



December 18, 2020

Jeanine M. Harris
Haywood County Health and Human Services
157 Paragon Parkway, Suite 800
Clyde, NC 28721

Dear Ms. Harris,

It is our pleasure to inform you that Dogwood Health Trust has awarded a \$39,800.00 grant to Haywood County Health and Human Services to support COVID-19 wastewater surveillance in Haywood County. Wastewater surveillance can play a vital role in monitoring COVID-19 spread because of its broad population coverage, ability to detect asymptomatic infections, and value as a leading indicator for changing infection rates. This project will use weekly wastewater surveillance for the SARS-CoV-2 virus to provide public health officials with a more comprehensive measure of the magnitude of the COVID-19 pandemic locally and regionally over the span of four months.

Dogwood Health Trust originally funded a pilot of this wastewater testing approach in Jackson County earlier in 2019, and this grant to Haywood County represents an extension and scaling of that successful pilot. We are grateful to Haywood County Health and Human Services and delighted to partner on supporting this much-needed work in western North Carolina.

A copy of the grant agreement is enclosed for your review, and you should receive a signature request through our Adobe Sign system via email. Please do not hesitate to reach out to Emily Quinlan at e.quinlan@dht.org with any questions, and thank you for the great work you are doing for western North Carolina.

Sincerely,


Janice Brumit (Dec 18, 2020 15:38 EST)

Janice Brumit
Chair, Board of Directors
Dogwood Health Trust

Haywood County Award Letter

Final Audit Report

2020-12-18

Created:	2020-12-18
By:	Emma Lawless (e.lawless@dht.org)
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"Haywood County Award Letter" History

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Dear Grantee,

It is my pleasure to inform you that the Dogwood Health Trust (“Grantor” or “we”) has approved a grant (the “Grant”) to your organization (“Grantee” or “you”) in the amount and for the project described in Exhibit A (the “Project”). Grantee shall use the Grant consistent with the purposes of Grantor’s tax-exempt mission to create a dramatically healthier region in Western North Carolina and in accordance with the terms herein.

This letter is a legally binding agreement between Grantor and Grantee (“Agreement”). Grantor and Grantee are each a “party” and collectively, the “parties.” The Agreement will be effective upon our receipt of this Agreement, signed by an authorized representative of Grantee. An electronic copy will suffice.

We will arrange for payment of the grant within 30 days of our receipt of a signed copy.

You will be required to submit report(s) to the Grantor on the use and outcomes related to grant dollars. The Grantor may decline to consider grant renewals for Grantees who fail to do so. Please see Section 2 below and Exhibit A for additional information on the reporting requirement.

TERMS AND CONDITIONS

1. **Use of Funds.** Grantee shall use the Grant, and any interest or other income generated by the grant funds, only for the purposes of the Project described in Exhibit A and in a manner consistent with the terms of this Agreement. Grantee must use the Grant to support the 18 counties and Qualla Boundary within the Grantor’s Region. Grantee may not make any changes in the purposes for which the Grant is spent without the Grantor’s prior written approval.
2. **Reporting.** The Grantee will submit to Grantor written reports detailing Grant progress from a programmatic perspective along with a report of expenditures and confirmation that Grantee is in compliance with the terms of this Agreement. Grantor will provide reporting instructions prior to the due date found in Exhibit A. As part of the financial final report, Grantee will report grant dollars spent by county.
3. **Recordkeeping.** Grantee shall treat the Grant and any interest or income generated by the Grant as restricted assets and shall maintain either books to show the Grant separately or the Grant in a separate bank account. All expenditures made in furtherance of the Project shall be charged off against the Grant and shall appear on Grantee’s books. Grantee shall keep adequate records to substantiate its expenditures of the Grant. Grantee shall make these books and records pertaining to the Grant available to the Grantor at reasonable times for review and audit, and shall comply with all reasonable requests of the Grantor for information and interviews regarding use of the Grant. Grantee shall keep copies of all

books and records related to this grant and all reports to the Grantor for at least six years after Grantee has expended the last of the Grant.

4. **Prohibited Uses.** Grantee shall not use any portion of the funds granted in a manner inconsistent with Internal Revenue Code ("IRC") Section 501(c)(3), including:
 - a. Influencing the outcome of any specific election for candidates to public office, or
 - b. Carrying on propaganda, or otherwise attempting to, to influence legislation of any kind by any governmental body or by means of a public vote, interpreted in accordance with the provisions of IRC sections 4945(d)(1) and 4945(e); or
 - c. Inducing or encouraging violations of law or public policy, or causing any private inurement or improper private benefit to occur, or taking any other action inconsistent with IRC Section 501(c)(3).
5. **Lobbying and Certain Voter Registration Drives Prohibited.** No part of the Grant may be spent for influencing legislation within the meaning of IRC Section 4945(e). No part of the Grant may be spent to carry on, directly or indirectly, any voter registration drive within the meaning of Section 4945(d)(2).
6. **Regrants.** Grantee may regrant a part of this grant if and only if such regrants fall within the stated purpose of the grant and the Agreement or are in accordance with the charitable purposes of Grantee and Grantor.
7. **No Pledge.** Neither this Agreement nor any other statement, oral or written, nor the making of any contribution or grant to Grantee, shall be interpreted to create any pledge or any commitment by the Grantor or by any related person or entity to make any other grant or contribution to Grantee or any other entity for this or any other purpose. The Grant contemplated by this Agreement shall be a separate and independent transaction from any other transaction between the Grantor and Grantee or any other entity.
8. **Representation and Warranty Regarding Tax Status.**
 - a. By entering into this Agreement, Grantee represents and warrants that Grantee is exempt from federal income tax under IRC 501(c)(3) and is a public charity described in IRC Sections 509(a)(1) or 509(a)(2) or is described in IRC Sections 170(c)(1) or 511(a)(2)(B).
 - b. Grantee's tax status has not been revoked and, to Grantee's knowledge, Grantee is not under review or audit by the Internal Revenue Service. Upon request, Grantee will provide Grantor with current documentation of its tax status.
 - c. Grantee's receipt of the Grant and compliance with the terms of this Agreement will not cause Grantee to be in violation or conflict with the governing documents of

Grantee or any law to which Grantee is subject, or to be in breach or default of any contract or license to which Grantee is a party; nor will it have any material adverse effect on Grantee's tax or legal status.

- d. There is no pending proceeding or investigation directed at the Grantee by a federal, state, tribal, or local administrative agency or authority that could have a material adverse impact on the Grantee's ability to perform its obligations under this Agreement.
9. **Notice.** Grantee shall give the Grantor immediate written notice of any change in Grantee's tax-exempt or public charity status.
10. **Publications; License.** Any information contained in publications, studies, or research funded by this grant shall be made available to the public following such reasonable requirements or procedures as the Grantor may establish from time to time. Grantee grants to the Grantor an irrevocable, nonexclusive license to publish any publications, studies, or research funded by this grant at the sole discretion of the Grantor.
11. **Grant Announcements.** Grantee shall submit in advance to the Grantor, for review and revision at the sole discretion of the Grantor, any announcements Grantee intends to make regarding the grant, and any publications referring to the grant Grantee intends to publish, other than in its annual reports or tax returns. The Grantor may include information on the grant in its periodic public reports.
12. **Terrorist Activity.** Grantee warrants that it does not support or conduct, directly or indirectly, violence or terrorist activities of any kind.
13. **Indemnification.** Grantee irrevocably and unconditionally agrees, to the fullest extent permitted by law, to defend, indemnify, and hold harmless the Grantor, its officers, directors, employees, and agents, from and against any and all claims, liabilities, losses, and expenses (including reasonable attorneys' fees) directly, indirectly, wholly, or partially arising from or in connection with any act or omission of Grantee, its employees, or agents, in applying for or accepting the Grant, or in expending or applying the Grant, except to the extent that such claims, liabilities, losses, or expenses arise from any act or omission of the Grantor, its officers, directors, employees, or agents.
14. **No Agency.** Grantee and not the Grantor is solely responsible for all activities supported by the Grant, the content of any product created with the grant funds, and the manner in which such products may be disseminated. This Agreement shall not create any agency relationship, partnership, or joint venture between the parties, and Grantee shall make no such representation to anyone.
15. **Waivers.** The failure of the Grantor to exercise any of its rights under this Agreement shall not be deemed to be a waiver of such rights.

16. **Remedies.** Grantee shall repay to the Grantor any portion of the Grant which is not spent or committed for the charitable purposes of this Agreement. If the Grantor determines, in its sole discretion, that Grantee has substantially violated or failed to carry out any provision of this Agreement, including but not limited to failure to submit reports when due, the Grantor may, in addition to any other legal remedies it may have, refuse to make any further grant payments to Grantee under this or any other grant agreement, and the Grantor may demand the return of all or part of the unexpended Grant, which Grantee shall immediately repay to the Grantor. The Grantor may also avail itself of any other remedies available by law.
17. **Captions.** All captions and headings in this Agreement are for the purposes of reference and convenience only. They shall not limit or expand the provisions of this Agreement.
18. **Entire Agreement.** This Agreement supersedes any prior or contemporaneous oral or written understandings or communications between the parties and constitutes the entire agreement of the parties with respect to its subject matter. This Agreement may not be amended or modified, except in a writing signed by both parties.
19. **Governing Law.** This Agreement shall be governed by the laws of the State of North Carolina applicable to contracts to be performed entirely within the State. For the purpose of any action or proceeding arising out of or relating to this Agreement, each of the parties hereto irrevocably (a) submits to the exclusive jurisdiction of the state courts of North Carolina and to the jurisdiction of the United States District Court for the Western District of North Carolina and (b) agrees that all claims in respect of such action or proceeding shall be heard and determined exclusively in any North Carolina state or U.S. federal court sitting in the County of Buncombe, North Carolina.

Please have an authorized officer of your organization sign this Agreement and return it to the Grantor. You may return the signed Agreement via AdobeSign, or send it to finance@dht.org or 890 Hendersonville Rd, Suite 300, Asheville, NC 28803. Please keep a copy of the signed Agreement for your files.

If you have any questions concerning this grant or the grant agreement, please don't hesitate to email finance@dht.org or contact your DHT Impact Team contact.

On behalf of Dogwood Health Trust's Board and staff, let me express how delighted we are to support your organization. We wish you every success.

Sincerely,

Dogwood Health Trust

Authorized Signature

Janice Brumit
Name

Chair of the Board
Title

Date

Accepted on behalf of organization by:

Authorized Signature

Date: _____

Name

Title

EXHIBIT A

Grantee legal name: Haywood County Health and Human Services - Public Health

Tax ID Number: 56-6001524

Type of organization: Government Entity

Organization contact: Garron Bradish, Environmental Health Supervisor & Interim Public Health Director

Grant contact: Garron Bradish, Environmental Health Supervisor & Interim Public Health Director

Grantee Address:

*157 Paragon Parkway, Suite 800
Clyde, NC 28721*

Address for payment:

*Michelle Haynes
157 Paragon Parkway
Clyde, NC 28721*

Signatory Information:

*Garron Bradish
Tel: (828) 356-2111 ext. 2111
garron.bradish@haywoodcountync.gov*

Dogwood Strategic Priority: Health & Wellness

Project title: COVID-19 Wastewater Project

Project:

Detailed Description/Project Summary

This grant will support COVID-19 wastewater surveillance in Haywood County. Wastewater surveillance can play a vital role in monitoring COVID-19 spread because of its broad population coverage, ability to detect asymptomatic infections, and value as a leading indicator for changing infection rates. This project will use weekly wastewater surveillance for the SARS-CoV-2 virus to provide public health officials with a more comprehensive measure of the magnitude of the COVID-19 pandemic locally and regionally over the span of four months.

Grant amount: \$39,800.00

Budget:

The project budget of \$39,800 includes \$29,000 to Mathematica researchers for data analysis, synthesis, communication, and coordination; \$6,000 to the testing lab to quantify SARS-CoV-2 viral RNA concentrations; \$1,500 to utility staff to offset sample collection costs; \$1,000 in sample shipping costs; and \$2,300 in project management costs.

Counties served and anticipated allocation:

<i>County</i>	<i>Anticipated Funding Allocation</i>
<i>Avery</i>	0%
<i>Buncombe</i>	0%
<i>Burke</i>	0%
<i>Cherokee</i>	0%
<i>Clay</i>	0%
<i>Eastern Band of the Cherokee Indians</i>	0%
<i>Graham</i>	0%
<i>Haywood</i>	100%
<i>Henderson</i>	0%
<i>Jackson</i>	0%
<i>Macon</i>	0%
<i>Madison</i>	0%
<i>McDowell</i>	0%
<i>Mitchell</i>	0%
<i>Polk</i>	0%
<i>Rutherford</i>	0%
<i>Swain</i>	0%
<i>Transylvania</i>	0%
<i>Yancey</i>	0%

Outcome measurements (if any):

The main outcome will be the SARS-CoV-2 viral RNA concentrations in the wastewater samples. Mathematica will work with the testing lab to report the outcome within 5 to 6 days after each sample is collected, and Mathematica will update its COVID-19 wastewater policy dashboard to show trends in the wastewater data over time alongside trends in confirmed cases and a proxy based on COVID-like symptom reports.

Reporting requirements:

Narrative Final Report

Due Date: Dec. 31, 2021

Financial Final Report

Due Date: Dec. 31, 2021

As part of the financial final report, Grantee will report grant dollars spent by county.

ADDITIONAL HAYWOOD COUNTY CONTRACT TERMS/CONDITIONS AND SIGNATURE PAGE

NON APPROPRIATION

If funds are not appropriated during the term of this Agreement for this agreement, and there are no other available funds with which payment can be made, this agreement is terminated on the last day of the fiscal period for which appropriations were received without penalty or expense.

IRAN DIVESTMENT ACT CERTIFICATION REQUIRED BY N.C.G.S. Chapter 147, Article 6E

As of the date listed below, the vendor or bidder listed below is not listed on the Final Divestment List created by the State Treasurer pursuant to the applicable provisions of Chapter 147, Article 6E of the N.C.G.S. The undersigned certifies that he or she is authorized by the vendor or bidder listed below to make the foregoing statement.

NOTE: N.C.G.S Chapter 147, Article 6E requires this certification for bids or contracts with the various governmental entities of North Carolina, including counties. The certification is required when a bid is submitted, when a contract is entered into, and when a contract is renewed or assigned. No vendor may utilize any subcontractor found on the State Treasurer's Final Divestment List. The List is updated every 180 days, and can be found at www.nctreasurer.com/iran

NORTH CAROLINA E-VERIFY CERTIFICATION

APPLICABILITY: Pursuant to North Carolina General Statute 64-25, the certification is applicable for all contracts entered into by Haywood County, except contracts solely for the purchase of goods, apparatus, supplies, materials, equipment, or contracts with specific other entities as described in N.C.G.S. §143-133.3, piggy-back contracts, and travel purchases.

CERTIFICATION: By signing and entering into this contract with Haywood County, I hereby certify that I comply with E-Verify, the Federal program used to verify the work authorization of newly hired employees. I certify compliance with the E-Verification program pursuant to Article 2 of Chapter 64 of the North Carolina General Statutes. If applicable, I am also certifying that any subcontractor hired or used by me will comply with E-Verify.

ADA AND CIVIL RIGHTS CERTIFICATION OF COMPLIANCE

I hereby certify that I comply with all applicable federal civil rights laws, including the applicable provisions of the Americans with Disabilities Act

UNIFORM GUIDANCE ("UG") REQUIRED CONTRACT PROVISIONS

Uniform Guidance ("UG") is a set of uniform standards for contracts involving the award/expenditure of certain federal monies. If the UG requirements are not applicable, the UG provisions do not apply, unless specifically stated so in the contract.

NOTE: BY SIGNING THE HAYWOOD COUNTY SIGNATURE PAGE, YOU AGREE TO FOLLOW THE ATTACHED TERMS AND CONDITIONS, TO THE EXTENT THAT SUCH PROVISIONS ARE APPLICABLE.

VENDOR

Vendor Name: N/A

By: N/A Title: N/A

Date: N/A

HAYWOOD COUNTY

By: _____

County Manager

Date: _____

ATTEST:

Clerk to the Board/Deputy Clerk to the Board

APPROVED AS TO FORM:

County Attorney

This instrument has been pre-audited in the manner required by the Local Government Budget Act.

Finance Director

Uniform Guidance ("UG") Required Contract Provisions

APPLICABILITY: UG is a set of uniform standards for award and expenditure of federal financial assistance, and applies to the purchase of apparatus, supplies, equipment, materials, services, construction and repair, and engineering/architectural services. See 2 CFR Part 200. Provided that these standards are applicable to you, by signing this signature page, you are certifying that your organization meets these requirements and that this certification, with the statutory references incorporated into each certification, on its face constitutes the "provision for compliance" for any paragraphs requiring such provision or other similar required statement, terms, or requirements. Haywood County is also required to be bound by such provisions. As the UG requires that any more stringent state law or local ordinance/policy supersedes these certifications, such state or local contractual references supersedes the requirements below, to the extent that the state or local provisions are more stringent than the federal requirements.

If the service provided under the contract is not covered by the UG, signing the contract signature page will not bind the parties to these requirements, unless if specified in the contract. See generally <https://www.ecfr.gov/cgi-bin/text-idx?SID=04e61f4e0a8317140a9ec150bb2ac195&mc=true&node=pt2.1.200&rgn=div5#ap2.1.200.1521.ii>

(A) Contracts for more than the simplified acquisition threshold currently set at \$150,000, which is the inflation adjusted amount determined by the Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council (Councils) as authorized by 41 U.S.C. 1908, must address administrative, contractual, or legal remedies in instances where contractors violate or breach contract terms, and provide for such sanctions and penalties as appropriate.

(B) All contracts in excess of \$10,000 must address termination for cause and for convenience by the non-Federal entity including the manner by which it will be effected and the basis for settlement.

(C) Equal Employment Opportunity. Except as otherwise provided under 41 CFR Part 60, all contracts that meet the definition of "federally assisted construction contract" in 41 CFR Part 60-1.3 must include the equal opportunity clause provided under 41 CFR 60-1.4(b), in accordance with Executive Order 11246, "Equal Employment Opportunity" (30 FR 12319, 12935, 3 CFR Part, 1964-1965 Comp., p. 339), as amended by Ex. Order 11375, "Amending Ex. Order 11246 Relating to Equal Employment Opportunity," and implementing regulations at 41 CFR part 60, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor."

(D) Davis-Bacon Act, as amended (40 U.S.C. 3141-3148). When required by Federal program legislation, prime construction contracts in excess of \$2,000 awarded by non-Federal entities must include a provision for compliance with the Davis-Bacon Act (40 U.S.C. 3141-3144, and 3146-3148) as supplemented by Department of Labor regulations (29 CFR Part 5, "Labor Standards Provisions Applicable to Contracts Covering Federally Financed and Assisted Construction"). In accordance with the statute, contractors must be required to pay wages to laborers and mechanics at a rate not less than the prevailing wages specified in a wage determination made by the Secretary of Labor. In addition, contractors must be required to pay wages not less than once a week. The non-Federal entity must place a copy of the current prevailing wage determination issued by the Department of Labor in each solicitation. The decision to award a contract or subcontract must be conditioned upon the acceptance of the wage determination. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency. The contracts must also include a provision for compliance with the Copeland "Anti-Kickback" Act (40 U.S.C. 3145), as supplemented by Department of Labor regulations (29 CFR Part 3, "Contractors and Subcontractors on Public Building or Public Work Financed in Whole or in Part by Loans or Grants from the United States"). The Act provides that each contractor or subrecipient must be prohibited from inducing, by any means, any person employed in the construction, completion, or repair of public work, to give up any part of the compensation to which he or she is otherwise entitled. The non-Federal entity must report all suspected or reported violations to the Federal awarding agency.

(E) Contract Work Hours and Safety Standards Act (40 U.S.C. 3701-3708). Where applicable, all contracts awarded by the non-Federal entity in excess of

\$100,000 that involve the employment of mechanics or laborers must include a provision for compliance with 40 U.S.C. 3702 and 3704, as supplemented by Department of Labor regulations (29 CFR Part 5). Under 40 U.S.C. 3702 of the Act, each contractor must be required to compute the wages of every mechanic and laborer on the basis of a standard work week of 40 hours. Work in excess of the standard work week is permissible provided that the worker is compensated at a rate of not less than one and a half times the basic rate of pay for all hours worked in excess of 40 hours in the work week. The requirements of 40 U.S.C. 3704 are applicable to construction work and provide that no laborer or mechanic must be required to work in surroundings or under working conditions which are unsanitary, hazardous or dangerous. These requirements do not apply to the purchases of supplies or materials or articles ordinarily available on the open market, or contracts for transportation or transmission of intelligence.

(F) Rights to Inventions Made Under a Contract or Agreement. If the Federal award meets the definition of "funding agreement" under 37 CFR §401.2 (a) and the recipient or subrecipient wishes to enter into a contract with a small business firm or nonprofit organization regarding the substitution of parties, assignment or performance of experimental, developmental, or research work under that "funding agreement," the recipient or subrecipient must comply with the requirements of 37 CFR Part 401, "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements," and any implementing regulations issued by the awarding agency.

(G) Clean Air Act (42 U.S.C. 7401-7671q.) and the Federal Water Pollution Control Act (33 U.S.C. 1251-1387), as amended-Contracts and subgrants of amounts in excess of \$150,000 must contain a provision that requires the non-Federal award to agree to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act (42 U.S.C. 7401-7671q) and the Federal Water Pollution Control Act as amended (33 U.S.C. 1251-1387). Violations must be reported to the Federal awarding agency and the Regional Office of the Environmental Protection Agency (EPA).

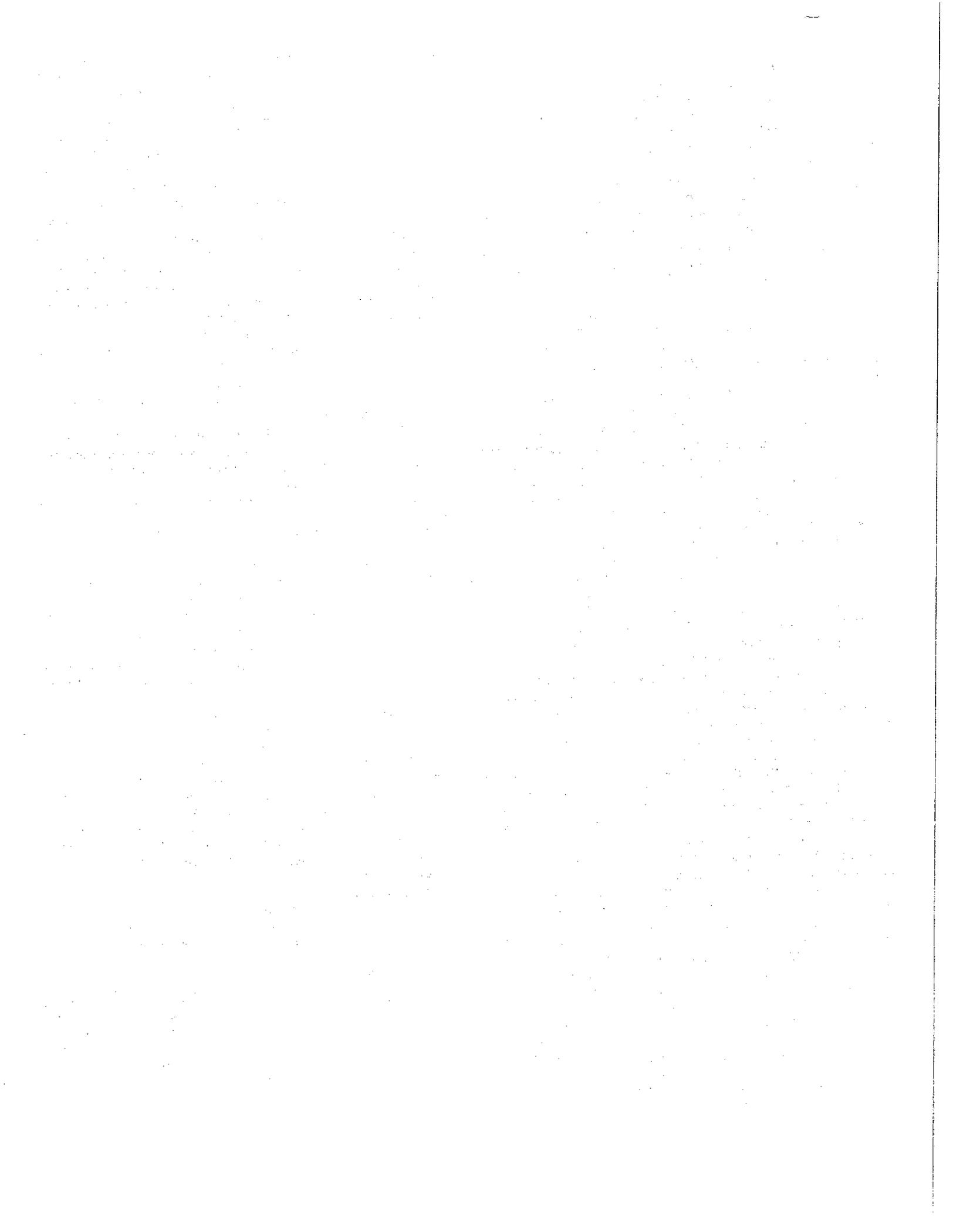
(H) Debarment and Suspension (Ex. Orders 12549 and 12689)-A contract award (see 2 CFR 180.220) must not be made to parties listed on the government wide exclusions in the System for Award Management (SAM), in accordance with the OMB guidelines at 2 CFR 180 that implement Ex. Orders 12549 (3 CFR part 1986 Comp., p. 189) and 12689 (3 CFR part 1989 Comp., p. 235), "Debarment and Suspension." SAM Exclusions contains the names of parties debarred, suspended, or otherwise excluded by agencies, as well as parties declared ineligible under statutory or regulatory authority other than Ex. Order 12549.

(I) Byrd Anti-Lobbying Amendment (31 U.S.C. 1352)-Contractors that apply or bid for an award exceeding \$100,000 must file the required certification. Each tier certifies to the tier above that it will not and has not used Federal appropriated funds to pay any person or organization for influencing or attempting to influence an officer or employee of any agency, a member of Congress, officer or employee of Congress, or an employee of a member of Congress in connection with obtaining any Federal contract, grant or any other award covered by 31 U.S.C. 1352. Each tier must also disclose any lobbying with non-Federal funds that takes place in connection with obtaining any Federal award. Such disclosures are forwarded from tier to tier up to the non-Federal award.

(J) See §200.322 Procurement of recovered materials.

§200.322 Procurement of recovered materials. A non-Federal entity that is a state agency or agency of a political subdivision of a state and its contractors must comply with section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act. The requirements of Section 6002 include procuring only items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition, where the purchase price of the item exceeds \$10,000 or the value of the quantity acquired during the preceding fiscal year exceeded \$10,000; procuring solid waste management services in a manner that maximizes energy and resource recovery; and establishing an affirmative procurement program for procurement of recovered materials identified in the EPA guidelines.

[78 FR 78608, Dec. 26, 2013, as amended at 79 FR 75888, Dec. 19, 2014]



Memo

To: Garron Bradish & Jeanine Harris, Haywood County Health and Human Services Agency; Jeff Evans, Town of Waynesville Water and Sewer Maintenance

From: Aparna Keshaviah, Mathematica

cc: Cindy Hu, Marisa Henry, Ella Pestine

Date: 12/21/2020

Subject: Haywood County Wastewater Results from Week 1 (Dec 13-14, 2020)

Introduction

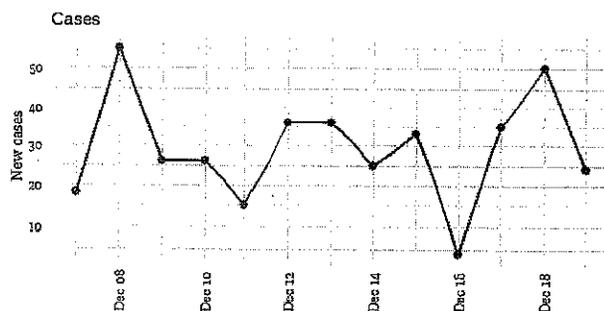
Wastewater surveillance can play a vital role in monitoring COVID-19 spread because of it overcomes some key gaps in clinical testing, including broad population coverage (the Waynesville wastewater treatment plant [WWTP] serves 27% of Haywood county residents), the ability to pick up asymptomatic infections, and the fact that wastewater is a leading indicator, showing changes in infection rates one to two weeks earlier than confirmed case data. The COVID-19 Wastewater Alert for Regional Risk in NC (COVID-WARRN) project will use weekly wastewater surveillance for the SARS-CoV-2 virus to provide public health officials with a more comprehensive measure of the magnitude of the COVID-19 pandemic locally and regionally. Below we describe the wastewater concentrations quantified in week 1 of the project and provide information on community risk and vulnerability. Dynamic data for all of the measures described below can be viewed on Mathematica's COVID-19 Wastewater Dashboard: <https://wastewater.covid19.mathematica.org/> (which should be updated by Tuesday, 12/22/2020).

Wastewater Lab Results

On 12/13/2020, the SARS-Cov-2 concentration in the Waynesville WWTP was $15,175 \pm 7,160$ gene copies per liter (GC/L). This measurement on its own is difficult to interpret, but it will provide a 'baseline' for trend analyses conducted over the course of the project.

Community Data

To date, Haywood county has confirmed 1,765 COVID-19 cases. Daily case counts have been rising over time, and the test positivity rate is 6.0% in the county (compared to a test positivity of 7.4% statewide). The number of new cases over the past two weeks has hovered around 35, as seen in the figure on the right. On 12/18/2020, the first doses of a COVID-19 vaccine were distributed to health care workers.

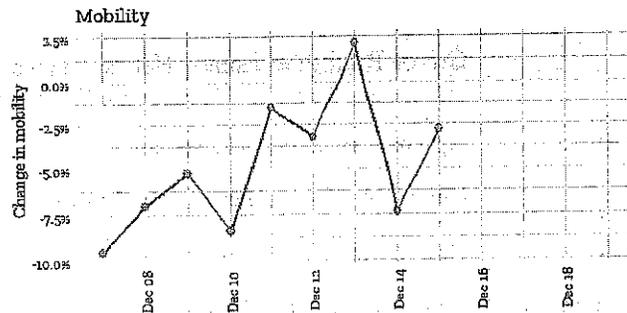


To: Haywood County
From: Mathematica
Date: 12/21/2020
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Mathematica

Despite high case counts and test positivity, population mobility (based on Google Mobility reports) is only 4.8% below pre-pandemic mobility levels recorded in January-February 2020, as seen in the figure on the right.

On 12/19, Haywood county had a moderate NIEHS pandemic vulnerability score of 48%.



Implications

- Haywood county has rising infection rates and residents who are still quite mobile.
- The wastewater data will provide a benchmark against future trends and may show the impact of increased vaccination in the county.