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BEST PRACTICE

Strategic National Stockpile Distribution Planning: Selecting and Operating Receipt, Store, and Stage Sites

PURPOSE

Provides state Strategic National Stockpile (SNS) planners with information on selecting and operating receipt, store, and stage (RSS) sites.

SUMMARY

States are responsible for planning and operating RSS sites as part of their Strategic National Stockpile (SNS) responsibilities. RSS sites are facilities that receive SNS push packages and/or the Managed Inventory (MI) from the federal government, stage materials for shipment to dispensing sites, and store materials. State SNS planners need to consider a range of issues regarding RSS sites and plans, including transportation, physical facility characteristics and location, site security, and staffing.

DESCRIPTION

This Best Practice provides state SNS planners with information and resources to aid them in selecting RSS sites and developing plans for their operation.

Selecting RSS Sites

State SNS planners will need to consider a range of factors when identifying and selecting RSS sites, including the Centers for Disease Control and Prevention (CDC) selection criteria, facility features, transportation, loading, and Technical Advisory Response Unit (TARU) requirements.

CDC RSS Selection Criteria

The CDC's [Receiving, Distributing, and Dispensing Strategic National Stockpile Assets - Version 10](#) provides state planners with critical selection criteria for RSS locations. This CDC guidance focuses on the physical and spatial facility requirements for receiving SNS push packages: adequate floor space, temperature/humidity control, sufficient and emergency electrical power, location out of a floodplain, and perimeter fences. However, the CDC guidance does not currently offer detailed information on topics such as transportation considerations for RSS facilities, staging requirements, templates for RSS layout, or RSS specific staffing requirements.

Identifying RSS Locations

State SNS planners can locate an RSS at a range of facilities, including airport warehouses, large gymnasiums or sports arenas, buildings on college campuses, workforce training sites, large meeting or convention centers, and large private

Several state health departments, including those of Washington, Minnesota, and Missouri, use their RSS site review and inspection checklists to list contact details and provide information on facility characteristics, loading and unloading, and security of the RSS sites.

or non-profit warehouses. Some states plan to locate their RSS at a private pharmaceutical or medical distribution company facility. These facilities offer advantageous physical attributes as well as employees with valuable expertise who are potential volunteers for duty during SNS operations.

State SNS planners will need to coordinate with the owner(s) of any potential RSS location to gain permission to use the facility during distribution operations. A memorandum of understanding may be a prerequisite for planning and coordination with facility owner(s) or managers. Any facility under consideration would need to be empty or easily cleared in order to be considered for use as an RSS location.

Physical Site Considerations

The most important physical characteristic of any RSS site is its size. A RSS site must have the internal space to stage, store, and manage all 130 containers in a push package. The CDC [Version 10](#) planning guidance recommends use of a facility with at least 12,000 square feet of open, level floor space. This includes 7,000 square feet to store a push package, 2,000 to 4,000 sq. ft. for staging containers and materials, 1,000 sq. ft. for office space (operations management, TARU, inventory control, distribution teams), and approximately 2,000 sq. ft. for repackaging operations, if necessary.

The CDC Version 10 planning guidance recommends the use of facilities with several specific physical characteristics that facilitate receipt, storage, and staging operations. These include:

- Smooth, hard surface floors to enable easy movement of push package containers;
- Sprinklers and fire suppression systems;
- Personal space for staff, including bathrooms with showers and designated rest areas;
- Designated repackaging area(s) within the RSS site or at a separate, nearby facility; and
- Sufficient office space, including workstations, communications (voice and data connections), and computers.

RSS sites must have temperature controlled storage space. Most drugs in the push package can be stored at room temperature (i.e., between 58°F and 86°F), but a few (e.g., lorazepam) must be kept cooler, requiring refrigerated storage at RSS sites. SNS state planners should work with general services departments to find back-up generators and refrigeration equipment to ensure the availability of cooled storage space.

Transportation Considerations

Federal authorities are responsible for delivering both push package and MI assets to the RSS site. A push package will be delivered by air to the local airport and then transported to an RSS site in approximately eight tractor-trailer trucks.

State SNS planners should develop pre-planned routes for transporting SNS materials from the RSS location to the dispensing sites. Since the most likely transport will be by ground, state planners can conduct time-distance analyses to identify travel times between possible RSS locations and dispensing sites. These analyses should include factors such as traffic congestion, the effect of physical disruption to vehicles transporting SNS assets, and security vulnerabilities. Where available, geographic information systems and modeling software can be used in estimating travel times and preventing potential problems on the day of an event.

Loading Considerations

A facility's physical characteristics will affect the ease with which materials are transported to and from the facility, including the ease of loading and off-loading of materials. Push package delivery requires eight 53-foot tractor-trailers, each holding 16 to 18 cargo containers. Consequently, state planners should look for the following features when evaluating potential RSS locations:

- Tractor trailer drive-through capability;
- Four or more adjustable loading docks capable of easily loading and off-loading a 48–53 foot truck; and
- Helicopter landing pad(s).

Loading docks decrease the time and personnel required to load and offload trucks. With loading docks, two people can offload push package containers from one tractor-trailer in less than 30 minutes. Without loading docks, the facility must be equipped with forklifts to off-load push package containers. The CDC's Division of Strategic National Stockpile (DSNS) recommends using two forklifts with capacity to lift 3,000 to 5,000 lbs. Using forklifts, three to four people can unload push package containers from one truck in approximately one hour.

DSNS officials suggest that off-loaded containers enter the RSS location through a common entry point to allow the inventory control chief to record their arrival. DSNS also recommends each RSS site have approximately six pallet jacks available to stage materials around the facility.

Technical Advisory Response Unit Considerations

A TARU will be deployed with the push package consisting of five to seven CDC personnel who will offer advice to state officials, as requested, on all aspects of SNS distribution. Security will arrive with the TARU to protect them and the SNS material. The state is responsible for transporting the TARU to the RSS location.

The TARU serves as the communications link between the state and the CDC. The TARU will bring multiple communication systems, including secure and non-secure communications equipment, to provide redundant communications—i.e., cellular, satellite, and government priority phones.

During its state SNS exercise, the Virginia Department of Health found that co-locating state SNS officials and the TARU in the same office space at the RSS location enabled effective coordination and decision-making.

The TARU logistician will also bring a Microsoft Excel file in delimited text format enumerating the contents of the push package on a CD and loaded into his/her computer. This information can be downloaded into the state's inventory tracking system.

Separate office space should be designated in the RSS location for the TARU. This space must contain:

- Sufficient electrical power for TARU computers and telecommunications equipment;
- Three analog telecommunications lines for dedicated TARU telephone, fax, and data transfer plus additional voice and data phone lines for warehouse operations; and
- Access to a window for satellite telephone equipment.

A local area computer network and high-speed Internet connections are also desirable for TARU operations. The state should issue the TARU team three two-way radios in order to communicate with RSS personnel. Living quarters for TARU members should be made

available near the RSS location. More information about the TARU and its function can be found in CDC's Version 10 planning guidance.

State-Provided Materials and Equipment at the RSS Location

The CDC recommends that states procure the following items for their RSS locations:

- Pallets on which to position SNS supplies to ship to dispensing sites;
- Shrink wrap/pallet film to secure SNS materials to outbound pallets;
- Four or more pallet jacks to move pallets around the RSS locations;
- Dollies to move boxes and equipment;
- Retractable box cutters to open boxes;
- A photocopier and telephones in the office;
- Two-way radios for communications between warehouse managers and staff;
- A bullhorn for conducting briefings in the warehouse;
- First aid kits;
- Potable water for RSS staff and volunteers;
- Cots and blankets for resting RSS staff and volunteers; and
- Lightweight Kevlar gloves.

SNS planners need to obtain these supplies and equipment prior to an incident and store them at each designated RSS location. This will ensure the RSS location is ready to receive SNS materials and begin operations within 12 hours following the approval of the SNS deployment request. Additionally, the state should plan to provide food and beverages to RSS personnel, the TARU, and security. In the absence of an on-site kitchen or vending machines, an outside company could cater food.

RSS Site Operations

State SNS planners need to develop plans for RSS operations that address such factors as security, receipt of SNS assets, SNS storage and staging, and RSS staffing.

Securing RSS Locations

Every potential RSS location must be made completely secure. The site should not be located in a highly visible or highly populated area likely to be affected by the disaster or crisis. Officials recommend that the exterior of RSS sites are well lit in order to positively identify personnel and deter trespassing. Officials also recommend that RSS sites have a "buffer zone" of 300–1,000 feet between the physical site and the exterior barrier (e.g., fence, wall) to allow sufficient area for patrols and to reduce potential damage from an improvised explosive device or other incendiary device. All entry points to the RSS location should be guarded.

Before and during SNS operations, it is vital to keep the location of the RSS from the public and media. This will reduce likelihood of disruptions to SNS operations.

Each state is responsible for providing security officers at the RSS locations. RSS security personnel could be provided by state or local law enforcement agencies or private security companies. Additionally, a possible RSS site may already have personnel that perform security functions at the site during non-emergency times (i.e., a private company warehouse). In such cases, state SNS planners may contract with the facility owner(s) to use these personnel during SNS distribution operations. State SNS planners should be aware that while the TARU travels with a security detail, its responsibility is to protect the TARU and the SNS assets, not to provide security for the RSS location. CDC Version 10 guidance includes additional criteria for securing RSS sites.

Receipt of SNS Assets

The DSNS will deliver SNS assets directly to the state designated RSS location. A designated state official must accept custody of SNS materials before RSS site staff can begin unloading trucks. The state official will need to sign a custody transfer form acknowledging receipt. He or she will also need to sign a memorandum of agreement obligating the state to use materials and equipment in certain ways, including returning storage containers and any unused pharmaceutical and equipment. Examples of both documents are available in the appendices of the Version 10 guidance.

A state official previously registered with Drug Enforcement Agency will also need to sign the custody transfer form to legally accept the Schedule II controlled substances that may be included in the shipment. This person can be the same person accepting the shipment overall (assuming that person is a DEA registrant). If a different person, the registrant can sign at the same time the shipment is accepted. If they are not available at the time of the shipment, he or she can also sign at a later date. More information about the requirements for transferring controlled substances and their storage at the RSS site is available from the Version 10 planning guidance and the DSNS.

Storing and Staging SNS Materials

The RSS location's inventory control chief is responsible for recording the numbers of incoming containers as push package containers are unloaded. Inventory control personnel must also note the numbers of any damaged or missing containers. According to DSNS planning documents, each push package container is numbered and assigned a color, designating its contents:

- Containers 1-33: Red: Oral Antibiotics and Related Supplies (i.e., pill counting machines)
- Container 34: Clear: Medical and Surgical Supplies
- Containers 35-101: Yellow: Intravenous Drugs and Related Supplies
- Containers 102-105: Green: Chemical Weapons Antidotes and Supplies
- Containers 106-130: Blue: Airway Management Supplies

Push package containers are unlikely to be unloaded at the RSS location in numerical order. CDC program officials suggest that the containers be organized by color and number with container doors facing six-foot isles to maximize storage and staging efficiency. Figure 1 below is one example of a RSS location layout with push package containers organized by color and number.

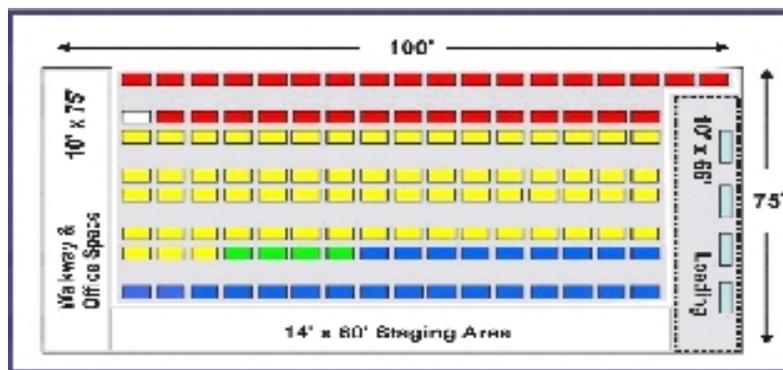


Figure 1 - This diagram displays minimum space recommendations. The space contains 130 containers within 4520 sq. ft. The staging area is 1120 sq. ft.; loading area 660 sq. ft.; and the walkway/office space 700 sq. ft. This equals a total of 6730 sq. ft. Source: CDC

RSS location layout will vary depending on the facility, but should always have at least 7,000 square feet of storage space and between 2,000 and 4,000 square feet of staging space. The staging area should be located in close proximity to loading docks and transport areas.

During SNS distribution operations, RSS locations may receive resupply requests from either inventory control personnel at dispensing sites or treatment centers. Alternatively, dispensing sites can be required to send requests to the state Emergency Operations Center (EOC) who will relay them to the RSS location. Once orders are received at the RSS location, site personnel will find, re-package, and ready materials for delivery to dispensing sites. During this process, RSS personnel will record processed requests in the state's inventory tracking system.

RSS Staffing

State SNS plans should pre-identify the necessary personnel to activate the RSS location, receive the SNS from the federal government, and quickly begin staging and distribution operations. Professional and volunteer personnel can be derived from a variety of sources. The following list, derived from multiple state SNS plans, enumerates key RSS positions and the number of personnel needed to fill each position per shift. If there are a limited number of individuals available to staff operating RSS and dispensing sites, SNS planners may be required to assign the responsibilities of multiple positions to a single individual.

During its state SNS exercise, the Virginia Department of Health found the use of color-coded vests at the RSS site to be useful for easily identifying those with particular job functions. Command and control wore white vests; Operations, orange; Logistics, blue, and; Administrative, green.

- **RSS Warehouse Manager/On-Site commander** (1): There should be only one warehouse manager who serves as commander 24 hours a day
 - Shift Supervisor (1): Assumes warehouse manager's duties in his/her absence
 - Safety Officer (1)
 - On-Site Commander's Clerical Support (1)
- **Logistics & Communications**
 - Logistics & Communications Chief (1)
 - Clerical Support (1)
 - Technical Support (2)
 - Human Resources Chief (1)
- **Operations Team**
 - Operations Chief (1)
 - Inventory Control Supervisor (Preferably Pharmacist) (1)
 - Transportation Plan Operator (TPO) (1)
 - Security Chief (1)
 - Clerical Support (2)
- **Dispensing Site and Treatment Center Sorting & Staging**
 - Supervisor (1)
 - Assistants (8)
- **Receiving and Loading**
 - Supervisor (1)
 - Assistants (2)
- **Quality Control**
 - Supervisor (1)
 - Assistant (1)
- **Inventory Control Assistants** (2)
- **Licensed Forklift Drivers** (1-2)

- **Security/Law Enforcement Officers** (varies)

States should assess their own personnel needs based upon their plans, determine the number of personnel they will need for each shift, and try to obtain the minimum personnel for four shifts.

RESOURCES

- Centers for Disease Control and Prevention. *The Receipt, Store, Stage (RSS) Site: Finding the Right Location and Facility for Your State*. Nov 2003.
- Centers for Disease Control and Prevention. *Receiving, Distributing, and Dispensing the Strategic National Stockpile: A Guide for Preparedness - Version 10 (Draft)*. Jun 2005.
(LLIS.gov ID# [14197](#))
- Centers for Disease Control and Prevention. *Strategic National Stockpile Preparedness Course*. 12-16 Jan 2004.
- Harris County Public Health and Environmental Services. *Field Operations Guide (FOG)*. Unpublished Draft.
- Oregon Department of Human Services. *National Pharmaceutical Stockpile Planning in Oregon: Information for Local Health and Emergency Management Officials*. Apr 2002.
(LLIS.gov ID# [14175](#))
- Virginia Department of Health. *SNS Training: Applying the Lessons Learned*.
- Wyoming Department of Health. *Strategic National Stockpile Plan*. 1 Jul 2003.

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