G. and Knowlton, K. F. 2005. Using Enhanced Biological Phosphorus Removal (EBPR) to Alter the Nitrogen:Phosphorus Ratio of Dairy Manure and to Minimize Nutrient

- Delivery to Receiving Waters, Water Environment Federation Innovative Uses of Agricultural Wastes Conference, Chicago, IL, July 1-3, 2005.
392. Xu, Y., Linares, K., Meehan, K. A., Love, N. G. and Love, B. J. 2004. pH dependent optical properties of surface modified gold nanoparticles using bovine serum albumin coating. NSTI Nanotechnology Conference and Trade Show, Boston, MA, March 2004.
 393. Kelly II, R. T., and Love, N. G. 2004. Investigating the role of oxidative stress mechanisms in chemically inhibited nitrifiers. Poster presentation. Environmental Science – Water Gordon Research Conference, June 27-July 1, 2004, Holderness School, Plymouth, New Hampshire.
 394. Sandu, S., Hallerman, E. and Love, N. G. 2004. Ozone treatability and pilot-scale treatment for aquaculture effluent recovery and reuse. Presented at the International Conference on Successes and Failures in Commercial Recirculating Aquaculture, Roanoke, VA, July 2004.
 395. Fleming, D., Linares, K., Xu, Y., Love, B., Love, N. and Meehan, K. 2004. Use of immobilized bacterial elements in an environmental biosensor. The Eighth World Conference on Biosensors, Granada, Spain. May 24-26, 2004.
 396. Chakraborty, I., Rhodes, R.R., Stevens, A.M., and Love, N. G. 2004. Monitoring the adaptation of an enriched bacterial consortium in response to chemical stressors using DGGE and sequencing. Poster Presentation, 10th International Symposium on Microbial Ecology, Cancun, Mexico, August 22-27, 2004.
 397. Kelly, R. T. and Love, N. G. Mechanisms of chemical inhibition of nitrification in wastewater treatment. Virginia Water Environment Association, Roanoke, VA, May 2003. *2003 Best Student Paper Award.*
 398. Leung, S.M., Little, J. C., Holst, T., and Love, N. G. 2003. Oxygen transfer and consumption in a biological aerated filter. Virginia Water Environment Association, Roanoke, VA, May 2003.
 399. Dauphinais, J. L. and Love, N. G. 2003. Determination of toxic inhibition potential from industrial dischargers to a POTW using a respirometric assay. Virginia Water Environment Association, Roanoke, VA, May 2003.
 400. Bott, C.B., Henriques, I. D. S., Kelly, R. T., Dauphinais, J. L., and Love, N. G. 2002. WERF - Upset early warning systems for biological wastewater treatment. *Proceedings of the Water Environment Federation 8th Annual Industrial Wastes Technical and Regulatory Conference*, Atlantic City, New Jersey, August 11-14, 2002.
 401. Holbrook, R.D., Novak, J. T. and Love, N. G. 2002. The role of particulate and colloidal material in the fate and transport of endocrine disrupting compounds. Joint Annual Meeting of the Virginia Water Environment Association and Virginia American Water Works Association, September 2002, Virginia Beach, VA.
 402. Leung, S., Hofst, T., Love, N. G. and Little, J. C. 2002. A fundamental investigation of oxygen utilization in a biological aerated filter. Joint Annual Meeting of the Virginia Water Environment Association and Virginia American Water Works Association, September 2002, Virginia Beach, VA.
 403. Kelly, R. T. II, Henriques, I. D. S., Dauphinais, J. and Love, N. G. 2002. Evaluation of source-effect relationships for activated sludge response to shock loads of disruptive chemical toxins. Joint Annual Meeting of the Virginia Water Environment Association and Virginia American Water Works Association, September 2002, Virginia Beach, VA.
 404. Wimmer, R. F. and Love, N. G. 2002. Activated sludge deflocculation in response to chlorine addition: the potassium connection. Joint Annual Meeting of the Virginia Water Environment Association and Virginia American Water Works Association, September 2002, Virginia Beach, VA.
 405. Love, N. G. and Bott, C. B. 2002. In search of physiological mechanisms linked to wastewater treatment malfunctions caused by toxic chemicals. Oral presentation. Gordon Research Conference on Microbial Stress Responses. July 14-19, Salve Regina University, Newport, Rhode Island.

406. **Brazil, B. L.** and Love, N. G. 2002. Design and implementation of a pilot-scale nitrogen removal system employing fermentation of endogenous carbon sources to treat an aquaculture waste stream. *Aquaculture America 2002*, Jan. 27-30, San Diego, CA.
407. **Wimmer, R. F.** and Love, N. G. 2001. Potassium efflux as a bacterial defense mechanism against chlorinated disinfectants. Virginia Water Environment Association Annual Meeting, May 2001. Williamsburg, VA. *2001 Best Student Research Paper Award*.
408. **Brazil, B. L.** and Love, N. G. 2001. Design and implementation of a pilot-scale nitrogen removal system employing fermentation and endogenous carbon sources to treat an aquaculture waste stream. Virginia Water Environment Association Annual Meeting, May 2001. Williamsburg, VA.
409. **Bott, C. B.** and Love, N. G. 2000. Mechanistic evaluation of activated sludge deflocculation in response to shock loads of electrophilic xenobiotic chemicals. Virginia Water Environment Association Annual Meeting, May 2000, Roanoke, VA. *2000 Best Student Research Paper Award*.
410. **Ma, G.** and Love, N. G. 1999. BTX biodegradation under anoxic, microaerobic, and aerobic conditions in activated sludge sequencing batch reactors. Podium presentation. Virginia Water Environment Association Annual Meeting, May 1999, Tyson's Corner, VA. *1999 Best Student Research Paper Award*.
411. **Love, N.G., Delahave, A., Gilmore, K. R., Holst, T., Husovitz, K. J., Little, J. C., and Novak, J. T.** 1999. Performance of a two-stage biological aerated filter system treating domestic wastewater for BOD and ammonia removal – pilot-scale results. Podium presentation. Virginia Water Environment Association Annual Meeting, May 1999, Tyson's Corner, VA.
412. **Love, N. G.** 1999. The Applicability of the Microbial Stress Response as an Indicator for In Situ and Up-Stream Wastewater Treatment Monitoring. Invited podium presentation. Virginia Water Environment Association Industrial Waste and Pretreatment Seminar, Charlottesville, VA.
413. **Ma, G., Bilyk, K.** and Love, N. G. 1999 Nitrite accumulation and inhibition during denitrification. Poster presentation. Virginia Water Environment Association Industrial Waste and Pretreatment Seminar, Charlottesville, VA. *2nd Place Best Student Research Award*.
414. **Phipps, S.**, Love, N. G., and Novak, J. T. 1999 Dewatering of oily wastewater sludge. Poster presentation. Virginia Water Environment Association Industrial Waste and Pretreatment Seminar, Charlottesville, VA. *3rd Place Best Student Research Award*.
415. **Love, N. G., Duncan, A. J., and Bott, C. B.** 1998. Detection of Hsp60 in activated sludge following heat shock and exposure to xenobiotic compounds. Poster presentation. Gordon Research Conference on the Microbial Stress Response, New England College, Henniker, NH.
416. **McInnis, J.**, Love, N. G., and Novak, J. T. 1998. Pilot Study of Aerobic Treatment of Waste Oily Sludge. Podium presentation. Virginia Water Environment Association Annual Meeting, Norfolk, Virginia.
417. **Fallon, A.**, Novak, J. T., and Love, N. G. 1998. Biological Treatment of Oily Sludge: Laboratory Studies. Podium presentation. Virginia Water Environment Association Annual Meeting, Norfolk, Virginia. *1998 Best Student Research Paper Award*.
418. **Phillips, J.**, and Love, N. G. 1997. Denitrification of recirculating aquaculture system waters using an upflow fixed film bioreactor. Podium presentation. Virginia Water Environment Association Annual Meeting, Roanoke, Virginia. *1997 Best Student Research Paper Award*.
419. **Perri, K. L.**, and Love, N. G. 1997. The effectiveness of sequential treatment strategies on the treatability of a high strength industrial wastewater. Podium presentation. Virginia Water Environment Association Annual Meeting, Roanoke, Virginia.
420. **Love, N. G.** and Grady, C. P. L. Jr. 1994. The impact of second substrates on the expression of a TOL plasmid. Poster presentation. Gordon Research Conference on Environmental Sciences: Water, New Hampton, New Hampshire.

421. **Hegan (Love), N. G.** and Pfeffer, J. T. 1987. Using oxidation-reduction potential as a monitoring device for biological phosphorus removal systems. Podium presentation. Texas Water Pollution Control Association Annual Meeting, Corpus Christi, Texas.

FUNDED PROJECTS

(Total Value: \$29.3 million; Share Value: \$7.4 million)

Research Support Received – External Programs

(Total Value: \$21.6 million; Share Value: \$5.8 million)

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| 1. | Love, N. G. An effect-directed monitoring program for SWIFT effluent-Yr 2. Hampton Roads Sanitation District | \$130,000
3/1/17-continuing
100% share |
| 2. | Love, N. G., J. P. Newell, M. Arabi, T. Bradley and S. P. McElmurry. Planning Grant: Engineering Research Center for Regenerative, Restorative and Resilient Community Infrastructure Systems (R3CIS). National Science Foundation. | \$100,000
09/18 – 08/20
100% share |
| 3. | McElmurry, S. P., M. Seeger, N. G. Love, B. Kerkez, J. A. MacDonald Gibson. COLLABORATIVE PROPOSAL: CRISP 2.0 Type 2 – Water and Health Infrastructure Resilience and Learning (WHIRL). National Science Foundation. | \$2 million
09/18 – 08/22
5% share |
| 4. | Love, N. G., V. Bertacco, B. Kerkez, L. Larsen. IRES: Advancing Cyber-Enabled, Decentralized Water Systems in Rapidly Developing Cities. National Science Foundation. | \$249,989
09/17 – 08/20
25% share |
| 5. | Lastoskie, C. and N. G. Love. Workshop: Advancing Healthy Communities – the 2017 AEESP Meeting. National Science Foundation. | \$49,999
01/17 – 12/17
50% share |
| 6. | Kerkez, B. and N. G. Love. Dynamic collection system reconfiguration through real-time modeling and control. Great Lakes Water Authority | \$131,864
5/22/17-11/21/18
10% share |
| 7. | Daigger, G. T. and N. G. Love. Characterizing the performance and operational characteristics of the bioreactors at the Detroit, MI wastewater treatment plant. Great Lakes Water Authority. | \$100,000
5/1/17-4/30/17
10% share |
| 8. | Daigger, G. T. and N. G. Love. Traverse City regional wastewater treatment plant's comma-shaped Gram positive bacteria study. Traverse City Regional Wastewater Treatment Plant. | \$120,000
9/1/16-12/31/17
25% share |
| 9. | Love, N.G., D. S. Aga, R. Hardin, A. Noe-Hays, and K. R. Wigginton. INFEWS/T3: Advancing technologies and improving communication of urine-derived fertilizers for food production within a risk-based framework. National Science Foundation. | \$3 million
9/1/16-8/31/20
23% share |
| 10. | McElmurry, S. (PI, Wayne State University), multiple co-PIs, N. G. Love is co-PI for project and PI for UM. Flint Area Community Health and Environment Partnership (FACHEP) Phase II Study-Enhanced disease surveillance and environmental monitoring in Flint, Michigan. State of Michigan Department of Health and Human Services. | \$2 million
8/1/16-12/31/17
~4% share |
| 11. | Xu, M., J. Johnson, N. G. Love, S. Miller and J. Newell. UNS: U.S.-China: Integrated systems modeling of food-energy-water (FEW) nexus for urban sustainability. National Science Foundation. | \$499,990
6/1/16-5/31/20
10% share |
| 12. | Love, N.G. and T. M. Olson. RAPID: Assessing microbiological quality across point-of-use filters deployed in Flint, MI. (\$30,250 cost share from College of Engineering). National Science Foundation. | \$49,999
4/1/16 – 3/31/2017
50% share |
| 13. | Newell, J. P., G. T. Daigger, N. McClintock, A. Ramswami, J. Vandermeer. N.G. Love Senior Personnel and one of three proposal authors (with Newell and | \$69,242
7/01/15 – 12/31/15 |

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| | Daigger). FEW Workshop: "Scaling Up" Urban Agriculture to Mitigate Food-Energy-Water Impacts. National Science Foundation. | 30% share |
| 14. | Love, N.G. and C. B. Bott. GOALI: Developing Sensor-Mediated Control Strategies that Allow Innovative Treatment of Nitrogen in Wastewater. National Science Foundation. | \$330,000
9/1/14 – 8/31/18
100% share |
| 15. | Wigginton, K. R., N. G. Love, J. Jimenez, A. Noe Hayes, D. S. Aga, C. B. Bott. Nutrient Recovery Through Urine Separation. Water Environment Research Foundation EPA Water Center. | \$554,034
5/1/14 – 12/31/15
10% share |
| 16. | Raskin, L. and N. G. Love. Evaluation of Waste Activated Sludge Anaerobic Contactor (WASAC™) as a Process for Energy Conservation at Domestic Wastewater Treatment Plants. Carollo Engineering. | \$104,481
3/1/2013-4/30/2014
50% share |
| 17. | Love, N.G., L. Raskin, C. Bott, S. Skerlos and A. Salvesson. Low Energy Alternatives for Activated Sludge-Advancing Anaerobic Membrane Bioreactor Technology. Water Environment Research Foundation. | \$527,000
1/1/2013-12/31/2014
33% share |
| 18. | Burns, M. A. and N. G. Love. Point-of-Use Water Quality Assessment (Sensors for Faucets). MASCO Inc. | \$583,868
9/1/12-8/31/15
10% share |
| 19. | Linden, K., D. S. Aga and N. G. Love. Demonstrating Advanced Oxidation/ Biofiltration for Pharmaceutical Removal in Wastewater. Water Environment Research Foundation. | \$150,000
3/1/2012-8/31/2013
10% share |
| 20. | Raskin, L., S. J. Skerlos and N. G. Love. Low-temperature Anaerobic Membrane Bioreactors for Sustainable Domestic Wastewater Treatment. National Science Foundation (CBET-1133793) | \$404,365
9/1/11 – 8/31/14
10% share |
| 21. | Olson, T. and N. G. Love. Point-of-Use Devices as Incubators of Halogenated Phenol-Mediated Antibiotic Resistant Bacteria. National Science Foundation (CBET-1067450) (includes \$55,669 supplement to support dissertation work of Mr. Bayable Atnafu Kassa of Addis Ababa University) | \$373,556
5/1/11 – 4/30/15
50% share |
| 22. | Love, N. G., J. S. Guest and S. J. Skerlos. Quantitative Sustainable Design of Chesapeake-Elizabeth WWTP Upgrade Alternatives | \$8,500
1/1/11-6/30/11
33% share |
| 23. | Love, N. G. Understanding Microaerobic Metabolism in a Sustainable World. Water Environment Research Foundation | \$149,312
2/1/10–3/31/12
100% share |
| 24. | Savage, P. E., G. Keoleian, A. Matzger, S. Linic, and N. Lin (Senior Personnel = H. Wang and N. G. Love). EFRI HyBi: The Science and Engineering of Microalgae Hydrothermal Processing. National Science Foundation (EFRI 0937992) | \$2,000,000
9/1/09-8/31/13
2% share |
| 25. | Love, N. G., K. Linden and D. S. Aga. Demonstrating Advanced Oxidation Technologies on Pharmaceutical Removal Downstream of Biological Treatment. Water Environment Research Foundation. | \$80,000
1/1/10-5/15/11
34% share |
| 26. | Love, N. G. and L. Raskin. MSB – Investigating the Relationship Between Structural Diversity and Functional Resilience to Stress in Ammonia Oxidizers. National Science Foundation (IOS-0919629) | \$312,560
9/1/09-8/31/11
50% share |
| 27. | Raskin, L., S. J. Skerlos and N. G. Love. Anaerobic Membrane Bioreactors for Sustainable Wastewater Treatment. Water Environment Research Foundation | \$159,938
5/1/09-4/30/11
10% share |

28.	Bott, C. B., Schafran, G., Mulholland, M. and Love, N. G. Integrated Fixed-Film Activated Sludge (IFAS) Demonstration Project at the James River Wastewater Treatment Plant (JRWWTP). Hampton Roads Sanitation District	\$100,000 4/1/08–3/31/09 30% share
29.	Bronk, D., Canuel, E., Hatcher, P., Love, N. G. and Mulholland, M. Collaborative Research: Assessing the Bioavailability of Effluent Organic Nitrogen Along a Freshwater to Saltwater Continuum. National Science Foundation (NG Love original PI, shifted to co-PI upon moving to MI)	\$448,073 4/1/08–3/31/10 8% share
30.	Love, N. G., Ellis, M., Puri, I. Development of a Nitrifying Microbial Fuel Cell for Sustainable Wastewater Treatment. Water Environment Research Foundation	\$155,869 3/15/07–3/14/09 50% share
31.	Edwards, M. and Love, N. G. Effects of Nitrification on Distribution System Materials. American Water Works Research Foundation	\$350,000 1/15/07–11/15/09 8% share
32.	Love, N. G. Anammox Studies in Association with DC Water and Sewer Authority. District of Columbia Water and Sewer Authority	\$95,000 9/1/06–8/31/08 100% share
33.	Love, N. G. Development of Response Protocols for Wastewater Treatment Plants Exposed to CBR Contaminants. Water Environment Research Foundation.	\$300,000 1/1/06–8/31/08 100% share
34.	Love, N. G. Preliminary Nitritation Experiments in Support of the Reject Water Treatment Study for The Blue Plains Advanced Wastewater Treatment Facility. District of Columbia Water and Sewage Authority.	\$32,133 12/24/05–6/24/06 100% share
35.	Love, N. G. Planning, Mobilization, Enrichment and Evaluation of Anammox Organisms. District of Columbia Water and Sewage Authority.	\$7,364 11/15/05–9/30/06 100% share
36.	Love, N. G. and Love, B. J. Detection of Toxins in the Water Supply. National Institute of Standards and Technology.	\$75,000 10/1/05–9/29/06 50% share
37.	Love, N. G., Aga, D. S. and Harper, W. J. Collaborative Research: The Biotransformation of Hydrophobic and Hydrophilic Pharmaceuticals and their Metabolites by Nitrifying and Heterotrophic Cultures, National Science Foundation.	\$414,196 6/1/2005–5/31/2009 26% share
38.	Bonner, J. S., Love, N. G., Jones, K. L., Zaslavsky, I., Baru, C. K., Fountain, T., Wentling, T. L., Collaborative Large-Scale Engineering Analysis Network for Environmental Research for the Coastal Margin, National Science Foundation.	\$85,309 8/1/2004–7/31/2005 8% share
39.	Love, N. G., Knowlton, K. F. and Smets, B. F. Wastewater Treatment to Minimize Nitrogen Delivery from Dairy Farms to Receiving Waters. The Cooperative Institute for Coastal and Estuarine Environmental Toxicology.	\$214,200 9/1/2004–8/31/2006 60% share
40.	Love, N. G. and Smets, B. F. Integrated Biotreatment Technology for Nitrogen-Rich Wastewaters in Advanced Life Support Systems. NASA.	\$419,119 10/1/2004–9/30/2007 90% share
41.	Shaw, A. and Love, N. G. Feasibility Testing of Support Systems to Prevent Upsets. Water Environment Research Foundation.	\$175,000 3/1/04–2/28/06 15% share
42.	Vikesland, P. and Love, N. G. Treatability Evaluation of Three Chlorinated Organic Compounds. Parsons Corporation.	\$115,730 12/19/03–12/31/04 50% share

43. Vikesland, P. and Love, N. G. Effects of Dissimilatory Iron Reducing Bacteria on the Longevity of Iron Permeable Reactive Barriers. Virginia Water Resources Research Center. \$18,500
7/1/03–6/30/04
20% share
44. Knowlton, K. F., Love, N. G. and Mullins, G. Wastewater Treatment to Minimize Nutrient Delivery from Dairy Farms to Receiving Waters. The Cooperative Institute for Coastal and Estuarine Environmental Toxicology. \$278,934
9/1/03–8/31/05
40% share
45. Love, N. G., Meehan, K. A., Love, B. J. A Microfluidic Biosensor for Environmental Monitoring. U. S. Environmental Protection Agency Midwest Hazardous Substances Research Center. \$279,022
10/1/03–9/30/06
34% share
46. Love, N. G. Factors Affecting the Performance of Acid Phase Digesters Treating Municipal Sludges: Stage I. District of Columbia Water and Sewer Authority. \$24,382
6/3/02–11/30/02
100% share
47. Vikesland, P., Love, N. G. and DiGiano, F. Assessment of Seasonal Practices and Impacts to Chloraminating Utilities. American Waterworks Association Research Foundation. \$528,362
7/1/02–1/1/05
22% share
48. Little, J. D. and Love, N. G. Optimizing a Biological Aerated Filter. Virginia Center for Innovative Technology. \$30,000
3/1/02–10/31/02
50% share
49. Little, J. C., Filz, G., Berry, D., Eick, M., Hochella, M., Love, N., Schreiber, M., Widdowson, M. GAANN: An Interdisciplinary Program in Environmental Biogeochemistry. US Dept of Education. Phase I: \$432,855
8/16/01–8/15/04
17% share
Phase II: \$373,599
8/16/04–8/15/07
8% share
50. Novak, J. T., Holbrook, D., Love, N. G. Endocrine Disrupting Potential in Wastewater Effluents and Biosolids. Virginia Water Resources Research Center. \$19,200
7/1/01–6/30/02
33% share
51. Love, N. G. and Little, J. C. Development of a Fundamentally-Based Model of a Biological Aerated Filter. Degremont North American Research and Development, Inc. \$55,420
6/11/01–8/10/02
50% share
52. Novak, J. T., Holbrook, D., Love, N. G. Endocrine Disrupting Potential in Wastewater Effluents and Biosolids. Virginia Water Resources Research Center. \$19,200
7/1/01–6/30/02
33% share
53. Bishop, P., Love, N. G., and Stevens, A. M. Adaptation of subsurface microbial biofilm communities in response to chemical stressors. EPA Hazardous Substance Research Center (Purdue University). \$214,000
9/1/01–8/31/03
50% share
54. Love, N. G., Upset early warning systems for biological treatment processes: fundamental studies on source-cause-effect relationships, Water Environment Research Foundation. \$326,646
1/1/01–4/30/04
100% share
55. Novak, J. T., Love, N. G., and Hughes, J. M. Testing of a Package Wastewater Treatment System and Consultation Services for UTD, Inc., UTD, Inc. STTR II. \$150,100
10/1/00–5/1/02
45% share
56. Love, N. G. and Love, B. J. New technologies: integrating microfluidics, materials science and microbiology: biosensors for protecting wastewater treatment systems. National Science Foundation. \$105,050
9/1/00–12/31/02
75% share
57. Love, N. G., Grizzard, T., and Novak, J. T. Virginia Tech's Plan of Study for the Loudoun County Sanitation Authority Broad Run Advanced Wastewater Treatment Pilot Plant Study. CH2M Hill, Inc. \$126,564
8/15/00–5/31/01
30% share

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| 58. | Love, N. G. Monitoring the full-scale Biofor® biological aerated filter system at Roanoke, VA. Inflico Degremont, Inc. | \$30,000
12/24/99–2/15/01
100% share |
| 59. | Love, N. G. and Bott, C. B. Assessment and framing workshop on upset early warning systems. Water Environment Research Foundation. | \$81,064
6/30/99–7/1/00
75% share |
| 60. | Love, N. G. and Stevens, A. M. Characterizing nitrifying bioaugmentation cultures. Sybron Chemical Company and Virginia Center for Innovative Technology. | \$90,000
9/1/98–6/30/00
50% share |
| 61. | Love, N. G. Evaluating protein induction patterns in industrial activated sludge cultures. Eastman Chemical Company. | \$43,294
12/1/97–12/31/98
100% share |
| 62. | Love, N. G., Little, J. C., and Novak, J. T. A Fundamentally-based investigation into the operational potential of the Biofor® biological aerated filter. Degremont North American Research and Development, Inc., with matching from the Virginia Center for Innovative Technology. | \$95,592
9/97–12/98
50% share |
| 63. | Widdowson, M. A. Love, N. G., and Novak, J. T. Evaluation of intrinsic bioremediation at the Douge Creek Subdivision, Ft. Belvoir, VA. Horne Engineering Services, Inc. | \$28,800
9/16/96–9/16/97
10% share |
| 64. | Love, N. G., Widdowson, M. A, and Novak, J. T. An investigation into the use of biologically-based treatment technologies for waste oil volume reduction at Norfolk Southern Corporation. Norfolk Southern Corporation and Virginia Water Resources Research Center. | \$116,835
8/1/96–8/31/98
45% share |
| 65. | Love, N. G. Laboratory studies to assess wastewater treatment strategies for Eastman Chemical Company. Eastman Chemical Company. | \$10,000
11/15/95–3/1/97
100% share |
| 66. | Love, N. G. The distribution and expression of BTX-degrading microorganisms in anoxic/aerobic single sludge biological treatment processes. National Science Foundation CAREER Award. | \$335,618
7/1/95–6/30/99
100% share |
| 67. | Love, N. G. The role of anoxic zones in preventing methylethyl ketoxime inhibition of nitrification. Virginia Water Resources Research Center and AlliedSignal Chemical Company. | \$20,000
4/1/95–4/30/96
100% share |
| 68. | Love, N. G. and Novak, J. T. The impact of industrial wastewater composition on the bioflocculation of biological sludges. Virginia Water Resources Research Center and Eastman Chemical Company. | \$30,000
2/1/95–2/29/96
50% share |

Research Support Received – Internal Programs
(Total Value: \$4.0 million Share Value: \$424,850)

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| 69. | Love, N. G., M. Zimmerman. Partnerships that Support Confident Use and Management of Point-of-Use Drinking Water Units in Flint, MI. University of Michigan Poverty Solutions Center. | \$25,000
Jan 2020-present
90% share |
| 70. | Love, N.G., J. Eisenberg, A. Jones. Addressing the Food-WASH Nexus Across the Urban-Rural Gradient and Impacts on Childhood Stunting. University of Michigan MCubed 2.0 Program. | \$60,000
2015-2017
33% share |
| 71. | Schwank, J., M. Bateau, G. Fisher, P. Adriaens, E. Hill, N. G. Love, R. Clarke, J. Diana, K. Wigginton, D. Scavia, A. Hoffman, S. Miller, A. Huang-Saad, J. Trumpey, L. Raskin, S. Skerlos, A. Todd. REFRESH: Researching Fresh | \$2,998,832
7/1/14 – 6/30/17
1 of 17 co-PIs at 6%
share each |

	Solutions to the Energy/Water/Food Challenge in Resource-Constrained Environments. University of Michigan Third Century Initiative.	
72.	Newell, J., N. G. Love and R. Norton. Planning for Technological Innovation: Water, Infrastructure and Sustainability. University of Michigan MCubed program.	\$60,000 1/13/13 – 12/31/14 33% share
73.	Kolars, J. D., N. G. Love, S. Fisseha, A. Burton, L. Isom, P. Yadav, J. Godfrey, and K. Sienko. A Proposal to Develop the Ethiopia-Michigan Platform for Advancing Collaborative Engagement (EM-PACE). University of Michigan Third Century Initiative. N. Love co-leads the Environmental Initiative within this program.	\$297,800 1/1/14 – 8/31/15 1 of 8 co-PIs at 12% each
74.	Love, N. G., Skerlos, S., and Raskin, L. Global Sustainable Water Systems – Acknowledging Wastewater as a Resource. Graham Environmental Sustainability Institute, University of Michigan.	\$5,000 1/1/08–8/1/08 34% share
75.	Love, N.G., Muller, J. F., Stevens, A. M. and Hagedorn, C. Evaluating the extent of pollution-induced antibiotic resistance in environmental bacterial strains. Virginia Water Resources Research Center.	\$18,000 7/1/06–6/30/07 25% share
76.	Vikesland, P., Love, N. G. and Knocke, W. R. Construction of the Environmental BioNanoTechnology Laboratory (EB/NL), ASPIRES.	\$82,030 7/1/05–6/30/06 33% share
77.	Knowlton, K. F., Love, N. G., and Ogejo, J. A. Fate of endocrine disrupting compounds in dairy manure during storage and treatment. Virginia Water Resources Research Center.	\$18,000 7/1/05–6/30/06 33% share
78.	Halleman, E. and Love, N. G. Scale up of water treatment and recovery system at Blue Ridge Aquaculture. Virginia Tech Commercial Fisheries and Shellfish Technologies Program	\$26,569 7/1/01–6/30/02 50% share
79.	Love, N. G., Dietrich, A., Edwards, M., Godrej, A., Grizzard, T., Novak, J. T., Schreiber, M. Acquisition of a gas chromatograph with both mass spectrometer and flame photometric detector in support of water quality research. Virginia Tech ASPIRES program.	\$88,340 1/1/01–12/31/01 14% share
80.	Gibson, H. W., Bevan, D. R., Love, N. G. A collaborative effort to establish a research program for developing biomimetic sensors using molecularly imprinted polymers (MIPs). Virginia Tech ASPIRES program.	\$50,393 1/1/01–12/31/01 33% share
81.	Widdowson, M., Schreiber, M., and Love, N. G. Evaluating processes that control natural attenuation of nitrate in natural waters. Virginia Water Resources Research Center.	\$5,000 7/1/00–6/30/01 33% share
82.	Love, N. G. and Knowlton, K. F. Development of a collaborative effort on environmentally responsible management of dairy wastes. Virginia Tech ASPIRES program plus College and Departmental matching support.	\$37,944 1/1/00–5/31/01 50% share
83.	Stevens, A. M. and Love, N. G. Development of a <i>lux</i> reporter for the anaerobic human pathogen <i>Bacteroides</i> . Virginia Tech Optical Sciences and Engineering Research Center.	\$50,000 7/1/00–6/30/01 10% share
84.	Love, N. G. and Brazil, B. L. Performance optimization and economic analysis of a fluidized denitrifying unit for treating aquaculture effluents. Virginia Tech Commercial Fisheries and Shellfish Technologies Program.	\$57,456 7/1/99–6/30/01 50% share
85.	Popham, D. L., Brewer, K. J., Esen, A., Love, N. G., Rutherford, C. L., Shirley, S. W., Stevens, A. M., and Walker, R. A. Establishment of a phosphor/fluorescent imaging facility in Derring Hall. Virginia Tech ASPIRES program.	\$69,200 1/98–12/99 2% share

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| 86. | Love, N. G. and Stevens, A. M. Development of a collaborative research effort in environmental biotechnology as applied to biological wastewater treatment systems. Virginia Tech ASPIRES program. | \$32,080
1/98–12/99
50% share |
| 87. | Widdowson, M. A., Love, N. G., Novak, J. T., and Berry, D. F. Intrinsic bioremediation of contaminants in groundwater and soil: A strategy for research and partnerships. Virginia Tech ASPIRES program. | \$37,300
4/97–3/98
25% share |
| 88. | Love, N. G. Denitrification of recirculating aquaculture system waters. Virginia Tech Commercial Fisheries and Shellfish Technologies Program. | \$6,000
3/1/95–6/30/96
100% share |
| 89. | Randall, C. W. and Love, N. G. Identification of bacterial groups in biological nutrient removal systems. Virginia CORE Research Program. | \$4,300
7/1/94–6/30/95
50% share |

Institutional/ Educational Support Received – External Programs
(Total Value: \$3.7 million, Share Value: \$1.2 million)

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| 90. | Love, N. G., Thole, K. A. and McCrickard, S. Development and Maintenance of a Portal Website for the NSF Advance Program, National Science Foundation. | \$94,671
9/1/04–8/31/06
12% share |
| 91. | Layne, P., Love, N. G. and Thole, K. A. ADVANCE Engineering Workshop, National Science Foundation. | \$61,381
8/1/04–1/31/05
33% share |
| 92. | McNamee, M., Hyer, P.B, Love, N. G. and Thole, K. A. ADVANCE Institutional Transformation Award for Virginia Tech. NSF. Co-initiated and co-authored proposal. Active participant from 2003-2006. | \$3,460,211
7/1/03–6/30/08
33% share |
| 93. | Oerther, D. and Love, N. G. Workshop to Explore the Value of Applying Molecular Biology Tools in Environmental Engineering, National Science Foundation. | \$21,400
10/1/01–9/30/02
10% share |
| 94. | Love, N. G. Making the Connection Program, Women in Engineering Programs and Advocates Network. | \$5,000
12/1/1999–1/31/2003
100% share |
| 95. | Little, J. C. and Love, N. G. Environmental Engineering: Creation of an electronic textbook. SUCCEED and College of Engineering Green Engineering Program. | \$30,416
1/1/95–5/31/97
50% share |

INVITED SEMINARS AND PRESENTATIONS

1. Invited Speaker – My Career Path: Seminar for CWEA-AWWA Student Chapter, California State Polytechnic University, Pomona. November 19, 2020.
2. Invited Speaker - Water Infrastructure in Resource-Constrained Shrinking and Expanding Cities: The Impact on Water Quality and Public Health. University of Arizona Department of Chemical and Environmental Engineering. September 21, 2020.
3. Invited Speaker: Rethinking America's Urban Water Infrastructure: Resource Efficiency, Access, and Public Health. University of Notre Dame, Civil and Environmental Engineering Challenges and Innovation Seminar Series. Virtual. September 17, 2020.
4. Invited Speaker. Water Infrastructure in Resource-Constrained Shrinking and Expanding Cities: The Impact on Water Quality and Public Health. Department of Environmental Engineering, Technical University of Denmark. January 17, 2020.
5. American Academy of Environmental Engineers and Scientists Kappe Lecturer

(<https://www.aaees.org/kappelectureseries/kappelecturer.php>). 2019-2020. Offered two talks and presented both at most venues. Talk 1: "Rethinking America's Urban Water Infrastructure: Resource Efficiency, Access and Public Health" or Talk 2: "Environmental Engineering and Science Academic Scholarship in Service to Society: Our Role and Responsibility." Seventeen venues were selected among 20 applicants. Most venues involve more than one host school. Host schools include: Carnegie Mellon University and University of Pittsburgh; Clemson University; Georgia Tech; Michigan State University and Wayne State University; North Carolina State University; Old Dominion University; Rice University, University of Houston and University of Texas-Austin; Wilkes University; University of California-Merced; University of Cincinnati; University of Iowa; University of Minnesota; University of Nebraska-Lincoln; University of Rhode Island; University of Tennessee-Knoxville; University of Washington; University of Wisconsin.

6. Invited Keynote Speaker: The Microbiology of Drinking Water Systems in Shrinking and Expanding Resource-Constrained Cities and the Link to Public Health. International Water Association Microbial Ecology of Water Engineering (MEWE) Biannual Conference, Hiroshima, Japan, November 2019.
7. Invited Keynote Speaker: Achieving Resource Efficiency through Urine Separation and Nutrient Recovery: Advancing Hybrid Solutions for a Sustainable Future. Virginia Water Environment Association Education Seminar, May 8-9, 2019, Richmond, VA.
8. Invited Plenary Speaker: Shrinking and Expanding Urban Water Systems in Resource-Constrained Cities: the Link to Public Health. TransCon2019: Understanding and Managing Microbial Transformation of Environmental Contaminants, Monte Verita, Asconia, Switzerland. April 28 to May 3, 2019.
9. Invited speaker: The Microbial Characteristics of Drinking Water in Flint, MI: The Point-of-Use "Lead" Filter Field Study. Texas A&M University Department of Civil Engineering Environmental and Water Resources Seminar Series. March 4, 2019.
10. Invited speaker: Progress with Source Separation and Conversion to Fertilizer. Water Environment Federation Forum 2019: James Barnard Research Conference on Emerging Themes on Biological Phosphorus Removal and Recovery. January 14-15, 2019, Austin, TX.
11. Invited speaker: A Field Study of Microbial Changes Across Activated Carbon Block Point of Use Filters Deployed During the Flint Water Crisis. University of California-Davis. May 22, 2018.
12. Keynote speaker. "Water Infrastructure in Shrinking and Expanding Cities: The Impact on Water Quality and Public Health". Integrity of Creation Conference, The Global Water Crisis, Duquesne University. September 27-28, 2017, Pittsburgh, PA.
13. Invited speaker: Microbiome at the Global Tap: Understanding Microbial Colonization of Point-of-Use Drinking Water Filters. 14th Annual USEPA Drinking Water Workshop: Small Systems Challenges and Solutions, Cincinnati, OH, August 22-24, 2017.
14. Distinguished Lecture. Borchardt and Glysson Collegiate Professorship Induction. "At the interplay of water and health." Borchardt Conference, University of Michigan, February 22, 2017.
15. Distinguished Lecture. "The interplay between chemicals and microbiomes: an environmental biotechnology perspective." Wayne State "Water at Wayne" Lecture Series, Feb 1, 2017.
16. Invited speaker. "Microbiome at the Global Tap: Understanding microbial colonization of point-of-use drinking water filters." Marquette University, January 25, 2017
17. Invited speaker. "A Balancing Act: Achieving Nutrient Recovery via Urine-Derived Fertilizers while Managing Emerging Contaminants." University of Buffalo, November 11, 2016.
18. Distinguished Lecture. "At the Confluence: Nutrients, Trace Chemicals and Sustainability in the Urban Water Sector." Cornell University, October 24, 2016.
19. AEEESP Distinguished Lecturer. 2015-2016 academic year. Presented one of two talks: "The Interplay Between Chemicals and Microbiomes: An Environmental Biotechnology Perspective", or "At the