

City of Flint, Michigan

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



Meeting Agenda - Final

Monday, May 10, 2021

5:30 PM

ELECTRONIC PUBLIC MEETING

CITY COUNCIL

*Kate Fields, President, Ward 4
Maurice D. Davis, Vice President, Ward 2*

*Eric Mays, Ward 1
Jerri Winfrey-Carter, Ward 5
Monica Galloway, Ward 7*

*Santino J. Guerra, Ward 3
Herbert J. Winfrey, Ward 6
Allan Griggs, Ward 8*

Eva L. Worthing, Ward 9

Inez M. Brown, City Clerk

Davina Donahue, Deputy 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 Meeting
Monday, May 10, 2021, at 5:30 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 HEARING PERIOD of the meeting by telephone, participants will also call (617) 944-8177:

- a. All callers will be queued and muted until the Public Hearing portion of the agenda;
- b. Public speakers will be unmuted in order and asked if they wish to address the City Council on THE SUBJECT OF THE PUBLIC HEARING SPECIFICALLY;
- c. Public speakers should state and spell their name for the record and will be allowed ten (10) minutes to speak during the public hearing;
- d. The speaker will be returned to mute after the 10 minutes have expired.

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

- a. All callers will be queued and muted until the Public Speaking portion of the 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 three (3) minutes for public speaking;
- d. The speaker will be returned to mute after the 3 minutes have expired;
- e. After the telephonic public speakers are completed, emailed public comments will be read by the City Clerk. All emailed public comments will be timed for 3 minutes;
- f. Per Rules Governing Meetings of the Council (Rule 7.1 VII), there will only be one speaking opportunity per speaker. Consequently, public participants who call in and speak during the public speaking period of the meeting WILL NOT have written comments as submitted read by the City Clerk.

3. The public may send public comments by email to CouncilPublicComment@cityofflint.com no later than 10 minutes prior to the meeting start time of 5:30 p.m.

4. 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.

CALL TO ORDER**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.

PLEDGE OF ALLEGIANCE**PRAYER OR BLESSING****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.

REQUEST FOR CHANGES AND/OR ADDITIONS TO AGENDA

Council shall vote on any agenda changes.

PRESENTATION OF MINUTES

210220 Summary Minutes/Special Flint City Council/March 1, 2021

Summary Minutes of the Special Flint City Council ELECTRONIC PUBLIC MEETING held Monday, March 1, 2021 at 4:33 p.m.

- 210221** Summary Minutes/Special Flint City Council/March 15, 2021
- Summary Minutes of the Special Flint City Council ELECTRONIC PUBLIC MEETING held Monday, March 15, 2021 at 5:32 p.m.
- 210222** Summary Minutes/Regular Flint City Council/March 22, 2021
- Summary Minutes of the Regular Flint City Council ELECTRONIC PUBLIC MEETING held Monday, March 22, 2021 at 5:33 p.m.
- 210223** Summary Minutes/Special Flint City Council/March 25, 2021
- Summary Minutes of the Special Flint City Council ELECTRONIC PUBLIC MEETING held Thursday, March 25, 2021 at 5:33 p.m.

SPECIAL ORDERS

- 210215** Special Order/Certificate of Recognition
- A Special Order as requested by Councilperson Griggs to present a Certificate of Recognition to Kettering's B Delta Chi Fraternity.
- 210218** Special Order/Republic Services/Composting & Trash
- A Special Order as requested by Councilperson Monica Galloway to discuss composting and trash with Republic Services.
- 210181** Special Order/Plaque for COVID-19 Victims
- A Special Order as requested by Council President Fields to discuss having the City Council pay for a plaque to honor employees who have died of COVID-19.
- 210172** Special Order/Discussion/Finance Committee Vice Chair
- A Special Order as requested by Councilperson Worthing to discuss the Finance Committee Vice Chair.
- 210171** Special Order/Special Meeting/\$99 Million/COVID-19 Relief Funds
- A Special Order as requested by Councilperson Mays to discuss having a special meeting to talk about the \$99 million in COVID-19 relief funds.
- 210167** Special Order/Special Orders
- A Special Order as requested by Council President Fields to discuss Special Orders.
- 210124** Special Order/Bone Scans & Lead Measurement/Dr. Lawrence Reynolds
- A Special Order as requested by Council President Fields to allow Dr. Lawrence

Reynolds to present his findings on bone scanning equipment and their use in measuring lead exposure.

210070 Special Order/Hatch Act

A Special Order as requested by Council President Fields to discuss the Hatch Act of 1939, which prohibits some forms of political activity.

PUBLIC HEARINGS

210158.6 Public Hearing/Ordinance 210158

A Public Hearing for Ordinance 210158, which will amend Chapter 18, (Taxation; Funds; Purchasing); Article I, (In General); Section 18-4.1, (Service Charge in Lieu of Taxes for Housing Facilities for Certain Persons) by adding subsection (GG). [NOTE: The PILOT is for Flushing Place Limited Dividend Housing Association, LP, a Limited Partnership. The annual service charge for the class of persons of low and moderate income shall be equal to four (4) percent of the annual shelter rents, exclusive of charges for gas, electricity, heat or other utilities furnished to the occupants.]

PUBLIC SPEAKING

COUNCIL RESPONSE

PETITIONS AND UNOFFICIAL COMMUNICATIONS

210225 Financial Report/Karegnondi Water Authority (KWA)

Communication received April 27, 2021, re: The Karegnondi Water Authority (KWA) March 2021 Financial Report.

COMMUNICATIONS (from Mayor and other City Officials)

210226 Flyer/City of Flint/Clean & Beautify Flint

Flyer received May 6, 2021, from City of Flint, re: Join the city-wide effort to clean and beautify Flint.

210227 Traffic Engineering/Closure Permits

Sidewalk, Lane and Street Closure permits (9) dated April and May 2021, for requested activities/events, with noted responsibility for the placement of the required traffic control devices, and/or personnel, for the protection of traffic and event participants.

ADDITIONAL COMMUNICATIONS

LIQUOR LICENSES**APPOINTMENTS****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.]

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.]

RESOLUTIONS**210202** CO#1/Contract/Extend Contract/Rowe Professional Services Co./Comprehensive Zoning Services

Resolution resolving that city officials, upon City Council's approval, are authorized to do all things necessary to extend the contract [change order #1] with Rowe Professional Services Co. until October 31, 2021, and add \$60,000.00 to continue their provision of comprehensive zoning services with funds in the amount of \$60,000.00, to be made available from Planning & Development Medical Marijuana Compliance Professional Services Acct. No. 101-371.220-801.000.

210203 Sale of City-Owned Land/3420 St. John Street/Evergrow, LLC

Resolution resolving that the appropriate city officials are authorized to do all things necessary to enter into and complete the sale of the property commonly known as 3420 St. John Street, Flint, MI, 48505, Parcel ID 47-31-487-015, and legally described as LOTS 425 THRU 443 AS ORIGINALLY PLATTED; LOT 444 EXC ELY 10 FT OF NLY 75 FT; LOT 445 EXC NLY 75 FT, GENERAL MOTORS PARK; ALSO A CONTIG UNPLATTED PARCEL OF LAND DESC AS FOLLS: THAT PART OF N8 RDS OF 1/2 OF NE 1/4 OF SEC 6, T7N, R7E LYING WLY OF WLY R.O.W. LINE OF JAMES P. COLE BLVD AS DESCRIBED IN DEED LIBER 2183, PAGES 869-873, GENESEE COUNTY RECORDS. EXC THAT PART OF VACATED ST JOHN ST. for a total cost of \$500,000.00 and transfer the property to Evergrow, LLC, in an AS IS condition, according to the terms agreed upon in

the Purchase Agreement by means of conveyance of a Warranty Deed. Revenue realized from the sale of this real property will be placed in Revenue Acct. No. 101-371.209-673.100, AND, resolving that the City Clerk shall, within thirty (30) days of this action, record a certified copy of this resolution with the Register of Deeds for Genesee County and forward a certified copy of said resolution to the State Treasurer.

210204 CO#2/Contract/Rowe Engineering/Northwest Transmission Main/Re-Permitting & Design

Resolution resolving that the proper city officials are hereby authorized to enter into Change Order #2 [to the contract] with Rowe Engineering for additional scope of services for the Northwest Transmission Main re-permitting and design, in an amount NOT-TO-EXCEED \$28,000.00, and a revised contract amount of \$132,360.00, as requested by the Department of Public Works and Utilities.

210219.1 Amendment/Settlement/Pohly v City of Flint, Case No. 19-112528-CZ

Amended resolution resolving that the Flint City Council approves and consents to the city settling Pohly v City of Flint, Case No. 19-112528-CZ, through the mediation process authorizing one City Council representative and one City Administration representative to bind the parties in the event that a settlement is reach(ed) through the mediation process. [NOTE: Plaintiff filed a complaint against the city for alleged Open Meetings Act violations, violations of the Freedom of Information Act and failure to implement and breach of the Flint City Charter. An Executive Session was held on this matter on May 5, 2021.] [NOTE: Resolution amended to add City Councilperson Eric Mays as the Council's representative.]

RESOLUTIONS - MAY BE REFERRED FROM SPECIAL AFFAIRS

210216 Grant Acceptance/Budget Amendment/Transfer of Funds/Revive Community Health Center Grant/Bluegreen Alliance Foundation (BGAF)

Resolution resolving that the appropriate city officials, upon City Council's approval, are authorized to accept the Revive Community Health Center Grant, amend the FY2021 budget, appropriate funding for revenue and expenditures in future fiscal years, so long as funds are available from the funder, and abide by the terms and conditions of the grant from BGAF, in the amount of \$20,000.00, to grant budget with code PBGAF-HBBF21, through April 30, 2022. [NOTE: The City of Flint agrees to build a partnership between Revive Flint and two of the city's programs -- Flint ReCAST (Resilience in Communities After Stress and Trauma) and Lead-Based Paint and Hazard Control.]

210217 Grant Acceptance/Budget Amendment/Transfer of Funds/Flint Registry Community Referral Network Capacity Support Grant/Greater Flint Health Coalition

Resolution resolving that the appropriate city officials, upon City Council's approval,

are authorized to accept the Flint Registry Community Referral Network Capacity Support Grant, amend the FY2021 budget, appropriate funding for revenue and expenditures in future fiscal years, so long as funds are available from the funder, and abide by the terms and conditions of the grant from Greater Flint Health Coalition, in the amount of \$10,000.00, to grant budget with code FCDC-GFHC21, through July 31, 2021. [NOTE: The City of Flint agrees to provide capacity support for participation in the Community Referral Platform and Network. The grant will allow the Flint Registry to develop best practices for establishing community linkages while addressing capacity issues related to use of the referral tool.]

210224 Support/Safe Boating Campaign/National Safe Boating Week

Resolution resolving that the Flint City Council supports the goals of the Safe Boating Campaign, proclaims May 22-28, 2021 as National Safe Boating Week and the start of a year-round effort to promote safe boating, and urges those who boat to practice safe boating habits and wear a life jacket at all times while boating.

LIQUOR LICENSES

INTRODUCTION AND FIRST READING OF ORDINANCES

SECOND READING AND ENACTMENT OF ORDINANCES

210158 Amendment/Ordinance/Chapter 18 (Taxation; Funds; Purchasing)/Article I (In General)/Section 18-4.1 (Service Charge in Lieu of Taxes for Housing Facilities for Certain Persons)

The provisions of Chapter 18, (Taxation; Funds; Purchasing); Article I, (In General); Section 18-4.1, (Service Charge in Lieu of Taxes for Housing Facilities for Certain Persons) shall be amended by adding subsection (GG). [NOTE: The PILOT is for Flushing Place Limited Dividend Housing Association, LP, a Limited Partnership. The annual service charge for the class of persons of low and moderate income shall be equal to four (4) percent of the annual shelter rents, exclusive of charges for gas, electricity, heat or other utilities furnished to the occupants.]

ADJOURNMENT

City of Flint, Michigan

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



Meeting Minutes - Draft

Monday, March 1, 2021

4:33 PM

* Meeting Held to Receive Budget

ELECTRONIC PUBLIC MEETING

SPECIAL CITY COUNCIL

*Kate Fields, President, Ward 4
Maurice D. Davis, Vice President, Ward 2*

*Eric Mays, Ward 1
Jerri Winfrey-Carter, Ward 5
Monica Galloway, Ward 7*

*Santino J. Guerra, Ward 3
Herbert J. Winfrey, Ward 6
Allan Griggs, Ward 8*

Eva L. Worthing, Ward 9

Inez M. Brown, City Clerk

Davina Donahue, Deputy Clerk

CALL TO ORDER

President Kate Fields called this meeting to order at 4:33 p.m.

ROLL CALL

Present: Councilperson Mays, Vice President Davis, Councilperson Guerra, Councilperson Fields, Councilperson Winfrey-Carter, Councilperson Winfrey, President Galloway, Councilperson Griggs and Councilperson Worthing

PLEDGE OF ALLEGIANCE

Councilperson Eva Worthing led the Pledge of Allegiance.

PRESENTATION OF PROPOSED BUDGET

210122 Presentation/2022 City of Flint Budget

Presentation to the Flint City Council, by the Neeley Administration, of the [Proposed] 2022 Budget.

Presented

MOTION

Councilperson Worthing, with support from Councilperson Griggs, made a motion to receive the Mayor's budget. The vote was 7-2 (No: Mays, Galloway).

MOTION (APPEAL)

President Fields asked that Councilperson Mays be removed from the meeting. He appealed the decision, with support from Councilperson Winfrey-Carter. The vote was 4:4 (No: Mays, Davis, Winfrey-Carter, Galloway). A tie vote reaffirms the chair's decision and Councilperson Mays was removed from the meeting at 7:15 p.m.

ADJOURNMENT

This Special Electronic City Council Meeting adjourned at 7:30 p.m. after a motion by Councilperson Griggs and a second by Councilperson Davis. The vote to adjourn was 7:0. (Absent: Mays, Winfrey).

Respectfully transcribed & submitted,

Janell Johnson, Administrative Secretary to City Council

City of Flint, Michigan

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



Meeting Minutes - Draft

Monday, March 15, 2021

5:32 PM

ELECTRONIC PUBLIC MEETING

SPECIAL CITY COUNCIL

*Meeting held to deal with action items from the March 8,
2021 meeting, which was not held due to a lack of quorum.*

*Kate Fields, President, Ward 4
Maurice D. Davis, Vice President, Ward 2*

*Eric Mays, Ward 1
Jerri Winfrey-Carter, Ward 5
Monica Galloway, Ward 7*

*Santino J. Guerra, Ward 3
Herbert J. Winfrey, Ward 6
Allan Griggs, Ward 8*

Eva L. Worthing, Ward 9

Inez M. Brown, City Clerk

Davina Donahue, Deputy Clerk

CALL TO ORDER

Council President Kate Fields called this meeting to order at 5:32 p.m.

ROLL CALL

Present: Councilperson Mays, Vice President Davis, Councilperson Guerra, Councilperson Fields, Councilperson Winfrey-Carter, Councilperson Winfrey, Councilperson Galloway, Councilperson Griggs and Councilperson Worthing

PLEDGE OF ALLEGIANCE

Councilperson Jerri Winfrey-Carter led the Pledge of Allegiance.

REQUEST FOR CHANGES AND/OR ADDITIONS TO AGENDA

Councilperson Galloway made a motion to move Ordinance 210045 (a zoning ordinance) to right after Public Speaking and Council Response. The motion passed 9-0. Councilperson Mays asked for a Special Order on the Flint Water Settlement agreement deadlines. The vote was 9-0. Councilperson Fields made a motion to postpone Special Order 210124 (with Dr. Lawrence Reynolds) until the next City Council meeting. The motion passed 9-0. Councilperson Fields asked to move all action items right after Ordinance 210045. The vote was 5-3 (No: Mays, Davis, Winfrey-Carter).

ROLL CALL

Councilperson Galloway was removed (muted) from the meeting.

Present: Councilperson Mays, Vice President Davis, Councilperson Guerra, Councilperson Fields, Councilperson Winfrey-Carter, Councilperson Winfrey, Councilperson Griggs and Councilperson Worthing

Absent: Councilperson Galloway

ORDINANCES

210045 Ordinance/Chapter 50 (Zoning)/Article II (A-1 Single-Family Low-Density District)

An ordinance to amend Chapter 50 (Zoning), Article II, (A-1 Single-Family Low-Density District), of the Code of the City of Flint by repealing said Article and adopting Article II (Mapped Zone Districts).

ACKNOWLEDGED FOR FIRST READING

Substituted

A motion was made by Councilperson Winfrey-Carter, seconded by Councilperson Mays, that this matter be Amended. The motion carried by the following vote:

Aye: 7 - Councilperson Mays, Vice President Davis, Councilperson Guerra, Councilperson Fields, Councilperson Winfrey-Carter, Councilperson Winfrey and Councilperson Worthing

No: 1 - Councilperson Griggs

Absent: 1 - Councilperson Galloway

210045.1 Amendment/Ordinance/Chapter 50 (Zoning)/Article II (A-1 Single-Family Low-Density District)

An amended ordinance amending Chapter 50 (Zoning), Article II, (A-1 Single-Family Low-Density District), of the Code of the City of Flint by repealing said Article and adopting Article II (Mapped Zone Districts). [NOTE: Ordinance amended to correct the zoning of addresses 914 and 918 East Kearsley Street, Parcel Nos. 41-07-453-016 and 41-07-453-017. They are mapped as MR-2 and should be mapped as MR-1 to be consistent with the other addresses in the neighborhood.]

A motion was made by Councilperson Winfrey, seconded by Councilperson Worthing, that this matter be ACKNOWLEDGED FOR FIRST READING. The motion carried by the following vote:

Aye: 6 - Vice President Davis, Councilperson Guerra, Councilperson Fields, Councilperson Winfrey-Carter, Councilperson Winfrey and Councilperson Worthing

No: 1 - Councilperson Griggs

Abstain: 1 - Councilperson Mays

Absent: 1 - Councilperson Galloway

PUBLIC HEARINGS

At the March 8, 2021, City Council meeting, the following five (5) Public Hearings were scheduled. However, because of legal time frames, they were not held due to local, state and federal requirements for public notice.

210063.6 Public Hearing/Street Vacation/Decker Street Between Robert T. Longway Boulevard and Kearsley Street

A public hearing to consider the vacation of Decker Street between Robert T. Longway Boulevard and Kearsley Street. [NOTE: The Ruth Mott Foundation's Applewood Master Plan calls for the construction of a welcome center... which will offer year-round education, conference and exhibit spaces open to the community and broader access to the archives and collection materials that are part of the foundation.]

210064.6 Public Hearing/Street Vacation/Kearsley Street Between Walnut and Robert T. Longway Boulevard (1400 Kearsley Street)

A public hearing to consider the vacation of Kearsley Street between Walnut and Robert T. Longway Boulevard (1400 Kearsley Street). [NOTE: The Ruth Mott Foundation's Applewood Master Plan calls for the construction of a welcome center... which will offer year-round education, conference and exhibit spaces open to the community and broader access to the archives and collection materials that are part of the foundation.]

210084.6 Public Hearing/Brownfield Redevelopment Plan/James P. Cole Project (1809 James P. Cole)

A Public Hearing on the proposed Brownfield Redevelopment Plan for 1809 James P. Cole (James P. Cole Project.) [NOTE: Once approved, the Brownfield plan will allow the reimbursement of eligible project expenses from the additional tax revenue realized as a result of the redevelopment. The reimbursement can occur over the life of the plan, which is normally 30 years. The eligible reimbursable expenses are estimated at around \$2,541,508.00.]

210085.6 Public Hearing/Ordinance 210085

A Public Hearing for Ordinance No. 210085, an ordinance to amend the Flint City Code of Ordinances by amending Chapter 18 (Taxation; Funds; Purchasing), Article II (Assessments), by amending Section 18-7 (Special Assessment Relief Board Created; Membership), by amending Section 18-8 (Same -- Investigation of Requests for Relief; Report and Recommendation), by amending Section 18-9 (Award of Relief from Assessments), and by amending Section 18-10 (Payment of Special Assessment by City; Taking of Mortgage and Note to Assure Repayment to City). [NOTE: Ordinance to become effective 30 days after adoption.]

210087.6 Public Hearing/Review and Receive Public Input/City of Flint 2020-21 Annual Action Plan

A Public Hearing for the purposes of allowing review of the [2020-21] Annual Action Plan and to receive public comment.

APPOINTMENTS

210096 Reappointment/Flint Planning Commission/Elizabeth Jordan (Ward 9)

Resolution approving the reappointment of Elizabeth Jordan (401 Burroughs Avenue, Flint, Michigan, 48507 - Ward 9) to the Flint Planning Commission as requested by 9th Ward Representative Eva Worthing for an additional three-year term, expiring March 2022, as requested by Mayor Sheldon Neeley. [By way of background, Ms. Jordan's term expired in March 2019, but she continued to serve.]

Approved

Substituted

A motion was made by Councilperson Mays, seconded by Councilperson Griggs, that this matter be POSTPONED for March 22, 2021. The motion failed by the following vote:

Aye: 4 - Councilperson Mays, Councilperson Winfrey-Carter, Councilperson Winfrey and Councilperson Griggs

No: 4 - Vice President Davis, Councilperson Guerra, Councilperson Fields and Councilperson Worthing

Absent: 1 - Councilperson Galloway

A motion was made by Councilperson Mays, seconded by Councilperson Winfrey-Carter, that this matter be RECONSIDERED. The motion failed by the following vote:

Aye: 3 - Councilperson Mays, Councilperson Winfrey-Carter and Councilperson Winfrey

No: 5 - Vice President Davis, Councilperson Guerra, Councilperson Fields, Councilperson Griggs and Councilperson Worthing

Absent: 1 - Councilperson Galloway

A motion was made by Councilperson Worthing, seconded by Councilperson Griggs, that this matter be Approved. The motion carried by the following vote:

Aye: 5 - Vice President Davis, Councilperson Guerra, Councilperson Fields, Councilperson Griggs and Councilperson Worthing

No: 3 - Councilperson Mays, Councilperson Winfrey-Carter and Councilperson Winfrey

Absent: 1 - Councilperson Galloway

210097 Appointment/Human Relations Commission/Brian Larkin/9th Ward

Resolution resolving that the Flint City Council approves the appointment of Brian Larkin (2821 Circle Drive, Flint, MI, 48507), to serve on the City of Flint Human Relations Commission for a two-year term, commencing October 27, 2020, and expiring October 28, 2022.

A motion was made by Vice President Davis, seconded by Councilperson Worthing, that this matter be Approved. The motion carried by the following vote:

Aye: 6 - Vice President Davis, Councilperson Guerra, Councilperson Fields, Councilperson Winfrey, Councilperson Griggs and Councilperson Worthing

Abstain: 2 - Councilperson Mays and Councilperson Winfrey-Carter

Absent: 1 - Councilperson Galloway

210125 Appointment/Board of Review/Lisa M. Squier/Ward 4

Resolution approving the appointment of Lisa M. Squire (1301 Maplewood Avenue, Flint, MI, 48506) to the Board of Review for the remainder of a three-year term, commencing immediately upon adoption of this resolution and expiring January 1, 2022, as requested by 4th Ward City Councilperson Kate Fields. [NOTE: By way of background, Ms. Squire is replacing Clarence Campbell, whose term expired in December 2018, although he continued to serve on the Board until his resignation in November 2020.]

A motion was made by Councilperson Guerra, seconded by Councilperson Worthing, that this matter be Approved. The motion carried by the following vote:

Aye: 8 - Councilperson Mays, Vice President Davis, Councilperson Guerra, Councilperson Fields, Councilperson Winfrey-Carter, Councilperson Winfrey, Councilperson Griggs and Councilperson Worthing

Absent: 1 - Councilperson Galloway

RESOLUTIONS

210063.1 Approval/Street Vacation/Decker Street Between Robert T. Longway Boulevard and Kearsley Street

Resolution resolving that Decker Street Between Robert T. Longway Boulevard and Kearsley Street is hereby vacated and discontinued forever as a public street, alley or public ground, and the same is hereby placed on the assessment rolls for the purpose of taxation; AND, resolving that the City Clerk shall, within 30 days of this action, record a certified copy of this resolution with the Register of Deeds for Genesee County and forward a certified copy of said resolution to the State Treasurer. [NOTE: The Ruth Mott Foundation's Applewood Master Plan calls for the construction of a welcome center... which will offer year-round education, conference and exhibit spaces open to the community and broader access to the archives and collection materials that are part of the foundation.]

SEPARATED FROM THE MASTER RESOLUTION

210064.1 Approval/Street Vacation/Kearsley Street Between Walnut Street and Robert T. Longway Boulevard (1400 Kearsley Street)

Resolution resolving that Kearsley Street between Walnut Street and Robert T. Longway Boulevard is hereby vacated and discontinued forever as a public street, alley or public ground, and the same is hereby placed on the assessment rolls for the purpose of taxation; AND, resolving that the City Clerk shall, within 30 days of this action, record a certified copy of this resolution with the Register of Deeds for Genesee County and forward a certified copy of said resolution to the State Treasurer. [NOTE: The Ruth Mott Foundation's Applewood Master Plan calls for the construction of a welcome center... which will offer year-round education, conference and exhibit spaces open to the community and broader access to the archives and collection materials that are part of the foundation.]

SEPARATED FROM THE MASTER RESOLUTION

210084.1 Approval/City of Flint Brownfield Redevelopment Project Authority/Brownfield Plan for the James P. Cole Project (1809 James P. Cole Boulevard)

Resolution resolving that the [Brownfield Plan for the James P. Cole Project (1809 James P. Cole Boulevard)] as submitted is hereby approved and adopted, and a

copy of the plan and all amendments thereto shall be maintained on file in the City Clerk's office. [NOTE: Once approved, the Brownfield plan will allow the reimbursement of eligible project expenses from the additional tax revenue realized as a result of the redevelopment. The reimbursement can occur over the life of the plan, which is normally 30 years. The eligible reimbursable expenses are estimated at around \$2,541,508.00.]

SEPARATED FROM THE MASTER RESOLUTION

210103 Contract/Sorensen Gross Construction Co./Dort Pump Station Rehabilitation

Resolution resolving that the appropriate city officials, upon City Council's approval, are authorized to do all things necessary to issue a contract to Sorensen Gross Construction Co. for Dort Pump Station rehabilitation, in an amount NOT-TO-EXCEED \$3,649,397.00, as requested by the Department of Public Works [Water Infrastructure Improvements for the Nation (WIIN) Fund Acct. No. 496-552.000-801.076].

This Matter was Adopted on the Consent Agenda.

210104 Agreement/Sub-Grantee/United Way of Genesee County/W.K. Kellogg Foundation (WKKF) Grant

Resolution resolving that the appropriate City Officials are authorized to do all things necessary to enter into an agreement with United Way of Genesee County to act as a sub-grantee to the city's 2017 W.K. Kellogg Foundation (WKKF) grant, and to allocate above said funds as stated in the grant budget. [NOTE: The City of Flint received a grant from the W.K. Kellogg Foundation under the FY2017-2018 budget in the amount of \$2,957,800.00 to assist with workforce development through incentivizing companies to hire Flint residents.]

SEPARATED FROM THE MASTER RESOLUTION

210120 Multi-Year Agreement/Dearborn National Insurance Co./Third-Party Administrator/Life & Short-Term Disability Insurance

Resolution resolving that the appropriate officials are hereby authorized to do all things necessary to enter into an agreement with Dearborn National Insurance Co. to continue providing the city with its life and short-term disability insurance coverage, in the amount of \$75,000.00 for the rest of FY2021, \$150,000.00 for FY2022, and \$100,000 for the period July 1, 2022 through March 1, 2023, for a total cost NOT-TO-EXCEED \$325,000.00, as requested by Human Resources, with funding to come from Acct. No. 627-853.300-732.000. [NOTE: The city's healthcare consultant, Manquen Vance, selected Dearborn National Insurance Co. after a bidding process to administer its life and short-term disability insurance coverage.]

This Matter was Adopted on the Consent Agenda.

210121.1 Amendment/Budget Amendment/Transfer of Funds/FY2020-2021 Quarterly

Budget Amendment

Amended resolution resolving that the appropriate city officials are hereby authorized to do all things necessary to incorporate the approved appropriation changes into the FY2020-2021 operating budget of the City of Flint, as requested by Finance. [NOTE: The city is adding \$166,834.79 in expenditures to the City's General Fund for Blight Management, the discontinuation of bank processing fees for online payments, and shortages in supplies and professional services for Maintenance.] [NOTE: The proposed amendments decreased from \$210,208.67 to \$166,834.79 and the final adjustment decreased from \$73,509,043.46 to \$73,465,043.46.]

SEPARATED FROM THE MASTER RESOLUTION

Passed The Consent Agenda

A motion was made by Councilperson Guerra, seconded by Councilperson Worthing, including all the preceding items marked as having been adopted on a Consent Agenda. The motion carried by the following vote:

Aye: 8 - Councilperson Mays, Vice President Davis, Councilperson Guerra, Councilperson Fields, Councilperson Winfrey-Carter, Councilperson Winfrey, Councilperson Griggs and Councilperson Worthing

Absent: 1 - Councilperson Galloway

SEPARATED FROM THE MASTER RESOLUTION**210104 Agreement/Sub-Grantee/United Way of Genesee County/W.K. Kellogg Foundation (WKKF) Grant**

Resolution resolving that the appropriate City Officials are authorized to do all things necessary to enter into an agreement with United Way of Genesee County to act as a sub-grantee to the city's 2017 W.K. Kellogg Foundation (WKKF) grant, and to allocate above said funds as stated in the grant budget. [NOTE: The City of Flint received a grant from the W.K. Kellogg Foundation under the FY2017-2018 budget in the amount of \$2,957,800.00 to assist with workforce development through incentivizing companies to hire Flint residents.]

A motion was made by Councilperson Mays, seconded by Councilperson Griggs, that this matter be Adopted. The motion carried by the following vote:

Aye: 8 - Councilperson Mays, Vice President Davis, Councilperson Guerra, Councilperson Fields, Councilperson Winfrey-Carter, Councilperson Winfrey, Councilperson Griggs and Councilperson Worthing

Absent: 1 - Councilperson Galloway

210121.1 Amendment/Budget Amendment/Transfer of Funds/FY2020-2021 Quarterly Budget Amendment

Amended resolution resolving that the appropriate city officials are hereby authorized to do all things necessary to incorporate the approved appropriation changes into the FY2020-2021 operating budget of the City of Flint, as requested by Finance. [NOTE: The city is adding \$166,834.79 in expenditures to the city's

General Fund for Blight Management, the discontinuation of bank processing fees for online payments, and shortages in supplies and professional services for Maintenance.] [NOTE: The proposed amendments decreased from \$210,208.67 to \$166,834.79 and the final adjustment decreased from \$73,509,043.46 to \$73,465,043.46.]

A motion was made by Councilperson Worthing, seconded by Councilperson Guerra, that this matter be Adopted. The motion carried by the following vote:

Aye: 6 - Vice President Davis, Councilperson Guerra, Councilperson Fields, Councilperson Winfrey, Councilperson Griggs and Councilperson Worthing

No: 2 - Councilperson Mays and Councilperson Winfrey-Carter

Absent: 1 - Councilperson Galloway

INTRODUCTION AND FIRST READING OF ORDINANCES

210044 Ordinance/Chapter 50 (Zoning)/Article I (In General)

An ordinance to amend Chapter 50 (Zoning), Article I, (In General), of the Code of the City of Flint by repealing said Article and adopting Article I (Title, Purpose and Scope). [NOTE: This Chapter shall be known as the "Zoning Ordinance" of the City of Flint.]

ACKNOWLEDGED FOR FIRST READING

Substituted

A motion was made by Councilperson Winfrey-Carter, seconded by Councilperson Mays, that this matter be REFERRED TO COMMITTEE to the LEGISLATIVE COMMITTEE, due back on March 17, 2021. The motion failed by the following vote:

Aye: 3 - Councilperson Mays, Councilperson Winfrey-Carter and Councilperson Winfrey

No: 5 - Vice President Davis, Councilperson Guerra, Councilperson Fields, Councilperson Griggs and Councilperson Worthing

Absent: 1 - Councilperson Galloway

A motion was made by Councilperson Guerra, seconded by Councilperson Griggs, that this matter be ACKNOWLEDGED FOR FIRST READING. The motion carried by the following vote:

Aye: 6 - Vice President Davis, Councilperson Guerra, Councilperson Fields, Councilperson Winfrey, Councilperson Griggs and Councilperson Worthing

No: 2 - Councilperson Mays and Councilperson Winfrey-Carter

Absent: 1 - Councilperson Galloway

210046 Ordinance/Chapter 50 (Zoning)/Article III (A-2 Single-Family Medium Density District)

An ordinance to amend Chapter 50 (Zoning), Article III, (A-2 Single-Family Medium Density District), of the Code of the City of Flint by repealing said Article and adopting Article III (Residential Zone Districts).

A motion was made by Councilperson Winfrey-Carter, seconded by Councilperson Mays, that this matter be REFERRED TO COMMITTEE to the LEGISLATIVE COMMITTEE, due back on March 17, 2021. The motion failed by the following vote:

Aye: 3 - Councilperson Mays, Councilperson Winfrey-Carter and Councilperson Winfrey

No: 5 - Vice President Davis, Councilperson Guerra, Councilperson Fields, Councilperson Griggs and Councilperson Worthing

Absent: 1 - Councilperson Galloway

A motion was made by Councilperson Griggs, seconded by Councilperson Worthing, that this matter be ACKNOWLEDGED FOR FIRST READING. The motion carried by the following vote:

Aye: 6 - Vice President Davis, Councilperson Guerra, Councilperson Fields, Councilperson Winfrey, Councilperson Griggs and Councilperson Worthing

No: 2 - Councilperson Mays and Councilperson Winfrey-Carter

Absent: 1 - Councilperson Galloway

210047

Ordinance/Chapter 50 (Zoning)/Article IV (B Two-Family District)

An ordinance to amend Chapter 50 (Zoning), Article IV, (B Two-Family District), of the Code of the City of Flint by repealing said Article and adopting Article IV (Commercial Zone Districts).

A motion was made by Councilperson Winfrey-Carter, seconded by Councilperson Mays, that this matter be REFERRED TO COMMITTEE to the LEGISLATIVE COMMITTEE, due back on March 17, 2021. The motion failed by the following vote:

Aye: 3 - Councilperson Mays, Councilperson Winfrey-Carter and Councilperson Winfrey

No: 5 - Vice President Davis, Councilperson Guerra, Councilperson Fields, Councilperson Griggs and Councilperson Worthing

Absent: 1 - Councilperson Galloway

A motion was made by Councilperson Griggs, seconded by Councilperson Worthing, that this matter be ACKNOWLEDGED FOR FIRST READING. The motion carried by the following vote:

Aye: 6 - Vice President Davis, Councilperson Guerra, Councilperson Fields, Councilperson Winfrey, Councilperson Griggs and Councilperson Worthing

No: 2 - Councilperson Mays and Councilperson Winfrey-Carter

Absent: 1 - Councilperson Galloway

210048 Ordinance/Chapter 50 (Zoning)/Article V (C-1 Multifamily Walk-Up Apartment District)

An ordinance to amend Chapter 50 (Zoning), Article V, (C-1 Multifamily Walk-Up Apartment District), of the Code of the City of Flint by repealing said Article and adopting Article V (Employment Zone Districts).

A motion was made by Councilperson Winfrey-Carter, seconded by Councilperson Mays, that this matter be REFERRED TO COMMITTEE to the LEGISLATIVE COMMITTEE, due back on March 17, 2021. The motion failed by the following vote:

Aye: 3 - Councilperson Mays, Councilperson Winfrey-Carter and Councilperson Winfrey

No: 5 - Vice President Davis, Councilperson Guerra, Councilperson Fields, Councilperson Griggs and Councilperson Worthing

Absent: 1 - Councilperson Galloway

A motion was made by Councilperson Griggs, seconded by Councilperson Worthing, that this matter be ACKNOWLEDGED FOR FIRST READING. The motion carried by the following vote:

Aye: 6 - Vice President Davis, Councilperson Guerra, Councilperson Fields, Councilperson Winfrey, Councilperson Griggs and Councilperson Worthing

No: 2 - Councilperson Mays and Councilperson Winfrey-Carter

Absent: 1 - Councilperson Galloway

210049 Ordinance/Chapter 50 (Zoning)/Article VI (C-2 Multifamily High-Density Apartment District)

An ordinance to amend Chapter 50 (Zoning), Article VI, (C-2 Multifamily High-Density Apartment District), of the Code of the City of Flint by repealing said Article and adopting Article VI (Institutional/Innovation Zoned Districts).

A motion was made by Councilperson Winfrey-Carter, seconded by Councilperson Mays, that this matter be REFERRED TO COMMITTEE to the LEGISLATIVE COMMITTEE, due back on March 17, 2021. The motion failed by the following vote:

Aye: 3 - Councilperson Mays, Councilperson Winfrey-Carter and Councilperson Winfrey

No: 5 - Vice President Davis, Councilperson Guerra, Councilperson Fields, Councilperson Griggs and Councilperson Worthing

Absent: 1 - Councilperson Galloway

A motion was made by Vice President Davis, seconded by Councilperson Griggs, that this matter be ACKNOWLEDGED FOR FIRST READING. The motion carried by the following vote:

Aye: 6 - Vice President Davis, Councilperson Guerra, Councilperson Fields, Councilperson Winfrey, Councilperson Griggs and Councilperson Worthing

No: 2 - Councilperson Mays and Councilperson Winfrey-Carter

Absent: 1 - Councilperson Galloway

SECOND READING AND ENACTMENT OF ORDINANCES

210085 Ordinance/Amendment/Chapter 18 (Taxation; Funds; Purchasing)/Article II (Assessments)/Amendment of Sections 18-7, 18-8, 18-9 and 18-10

An ordinance to amend the Flint City Code of Ordinances by amending Chapter 18 (Taxation; Funds; Purchasing), Article II (Assessments), by amending Section 18-7 (Special Assessment Relief Board Created; Membership), by amending Section 18-8 (Same -- Investigation of Requests for Relief; Report and Recommendation), by amending Section 18-9 (Award of Relief from Assessments), and by amending Section 18-10 (Payment of Special Assessment by City; Taking of Mortgage and Note to Assure Repayment to City).

PASSED

Substituted

A motion was made by Councilperson Mays, seconded by Vice President Davis, that this matter be REFERRED TO COMMITTEE to the LEGISLATIVE COMMITTEE, due back on March 17, 2021. The motion carried by the following vote:

Aye: 8 - Councilperson Mays, Vice President Davis, Councilperson Guerra, Councilperson Fields, Councilperson Winfrey-Carter, Councilperson Winfrey, Councilperson Griggs and Councilperson Worthing

Absent: 1 - Councilperson Galloway

ROLL CALL

Councilperson Fields left at midnight.

Present: Councilperson Mays, Vice President Davis, Councilperson Guerra, Councilperson Winfrey-Carter, Councilperson Winfrey, Councilperson Griggs and Councilperson Worthing

Absent: Councilperson Fields and Councilperson Galloway

RESOLUTIONS CONTINUED

210063.1 Approval/Street Vacation/Decker Street Between Robert T. Longway Boulevard and Kearsley Street

Resolution resolving that Decker Street Between Robert T. Longway Boulevard and Kearsley Street is hereby vacated and discontinued forever as a public street, alley or public ground, and the same is hereby placed on the assessment rolls for the

purpose of taxation; AND, resolving that the City Clerk shall, within 30 days of this action, record a certified copy of this resolution with the Register of Deeds for Genesee County and forward a certified copy of said resolution to the State Treasurer. [NOTE: The Ruth Mott Foundation's Applewood Master Plan calls for the construction of a welcome center... which will offer year-round education, conference and exhibit spaces open to the community and broader access to the archives and collection materials that are part of the foundation.]

A motion was made by Councilperson Mays, seconded by Councilperson Winfrey, that this matter be REFERRED TO COMMITTEE to the GOVERNMENTAL OPERATIONS COMMITTEE, due back on March 17, 2021. The motion carried by the following vote:

Aye: 7 - Councilperson Mays, Vice President Davis, Councilperson Guerra, Councilperson Winfrey-Carter, Councilperson Winfrey, Councilperson Griggs and Councilperson Worthing

Absent: 2 - Councilperson Fields and Councilperson Galloway

210064.1

Approval/Street Vacation/Kearsley Street Between Walnut Street and Robert T. Longway Boulevard (1400 Kearsley Street)

Resolution resolving that Kearsley Street between Walnut Street and Robert T. Longway Boulevard is hereby vacated and discontinued forever as a public street, alley or public ground, and the same is hereby placed on the assessment rolls for the purpose of taxation; AND, resolving that the City Clerk shall, within 30 days of this action, record a certified copy of this resolution with the Register of Deeds for Genesee County and forward a certified copy of said resolution to the State Treasurer. [NOTE: The Ruth Mott Foundation's Applewood Master Plan calls for the construction of a welcome center... which will offer year-round education, conference and exhibit spaces open to the community and broader access to the archives and collection materials that are part of the foundation.]

A motion was made by Councilperson Mays, seconded by Councilperson Winfrey, that this matter be REFERRED TO COMMITTEE to the GOVERNMENTAL OPERATIONS COMMITTEE, due back on March 17, 2021. The motion carried by the following vote:

Aye: 7 - Councilperson Mays, Vice President Davis, Councilperson Guerra, Councilperson Winfrey-Carter, Councilperson Winfrey, Councilperson Griggs and Councilperson Worthing

Absent: 2 - Councilperson Fields and Councilperson Galloway

210084.1

Approval/City of Flint Brownfield Redevelopment Project Authority/Brownfield Plan for the James P. Cole Project (1809 James P. Cole Boulevard)

Resolution resolving that the [Brownfield Plan for the James P. Cole Project (1809 James P. Cole Boulevard)] as submitted is hereby approved and adopted, and a copy of the plan and all amendments thereto shall be maintained on file in the City Clerk's office. [NOTE: Once approved, the Brownfield plan will allow the reimbursement of eligible project expenses from the additional tax revenue realized as a result of the redevelopment. The reimbursement can occur over the life span

of the plan, which is normally 30 years. The eligible reimbursable expenses are estimated at around \$2,541,508.00.]

A motion was made by Councilperson Mays, seconded by Councilperson Winfrey, that this matter be REFERRED TO COMMITTEE to the GOVERNMENTAL OPERATIONS COMMITTEE, due back on March 17, 2021. The motion carried by the following vote:

Aye: 7 - Councilperson Mays, Vice President Davis, Councilperson Guerra, Councilperson Winfrey-Carter, Councilperson Winfrey, Councilperson Griggs and Councilperson Worthing

Absent: 2 - Councilperson Fields and Councilperson Galloway

ROLL CALL

Councilpersons Worthing, Winfrey-Carter and Griggs left at 12:34, 12:45 and 12:55 a.m., respectively.

SPECIAL ORDERS

Special Orders 210070 and 210124 were postponed to the next Council agenda (4-12-21) due to lack of a quorum.

210070 Special Order/Hatch Act

A Special Order as requested by Council President Fields to discuss the Hatch Act of 1939, which prohibits some forms of political activity.

210124 Special Order/Bone Scans & Lead Measurement/Dr. Lawrence Reynolds

A Special Order as requested by Council President Fields to allow Dr. Lawrence Reynolds to present his findings on bone scanning equipment and their use in measuring lead exposure.

ADJOURNMENT

This Special Electronic City Council Meeting adjourned at 1:06 a.m. due to lack of a quorum.

Respectfully transcribed & submitted,

Janell Johnson, Administrative Secretary to City Council

City of Flint, Michigan

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



Meeting Minutes - Draft

Monday, March 22, 2021

5:33 PM

*

ELECTRONIC PUBLIC MEETING

CITY COUNCIL

*Kate Fields, President, Ward 4
Maurice D. Davis, Vice President, Ward 2*

*Eric Mays, Ward 1
Jerri Winfrey-Carter, Ward 5
Monica Galloway, Ward 7*

*Santino J. Guerra, Ward 3
Herbert J. Winfrey, Ward 6
Allan Griggs, Ward 8*

Eva L. Worthing, Ward 9

Inez M. Brown, City Clerk

Davina Donahue, Deputy Clerk

CALL TO ORDER

Council Vice President Maurice Davis called this meeting to order at 5:33 p.m.

ROLL CALL

Present: Councilperson: Councilperson Mays, Councilperson Davis, Councilperson Winfrey-Carter, Winfrey, Councilperson Galloway and Councilperson Griggs

Absent: Councilperson: Councilperson Guerra, Councilperson Fields and Councilperson Worthing

PLEDGE OF ALLEGIANCE

Councilperson Monica Galloway led the Pledge of Allegiance.

REQUEST FOR CHANGES AND/OR ADDITIONS TO AGENDA

Councilperson Mays asked for five Special Orders be added after all action items had been completed: 1. Police and Public Safety; 2. Blight; 3. Procedures at City Hall and Emergency Ordinances; 4. Council Rules and "lawlessness"; and 5. the \$46 million the city is expected to receive in the next 60 days for COVID-19 relief. The five were voted on together and were approved 6-0 (Absent: Guerra, Fields, Worthing).

RECONSIDERATION (of Appointments)

210102 Mayoral Appointment/Chief Financial Officer/Shelbi Frayer

Resolution resolving that the Flint City Council approves the recommendation by Mayor Sheldon Neeley to appoint Shelbi Frayer as Chief Financial Officer [at an hourly compensation rate of \$71.153 per hour (\$148,100.00 annually).] [General Fund Salary and Wages Acct. No. 101-191.100-703.000 = \$91,976.90 and LCSM-17-FRTA = \$56,032.10.]

A motion was made by Councilperson Griggs, seconded by Councilperson Winfrey, that this matter be RECONSIDERED. The motion carried by the following vote:

Aye: 6 - Councilperson Mays, Councilperson Davis, Councilperson Winfrey-Carter, Councilperson Winfrey, Councilperson Galloway and Councilperson Griggs

Absent: 3 - Councilperson Guerra, Councilperson Fields and Councilperson Worthing

Adopted

Substituted

A motion was made by Councilperson Mays, seconded by Councilperson Winfrey-Carter, that this matter be REFERRED TO COMMITTEE to the GOVERNMENTAL OPERATIONS COMMITTEE, due back on April 7, 2021. The motion carried by the following vote:

Aye: 5 - Councilperson Mays, Councilperson Davis, Councilperson Winfrey-Carter, Councilperson Winfrey and Councilperson Galloway

No: 1 - Councilperson Griggs

Absent: 3 - Councilperson Guerra, Councilperson Fields and Councilperson Worthing

210123 Mayoral Appointment/Department of Public Works (DPW) Director/Michael Brown

Resolution resolving that the Flint City Council approves the recommendation by Mayor Sheldon A. Neeley to appoint Michael Brown as the Director of the Department of Public Works (DPW). [NOTE: Mr. Brown will be paid an annual compensation rate of \$95,000.00 (45.673 per hour).]

RECONSIDERED

Substituted

The vote was to table the reconsideration until the next City Council meeting.

A motion was made by Councilperson Mays, seconded by Councilperson Galloway, that this matter be POSTPONED for April 12, 2021. The motion carried by the following vote:

Aye: 6 - Councilperson Mays, Councilperson Davis, Councilperson Winfrey-Carter, Councilperson Winfrey, Councilperson Galloway and Councilperson Griggs

Absent: 3 - Councilperson Guerra, Councilperson Fields and Councilperson Worthing

APPOINTMENTS (May be Referred from Special Affairs)

210134 Reappointment/Mass Transportation Authority (MTA) Board/Quincy Murphy

Resolution resolving that the Flint City Council approves the reappointment of Quincy Murphy (322 E. Myrtle Avenue, Flint, Michigan, 48505) to serve a two-year term on the Mass Transportation Authority (MTA) Board of Directors, commencing retroactively on March 31, 2019 and expiring on March 31, 2023. [NOTE: By way of background, Mr. Murphy's term on the MTA expired March 31, 2019, although he has continued to serve.]

A motion was made by Councilperson Winfrey, seconded by Councilperson Winfrey-Carter, that this matter be Approved. The motion carried by the following vote:

Aye: 5 - Councilperson Davis, Councilperson Winfrey-Carter, Councilperson Winfrey, Councilperson Galloway and Councilperson Griggs

Abstain: 1 - Councilperson Mays

Absent: 3 - Councilperson Guerra, Councilperson Fields and Councilperson Worthing

RECONSIDERATION (of Resolutions)

210081 CO#1/Contract/Rowe Professional Services Co./Project Management Services/FAST Start Program Phase VI

Resolution resolving that the proper city officials, upon City Council's approval,

are hereby authorized to enter into change order #1 with Rowe Professional Services Co. for additional project management services for Phase VI of the FAST Start Program, as requested by DPW, in an amount NOT-TO-EXCEED \$500,000.00, for a total contract price NOT-TO-EXCEED \$2,638,735.00 [Water Infrastructure Improvements for the Nation (WIIN) Grant Acct. No. 496-540.006-801.051.]

RECONSIDERED

Substituted

The motion was to postpone the reconsideration to the next City Council meeting.

A motion was made by Councilperson Galloway, seconded by Councilperson Winfrey-Carter, that this matter be POSTPONED for April 12, 2021. The motion carried by the following vote:

Aye: 6 - Councilperson Mays, Councilperson Davis, Councilperson Winfrey-Carter, Councilperson Winfrey, Councilperson Galloway and Councilperson Griggs

Absent: 3 - Councilperson Guerra, Councilperson Fields and Councilperson Worthing

RESOLUTIONS

210133 Amendment/Resolution 210042/Grant Agreement/Flint Police Foundation/Sub-Grantee/Enhanced and Integrated Blight Elimination and Community Policing Grant

Resolution resolving that the appropriate city officials, upon City Council's approval, are hereby authorized to do all things necessary to amend Resolution 210042 to increase the budget of the Enhanced and Integrated Blight Elimination and Community Policing Grant by \$30,000.00, bringing the total grant budget to \$127,000.00, as stated in the Grant award. [NOTE: The Flint Police Department received \$97,000.00 in grant funds to cover Neighborhood Safety Officer expenses. Resolution 210042, which entered into an agreement with the Flint Police Foundation and approved by City Council on January 25, 2021, did not include \$30,000.00 for Data Analyst wages and fringes.]

SEPARATED FROM MASTER RESOLUTION

RESOLUTIONS - MAY BE REFERRED FROM S.A.

210130 Contract/Stantec Consulting Services, Inc./Flint River Federal Emergency Management Agency (FEMA) Map Revisions Project

Resolution resolving that the proper city officials, upon City Council's approval, are authorized to do all things necessary to enter into a contract with Stantec Consulting Services, Inc., for the Flint River Federal Emergency Management Agency (FEMA) Map Revisions project, in an amount NOT-TO-EXCEED \$300,000.00 [Other Grants Fund Acct. No. 171-331.801-000 = \$270,000.00 and Other Grants Fund Acct. No. 171-331.969-100 = \$30,000.00.] [NOTE: FEMA is requiring the City of Flint to update its flood maps for the Flint River. The city was successful in obtaining a grant from the C.S. Mott Foundation to cover the cost of

remapping the floodplains.]

This Matter was ADOPTED BY THE MASTER RESOLUTION on the Consent Agenda.

210135 Kennedy Industries, Inc./Lift Station Pumps

Resolution resolving that the appropriate city officials, upon City Council's approval, are hereby authorized to issue a purchase order to Kennedy Industries, Inc. for lift station pumps, as requested by Water Pollution Control, in an amount NOT-TO-EXCEED \$277,782.00 [Sewer Fund Acct. No. 590-550.300-977.000].

This Matter was ADOPTED BY THE MASTER RESOLUTION on the Consent Agenda.

210136 Transparency/Review of Attorney Fees/Reimbursement of Expenses/Flint Water Litigation Settlement

Resolution resolving that the Mayor and Flint City Council requests that Judge Levy retain a court-appointed expert or appoint the special master to assist in reviewing the Motion. [NOTE: On March 8, 2021, plaintiffs' counsel for the water litigation settlement filed a Motion for attorneys' fees and reimbursement of expenses incurred by Co-Lead Class Counsel, Co-Liaison Counsel and the law firms that have worked with and under their supervision. The Flint community needs transparency at every stop of this settlement process, including the Court's review of the Motion for attorney fees and, in particular, the reimbursement of expenses. The Mayor and Flint City Council take no position in the outcome of the Motion, but believe that the public would benefit from an expert, independent review and analysis of the complex and voluminous Motion and its supporting documentation.]

This Matter was ADOPTED BY THE MASTER RESOLUTION on the Consent Agenda.

Passed The Consent Agenda

A motion was made by Councilperson Mays, seconded by Councilperson Griggs, including all the preceding items marked as having been adopted on a Consent Agenda. The motion carried by the following vote:

Aye: 6 - Councilperson Mays, Councilperson Davis, Councilperson Winfrey-Carter, Councilperson Winfrey, Councilperson Galloway and Councilperson Griggs

Absent: 3 - Councilperson Guerra, Councilperson Fields and Councilperson Worthing

ADD-ON RESOLUTION

210137 Joint Resolution/Mayor/Flint City Council/Condemnation of Violence, Harassment and Bias/Asian-Americans/Pacific Islanders

Resolution resolving that the Mayor and Flint City Council condemns in the strongest possible terms the recent violence, harassment and acts of bias

against Asian-Americans and Pacific Islanders (AAPI); expresses our heartfelt sympathy to and solidarity with victims and their families; and reaffirms our commitment to combat racism, xenophobia, harassment and all other forms of discrimination against AAPI persons and communities to ensure equal opportunity, inclusion and dignity for all throughout the City of Flint; AND, resolving that the Mayor and Flint City Council do all things necessary to support all additional efforts in the City of Flint, Genesee County, the State of Michigan and nationwide to address violence, harassment and bias against AAPI persons and communities, AND, resolving that the Mayor and Flint City Council do all things necessary to call upon the Governor, the Speaker of the Michigan House and the Michigan Senate President to join with us to condemn violence, harassment and bias against AAPI persons and communities.

SEPARATED FROM MASTER RESOLUTION

SEPARATED FROM THE MASTER RESOLUTION

210133 Amendment/Resolution 210042/Grant Agreement/Flint Police Foundation/Sub-Grantee/Enhanced and Integrated Blight Elimination and Community Policing Grant

Resolution resolving that the appropriate city officials, upon City Council's approval, are hereby authorized to do all things necessary to amend Resolution 210042 to increase the budget of the Enhanced and Integrated Blight Elimination and Community Policing Grant by \$30,000.00, bringing the total grant budget to \$127,000.00, as stated in the Grant award. [NOTE: The Flint Police Department received \$97,000.00 in grant funds to cover Neighborhood Safety Officer expenses. Resolution 210042, which entered into an agreement with the Flint Police Foundation and approved by City Council on January 25, 2021, did not include \$30,000.00 for Data Analyst wages and fringes.]

A motion was made by Councilperson Mays, seconded by Councilperson Griggs, that this matter be Adopted. The motion carried by the following vote:

Aye: 6 - Councilperson Mays, Councilperson Davis, Councilperson Winfrey-Carter, Councilperson Winfrey, Councilperson Galloway and Councilperson Griggs

Absent: 3 - Councilperson Guerra, Councilperson Fields and Councilperson Worthing

210137 Joint Resolution/Mayor/Flint City Council/Condemnation of Violence, Harassment and Bias/Asian-Americans/Pacific Islanders

Resolution resolving that the Mayor and Flint City Council condemns in the strongest possible terms the recent violence, harassment and acts of bias against Asian-Americans and Pacific Islanders (AAPI); expresses our heartfelt sympathy to and solidarity with victims and their families; and reaffirms our commitment to combat racism, xenophobia, harassment and all other forms of discrimination against AAPI persons and communities to ensure equal opportunity, inclusion and dignity for all throughout the City of Flint; AND, resolving that the Mayor and Flint City Council do all things necessary to support all additional efforts in the City of Flint, Genesee County, the State of Michigan and nationwide to address violence, harassment and bias against AAPI persons and communities, AND, resolving that

the Mayor and Flint City Council do all things necessary to call upon the Governor, the Speaker of the Michigan House and the Michigan Senate President to join with us to condemn violence, harassment and bias against AAPI persons and communities.

A motion was made by Councilperson Mays, seconded by Councilperson Winfrey, that this matter be Adopted. The motion carried by the following vote:

Aye: 6 - Councilperson Mays, Councilperson Davis, Councilperson Winfrey-Carter, Councilperson Winfrey, Councilperson Galloway and Councilperson Griggs

Absent: 3 - Councilperson Guerra, Councilperson Fields and Councilperson Worthing

MOTION

Councilperson Mays made a motion, with support from Councilperson Galloway, to move all five Special Ordinances requested by Councilperson Mays to the next Governmental Operations Committee meeting. The five are: 1. Police and Public Safety; 2. Blight; 3. Procedures at City Hall and Emergency Ordinances; 4. Council Rules and "lawlessness"; and 5. the \$46 million the city is expected to receive in the next 60 days for COVID-19 relief.

ADJOURNMENT

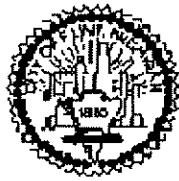
Vice President Maurice Davis adjourned this meeting at 9:07 p.m. after a motion by Councilperson Mays, with support from Councilperson Griggs. The motion passed 6-0 (Absent: Guerra, Fields, Worthing).

Respectfully transcribed & submitted,

Janell Johnson, Administrative Secretary to City Council

City of Flint, Michigan

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



Meeting Minutes - Draft

Thursday, March 25, 2021

5:33 PM

***COMMUNITY BUDGET HEARING**

ELECTRONIC PUBLIC MEETING

SPECIAL CITY COUNCIL

*Kate Fields, President, Ward 4
Maurice D. Davis, Vice President, Ward 2*

*Eric Mays, Ward 1
Jerri Winfrey-Carter, Ward 5
Monica Galloway, Ward 7*

*Santino J. Guerra, Ward 3
Herbert J. Winfrey, Ward 6
Allan Griggs, Ward 8*

Eva L. Worthing, Ward 9

Inez M. Brown, City Clerk

Davina Donahue, Deputy Clerk

CALL TO ORDER

Council Vice President Maurice Davis called this Community Budget Hearing to order at 5:33 p.m.

ROLL CALL

Present: Councilperson Mays, Vice President Davis, Councilperson Guerra, Councilperson Winfrey-Carter, Councilperson Winfrey, Councilperson Galloway and Councilperson Griggs

Absent: Councilperson Fields and Councilperson Worthing

PLEDGE OF ALLEGIANCE

Councilperson Allan Griggs led the Pledge of Allegiance.

BRIEF OVERVIEW OF PROPOSED BUDGET BY THE ADMINISTRATION

Comments and presentation by Mayor Sheldon Neeley and Interim Chief Financial Officer Shelbi Frayer.

PUBLIC HEARING

210143 Public Hearing/Proposed FY2022 and FY2023 City of Flint Operating Biennial Budget

Public Hearing scheduled for Thursday, March 25, 2021, at 5:30 p.m., to allow for public comment on the FY2021/2022 and FY2022/2023 Biennial Budget, as proposed by Mayor Sheldon Neeley.

HEARING HELD

ADJOURNMENT

This Community Budget Hearing adjourned at 7:27 p.m. after a motion by Councilperson Guerra and a second by Councilperson Griggs. The vote to adjourn was 7:0. (Absent: Fields, Worthing).

Respectfully transcribed & submitted,

Janell Johnson, Administrative Secretary to City Council



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.

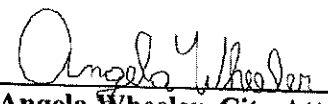
WHEREAS, to be eligible for appointment to the council, an individual shall have a demonstrated interest in or knowledge about lead in drinking water and its effects.;

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).

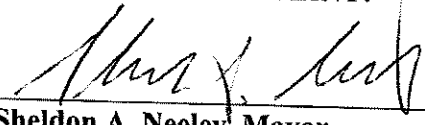
NOW THEREFORE BE IT RESOLVED, that Mayor Neeley hereby appoints Jamie Gaskin address 1225 Lori Lane Fenton, MI 48430 to serve on the Water System Advisory Council.

APPROVED AS TO FORM:



Angela Wheeler, City Attorney

FOR THE CITY OF FLINT:



Sheldon A. Neeley, Mayor

APPROVED BY CITY COUNCIL:

Kate Fields, City Council President

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



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

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 10 FTE's to 16 FTE'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 public 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.:

210157

PRESENTED:

APR - 7 2021

ADOPTED:

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

BY THE MAYOR:

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

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

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

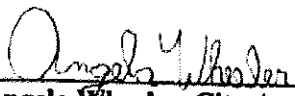
WHEREAS, to be eligible for appointment to the council, an individual shall have a demonstrated interest in or knowledge about lead in drinking water and its effects.;

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

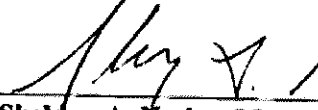
WHEREAS, Mayor Neeley desires to appoint Dr. Nancy Love to the Water System Advisory Council (See Attached Resume).

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

APPROVED AS TO FORM:


Angela Wheeler, City Attorney

FOR THE CITY OF FLINT:


Sheldon A. Neeley, Mayor

APPROVED BY CITY COUNCIL:

Kate Fields, City Council President

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

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

Borchardt and Glysson Collegiate Professor

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

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

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

EDUCATION

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

PROFESSIONAL EXPERIENCE AND LICENSURE

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

Associate Professor Department of Civil and Environmental Engineering, Virginia Tech	2000 – 2005
Assistant Professor Department of Civil and Environmental Engineering, Virginia Tech	1994 – 2000
Co-Founder and Co-Principal Investigator at Virginia Tech Environmental BioNanoTechnology Laboratory, Virginia Tech 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

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

MAJOR HONORS AND NOTABLE RECOGNITIONS

• American Society of Civil Engineers Wesley W. Horner Award for Daigger et al., Progress and Promise Transitioning to the One Water/Resource Recovery Integrated Urban Water Management Systems. <i>J Env Eng</i> , 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
• <i>Environmental Science and Technology Letters</i> , 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. <i>Water Environment Research</i> 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." <i>Water Environment Research</i> , 74:306-315 (2002).	2003
• Outstanding Young Alumni, College of Engineering & Science, Clemson Univ.	2002
• Paul L. Busch Award for Innovation in Applied Water Quality Research, Water Environment Research Foundation (\$100,000)	2001

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

PROFESSIONAL MEMBERSHIPS, ACTIVITIES AND APPOINTMENTS

Editorial Boards

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

Current Memberships and Activities

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

MEGA working group member	2005 – 2008
Biofilms 2010 Conference Program Committee	2009 – 2010
• Water Environment Federation	
Member and Fellow (2011)	1986 – present
Awards Committee	2012 - present
Research Symposium Subcommittee	1999 – 2003
Virginia WEA Student Activities Committee	1997 – 2007
Work Force Task Force – WEF Presidential Appointment	2008 – 2009
Nutrient Specialty Conference Program Committee	2008 - 2009
Chair, Academic Committee	2009 – 2013
• Water Environment Research Foundation	
Leaders Innovation Forum for Technology (LIFT) Steering Committee	2015 – current
Chlorination Control and Monitoring Practices Project Advisory Committee	2000 - 2002
Wastewater Security Project Subcommittee	2003 – 2004
Sensors for Security in WWT Systems Project Advisory Committee	2005 – 2007
Paul L. Busch Award Selection Committee	2005 – 2011
Membrane Aerated Biofilm Reactor Project Advisory Committee, U2R14	2016-2018
Current Board Appointments	
• National Water Research Institute Independent Science Advisory Panel for Metropolitan Water District	2019-present
• ReNUWit Engineering Research Center Science Advisory Board, Stanford, UC-Berkeley, Colorado School of Mines, New Mexico State University	2015-2020
• University of Iowa NSF Sustainable Water Development Graduate Program Advisory Board Member	2017-2019
Prior Memberships, Activities and Board Appointments	
• American Society for Microbiology, Member	1991-2010
• Environmental Protection Agency EPA Science Advisory Board, Drinking Water Subcommittee	2010 - 2012
• Appointed Member, Michigan Department of Agriculture/Michigan Department of Environmental Quality Food Processors Working Group	2009 - 2010
• Michigan Economic Development Corporation (MEDC) Water Cluster Committee, establishing water-based technology investment goals for Michigan.	2008 – 2010
• National Society of Professional Engineers Member	Discontinuous 1987 - 2019
• Member, NSF's CLEANER (later, WATERS Network) Initiative as (a) planning phase participant, (b) Co-PI on environmental impacts to coastal margins planning grant and (c) Member, sensor sub-committee.	2002 – 2007
• Appointed by Governors Warner and Kaine (Virginia) to the Scientific and Technical Advisory Committee to the Chesapeake Executive Council Workshop co-chair and author, Establishing a Research Agenda for Assessing the Bioavailability of Wastewater-Derived Organic Nitrogen in Treatment Systems and Receiving Waters, September 27 and 28, 2007, Baltimore, Maryland. Hhttp://www.chesapeake.org/stac/Pubs/eonreport.pdf	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=a1703f45b60797717658138319b971b1

MAJOR UNIVERSITY, COLLEGE & DEPARTMENT SERVICE/PROGRAMMATIC RESPONSIBILITIES

University of Michigan

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

• 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
• Civil and Environmental Engineering Strategic Plan Implementation and Development Committee, Revising plan in 2017-2018	2018-2019
• College of Engineering Graduate Recruitment, Retention & Summer Programs Advisory Group	2013-2018
• Internal Advisory Board Member, Center for Socially-Engaged Design	2017-2018
• Administrative Structure Working Group, School of the Environment and Sustainability Transition Subcommittee	2017-2020
• U-M ADVANCE LAUNCH Committee Chair	2017
• College of Engineering Promotion, Tenure and Reappointment Process Review Committee, Chair	2016-2017
• UM Energy Institute Faculty Affiliate (https://energy.umich.edu/)	2017
• College of Engineering Faculty Search Committee for positions in Engineering Education Research (EER)	2018-present
• Ethiopia – Michigan Collaborative Consortium (EMC2) Planning Committee, appointed by Assoc Provost James Holloway	2015-2016
• Provost's Committee on Environment and Sustainability	2015-2018
• Provost's Poverty Visioning Committee	2016
• Integrated Training in Microbial Systems (ITiMS) (Burroughs Wellcome Fund training program) Faculty Affiliate	2015-2016
• President's Advisory Commission on Women's Issues	2015 - present
• President's Postdoctoral Fellowship Advisory Committee	2014-2015
• Rackham Graduate School Dean Search Committee	2014-2015
• Provost's Promotion and Tenure Committee	2014
• Mentoring Others Results in Excellence (MORE) Committee, Rackham Graduate School, Member and Chair	2013
• Alumni Liaison Committee, Civil and Environmental Engineering	2012 - 2013
• Deans Advisory Committee on Female Faculty, College of Engineering	2012-2014
• Faculty Search Committee Co-Chair, Civil and Environmental Engineering	2012-2013
• Center for Molecular and Clinical Epidemiology of Infectious Diseases (MAC-EPID) Faculty Affiliate	2011-2012
• Graham Sustainability Institute Faculty Affiliate	2009 - present
• College of Engineering Alumni Awards Selection Committee	2009 - current
• Graham Environmental Sustainability Institute, Executive Committee	2011
• College of Engineering Dean's Advisory Committee on Faculty Diversity	2009 - 2011
• Provost's Office - Classroom Emergency Training Video Planning Group	2010 - 2012
• College of Engineering <i>ad hoc</i> Committee on Graduate Student Excellence	Fall 2008 – 2009
Virginia Tech	Summer 2008
• Chair, College of Engineering "Think Tank" Committee (6 faculty)	2006 – 2007
• Space/Overhead Return Allocation <i>ad hoc</i> 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
- Fraikin 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 WASACTM 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 Lubkowitz (Bailey). 1995-1996. Biological Treatment Schemes for Preventing Oxime Inhibition of Nitrification. Current affiliation – environmental engineering consulting.

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

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

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

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

Post-Doctoral Research Associates

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

PUBLICATIONS

Textbooks

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

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

2. Wigginton, K. R., P. J. Arts, H. Clack, W. J. Fitzsimmons, M. Gamba, K. R. Harrison, W. LeBar, A. S. Luring, L. Li, W. W. Roberts, N. Rockey, J. Torreblanca, C. Young, L. G. Anderegg, A. M. Cohn, J. M. Doyle, C. M. Meisenholder, 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. Meisenholder, A. Pillarsetti, 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. Luring, 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. Segré Cohen*, A., N. G. Love, J. Árvai. 2020. Communicating the risks and benefits of human urine-derived fertilizer. *Sustainability*. 12(23): 9973. DOI:10.3390/su12239973.
9. Troutman, S. C., N. G. Love and B. Kerkez*. 2020. Balancing water quality and flows in combined sewer systems using real-time control. *Environmental Science: Water Research & Technology*. 6:1357-1369. DOI: 10.1039/c9ew00882a.
10. Schreiber*, T., S. Opperman, K. Nace, A. N. Pallmeyer, N. Love and R. Hardin. 2020. Leveraging integrative research for inclusive innovation: urine diversion and re-use in agriculture. *Elementa Science of the Anthropocene*. 8:12. doi.org/10.1525/elementa.408
11. Cohen, A. S.*, N. G. Love, K. K. Nace and J. Arvai. 2020. Consumers' acceptance of agricultural fertilizers derived from diverted and recycled human urine. *Environmental Science & Technology*. 54(8):5297-5305. DOI:10.1021/acs.est.0c00576.
12. Carlson, A. L., G. T. Daigger*, N. G. Love and E. Hart. 2020. Multi-year diagnosis of unpredictable fouling occurrences in a full-scale membrane bioreactor. *Water Science and Technology*. 82(3):524-536. DOI: 10.2166/wst.2020.354.
13. Bekele, Z. A., J. Delgado Vela, C. B. Bott, N. G. Love*. 2020. Sensor-mediated granular sludge reactor for nitrogen removal and reduced aeration demand using a dilute wastewater. *Water Environment Research*. 92(7):1006-1016. DOI: 10.1002/wer.1296. Honor: Editor selected for issue cover art
14. Goetsch, H. E., N. G. Love, K. R. Wigginton*. 2020. Fate of extracellular DNA in the production of fertilizers from source-separated urine. *Environmental Science & Technology*. 54 (3):1808-1815. DOI:10.1021/acs.est.9b04263.
15. Brown, M., F. Karimova, N. Love, K. Pagilla, C. Bott, Z. He, B. Liner and S. Merther. 2020. University-utility partnerships: Best practices for water innovation and collaboration. *Water Environment Research*. 92(3):314-319. DOI:10.1002/wer.1252.

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

- convergence through fertilizer production: storage, pasteurization, and struvite precipitation. *Environmental Science and Technology*, 50(21):11619-11626.
32. Lester, Y., D. Aga, N. G. Love, R. Singh, I. Morrissey and K. Linden*. 2016. Integrative advanced oxidation and biofiltration for treating pharmaceuticals in wastewater. *Water Environment Research*. 88(11):1985-1993. DOI:10.2175/106143016X14504669767454
 33. Stadler, L. B. and N. G. Love*. 2016. Impact of microbial physiology and microbial community structure on pharmaceutical fate driven by dissolved oxygen concentration in nitrifying bioreactors. *Water Research*, 104:189-199. DOI: 10.1016/j.watres.2016.08.001
 34. Keen, O., N. G. Love, D. S. Aga and K. Linden*. 2016. Biodegradability of iopromide products after UV/H₂O₂ advanced oxidation. *Chemosphere*, 144:989-994.
 35. Delgado Vela, J., L. B. Stadler, K. J. Martin, L. Raskin, C. B. Bott and N. G. Love*. 2015. Prospects for biological nitrogen removal from anaerobic effluents during mainstream wastewater treatment. *Environmental Science and Technology Letters*, 2(9):234-244. DOI: 10.1021/acs.estlett.5b00191.
 36. Muller, J. F., S. Ghosh, K. Ikuma, A. M. Stevens and N. G. Love*. 2015. Chlorinated phenol-induced physiological antibiotic resistance in *Pseudomonas aeruginosa*. *FEMS Microbiology Letters*, 362(21):fnv172, DOI: 10.1093/femsle/fnv172.
 37. Jimenez*, J., C. Bott, N. Love, and J. Bratby. 2015. Source separation of urine as an alternative solution to nutrient management in biological nutrient removal treatment plants. *Water Environment Research*. 87(12):2120-2129. DOI:10.2175/106143015X14212658613884.
 38. Singh, R., Y. Lester, K. Linden, N. G. Love, G. Ekin Atilla-Gokcumen, D. S. Aga*. 2015. Application of metabolite profiling tools and time-of flight mass spectrometry in the identification of transformation products of iopromide and iopamidol during advanced oxidation. *Environmental Science and Technology*, 49(5):2983-2990.
 39. Stadler, L. B., L. Su, C. J. Moline, A. S. Ernstoff, D. S. Aga, and N. G. Love*. 2015. Effect of redox conditions on pharmaceutical loss during biological wastewater treatment using sequencing batch reactors. *Journal of Hazardous Materials*, 282:106-115. DOI/10.1016/j.jhazmat.2014.08.002
 40. Smith[†], A. L., L. B. Stadler[†], L. Cao, N. G. Love, L. Raskin, and S. J. Skerlos*. 2014. Navigating wastewater energy recovery strategies: A life cycle comparison of anaerobic membrane bioreactor and conventional treatment systems with anaerobic digestion. *Environmental Science and Technology*, 48:5972-5981. DOI/10.1021/es5006169. [†]These authors contributed equally to this work.
 41. Syed, A. K., S. Ghosh, N. G. Love, B. R. Boles*, 2014. Triclosan promotes *Staphylococcus aureus* nasal colonization, *mBio*, 5(2):e01015-13. doi:10.1128/mBio.01015-13.
 42. Orfield, Nolan D., G. A. Keoleian* and N. G. Love. 2014. A GIS-based national assessment of algal bio-oil production potential through flue gas and wastewater co-utilization. *Biomass and Bioenergy*, 63:76-85.
 43. Clouzot, L., J.-M. Choubert, F. Cloutier, R. Goel, N. G. Love, H. Melcer, C. Ort, D. Patureau, B. G. Plósz, M. Pomiès and P. A. Vanrolleghem*. 2013. Perspectives on modeling micropollutants in wastewater treatment plants. *Water Science and Technology*. 68(2):448-461. DOI/10.2166/wst.2013.272.
 44. Guest, J., M.C.M vanLoosdrecht, S. J. Skerlos and N.G. Love*. 2013. A lumped pathway metabolic model of organic carbon accumulation and mobilization by the alga *Chlamydomonas reinhardtii*. *Environmental Science and Technology*, 47:3258-3267. DOI/10.1021/es304980y.
 45. Gilmore*, K.R., A. Terada, B. F. Smets, S. Lackner, J. L. Garland, and N. G. Love. 2013. Autotrophic nitrogen removal in a membrane-aerated biofilm reactor under continuous aeration: A demonstration. *Environmental Engineering and Science*, 30(1):38-45. DOI: 10.1089/ees.2012.0222.
 46. Smith, A. L., L. B. Stadler, N. G. Love, S. Skerlos, and L. Raskin*. 2012. Perspectives on anaerobic membrane bioreactor treatment of domestic wastewater: A critical review. *Bioresource Technology*, 122 (Special Issue, SI):149-159. DOI: 10.1016/j.biortech.2012.04.055
 47. Pinto, A.J. and N. G. Love*. 2012. Bioreactor function under perturbation scenarios is affected by interactions between bacteria and protozoa. *Environmental Science and Technology*, 46(14):7558-7566. DOI: 10.1021/es301220f

48. Keen, O., N. G. Love, and K. G. Linden*. 2012. The role of effluent nitrate in contaminant oxidation during UV disinfection. *Water Research*, **46**(16):5224-5234. DOI:10.1016/j.watres.2012.06.052
49. Keen, O. S., S. Baik, K. G. Linden*, D. S. Aga and N. G. Love. 2012. Enhanced biodegradation of carbamazepine after UV/H₂O₂ advanced oxidation. *Environmental Science and Technology*, **46**:6222-6227. DOI: 10.1021/es300897u.
50. Cook, S. M., B. J. VanDuinen, N. G. Love and S. J. Skerlos*. 2012. Life cycle comparison of environmental emissions from three disposal options for unused pharmaceuticals. *Environmental Science and Technology*, **46** (10):5535-5541. DOI: 10.1021/es203987b
51. R. Mesfioui, N. G. Love, D. A. Bronk, M. R. Mulholland, P. G. Hatcher*. 2012. Reactivity and chemical characterization of effluent organic nitrogen from wastewater treatment plants determined by Fourier transform ion cyclotron resonance mass spectrometry. *Water Research*, **46**(3):622-634. DOI:10.1016/j.watres.2011.11.022
52. Lamp†, J. L., J. S. Guest†, S. Naha, K. A. Radavich, N. G. Love*, M. W. Ellis* and I. K. Puri. 2011. Flame synthesis of carbon nanostructures on stainless steel anodes for use in microbial fuel cells. *Journal of Power Sources*, **196**(14):5829-5834. † These authors contributed equally to this work.
53. Khunjar, W. O., S. A. Mackintosh, J. Skotnicka-Pitak, S. Baik, D. S. Aga, N. G. Love*. 2011. Elucidating the relative roles of ammonia oxidizing and heterotrophic bacteria during the biotransformation of 17 α -ethinylestradiol and trimethoprim. *Environmental Science and Technology*, **45**(8):3605-3612. DOI:10.1021/es1037035.
54. Ghosh, S., C. M. Cremers, U. Jakob, and N. G. Love*. 2011. Chlorinated phenols control the expression of the multi-drug resistance efflux pump MexAB-OprM in *Pseudomonas aeruginosa* by activating NalC. *Molecular Microbiology*, **79**(6):1547-1556. DOI:10.1111/j.1365-2958.2011.07544.x.
55. Filippino*, K. C., M. R. Mulholland, P. W. Bernhardt, G. E. Boneillo, R. E. Morse, M. Semcheski, H. Marshall, N. G. Love, Q. Roberts and D. A. Bronk. 2011. Bioavailability of effluent-derived organic nitrogen along an estuarine salinity gradient. *Estuaries and Coasts*. **34**:269-280.
56. Zhao, Z., K. F. Knowlton*, N. G. Love, and J. A. Ogejo. 2011. Estrogen removal from dairy manure by pilot-scale treatment reactors. *Transactions of the American Society of Agricultural and Biological Engineers (ASABE)*. **53**(4):1295-1301.
57. Khunjar, W. O. and N. G. Love*. 2011. Sorption of carbamazepine, 17 α -ethinylestradiol, iopromide and trimethoprim to biomass involves interactions with exocellular polymeric substances. *Chemosphere*, **82**:917-922, doi:10.1016/j.chemosphere.2010.10.046.
58. Ghosh, S. and N. G. Love*. 2011. Molecular diversity of algae assemblages at wastewater treatment plants. *Bioresour Technol*, **102**: 3619-3622.
59. *Guest, J. S., S. J. Skerlos, G. T. Daigger, J. R. E. Corbett, N. G. Love. 2010. The use of qualitative system dynamics to identify sustainability characteristics of decentralised wastewater management alternatives. *Water Science and Technology*, **61**(6):1637-1644.
60. Bronk*, D. A., Q. Roberts, E. Canuel, P. Hatcher, R. Mesfioui, K. C. Filippino, M. R. Mulholland, and N. G. Love. 2010. Effluent organic nitrogen (EON): bioavailability, and photochemical and salinity release. *Environmental Science and Technology*, **44**(15):5830-5835.
61. H. A. Tucker, K. F. Knowlton*, M. T. Meyer, W. O. Khunjar, and N. G. Love. 2010. Effect of diet on fecal and urinary estrogenic activity, *Journal of Dairy Science*, **93**:2088-2094.
62. Aruguete*, D. M., J. S. Guest, W. W. Yu, N. G. Love and M. F. Hochella, Jr. 2010. Interaction of CdSe/CdS core-shell quantum dots and *Pseudomonas aeruginosa*. *Environmental Chemistry*, **7**:28-35.
63. Guest, J. S.; S. J. Skerlos, J. L. Barnard, M. B. Beck, G. T. Daigger, H. Hilger, S. J. Jackson, K. Karvazy, L. Kelly, L. Macpherson, J. R. Mihelcic, A. Pramanik, L. Raskin, M. C. M. van Loosdrecht, F. Yeh, N. G. Love*. 2009. A new planning and design paradigm to achieve sustainable resource recovery from wastewater. *Environmental Science and Technology*, **43**(16):6126-6130.

64. Krometis*, L. A. H., T. A. Dillaha, N. G. Love, and S. Mostaghimi. 2009. Evaluation of a filtration/dispersion method for enumeration of particle-associated *Escherichia coli*. *Journal of Environmental Quality*, **38**(3):980-986.
65. Skotnicka-Pitak, J., W. O. Khunjar, N. G. Love*, and D. S. Aga*. 2009. Characterization of metabolites formed during the biotransformation of 17 α -ethinylestradiol by *Nitrosomonas europaea* in batch and continuous flow bioreactors. *Environmental Science and Technology*, **43** (10):3549 - 3555.
66. Gilmore, K. R., Little, J. C., Smets, B. F. and *Love, N. G. 2009. Oxygen Transfer in a flow-through hollow-fiber membrane biofilm reactor. *Journal of Environmental Engineering*, **135**(9):806-814.
67. Güngör, K., Müftügil, M. B., *Ogejo, J. A., Knowlton, K. F. and Love, N. G. 2009. Prefermentation of liquid dairy manure to support biological nutrient removal. *Bioresource Technology*, **100**:2124-2129.
68. Zhao, Z., Fang, Y., Love, N. G. and *Knowlton, K. F. 2009. Biochemical and biological assays of endocrine disrupting compounds in various manure matrices. *Chemosphere*, **74**:551-555.
69. *Zhang, Y., Love, N. G. and Edwards, M. 2009. Nitrification in drinking water systems. *Critical Reviews in Environmental Science and Technology*, **39**(3):153-208.
70. DeBusk, J. A., *Arogo Ogejo, J., Knowlton, K. F., and Love, N. G. 2008. Chemical phosphorus removal for separated flushed dairy manure. *Applied Engineering in Agriculture*, **24**(4):499-506.
71. *Soupir, M.L., S. Mostaghimi, and N.G. Love. 2008. A method to partition between attached and unattached *E. coli* in runoff from agricultural lands. *Journal of the American Water Resources Association*, **44**(6):1591-1599.
72. Carrico, B., *DiGiano, F. A., Love, N. G., Vikesland, P., Fiss, M., Zaklikowski, A., Chandran, K. 2008. Effectiveness of disinfectant switching for control of nitrification. *JAWWA*, **100**(10):104-115.
73. Kozarek, J. L., *Wolfe, M. L., Love, N. G., and Knowlton, K. F. 2008. Sorption of estrogens to three agricultural soils from Virginia, USA. *Transactions of the American Society of Agricultural and Biological Engineers (ASABE)* **51**(5):1591-1597.
74. Chandran, K. and *Love, N. G. 2008. Physiological state, growth mode, and oxidative stress play a role in Cd(II)-mediated inhibition of *Nitrosomonas europaea* 19718. *Applied and Environmental Microbiology*, **74**(8):2447-2453.
75. Mutuc, M. D. M., Love, N. G. and *Vikesland, P. J. 2008. Surface catalyzed fenton treatment of bis(2-chloroethyl) ether and bis(2-chloroethoxy) methane. *Chemosphere*, **70**:1390-1398.
76. Pinto, A., Guest, J. S., *Love, N. G., Shaw, A., Fairey, A. W., Iler, P. L., Earle, J. K. Shallenbarger, D., and Barker, D. 2007. Testing toxic shock event response protocols for nutrient removal systems. *Water Practice* **1**(5): doi: 10.2175/193317707X256973.
77. Henriques, I. D. S. and *Love, N. G. 2007. The role of extracellular polymeric substances in the toxicity response of activated sludge bacteria to chemical toxins. *Water Research* **41**:4177-4185.
78. Henriques, I.D.S., Kelly, R. T. II, Dauphinais, J. L. and *Love, N. G. 2007. Activated sludge inhibition by chemical stressors – a comprehensive study. *Water Environment Research* **79**(9):940-951. (Recipient of Rudolf's Industrial Waste Management Medal, WEF)
79. Kelly, R. T. II and *Love, N. G. 2007. Ultraviolet spectrophotometric determination of nitrate: detecting nitrification rates and inhibition. *Water Environment Research* **79**(7):808-812.
80. Henriques, I. D. S., Aga, D. S., Mendes, P. and *Love, N. G. 2007. Metabolic footprinting: A new approach to identify physiological changes in complex microbial communities upon exposure to toxic chemicals. *Environmental Science and Technology* **41**(11):3945-3951. DOI: 10.1021/es062796t.
81. Muller, J. F., Stevens, A. M., Craig, J. and *Love, N. G. 2007. Transcriptome analysis reveals multi-drug efflux genes upregulated to protect *Pseudomonas aeruginosa* from pentachlorophenol stress. *Applied and Environmental Microbiology* **73**(14):4550-4558. DOI: 10.1128/AEM.00169-07.
82. Yi, T., *Harper, W. F. Jr., Holbrook, R. D. Jr., and Love, N. G. 2006. The role of particle characteristics and ammonium monooxygenase in removal of 17 α -ethinyl estradiol in bioreactors. *ASCE Journal of Environmental Engineering* **132**(11):1527-1529.

83. *Rittmann, B. E., Haunser, M., Loeffler, F., Love, N. G., Muyzer, G., Okabe, S., Oerther, D., Peccia, J., Raskin, L., and Wagner, M. 2006. A vista for microbial ecology and environmental biotechnology. *Environmental Science and Technology* 40(4):1096-1103.
84. Leung, S.M., *Little, J.C., Holst, T. and Love, N.G. 2005. Gas/liquid mass transfer in a biological aerated filter. *ASCE, Journal of Environmental Engineering*, 132(2):181-189.
85. Holbrook, R.D., Novak, J.T. and *Love, N.G. 2005. Impact of activated sludge-derived colloidal organic carbon on behavior of estrogenic agonist recombinant yeast bioassay. *Environmental Toxicology and Chemistry*, 24(11):2717-2724.
86. Henriques, I.D.S., *Holbrook, R.D., Kelly, R.T. and Love, N.G. 2005. The impact of floc size on respiration inhibition by soluble toxicants – a comparative investigation. *Water Research*, 39(12):2559-2568.
87. *Knowlton, K.F., Love, N.G., and Parsons, C.M. 2005. Effect of dietary phosphorus and mechanical separation on dairy manure characteristics. *Transactions of the American Society of Agricultural Engineers (ASAE)*, 48(3):1252-1258.
88. Gillam, D. E., *Bishop, P. L., and Love, N. G. 2005. A study of glutathione-gated potassium efflux in biofilms using potassium microelectrodes. *Environmental Engineering Science*, 22(4):489-495.
89. *Holbrook, R. D., Higgins, M. J., Murthy, S. N., Fonseca, A. D., Fleischer, E. J., Daigger, G. T., Grizzard, T. J., Love, N. G., Novak, J. T. 2004. Impact of alum addition on the performance of submerged membranes for wastewater treatment. *Water Environment Research*, 76(7):2699-2702.
90. Holbrook, R. D., Love, N. G. and *Novak, J. T. 2004. Investigation of sorption behavior between pyrene and colloidal organic carbon from activated sludge processes. *Environmental Science and Technology*, 38(19):4987-4994.
91. Holbrook, R. D., Love, N. G. and *Novak, J. T. 2004. Sorption of 17 β -estradiol and 17 α -ethinylestradiol by colloidal organic carbon derived from biological wastewater treatment systems. *Environmental Science and Technology*, 38(12):3322-3329. DOI: 10.1021/es035122g.
92. Bott, C. B. and *Love, N. G. 2004. Implicating the glutathione-gated potassium efflux system as a cause of electrophile-induced activated sludge deflocculation. *Applied and Environmental Microbiology*, 70(9):5569-5578. DOI:10.1128/AEM.70.9.5569-5578.2004.
93. Wimmer, R. F. and *Love, N. G. 2004. Activated sludge deflocculation in response to chlorine addition: the potassium connection. *Water Environment Research*, 76(3):213-219.
94. Henriques, I. D. S., Kelly II, R. T. and Love, N. G. 2004. Deflocculation effects due to chemical perturbation in sequencing batch reactors. *Water Science and Technology*. 50(10):287-294.
95. Kelly II, R. T., Henriques, I. D. S. and *Love, N. G. 2004. Chemical inhibition of nitrification in activated sludge. *Biotechnology and Bioengineering*, 85(6):683-694.
96. *Oerther, D. B. and Love, N. G. 2003. The value of applying molecular biology tools in environmental engineering: academic and industry perspective in the U.S.A., *Re/Views in Environmental Science and Bio/Technology*, 2(1):1-8.
97. Holbrook, R. D., Love, N. G. and *Novak, J. T. 2003. Biological wastewater treatment and estrogenic endocrine disrupting compounds: The importance of colloidal organic carbon. *Practice Periodical of Hazardous, Toxic, and Radioactive Waste Management (ASCE)*, October:289-296.
98. Fouratt, M. A., Rhodes, J. A., Smithers, C. M., Love, N. G. and *Stevens, A. M. 2003. Application of temporal gradient gel electrophoresis to the characterization of a nitrifying bioaugmentation culture. *FEMS Microbial Ecology*, 43(2):277-286.
99. Holbrook, R. D., Novak, J. T., Grizzard, T. J., and *Love, N. G. 2002. Estrogen receptor agonist fate during wastewater and biosolids treatment processes: A mass balance analysis. *Environmental Science and Technology*, 36(21):4533-4539.
100. Love, N. G. and Bott, C. B. 2002. Evaluating the role of microbial stress response mechanisms in causing biological treatment system upset. *Water Science and Technology*. 46(1-2):11-18.

101. Brauner, J. S., *Widdowson, M. A., Novak, J. T. and Love, N. G. 2002. Biodegradation of a PAH mixture by native subsurface microbiota. *Bioremediation Journal*, 6 (1):9-24.
102. Bott, C. B. and *Love, N. G. 2002. Investigating a mechanistic cause for activated sludge deflocculation in response to shock loads of toxic electrophilic chemicals. *Water Environment Research*, 74:306-315. (Recipient of Harrison Prescott Eddy Medal, WEF)
103. Bott, C. B., Duncan, A. J. and Love, N. G. 2001. Stress protein expression in domestic activated sludge in response to xenobiotic shock loading. *Water Science and Technology*, 43(1):123-130.
104. Ma, G. and Love, N. G. 2001. Creating anoxic and microaerobic conditions in sequencing batch reactors treating volatile BTX compounds. *Water Science and Technology*, 42(3):275-282.
105. Ma, G. and *Love, N. G. 2001. BTX metabolism in activated sludge under multiple redox conditions. *Journal of Environmental Engineering*, 127(6):509-516.
106. Bott, C. B. and *Love, N. G. 2001. The immunochemical detection of stress protein expression in activated sludge exposed to toxic chemicals. *Water Research*, 35:91-100. DOI:10.1016/S0043-1354(00)00245-1.
107. Duncan, A. J., Bott, C. B., Terlesky, K. C., and *Love, N. G. 2000. Detection of GroEL in activated sludge: a model for detection of system stress. *Letters in Applied Microbiology*, 30:28-32.
108. *Love, N. G., Smith, R. J., Gilmore, K. R., and Randall, C. W. 1999. Oxime inhibition of nitrification during treatment of an ammonia-containing industrial wastewater. *Water Environment Research*, 71(4):418-426.
109. Gilmore, K. R., Husovitz, K. J., Holst, T., and Love, N. G. 1999. Influence of organic and ammonia loading on nitrifier activity and nitrification performance for a two-stage biological aerated filter system. *Water Science and Technology*, 39(7):227-234.
110. Lu, Y.-T., *Love, N. G., and Grady, C. P. L. Jr. 1999. Microscopic methods for distinguishing among three cell types in TOL plasmid-carrying *Pseudomonas putida* cultures. *FEMS Microbiology Letters*, 173:195-201.
111. Bailey, E. L. and *Love, N. G. 1999. Treatment of a wastewater containing nitrification-inhibiting oximes using a single sludge nitrogen removal treatment system. *Water Environment Research*, 71(1):94-101.
112. Love, N. G., Rust, M. E., and Terlesky, K. C. 1998. Enrichment and characterization of an anaerobic methylethylketoxime-degrading culture from an anoxic/anaerobic/aerobic activated sludge sequencing batch reactor. *Water Science and Technology*, 37(3-4):95-98.
113. *Novak, J. T., Love, N. G., Smith, M. L. and Wheeler, E. R. 1998. The impact of cationic salt addition on the settling and dewatering properties of an industrial activated sludge. *Water Environment Research*, 70(5):984-996.
114. *Love, N. G. and Grady, C. P. L. Jr. 1995. Impact of growth in benzoate and *m*-toluate liquid media on culturability of *Pseudomonas putida* on benzoate and *m*-toluate plates. *Applied and Environmental Microbiology*, 61:3142-3144.
115. *Herendeen, R., Hegan (Love), N., and Stiles, L. 1983. Measuring energy savings using personal trend data. *Energy and Buildings*, 5:289-296.

Peer-Reviewed Published Reports

116. Hilton, S., B. Zhou , G. T. Daigger, G. Keoleian, N. G. Love, S. Skerlos. 2018. Life Cycle Assessment of Urine Diversion Wastewater Treatment: Results and Software Tool. The Water Research Foundation, STAR-Na1R14/4899.
117. Wigginton, K., N. Love, R. Lahr, H. Goetsch, D. Aga, R. Mullen, A. Noe-Hays, K. Nace, C. Bott, A. Gagnon, J. Jimenez. 2017. Nutrient Recovery Through Urine Separation. Water Environment & Reuse Foundation, STAR-N1R14.
118. Love, N. G., C. Moline, A. Ernstoff, L. Stadler, D. Aga and L. Su. 2013. Pharmaceutical Fate under Varying Redox Biological Treatment Environments. Water Environment Research Foundation Final Report U1R09.

119. Skerlos, S.J., L. Raskin, N.G. Love, A.L. Smith, L.B. Stadler, and L. Cao, 2013. Challenge Projects on Low Energy Treatment Schemes for Water Reuse, Phase 1 (WaterReuse-10-06D). WaterReuse Research Foundation, Alexandria, Virginia.
120. Raskin, L., S. Skerlos, N.G. Love, A.L. Smith. 2012. Anaerobic Membrane Bioreactors for Sustainable Wastewater Treatment, Water Environment Research Foundation Final Report U4R08, IWA Publishing, London, United Kingdom.
121. Ellis, M. W., N. G. Love, I. K. Puri, J. S. Guest, S. Naha, and J. L. Lamp. 2010. Development of a Microbial Fuel Cell for Sustainable Wastewater Treatment. Water Environment Research Foundation, Report No. U1R06, Alexandria, VA, 61 pages.
122. Love, N. G., A. J. Pinto, J. S. Guest, S. Hardin and A. Shaw. 2009. Determining and Assessing Corrective Action Strategies for Treatment Plants Exposed to Chemical Toxins. Water Environment Research Foundation, Report No. 04-CTS-11S, Alexandria, VA, 191 pages.
123. Love, N. G., Henriques, I. D. S., and Kelly, R. T. II. 2005. Upset Early Warning Systems for Biological Treatment Processes: Source and Effect Relationships. Water Environment Research Foundation, Report No. 01-CTS-2. Alexandria, VA.
124. Love, N. G. and Bott, C. B. 2000. A Review and Needs Survey of Upset Early Warning Devices. Water Environment Research Foundation, Report No. 99-WWF-2. Alexandria, VA.

Peer-Reviewed Book Chapters

125. Love, N. G., G. Sahilu, H. A. Adejumo and S. P. McElmurry. 2018. Drinking Water Infrastructure in Shrinking and Expanding Cities: The Impact on Water Quality and Public Health. In *Cascading Challenges in the Global Water Crisis*, Gerard Magill, Editor. Cambridge Scholars Publishing.
126. Keen, O.S., N. G. Love and K. G. Linden. 2014. Nitrate Photochemistry in the Context of Water Reclamation. Pp 229-246. In *Water Reclamation and Sustainability*, Satinder Ahuja, Ed. Elsevier.
127. Love, N. G., D. Bronk and M. Mulholland. 2010. Nutrients and their effects on the environment. *Biological and Chemical Systems for Nutrient Removal*. Water Environment Federation, Alexandria, VA.
128. Zhao, Z., Knowlton, K. F. and Love, N. G. 2008. Hormones in Waste from Concentrated Animal Feeding Operations. In *Fate of Pharmaceuticals in the Environment and in Water Treatment Systems*, D. S. Aga, Editor. CRC Press.
129. Brauner, J. S., Widdowson, M. A., Novak, J. T., and Love, N. G. 1999. Intrinsic bioremediation of PAH compounds at a fuel-contaminated site. In *Bioremediation Technologies for Polycyclic Aromatic Hydrocarbon Compounds*. (Eds) Leeson, A., and Alleman, B. C. Battelle Press, Columbus, OH, 5(8):19-24.

Reviews, Discussions, Editorials and General Technical News Pieces

130. Hicks*, B. B., E. Y. Lewis, and N. G. Love. 2021. Letter to the Editor: Closing America's Racial Gap Around Drinking Water Quality Perceptions and the Role of the Environmental Engineering and Science Academic Community. *ACS ES&T Water*. 1:459-460.
131. Choi, W., N. G. Love, J.-H. Kim and J. Ma. 2021. Launch of ACS ES&T Engineering and Redefining Environmental Engineering. *ACS ES&T Engineering*. 1(1):1-2.
132. Zervos, M., G. Maki, N. G. Love and S. P. McElmurry. 2020. Response: Bacterial colonization in point-of-use filters and deaths in Flint, Michigan. *International Journal of Infectious Diseases*. 91:268-269.
133. Stadler, L. B., A. S. Ernstoff, D. S. Aga and N. G. Love. 2012. Micropollutant fate in wastewater treatment: redefining "removal". Correspondence. *Environmental Science and Technology*, 46(19):10485-10486.
134. Novak, P. J., V. S. Blazer, R. U. Halden, R. D. Klaper, D.W. Kolpin, D. Kriebel, N. G. Love, D. Martinović-Weigelt, H. B. Patisaul, S. A. Snyder, F. S. vom Saal, A. V. Weisbrod, and D. L.

- Swackhamer. 2011. Assess Contaminant Risk on a Global Scale. Correspondence, *Nature*, in press. From 2010 Wingspread (Johnson Foundation) meeting on Trace Contaminants in the Environment.
135. Novak, P. J., W. A. Arnold, V. S. Blazer, R. U. Halden, R. D. Klaper, D. W. Kolpin, D. Driebel, N. G. Love, D. Martinović-Weigelt, H. B. Patisaul, S. A. Snyder, F. S. vom Saal, A. V. Weisbrod and D. L. Swackhamer. 2011. On the need for a national (U.S.) research program to elucidates the potential risks to human health and the environment posed by contaminants of emerging concern. Viewpoint, in *Environmental Science and Technology*, in press. From 2010 Wingspread (Johnson Foundation) meeting on Trace Contaminants in the Environment.
 136. Rittmann, B. E., Love, N. G. and Siegrist, H. 2008. Making Wastewater a Sustainable Resource. *Water21*, April 2008:22-23.
 137. Boltz, J.P., G.T. Daigger, J.S. Guest, D. Jenkins, N.G. Love, A.J. Schuler, R. West, and A. Wilson. 2007. Pipeline to the future: critical success factors in attracting, developing, and retaining your future water quality leaders. *Water Environment Research*, 79(11), 2251-2252.
 138. Gilmore, K. R., A. Terada, B. F. Smets, and N. G. Love. 2007. Controlling population dynamics and nitrogen removal performance in hollow fiber membrane-aerated biofilm reactors. Newsletter of the IWA Specialist Group on Activated Sludge Populations Dynamics. May, 2007.
 139. Love, N. G. Oerther, D. B. and Ross, B. 2005. Editorial: Evolving to Serve You Better. *Water Environment Research*, 77(1):3-3.
 140. Hughes, L.D., K. F. Knowlton, N. G. Love, A. M. Gamboni and C. M. Parsons. 2004. Wastewater treatment to reduce phosphorus losses from dairy farms. *Journal of Dairy Science*, 87, 470.
 141. Holbrook, R. D., Novak, J. T., Grizzard, T. and Love, N. G. 2003. Closure to discussion of: Estrogen receptor agonist fate during wastewater and biosolids treatment processes: A mass balance analysis. *Environmental Science and Technology*, 37(20):4821-4822.
 142. Novak, J. T., Higgins, M., and Love, N. G. 1999. Closure to discussion of: The effect of cationic salt addition on the settling and dewatering properties of an industrial activated sludge. *Water Environment Research*, 71:252-254.
 143. Cowan, R.M., Love, N. G., Sock, S. and White, K. 1995. Treatment systems: activated sludge and other aerobic suspended culture processes. *Water Environment Research*, 67:433-450.
 144. Lu, Y.-T. and Love, N. G. 1992. Discussion of: enhanced biodegradation of polyaromatic hydrocarbons in the activated sludge process. *Water Environment Research*, 64:922-923.

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 Burch*, Nick J. Lowe, Audrey Rose Zarb, Alyssa Schubert, Janée Rankin*, Lydia Starrs*, Rochelle Kelly*, Richard Kelley*, Alyssa Schubert, Enrique Rodriguez, Lucinda Li, Audrey Pailmeyer, 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. **Bekale, Z., J. Delgado Vela, C. B. Bott, N. G. Love.** Sensor-mediated Control for Aerobic Granular Sludge Process Treating Mainstream Anaerobic Effluent. Podium presentation. 91st Annual Water Environment Federation Technical Exhibition and Conference, New Orleans, LA, October 1-3, 2018.
 156. **Troutman, S.C., N. G. Love and B. Kerkez.** Evaluating market-based algorithms for system-level TSS control. 13th International Conference on Hydroinformatics. Palermo, Italy, July 1-6, 2018.
 157. **Troutman, S. C., N. G. Love and B. Kerkez.** Market-based real-time control of TSS across large sewer systems. World Environmental & Water Resources Congress, EWRI. Minneapolis, MN, USA. June 3-7, 2018.
 158. **Tarpeh, W., D. S. Aga, N. G. Love, K. Wigginton.** Assessing Risks from Pharmaceuticals and Transformation Products in Urine-Derived Fertilizers. Podium presentation. American Chemical Society Annual Meeting. New Orleans, LA. March 2018.
 159. **Troutman, S.C., N. G. Love and B. Kerkez.** Evaluating market-based algorithms for system-level TSS control. Podium presentation. 13th International Conference on Hydroinformatics. Palermo, Italy, July 1-6, 2018.
 160. **Wagner, B., G. T. Daigger, N. G. Love.** Partial nitrification/anammox membrane aerated biofilm reactor for nitrogen removal from aerobic secondary effluent. Podium presentation. Water Environment Federation Nutrient Removal and Recovery Conference, Raleigh North Carolina, June 18-21, 2018. Presentation with associated conference paper.
 161. **Love, N. G., A. Noe-Hays, K. R. Wigginton, L. Macpherson, D. S. Aga, C. B. Bott, G. T. Daigger, A. P. Davis, J. Eisenberg, A. Gagnon, Z. Getaneh, H. Goetsch, P. Gooding, R. Hardin, S. Hilton, J. Jimenez, G. Keoleian, N. J. Lowe, W. Mui, R. Mullen, K. Nace, A. Pallmeyer, N. Patel, D. Raye-Leonard, E. E. Rodriguez, T. Schreiber, A. Sinanaj, W. Tarpeh, R. Wombacher, B. Zhou.** Advancing Nutrient Recovery through Urine-Derived Fertilizers (UDF) in the United States. Podium presentation. Water

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

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

192. **Lahr, R., H., Goetsch, A. Noe-Hays, D. Aga, C. B. Bott, B. Foxman, J. Jimenez, N. G. Love, T. Luo, R. Mullen, K. Nace, K. Ramadugu and K. Wigginton.** 2015. Microbial communities in urine separated for nutrient recovery. 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/H₂O₂ treatment of wastewater. *Water Environment Federation Technical Exhibition and Conference*. Los Angeles, CA. October 15-19, 2011. Podium presentation.
222. **Smith, A., N. G. Love, S. J. Skerlos, and L. Raskin.** Role of membrane biofilm in psychrophilic anaerobic membrane bioreactor for domestic wastewater treatment. *Water Environment Federation Technical Exhibition and Conference*. Los Angeles, CA. October 15-19, 2011. Podium presentation.
223. **Colby, A., Khunjar, W., Pinto, A., Ghosh, S., Raskin, L., Love, N.** Impact of Copper Stress on Ammonia Oxidizer Activity and Community Structure in Nitrifying Activated Sludge. *Water Environment Federation Technical Exhibition and Conference*. Los Angeles, CA. October 15-19, 2011. Podium presentation.
224. **Smith, A.L., N.G. Love, S. Skerlos, and L. Raskin,** 2011. Analysis of microbial communities in an anaerobic membrane bioreactor for domestic wastewater treatment at psychrophilic conditions. *2011 Biogas Microbiology Conference*, September 14-16, Leipzig, Germany.
225. **Colby, A., Khunjar, W., Pinto, A., Ghosh, S., Raskin, L., Love, N.** 2011. Effect of Copper Stress on Ammonia Oxidizer Community Structure and Nitrification Performance in a Nitrifying Activated Sludge Wastewater Treatment Process. *2nd International Conference on Nitrification*. Nijmegen, the Netherlands. July 1-7.
226. **Guest, J.S., S.J. Skerlos, N.G. Love.** 2011. Quantitative sustainable design of wastewater treatment plants. *Engineering Sustainability 2011*, Pittsburgh, PA, March 10-12, 2011, Podium presentation.
227. **Cook, S. M., B.J. VanDuijn, S.J. Skerlos, N.G. Love.** Life cycle comparison of environmental impacts from alternative pharmaceutical disposal methods. *Engineering Sustainability 2011 Conference*, Pittsburgh, PA, April 11, 2011
228. **Smith, A.L., N.G. Love, S.J. Skerlos, and L. Raskin.** 2010. Anaerobic membrane bioreactors for sustainable domestic wastewater treatment at psychrophilic temperatures. *Proceedings of the 12th World Congress on Anaerobic Digestion*, Guadalajara, Mexico, November 1-4, 2010
229. **Smith, A.L., H.J. Dorer, N.G. Love, S.J. Skerlos, and L. Raskin.** 2011. Role of membrane biofilm in psychrophilic anaerobic membrane bioreactor for domestic wastewater treatment. *Proceedings of the 84th Annual Water Environment Federation Technical Exhibition and Conference*, Los Angeles, California, October 15-19, 2011.
230. **Pinto, A.J. and N.G. Love.** Impact of chemical perturbation on trophic interactions and its implications for ecosystem function in an engineered environment. *13th International Symposium on Microbial Ecology 2010*, Seattle, Washington. August 22-27, 2010
231. **Love, N.G., W. O. Khunjar, S. Mackintosh, S. Baik, and D. Aga.** The Relative Roles of Ammonia Oxidizing and Heterotrophic Activated Sludge Bacteria in Biotransforming 17 α -Ethinylestradiol and Trimethoprim. Podium presentation, *AEESP Special Session. 83rd Water Environment Federation Technical Exposition and Conference 2010*, New Orleans, LA, October 3-6, 2010.

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

- 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 17 α -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.
 247. Loh, K. J., J. S. Guest, G. Ho, J. P. Lynch, and N. G. Love. 2009. Layer-by-layer carbon nanotube bio-templates for in situ monitoring of the metabolic activity of nitrifying bacteria. *SPIE Smart Structures and Materials*, San Diego, CA.
 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 17 α -ethinylestradiol. Poster Presentation. *Association of Environmental Engineering and Science Professors Conference*, July 26-29, 2009, Iowa City, IA.
 251. Pinto, A.J., J. S. Guest, R. Roots, N. G. Love, and S. Skerlos. 2009. A project-based active learning framework to introduce freshman engineering students to sustainable waste management and waste-to-energy technologies. Podium presentation. *Association of Environmental Engineering and Science Professors 2009 Conference*. Iowa City, IA, July 26-29, 2009.
 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.
 253. 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 17 α -ethinylestradiol. Poster presentation. *Micropol and Ecohazard 2009, 6th IWA/GRA Specialized Conference on Assessment and Control of Micropollutants/Hazardous Substances in Water* June 2009, San Francisco, CA.
 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. Skotnicka-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 deammonification process. Podium presentation alternate. *Proceedings of the Water Environment Federation 81st Annual Conference and Exposition*, Chicago, IL, October 19-22, 2008.
262. **O'Shaughnessy, M., M. Musabyimana, J. Sizemore, S. Murthy, B. Wett, I. Takacs, D. Houweling, P. Sanjines, N. Love, K. Pallansch,** 2008. Operations and process control of the deammonification process as a sidestream option for nutrient removal. Podium presentation. *Proceedings of the Water Environment Federation 81st Annual Conference and Exposition*, Chicago, IL, October 19-22, 2008.
263. **Khunjar, W. O., J. Skotnicka-Pitak, N. G. Love, D. Aga, W. F. Harper Jr.** 2008. Elucidating the role of nitrifiers versus heterotrophic bacteria in the biotransformation of 17 α -ethinylestradiol during wastewater treatment. Podium presentation. *Proceedings of the Water Environment Federation 81st Annual Conference and Exposition*, Chicago, IL, October 19-22, 2008.
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.
265. **Pinto, A., S. Hardin and N. G. Love.** 2008. Structural and functional responses of the ammonia oxidizing community in activated sludge exposed to cadmium stress. Podium presentation. *Proceedings of the Water Environment Federation 81st Annual Conference and Exposition*, Chicago, IL, October 19-22, 2008.
266. **Gilmore, K. R., B. F. Smets, J. L. Garland, A. Terada, and N. G. Love.** 2008. Controlling gaseous nitrogen oxide emissions and nitrogen removal performance in hollow fiber membrane aerated biofilm reactors. *Proceedings of the WEF Membrane Technology 2008 Conference*, Atlanta, Georgia, January 27-30, 2008.
267. **DeBusk, J. A., J. Arogo Ogejo, N. G. Love, K. F. Knowlton.** 2007. Adjusting nitrogen to phosphorus ratios in liquid dairy manure through nitrification and chemical phosphorus removal to match crop fertilizer requirements. Podium presentation. *Proceedings of the American Society of Agricultural and Biological Engineers (ASABE)*, Paper No. 074048, June 17-20, 2007.
268. **Guest, J. S., A. J. Pinto, N. G. Love and A. Shaw.** 2007. Corrective action strategies for enhanced biological phosphorus removal WWTPs during short-term and prolonged toxic shock events. Podium presentation. *Proceedings of the Water Environment Federation 80th Annual Conference and Exposition*, San Diego, CA, Oct 14-17, 2007.

269. **Khunjar, W. O., C. Klein, T. Yi, N. G. Love, D. Aga, and W. F. Harper Jr.** 2007. Cometabolism of pharmaceutical, personal care products (PPCPs) by the ammonia oxidizing bacterium *Nitrosomonas europaea*. Podium presentation. *Proceedings of the Water Environment Federation 80th Annual Conference and Exposition*, San Diego, CA, Oct 14-17, 2007.
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.
271. **Gilmore, K. R., N. G. Love and B. F. Smets.** 2007. Oxygen mass transfer in a flow-through hollow fiber membrane aeration reactor. Poster presentation. *Proceedings of the Water Environment Federation 80th Annual Conference and Exposition*, San Diego, CA, Oct 14-17, 2007.
272. **Beck, J. L., K. R. Gilmore, N. G. Love, K. F. Knowlton and J. Arogo Ogejo.** 2007. Nitrogen removal from dairy waste using deammonification fueled by fermented dairy manure. Podium presentation. *Proceedings of the Water Environment Federation 80th Annual Conference and Exposition*, San Diego, CA, Oct 14-17, 2007.
273. **Pinto, A.J., Guest, J.S., Love, N.G., and Shaw, A.** 2007. Elucidating the importance of contaminant specific corrective action strategies for wastewater treatment plants during toxic shocks. *Proceedings of the Water Environment Federation 80th Annual Conference and Exposition (WEFTEC)*, San Diego, CA, October 14-17, 2007.
274. **Khunjar, W. O., Klein, C., Skotnicka-Pitak, J., Yi, T., Love, N. G., Aga, D., Harper, W. F. Jr.** 2007. Biotransformation of pharmaceuticals and personal care products (PPCPs) during nitrification: the role of ammonia oxidizing bacteria versus heterotrophic bacteria. WEF Specialty Conference - Compounds of Emerging Concern: What's on the Horizon? Providence, Rhode Island, July 29-30, 2007, Podium presentation.
275. **Fang, Y., Zhao, Z., Love, N. G., Knowlton, K. F., Novak, J. T.** 2007. Detecting endocrine disrupting compounds in various waste matrices using a bioassay. WEF Specialty Conference - Compounds of Emerging Concern: What's on the Horizon? Providence, Rhode Island, July 29-30, 2007, Podium presentation.
276. **Ikuma, K., Fraga Muller, J., Stevens, A. M., Hagedorn III, C., Love, N. G.** 2007. Evaluating the extent of pollution-induced antibiotic resistance in environmental bacterial strains. *American Water Resources Association Summer Specialty Conference – Emerging Contaminants of Concern in the Environment: Issues, Investigations and Solutions*. Vail, Colorado, June 25-27, 2007, Podium presentation.
277. **Khunjar, W. O., Klein, C., Yi, T., Henriques, I. D. S., Love, N. G., Aga, D. S., Harper Jr., W. F.** 2007. The relative roles of ammonia oxidizing bacteria versus heterotrophic bacteria in biotransforming 17 α -ethinylestradiol under low growth rate conditions. *American Water Resources Association Summer Specialty Conference – Emerging Contaminants of Concern in the Environment: Issues, Investigations and Solutions*. Vail, Colorado, June 25-27, 2007, Podium presentation.
278. **Zhao, Z., K. F. Knowlton, N. G. Love and Y. Fang.** 2007. Advanced treatment to reduce the estrogen content of dairy manure. *American Society of Civil Engineers World Environmental & Water Resources Congress*, Tampa Bay, FL., May 15-19, 2007. Podium presentation.
279. **Zhao, Z., Knowlton, K.F., Love, N. G., and Fang, Y.** 2007. Dairy manure estrogens with advanced treatments. *Journal of Dairy Science*, **90**:332, Supplement 1.
280. **Pinto, A. J., Love, N. G.** 2007. Elucidating the importance of contaminant specific corrective action strategies for wastewater treatment plants during toxic shocks. Poster presentation. *Water Environment Federation 80th Annual Conference and Exposition*, San Diego, CA, Oct 14-17, 2007.
281. **Beck, J. L., N. G. Love, K. F. Knowlton and J. Arogo Ogejo.** 2007. Nitrogen removal from dairy waste using deammonification fueled by fermented dairy manure. Poster presentation. *Proceedings of the American Society of Agricultural and Biological Engineers (ASABE)*, June 17-20, 2007.

282. **Khunjar, W. O., Baik, S., Celiz, D., Yi, T., Henriques, I.D.S., Love, N. G., Aga, D. S., Harper Jr., W. F.** 2007. Evaluation of the fate of environmentally relevant micropollutants. Podium presentation. *American Society of Civil Engineers World Environmental & Water Resources Congress*, Tampa Bay, FL., May 15-19, 2007.
283. **Aga, D. S., Harper Jr., W. F., Love, N. G. Khunjar, W. O., Klein, C., Celiz, D. M., Baik, S., Yi, T.** 2007. Investigating the connection between nitrification and the removal of pharmaceuticals using engineered bioreactors. *Micropol and Ecohazard 2007*, Frankfurt, Germany. Podium Presentation.
284. **Pinto, A. J., Guest, J. S., Love, N. G., Shaw, A., Fairey, A. W., Iler, P. L., Earle, J. K., Shellenbarger, D., Barker, D.** 2007. Process control at nutrient removal wastewater treatment plants during toxic shock events. *State of the Art Nutrient Removal Design*, Water Environment Federation and International Water Association, March 3-7, 2007, Baltimore, Maryland.
285. **Klein, C., Aga, D. S., Love, N. G., Khunjar, W. O., and Harper Jr., W. F.** 2007. Characterizing the degradation products of 17 alpha-ethinylestradiol in activated sludge systems by LC/MS. 58th Pittsburgh Conference on Analytical Chemistry and Applied Spectroscopy. Chicago, IL, Feb 25-March 2, 2007. Podium presentation.
286. **Harper Jr. W.F., Love, N.G., Aga, D.S., Yi, T., Khunjar, W.O., Klein, C., O'Connor, S.** Evaluating the link between nitrification and the removal of 17 α -ethinylestradiol. Poster presentation. *Nutrient Removal 2007: The State of the Art. Water Environment Federation Specialty Conference*, Baltimore, MD.
287. **Ikuma, K., Rzigalinski, B. A. and Love, N. G.** 2007. Predicting the public health impact of oxidative toxins using a bacterial glutathione-gated potassium efflux stress response biosensor. 233rd American Chemical Society National Meeting, Chicago, Illinois, March 25-29, 2007.
288. **Chandran, K. and Love, N. G.** 2006. Cd(II) mediated inhibition of *Nitrosomonas europaea* is linked to oxidative stress and is impacted by physiological state and growth mode. *Proceedings of the Water Environment Federation 79th Annual Conference and Exposition*, Dallas, TX Oct 22-25, 2006. (Number 1 Abstract out of 120+ submissions for Research Symposium)
289. **Kelly, R. T. Jr. and Love, N. G.** 2006. The role of glutathione mediated stress response mechanisms in nitrifying bacteria. *Proceedings of the Water Environment Federation 79th Annual Conference and Exposition*, Dallas, TX Oct 22-25, 2006.
290. **Capuno, R. E., Love, N. G., and Smets, B. F.** 2006. Mathematical modeling of start-up scenarios for nitrogen removal via a nitrification:anaerobic ammonia oxidation-coupled biofilm in a hollow fiber membrane bioreactor. *International Water Association Biofilm Systems VI*, Amsterdam, The Netherlands, September 24-27, 2006.
291. **Gilmore, K. R., R. E. Capuno, Jr., N. G. Love, and B. F. Smets.** 2006. Anaerobic stabilization of early planetary base ersatz wastewater formulation. Society of Automotive Engineers (SAE) Technical Paper Series 2006-01-2255. 36th International Conference on Environmental Systems, SAE, Norfolk, VA.
292. **Zaklikowski, A., Love, N. G., Vikesland, P. and Chandran, K.** 2006. The effect of breakpoint chlorination practices on the activity, viability and recovery of nitrifying bacteria in chloraminated water. *American Water Works Association Annual Meeting, Universities Forum*. June 12, 2006.
293. **Rushing, J. C., Vikesland, P., Love, N. G., Mutuc, M., Chan, K. M., Casselberry, R. and Cichy, P.** 2006. Evaluating in situ chemical and biological treatment approaches for two chlorinated aliphatic ethers: BCEE and BCEM. *The Fifth International Conference on Remediation of Chlorinated and Recalcitrant Compounds*. Battelle, May 22-25, 2006, Monterey, California.
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. **Rasnahe, W. J., Love, N. G., Black, W. L., and Gruber, D.** 1997. Application of a toxicity reduction evaluation at a seafood processing facility which emphasized source reduction and treatment

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

Published Reports (not peer reviewed)

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

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

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

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

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

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

- Delivery to Receiving Waters, Water Environment Federation Innovative Uses of Agricultural Wastes Conference, Chicago, IL, July 1-3, 2005.
392. Xu, Y., Linares, K., Meehan, K. A., Love, N. G. and Love, B. J. 2004. pH dependent optical properties of surface modified gold nanoparticles using bovine serum albumin coating. NSTI Nanotechnology Conference and Trade Show, Boston, MA, March 2004.
 393. Kelly II, R. T., and Love, N. G. 2004. Investigating the role of oxidative stress mechanisms in chemically inhibited nitrifiers. Poster presentation. Environmental Science – Water Gordon Research Conference, June 27-July 1, 2004, Holderness School, Plymouth, New Hampshire.
 394. Sandu, S., Hallerman, E. and Love, N. G. 2004. Ozone treatability and pilot-scale treatment for aquaculture effluent recovery and reuse. Presented at the International Conference on Successes and Failures in Commercial Recirculating Aquaculture, Roanoke, VA, July 2004.
 395. Fleming, D., Linares, K., Xu, Y., Love, B., Love, N. and Meehan, K. 2004. Use of immobilized bacterial elements in an environmental biosensor. The Eighth World Conference on Biosensors, Granada, Spain. May 24-26, 2004.
 396. Chakraborty, I., Rhodes, R.R., Stevens, A.M., and Love, N. G. 2004. Monitoring the adaptation of an enriched bacterial consortium in response to chemical stressors using DGGE and sequencing. Poster Presentation, 10th International Symposium on Microbial Ecology, Cancun, Mexico, August 22-27, 2004.
 397. Kelly, R. T. and Love, N. G. Mechanisms of chemical inhibition of nitrification in wastewater treatment. Virginia Water Environment Association, Roanoke, VA, May 2003. 2003 Best Student Paper Award.
 398. Leung, S.M., Little, J. C., Holst, T., and Love, N. G. 2003. Oxygen transfer and consumption in a biological aerated filter. Virginia Water Environment Association, Roanoke, VA, May 2003.
 399. Dauphinais, J. L. and Love, N. G. 2003. Determination of toxic inhibition potential from industrial dischargers to a POTW using a respirometric assay. Virginia Water Environment Association, Roanoke, VA, May 2003.
 400. Bott, C.B., Henriques, I. D. S., Kelly, R. T., Dauphinais, J. L., and Love, N. G. 2002. WERF - Upset early warning systems for biological wastewater treatment. *Proceedings of the Water Environment Federation 8th Annual Industrial Wastes Technical and Regulatory Conference*, Atlantic City, New Jersey, August 11-14, 2002.
 401. Holbrook, R.D., Novak, J. T. and Love, N. G. 2002. The role of particulate and colloidal material in the fate and transport of endocrine disrupting compounds. Joint Annual Meeting of the Virginia Water Environment Association and Virginia American Water Works Association, September 2002, Virginia Beach, VA.
 402. Leung, S., 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
6/1/16-5/31/20
10% share
12. Love, N.G. and T. M. Olson. RAPID: Assessing microbiological quality across point-of-use filters deployed in Flint, MI. (\$30,250 cost share from College of Engineering). National Science Foundation.
\$49,999
4/1/16 – 3/31/2017
50% share
13. Newell, J. P., G. T. Daigger, N. McClintock, A. Ramswami, J. Vandermeer. N.G. Love Senior Personnel and one of three proposal authors (with Newell and
\$69,242
7/01/15 – 12/31/15

- | | | |
|-----|--|---|
| | Daigger). FEW Workshop: "Scaling Up" Urban Agriculture to Mitigate Food-Energy-Water Impacts. National Science Foundation. | 30% share |
| 14. | Love, N.G. and C. B. Bott. GOALI: Developing Sensor-Mediated Control Strategies that Allow Innovative Treatment of Nitrogen in Wastewater. National Science Foundation. | \$330,000
9/1/14 – 8/31/18
100% share |
| 15. | Wigginton, K. R., N. G. Love, J. Jimenez, A. Noe Hayes, D. S. Aga, C. B. Bott. Nutrient Recovery Through Urine Separation. Water Environment Research Foundation EPA Water Center. | \$554,034
5/1/14 – 12/31/15
10% share |
| 16. | Raskin, L. and N. G. Love. Evaluation of Waste Activated Sludge Anaerobic Contactor (WASAC™) as a Process for Energy Conservation at Domestic Wastewater Treatment Plants. Carollo Engineering. | \$104,481
3/1/2013-4/30/2014
50% share |
| 17. | Love, N.G., L. Raskin, C. Bott, S. Skerlos and A. Salvesson. Low Energy Alternatives for Activated Sludge-Advancing Anaerobic Membrane Bioreactor Technology. Water Environment Research Foundation. | \$527,000
1/1/2013-12/31/2014
33% share |
| 18. | Burns, M. A. and N. G. Love. Point-of-Use Water Quality Assessment (Sensors for Faucets). MASCO Inc. | \$583,868
9/1/12-8/31/15
10% share |
| 19. | Linden, K., D. S. Aga and N. G. Love. Demonstrating Advanced Oxidation/ Biofiltration for Pharmaceutical Removal in Wastewater. Water Environment Research Foundation. | \$150,000
3/1/2012-8/31/2013
10% share |
| 20. | Raskin, L., S. J. Skerlos and N. G. Love. Low-temperature Anaerobic Membrane Bioreactors for Sustainable Domestic Wastewater Treatment. National Science Foundation (CBET-1133793) | \$404,365
9/1/11 – 8/31/14
10% share |
| 21. | Olson, T. and N. G. Love. Point-of-Use Devices as Incubators of Halogenated Phenol-Mediated Antibiotic Resistant Bacteria. National Science Foundation (CBET-1067450) (includes \$55,669 supplement to support dissertation work of Mr. Bayable Atafu 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 Nitrification 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. Inflico Degremont, Inc. | \$30,000
12/24/99–2/15/01
100% share |
| 59. | Love, N. G. and Bott, C. B. Assessment and framing workshop on upset early warning systems. Water Environment Research Foundation. | \$81,064
6/30/99–7/1/00
75% share |
| 60. | Love, N. G. and Stevens, A. M. Characterizing nitrifying bioaugmentation cultures. Sybron Chemical Company and Virginia Center for Innovative Technology. | \$90,000
9/1/98–6/30/00
50% share |
| 61. | Love, N. G. Evaluating protein induction patterns in industrial activated sludge cultures. Eastman Chemical Company. | \$43,294
12/1/97–12/31/98
100% share |
| 62. | Love, N. G., Little, J. C., and Novak, J. T. A Fundamentally-based investigation into the operational potential of the Biofor® biological aerated filter. Degremont North American Research and Development, Inc., with matching from the Virginia Center for Innovative Technology. | \$95,592
9/97–12/98
50% share |
| 63. | Widdowson, M. A. Love, N. G., and Novak, J. T. Evaluation of intrinsic bioremediation at the Douge Creek Subdivision, Ft. Belvoir, VA. Horne Engineering Services, Inc. | \$28,800
9/16/96–9/16/97
10% share |
| 64. | Love, N. G., Widdowson, M. A., and Novak, J. T. An investigation into the use of biologically-based treatment technologies for waste oil volume reduction at Norfolk Southern Corporation. Norfolk Southern Corporation and Virginia Water Resources Research Center. | \$116,835
8/1/96–8/31/98
45% share |
| 65. | Love, N. G. Laboratory studies to assess wastewater treatment strategies for Eastman Chemical Company. Eastman Chemical Company. | \$10,000
11/15/95–3/1/97
100% share |
| 66. | Love, N. G. The distribution and expression of BTX-degrading microorganisms in anoxic/aerobic single sludge biological treatment processes. National Science Foundation CAREER Award. | \$335,618
7/1/95–6/30/99
100% share |
| 67. | Love, N. G. The role of anoxic zones in preventing methylethyl ketoxime inhibition of nitrification. Virginia Water Resources Research Center and AlliedSignal Chemical Company. | \$20,000
4/1/95–4/30/96
100% share |
| 68. | Love, N. G. and Novak, J. T. The impact of industrial wastewater composition on the bioflocculation of biological sludges. Virginia Water Resources Research Center and Eastman Chemical Company. | \$30,000
2/1/95–2/29/96
50% share |

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

- | | | |
|-----|---|--|
| 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. REFRESH: Researching Fresh | \$2,998,832
7/1/14 – 6/30/17
1 of 17 co-PIs at 6% share each |

Solutions to the Energy/Water/Food Challenge in Resource-Constrained Environments. University of Michigan Third Century Initiative.		
72.	Newell, J., N. G. Love and R. Norton. Planning for Technological Innovation: Water, Infrastructure and Sustainability. University of Michigan MCubed program.	\$60,000 1/13/13 – 12/31/14 33% share
73.	Kolars, J. D., N. G. Love, S. Fisseha, A. Burton, L. Isom, P. Yadav, J. Godfrey, and K. Sienko. A Proposal to Develop the Ethiopia-Michigan Platform for Advancing Collaborative Engagement (EM-PACE). University of Michigan Third Century Initiative. N. Love co-leads the Environmental Initiative within this program.	\$297,800 1/1/14 – 8/31/15 1 of 8 co-PIs at 12% each
74.	Love, N. G., Skerlos, S., and Raskin, L. Global Sustainable Water Systems – Acknowledging Wastewater as a Resource. Graham Environmental Sustainability Institute, University of Michigan.	\$5,000 1/1/08–8/1/08 34% share
75.	Love, N. G., Muller, J. F., Stevens, A. M. and Hagedorn, C. Evaluating the extent of pollution-induced antibiotic resistance in environmental bacterial strains. Virginia Water Resources Research Center.	\$18,000 7/1/06–6/30/07 25% share
76.	Vikesland, P., Love, N. G. and Knocke, W. R. Construction of the Environmental BioNanoTechnology Laboratory (EB/NL), ASPIRES.	\$82,030 7/1/05–6/30/06 33% share
77.	Knowlton, K. F., Love, N. G., and Ogejo, J. A. Fate of endocrine disrupting compounds in dairy manure during storage and treatment. Virginia Water Resources Research Center.	\$18,000 7/1/05–6/30/06 33% share
78.	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 <i>lux</i> reporter for the anaerobic human pathogen <i>Bacteroides</i> . Virginia Tech Optical Sciences and Engineering Research Center.	\$50,000 7/1/00–6/30/01 10% share
84.	Love, N. G. and Brazil, B. L. Performance optimization and economic analysis of a fluidized denitrifying unit for treating aquaculture effluents. Virginia Tech Commercial Fisheries and Shellfish Technologies Program.	\$57,456 7/1/99–6/30/01 50% share
85.	Popham, D. L., Brewer, K. J., Esen, A., Love, N. G., Rutherford, C. L., Shirley, S. W., Stevens, A. M., and Walker, R. A. Establishment of a phosphor/fluorescent imaging facility in Derring Hall. Virginia Tech ASPIRES program.	\$69,200 1/98–12/99 2% share

- | | | |
|-----|--|---|
| 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.aees.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, Ascona, 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 Universität München and ETH Zürich; 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, Dübendorf, 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, Korngrit 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.