

APPROVED BY THE PUBLIC HEALTH ADVISORY BOARD JANUARY 13, 2025

MINUTES

SOUTHERN NEVADA DISTRICT BOARD OF HEALTH PUBLIC HEALTH ADVISORY BOARD MEETING

October 14, 2024 - 8:30 A.M.

Meeting was conducted In-person and via Microsoft Teams
Southern Nevada Health District, 280 S. Decatur Boulevard, Las Vegas, NV 89107
Red Rock Trail Conference Room

MEMBERS PRESENT: Kenneth Osgood, Chair – At-Large Member, Physician (*in-person*)

Susan VanBeuge, Vice-Chair – At-Large Member, Nurse (in-person)

Paul Klouse – Member, City of Boulder City (in-person)

Brian Labus – At-Large Member, Environmental Health (in-person)

Holly Lyman – Member, City of Henderson (via Teams) Jennifer Young – Member, City of Las Vegas (via Teams)

ABSENT: Ronald Kline – Member, City of North Las Vegas

ALSO PRESENT: Linda Anderson, Stacie Sasso

(In Audience)

LEGAL COUNSEL: Edward Wynder, Associate General Counsel

EXECUTIVE SECRETARY: Fermin Leguen, MD, MPH, District Health Officer

STAFF: Emily Anelli, Jacqueline Ayala, Tawana Bellamy, Alexis Brignola, Victoria

Burris, Andria Cordovez Mulet, Rebecca Cruz-Nañez, Christian De Haan, Jacques Graham, Jessica Johnson, Horng-Yuan Kan, Heidi Laird, Josie Llorico, Cassius Lockett, Anil Mangla, Kimberly Monahan, Brian Northam,

Vivek Raman, Kim Saner, Chris Saxton, Karla Shoup

I. CALL TO ORDER AND ROLL CALL

The Chair called the Public Health Advisory Board meeting to order at 8:32 a.m. Andria Cordovez Mulet, Executive Assistant, administered the roll call and confirmed a quorum was present. Ms. Cordovez Mulet provided clear and complete instructions for members of the general public to call in to the meeting to provide public comment, including a telephone number and access code.

II. PLEDGE OF ALLEGIANCE

III. OATH OF OFFICE

Ms. Cordovez Mulet administered the Oath of Office to Chair Osgood and Vice-Chair VanBeuge.

IV. FIRST PUBLIC COMMENT: A period devoted to comments by the general public about those items appearing on the agenda. Comments will be limited to five (5) minutes per speaker. Please clearly state your name and address and spell your last name for the record. If any member of the Board wishes to extend the length of a presentation, this may be done by the Chair or the Board by majority vote.

Seeing no one, the Chair closed this portion of the meeting.

V. ADOPTION OF THE OCTOBER 14, 2024 MEETING AGENDA (for possible action)

A motion was made by Member Klouse, seconded by Member Labus, and carried unanimously to approve the October 14, 2024 Agenda, as presented.

- VI. CONSENT AGENDA: Items for action to be considered by the Southern Nevada District Board of Health Public Health Advisory Board which may be enacted by one motion. Any item may be discussed separately per Board Member request before action. Any exceptions to the Consent Agenda must be stated prior to approval.
 - 1. APPROVE MINUTES/PUBLIC HEALTH ADVISORY BOARD MEETING: July 8, 2024 (for possible action)

The Chair said that he thought that, during the Tuberculosis and Syphilis presentation at the July meeting, there was a request from a member regarding a proposal that would be prepared and presented to the board, however specific details could not be recalled. Dr. Leguen advised that the recording from the July meeting will be reviewed and will advise if there was a mention of a proposal.

The Chair inquired whether the issue that was raised during the Second Public Comment at the July meeting had been resolved. Ms. Cordovez Mulet will inquire with staff and advise if the issue was resolved.

A motion was made by Member Labus, seconded by Member VanBeuge, and carried unanimously to approve the October 14, 2024 Consent Agenda, as presented.

VII. REPORT / DISCUSSION / ACTION

 Receive, Discuss and Approve the 2025 Meeting Schedule; direct staff accordingly or take other action as deemed necessary (for possible action)

The Advisory Board was informed that the proposed 2025 meeting schedule followed the timeline approved by the Advisory Board the previous year.

A motion was made by Member VanBeuge, seconded by Member Klouse, and carried unanimously to approve the 2025 Public Health Advisory Board Meeting Schedule, as presented.

2. Update on Mental Health, including substance use and suicide rates; direct staff accordingly or take other action as deemed necessary (for possible action)

Heidi Laird, Health Education and Suicide Awareness Coordinator, provided an update on mental health, including substance use and suicide rates. Specifically, Ms. Laird reviewed the current suicide statistics in Clark County, an update on suicide prevention efforts, the new CredibleMind mental health wellness platform, programs successes and challenges, and concluded with next steps.

Further to an inquiry from Member Labus regarding the reason that the suicide rate in Clark County is higher than the national rate, Rebecca Cruz-Nañez, Senior Health Educator, advised that it was difficult to pinpoint an exact reason. However, there are risk factors that contribute to the high rate, such as different funding, lack of mental health facilities and providers. Ms. Cruz-Nañez further advised that the Health District was making efforts to address the concerns.

Vice-Chair VanBeuge inquired as to the impact of the CredibleMind dashboard. Ms. Laird advised that the CredibleMind dashboard was a resource that could reach people where they are to have access to mental health resources. Credible Mind was to help with the gap between the shortage of providers and other reasons, such as the stigma around mental health. CredibleMind helped to start the process to identify issues and risks and connect individuals with available resources. Ms. Laird advised that since July 1, 2024 there have been 3,232 users, with 538 being 13-17 years old and 239 being 18-24 years old. Vice-Chair VanBeuge requested an update at a future meeting on the data. Dr. Leguen advised that CredibleMind was a resource that was recently introduced to the community with the intention to enhance access to initial appropriate behavioral health services, and not a complete solution to the problem in the community.

The Chair commended staff on the release of CredibleMind as it was the start of bringing awareness to behavioral health and helping people take control of their wellbeing. The Chair suggested that staff conduct a survey of CredibleMind users, similar to the Community Health Assessment survey, with the results to be presented at a future meeting.

2. Presentation on Mosquito Surveillance and Control; direct staff accordingly or take other action as deemed necessary (for possible action)

Vivek Raman, Environmental Health Supervisor, presented on mosquito surveillance and control. Specifically, Mr. Raman reviewed the program objectives, map surveillance, disease transmission, comparison of WNV activity from 2019 to 2024, nuisance biting, and concluded with the long-term next steps.

Further to an inquiry about a mosquito abatement district, Mr. Raman advised that the Health District has had conversation with local jurisdictions, the Southern Nevada District Board of Health and the Board of County Commissioners. Mr. Rama further advised that it would have to be discussed at the legislative level.

Mr. Raman advised that there had been discussions with the City of North Las Vegas regarding wide area larvicide spray, but the program never came to fruition. Mr. Raman advised that Clark County Vector Control sprayed at the Wetlands Park in the Spring and starting in April 2025, they will spray again, and the Health District will do surveillance. Mr. Raman advised that ultra-low volume fogging was ineffective due to the high temperatures in Las Vegas.

Brian Northam, Environmental Health Manager, advised that the Health District was working with Clark County on an MOU to be used in times of emergency to ease the ability for the other jurisdictions to seek assistance from vector control staff.

Dr. Leguen advised that the main issue was that there was not an integrated mosquito abatement district in our community, which has been discussed at previous Southern Nevada District Board of Health meetings. Dr. Leguen advised that there was a lot of work to be done by different entities to develop a plan to be brought to the next legislative session. However, the main issue was the lack of funding for a mosquito abatement district. Dr. Leguen advised that a mosquito abatement district was not typically a function of a health district. Dr. Leguen advised that, in Clark County, mosquito concerns were a new growing issue, not similar to the level of public concern observed in communities like Miami-Dade or Houston.

VIII. BOARD RECORDS: The Southern Nevada District Board of Health Public Health Advisory Board members may identify and comment on Health District related issues. Comments made by individual Board members during this portion of the agenda will not be acted upon by the Southern Nevada District Board of Health Public Health Advisory Board unless that subject is on the agenda and scheduled for action. (Information Only)

The Chair advised that an update on nutrition and food insecurity was scheduled for a meeting in 2025.

Member Labus requested an update on the Respiratory Syncytial Virus (RSV) at the January 2025 meeting.

There were no additional items raised.

IX. HEALTH OFFICER & STAFF REPORTS (Information Only)

DHO Comments

Dr. Leguen advised that the new Behavioral Health Clinic, which was part of the Southern Nevada Community Health Center, at the Decatur location was in the final stages of completion, with a grand opening scheduled for January 2025. The Behavioral Health Clinic would be part of the integrated health care delivery system being implemented by the Community Health Center, but still an additional resource for the community.

Dr. Leguen further advised that the expansion of the Southern Nevada Public Health Lab was proceeding to the procurement process, with construction scheduled to commence in early 2025.

Introduction to Wastewater Surveillance

Dr. Anil Mangla, Directors of Disease Surveillance and Control, provided an introduction to wastewater surveillance.

X. SECOND PUBLIC COMMENT: A period devoted to comments by the general public, if any, and discussion of those comments, about matters relevant to the Board's jurisdiction will be held. Comments will be limited to five (5) minutes per speaker. If any member of the Board wishes to extend the length of a presentation, this may be done by the Chair or the Board by majority vote.

Seeing no one, the Chair closed this portion of the meeting.

XI. ADJOURNMENT

The Chair adjourned the meeting at 10:01 a.m.

Fermin Leguen, MD, MPH
District Health Officer/Executive Secretary

/acm



AGENDA

SOUTHERN NEVADA DISTRICT BOARD OF HEALTH PUBLIC HEALTH ADVISORY BOARD MEETING

October 14, 2024 - 8:30 a.m.

Meeting will be conducted In-person and via Microsoft Teams
Southern Nevada Health District, 280 S. Decatur Boulevard, Las Vegas, NV 89107
Red Rock Trail Conference Room

NOTICE

Microsoft Teams:

https://events.teams.microsoft.com/event/43e1f4d5-21ba-4107-82ad-7f1f37c19fa1@1f318e99-9fb1-41b3-8c10-d0cab0e9f859

To call into the meeting, dial (702) 907-7151 and enter Phone Conference ID: 760 547 30#

NOTE:

- Agenda items may be taken out of order at the discretion of the Chair.
- > The Board may combine two or more agenda items for consideration.
- The Board may remove an item from the agenda or delay discussion relating to an item on the agenda at any time.
 - I. CALL TO ORDER AND ROLL CALL
 - II. PLEDGE OF ALLEGIANCE
- III. OATH OF OFFICE
- IV. FIRST PUBLIC COMMENT: A period devoted to comments by the general public about those items appearing on the agenda. Comments will be limited to five (5) minutes per speaker. Please clearly state your name and spell your last name for the record. If any member of the Board wishes to extend the length of a presentation, this may be done by the Chairman or the Board by majority vote. There will be two public comment periods. To submit public comment on either public comment period on individual agenda items or for general public comments:
 - By Teams: Use the Teams link above. You will be able to provide real-time chatroom
 messaging, which can be read into the record or by raising your hand. Unmute your
 microphone prior to speaking.
 - **By telephone:** Call 702-907-7151 and when prompted to provide the Meeting ID, enter 760 547 30#. To provide public comment over the telephone, please press *5 during the comment period and wait to be called on.
 - **By email:** public-comment@snhd.org. For comments submitted prior to and during the live meeting, include your name, zip code, the agenda item number on which you are commenting, and your comment. Please indicate whether you wish your email comment

to be read into the record during the meeting or added to the backup materials for the record. If not specified, comments will be added to the backup materials.

- V. ADOPTION OF THE OCTOBER 14, 2024 AGENDA (for possible action)
- VI. CONSENT AGENDA: Items for action to be considered by the Southern Nevada District Board of Health Public Health Advisory Board which may be enacted by one motion. Any item may be discussed separately per Board Member request before action. Any exceptions to the Consent Agenda must be stated prior to approval.
 - 1. APPROVE MINUTES/PUBLIC HEALTH ADVISORY BOARD MEETING: July 8, 2024 (for possible action)

VII. REPORT / DISCUSSION / ACTION

- 1. Receive, Discuss and Approve the 2025 Meeting Schedule; direct staff accordingly or take other action as deemed necessary (for possible action)
- 2. Update on Mental Health, including substance use and suicide rates; direct staff accordingly or take other action as deemed necessary (for possible action)
- **3. Presentation on Mosquito Surveillance and Control**; direct staff accordingly or take other action as deemed necessary *(for possible action)*
- VIII. BOARD REPORTS: The Southern Nevada District Board of Health Public Health Advisory Board members may identify and comment on Health District related issues. Comments made by individual Board members during this portion of the agenda will not be acted upon by the Southern Nevada District Board of Health Public Health Advisory Board unless that subject is on the agenda and scheduled for action. (Information Only)
 - IX. HEALTH OFFICER & STAFF REPORTS (Information Only)
 - DHO Comments
 - Introduction to Wastewater Surveillance
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XI. ADJOURNMENT

NOTE: Disabled members of the public who require special accommodations or assistance at the meeting are requested to notify the Administration Office at the Southern Nevada Health District by calling (702) 759-1201.

THIS AGENDA HAS BEEN PUBLICLY NOTICED on the Southern Nevada Health District's Website at https://snhd.info/meetings, the Nevada Public Notice website at https://notice.nv.gov, and a copy will be provided to any person who has requested one via U.S mail or electronic mail. All meeting notices include the time of the meeting, access instructions, and the meeting agenda. For copies of agenda backup material, please contact the Administration Office at 280 S. Decatur Blvd., Las Vegas, NV 89107 or (702) 759-1201.



MINUTES

SOUTHERN NEVADA DISTRICT BOARD OF HEALTH PUBLIC HEALTH ADVISORY BOARD MEETING

July 8, 2024 - 8:30 A.M.

Meeting was conducted via Webex Event

MEMBERS PRESENT: Kenneth Osgood – Vice-Chair, Physician (*via WebEx*)

Ronald Kline – Member, City of North Las Vegas (*via WebEx*)
Paul Klouse – Member, City of Boulder City (*via WebEx*)
Brian Labus – Member, Environmental Health (*via WebEx*)
Holly Lyman – Member, City of Henderson (*via WebEx*)
Jennifer Young – Member, City of Las Vegas (*via WebEx*)

ABSENT: Susan VanBeuge – Member, Nurse

ALSO PRESENT: Linda Anderson, Kanani Espinoza, Allison Genco, Olivia Graf-Mank, Jared

(In Audience) Hansen, Erin Midby, Sabrina Santiago

LEGAL COUNSEL: Edward Wynder, Associate General Counsel

EXECUTIVE SECRETARY: Fermin Leguen, MD, MPH, District Health Officer (absent)

STAFF: Heather Anderson-Fintak, Emily Anelli, Tawana Bellamy, Jacob Billings,

Daniel Burns, Nikki Burns-Savage, Victoria Burris, Andria Cordovez Mulet, Rebecca Cruz-Nañez, Carmen Hua, Josie Llorico, Cassius Lockett, Anil Mangla, Kyle Parkson, Kim Saner, Chris Saxton, Randy Smith, Rosanne

Sugay, Greg Tordjman, Tamera Travis, Donnie Whitaker

I. CALL TO ORDER AND ROLL CALL

Vice-Chair Osgood called the Public Health Advisory Board meeting to order at 8:31 a.m. Andria Cordovez Mulet, Executive Assistant, administered the roll call and confirmed a quorum was present. Ms. Cordovez Mulet provided clear and complete instructions for members of the general public to call in to the meeting to provide public comment, including a telephone number and access code.

II. PLEDGE OF ALLEGIANCE

III. OATH OF OFFICE

Ms. Cordovez Mulet administered the Oath of Office to Vice-Chair Osgood and Member Labus.

IV. FIRST PUBLIC COMMENT: A period devoted to comments by the general public about those items appearing on the agenda. Comments will be limited to five (5) minutes per speaker. Please clearly state your name and address and spell your last name for the record. If any member of the Board wishes to extend the length of a presentation, this may be done by the Chair or the Board by majority vote.

Seeing no one, the Vice-Chair closed this portion of the meeting.

V. ADOPTION OF THE JULY 8, 2024 MEETING AGENDA (for possible action)

A motion was made by Member Klouse, seconded by Member Young, and carried unanimously to approve the July 8, 2024 Agenda, as presented.

VI. CONSENT AGENDA: Items for action to be considered by the Southern Nevada District Board of Health Public Health Advisory Board which may be enacted by one motion. Any item may be discussed separately per Board Member request before action. Any exceptions to the Consent Agenda must be stated prior to approval.

Member Osgood requested a follow-up on nutrition and mental health, including substance abuse and suicide rates, at a subsequent meeting.

Member Klouse requested a presentation on mosquito surveillance and control, including coordinating efforts with the local jurisdictions.

1. APPROVE MINUTES/PUBLIC HEALTH ADVISORY BOARD MEETING: April 8, 2024 (for possible action)

A motion was made by Member Kline, seconded by Member Lyman, and carried unanimously to approve the July 8, 2024 Consent Agenda, as presented.

VII. REPORT / DISCUSSION / ACTION

1. Update on Unpermitted Food Vending; direct staff accordingly or take other action as deemed necessary *(for possible action)*

Nikki Burns-Savage, Environmental Heath Supervisor of the Specialized Food Office, provided an update on unpermitted food vending.

Further to an inquiry from Vice-Chair Osgood, Ms. Burns-Savage advised that staff continue to experience pushback and cultural challenges from vendors. Ms. Burns-Savage advised that, despite the pushback, staff continue to educate vendors on proper permitting and food borne illness, specifically on the source of the food, the preparation and storage, and how food borne illnesses pass from food to a person and from person to person. Ms. Burns-Savage further advised that staff further explain how the Health District's regulations were based on science. Ms. Burns-Savage confirmed that there were staff that spoke Spanish.

Dr. Lockett advised that Senator Doñate invited Health District staff to meetings with mobile truck and stationary food vendors. Ms. Burns-Savage further outlined that at any meetings with food vendors, administrative staff is present to generate invoices and assist with online payments. Further, Ms. Burns-Savage outlined available payment plans.

Vice-Chair Osgood requested that this item be brought back to the Public Health Advisory Board for a follow-up presentation in one year.

Further to inquiries from Member Kline and Member Klouse, Ms. Burns-Savage advised that permits may be location specific or roaming. Ms. Burns-Savage clarified that the large food vendor stands that were stationary were too large to be permitted as a sidewalk vendor.

3. Community Status Assessment Survey Launch; direct staff accordingly or take other action as deemed necessary (for possible action) (Heard out of Order)

Carmen Hua, Health Educator II, presented on the Community Status Assessment Survey Launch.

Members were encouraged to share the link to the survey with their networks to extend the reach to more participants.

2. Update on Surveillance for Tuberculosis and Congenital Syphilis; direct staff accordingly or take other action as deemed necessary (for possible action) (Heard out of Order)

Dr. Rosanne Sugay, Medical Epidemiologist, presented an update on surveillance for Tuberculosis and Congenital Syphilis.

Further to an inquiry from Member Labus on outreach for pregnant patients, Dr. Sugay advised that there has been a drive for STI screenings for all patients, along with an increase in educating providers to screen patients regardless of whether they were pregnant or not.

Vice-Chair Osgood reminded the members that the Public Health Advisory Board had the responsibility to make recommendations to the Board of Health. Dr. Lockett confirmed that any recommendations from the Public Health Advisory Board would need to be consistent with the foundational public health services.

VIII. BOARD RECORDS: The Southern Nevada District Board of Health Public Health Advisory Board members may identify and comment on Health District related issues. Comments made by individual Board members during this portion of the agenda will not be acted upon by the Southern Nevada District Board of Health Public Health Advisory Board unless that subject is on the agenda and scheduled for action. (Information Only)

There were no additional items raised.

IX. HEALTH OFFICER & STAFF REPORTS (Information Only)

DHO Comments

On behalf of Dr. Leguen, Dr. Cassius Lockett, Deputy District Health Officer-Operations, advised that the CDC Director, Dr. Mandy Cohen, was in Las Vegas in June and visited the Trac-B Impact Exchange, the Health District's Decatur location and UNLV School of Public Health. There were discussions on substance use, wastewater surveillance and family planning.

Dr. Lockett advised that the Vector Surveillance Team was busy trapping mosquitos. Dr. Lockett advised that, as of June 21st, there had been 230 West Nile Virus positive mosquito pools, across 30 zip codes. Dr. Lockett further advised that in addition to West Nile Virus, there was also detection of St. Louis encephalitis. Dr. Lockett advised that at the last Board of Health meeting there was discussion of a mosquito abatement district.

X. SECOND PUBLIC COMMENT: A period devoted to comments by the general public, if any, and discussion of those comments, about matters relevant to the Board's jurisdiction will be held. Comments will be limited to five (5) minutes per speaker. If any member of the Board wishes to extend the length of a presentation, this may be done by the Chair or the Board by majority vote.

Jared Hansen, Co-founder and CEO of Thrilling Foods, which is a manufacturer of a plant-based bacon. Mr. Hansen advised that he started the company in Oregon in 2021, serving tens of thousands of customers across the United States and Canada, which has since moved to Las Vegas employing approximately 17 individuals. Mr. Hansen advised that on June 26th the Health District closed his facility not because of any specific health or sanitation concern, but due to a misunderstanding on his part about the status of required permits. Mr. Hansen took fault for the misunderstanding and took immediate action to rectify the issue. Mr. Hansen advised that they were still waiting on special permits team to process their paperwork that would allow them to reopen. Mr. Hansen advised that the cost of the facility being closed had been over \$40,000 and continued to rise approximately \$3,000 per day. Mr. Hansen advised that as a small business, they were in danger of bankruptcy, in addition to risking the livelihoods of their employees with two employees at immediate risk of homelessness. Mr. Hansen stated that the facility had been FDA registered since 2022, which allowed them to qualify for certain waivers of the Health District's hazard preview rules. Mr. Hansen again stated that the documentation related to the waivers was submitted early last week. Mr. Hansen respectfully requested that anyone with any authority to direct staff in Environmental Health to take immediate action on the waiver request. Mr. Hansen stated that he and his company recognized and were deeply appreciative of the role that the Health District played in creating and maintaining a safe and reliable food system. Mr. Hansen clarified that he was not requesting an exemption from the rules. However, due to the slow process times, the Health District was putting his company in immediate and severe danger of destruction. Mr. Hansen concluded that he respectfully requested that the invoice for their expedited review request be processed immediately. Mr. Hansen's contact information was obtained and provided to staff.

Seeing no one further, the Vice-Chair closed this portion of the meeting.

XI. ADJOURNMENT

The Vice-Chair adjourned the meeting at 10:01 a.m.

Fermin Leguen, MD, MPH
District Health Officer/Executive Secretary

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APPROVED BY THE PUBLIC HEALTH ADVISORY BOARD OCTOBER 14, 2024

2025 PUBLIC HEALTH ADVISORY BOARD MEETING SCHEDULE

All Public Health Advisory Board meetings are proposed to occur on the second Monday of the designated month at 8:30 a.m.:

DATE	TIME
January 13, 2025	8:30 a.m.
April 14, 2025	8:30 a.m.
July 14, 2025	8:30 a.m.
October 13, 2025	8:30 a.m.

^{*}Special meetings, as required, shall be called by the Chair.



Suicide Prevention

Progress and Plans

Presented by
Heidi Laird, BSPH, CHES
Division of Disease Surveillance and Control
Office of Disease Surveillance

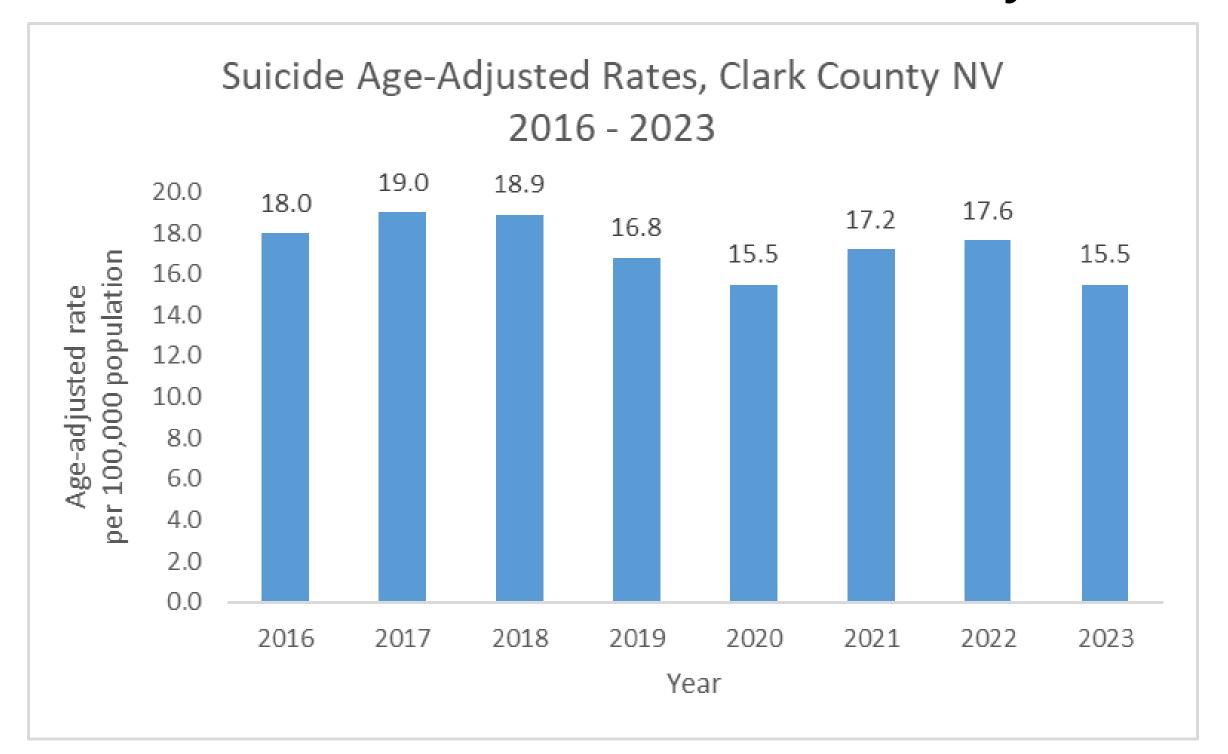
October 14, 2024

Overview

- 1 Current Data
- 2 Update on Suicide Prevention Efforts
- 3 Successes
- 4 Challenges
- Next Steps

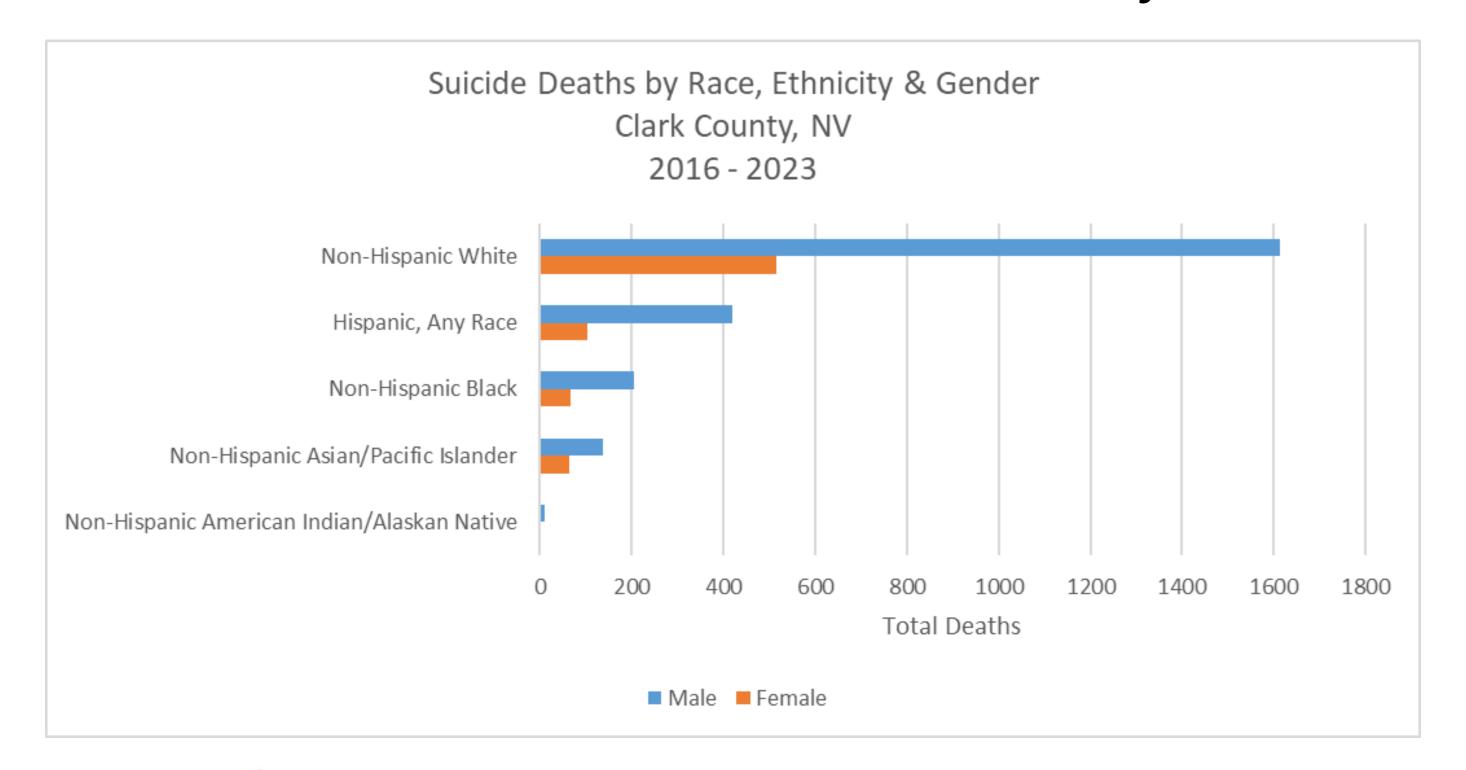


Suicide Statistics for Clark County



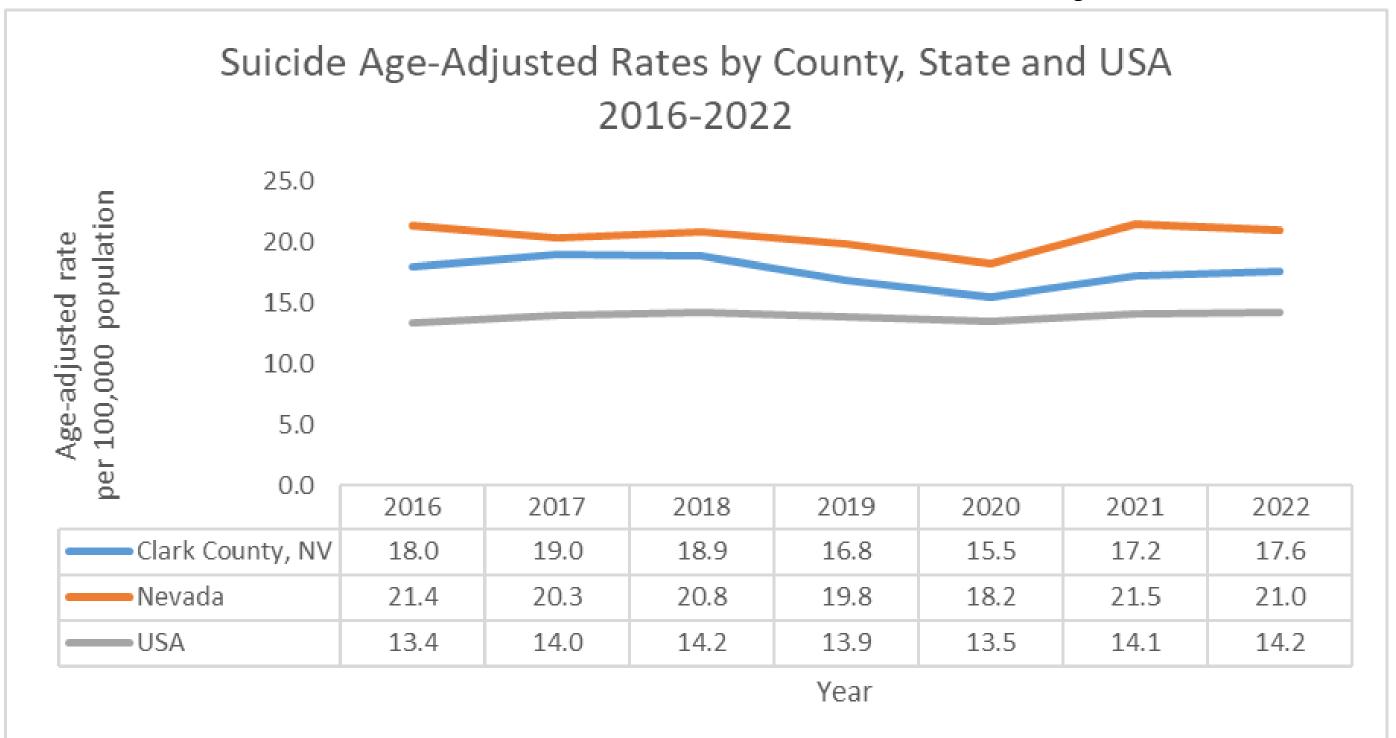


Suicide Statistics for Clark County



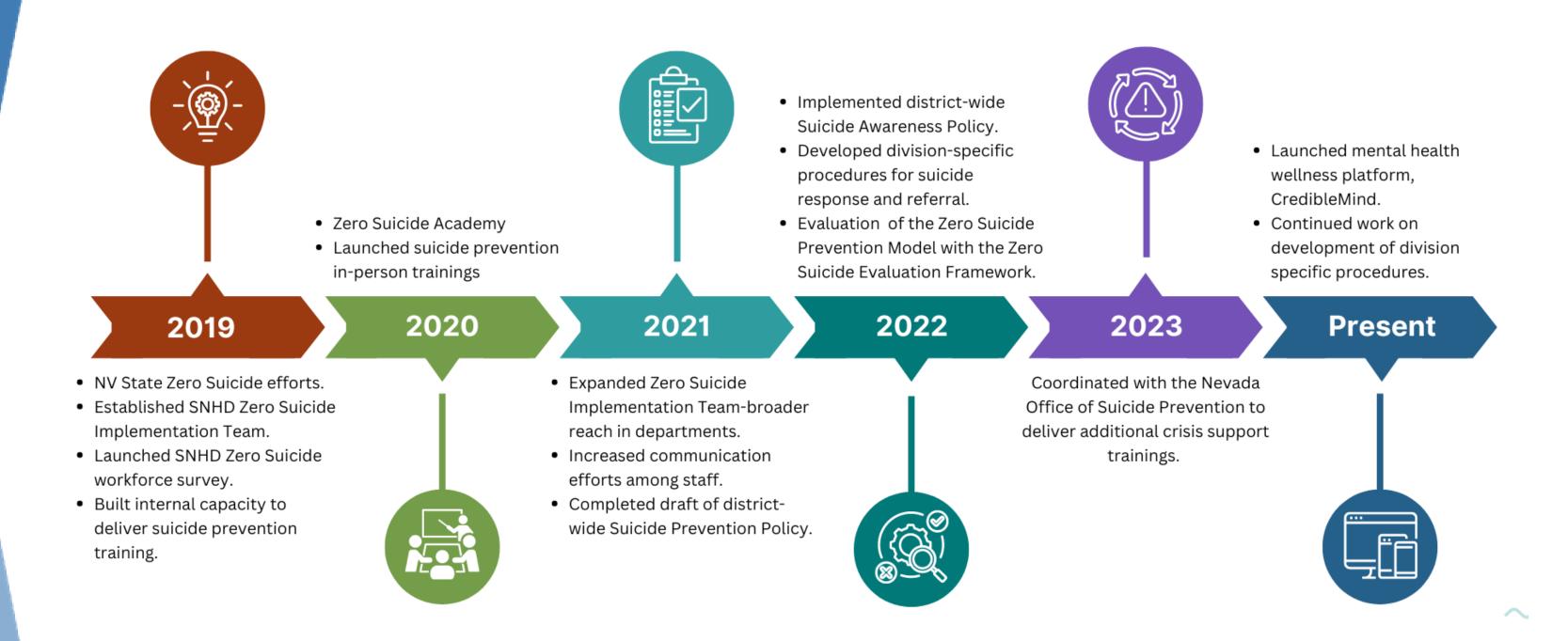


Suicide Statistics for Clark County





Suicide Prevention and Awareness Efforts





-CredibleMind-

A population-based approach for addressing provider shortages and increased community demand



Evidence-based



Prevention



Early Intervention



Broad Topics



Assessments



Self-Help/Self-Care Tools

Accessible

FREE

Confidential



<u>clarkcountythrive.crediblemind.com</u>

2024 Successes



Roll out of new mental health resource



Training of staff and community partners



Adoption and implementation of Suicide Awareness Procedures



Development of a workforce survey 2.0



Successful facilitation of Crisis Call Trainings



2024 Challenges



Identifying funding opportunities



Sustaining efforts



Competing timelines



Workforce growth



Next Steps



Administer surveys



Expand community efforts



Marketing and promotion of new mental health resource



Training and follow-up on Suicide Awareness Procedures



Collaborate with Behavioral Health Clinic



Southern Nevada Health District

280 S Decatur Blvd, Las Vegas, NV 89107



Facebook.com/SouthernNevadaHealthDistrict



@SNHDinfo



@southernnevadahealthdistrict



YouTube.com/SNHealthDistrict



Mosquito Disease Surveillance, Education & Prevention

ENVIRONMENTAL HEALTH



Environmental Health: Program Objectives



Routine surveillance to determine species, abundance, and disease status



Counterpart notification for breeding site interventions (Code Enforcement, Parks & Recreation, Public Works)



Community education on breeding, biting, and disease prevention



No coordinated mosquito abatement across Clark County

SURVEILLANCE

Routine Sentinel sites

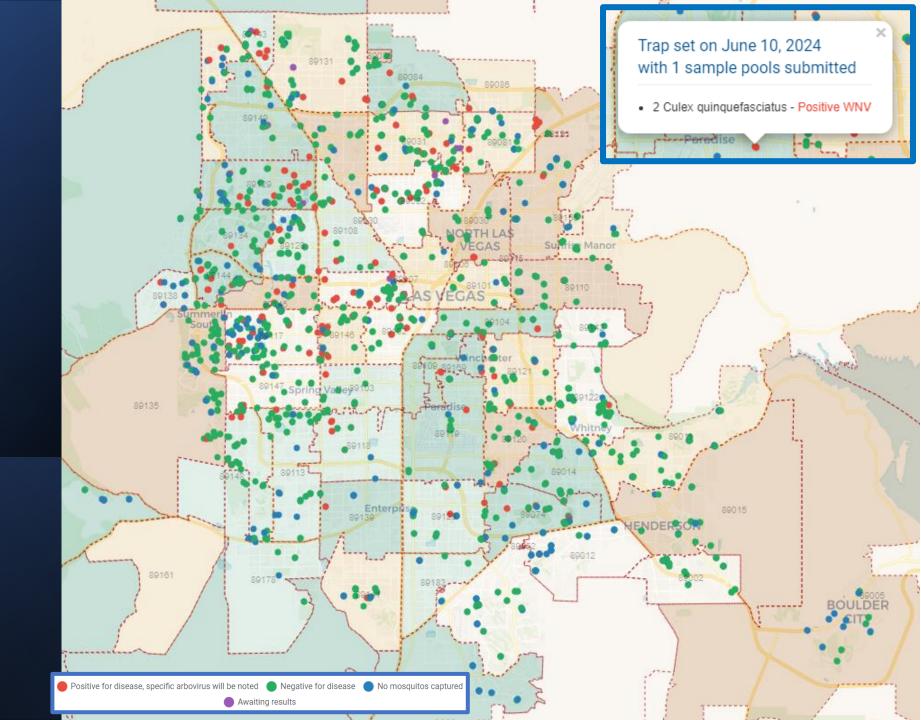
- Wetlands
- Washes
- Parks
- Bird Preserves

Unique Sites

Citizen Complaints

Web Site Information

Updated Mapping



DISEASE TRANSMISSION

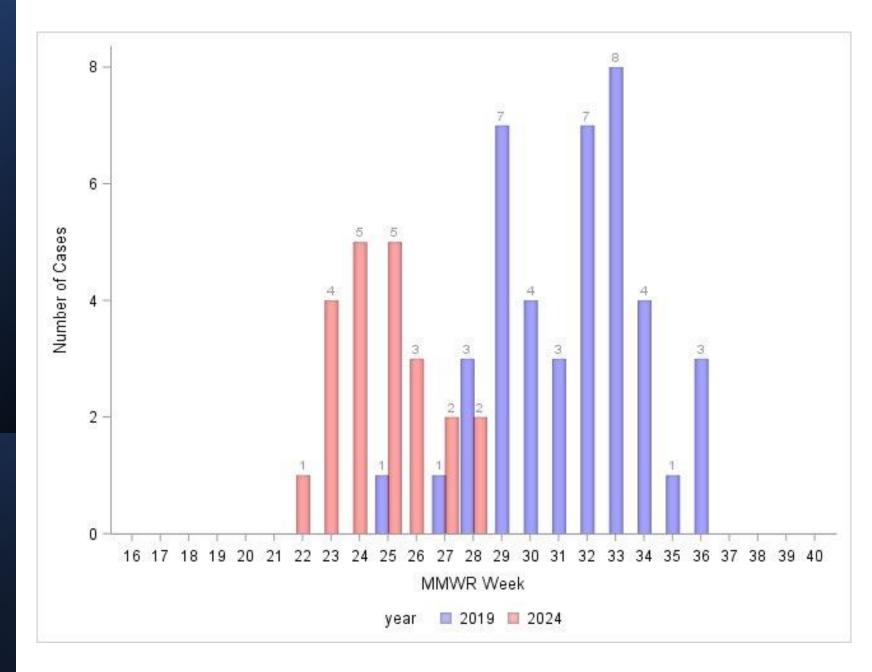


- Culex species Drivers of disease:
- West Nile Virus, St. Louis Encephalitis
- Most common and widespread mosquito
- Primarily feed on birds / Dusk and Dawn
- Breed in abandoned pools, wash channels, culverts
- Can fly up to a mile

	Traps Set	Mosquitoes Trapped	Submission Vials	WNV + Mosquito Vials	SLEV + Mosquito Vials	Zip codes with WNV	Reported Human WNV cases
2022	3,246	43,516	3,280	0	0	0	0
2023	3,701	68,634	3,149	27 (1%)	0	13	2
2024 *	2,188	39,070	2,476	<mark>384 (15%)</mark>	<mark>21 (1%)</mark>	<mark>46</mark>	<mark>26</mark>

COMPARISON OF WNV ACTIVITY: 2019 vs. 2024

- 2019: Most cases were identified later in the mosquito season
- 2024: Cases are being identified earlier in the season
- Trend: Shift in case distribution, with earlier detection of cases in 2024 compared to 2019



NUISANCE BITING



- Aedes aegypti Drivers of nuisance calls
- Aggressive, daytime and relentless biter (ankles)
- Primarily feed on people
- Breed in small water sources tires, planters, buckets
- Short flight range (50 100 meters)
- Spread Dengue and Yellow Fever

	Citizen complaints	Number of <i>Aedes aegypti</i> trapped*	Zip Codes with Aedes Identified
2021	34	138	6
2022	101	618	12
2023	<mark>739</mark>	7,409	<mark>43</mark>
2024*	440	1,807	47

LONG TERM: COMMUNITY IMPORTANCE

- No single coordinated mosquito abatement across Clark County
- Mosquito disease has proven unpredictable over 20 years of surveillance in Clark County
- Aedes aegypti will continue to expand and entrench itself – calls for service will increase
- The community needs a consistent and organized Integrated Mosquito Management Plan / Mosquito Abatement District
- Develop emergency abatement responses: WNV, Dengue, Zika



Introduction to Wastewater Monitoring for Public Health

Public Health Advisory Board Meeting

Anil T. Mangla, MS., PhD, MPH., FRIPH

Director of Disease Surveillance and Control

October 14th, 2024

What is Wastewater





Used water from chemical and manufacturing processes or from local businesses.





Domestic Sewage

Water from houses and apartments coming from toilets, showers, sinks, washing machines, etc.



Storm Water

Water runoff from streets, yards, fields, etc. after storm events (in combined sewer systems).

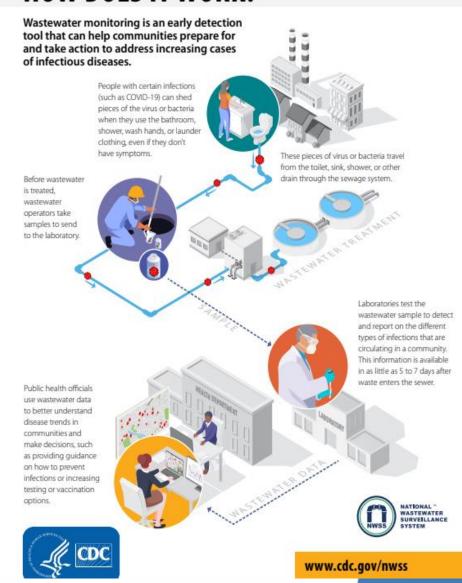


Going from Sewage to Data

- Individuals routinely shed pieces of virus and bacteria from their bodies
 - Shedding can occur in a variety of ways
 - Can occur without individual displaying symptoms
- ► Through collaborative efforts:
 - Samples are obtained before initial treatment
 - Samples are then sent to a lab to determine the presence or concentration of a pathogen
 - Information is then analyzed to determine the potential trend of a given disease
- Process can be as short as 5-7 days from shedding!



Wastewater Monitoring HOW DOES IT WORK?

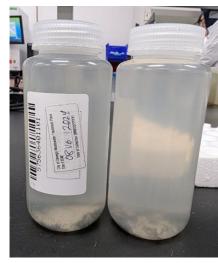


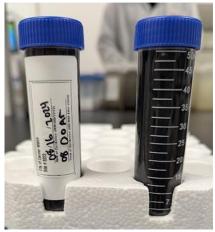
Types of Samples

Influent or Sludge

Influent is the liquid wastewater that flows into a treatment plant.

Sludge is wastewater in a treatment plant after going through a primary clarifier and natural concentration process.





Composite or Grab

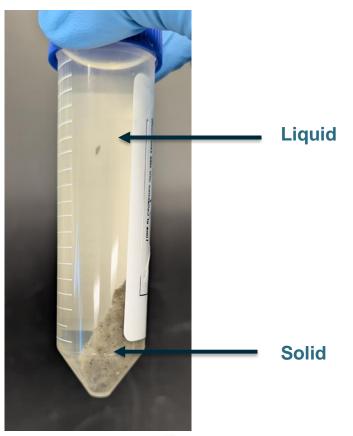
A **grab sample** is taken from a single location at a specific time. They are often collected manually.

A **composite sample** is created by combining multiple individual samples. Time-based composites include a subsample every n minutes. Flow-based composites include a sub-sample from every n gallons. They are collected using machines called *auto samplers*.



Sample preparation

There is a small volume of pathogens in each wastewater sample along with many other substances. In order to detect and quantify these pathogens, the sample must be prepared with three steps:



1. Concentration

Liquids are clarified by centrifugation and then pathogens are concentrated out of the clarified liquid using magnetic particles with high affinity for viruses and other pathogens.

2. Extraction

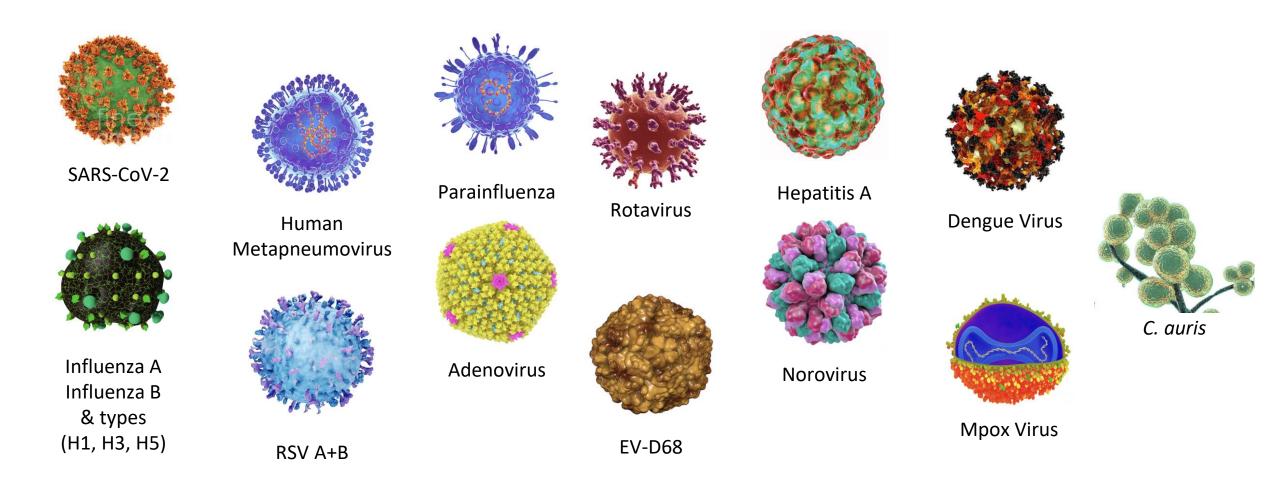
A reagent is added to the sample to release the nucleic acids that we will use to detect and quantify the pathogen.

3. Purification

A PCR clean-up process is used to remove the unwanted components from the sample.



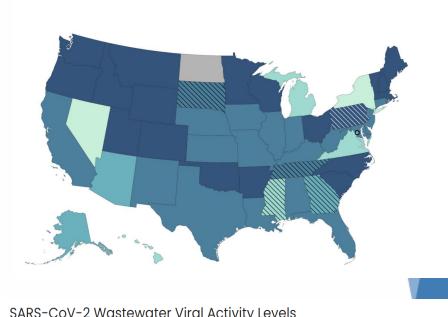
Many pathogens have been detected in wastewater

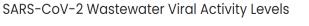


The Value of Wastewater Monitoring on the National Level

- The CDC oversees that National Wastewater Surveillance System (NWSS)
 - Over 1600 sites have reported to this site in the last two months
 - Estimated population covered by the surveillance system (146,000,000)
- Provides timely data on four diseases of importance along with variants of concern
- Provides information on historical trends in diseases that can help guide public health action







Select a level to add or remove from map.

Very High ● High ● Moderate ● Low ● Minimal ● No Data ※*Limited Coverage

Time Period: September 08 - September 14, 2024

How can wastewater monitoring be used towards Public Health

- To identify the presence of emerging pathogens or new strains of common pathogens
 - Essential when testing data is not regularly available
- To identify when community levels of certain pathogens are rising
 - Help combat future surges at local health care centers
- May help direct resources more efficiently to combat infectious diseases
 - (e.g, Vaccination Clinics and Educational Resources)



Moving forward with the science

- While the potential of wastewater monitoring is promising additional considerations should be considered
 - Wastewater monitoring only tells one part of a larger story
 - The sustainability and adaptability of wastewater monitoring programs moving forward
 - Ethical considerations when sampling for certain pathogens
 - Communication of results to the larger community



Further Questions and Thank You

- Thank You for your time and please let us know if you have any additional questions!

