City of Flint, Michigan

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

Meeting Agenda - Final

Monday, April 26, 2021

4:30 PM

ELECTRONIC PUBLIC MEETING

SPECIAL AFFAIRS COMMITTEE

Maurice D. Davis, Chairperson, Ward 2
Allan Griggs, Vice Chairperson, Ward 8

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
Eva Worthing, Ward 9

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 a Regular Meeting of the Flint City Council scheduled to be held as follows:

Flint City Council Special Affairs Committee
Monday, April 26, 2021, at 4:30 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 Solution by dialing (617) 944-8177.

1. In order to speak during the PUBLIC SPEAKING PERIOD of each meeting by telephone, participants will also call (617) 944-8177:

a. All callers will be queued and muted until the Public Speaking portion of each agenda;

b. 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 4:30 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 1108, as passed on October 13, 2020, and signed into law on October 16, 2020.

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

RESOLUTIONS

210197 Berger Chevrolet, Inc./Twenty (20) 2020 Chevrolet Tahoe Police Pursuit Vehicles

Resolution resolving that the appropriate City Officials are authorized to issue a purchase order to Berger Chevrolet, Inc. for twenty (20) 2019 Chevrolet Tahoe Police Pursuit Vehicles (PPV), with full police up-fitting, as requested by Police, in an amount NOT-TO-EXCEED $257,877.66 [Fleet/Central Garage Fund Acct. No. 661-451.100-940.000.]

210198 Encouragement/Residents & Businesses/Become Vehicle City Blight Busters

Resolution resolving that the Mayor of the City of Flint hereby encourages all residents and businesses to clean their property of trash and other debris at least once a week and as needed in between, and partner with the city as volunteer Vehicle City Blight Busters to make the city a great place for families to live and unwelcome for those who wish to bring blight into the city.

APPOINTMENTS

210154 Appointment/Water System Advisory Council/Sheryl Thompson

Resolution resolving that Mayor Neeley hereby appoints Sheryl Thompson (4709 Crestbrook Lane, Flint, MI 48507) 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.]

210155 Appointment/Water System Advisory Council/James Gaskin

Resolution resolving that Mayor Neeley hereby appoints James Gaskin (41225 Lori Lane, Fenton, MI 48430) 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.]

210156 Appointment/Water System Advisory Council/Earnestine Yvonne Lewis

Resolution resolving that Mayor Neeley hereby appoints Earnestine Yvonne Lewis (2171 South Linden Road, Flint, MI 48532) 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.]

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.]

ORDINANCES

DISCUSSION ITEMS

ADDITIONAL COUNCIL DISCUSSION

ADJOURNMENT

CITY OF FLINT

PROPOSAL #19000014

RESOLUTION NO: 210197

PRESENTED: APR 26 2021

ADOPTED: _____

BY THE CITY ADMINISTRATOR:

RESOLUTION TO BERGER CHEVROLET FOR TWENTY (20) CHEVROLET TAHOES PPV

On December 18, 2018, the City Council adopted resolution #180618 to lease/purchase twenty (20) 2019 Chevrolet Tahoe Police Pursuit Vehicles (PPV) with full police up-fitting; and

Berger Chevrolet, Inc., 2525 28th Street, SE, Grand Rapids, MI was the responsive bidder through the Oakland County Cooperative Purchasing Blanket Contract #5218. This is the third year of a four year lease/purchase.

Funding for said services will come from the following accounts for FY21 (07/01/20 – 06/30/21):

Name of Account	Account #	Grant #	Amount
Lease of 2019 Chevrolet 4x4 Tahoe PPV	661-451.100-940.000		$257,877.66
	FY21 GRAND TOTAL		$257,877.66

IT IS RESOLVED, that the proper city officials, are hereby authorized to issue a purchase order to Berger Chevrolet for twenty (20) 2019 Chevrolet Tahoe Police Pursuit Vehicles (PPV) with full police up-fitting in the amount not to exceed for FY21 (07/01/20 – 06/30/21) $257,877.66, and the aggregate amount not to exceed $773,632.98.

APPROVED AS TO FORM:

Angela Wheeler (Mar 16, 2021 11:39 EDT)

Angela Wheeler, Chief Legal Officer

APPROVED AS TO FINANCE:

Shelbi Frayer (Mar 16, 2021 10:37 EDT)

Shelbi Frayer, Interim Chief Financial Officer

FOR THE CITY OF FLINT:

CLYDE D EDWARDS (Mar 16, 2021 13:31 EDT)

Clyde Edwards, City Administrator

APPROVED BY CITY COUNCIL:

_____

Kate Fields, City Council President

APPROVED AS TO PURCHASING:

Joyce McClane (Mar 15, 2021 16:56 EDT)

Joyce A. McClane, Purchasing Manager

FY21-03/15/2021-JAM

180618

(Bid #19000014)

SUBMISSION NO.: _____

PRESENTED: 12-18-18

ADOPTED: 12-18-2018

RESOLUTION TO BERGER CHEVROLET FOR TWENTY (20) CHEVROLET TAHOE PPV

BY THE CITY ADMINISTRATOR:

RESOLUTION

The Police Department is requesting the issuance of a purchase order to lease/purchase twenty (20) each 2019 Chevrolet Tahoe Police Pursuit Vehicles (PPV) with full police up-fitting; and

Berger Chevrolet, Inc., 2525 28th St., SE, Grand Rapids, MI has submitted a cost to lease/purchase said vehicles through the Oakland County Cooperative Purchasing Blanket Contract #5218 and based upon the best financing lease/purchase option over four years with Ally Financial. Funding for said services will come from the following account: 661-451.100-940.000.

IT IS RESOLVED, that the Department of Purchases and Supplies, upon City Council's approval, is hereby authorized to issue a purchase order for the first year of a four lease/purchase of twenty (20) each Chevrolet Tahoe PPV with up-fitting in the amount of $260,565.20 from Berger Chevrolet and in an amount not to exceed the four year lease/purchase total amount of $1,042,260.80. (Fleet/Central Garage Fund)

APPROVED PURCHASING DEPT.:

Bryan D. Bond
Interim Purchasing Manager

APPROVED AS TO FINANCE:

Hughey Newsome
Chief Financial Officer

APPROVED AS TO FORM:

Angela Wheeler
Chief Legal Officer

Steve Branch, City Administrator

Herbert J. Winfrey, President
City Council

BERGER CHEVROLET - #0000004365

180001279	19-001133	260,565.20		257,877.66
190001841	19-001748	257,877.66		257,877.66
210004100		257,877.66		0.00
			$	257,877.66
			$	257,877.66
			$	257,877.66
			$	773,632.98

210198

RESOLUTION NO.: _____

PRESENTED: _____

ADOPTED: _____

RESOLUTION ENCOURAGING RESIDENTS AND BUSINESSES TO BECOME VEHICLE CITY BLIGHT BUSTERS LAUNCHING VOLUNTEERS TO FIGHT BLIGHT BEGINNING MAY 1, 2021

BY THE MAYOR:

WHEREAS, the great city of Flint is made up of many hard working families, seniors, and individuals that desire to live in a clean, safe and blight free environment where the quality of life parallels or exceeds surrounding communities; and

WHEREAS, Residents take pride in their communities, neighbors, residences, and businesses and have raised many generations of their families in Flint as well as making financial investments in community building up Flint; and

WHEREAS, this foundation has been compromised with those who willfully, negligently, and illegally use Flint as a dumping ground. According to the Flint City Charter, Declaration of Rights, "The people have a right to and city officers shall pledge themselves to assure residents and businesses a clean, safe, blight fee environment…"

WHEREAS, the City Blight Elimination Team has and will continue to operate weekly clean ups throughout the City of Flint and in partnership with the community; and

WHEREAS, cleanliness and beautification of the City of Flint requires consistent effort on the part of all residents and businesses; and

WHEREAS, more enlisted volunteers are needed to aggressively and successfully remove the blight; and

WHEREAS, there is a City-wide effort to jumpstart a more robust practice of keeping the city clean and beautiful.

BE IT RESOLVED, the Mayor of the City of Flint hereby encourages all residents and businesses to clean their property of trash and other debris at least once a week and as needed in between and partner with the City as volunteer Vehicle City Blight Busters to make the City a great place for families to live and unwelcome place for those who wish to bring blight into the City.

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

RESOLUTION NO.: 210154

PRESENTED: APR - 7 2021

ADOPTED: _____

RESOLUTION FOR THE APPOINTMENT OF SHERYL THOMPSON 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 Sheryl Thompson to the Water System Advisory Council (See Attached Resume).

NOW THEREFORE BE IT RESOLVED, that Mayor Neeley hereby appoints Sheryl Thompson address 4709 Crestbrook Lane Flint MI 48507 to serve on the Water System Advisory Council.

APPROVED AS TO FORM:

Angela Y. Wheeler

Angela Wheeler, City Attorney

FOR THE CITY OF FLINT:

Sheldon A. Neeley, Mayor

APPROVED BY CITY COUNCIL:

_____

Kate Fields, City Council President

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Sheryl D. Thompson
4709 Crestbrook Lane
Flint, MI 48507
810-874-9419
SherylanWendell@gmail.com

EDUCATION

CENTRAL MICHIGAN UNIVERSITY, MT. PLEASANT, MI

- Master of Science in Administration; concentration in Public Administration - August 2000
- Bachelor of Social Work Degree - December 1985

EXPERIENCE

APRIL 2020- PRESENT

NNA CERTIFIED NOTARY SIGNING AGENT- HERE 4U NOTARY SERVICES

Work independently with title and mortgage companies as well as third party vendors to meet with borrowers, sellers, and buyers to facilitate paperwork regarding loans, purchases and sales of real property. Interact with customers from diverse sociocultural, economic, educational, and ethnic backgrounds. Explain the purpose of each document being signed and answer any pertinent questions without giving advice. Specifically trained to handle and work with mortgage lenders, title and escrow companies signing and notarizing mortgage loan documents.

- Ensure all lender requirements are met by conducting quality checks on loan documentation submitted.
- Experience with all mortgages including, buyers and sellers, refinancing, including VA loans, Home Equity Loans, Reverse Mortgages. Loan modifications, Debt Resolutions
- Comply with privacy laws by properly disposing of non-processed paperwork with personal and financial data.
- Traveled to borrower's homes or office to complete loan documents for real estate, refinancing and modifications.
- Verify that all documents are accounted for when notarizing closing documents during a real estate transaction.
- Ensure that signer is aware and understand the documents he/she is signing without interfering with the transaction on behalf of either party
- Direct signer to where information can be found should questions arise
- Ensure that signer is of sound mind and is not signing under duress

- Return all signed documents to escrow company immediately to ensure that there is no lapse in time to record documents as needed in the various entities involved
- Regular communication with escrow companies

September 1989- present
Notary Public – State of Michigan, Genesee County

- Appointed by Governor to take acknowledgements, administer oaths, attestations of certain documents.
- Taking affidavits, verifying signatures and identification of signers
  As well as the signer's mental awareness
- Maintain notary documentation

June 1987-November 2020

Michigan Department of Health and Human Services

Over 33 years of experience at the Michigan Department of Health and Human Services (MDHHS) in both local and central office roles.

- **Development and grants management:** Managed over $50 million in grants for local and state initiatives that impact low income and disadvantaged populations. Developed local and statewide fundraising strategies for the MDHHS.
- **Strategic planning and facilitation:** Led or participated in various strategic planning processes for the MDHHS, Work Force Development Agency, non-profit boards, community schools, and community partners.
- **Budget management:** Background in developing, and monitoring program and organizational budgets, preparing and monitoring contract compliance and expenditures.
- **Policy development and analysis:** Background in assisting local and state government agencies in developing, analyzing and implementing policy, procedures, and legislative changes.
- **Advocacy work and constituency building:** Extensive experience in articulating the MDHHS mission and vision as they relate to economic, social and educational development of our disadvantaged population. Created a network of partners to work in tandem to address family barriers and provision of resources to lift families out of poverty.
- **Human Services:** Extensive background as a front-line worker, supervisor and manager, senior executive in all aspects of the human services field. Child Welfare; Children's Protective Services, Foster Care, Juvenile Justice, Adoption. Temporary Assistance to Needy Families (TANF) Programs, Supplemental Nutrition Assistance Program (SNAP), Child Support, Work Force Development & Training.
- **Communication:** Experience in public speaking, media- locally and nationally. Presenter or panelist at local, state and national conferences on MDHHS initiatives. Experience in providing expert testimony on policy and procedures of

Michigan Department of Health and Human Services. Provided two depositions for MDHHS in two major lawsuits. - Dwayne B vs. Granholm and Smith vs. DHS Director

- **Board Experience:** Over 25 years of experience as non-profit board member, chair and committee member on local and state boards.
- **Training**: Provided training to MDHS and collaborative partners in needed subject areas.
- **Technology**: proficiency in MS word, Power Point, Excel
- **Management/Staff Development:** Experience in human resources- hiring staff, developing position descriptions, performance management, staff career development plans/mentoring, team building. Over 30 mentored staff have been promoted to higher level positions.
- **Organizational Management:** Over 25 years of experience in strategic leadership, organizing, planning and critical decision-making
- **Crisis Management:** Experience in disaster relief, task force lead for MDHHS in the Flint Water Crisis in providing resources, Covid19 testing resources

Volunteer Engagement

03-18- present	American Red Cross- ECB Board of Directors- Co chair
2018-present-	Flint Technical Advisory Council Member
03/20-present	State Wide Drinking Water Advisory Council-EGLE
06-20-present	American Red Cross- ECB Diversity Equity Inclusion- Chair
09-20-present	Crim Foundation Board of Directors- member
10/20-present	Black Philanthropy Fund Advisory member
11/20-present	Flint Kids Fund- Advisory member

RESOLUTION NO.: 210155

PRESENTED: APR - 7 2021

ADOPTED: _____

RESOLUTION FOR THE APPOINTMENT OF JAMES GASKIN 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 Jamie Gaskin to the Water System Advisory Council (See Attached Resume).

NOW THEREFORE BE IT RESOLVED, that Mayor Neeley hereby appoints Jamie Gaskin address 1225 Lori Lane Fenton, MI 48430 to serve on the Water System Advisory Council.

APPROVED AS TO FORM:

Angela Wheeler

Angela Wheeler, City Attorney

FOR THE CITY OF FLINT:

Sheldon A. Neeley, Mayor

APPROVED BY CITY COUNCIL:

Kate Fields, City Council President

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CITY OF FLINT

RESOLUTION STAFF REVIEW FORM

TODAY'S DATE: *02/12/2021*

BID/PROPOSAL#

AGENDA ITEM TITLE: RESOLUTION TO PLACE APPOINTEES TO AND ESTABLISH A WATER SYSTEM ADVISORY COUNCIL ON THE CITY COUNCIL AGENDA FOR APPROVAL.

PREPARED BY: Billie Mitchell- Manger of Public Health
(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 at least five members appointed by the community supply.~~ 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.

CITY OF FLINT

The names, titles and organizations of the individuals who are Mayoral appointed with consultation from the City's Chief Health Advisor (Dr. Lawrence Reynolds) to the Water System Advisory Council are: James Gaskin-CEO- United Way of Genesee County; Lydia Starrs-Health Systems Navigator- Community Foundation of Greater Flint; Sheryl Thompson- Community Member; Earnestine Yvonne Lewis- Director of Outreach- Genesee Health Plan; Dr. Nancy Love- Department of Civil and Environmental Engineering- University of Michigan. The designated Appointees have either lived or worked within the Flint community during the Flint Water Crisis and have expressed interest and knowledge concerning lead in drinking water. Appointees resumes are attached.

It is the desires of the City to submit the approval of appointing a board of and establishing a Water System Advisory Council, to Flint City Council at the March 22, 2021 council meeting. So that if approved, the City of Flint will, be in compliance with the Lead and Copper Rule required by the State of Michigan; create transparency with Flint residents; avoid any monetary penalties associated with the non-compliance of establishing the Water System Advisory Council.

FINANCIAL IMPLICATIONS: There is no budget required to establish or sustain the Water System Advisory Council.

BUDGETED EXPENDITURE? YES ☐ NO X☐ IF NO, PLEASE EXPLAIN:

Dept.	Name of Account	Account Number	Grant Code	Amount
Public Health	Water System Advisory Council	N/A	N/A	$0
		FY20/21 GRAND TOTAL		**$0**

PRE-ENCUMBERED? YES ☐ NO ☐ REQUISITION NO:

ACCOUNTING APPROVAL: _____ **Date:** _____

CITY OF FLINT

WILL YOUR DEPARTMENT NEED A CONTRACT? YES ☐ NO x ☐

(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 $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: Billie Mitchell, Manager of Public Health

(PLEASE TYPE NAME, TITLE)

1225 Lori Lane Fenton, MI 48430
PHONE (810) 240-0297 - E-MAIL jdogflint@outlook.com

James William Gaskin

EDUCATION

Central Michigan University
Bachelors of Science Degree, Cum Laude
Major: Sociology with concentration in Social Work
Minor: Family Life and Human Sexuality
G.P.A. – 3.64

EXPERIENCE

United Way of Genesee County 2013 – current

CEO

Responsible for leading a turn-a-round process that included developing a strategic plan, diversifying the Board of Directors, and overseeing all daily operations. This includes growing annual revenue to as much as 9 million dollars from a low of 4 million, moving the organization to a new location, hiring a new management team, negotiating a new three year labor contract, expanding the staff from 10FTE's to 16FTE's, and moving the annual campaign to a new regional based format.

Boys & Girls Club of Greater Flint 2003-2013

Executive Director

Responsible for reopening a once closed organization and growing the budget to 1.3 million annually, negotiated the purchase of a $1.8 million facility from pubic schools, overseeing resource development, grant writing, managing a staff of 9 FTE and up to 80 PTE employees including all Human Resource issues, supervising all program development.

Family Independence Agency State of Michigan 2002-2003

Foster Care Specialist

Foster Care Specialist responsible for all aspects of case management including development of treatment plans, monitoring of treatment plans, preparation of court petitions, extensive documentation through initial and updated reports, and coordination and collaboration with local service providers. Resigned in good standing after 1 year for executive position.

Boys & Girls Club Fox Valley 1998-2002

Director of After School Services 2001-2002

This position was created as a promotion with the addition of two 21st Century Learning Centers. Responsibilities include supervision of implementation of contract with the Appleton Area School District to provide daily after school activities at one middle school and one elementary school. This includes recruitment of full and part-time staff, supervision of branch directors at each site and oversight of administrative duties in conjunction with the AASD Director Club's

accountant and Executive Director. Oversight of more than 30 staff members employed by the Club.

Unit Director 1998-2001

Responsibilities include the development of programming in the five core program areas, recruitment, and supervision of all After School program staff, and supervision of all guidance and discipline of members. Duties include annual staff evaluations, annual Commitment to Quality process, consultation on grant development, management of membership of over 1,200 youth, and general facilities management and administration. Coordination and development of relationships with community partners and implementation of special services in the areas of transportation, food service and special services.

Boys & Girls Club of Lansing 1995-1998

Extension Unit Director 1997-1998

Responsibilities included program development and implementation, staff recruitment and development, daily supervision of program, implementation of Commitment to Quality process, and development and maintenance of relationships with teachers, administration, and other collaborative community partners

Youth Development Professional 1995-1997

Responsibilities included coordination of Smart Moves program, Fresh Start community service program, supervision of programs and services in the Club's Teen Center, Games Room, Learning Center, Arts & Crafts Center, Group Clubs and Junior Staff program.

PROFESSIONAL TRAINING

United Way National Conference 2015,2017
Michigan Association of United Way Annual Conference 2014,2015,2017
United Way New Executive Orientation 2014
BGCA Midwest Admin Leadership Conference 2004-2011
BGCA National Conference 2006,2008,2011
Executive Management Training 2003
State of Michigan Foster Care Training 2002
Ethics & Boundaries Workshop 2001
Career Assistance Network Training 2001
21st Century Learning Center Training 2001
Wally World Program Training 2001
Targeted Outreach Training 2000, 2001
Midwest Program Institute 2000, 1999, 1998
Leadership Development Training 1998
Outcomes Workshop 1997
Practice of Boys & Girls Club Work 1995

ORGANIZATIONAL AFFILIATIONS

State of Michigan Governor's Talent Investment Board (First Term)
Rotary Club of Flint 2004-2018
BGCA Professional Association 1997-2011
BGCA Professional Association Great Lakes Chapter

Academy of Boys & Girls Club Professionals Executive Professional

RELATED EXPERIENCE

Volunteer In Service to America 1994-1995

Coordinated four after school programming sites with focus on tutoring in low-income housing developments in Lansing Michigan.

Facilitate Learn, Earn and Play summer computer camp for low-income youth in collaboration with the Boys & Girls Club of Lansing, Fox Valley Literacy Coalition, and the Lomas Brown Jr. Foundation.

Goodrow House Shelter Coordinator 1993

Coordination of emergency shelter service including client consultation, referrals, and volunteer supervision. Lived on site.

Central Michigan University 1991-1993

Worked as live-in Resident Assistant and Residential Recreational Counselor for summer camp focused on youth with communication disorders.

PROFESSIONAL RECOGNITION

Peacemaker Award Genesee County 2015
Syble Atwood Award Nominee 2013
2015 Service to Youth Award – Boys & Girls Club Fox Valley 2001
Health & Life Skills National Merit Award, Staff wide 2000
Professional of the Year – Great Lakes Association of Boys & Girls Club Professionals 1997
Resident Assistant Program of the Year Awards 1991,1992,1993

References available upon request

RESOLUTION NO.: 210156

PRESENTED: APR - 7 2021

ADOPTED: _____

RESOLUTION FOR THE APPOINTMENT OF EARNESTINE YVONNE LEWIS 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 Earnestine Yvonne Lewis to the Water System Advisory Council (See Attached Resume).

NOW THEREFORE BE IT RESOLVED, that Mayor Neeley hereby appoints Earnestine Yvonne Lewis address 2171 S. Linden Rd. Flint, MI 48532 to serve on the Water System Advisory Council.

APPROVED AS TO FORM:

Angela Wheeler

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 Copy0 Resolution to Appoint to the Water System Advisory Council (1).doc

Earnestine Yvonne Lewis *Email Address: eyvonlewis@gmail.com*

Personal Statement

Ms. Lewis is a thought leader, trainer and mentor. She is skilled in organizational leadership and development. She possesses excellent oral and written communication skills. Through her years of experience and training she is an effective communicator and well versed in a variety of disciplines. Ms. Lewis is adept to working and communicating with people from all walks of life, regardless of education, social/economic status, race/ethnicity, age or gender. Her extensive experience in business, community collaboration, and community/academic partnerships has resulted in positive outcomes. She is passionate about her work and service to community.

Professional Experience

Genesee Health Plan **Flint, MI**
Director of Outreach **October 2015 - Present**

- Responsible for the overall development and implementation of the organizations Community Outreach Program to improve access to health care services for low income and underserved residents of Genesee County
- Expand and develop organizational and community relationships to help individuals make informed decisions to better their health.
- Identify community-based organizations to support capacity building to ensure their ability to assist in fulfilling their mission and supporting the Health Plan's the mission to reach special populations.
- Develop a process to assist individuals with language and cultural barriers access and engage in a system of care to increase access and reduce health disparities.

National Center for African American Health Consciousness **Flint, MI** **4/2014 – Present**
Founding Director/CEO

- Increase awareness and knowledge about health and health disparities within the African American Community
- Provide Consultant services to academic partners and community organizations who wish to better engage and serve community residents.
- Assist in improving community access to information, education, resources and services
- Seek to build trust and relationships with academic, practice, business and policy makers
- Be a voice for the community, where there is limited or no voice.
- Help build capacity of community residents and organizations to increase diversity of voices at the table

Universal Kidney Foundation **Burton, MI** **10/ 2011 – 11/2014**
Executive Director

- Responsible for overall organization development of the Universal Kidney Foundation.
- Implementation of strategic plan based on needs assessment conducted.
- Identified partners and allies who shared the mission of the Foundation,
- Provided education to community about Chronic Kidney Disease,
- Increased access and awareness about available programs and services for the underserved.
- Established a fund development program.

Faith Access to Community Economic Development **Flint, MI** **10/2002 – 5/2011**
Executive Director

- Responsible for overall operation of the organization, staff growth and development.
- Increase the organizational financial portfolio (from >$25k annual budget to over $500k).
- Maintained and enhanced community/academic partnerships (local/state/nationally).
- Expanded work with faith leaders and established the economic development arm of the organization.
- Represented the organization on community boards and local, state and National and committees.
- Facilitated dissolution process due to economic downturn and loss of state and federal funding

Education

University of Michigan -Flint
Master Health Education
Course work

University of Michigan- Flint – Bachelor Science
Clinical/Community Psychology - 1996

Ferris State University – Bachelor Science
Business Administration - 1977

Board Service and Community Memberships

2020 – Present	Member - Health Subcommittee of the Greater Flint Coronavirus Task Force on Racial Inequities
2020 – Present	Member - Coronavirus Contact Tracing Workgroup
2019 – Present	Community Director, Michigan Prevention Research Center (funded by CDC)
2919 – Present	Member - MSU MPH Stakeholder Advisory Committee
2018 – Present	Member/Vice Chair – Ascension Genesys Foundation Board
2018 – Present	Member – National Mass Violence Victimization Resource Center (NMVVRC) Stakeholder Group
2016 – Present	Co-Director, Healthy Flint Research Coordinating Center, Community Core
2016 – Present	Community PI, Flint Center for Health Equity Solutions (funded by NIMHD)
2016 – 2018	Board Chair – Genesee Community Health Center
2009 – 2013	Member, Michigan Bio Trust Community Values Advisory Board

Other Relevant Experience

Ms. Yvonne Lewis has made significant contributions to Community Based Participatory Research, specifically in delineating and exemplifying the role of community partners in community-level public health programs and interventions. She has participated in a wide cross-section of community-based public health initiatives related to pregnancy, cancer, tobacco prevention and cessation, food security, and health care access to name a few. She is the initial co-chair and lead the development of the Centers for Disease Control and Prevention (CDC) Prevention Research Centers National Community Committee.

Honors and Awards

November 2020	Healthy Flint Research Coordinating Center - Community/Academic Partnership Award
July 2019	Michigan State University Division of Public Health – Public Health Champion Award
January 2017-April 2017	Flint Institute of Arts – Women of a New Tribe Exhibition
December 2018	Sybyl Atwood Award Nominee
March 2015	Genesee Health Plan Health Care Hall of Fame – Visionary Leadership Award
June 2014	Pick a Place and Start (PAPAS) Women In Power Award

Contribution to Science

Ms. Lewis has co-authored and been cited in over 10 peer reviewed articles and publications. Of special note, here comments were included in the Institute of Medicine Roundtable Proceedings 1996, from her presentation on A Community Perspective on Community Based Participatory Research. Emory University, Atlanta, GA. She has presented on panels and moderated sessions for local, state and National conferences including the 2020 Annual Meeting of the American Public Health Association, a National Conferences on Chronic Disease Prevention and Control, and at the National Academy of Sciences, to name a few.

Peer-Reviewed Publications

1. Key, K.D, Furr-Holden, C. D., **Lewis, E.Y.,** Cunningham, R., Zimmerman, M., Johnson-Lawrence, V., Selig, S. (2019). The Continuum of Community Engagement in Research (CEnR): A Roadmap for Understanding and Assessing Progress. *Progress in Community Partnerships* 13(4):427-434.
2. Key, K. D., Lewis, E. Y., (2018) Sustainable community engagement in a constantly changing health system. *Learn Health Sys.* 2018;e10053. https://doi.org/10.1002/ lrh2.10053
3. Carty, D.C., Kruger, D.J., Turner, T.M., Campbell, B., DeLoney, E. H, & **Lewis, Y.**, (2011). Racism, health status, and pregnancy outcomes: Results of a participatory community-based intervention and health survey. Journal of Urban Health, 88, 84-97.
4. Kruger, D. J., **Lewis, Y.**, & Schlemmer, E. (2010). Mapping a message for faith leaders. Encouraging community health promotion with local health data. Health Promotion Practice, 11, 831-844.
5. Griffith, D. M., Allen, J.O., DeLoney, E. H., Robinson, K., **Lewis, E. Y.**, Campbell, B., Morrell-Samuels, S., Sparks, A., Zimmerman, M., Rischel, T. (2010). Community-Based Organizational Capacity Building as a Strategy to Reduce Health Disparities. Journal of Primary Prevention.
6. White-Cooper, S., **Lewis, E. Y.**, Greene-Moton, E., (2009). Community Engagement in Prevention Research: The Centers for Disease Control and Prevention Research Centers' National Community Committee.
7. Citation in the Institute of Medicine Roundtable Proceedings 1996 – Presentation on Community Perspective on Community Based Participatory Research. Emory University, Atlanta, GA

Selected Journal Articles Under Review/Revision (Manuscripts 'In Progress' not included, but available upon request)

1. Meghea, C., Montgomery, B., Ellington, R., **Lewis, E.Y.,** Furr-Holden, C.D. An NIH Investment in Health Equity - The Economic Impact of FCHES. Submitted October 2020: *BMC Medicine*.

Research Grant Participation

Ongoing Sponsored Research/Grants

The Flint Center for Health Equity Solutions ($10,689,313)	**07/20/16-02/28/21**
U54MD011227 NIH (PI: Furr-Holden)	
Lewis Role: Community PI	
National Institute for Minority Health and Health Disparities/NIH	
The Flint Center for Health Equity Solutions (FCHES) is a Transdisciplinary Collaborative Center (TCC) for Health Disparities Research on Chronic Disease Prevention within the DHHS-defined Region 5. The TCC targets its initial activities within Flint, Michigan, with scope and reach of Center activities more generally across the state through the Michigan State University Extension Program, and nationally through Consortium Partners.	

The Prevention Research Center of Michigan Health Promotion Through Environmental Design (HPTED): A Transformative Approach for Community Engagement and Health Equity ($7,424,000)	**10/01/19-9/30/24**
U48DP006397 (PI: Zimmerman)	
Furr-Holden Role: Co-Principal Investigator. ***Lewis Role: Community Director***	
Centers for Disease Control and Prevention	
This project will employ a newly developed health promotion model, the Health Promotion Through Environmental Design (HPTED) Model to explore social determinants of health, evidence-based practices and policies, and community activism as a means to promote health equity in a city in distress. The proposed research is grounded in theory and practice, is multi-disciplinary and translational.	

Ongoing Non-Sponsored Research

Healthy Flint Research Coordinating Center ($600,000)	07/01/16-ongoing
GA100492 (PI: Furr-Holden)	
Lewis Role: Co-Founder and Community Co-Lead	
MSU Provost and Vice-President of Research-funded/University of Michi	
This HFRCC is a multi-institutional research coordinating center conducted in partnership with the Michigan State University, the University of Michigan, the University of Michigan-Flint, and grass roots community partners including Community-Based Organization Partners and The National Center for African American Health Consciousness. Our goal is to maximize the benefit of Flint-based research for the Flint community and ensure equitable involvement of grass-roots community partners in research.	

Invest Health – Flint ($60,000)	04/30/16-12/31/18
(PI: Furr-Holden)	
Robert Wood Johnson Foundation	
Lewis Role: Community Co-Lead	
Invest Health is a new initiative that brings together diverse leaders from mid-sized U.S. cities across the nation to develop new strategies for increasing and leveraging private and public investments to accelerate improvements in neighborhoods facing the biggest barriers to better health. The program is a collaboration between the Robert Wood Johnson Foundation and Reinvestment Fund.	

Presentations

1. Lewis, E. Y., French-Turner, T., (November 17, 2020) What constitutes ethical engagement between researchers and communities before, during, and after environmental crises. Presented to the Environmental Communication Class, University of Rhode Island
2. Lewis, E. Y., Furr-Holden, D., Uphold, H, Crawford, M. K., (October 28, 2020) The Flint Community Webinar Series: From Sprint to Marathon. Oral presentation, American Public Health Association Annual Meeting.
3. Lewis, E. Y. (September 29, 2020) Leadership in Medicine for the Underserved. Presented to MSU Medical Students pursuing a Certificate in Public Health
4. New York State Association of County Health Officers – October 26-27, 2014
5. National Adult Influenza Immunization Summit (NAIIS) – May 14, 2014
6. Kruger, D.J., Hammacher, L., Shirey, L., Morrell-Samuels, S., & **Lewis, Y.**, (2008, October) Establishing a county health insurance plan with the aid of a community-based health survey. Poster presented at the Annual Meeting of the American Public Health Association, San Diego, CA.
7. Kruger, D. J., Carty, D. C., Turner T.M., Campbell, B., DeLoney, E. H., & **Lewis, Y.**, (2008, October) Developing and monitoring system change around social determinants of health; Lessons learned from a successful infant mortality reduction program. Oral presentation given at the Annual Meeting of the American Public Health Association, San Diego, CA.
8. Carty, D.C., Kruger, D.J., Turner, T. M., Campbell, B., DeLoney, E. H., **Lewis, Y.**, (2008, October) Impact of an integrated anti-racism community mobilization, and infant mortality prevention program on community racial attitudes and health status. Poster presented at the Annual Meeting of the American Public Health Association, San Diego, CA.
9. Kruger, D. J., Turner, T.M., **Lewis, Y.**, & Carty, D. (2008, March). A community partnership designed to reduce disparities in infant mortality. Symposiums presented at the Third Annual Health Disparities Conference, Columbia University, New York, NY.

10. Kruger, D. J., Turner, T., & **Lewis, Y.**, (2007, November). Using a community implemented activity to address racial disparities in infant mortality in Genesee County, Michigan. Symposium presented at the Annual Meeting of the American Public Health Association, Washington, D.C.
11. Kruger, D. J., Turner, T M., **Lewis, Y.**, (2007, November). The successes of a community partnership designed to reduces disparities in infant mortality. Oral presentation given at the Annual Meeting of the American Public Health Association, Washington, D. C.
12. Kruger, D. J., Shirey, L. **Lewis, Y.**, (2007, October). Democratizing data: Local dissemination strategies for a community-based health survey. Symposium presented at Michigan's Premier Public Health Conference, Dearborn, MI
13. Kruger, D. J., Turner, T. M. **Lewis, Y.**, (2007, October). Documenting success in an infant mortality reduction program. Oral Presentation given at the Annual Meeting of the Society for Public Health Education, Alexandria, VA.
14. Kruger, D. J., Shirey, L. **Lewis, Y.,** (2007, October). Democratizing data: Local dissemination strategies for a community-based health survey. Oral presentation given at Michigan's Premier Public Health Conference, Dearborn, MI
15. **Lewis, Y.**, Kruger, D. J., (2006, November). Mapping a message for faith leaders. Oral Presentation given at the Annual Meeting of the American Public Health Association, Boston, MA
16. Kruger, D. J., Brady, J., **Lewis, E. Y.**, & Shirey, L. (2005, March). Using geographical information systems to facilitate community based public health planning of diabetes intervention efforts. Oral

    Presentation given at the 19th National Conference on Chronic Disease Prevention and Control, Atlanta, GA.

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

Angela Wheeler, City Attorney

FOR THE CITY OF FLINT:

Sheldon A. Neeley, Mayor

APPROVED BY CITY COUNCIL:

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Kate Fields, City Council President

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APPROVED BY CITY COUNCIL:

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Kate Fields, City Council President

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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://ii.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 Fralin Environmental Biotechnology Laboratory, Virginia Tech	2005 – 2007 1995 – 1999
Project Engineer CH2M Hill, Inc. (now Jacobs Engineering Group), Dallas, Texas	1986 – 1989

ADMINISTRATIVE ACCOMPLISHMENTS

• 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
• 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
• 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
• 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
- **American Society for Engineering Education**
  Member — 2007 - 2009
- **Association of Environmental Engineering and Science Professors**
  Member and Fellow (2015) — Discontinuous 1994 - present
  Master's Thesis Awards Subcommittee (Chair, 1999) — 1994 – present
  Awards Committee (Chair, 2006-2007) — 1997 – 1999
  Board of Directors (Elected by membership; elected by board as Vice-President 2008-2009; President-Elect 2009-2010; President 2010-2011) — 2004 – 2007
  Co-Chair, AEESP 2017 Biannual Conference — 2007 – 2011
  AEESP Fellows Selection Committee — 2016-2017
- **International Water Association**
  Member and Fellow (2014) — 2018
  Environmental Engineering Education specialist's group, chair effective 2014 — 1989 – present
  Microbial Ecology in Water Engineering (MEWE, formerly Activated Sludge Population Dynamics) Specialty Group member — 2006 - present
  MEWE program committee — 1995 – present
  Chair, MEWE2013 conference, Ann Arbor, Michigan USA — 2005 - 2019
  Leading Edge Technology (LET) Program Committee — 2012 - 2013
  Instrumentation, Control and Automation Group — 2007 – 2009
  Organizing Committee, Nutrient Management 2007 Workshop — 2001 – 2007
  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** 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.pdfH	2005 – 2007
• **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=a1703f45b607977176581383l9b971b1

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

• Advisory Group on University of Michigan activities in Ethiopia, Provost's office	2019-2020
• Advisory Group: U-M Lead and Copper Rule Project, Graham Institute overseeing Mott Foundation project.	2017-2019 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 or 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 Lubkowicz (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 withi 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.
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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 Pallmeyer, 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 nitritation/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 Nitritation 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 or 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. AEESP 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., Salveson, 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. WWTMod2012 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/H_2O_2 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.

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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. VanDuinen, 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 17α-Ethinylestradiol and Trimethoprim. Podium presentation, AEESP Special Session. 83rd Water Environment Federation Technical Exposition and Conference 2010, New Orleans, LA, October 3-6, 2010.

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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 17α-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.

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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 17α-Ethinylestradiol and Trimethoprim by Heterotrophic Bacteria. Podium Presentation. *82nd Annual Water Environment Federation Technical Exposition and Conference*, Orlando, Florida, October 10-14, 2009.

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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.

243. **Guest, J. S.**; Skerlos, S. J.; Daigger, G. T.; Corbett, J. R. E.; Love, N. G. 2009. The use of qualitative system dynamics to identify sustainability characteristics of decentralised wastewater management alternatives. *Proceedings of 6th IWA Leading Edge Conference on Water and Wastewater Technologies*, Singapore, June 22-25, 2009. *Invited for consideration in Water Science and Technology*.

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systems. Podium presentation. *Proceedings of the ASPD5 (Activated Sludge Population Dynamics) Specialised Conference: Microbial Population Dynamics in Biological Wastewater Treatment.* International Water Association. Aalborg, Denmark, May 24-27, 2009.

245. **Gilmore, K. R.**, B. F. Smets, A. Terada, S. Lackner, J. L. Garland, N. G. Love. 2009. Microbial community analysis in an autotrophic hollow-fiber membrane-aerated biofilm reactor (HFMBR) treating a high-strength nitrogen wastewater. Podium presentation. *Proceedings of the ASPD5 (Activated Sludge Population Dynamics) Specialised Conference: Microbial Population Dynamics in Biological Wastewater Treatment.* International Water Association. Aalborg, Denmark, May 24-27, 2009, pp 146-148.

246. **Khunjar, W. O.**, Skotnicka-Pitak, J., Celiz, M.D., Mackintosh, S., Love, N.G., Aga, D.S., Harper Jr., W.F. Elucidating the Role of Ammonia Oxidizing Bacteria versus Heterotrophic Bacteria in the biotransformation of 17α-ethinylestradiol. Poster presentation. *Proceedings of the Activated Sludge Population Dynamics 5 (ASPD5): Microbial Population Dynamics in Biological Wastewater Treatment.* International Water Association. Aalborg, Denmark, May 24-27, 2009.

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248. **Ghosh, S.** and N. G. Love. MexAB-OprM efflux pump mediated changes in antibiotic susceptibilities of *Pseudomonas aeruginosa*. ASM General Meeting, Philadelphia. May 19, 2009.

249. **Love, N. G.**, D. Bronk, E. Canuel, M. Poteat, Q. Roberts, K. C. Filippino, P. Hatcher, R. Mesfioui, M. M. Mulholland, and G. Ho. The importance of effluent organic nitrogen fate and its contribution to N management in N-limited regions. Podium presentation. *Association of Environmental Engineering and Science Professors Conference,* July 26-29, 2009, Iowa City, IA.

250. **Khunjar, W. O.**, Skotnicka-Pitak, J., Celiz, M.D., Mackintosh, S., Love, N.G., Aga, D.S., Harper Jr., W.F. 2009. Elucidating the role of ammonia oxidizing bacteria versus heterotrophic bacteria in the biotransformation of 17α-ethinylestradiol. Poster Presentation. *Association of Environmental Engineering and Science Professors Conference,* July 26-29, 2009, Iowa City, IA.

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252. **Pinto, A.J.** and N. G. Love. 2009. Structural and Functional Response of the Ammonia Oxidizing Bacterial Community to Acute Cadmium Stress in Laboratory and Pilot Scale Activated Sludge Systems. Poster presentation. *Association of Environmental Engineering and Science Professors 2009 Conference*. Iowa City, IA, July 26-29, 2009.

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254. **Cook, S. M.**, J. S. Guest, M. G. Christianson, N. G. Love, S. J. Skerlos. 2009. Energy Recovery from Wastewater: Evaluation of Resource Management Alternatives for Appropriate and Environmentally Sustainable Energy Production. Podium presentation, *Engineering Sustainability 2009 Conference,* Pittsburgh, PA, April 21, 2009.

255. **H.A. Tucker**, K.F. Knowlton, and N.G. Love. 2009. Fecal and urinary estrogens in dairy heifers during the estrous cycle. *J. Dairy Sci.* **92** (Suppl. 1).

256. **Hardin, S.**, A. Pinto, N. G. Love, and A. Shaw. 2008. Impact of Contaminant-Specific Corrective Action Strategies on Wastewater Treatment Plant Performance and Recovery. Poster presentation. *Water*

Environment Federation 81st Annual Conference and Exposition, Chicago, IL, October 19-22, 2008. *1st Place - Best Poster Award.*

257. **Khunjar, W. O.**, Skotnicka-Pitak, J., Yi, T., Love, N.G., Aga, D.S., Harper Jr., W.F. 2008. Biotransformation of pharmaceutical, personal care products during nitrification – the role of nitrifiers vs. heterotrophs. Podium presentation. *ASCE World Environmental &Water Resources Congress 2008.* Honolulu, HI.

258. **Aga, D.**, N. G. Love, W. Harper, W. O. Khunjar, J. Slotnicka-Pitak, T. Yi. 2008. Biotransformation of pharmaceuticals by nitrifying and heterotrophic cultures: Investigation of degradation kinetics and metabolite identification. Keynote Address - International Water Association Leading Edge Technology Conference, Zurich, Switzerland, June 1-4, 2008.

259. **Shaw, A.**, deBarbadillo, C., Pinto, A. J., Guest, J. S., Love, N. G., Fairey, A. W., Iler, P. L., Earle, J. K., Shellenbarger, D., and Barker D. 2008. Dynamic whole plant modeling to investigate mitigation strategies for toxic shocks. *1st IWA/WEF Wastewater Treatment Modeling Seminar.* Mont-Sainte-Anne, Quebec, Canada. June-1-3, 2008.

260. **Love, N. G.** and **Skerlos, S. J.** 2008. Global Sustainable Water Systems – Acknowledging Wastewater as a Resource. *Graham Environmental Sustainability Institute Water, Health + Environment Workshop*, University of Michigan, March 26-27, 2008.

261. **Musabyimana, M.**, N. G. Love, C. B. Bott and S. Murthy. 2008. Evaluation of nitrite inhibition and toxicity in the deamonification process. Podium presentation alternate. *Proceedings of the Water Environment Federation 81st Annual Conference and Exposition,* Chicago, IL, October 19-22, 2008.

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264. **Gilmore, K. R.**, N. G. Love, B. F. Smets, A. Terada, J. Garland. 2008. Nitrifier and anammox population dynamics in an autotrophic nitrogen removal membrane biofilm reactor. Podium presentation. *Proceedings of the Water Environment Federation 81st Annual Conference and Exposition,* Chicago, IL, October 19-22, 2008.

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270. **Ikuma, K.**, I. D. S. Henriques, B. J. Love and N. G. Love. 2007. Immobilization of *Pseudomonas aeruginosa* in alginate microbeads for use in a biosensor designed to detect oxidative toxins. Podium presentation. *Proceedings of the Water Environment Federation 80th Annual Conference and Exposition*, San Diego, CA, Oct 14-17, 2007.

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294. **Xu, Y.**, Lei, G., Linares, K. A., Fleming, D. L., Meehan, K., Lu, G. Q., Love, N. G. and Love, B. J. 2005. Maximizing dye fluorescence via incorporation of metallic nanoparticles in solution. *SPIE (The International Society for Optical Engineering)*, **5591**:175-183.

295. **Henriques, I. D. S.**, Aga, D., Mendes, P. and Love, N. G. 2005. Metabolic footprinting: A new approach to identify changes in activated sludge physiology upon exposure to toxic compounds.

Proceedings of the Water Environment Federation 78th Annual Conference and Exposition, Washington DC, Oct 31-Nov 2, 2005, 12 pages.

296. **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. Poster presentation at Water Environment Federation 78th Annual Conference and Exposition, Washington DC, Oct 31-Nov 2, 2005.

297. Henriques, I. D. S., Aga, D., Mendes, P. and **Love, N. G.** 2005. Metabolic footprinting: A new approach to identify changes in activated sludge physiology upon exposure to toxic compounds. *Proceedings of the 4th International Water Association Activated Sludge Population Dynamics Specialist Conference*, Gold Coast, Australia, 12 pages.

298. **Henriques, I. D. S.**, Aga, D., Mendes, P., and Love, N. G. 2005. Metabolic Footprinting: A New Approach to identify Changes in Activated Sludge Physiology upon Exposure to Toxic Compounds. Association of Environmental Engineering and Science Professors Conference, July 24-26, Clarkson University, Potsdam, New York.

299. **Fraga Muller, J.**, Craig, J., Stevens, A. M., and Love, N. G. 2005. Using Whole Genome Arrays to Investigate Functional Response to Contaminant Stress: the Response of *Pseudomonas aeruginosa* to Pentachlorophenol. Association of Environmental Engineering and Science Professors Conference, July 24-26, Clarkson University, Potsdam, New York.

300. **Fraga Muller, J.**, Craig, J., Stevens, A. M., and Love, N. G. 2005. The Stress Response of *Pseudomonas aeruginosa* to Pentachlorophenol. *Abstracts of the 105th General Meeting of the American Society for Microbiology*, Atlanta Georgia.

301. **Kelly II, R. T.** and Love, N. G. 2004. Investigating the role of oxidative stress mechanisms in chemically-inhibited nitrifiers. *Proceedings of the Water Environment Federation 77th Annual Conference and Exposition*, New Orleans, LA, October 2004, 22 pages.

302. **Kelly II, R. T.** and Love, N. G. 2004. A critical comparison of methods used to determine nitrification inhibition. *Proceedings of the Water Environment Federation 77th Annual Conference and Exposition*, New Orleans, LA, October 2004, 15 pages.

303. **Henriques, I. D. S.**, Stevens, A. M. and Love, N. G. 2004. Is biomass concentration a factor determining the sensitivity of activated sludge to toxic shocks? *Proceedings of the Water Environment Federation 77th Annual Conference and Exposition*, New Orleans, LA, October 2004, 22 pages.

304. **Linares, K.**, Fleming, D., Xu, Y., Love, N. G., Love, B. J. and Meehan, K. 2004. Evaluating strategies for integrating bacterial cells into a biosensor designed to detect electrophilic toxins. *Proceedings of the Water Environment Federation 77th Annual Conference and Exposition*, New Orleans, LA, October 2004, 17 pages.

305. **Henriques, I. D. S., Kelly II, R. T.** and Love, N. G. 2004. Deflocculation Effects Due to Chemical Perturbations in Sequencing Batch Reactors. 3rd International Symposium on Sequencing Batch Reactors, International Water Association, Brisbane, Australia.

306. **Leung, S.M.**, Little, J. C., Holst, T., and Love, N. G. 2003. Oxygen transfer and consumption in a biological aerated filter. *Proceedings of the Water Environment Federation 76th Annual Conference and Exposition*, Los Angeles, CA October 2003.

307. **Dauphinais, J. L.** and Love, N. G. 2003. Determination of toxic inhibition potential from industrial dischargers to a POTW using a respirometric assay. *Proceedings of the Water Environment Federation 76th Annual Conference and Exposition*, Los Angeles, CA October 2003.

308. **Yanosek, K.A.**, Wolfe, M. L. and Love, N. G. 2003. Assessment of enhanced biological phosphorus removal for dairy manure treatment. In the *Animal, Agricultural and Food Processing Wastes, Proceedings of the Ninth International Symposium*, 11-14 October 2003 (Raleigh, North Carolina, USA), ed. Robert Burns. ASAE Pub #701P1203. pp. 212-220.

309. **Henriques, I. D. S.** and Love, N. G. 2003. The role of floc morphology and composition on susceptibility of biomass to shock loads of chemical toxins. Poster presentation at Water Environment

Federation 76th Annual Conference and Exposition, Los Angeles, CA October 2003. *1st Place - Best Poster Award.*

310. **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. *Proceedings of the Water Environment Federation 75th Annual Conference and Exposition*, Chicago, IL October 2002.

311. **Leung, S.**, Holst, T., Love, N. G. and Little, J. C. 2002. A fundamental investigation of oxygen utilization in a biological aerated filter. *Proceedings of the Water Environment Federation 75th Annual Conference and Exposition*, Chicago, IL October 2002.

312. **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. *Proceedings of the Water Environment Federation 75th Annual Conference and Exposition*, Chicago, IL October 2002.

313. **Wimmer, R. F.** and Love, N. G. 2002. Activated sludge deflocculation in response to chlorine addition: the potassium connection. *Proceedings of the Water Environment Federation 75th Annual Conference and Exposition*, Chicago, IL October 2002.

314. **Love, N. G.**, Wimmer, R. F., Barker, S., Travis, J., Love, B. J., and Locascio, L. 2002. Developing sensing technologies to enable proactive operations in biological wastewater treatment. Association of Environmental Engineering and Science Professors/American Academy of Environmental Engineers Conference, August 10-14, University of Toronto, Toronto, Canada, p. 24.

315. **Love, N. G.** 2002. Invited keynote speaker. Status and Potential for Biosensors in Wastewater Treatment. European Union COST meeting, *Biosensors in Wastewater*, Milan Italy.

316. **Holbrook, R. D.**, Novak, J. T. and Love, N. G. 2001. Process considerations for the reduction of endocrine disruption potential in wastewater effluents. *Proceedings of the Water Environment Federation 74th Annual Conference and Exposition*, Atlanta, GA, October 2001.

317. **Wimmer, R. F.**, Waddell, E., Barker, S. L. R., Suggs, A., Locascio, L., Love, B. J. and Love, N. G. 2001. Development of an upset early warning device to predict deflocculation events. *Proceedings of the Water Environment Federation 74th Annual Conference and Exposition*, Atlanta, GA, October 2001.

318. **Phipps, S. D.** and Love, N. G. 2001. Quantifying observed biomass yield in a biological aerated filter. *Proceedings of the Water Environment Federation 74th Annual Conference and Exposition*, Atlanta, GA, October 2001.

319. **Love, N. G.** and Bott, C. B. 2001. Evaluating the Role of Microbial Stress Response Mechanisms in Causing Biological Treatment System Upset. Microorganisms in Activated Sludge and Biofilm Processes, Rome, Italy [see associated *Water Science and Technology* publication above].

320. **Love, N. G.**, C. B. Bott, K. C. Terlesky. 2001. Proteomic approach to assessing environmental stress in complex microbial communities." Oral presentation at the 221st American Chemical Society National Meeting, San Diego, CA. April 2, 2001.

321. **Bott, C. B.**, Abrajano, J. and Love, N. G. 2000. A physiological mechanism for activated sludge deflocculation caused by shock loads of toxic chemicals. *Proceedings of the Water Environment Federation 73rd Annual Conference and Exposition*, Anaheim, CA, October 14-18, 2000.

322. Bott, C. B., Duncan, A. J. and **Love, N. G.** 2000. Stress Protein Expression in Domestic Activated Sludge in Response to Xenobiotic Shock Loading. First World Congress of the International Water Association, Paris France [see associated *Water Science and Technology* publication above].

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. 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.
- E. Rodriguez, W. Tarpeh, K. Wigginton, **N. G. Love**. Comparative Examination of Pharmaceutical Degradation in Synthetic Urine by a Dielectric Barrier Discharge Plasma Jet and UV/H_2O_2 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. Nitritation 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 nitritation: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/WEA 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/WEA 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/WEA 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.**, Holst, 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.,** Delahaye, 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)

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 61/16-5/31/20 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

	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. Salveson. 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

58. Love, N. G. Monitoring the full-scale Biofor® biological aerated filter system at Roanoke, VA. Infilco 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)

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. Bareau, 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. REFRESCH: 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.	Hallerman, 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 *lux* reporter for the anaerobic human pathogen *Bacteroides*. 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

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)

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. AEESP Distinguished Lecturer. 2015-2016 academic year. Presented one of two talks: "The Interplay Between Chemicals and Microbiomes: An Environmental Biotechnology Perspective", or "At the

Confluence: Nutrients, Trace Chemicals and Sustainability in the Urban Water Sector." Eighteen venues were selected among 27 applicants. Most venues involve more than one host school. Host schools include: Ohio State; Michigan Tech and University of Minnesota-Duluth; Lehigh University and Lafayette College; Penn State University and St. Francis University; University of South Florida, University of Central Florida and University of Florida; University of Oklahoma; Technische Universitat Munchen and ETH Zurich; University of Pittsburgh and Carnegie Mellon University; Arizona State University; Colorado School of Mines and University of Colorado-Boulder; University of Tennessee; University of Cincinnati, University of Dayton and US EPA; University of Toronto; University of Maryland, Johns Hopkins University and Howard University; Virginia Tech; University of Vermont, Clarkson University, St. Michaels University, Norwich University and McGill University; University of Massachusetts, Yale University, University of Connecticut, Worcester Polytechnic Institute and Rensselaer Polytechnic Institute; Northwestern University and University of Illinois Chicago.

20. Invited Lecture: A balancing act: Achieving nutrient recovery via urine-derived fertilizers while managing emerging contaminants. University of Southern California, Los Angeles, CA. February 24, 2016.
21. Invited Lecture: Chlorinated phenols: their influence on microbial colonization and antibiotic resistance. Technical University of Delft, The Netherlands, January 22, 2016.
22. Distinguished Lecture: Microbial responses to and health implications for trace organic chemicals in the environment: A story about chlorinated phenols. School of Environment, Tsinghua University, Beijing China, December 5, 2014.
23. Distinguished Lecture: Bringing next generation sequencing to case studies in environmental biotechnology. Chinese Microbial Ecology Society, by webcast to Beijing China, October 26, 2014.
24. Distinguished Lecture: Chlorinated Phenols in Water: Their Influence on Microbial Colonization and Responses to Antibiotics. EAWAG, Swiss Federal Institute of Aquatic Science and Technology, Duebendorf, Switzerland, Invited, November 9, 2014.
25. Invited Lecture: Effect of Chlorinated Phenols on Microbial Communities that Colonize Point-of-Use Drinking Water Filters. Department of Civil and Environmental Engineering, University of Glasgow, Scotland, March 14, 2014
26. Invited Lecture: The Evolution of Wastewater Management in the United States: Toward Sustainable Systems. Dept of Civil and Environmental Engineering, Addis Ababa Institute of Technology, Ethiopia. October 17, 2013.
27. Distinguished Lecture: Eminent Scholar Lecture Series. At the Confluence of Nutrients, Pharmaceuticals and Sustainability: Emerging Issues in Wastewater Management. University of South Florida College of Engineering. April 19, 2013.
28. Distinguished Lecture: Water Resources and Environmental Engineering Research Symposium. At the Confluence of Nutrients, Pharmaceuticals and Sustainability: Emerging Issues in Wastewater Management. North Carolina State University. March 15, 2013
29. Invited Lecture: From Under the End Table: Navigating Fears, Hopes and Aspirations in Life and Career. North Carolina State University Women in Engineering Lecture Series. March 14, 2013.
30. Invited Lecture: Michigan Water Environment Association Annual Process Seminar. At the Confluence of Nutrients, Pharmaceuticals and Sustainability, East Lansing, MI, November 7, 2012.
31. Invited Speaker: Chesapeake Bay Science and Technical Advisory Committee/Water Environment Research Foundation. Real World Sustainable Wastewater Practices Workshop, At the Intersection of Nitrogen Transformation and Pharmaceuticals, Richmond, VA, May 16, 2012.
32. Keynote speaker: Virginia Water Environment Association Education Conference, At the Confluence of Nutrients, Pharmaceuticals and Sustainability: Emerging Issues in Wastewater Management, Richmond, VA, May 17, 2012.
33. Invited Speaker: Water & Wastewater Treatment BMP Forum, International Joint Commission, Wastewater Treatment Innovation: Current Research Focus, McGregor Memorial Conference Center,

Wayne State University, Detroit MI, March 26, 2012.

34. Distinguished Lecture: A Brace Lecture. The Brace Center for Water Resources Management. McGill University, At the Confluence of Nutrients, Pharmaceuticals and Sustainability: Emerging Issues in Wastewater Management, Montreal, Canada. February 29, 2012.

35. Invited Speaker: At the Confluence of Nutrients, Trace Contaminants and Sustainability: Emerging Issues in Wastewater Management. AEESP-Leading Edge Research Session in honor of the 10th anniversary of the Paul L. Busch Award, WEFTEC, Oct 17, 2011.

36. Invited Speaker: 16th Annual Central States Water Environment Association Meeting. At the confluence of nutrients, pharmaceuticals and sustainability: emerging issues in managing wastewater. Madison WI, April 5, 2011.

37. Distinguished Lecture: University of Texas, Austin, Department of Civil and Environmental Engineering, At the confluence of nutrients, pharmaceuticals and sustainability: emerging issues in urban water systems, March 24, 2011.

38. Invited Lecture: From Under the End Table: Navigating Fears, Hopes and Aspirations in Life and Career. University of Wisconsin-Madison Women in Science and Engineering Leadership Institute (WISELI) Lecture Series, which seeks to learn about the background and experiences of women who have succeeded in engineering and environmental chemistry fields, particularly those who have risen to leadership roles in academia, March 15, 2011.

39. Invited Lecture: University of Colorado, Boulder, Department of Civil and Environmental Engineering. At the confluence of nutrients, pharmaceuticals and sustainability: emerging issues in managing wastewater, January 13, 2011.

40. Invited Lecture: Northeastern University, Department of Civil and Environmental Engineering. At the confluence of nutrients, pharmaceuticals and sustainability: emerging issues in managing wastewater, December 2, 2010.

41. Keynote Lecture: International Water Association Leading Edge Technology 2010 Conference, Phoenix, AZ, USA. The pursuit of sustainable water and wastewater systems: The role of wastewater as a renewable resource, June 3, 2010.

42. Invited Lecture: University of California – Riverside, Department of Chemical and Environmental Engineering. Toward understanding dynamic microbiological responses to chemical stress: chemical stressors and antibiotic resistance, May 6, 2010.

43. Distinguished Lecture: Ernest and Agnes Gloyna Distinguished Lecture in Environmental Engineering, Johns Hopkins University, Baltimore, MD. Chemical Stressors in the Environment – Past, Present and Future. April 13, 2010.

44. Keynote Lecture: Somerville College, University of Oxford, England. Effects of antibiotics on sewage treatment processes. Part of the Workshop on Pharmaceutical Usage During an Influenza Pandemic – Implications for Sewage Treatment Plant Function, March 3, 2009.

45. Invited Lecture: University of Notre Dame Department of Civil Engineering and Geological Sciences. The Influence of Microbial Ecology and Physiology in the Biotransformation of Pharmaceuticals in Wastewater, November 11, 2008.

46. Distinguished Lecture: University of Minnesota Department of Civil Engineering Warren Lecture. Biotransformation of pharmaceuticals by nitrifying and heterotrophic cultures: Investigating degradation patterns, metabolite formation and the influence of growth state. November 14, 2008.

47. Invited Lecture: International Symposium on Glutathione and Related Thiols in Microorganisms and Plants, Faculté de Pharmacie de Nancy, France/ Glutathione as an *in vivo* indicator of chemical stress in complex biological systems, August 26-29, 2008.

48. Keynote Lecture: American Chemical Society Annual Meeting, Environmental Chemistry Symposium, Philadelphia, PA. Biotransformation and Chlorination of Pharmaceuticals and Their Byproducts during

Wastewater Treatment, August 20, 2008, Other co-authors include Wendell O. Khunjar, Komgrit Kotcharaksa, Peter Vikesland, Jolanta Skotnicka-Pitak, Diana Aga, Willie F. Harper Jr., Taewoo Yi.

49. Invited Lecture: Malcolm Pirnie, Inc. firm-wide seminar. Sustainable Water Systems – Acknowledging Wastewater as a Resource. May 2, 2008.

50. Invited Lecture: Research and Development Seminar Series, Metropolitan Water Reclamation District of Greater Chicago. Toward Understanding Dynamic Microbial Responses to Chemical Stress: Elucidating Biomarkers for Use in Upset Early Warning Systems, June 15, 2007.

51. Invited Lecture: Water Environment Research Foundation Nutrient Challenge Stakeholder Workshop, Baltimore, Maryland. Organic Nitrogen in Wastewater Effluents, March 7-8, 2007.

52. Invited Lecture: Department of Civil and Environmental Engineering, University of California, Los Angeles. Toward Understanding Dynamic Microbiological Responses to Chemical Stress: Elucidating Biomarkers and Ecological Impact, February 6, 2007.

53. Invited Lecture: Virginia Water Environment Association Education Seminar, 2010: A Nutrient Odyssey – A Timely Look for Options for Compliance. Nitrification Inhibition: An Overview of the Problem and How it Affects Nitrogen Removal, December 13, 2006.

54. Invited Lecture: Carnegie Mellon University, Department of Civil and Environmental Engineering. Toward Understanding Dynamic Microbiological Responses to Chemical Stress: Elucidating Biomarkers and Ecological Impact, November 3, 2006.

55. Invited Lecture: Workshop on The Future of Water Monitoring, Virginia Water Monitoring Council. Elucidating Biomarkers and Ecological Impacts of Chemical Stressors Informs Emerging Water Monitoring Technologies, October 12, 2006.

56. Invited Lecture: Center for Urban Environmental Research and Education, University of Maryland – Baltimore County. Stress-Induced Microbial Footprints as a Basis for Monitoring Complex Environmental Systems, March 31, 2006.

57. Invited Lecture: Virginia Department of Environmental Quality Permitting Workshop, Blacksburg, VA. Nitrogen Removal Technologies for Meeting Nitrogen Load Reductions in the Chesapeake Bay Watershed, August 30, 2005.

58. Workshop Coordinator and Presenter. Overview of WERF Research on Upset Early Warning Technologies for Wastewater Treatment Plants. WEFTEC workshop, Washington DC, October 30, 2005

59. Keynote Lecture: 4th International Water Association Activated Sludge Population Dynamics Specialist Conference, Gold Coast, Australia. Detecting Microbial Fingerprints and Their Role in Advancing Our Understanding of Activated Sludge Population Dynamics, July 2005.

60. Invited Lecture: EPA/WERF Water Sector Security Workshop, Eastern Section, Philadelphia, PA. Upset early warning systems for wastewater treatment plants: technology status and potential, May 10-12, 2005.

61. Invited Lecture: Vistas for Microbial Ecology and Environmental Biotechnology, Center for Environmental Biotechnology, The Biodesign Institutes, Arizona State University, Tempe, Arizona. Monitoring our environment: bridging the interface between biology, chemistry and technology. One of eight international experts invited to present my view of the future for environmental biotechnology/microbial ecology. Outcome was published in *Environmental Science and Technology* (see journal papers).

62. Invited Lecture: Department of Geography and Environmental Engineering, Johns Hopkins University. Understanding Stress and its Role in Defining Environmental Health, March 29, 2004

63. Invited Lecture: Pondering Stress and its Role in Environmental Monitoring. Half Day Seminar in honor of the retirement of C. P. Leslie Grady Jr., Clemson University, Clemson, South Carolina, February 20, 2004

64. Invited Lecture: School of Civil Engineering, Purdue University, West Lafayette, Indiana, A Proposed Strategy for Developing Sensing Technologies for Environmental Monitoring: The Role of Stress, November 2003

65. Invited Lecture: Chemistry Department, University of Maryland Department of Chemistry, College Park, MD. Molecular indicators of toxin-induced stress in wastewater treatment systems, March 15, 2002

66. Keynote Lecture. European Union COST meeting, *Biosensors in Wastewater*, Milan Italy. Status and potential for biosensors in wastewater treatment, June 2002.

67. Invited Lecture: Civil Engineering Department, University of Texas, Austin, TX. Molecular indicators of toxin-induced stress in wastewater treatment systems, April, 2002

68. Invited Lecture: Chemical Engineering Department, Yale University. Using molecular stress responses as indicators of system stress in biological wastewater treatment facilities, April 11, 2001

69. Protecting your biological processes using upset early warning systems. Water Environment Research Foundation Subscriber Regional Meeting, Washington, D.C., April 5, 2001

70. Invited Lecture: Department of Civil and Environmental Engineering, University of California, Davis. Using molecular stress responses as indicators of system stress in biological wastewater treatment facilities, February 7, 2000

71. Invited Lecture: Department of Environmental Sciences, Rutgers University, Cook College, New Brunswick, NJ. Using molecular stress responses as indicators of system stress in biological wastewater treatment facilities, November 12, 1999

72. Invited Lecture: Department of Civil Engineering, Tulane University, New Orleans. Use of the microbial stress response as an indicator of system stress in biological treatment, October 1999

73. Invited Lecture: Department of Chemical Engineering, University of Virginia. Microbial stress in biological treatment systems, November 1998

PATENTS

1. Noe-Hays, A. and N. G. Love. Feb 20, 2020. Patent Application No. 16541846. Freeze Concentration for Urine-Based Fertilizer Production.