Nevada

COVID-19

Disease Outbreak Management

Strategy and Concept of Operations

June 1, 2020

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I. Purpose

The purpose of the Nevada COVID-19 Outbreak Management Strategy and Concept of Operations (COP) is to develop an operations surge strategy and sustainment capability to prevent the spread of COVID-19 and mitigate any outbreak of COVID-19, and develop a strategy to transition state response to shared public and private partnership utilizing Nevada's public and private health care systems. This strategy will be a bridge from the current crisis response to an enhanced normal disease management process while being prepared for a significant outbreak.

Community-based testing, testing through the private sector, and disease outbreak management will be essential to reopening the Nevada economy. Transitioning to a more sustainable hospital-based supply, in particular for Personal Protective Equipment (PPE), while maintaining a surge capacity is key to ensuring the healthcare infrastructure is not overwhelmed in the case of future COVID-19 spikes or sustained future waves. As the state transitions from crisis management, Nevada has established five lines of effort as a bridge to a normal process:

- PPE Surge Capacity
- COVID-19 Specimen Collection
- Laboratory Testing PCR and Antibody
- Case Investigation and Contact Tracing
- Mass Vaccination Operations

II. Goal, Mission and Objectives

Goal:
Bridge to a normalized process. While the State is still firmly in the response phase of the COVID-19 crisis, the State's goal is to establish processes which may be easily transitioned from an emergency logistics and response mission to a normalized process which does not require the SEOC intervention.

Mission:
The Mission of the Nevada COVID-19 Outbreak Management Concept of Operations is to enhance Nevada's capacity to support community based test collection sites, streamline and increase the capacity to meet statewide COVID-19 virus detection through PCR and antibody testing needs, and increase the capacity of the state and local jurisdictions to epidemiologically manage the presence COVID-19 disease in the population.

Objectives:

1. Enhance and support the state and local capacity to manage COVID-19 outbreaks and to rapidly respond to spikes of disease through increasing the outbreak management capability.
2. Establish a Nevada PPE stockpile.
3. Synchronize supply operations for COVID-19 specimen collection to support community-based testing missions and surge sample collection supplies to meet current and anticipated needs.
4. Establish a statewide best practice model for community-based testing and establish a statewide testing support capability.
5. Enhance the statewide capacity to perform COVID-19 virus Polymerase Chain Reaction (PCR) testing and COVID-19 Immunoglobulin G (IgG) antibody testing.
6. Prepare the state for mass vaccination operations to be able to inoculate 80% of the state residents.
7. Establish performance measures for each line of effort in order to ensure system accountability and provide the Governor with decision-level information.

III. Concept of Operations

Concept of Operations

Build Capacity to Surge	Transition to a Sustained Normal Process	Aggressively Respond to Outbreaks
• Build Hospital and Community PPE Surge Capacity • 2 Months Peak PPE Stockpile • Cache 2 Weeks of PPE at Area Hospitals	**Personal Protection Equipment** • Hospitals Stabilize Supply Chain • 2 Weeks of Additional hospital PPE on Hand • Communities and Businesses Build PPE Cache	• Release State PPE Cache • Supplement PPE from State Stockpile • Maintain Stockpile Levels with Supplemental Ordering
• Surge purchase enough PCR specimen collection kits for 200,000 tests • Surge purchase specimen collection supplies for 680,000 antibody tests. • Support CBCS	**Community-Based Specimen Collection** • Transition to medical provider and hospital-based specimen collection	• Retain enough specimen collection supplies to be able to surge collect at facilities, businesses or communities that experiences outbreaks
• Surge purchase enough PCR testing kits for 200,000 tests • Surge purchase Testing kits for 680,000 antibody tests.	**Laboratory PCR and Antibody Testing** • Transition to medical provider point of care testing, commercial laboratory and hospital-based laboratory testing	• Retain enough testing supplies to test 120,000 per month for 2 months PCR tests and half the population for Antibody Tests.
• Surge 450 Contact Tracer through direct hire, volunteers and vendor-based staffing. • 100 paid contact tracers at state, county and tribal level	**Patient Contact Tracing** • Maintain 100 paid contact tracers	• Every positive test will be contacted by a contact tracer within 24- hours. • Within 24 hours of identifying a close contact of a case, those contacts will be contacted by a contact tracer.
• Prepare the state to vaccinate 80% of the population allocation. Surge Mass Vaccination capacity • Surge public messaging for seasonal flu vaccine	**Prepare for Mass Vaccinations** • Prepare traditional vaccination sites for mass vaccination surge for seasonal flu and COVID-19	• Mass inoculate 80%of the population with COVID-19 vaccine.

The Concept of Operations will be achieved based on the three overarching strategies listed below and executed with five main lines of efforts to achieve the execution of concept.

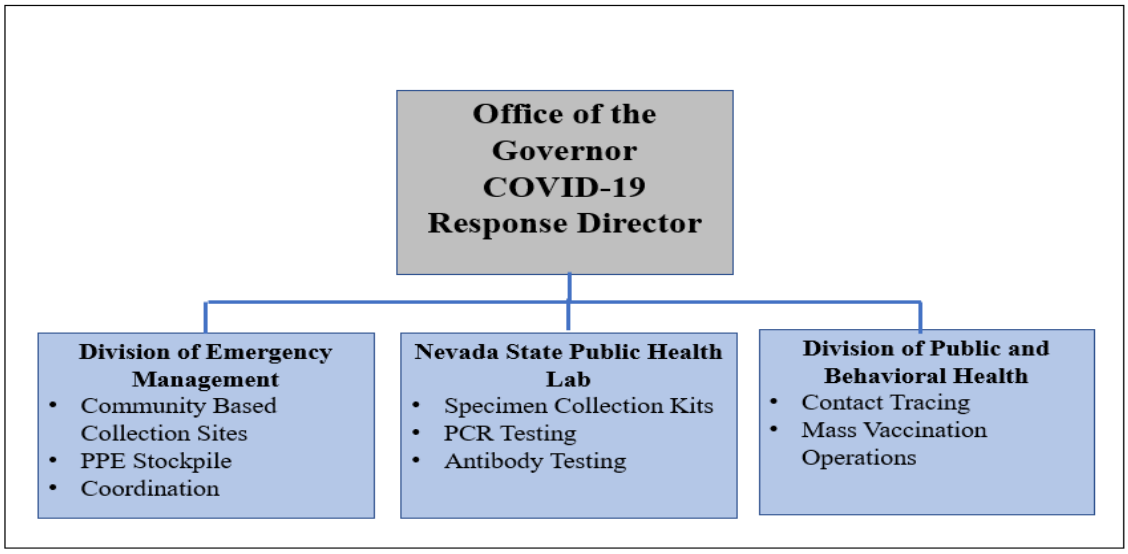
- Build Capacity to Surge
- Transition to a Sustained Normal Process
- Aggressively respond to Outbreaks

Build Capacity to Surge
This strategy develops a Strategic Nevada Stockpile which includes hospital PPE, specimen collection supplies, PCR and antibody laboratory testing supplies, and vaccination capability, along with surge patient contact tracing capacity to prepare the state to immediately meet any outbreak of COVID-19 infection.

Transition to a Sustained Normal Process
This strategy develops an orderly transition from state supported COVID-19 response, as supply chains normalize, to a public health and health care industry-based response through primary care and acute care providers.

Aggressively Respond to Outbreaks
The key to maintaining an open economy will be the capability of the State to effectively respond to spikes or outbreaks of COVID-19 transmission. If a statewide outbreak occurs, Nevada will have the capacity to manage the outbreak without a significant impact on the health care system necessitating crisis standards of care.

Statewide Unified Effort Organization



Nevada COVID-19 Response Director
The Nevada COVID-19 Response Director will coordinate resources and the work across multiple state, local and federal entities to respond to COVID-19, including the following:

- Federal agencies, including the Federal Emergency Management Agency (FEMA) and the U.S. Department of Health and Human Services (HHS);
- State agencies, including the Division of Public and Behavioral Health (DPBH) within the Nevada Department of Health and Human Services (DHHS), the Division of Emergency Management (DEM), and the Nevada State Public Health Lab (NSPHL); and
- Local agencies, including local emergency management, public health authorities, and city and county officials.

Nevada Division of Emergency Management
The Nevada Division of Emergency Management supports the local Community Based Specimen Collection Sites (CBSCS) and mass vaccination operations including the following:

- Coordinates with the Nevada State Public Health Laboratory for specimen collection kits.
- Coordinates with the Division of Public and Behavioral Health (DPBH) to provide Battle Born Medical Corps volunteers for specimen collection.
- Coordinates with the Nevada National Guard (NVNG) for collection support personnel.
- Coordinates with the local jurisdiction and DPBH for mass vaccination operations support.
- Coordinates the purchase of surge PPE stockpile.

Nevada State Public Health Laboratory
The Nevada State Public Health Laboratory will coordinate all specimen collection supplies and manages all statewide testing.

Nevada Division of Public and Behavioral Health
The DPBH will coordinate and manage all patient case investigation and contact tracing operations and support local health authority efforts. The DPBH also leads the statewide mass vaccination operations.

IV. Course of Action: PPE Stockpile

Goal
While maintaining adequate PPE levels at hospitals, nursing care facilities, community first responders and essential government services, establish a two-month stockpile of PPE at peak COVID-19 usage for future outbreaks or waves of COVID-19 or other novel diseases.

Strategy

- Resupply the pre-COVID-19 state stockpile.
- Surge purchase 60 days of average peak PPE daily rates for hospitals and communities as a strategic stockpile.

PPE Planning Criteria

1. Resources required for state stockpile

GLOVES	N95 MASKS	COVERALLS	FACE SHIELDS	GOWNS	PAPRs

2. Establish Strategic Nevada Stockpile based on Strategic National Stockpile PPE quantities received and Pre-COVID 19 Nevada PPE cache.

PRE-COVID STOCK & SNS PPE RECIEVED	QUANTITY	PRICE/ITEM	COST
N95 MASKS	672,600	$5	3,363,000
GOWNS	47,550	$2.15	102,233
GLOVES	253,640	$0.18	45,655
COVERALLS	240	$15	3,600
FACESHIELDS	54,624	$10	546,240
			$4,060,728

3. Surge stockage level = 60 days @ peak consumption levels from original response.
4. Peak usage levels *per day* (as reported by Nevada Hospital Association). *Additional 20% for "all other" care providers*
   a. Gloves – 625,000 + 20% = **750,000/day**
   b. Disposable face shields – 4,613 + 20% = **5535/day**
   c. N95 masks - 7,100 + 20% = **8,520/day**
   d. Gowns – 7,500 + 20% = **9,000/day**
   e. Coveralls – 106 + 20% = **127/day**
   f. PAPRs – 8 + 20% = **10/day**

NVDEM SURGE STOCK	PRICE/ITEM	ITEMS/DAY	ITEMS FOR 60 DAYS	COST FOR 60 DAY SUPPLY
GLOVES	$0.18	750,000	45,000,000	$8,100,000.00
DISPOSABLE FACE SHIELDS	$10.00	5,535	332,100	$3,321,000.00
N95 MASKS	$5.00	8,520	511,200	$2,556,000.00
GOWNS	$2.15	9,000	540,000	$1,161,000.00
COVERALLS	$15	127	7,620	$114,300.00
PAPRs	$800.00	10	600	$480,000.00
TOTAL				**$15,732,300.00**

5. Establish Nevada Public Health System PPE surge stockpile = 60 days of consumption.

PUBLIC HEALTH SYSTEM SURGE STOCK	PRICE/ITEM	ITEMS/DAY	ITEMS FOR 60 DAYS	COST FOR 60 DAY SUPPLY
GLOVES	$0.18	772,999	46,379,940	$8,348,389
DISPOSABLE FACE SHIELDS	$10.00	10,811	648,660	$6,486,600
N95 MASKS	$5.00	15,774	946,440	$4,732,200
GOWNS	$2.15	22,537	1,352,220	$2,907,273
COVERALLS	$15.00	354	21,240	$318,600
PAPRs	$800.00	43	2,580	$2,064,000
TOTAL				**$24,857,062**

6. State of Nevada public in person service / customer service state employees will require masks during the phased re-opening of government offices. The State has approximately 18,000 employees. We estimate half will require masks to resume operations before immunity is achieved. An initial one month's supply will facilitate re-opening. Re-supply of masks should be accomplished through normal departmental ordering processes using the good of the state contracts.

STATE CUSTOMER SERVICE INITIAL STOCK	PRICE/ITEM	ITEMS/DAY	ITEMS FOR 30 DAYS	COST FOR 30 DAY SUPPLY
MASKS	$5.00	1 per shift	180,000	$900,000
TOTAL				**$900,000**

7. Total PPE Cost is **$45,550,090.00** + 10% shipping and handling ($4,555,009) = **$50,105,099**

Transition to a Normal Process

As the supply chain normalizes and the hospitals are able to resupply via their usual supply chain, hospitals will be expected to maintain a two-week cache of PPE which does not include the state cache.

A Purchasing Desk at the SEOC was established to enable the transition from State supported response to local jurisdiction. The State will engage with traditional and nontraditional vendors to meet immediate needs while establishing long term contracts

leveraging the States buying power. State Purchasing will serve as the resource by which contracts intended for statewide use are executed for PPE, collection materials, and testing materials and services.

Aggressively Respond to Outbreaks

If a significant outbreak occurs which threatens to limit PPE usage to crisis standards of care levels, the Governor may release the PPE caches and release PPE from the stockpile.

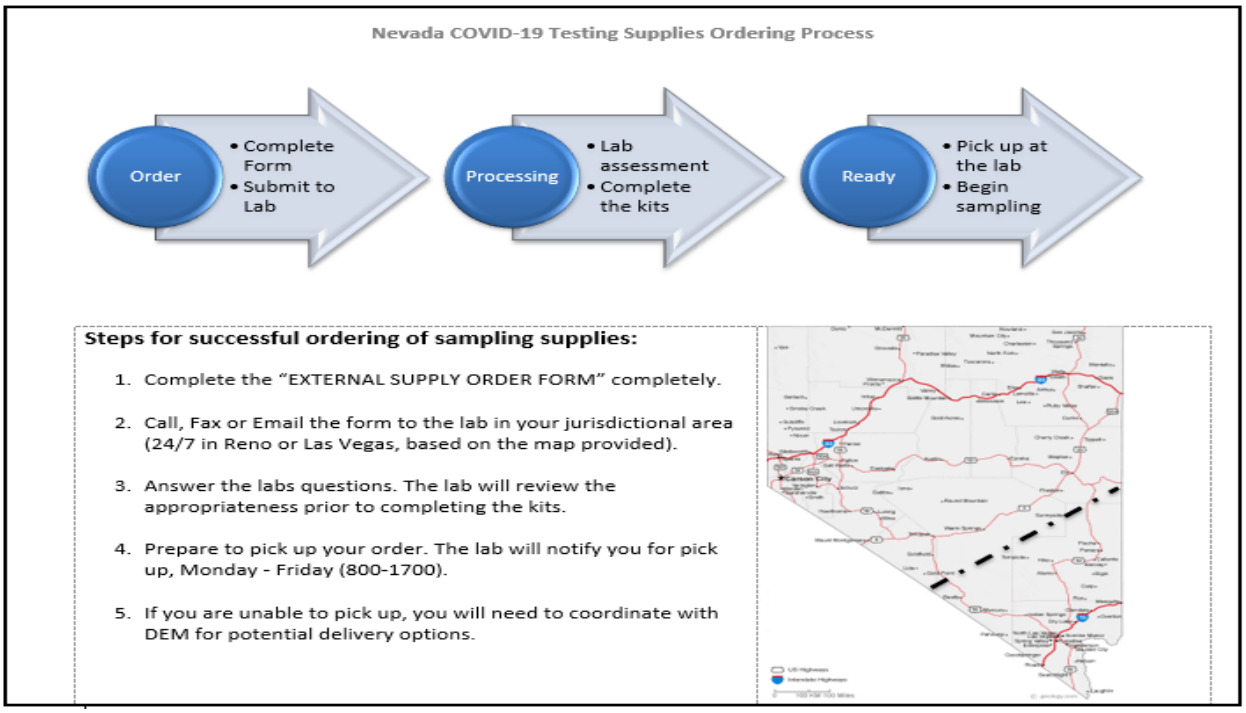
V. Course of Action: COVID-19 Sample Collection Supply Chain

Goal

Establish a supply chain using the Nevada Public Health Laboratories as a conduit for sample collection kits. Surge purchase sample collection supplies enough to test 200,000 samples at any point of the crisis.

- 150,000 sample collection kits or components purchased within 1 month and 10,000 kits or components will be purchased every month for the following 5 months.

Strategy



Supply Chain Process

- The Nevada State Public Health Laboratories (NSPHL) in Reno and Southern Nevada Public Health Laboratory (SNPHL) in Las Vegas will be the lead in all COVID-19 collection sampling supplies.

- Jurisdictions will order all collection sampling supplies from the public health laboratories using the External Supply Order Forms provided in Annex A.
- Normal ordering for routine collection sampling supplies for routine testing must be faxed to the NPHL every first, third and fifth Mondays of the month. For Northern NSPHL the fax number is (775) 688-1460. For SNPHL the Number is 702-759-1444. The forms also must be either sent to the SEOC or placed into WEBEOC with the comment, "Faxed to State Health Lab of this date."
- Emergency Managers, County Health Officers, or Hospitals from Clark County, Lincoln County and Pahrump in Nye County may order their collection sample supplies from SNPHL in Las Vegas.
- Emergency Managers, County Health Officers, or Hospitals from all the rest of the Northern Counties may order their collection sample supplies from NSPHL.
- Jurisdictions desiring supplies for mass community-based collection must submit their request to the NPHL at least 2 weeks prior to the collection date so the Labs can ensure enough supplies are on hand and available to meet the request for supplies and ensure timely turnaround of results.
- The State Emergency Operations Center (SEOC) will provide a Liaison to the public health labs to assist with the completion of supply orders and to facilitate delivery transportation.
- The laboratories will supply DEM with a daily report on testing supplies ordered and supplies distributed by facility. The reports will be used to facilitate statewide procurement, management, and sustainment of COVID-19 testing in Nevada.

Test Collection Supply Surge

The surge collection and testing goal is to perform up to 4,000 diagnostic laboratory tests per day and have the capability to test 2% of population each month. To achieve this goal, the state will need 200,000 swabs and viral testing media (VTM) kits available for distribution.

The strategy for the state will involve a surge purchase of six-month supply by procurement through purchase and donation to meet the needs of the State's the Recovery Plan. The strategy for the end user of this program will be to order your supplies for a two-week period or for establishment of a Community Based Testing/Collection process. The sustained supply chain will allow Nevada to continue and expand its testing capabilities, for both symptomatic and asymptomatic testing.

The projected costs for supplying the public health labs with supplies to create collection kits until December 31, 2020 are: **$8,646,597,** this includes: swabs, viral medium, and tubes. These projections were derived through the costs per a unit sent to us by the NSPHL. With input from The Director of NSPHL, the same amounts were projected for the SNPHL.

Monthly Collection Kit Construction (200,000 Kits)			
	Unit Costs	**Quantity**	**Monthly Costs**
Nasopharyngeal swab	$2.14	200,000 swabs	$428,000.00
Fetal Bovine Serum	$432.50	20 bottles	$8,650.00
Hank's Balanced Salt Solution	$36.99	1,200 bottles	$44,388.00
Gentamicin Sulfate (50mg/ml)	$60.34	40 bottles	$2,413.60
Amphotericin B (250 ug/ml)	$87.93	40 bottles	$3,517.20
Sheep's Blood Agar	$25.45	1000 plates (45 packs of 10)	$25,450.00
Ethanol (70%) (gallon)	$28.50	4.44 gallons	$126.67
15 ml conical, polypropylene (rack of 500)	$118.00	400 racks of 500	$47,200.00
Biohazard transport bags (pack of 1000)	$22.00	200 packs of 1000	$4,400.00
		Total Monthly Costs:	**$564,145.47**
		Months Until End of CY	**7**
		End of CY 20 Projection Northern Lab:	**$3,949,018.27**
		w/Southern NV Health District	**$7,898,036.53**
		w/Hologic Panther Units and Kits	**$8,346,596.53**
		w/Refrigeration Units North and South Labs (One-time Costs)	**$8,646,596.53**

Transition to a Normal Process

As the technology advances to point of routine testing in primary care offices, hospital labs and commercial diagnostic laboratories will take over the majority of the testing and the supplies needed for the testing will transition to point of care purchase. We fully anticipate that after 2021 the majority of the COVID-19 testing will be performed by commercial laboratories.

Aggressively Respond to Outbreaks

The public health laboratories in Nevada will maintain a stockpile of 200,000 specimen collection kits or combination of components to make the collection kits as a reserve to maintain a 30-day supply on hand in order to respond to an outbreak or wave of COVID-19

VI. Course of Action: Community-Based COVID-19 Sample Collection

Currently there are three systems for the collection COVID-19 specimens:

- Hospital testing of symptomatic patients,
- Private laboratory testing, and

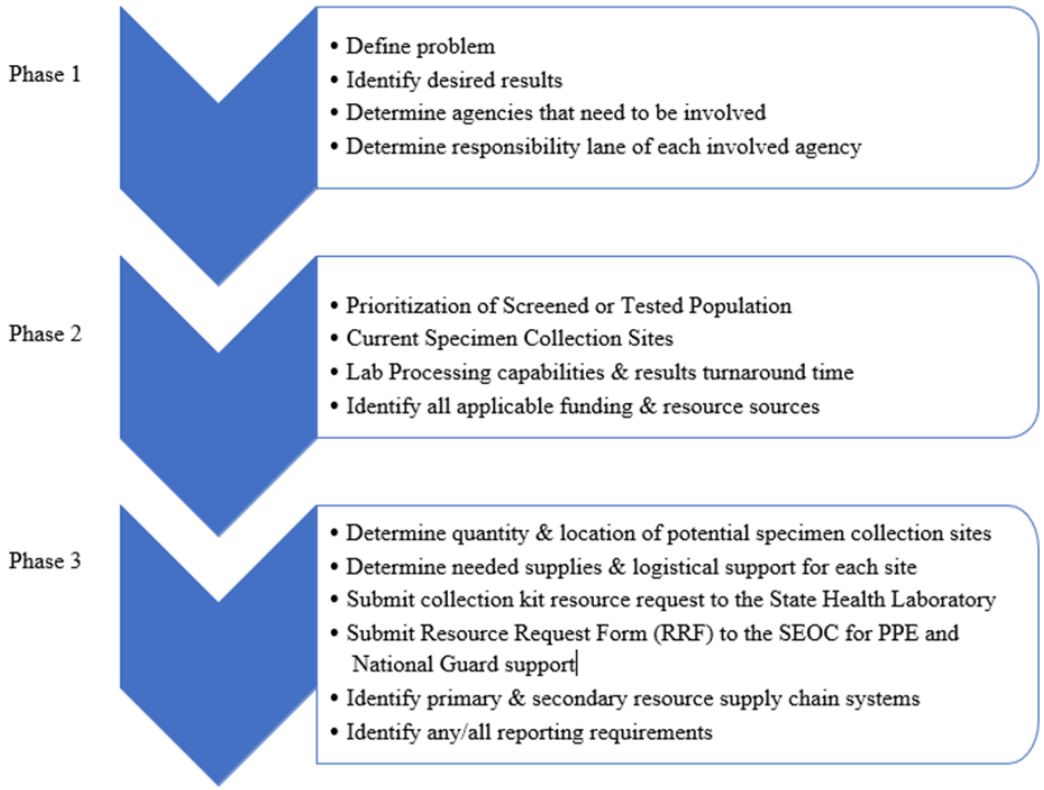
- Community-based mass testing or targeted testing among high risk groups.

Goal

The goal for community-based testing is to build the capacity to obtain viral sampling materials to collect up to 200,000 specimens at any time. Community-based testing should be coordinated by the local or tribal health authority, local or tribal emergency management and the leadership of the local government or tribe.

The Nevada Division of Emergency Management utilized its expertise to develop a "Best Practice" COVID-19 Community Based Collection Site (CBCS) Development Handbook which is Annex C of this Document. The State recommends each jurisdiction develop a similar CBCS planning document which meets that jurisdiction's needs.

CBCS Process



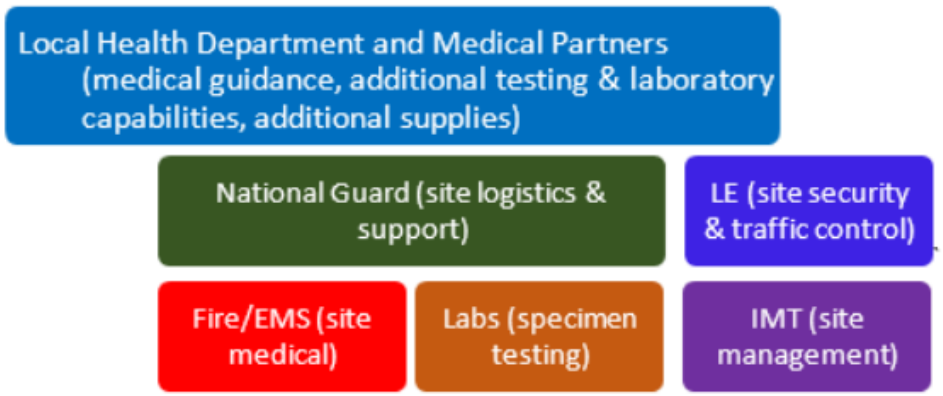
There are three (3) phases to developing a Community Based Collection Site Process.

Phase 1 consists of defining the problem, identifying the desired results, and then determining those agencies that need to be involved as well as identifying what their specific responsibilities will be.

- Problem definition: an inadequate number of community specimen collection and testing sites are currently located throughout the state.
- Desired results: coordinate and/or develop an increased capacity to perform wide scale testing throughout the state. This result, which is normally measured in terms of percentage/quantity of population tested, is dependent upon: (1) properly identifying populations being tested; (2) the presence of a definitive collection and testing process; and (3) the establishment and continued maintenance of a proper supply chain network.
- Agency involvement: the following agencies are typically needed to develop and manage a community-based specimen collection and testing site process:

    - Medical partners (Department of Health, local/regional hospitals, medical clinics and physician offices)
    - Nevada National Guard or trained volunteers
    - Local/regional/state law enforcement
    - Local fire/EMS
    - Public and/or private testing laboratories
    - Incident Management Team (IMT) personnel (Local Emergency Management)

Specific agency responsibilities:



Phase 2 consists of developing a prioritization process for determining which segments of the population need to be tested, the type of testing, identifying current specimen collection sites, determining the capabilities and results turn-around time for the testing laboratories, and identifying all applicable funding and resource supply chain sources.

Testing of Symptomatic Patients

- Current Community Based Collection Site (CBCS) locations: helps determine whether or not maximum community access is being accomplished (NOTE: certain populations are unable to drive to CBCS so arrangements should be considered to reach these target populations with static walk-up testing sites and mobile field Strike Teams/Task Forces).
- Lab Processing capabilities and results turn-around time: helps determine maximum CBCS throughput.
- Identify all applicable funding and resource sources: helps determine payment for CBCS personnel, supplies and laboratory fees.

Testing of Asymptomatic Patients

If your jurisdiction decides to test asymptomatic patients, you must decide the method by which you will test and who do you want to test:

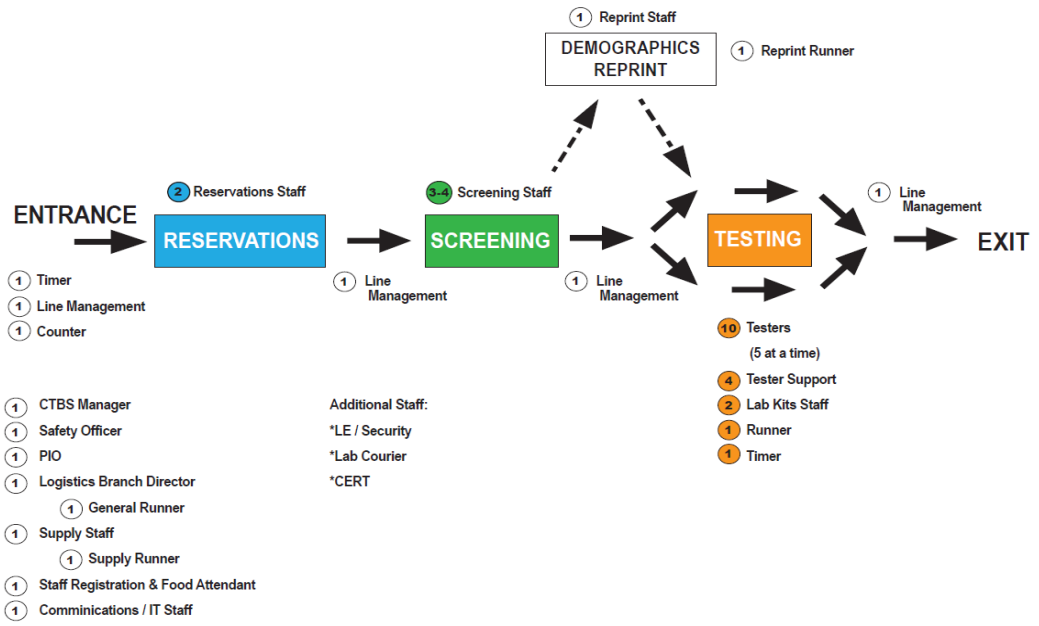
- Community members/residents to include vulnerable populations
- Healthcare workers
- Residents of Long-Term Care or Skilled Nursing Facilities
- First Responders
- Prison Populations
- Others

All the same steps are required when testing asymptomatic people.

Phase 3 consists of determining the quantity and location of all potential CBCS as well as the logistical resources that will be needed (in both personnel and supplies) to support them. Also involves identifying the testing laboratory partners that will be associated with each site. In addition, a primary and secondary resource supply chain systems must be identified along with any/all reporting requirements.

- Potential CBCS quantity and locations: helps determine population access capabilities and needed partner agency involvement.
- Site logistical support: helps determine supply chain management needs, burn rates and reordering schedule, and number of needed CBCS personnel.
- Primary and secondary resource supply chain systems: helps determine supply vendors, CBTS support vendors (i.e., porta- johns, tents, security, etc.) and administrative needs.
- Reporting requirements: helps maintain proper resource tracking for reimbursement and public information. This typically includes completion of CBCS Incident Action Plans (IAPs), CBTS ICS 214 Unit Logs and CBCS Force Account and Equipment Summary Accounts (FEMA recognized documents that assist with reimbursement claims).

Example of a Testing Location Design



Coordinating with the State Emergency Operations Center (SEOC) for CBTS support

If a jurisdiction requires additional support and supplies from the SEOC to support a CBTS operations, the SEOC will need the jurisdiction to fill out a testing request form as part of its resource request 2 weeks prior to the actual testing event so that the state has enough time to put together the resource package. All information on the form will need to be filled out. The form can be found in Annex B.

Nevada Department of Public Safety Emergency Management

TESTING REQUEST FORM

Jurisdiction / Entity Name:			
Dates & Times of Requested Testing Event:			
Location of Testing Site:			
Testing Site Layout (e.g. 2 lanes at a time):			
Number of Expected Tests Performed Per Day:			
Will you need testing kits provided?	Yes	No	
Do you require PPE?	Yes	No	Amount Requested:
Will you require NV National Guard Assistance?	Yes	No	
Number of Requested NV National Guardsmen:			
Scope of Work for NV National Guardsmen:			

Please Send Completed Form to logisticsNDEM@gmail.com

Aggressively Respond to Outbreaks

If a jurisdiction or tribe has an outbreak which is beyond its immediate capability to perform viral specimen collection in a facility or community, the jurisdiction may request a public health Taskforce to help with the management of the outbreak. The Taskforce will consist of public health personnel, volunteers and enough collection kits, PPE and cold storage equipment to collect 200 samples.

VII. Course of Action: Enhance Laboratory Testing Capacity

COVID-19 testing is performed and coordinated at the direction of the Nevada State Public Health Laboratory (NSPHL). Polymerase Chain Reaction (PCR) testing COVID-19 are also performed in the laboratories at the University Medical Center (UMC) and at two commercial medical laboratories – Quest Diagnostics and LabCorps.

Goals

- Surge purchase enough Lab PCR test kits or test components for 200,000 tests

- Surge purchase enough SAR-CoV-2 serologic antibody test kits to test 20% of the population.
- Establish or expand capacity to test all symptomatic individuals, and secondarily expand capacity to achieve community-based surveillance.
- Screen for past infection (e.g., serology) for health care workers, employees of high-risk facilities, critical infrastructure workforce, and childcare providers.
- Report all COVID-19 – related line level testing data (negatives, positives, indeterminants, serology) daily to CDC.

Over the past two months Nevada has increased its laboratory PCR testing capacity to meet and exceed the Governor's goal of 4,000 tests per day or 28,000 per week. Within four weeks the NSPHL has plans to continue to expand testing capacity to 7,000 per day or 45,000 tests per week.

PCR Target Goal	Cost per Test	Estimated Costs
200,000	**$40**	**$8,000,000**

COVID-19 Immunoglobulin G (IgG) Sero-testing

While IgG sero-testing for COVID-19 antibodies has been limited, The NSPHLs have plans to increase capacity through additional Abbott analyzer investments and point of care testing kits.

Antibody Test Target Goal	Cost per Test	Estimated Costs
680,000	**$7**	**$4,760,000**

Commercial Diagnostic Laboratory Leveraging

In Nevada, two main diagnostic laboratories, Quest Diagnostics and LabCorps, provide most of the provider referred laboratory testing. The NSPHL is having conversations with those laboratory providers to:

- The first goal is short term: to build an immediate capacity in the state for testing (kits and lab space).
- The second goal is longer term: to have a good-of-the-state contract that entities throughout the state could partner with to assist them in their testing needs.

VIII. Course of Action: Outbreak Management (Contact Tracing)

Case investigations, contact tracing and monitoring are tools public health professionals use to contain the spread of infectious diseases.

A robust public health surveillance system is the key to identifying disease trends, symptomology and risk factors. For any infectious disease, including COVID-19, test results are required to be reported by health care providers and laboratories to the local health authority. For all counties outside of Clark the Nevada's National Electronic Disease Surveillance System (NEDSS) is utilized. When the department is notified of a positive test result in NEDSS or TriSano (Clark County), disease investigation staff contact the person and perform a full investigation, which includes contact tracing.

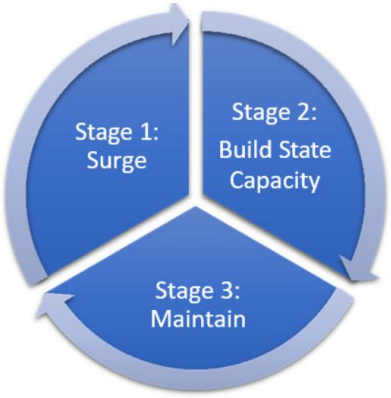
Contact Tracing

Contact tracing, a core disease control measure employed by public health personnel for decades, is a key strategy for preventing the further spread of infectious diseases like COVID-19.

Contact tracers adhere to the Centers for Disease Control and Prevention's (CDC) core principles of contact tracing:

- Contact tracing is part of the process of supporting patients with suspected or confirmed infection.
- In contact tracing, public health staff work with a patient to help them recall everyone with whom they have had close contact during the timeframe while they may have been infectious. (For Covid-19, this infectious period is 48 hours prior to symptom onset until the case meets isolation discontinuation criteria).
- Public health staff then notify these exposed individuals (close contacts) of their potential exposure as rapidly and sensitively as possible.
- To protect patient privacy, close contacts are only informed that they may have been exposed to a patient with the infection. They are not told the identity of the patient who may have exposed them.
- Close contacts are provided with education, information and support to understand their risk.
- Close contacts are encouraged to stay home and maintain social distance from others (at least 6 feet) until 14 days after their last exposure, in case they also become ill.

Nevada Contact Tracing Implementation Plan



Goals:

- Every Nevadan that tests positive for COVID-19 will be contacted by a contact tracer within 24- hours of that confirmatory lab report being received by the health authority.
- Within 24 hours of identifying a close contact of a case, those contacts will be contacted by a contact tracer.

As Nevada moves to loosen social distancing restrictions, the department plans to bolster these efforts using additional personnel, technology and improved workflows. In order to accomplish this, the public health authorities in the state have developed this four-part strategy outlined below for case investigation, contact tracing and monitoring to identify and contain localized outbreaks of disease. This will allow Nevadans to carefully move into normal routines while ensuring that the public health system does not become overwhelmed with people suffering from COVID-19.

The resources to assist in contact tracing and case investigation must be fluid to increase as needed to address a growth in COVID cases, but to also decrease to ensure resources are not wasted and can be extended if needed. Nevada currently has approximately 100 paid and volunteer staff dedicated statewide to provide case investigation and contact tracing for the almost 6,000 cases to date. Understanding that the number of cases may increase almost 5-fold in the next several months, Nevada's public health system is also prepared to grow accordingly. The goal for staffing ranges from 400 to 700 staff and volunteers to support these case investigation and contact tracing efforts.

Nevada will ensure that through public and private partnership the following benchmarks are maintained related to case investigation and contact tracing:

- Every Nevadan that tests positive for COVID-19 will be contacted by a contact tracer within 24-hours of that confirmatory lab report being received by the health authority.
- Within 24 hours of identifying a close contact of a case, those contacts will be contacted by a contact tracer.

There will likely be an immediate surge in new cases with large community testing events and the increased daily count of tests for the next two to three months. As such, case investigation and contact tracing will surge accordingly during this period for as many as 600 staff. Public health leadership will reassess each month to see what ideal staffing may be needed in the upcoming months and reduce or grow as indicated. As well, the contact tracing resources will be able to support other counties as cases surge in some and reduce in another.

Nevada will also utilize immediate and short-term resources, such as the Nevada National Guard to support community testing and contact tracing/COVID mapping efforts. When this mission concludes, Nevada will focus efforts on the Nevada System of Higher Education (NSHE) Schools of Community Health Sciences/Public Health to provide the needed workforce. Through

the partnership to be developed by establishing Academic Public Health Departments between NSHE and the state and local health departments, this will allow the public health community to have the staffing needed and allow Nevada's students to get real-life experience in the field. The University of Nevada, Las Vegas will develop a Contact Tracing Team (CTT) that will be a Nevada resource in perpetuity, but also be a strike team that can deploy to other states as needed. The University of Nevada, Reno will imbed disease investigation into both their undergraduate and graduate curriculum so there is a steady workforce stationed at health districts and the DPBH each semester. As well, the Nevada Public Health Training Center will have regular trainings for volunteers that will be a "crash course" in case investigation and contact tracing to provide a pool of trained volunteers should Nevada need it.

The following reflects the goal staffing by type of staff over the next year. This table will be able to grow or lessen as the case investigation and contact tracing needs are realized.

Staffing Source	*May*	*June*	*July*	*August*	*September*	*October*	*November*	*December*	*January*	*February*	*March*	*April*	*May*
Paid Staffing (DPBH, SNHD, WCHD, CCHHS)	100	100	100	150	150	150	150	150	150	150	150	150	150
University of Nevada, Las Vegas, Contact Tracing Team (CTT)	100	100	100	100	100	100	25	25	25	25	25	25	25
University of Nevada, Reno, School of CHS	0	0	0	25	25	25	25	25	25	25	25	25	25
Battle Born Medical Corps/Local Volunteers	100	100	100	100	100	100	100	100	100	100	100	100	100
Nevada National Guard	200	200	200	0	0	0	0	0	0	0	0	0	0
Vendor-Based Contact Tracers (Inductive Health)*	100	100	100	100	100	100	100	100	100	100	100	100	100
Total Available Staffing	**600**	**600**	**600**	**475**	**475**	**475**	**400**	**400**	**400**	**400**	**400**	**400**	**400**

Staffing is maximized initially to ensure coverage during testing surge.

**vendor-based surge staffing can increase or decrease as needed.*

Cost Estimate for Contact Tracing Vendor and staffing: **$55,993,575 for 2020**
$70,801,196 for 2021

Cost Estimate for the Salesforce Contract : **$986,338 for 2020**
$1,015,928 for 2021

IX. Course of Action: Mass Vaccination Operations

Like many infectious diseases, including influenza, vaccination will be the intervention that changes the trajectory of COVID-19. Though scientists around the world are working at a record-breaking pace to develop safe and effective COVID-19 vaccines, the exact timeline for delivery of the vaccination to a large population in Nevada is unknown. CDC is communicating with Immunization Programs nationwide regarding current expectations and plans, which are fluid. The current expectation, as of May 2020, is that vaccine distribution to the general U.S. population will occur in early 2021. Earlier phases, which will only include distribution to high-risk occupation groups followed by those suffering high-risk comorbidities, are expected to begin as early as October 2020.

Goal

Establish a mass vaccination infrastructure to manage an 80% vaccination rate once COVID-19 vaccinations are available.

Objectives

- Enhance WebIZ, the immunization tracking platform which the state uses.
- Increase immunization management personnel at the state and local level to facilitate mass immunization operations.
- Double the immunization Points of Dispensing (POD) capability
- Maximize fall influenza inoculations

WebIZ Enhancement

All CDC immunization program awardees are expected to take steps necessary to ensure their statewide immunization information system (IIS) is prepared to support the distribution and accountability of COVID-19 vaccine, and to facilitate the capture of all pertinent associated data. **In support of these anticipated but currently undefined needs, Nevada requests $205,000 to fund anticipated developments and implementation of enhancements to the NV WebIZ.**

	Mobile WebIZ Module
Description	• Closed application available only on provided hardware • Supports the provision of offsite clinics where internet connection is not possible/secure/efficient • No internet needed at clinic site • Must use preset iPads and would need portable printers/scanners • Can be used for check-in, screening, record lookup & vaccine administration documentation
Requirements	• iPads • Scanners • Printers • Printer labels

	• Batteries • WebIZ
Cost	• Onetime WebIZ Setup/System Configuration: $80,000 • Hardware (Unit = iPad, Scanner, Printer, Labels, Batteries): $2500/unit • Onetime Hardware Setup: $2500/unit (if shipped to Envision); $1000/unit (if Envision can walk us through setup) • Annual WebIZ support: $16,000 • Annual Hardware support: $750/unit • Estimating based on purchase of 25 units (5 for NSIP; 5 to WCHD; 10 to SNHD; 5 to CCHHS) • Other: Expanded data collection (fields TBD): $6000/data element
Total Cost	• Onetime costs: $207,000 + any data elements • Annual Cost: $34,750 (could be lower if LHDs can absorb own hardware support costs longer-term)

Immunization Personnel Enhancements

Personnel Enhancements		
Position	Function	Costs includes Salary, Fringe and operating costs
DPBH CDC Foundation COVID-19 Position	• Coordinate COVID-19 response activities among programs and assist in developing continuity of operations plans for all CFCW programs and their internal units as necessary: Immunizations, Chronic Disease Prevention and Health Promotion, Women, Infants and Children (WIC), and Maternal, Child and Adolescent Health • Liaise between CFCW Bureau leadership, CFCW managers, Public Health Preparedness, Division of Emergency Management, DBPH leadership, and any other stakeholders identified; maintain open and regularly scheduled communications regarding new information/progress	$77,000
DPBH POD Coordinator (Health Program Specialist 1)	• Coordinate all rural COVID-19 mass vaccination events • Liaise between Public Health Preparedness and the Nevada State Immunization Program and the rural communities	77,000
DPBH Three Pandemic Provider Enrollment Specialist (Program Officer 1) 2 in Las Vegas 1 in Carson City	• Recruit and enroll non-traditional providers into the Nevada State Immunization Program for the duration of the COVID-19 pandemic response • Educate providers and their staff and work with NV WebIZ staff to coordinate all appropriate trainings necessary to accept, store, administer and document COVID-19 vaccines physically and using the inventory management functions of NV WebIZ • Manage provider orders and provide all technical assistance necessary to ensure a smooth workflow for immunizing providers	$217,663

DPBH Two (2) NV WebIZ staff: One (1) NV WebIZ HL7 Technician (Program Officer 2, contractor) One (1) NV WebIZ Data Quality Specialist (Administrative Assistant 2, contractor)	• Assist the HL7 Interface Manager (HPS I) with enrolling and managing HL7 interfaces between provider sites and NV WebIZ • Help increase the number of providers able to submit data to NV WebIZ via an HL7 interface • Troubleshoot issues and provide technical assistance as necessary • Assist NV WebIZ users during the COVID-19 vaccine response, throughout ramp-up and high-volume use, and to maintain data quality primarily by monitoring duplicate records and manually "de-duplicating" records when the system deems human review necessary to protect data quality.	$132,400
Four (4) POD Coordinators at the Local Health Departments • Two (2) in Clark County • One (1) in Carson City • One (1) in Washoe County	• Estimated based on a community health nursing position plus associated operating and travel costs • Coordinate COVID-19 mass vaccination events for each jurisdiction • Liaise between the LHD and State immunization programs and public health preparedness programs	$365,000
	Total Costs Personnel	$869,063

Media Campaign

Nevada State Immunization Program statewide media campaign	• Recruit partners, stakeholders and community orgs; convene key stakeholders to discuss project goals and key activities. • Develop public relations and marketing plan including traditional media, social media and campaign messages; create Nevada campaign materials as well as use CDC-designed materials; recruit campaign ambassadors and compile personal stories; recruit healthcare professionals, community members, etc. • Execute plan and modify as needed, based on campaign metrics and statewide needs • Media contacts include but not limited to – Nevada Broadcasters Association for Radio/TV; Outdoor and Digital Media; Streaming services; Transit companies; social media channels. • Media will be targeted to demographics consistent with vaccine recommendations and	Personnel – COVID Communications Manager - $71,400 (annual + fringe) Operating/Printing/Postage - $200,000 Media campaign - $890,000

	will be designed to be adaptable to new information **Reminder postcard to target demographics for vaccine uptake** • Gather data from various mailing lists • Design a reminder card to be consistent with campaign and HIPAA compliant • Work with print/mail house vendor to mail	
	Total Media Campaign	1,277,540

POD Trailer Enhancement

The DPBH has 7 POD trailers to help support Urban and Rural immunization points of dispensing. Each trailer contains enough equipment to manage a 10-lane vaccination POD operation. Each POD trailer with equipment costs $10,000. The State would like to double this capability to meet the COVID-19 vaccination goal.

Item	Unit Cost	Total Cost
7 POD Trailers with equipment	$10,000	$70,000

Total Cost for Immunization Enhancement: $2,458,353

X. Nevada National Guard Support

Critical National Guard support to the state, and counties persists after the 502(f) federal activation expires.

Mission	# of Personnel	Type	Daily Cost	30-day Cost to Support
UMC Data Entry Support	6	Lab / Admin support	$2,100	$63,000
UNR Data Entry	6	Lab / Admin support	$2,100	$63,000
SEOC Support	8	SEOC / Admin support	$2,800	$84,000
LVCC Warehouse	6	Warehouse / Logistics	$2,100	$63,000
550 Logistics Warehouse	8	Warehouse / Logistics	$2,800	$84,000
CBC Support	12	Collection Site Support	$4,200	$126,000

SNHD Lab	2	Lab / Admin support	$700	$21,000

$504,000 per month
$6,048,000 for 12 months

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Annex A: External Supply Order Form

NEVADA STATE HEALTH LABORATORY
1660 NORTH VIRGINIA STREET
RENO, NV 89503
Phone: (775) 688-1335 Fax: (775) 688-1460
DIRECTOR: Mark Pandori PhD HCLD(ABB)

EXTERNAL SUPPLY ORDER FORM

For Pick Up/Date: _____ **Date Ordered:** _____

Ordered By: _____ **Order Taken By:** _____

SHIP TO ADDRESS: _____

_____

Phone: _____

Supplies Requested

QUANTITY	***Type of Test/Supply***
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Note: Supplies provided have not exceeded their expiration date.

Special Instructions: _____

Order Filled By: _____ **Date:** _____
Order Sent By: _____ **Date:** _____

SOUTHERN NEVADA PUBLIC HEALTH LABORATORY

Las Vegas, NV 89106
Phone: (702) 759-1020 Fax: (702) 759-1444
DIRECTOR: Ronald Knoblock, M.D.

EXTERNAL SUPPLY ORDER FORM

For Pick Up/Date: _____ **Date Ordered:** _____

Ordered By: _____ **Order Taken By:** _____

SHIP TO ADDRESS: _____

_____

_____

_____

_____

Phone: _____

Supplies Requested

QUANTITY	***Type of Test/Supply***
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Note: Supplies provided have not exceeded their expiration date.

Special Instructions: _____

Order Filled By: __ **Date:** __
Order Sent By: __ **Date:** __

Annex B; Community Based Testing Resource Request Form

Nevada Department of Public Safety Emergency Management

TESTING REQUEST FORM

Jurisdiction / Entity Name:
Dates & Times of Requested Testing Event:
Location of Testing Site:
Testing Site Layout (e.g. 2 lanes at a time):
Number of Expected Tests Performed Per Day:

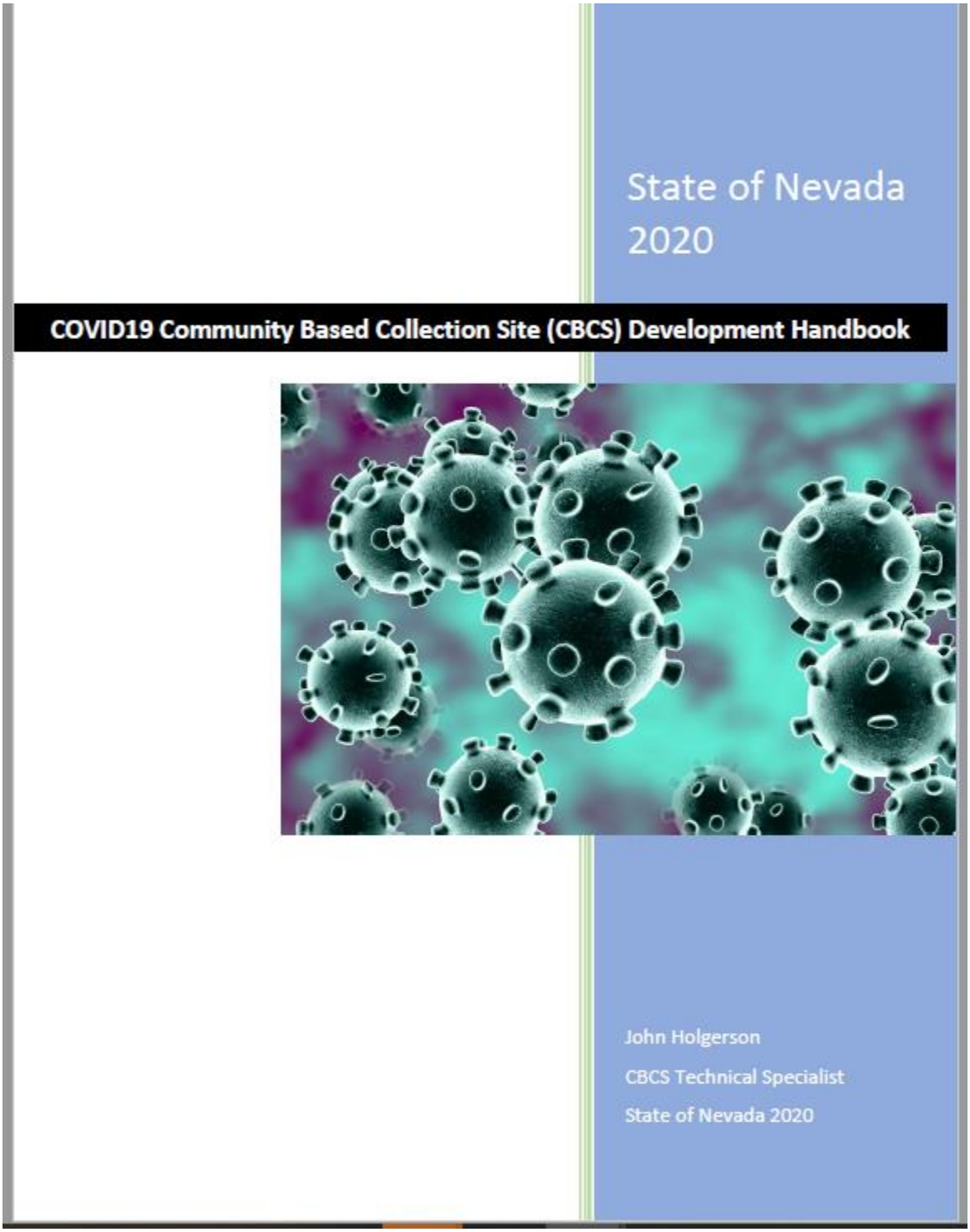
Will you need testing kits provided?	Yes	No

Do you require PPE?	Yes	No	Amount Requested:

Will you require NV National Guard Assistance?	Yes	No

Number of Requested NV National Guardsmen:
Scope of Work for NV National Guardsmen:

Please Send Completed Form to logisticsNDEM@gmail.com

Annex C: Community Based Collection Site Development Handbook

(To access full handbook, visit https://dem.nv.gov/COVID-19/home/)