DEBRIS MANAGEMENT PLAN

San Juan County

Prepared by

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RECORD OF CHANGES

Changes listed below have been made to the San Juan County Debris Management Plan since its promulgation.

#	Date	Section	Summary of Change	By (Name/Title/Organization)

RECORD OF DISTRIBUTION

The San Juan County Debris Management Plan has been distributed to the following agencies and organizations since its promulgation and subsequent revisions.

Name/Title	Organization	Date	Number of Copies

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ACRONYMS AND ABBREVIATIONS

AAR	After-Action Report
C&D	construction and demolition
CEMP	Comprehensive Emergency Management Plan
CESQG	conditionally-exempt small quantity generator
CFR	Code of Federal Regulations
County	San Juan County
cy	cubic yard
DMS	debris management site
EMAC	Emergency Management Assistance Compact
EMS	Emergency Management Services
EPA	U.S. Environmental Protection Agency
ESF	Emergency Support Function
FEMA	Federal Emergency Management Agency
GIS	geographic information system
HHW	household hazardous waste
ICS	Incident Command System
IP	Improvement Plan
JIC	Joint Information Center
JIS	Joint Information System
MAA	mutual aid agreement
MOA	memorandum of agreement
MOU	memorandum of understanding
NIMS	National Incident Management System
NRF	National Response Framework
PIO	Public Information Officer
PPE	personal protection equipment
PPDDR	private property demolition & debris removal
RCW	Revised Code of Washington
ROE	right-of-entry
ROW	right-of-way

SME	subject matter expert
USACE	U.S. Army Corps of Engineers
VCM	vegetative cover multiplier
WAC	Washington Administrative Code
WAMAS	Washington Mutual Aid System

1 INTRODUCTION

This debris management plan will be used by San Juan County (County) personnel and its contractors to facilitate and coordinate the removal, collection, and disposal of debris following a disaster event. It will be used to mitigate against any potential threat to the health, safety, and welfare of the impacted citizens of the County, expedite recovery efforts in the impacted area, and address any threat of significant damage to improved public or private property.

1.1 SCOPE

Natural and man-made disasters result in a variety of debris that includes, but is not limited to, such things as trees, soil, sand and gravel; building/construction materials; vehicles, boats, docks, and other shoreline infrastructure; and personal property. The quantity and type of debris generated from any particular disaster is a function of the location and kind of event experienced, as well as its magnitude, duration, and intensity. The quantity and type of debris generated, its location, and the size of the area over which it is dispersed directly impacts the type of collection and disposal methods used to address the debris problem, associated costs incurred, and the speed with which the problem can be addressed by the County.

In a major disaster, the County may have difficulty in locating staff, equipment, and funds to devote to debris removal. Private contractors may play a significant role in the debris removal, collection, reduction, and disposal process. The debris management program implemented by the County will be based on the waste management approach of reduction, reuse, reclamation, resource recovery, incineration, and landfilling.

This County debris management plan includes the following major sections:

- *Staff Roles and Responsibilities* – includes a staff organization chart with descriptions, emergency communications and health and safety plans, and schedule for personnel training and exercises.
- *Situation and Assumptions* – identifies possible natural and man-made disaster events in our area and probable debris types and locations.
- *Debris Collection Plan* – identifies priorities in debris collection with information on response and recovery operations.
- *Debris Management Sites* – identifies debris management sites in the County and includes management procedures before, during, and after a disaster event.
- *Contracted Services* – provides contracting procurement procedures including qualification requirements and procedures for solicitation.
- *Private Property Demolition and Debris Removal* – provides criteria and procedures for permitting, demolition, and debris removal on private property in the County.

- *Public Information Plan* – provides methods for distributing information to the public during a disaster event.

References are provided after the aforementioned sections followed by six attachments with supporting information including county and site maps, pre-qualified contractors, reporting forms and checklists, and a health and safety plan supplement.

1.2 AUTHORITY

This San Juan County Debris Management Plan is developed under the authority of the following local, state, and federal statutes and regulations:

- Revised Code of Washington (RCW) 38.52.070, 35.33.081, 35.33.101, and 70.95;
- Washington Administrative Codes (WAC) 118-30, 173-350-040, 173-350-310, 173-350-320, and 296-62;
- U.S. Codes 5121-5202 Disaster Relief Act of 1974 as amended, 2251-2303 Federal Civil Defense Act of 1950 as amended, 2301-2303 Improved Civil Defense 1980; and
- Homeland Security Presidential Directive 5.

1.3 ALIGNMENT WITH OTHER PLANS

This debris management plan is a companion document to the County's Comprehensive Emergency Management Plan (CEMP) (CEMP 2018), and the County Public Works Emergency Operations Plan (CEMP 2018). It is an integral part to the overall approach in managing the response to a disaster event in San Juan County.

This plan follows the guidelines by the Federal Emergency Management Agency (FEMA) for "*Debris Management Planning for State, Tribal, Territorial and Local Officials*" (FEMA 2016) and the Washington State Comprehensive Emergency Management Plan (2016). The following regulatory requirements were also considered in assembling this plan:

- Stafford Act Section 403 (Essential Assistance), Section 407 (Debris Removal), and Section 502 (Federal Emergency Assistance);
- Sandy Recovery Improvement Act and the Disaster Relief Appropriations Act of 2013;
- 44 CFR 206.224, Debris Removal and 44 CFR 206.225, Emergency Work; and
- Public Assistance Program and Policy Guide, FP 104-009-2 (January 2016).

1.4 PLAN MAINTENANCE AND UPDATE

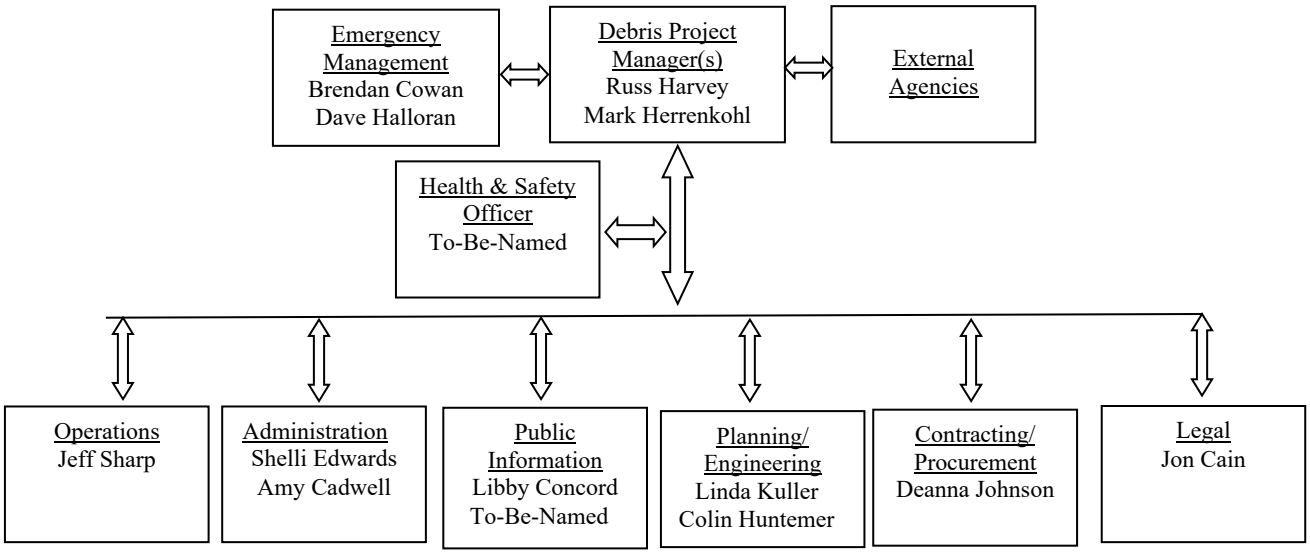
At a minimum, this plan will require maintenance and revision annually to address personnel and contractor changes. More frequent reviews and updating the plan may be necessary after a major disaster event, a change in operational resources (e.g., policy, personnel, organization structures, management processes, facilities, and equipment), a formal update of planning guidance standards, a change in the County's demographics or threat level, or the enactment of new or amended laws or ordinances.

2 STAFF ROLES AND RESPONSIBILITIES

This section includes a staff organization chart with descriptions, emergency communications and health and safety plans, and a schedule for personnel training and exercises.

2.1 STAFFING ORGANIZATIONAL CHART

To facilitate debris removal, the County has developed an organization that is aligned with the various possible functions associated with debris removal operations. It is critical to have a clearly identified primary decision maker such as a Debris Project Manager to coordinate debris activities and serve as the single point of contact for all other functions. The roles and responsibilities of the staff organization are provided below.



(It should be noted that the proposed staff organization may become a branch within Emergency Management Operations as part of the overall response to a disaster event.)

2.2 ROLES AND RESPONSIBILITIES

2.2.1 Debris Project Manager

The debris project manager for the County is the Director of Public Works (or designee) and is the primary decision maker during a debris management event. He/she will be assisted by the Solid Waste Program Administrator and together assign tasks to team members and track the completion of tasks, coordinate functions between departments and external agencies, and will be knowledgeable of the county's processes, procedures, personnel, resources, and limitations. The debris project manager will also coordinate emergency-related activities with the director of County Emergency Management.

2.2.2 Operations

Operations personnel will have responsibility for debris collection activities including:

- Positioning equipment and resources for the response and recovery debris removal operations;
- Developing staff schedules and plans;
- Providing communication, facilities, services, equipment and materials to support the debris activities;
- Monitoring and directing force account and contract labor;
- Operating and managing the collection and debris management site;
- Creating a demolition process for structures;
- Coordinating with other local and state governments for road clearance and operations; and
- Reporting progress of debris activities to the debris project manager.

2.2.3 Health and Safety Officer

The Health and Safety Officer will be responsible for maintaining the health and safety of the County's workers and contractor personnel during a disaster event. They will be familiar with the County's Health and Safety Plan and the general steps necessary to provide a safe work environment for debris removal and monitoring employees as described in the Health and Safety Supplemental Plan in Attachment 6.

2.2.4 Finance/Administration

The primary roles of the administration function are to develop a response and recovery budget, track expenses, and ensure that funds are available for personnel, equipment, supplies, and contract services. This function will also be responsible for staffing of the debris operations. Finance personnel will also maintain complete documentation as a part of standard accounting/business practices.

2.2.5 Public Information

Public information personnel are responsible for ensuring that important debris removal information is distributed to the public in a timely and effective manner. They also will be in communication with emergency management officials and communicate essential information to the media to keep the public informed. Additional duties include:

- Development of information bulletins;
- Organization of public "town hall" style community meetings;
- Coordination of social media outreach campaign;
- Hotline responses;
- Radio and television announcements;
- Develops information materials (flyers, press releases, etc.)
- Handbills and door hangers; and
- Newspaper notices.

2.2.6 Planning and Engineering

The planning staff are responsible for:

- Forecasting debris quantities based on specific disaster scenarios;
- Developing an estimating strategy for post-disaster debris quantities;
- Mapping debris haul routes;
- Selecting debris management sites;
- Identifying and coordinating environmental issues; and
- Issuing permits and obtaining permits from external agencies.

The engineering staff are responsible for:

- Designing the debris management site(s);
- Determining reduction and recycling methods;
- Developing the debris collection strategy;
- Writing the contract scope-of-work, conditions, and specifications;
- Coordinating with other local and state governments for road clearance and operations; and
- Developing a demolition procedure (public and private properties).

2.2.7 Contracting and Procurement

Contract and procurement personnel are responsible for the following tasks:

- Developing contract requirements;
- Establishing contractor qualifications;
- Distributing instruction to bidders;
- Advertising bids;
- Establishing a pre-disaster list of pre-qualified contractors;
- Overseeing that the work is being performed in compliance within the scope-of-work of the contract(s); and

- Establishing a post-disaster contracting procedure, if necessary.

2.2.8 Legal

Legal personnel will be responsible for tasks such as:

- Reviewing debris removal contracts and land lease agreements;
- Evaluating building condemnation processes;
- Reviewing legal processes for private property demolition and debris removal;
- Providing guidance on right-of-entry and hold harmless agreements; and
- Confirming overall safe work practices by contractors.

2.2.9 External Agencies

Additional coordination may be required during a disaster event with the following agencies:

- San Juan County Fire & Emergency Medical Services (Fire Districts 1-5, San Juan Island EMS);
- Town of Friday Harbor
- Port of Friday Harbor
- Washington State Emergency Management Division;
- Washington State Department of Transportation/WSF
- Washington State Department of Ecology;
- Washington State General Administration;
- Washington State National Guard;
- U.S. Army Corps of Engineers, Seattle District;
- U.S. Environmental Protection Agency;
- U.S. Coast Guard; and
- Federal Emergency Management Agency.

2.2.10 Contractors and Vendors

Contractors and vendors are often used to augment local resources in support of debris management operations.

Solid Waste Collection Companies

Solid waste collection companies (e.g., San Juan Sanitation) are private entities that provide daily municipal solid waste service through the transportation and/or disposal of solid waste. During debris-causing incidents, these companies can be tasked with maintaining existing municipal solid waste service, as well as potentially providing additional resources to assist with debris clearance, processing, and disposal activities.

Debris Management Contractors

Debris management contractors provide additional resources to assist with debris clearance, removal, separation, and disposal during debris-causing incidents. These contractors can be put

under contract prior to an incident to ensure efficient response during or after an actual incident or event. Federal agencies, such as the United States Army Corps of Engineers (USACE) and U.S. Environmental Protection Agency (EPA), may also have contract resources available to assist with County debris management operations.

Debris Management Monitoring Contractors

Debris monitoring contractors provide oversight and documentation of debris management operations. This may include supervising other debris management contractors, documenting debris clearance and disposal operations for potential reimbursement, and operations of temporary debris sorting and reduction sites.

2.3 EMERGENCY COMMUNICATIONS PLAN

Communications within San Juan County and with other external agencies during a debris-causing event shall be managed according to Emergency Support Function (ESF) #2 – Communications of the San Juan County Comprehensive Emergency Management Plan and ESF #8, Public Health and Medical Services (CEMP 2018).

2.4 HEALTH AND SAFETY PLAN

Debris operations involve the use of heavy equipment to move and process various types of debris. Many of these actions can pose safety hazards to emergency response and recovery personnel, as well as to the public. In addition to those safety hazards, exposure to certain types of debris, such as asbestos-containing building materials and mixed debris that contains hazardous materials, can pose potential health risks to emergency workers.

A debris health and safety officer will be designated by the project manager or lead operations personnel during a disaster event. All debris operations shall be in compliance with the health and safety requirements found in the San Juan County Health and Safety Plan with supplemental information presented in Attachment 6. The Health and Safety plan enables the County and their contractors to avoid accidents during debris recovery operations and to protect workers from exposure to hazardous materials. The Health and Safety Plan establishes minimum safety standards for the agency and contractor personnel to follow. In addition, the plan provides emergency workers with information on how to identify hazardous conditions and specific guidelines on the appropriate and proper use of personal protective equipment (PPE).

To facilitate compliance, the Health and Safety Plan specifies how the safety information will be disseminated to all County emergency employees and contractors, and how compliance with minimum safety standards will be monitored. The strategy also includes specific corrective actions to be taken if workers do not comply with the minimum safety standards.

2.5 TRAINING AND EXERCISES

This section summarizes training and exercise components necessary to support disaster debris operations. County staff participating in debris management operations should have emergency management and position-specific training, depending on their expected role during a debris-causing incident.

2.5.1 General Training

General emergency management training requirements are developed as part of National Incident Management System (NIMS). The online courses and additional NIMS and FEMA courses and information are at http://training.fema.gov/. The County will remain in compliance with NIMS by ensuring all applicable staff have completed the following courses:

All staff

- IS-700 NIMS – An Introduction to NIMS (available online at http://training.fema.gov/IS/);
- IS-800 NRF – An Introduction to the National Response Framework (NRF) (available online at http://training.fema.gov/IS/);
- ICS-100 – Introduction to NIMS ICS for Operational First Responders (available online at http://training.fema.gov/IS/);
- ICS-200 – Basic All-Hazards NIMS ICS for Operational First Responders (available online at http://training.fema.gov/IS/);

Key staff and leadership

- ICS-300 – Intermediate NIMS ICS16 (classroom); and
- ICS-400 – Advanced NIMS ICS1 (classroom).

Additional information on position-based NIMS training requirements is available from FEMA's Emergency Management Institute and the Washington Military Department Emergency Management Division.

2.5.2 Position-Specific Training

Specific training is available for staff that will support debris management operations. This may include:

- IS-630 – Introduction to the Public Assistance Program;
- IS-631 – Public Assistance Operations;
- IS-632 – Introduction to Debris Operations in FEMA's Public Assistance Program; and
- E202 – Debris Management.

IS-630 and IS-631 are recommended for finance leadership and IS-632 and E202 are recommended for the solid waste program manager and operations leadership. The County will strive to have all appropriate staff trained in the above position specific classes so that they will understand and be able to implement the County's Debris Management Plan within all required legal parameters and utilizing best practices within the industry.

2.5.3 Exercises

The purpose of conducting exercises is to determine the overall efficiency and effectiveness of the County Debris Management Plan or a subset of the plan in a disaster scenario. These procedures can be exercised specifically using a debris management scenario, or as part of another exercise (e.g., Emergency Operations Center exercise). At a minimum, operational exercises involving the debris management plan will be conducted every four years. The plan will be modified based on after-action reports (AARs) and improvement plans (IPs) from exercises, as well as actual events.

3 SITUATION AND ASSUMPTIONS

This section provides an overview of the types, amounts, and distribution of natural or human-caused incidents that may occur within San Juan County. It also provides tools to estimate debris volumes following an incident. Finally, it provides a list of the planning assumptions that were used to develop this plan.

3.1 TYPES OF DISASTER EVENTS

This section identifies the types and severity of disasters that are likely to occur in San Juan County.

3.1.1 High Wind Events

San Juan County and surrounding areas are susceptible to low pressure storms during the winter months characterized by high velocity winds (up to 100 mph), storm surge, wave action, and inland flooding. The effects of these storms can be devastating to both coastal and inland areas of the County and can cause large quantities of every type of debris. Heavy rainfall associated with these storms can cause isolated flooding. Significant damage may occur to buildings, above-grade utilities, roadways, and vegetation (e.g., trees).

3.1.2 Earthquakes

This county is located in an active geological area, prone to earthquakes and other seismic events. Characteristics of seismic events include shockwaves, movement along fault lines, and aftershocks. Earthquakes can cause damage to buildings and infrastructure, equipment and personal property from collapsed walls and roofs, and sediment from earthquake-induced landslides.

3.1.3 Tsunami

Tsunamis can occur anywhere there is coastal exposure which for San Juan County includes 408 miles of exposed shoreline. Characteristics of a tsunami include forceful, fast moving water with wide-area coverage. A tsunami is very similar to the storm surge damage caused by a hurricane or other high wind event but can be more devastating because it's fast moving and can flow inland farther. The subsequent receding waters pull debris back which can result in more marine debris problems. Recent tsunami modeling for San Juan County indicates that many areas might experience extreme current velocities which may damage and release waterfront infrastructure and docked and moored vessels.

3.1.4 Wildfires

This county is covered with large tracts of trees and agricultural fields which are susceptible to wildfires. Wildfires can be started by both by natural (e.g., lighting) and man-made sources and cause extensive burn areas. Damages resulting from wildfires include loss of vegetation, damaged homes and buildings, landslides and mudslides on burnt slopes when rains follow the fire. Wildfires can produce a significant amount of debris, and the loose light ash from burned residential property can pose a significant public health risk.

3.1.5 Act of Terrorism

Terrorism includes the unlawful use of force and violence against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives. Since terrorism is regarded as a criminal act, it involves coordination with law enforcement authorities, the coroner's office, and health officials before debris is handled or disposed.

Debris generated as a result of an act of terrorism is highly variable in both quantity and type, depending upon the specific means utilized by the terrorists. An act of terrorism could generate little to no debris at all, or could result in large quantities of multiple types of debris, potentially requiring highly specialized personnel, procedures, and equipment for its removal and disposal.

3.2 DEBRIS TYPES

3.2.1 Forecasted Types

		Typical Debris Streams									
		Vegetative	Soil/Mud/Sand	Construction/Demolition	Utility Systems	Furnishings	Household Hazardous Waste	Metals	Vessels/Boats/Vehicles/Docks /Other Marine Debris	White Goods	Animal Carcasses
Types of Disaster	High Wind Events	X	X	X	X	X	X	X	X	X	X
	Earthquakes	X	X	X	X	X	X	X	X	X	

		Typical Debris Streams									
		Vegetative	Soil/Mud/Sand	Construction/Demolition	Utility Systems	Furnishings	Household Hazardous Waste	Metals	Vessels/Boats/Vehicles/Docks /Other Marine Debris	White Goods	Animal Carcasses
	Tsunami	X	X	X	X	X	X	X	X	X	X
	Wildfires	X	X	X	X						X
	Terrorism	X	X	X	X	X	X	X	X	X	X

Vegetation. Vegetative debris including trees, brush, and limbs will be generated from most disaster types. It can be found both on public and private property, and will be found within streets, often blocking vehicle traffic and access.

Soil/Mud/Sand. Sediment and sand will result primarily from flooding events with areas of unconsolidated or loose soil material may become almost a river of sediment during flood conditions. Sediment flow combined with high velocity floodwater may cause extensive structural damage. Both sediment and structural debris will require disposal.

Construction and Demolition. Construction and demolition (C&D) material is generated by damaged structures and can be present in most types of disasters to varying degrees. C&D materials may include disaster-damaged building materials and damaged contents. Some C&D can be recycled or reused but must be evaluated to consider the potential presence of asbestos and other potentially hazardous materials.

Utility Systems. In addition to building damage, construction debris may include utility systems such as utility poles, wiring, conduits and other items from power, telephone, cable TV, and other utilities. These damages should be expected in all types of disasters and is necessary to coordinate closely with appropriate utility companies to define jurisdictional responsibilities and to encourage cooperation to expedite recovery.

Furnishings. Household furnishings and personal effects will become debris as a result of many disasters and may become a significant quantity of debris if residents have insufficient time to move contents before the disaster such as in an earthquake. Quantities increase when roofs are damaged during rain and wind events. Household furnishings normally make up the second

wave of debris moved to the right-of-way. Rugs, furniture, and mattresses should be treated as mixed debris and taken directly to debris sites and landfills (usually not cost effective to separate mixed debris).

Household Hazardous Waste. Household hazardous waste (HHW) may result from flooding conditions, as well as from other disasters resulting in damage to residences. HHW may be mixed in with personal property debris and therefore, every effort should be made to segregate HHW from the debris stream at the curbside as these materials require special handling and disposal. HHW includes paint, solvents, cleaning supplies, insecticides, propane, gasoline and oils.

Metals. Metal debris may come from building siding and roofing, vehicles, and miscellaneous structures. Some metal debris may be suitable for recycling and reuse.

Vessels/Boats/Vehicles/Docks/Other Marine Debris. Removal of boats and vehicles requires coordination with the appropriate governing authorities; generally, removal and disposal is the owner's responsibility.

Since San Juan County is an island-county, marine debris will likely be a major component of the debris found after a disaster event. Marine debris may accumulate along bays, inlets and shores, blocking important navigational channels, harbors and access points to population centers in the county. Marine debris may include docks, boats, and various other flotsam, some of which can be recycled but most may require disposal at a landfill.

Animal Carcasses. Disposal of animal carcasses can be an issue in disasters, especially in floods. Often times, a storm will cause a farmer to not have access to the animals which can cause additional deaths. The disposal of these animals is usually the responsibility of the owners but when large numbers are affected, it may be beyond the means of the farmer to properly dispose of them. In this case, disposal of the animals presents an environmental/health issue including the health and safety of those conducting the cleanup and citizens at large. In addition to the traditional method of disposal burial, composting and incineration are also effective means of disposal.

White Goods. White goods such as refrigerators, stoves, washers, dryers, etc. should be segregated and recycled if possible. Care must be exercised to ensure that refrigerants are removed from cooling units by a certified air-conditioning technician.

3.2.2 Forecasting Methods

After the disaster parameters and geographic extent are established, specific debris volumes can be quantified by using historical information available through San Juan County Emergency Management or the National Weather Service or by using forecasting models. If historical data is not available or insufficient, quantitative and qualitative forecasting models can be used to supplement the debris volume quantification.

Qualitative Forecasting

Qualitative forecasting will consist of "windshield tours" and "pass-through's" of the impacted portions of the unincorporated sections of the County. These actions will note the location, vegetative cover, and estimated percentage of area impacted. These estimates will be the basis of the overall debris forecast.

Quantitative Forecasting

The information gathered as part of the qualitative forecasting will be reported to the County's Geographic Information System (GIS) which will establish the number of habitable structures in the review area as well as land-use of the noted properties. Based on this information, the following estimations can be applied (forecasting information in this section from FEMA 2010).

Buildings – Several basic techniques have been established to forecast destroyed building debris quantities. These techniques can be used to forecast debris quantities prior to an event or estimate quantities after an event.

Residential Buildings – A formula for estimating the debris quantities from a demolished single-family home and associated debris is as follows:

L x W x S x 0.20 x VCM = ____ cubic yards of debris (cy)

- L = Length of the building in feet
- W = Width of the building in feet
- S = Height of building in stories
- VCM = Vegetative Cover Multiplier

The VCM is a measure of the amount of debris within a subdivision or neighborhood. The descriptions and multipliers are described as:

- Light (1.1 multiplier) includes new home developments where more ground is visible than trees. These areas will have a sparse canopy cover.

- Medium (1.3 multiplier) generally has a uniform pattern of open space and tree canopy cover. This is the most common description for vegetative cover.

- Heavy (1.5 multiplier) is found in mature neighborhoods and woodlots where the ground or houses cannot be seen due to the tree canopy cover.

The table below can be used to forecast debris quantities for totally destroyed single-family, single-story homes in the applicable vegetative cover category.

Typical House Size	Vegetative Cover Multiplier (cy)			
	None	Light (1.1)	Medium (1.3)	Heavy (1.5)
1000 SF	220	220	260	300
1200 SF	240	264	312	360

Typical House Size	Vegetative Cover Multiplier (cy)			
	None	Light (1.1)	Medium (1.3)	Heavy (1.5)
1400 SF	280	308	364	420
1600 SF	320	352	416	480
1800 SF	360	396	468	540
2000 SF	400	440	520	600
2200 SF	440	484	572	660
2400 SF	480	528	624	720
2600 SF	520	572	676	780

The amount of personal property within an average flooded single-family home has been estimated to be:

- 25-40 cy for homes without a basement
- 45-50 cy for homes with a basement

Mobile homes have less utilized space due to their construction and use. The walls are narrower, and the units contain more storage space. Therefore, the typical mobile home generates more debris by volume than a single-family home. Historically, the volume of debris from mobile homes can be found to be:

- 290 cy of debris for a single-wide mobile home
- 415 cy of debris for a double-wide mobile home

Outbuildings – All other buildings volumes may be calculated by using the following formulas:

(L x W x H x .33)/27 = cubic yards of debris

- L = Length of the building in feet
- W = Width of the building in feet
- H = Height of the building in feet
- 0.33 is a constant to account for the "air space" in the building
- "27" is the conversion factor from cubic feet to cubic yards

Vegetation – This type of debris is the most difficult to estimate due to the random sizes and shapes of trees and shrubbery. The following serves as a guide for forecasting and estimating vegetative debris:

- Each home is estimated to have an associated 3.65 cubic yards of this type of debris
- Treat debris piles as cubes, not a cone (when estimating)
- 15 trees, 8 inches in diameter = 40 cy (average)
- One acre of debris, 10 ft high = 16,117 cy

The following factors will be used to convert woody debris from cubic yards to tons:

- Softwoods: 6 cy = 1 ton

- Hardwoods: 4 cy = 1 ton
- Mixed Debris: 4 cy = 1 ton
- Construction & Demolition: 2 cy = 1 ton

Several truckloads may need to be tested to confirm these factors during actually debris management activities.

3.3 PLANNING ASSUMPTIONS

Assumptions are unknown, but expected events or actions that are used to develop the plan. The following assumptions were made during the development of the County's debris management plan:

- A major natural disaster may require the removal of debris from public or private lands;
- The amount of debris resulting from a major natural disaster may exceed the County's removal and disposal capabilities;
- If a debris event should occur, an accurate assessment of the disaster must be made as soon as practical;
- Based on the size or complexity of an event, the County may not be able to handle the debris generated without outside support, including support from private, county-based agencies;
- The County may contract for additional resources to assist in the debris removal, reduction, and disposal capabilities;
- Proper debris management will facilitate the return of critical functions and economic activity within the planning area and region;
- With the exception of vegetative debris, all solid waste will be moved out of the County which is consistent with current practice; and
- Any long-term disruption of roads could create a backlog of solid waste within the County.

Local, county, state, tribal and federal agencies may have difficulty in locating staff, equipment, and funds to devote to debris removal in the short- as well as long-term following a major natural disaster.

4 DEBRIS COLLECTION PLAN

This section provides details on the County's plan for debris collection including eligible and ineligible debris, priorities, and response and recovery operations.

4.1 DEBRIS ELIGIBILITY

Eligible debris removal work must meet the following criteria:

- The debris was generated by a major disaster event;
- The debris is located within a designated disaster area;
- The debris is located on County improved property or rights-of-way; and
- The debris removal is the legal responsibility of the County.

The following are not eligible for debris removal work:

- Any debris removed from the County's unimproved property or undeveloped land;
- Any debris removed from a facility that is not eligible for funding under the Public Assistance Program (e.g., privately owned cemeteries and golf courses); and
- Any debris removed from Federal lands or facilities that are the authority of a Federal agency or department (e.g., USACE navigable waterways, etc.).

4.2 PRIORITIES

Response operations will primarily focus on the emergency access routes and main arterials within San Juan County. Based on the incident, planning staff members will identify which roads and streets are essential to emergency operations so local resources can be optimally managed and directed.

Prior to and immediately following the event, extricating people and providing access to health care facilities are the top priorities; therefore, the major arterial road routes are given priority for the emergency services staff such as police, fire, and ambulance services.

Overall priority to roadways will be prioritized by the event; however, specific considerations are as follows:

- Fire, police, and ambulance service routes to affected areas;
- Access routes to trauma centers, hospitals, critical care units, and jails;
- Major arterial routes;
- Roads and streets to the debris management center and emergency operations center;
- Supply routes to emergency supply distribution centers;
- Roads and streets to government facilities;
- Communication towers and systems access;

- Utility access routes; and
- Routes to shelters and other emergency aid locations.

The priority of clearing roadways is similar to the road clearing priority list for snow conditions including (Refer to Attachment 2):

- San Juan Island – Beaverton Valley Road, Roche Harbor Road, Bailer Hill Road, and Town arterials;
- Orcas Island – Orcas Road, Deer Harbor Road, Enchanted Forest Road, Crow Valley Road, Olga Road, Point Lawrence Road; and
- Lopez Island – Fisherman Bay Road, Center Road, Mud Bay Road, Dill Road, School Road.

4.3 RESPONSE OPERATIONS

San Juan County will use its own labor force and equipment to remove debris during this phase. In circumstances when the existing labor force is not sufficient, or when specialized services are required, the County may supplement its work efforts by activating local or regional mutual aid agreements (e.g., Town of Friday Harbor, Skagit County) or by activating short-term debris removal contracts for specific work.

4.4 RECOVERY OPERATIONS

These activities begin after the emergency access routes are cleared and the residents return to their homes and begin to bring debris to the public rights-of-way.

The implementation of disaster debris collection immediately after the disaster event assures the public that recovery efforts are in progress and that the community will return to normal quickly. The two main methods of debris collection are curbside collection and collection centers.

4.4.1 Curbside Collection

This type of collection parallels the normal garbage and trash collection operations by the Town's Refuse Department and the County's certificated hauler San Juan Sanitation. Debris is placed at the curb or public rights-of-way by the residents and collected by standard methods.

Mixed Debris Collection

This method allows all debris types to be collected in one specified area, usually along the public rights-of-way or in front of individual residences. This method is convenient for the public, but does not facilitate effective recycling and reduction efforts as debris will need to be handled multiple times. Therefore, this method will not be used in San Juan County.

Source-Segregated Debris Collection

This method requires residents to sort the debris by material type and place it as the curb in separate piles. Trucks designated for a particular debris type collect the assigned debris and deliver it to a temporary staging area, or debris management site, reduction, recycling, or disposal facility. This method requires more trucks to collect the different types of debris; however, the increased equipment cost is offset by avoiding the labor cost and time to separate the debris by hand (as per mixed debris collection). This method offers the potential of high salvage value and efficient recycling/reduction processing.

4.4.2 Collection Centers

This type of collection method directs residents to transport their debris to a common location in the county where roll-off bins or dumpsters are located – the San Juan and Orcas Transfer Stations and the Lopez Drop Box. Associated costs are generally low since the public essentially accomplished the material collection and separate themselves; however, site monitoring is required to ensure debris cross-contamination does not occur. Although potentially effective, collection centers near debris management sites may inadvertently create a safety risk to debris management workers and the community-at-large. Therefore, collection centers will be established after initial curbside collection is completed to ensure the removal of remaining debris within the community and ensure the safety of the general public.

4.4.3 Barge and Ferry Transport

Debris generated during a disaster event could be removed and transported directly off-island by way of barge and ferry service. If available, these methods of direct transport of debris would require less handling and the use of temporary debris management sites in the County. Barge access locations include Griffin Bay Landing on San Juan Island, Nick Point Cove Beach Landing on Shaw Island, Odlin Park and McKay Harbor Landings on Lopez Island, and Olga and Deer Harbor Landings on Orcas Island. If available, ferry service is provided to the four major islands of the County.

4.4.4 Collecting Hazardous Waste, White Goods, and E-Waste

The three most common types of debris that will need special handling are hazardous waste, white goods, and electronic waste.

Household Hazardous Waste (HHW)

HHW mixed with other debris types will contaminate the entire load, which necessitates special disposal methods such as storage in a particular area of the debris management site. The disposal cost of HHW is generally higher than the disposal of other waste, which leads to escalating costs if this type of debris is not managed efficiently. This type of debris is mitigated through the County's Hazardous Waste Collection Program for HHW and certified exempt small quantity generators (CESQG) and its regular collection of HHW materials from the public. The County Health and Community Services Department and Solid Waste Program Administrator

will coordinate the curbside pickup and segregation of these materials at a temporary debris management site until final disposition can be arranged with vendors currently supporting the County's Hazardous Waste Collection Program.

White Goods

White goods include all appliances and household machines that contain refrigerants and other fluids that are regulated by the State of Washington and can only be reclaimed by certified technicians and disposed of a permitted facility. To avoid accidental release of these hazardous fluids, the collection of white goods will be accomplished by manually placing the appliances on trucks or by using lifting equipment that will not damage the elements that contain the hazardous fluids. These materials must be transported to the mainland for recycling and removal of the hazardous elements. These materials will be collected curbside and then taken to a temporary debris management site until final disposition can be arranged.

Electronic Waste (E-waste)

E-waste consists of any broken or damaged piece of electronic equipment. Categories include communications equipment, computer equipment, television and video equipment, electronic tools, lighting, medical equipment, etc. These types of materials are already collected at each of the County's privately-operated transfer stations and drop box. These materials will be collected curbside and then taken to a temporary debris management site until final disposition can be arranged.

4.4.5 Hazardous Stump Removal

A hazardous tree or stump may be collected individually, while downed or fallen debris is collected from rights-of-way or at a designated collection center. Tree and stump collection prices are typically based on the size of the tree or stump and charged by unit. FEMA has established criteria to assist in making these eligibility determinations, using objective information that can be collected in the field (FEMA 2016). A stump may be considered hazardous if the following criteria are met:

- 50% or more of the root-ball is exposed (less than 50% will be flush cut);
- Greater than 24" in diameter (as measured 24" above the ground);
- On improved property; and
- Poses immediate threat to life, public health, and safety.

4.4.6 Putrescent Waste Removal

The San Juan County Conservation District and Washington State Agricultural Department will be contacted to determine the most effective method of disposal. If on-site burial is considered, the County Health and Community Services would need to be notified of such actions. Options for putrescent waste disposal include landfilling, rendering, burial on-site, composting, and incineration and open-burning.

5 DEBRIS MANAGEMENT SITES

The use of disaster debris management sites (DMS) allows for efficient debris collection operations. These sites also allow the County to stockpile debris for recycling, reuse or volume reduction.

5.1 DMS SELECTION

A DMS is a temporary location for storing, and/or processing (including recycling and volume reduction) of disaster debris prior to consolidating and shipping to a facility for recycling, composting, or disposal. Debris management sites are important in supporting initial debris clearance activities, as well as more efficiently coordinating final debris management. Activation of pre-certified regional sites would be coordinated with the local Emergency Management Director and other local officials. Debris management sites are only intended for use during a disaster event and State of Emergency and associated debris management activities. In normal circumstances, without a declared State of Emergency, these types of operations would typically require extensive solid waste permitting and site assignment processes. Permits may be required from the following local and state agencies for regular operations of the debris management sites: County Health and Community Services – waste site assignments, transfer stations assignments, waste hauling, burials, condemnation; County Planning and Community Development – demolition permits, and emergency permits to work in wetlands/streams; and the Fire Department – removal of buried tanks and other gas/oil tanks.

Locating effective debris management sites requires evaluating a wide range of factors, including parcel size, topography, and ownership, in addition to past uses of the land and its proximity to residences, water supplies and wetlands. San Juan County Public Works has pre-selected sites on each of the four major islands (San Juan, Orcas, Lopez, and Shaw) to be used for debris management in the event that a hazard impacts multiple communities and the volume of debris exceeds the local capacity for management. Those sites are:

- San Juan Island – Beaverton Valley Road Public Works Property, Sutton Road & Roche Harbor Road County-Owned Property, Griffin Bay Marine Facility;
- Orcas Island – Orcas Island Solid Waste Facility, Orcas Public Works Shop Yard, Obstruction Pass Boat Ramp;
- Lopez Island – Closed Port Stanley County Landfill, Lopez Public Works Shop Yard, Mackaye Harbor Gravel Pit and Boat Ramp, Port Stanley Gravel Pit, Odlin Park Boat Ramp; and
- Shaw Island – Shaw Public Works Shop Yard, Neck Point Boat Ramp.

Figures 1-4 shows the location and distribution of these sites in the County. Table 1 provides detailed information regarding each of these sites. (See also Attachment 2 for DMS Site Selection Worksheets and site plans for each of the sites.) These sites were selected because they are:

- Owned or controlled by the County;
- Large enough to accept, transport, and store large quantities of debris;
- Have easy access, including being near the area of debris generation, be easy to enter and exit, and be near transportation arteries; and
- Are ready to use as management areas without extensive site modification.

Table 1. San Juan County Debris Management Sites

Site ID	Site Name	Site Location	Total Acres	Useable Acres	Debris Volume (cy)	Type of Debris/Site	Owner	Notes
SJI1	Beaverton Valley Road Public Works Property	Beaverton Valley Road	27.5	~10	TBD	Temporary Storage	SJC	This site is currently under development and may have limited space for temporary storage of debris in the future.
SJI2	Sutton Road Property/San Juan Transfer Station	Sutton Road and Roche Harbor Road	7/27	~5/5	TBD	Temporary Storage	SJC/ TOFH	The SJC Sutton Road property is currently undeveloped and has limited space for temporary storage due to tree cover.
SJI3	Griffin Bay Barge Landing	Jacksons Beach Road	NA	NA	NA	Transport Location	SJC	The Griffin Bay barge landing is a central location on San Juan Island for transporting equipment and debris material.
OI1	Orcas Island Solid Waste Facility and Northern Vacant Property	Orcas Road	17/15	~10/15	TBD	Temporary Storage	SJC	A central location for temporary storage of debris material on Orcas Island. The 15 acre vacant property to the north of the landfill could be cleared and used for temporary/permanent storage of debris.
OI2	Orcas Public Works Shop Yard	Mt. Baker Road	~8	~4	TBD	Temporary Storage	SJC	Limited space for debris material storage but there is room for equipment storage.
OI3	Obstruction Pass Marine Facility	Obstruction Pass Road	NA	NA	NA	Transport Location	SJC	Transport location for eastern Orcas Island.
LI1	Port Stanley Closed County Landfill	Port Stanley Road	20	~15	TBD	Temporary Storage	SJC	A central location for temporary storage of debris material on Lopez Island.
LI2	Lopez Public Works Shop Yard	Fisherman Bay Road	~3	~1.5	TBD	Temporary Storage	SJC	Limited space for debris material storage but room for equipment storage.
LI3	MacKaye Harbor	Norman Road	~2	~1	TBD	Temporary	SJC	Some storage for debris material on south

Table 1. San Juan County Debris Management Sites

	Gravel Pit and Marine Facility					Storage and Transport		side of Lopez Island. Transport of debris material and equipment from boat ramp.
LI4	Port Stanley Gravel Pit	Port Stanley Road	7.5	~5	TBD	Temporary Storage	SJC	Storage for debris material on north side of Lopez Island.
LI5	Odlin Park Marine Facility	Odlin Park Road (off of Ferry Road)	NA	NA	NA	Transport Location	SJC	Transport location for northern Lopez Island.
LI6	Hunter Bay Marine Facility	Islandale Road	NA	NA	NA	Transport Location	SJC	Transport location for southeastern Lopez Island.
SI1	Shaw Public Works Shop Yard	Blind Bay Road and Squaw Bay Road	1	0.5	TBD	Temporary Storage	SJC	Limited space for debris material storage but room for equipment storage.
SI2	Neck Point Cove Beach Landing	Harbor Way	NA	NA	NA	Transport Location	Public	Limited transport location for Shaw Island.

Notes: NA = not applicable, TBD = to be determined

5.2 SITE MANAGEMENT

Temporary DMS preparation and operation may be managed by the jurisdiction or a contractor. To meet overall debris management strategy goals and to ensure that the site operates efficiently, a Site Manager, debris monitoring personnel, and safety personnel should be assigned for each site. Attachment C, Debris Resources, references County personnel and qualified contractors identified for staffing by the County Public Works Director for each of these positions, with responsibilities as described below.

5.2.1 Site Manager

The site manager is responsible for supervising day-to-day operations, maintaining daily logs, preparing site progress reports, and enforcing safety and permitting requirements during site operations. The site manager is also responsible for scheduling the environmental monitoring and updating the site layout. The site manager has oversight of the activities of the debris removal contractors and the onsite debris processing contractors to ensure that they comply with the terms of their contracts.

5.2.2 Monitoring Staff and Assignments

Regional monitors (whether jurisdiction employees or contractors) should be placed at ingress and egress points to quantify debris loads, issue load tickets, inspect and validate truck capacities, check loads for hazardous waste, and perform quality control checks. The specific duties of the monitors depend on how debris is collected.

5.2.3 Safety Personnel

Safety personnel are responsible for traffic control and ensuring that site operations comply with local, state, and federal occupational safety regulations.

5.3 ESTABLISHMENT AND OPERATIONS PLANNING

Whenever possible, DMS's should be identified and established prior to an incident to allow appropriate planning and permitting to be completed. Attachment 2, DMS Inventory Sheets, contains information concerning operating plans for potential debris management sites and neighborhood collection sites that the County has identified.

5.3.1 Permits

Attachment 2 provides a discussion of the applicable permits necessary for establishing and operating DMSs. In general, Neighborhood Collection sites should be developed and operated using the Washington State Department of Ecology's Intermediate Solid Waste Handling Facility Standards under WAC 173-350-310 as guidance, and DMS's should be developed and

operated using the Washington State Department of Ecology's "Pile" Standards under WAC 173-350-320 and Moderate Risk Waste Handling under WAC 173-350-360 (if moderate risk waste is accepted) as guidance.

5.3.2 Debris Management and Neighborhood Collection Site Locations

Within San Juan County, there are nine DMSs identified for use during disaster debris operations that meet the criteria discussed below. Attachment 2 provides a list of DMS and transport landing locations and inventory sheets.

Locating Additional Debris Management Sites

The County is currently in the process of locating additional sites. When identifying additional debris management sites, planning staff should first consider sites that already have solid waste handling permits and, secondly, public lands to avoid costly land leases. Existing disposal or recycling facilities close to lifelines and major access routes are ideal debris management sites. Jurisdiction-owned sites that will not require extensive repair costs, such as parks, vacant lots, or sports fields, should be considered as well. State-to-state or county-to-county agreements may provide solutions for public land use; however, if these are not available, planning staff should develop criteria for identifying potential private property locations for the debris management sites. Private land easements should be reviewed by the legal staff to avoid extensive damage claims upon site closeout. Additional selection considerations for debris management sites include the following:

- Proximity to the sources of disaster debris, as close as possible;
- Large enough to accommodate a storage area, a sorting area, and volume reduction operation area of 100 acres total per FEMA requirements;
- Hard, preferably non-porous, surface such as a paved parking lot;
- Accessible by main transportation routes with good ingress and egress to accommodate heavy truck traffic;
- Outside of environmentally sensitive areas, such as wetlands or well-fields; and
- Reuse and recycling possibilities, including timber agreements, mulch and chip disposal in the agriculture community and fuel sources for incinerators or heating (Recycling success will depend on the types of debris and the local recycling environment.).

Site Preparation

Develop a Memorandum of Understanding (MOU), Mutual Aid Agreements (MAA), a Memorandum of Agreement (MOA), or lease/use agreement, if required. Sites outside of the County's control will need an MAA or MOU. A list of suggested Mutual Aid Agreement partners can be found in Attachment 4 of this plan. Lined temporary storage areas should be established for materials (including ash, household hazardous waste, fuels, and other materials) that can contaminate soils, groundwater, and surface water. When possible, plastic liners should be set up under stationary equipment, such as generators and mobile lighting plants. This should be included as a requirement in the scope of work if debris management site preparation will be contracted out. The topography and soil/substrate conditions should be evaluated to determine

the best site layout. When planning for site preparation, the designer should consider ways to make site closure and restoration easier. Upon site closeout, the uncontaminated soil can be re-spread to preserve the integrity of the tillable soils. Operations that modify the landscape, such as substrate compaction and over-excavation of soils when loading debris for final disposal, adversely affect landscape restoration. Identify who would be responsible for updating the initial baseline data and develop an operation layout to include ingress and egress routes.

Site Layout

The efficiency and the overall success of the DMS operations are determined by how the site is designed. Significant accumulation of debris should not be allowed to occur at temporary storage sites because of environmental and safety concerns, such as the risk of fire. Moreover, permits for such sites may impose maximum capacity restrictions. While FEMA recommends 100 acres as the minimum size for debris management sites, this may be altered due to availability of facilities within the county. Additional DMS's may need to be developed if debris quantities exceed site storage and processing capacity.

Operational Boundaries

Operational boundaries are the boundaries or areas that clearly define the different use areas on the DMS. In establishing the operational boundaries, the DMS design staff will consider using earthen berms, temporary barriers, or other physical restrictions. This aids traffic circulation and keeps the backlog of debris to a minimum. Common operational areas may include the following:

- Reduction (e.g., chipping or grinding);
- Recycling;
- Tipping areas (unloading);
- Loading areas for processed debris to go to its final disposition;
- Drop-off centers for the public (this may include vegetative, recycling, or construction and demolition debris);
- Household hazardous waste storage;
- Monitoring tower and/or scale locations at both the ingress and egress points; and
- Equipment, fuel, and water storage

Separation of the areas listed above will be clearly delineated and defined. As operations proceed, these areas may change with the various types of debris. The reduction, recycling, tipping, and loading areas need room for equipment operations. The site design will consider the possibility of multiple pieces of equipment engaging in the same activity at one time. Depending on the scale of operations, each debris stream may have its own tipping area and will be designed accordingly.

- General public drop-off areas for recycling, reduction, and construction and demolition debris may be included within a DMS. These public use areas will be designed for passenger vehicle traffic and public safety and to account for the weights or volumes of all materials received to ensure the maintenance of accurate and complete records for all debris received at the site by source.

- Household hazardous waste storage should be located in a safe location close to the public drop-off center, yet restricted, so that qualified personnel can process the waste appropriately. The design staff may consider constructing an impermeable lining and earthen berms to contain spills and prevent surface water runoff from leaving the area. Monitoring towers should be located at ingress and egress points.

- Monitoring towers should be constructed of durable structural materials. The structures should be designed to withstand active and static loads. A stepladder is not an acceptable monitoring tower.

- Equipment and fuel should have a designated storage area and signs posted appropriately. The fuel storage areas need to be designed to contain spills. For dust and fire suppression, water should be readily available throughout the site at all times and must be identified appropriately.

Traffic Patterns

Traffic circulation should be well defined throughout the entire DMS. Although traffic signs and barricades aid in directing traffic, the planning staff may also consider flag personnel to help direct traffic. Drivers unfamiliar with the new environments, routes, and rules will need assistance to safely navigate through the site.

Optimally, the designed traffic pattern should allow trucks to enter and exit through different access points, as long as each is monitored. Haulers are typically paid by the volume or weight of a load. The load is evaluated when entering the site, based on a percentage of the full capacity of the truck. Stationing monitors at ingress and egress points ensures that every truck releases the entire load prior to leaving the site. This prevents debris left in a truck from a previous load from being counted again in a subsequent load. The empty trucks that enter the site to remove the processed (reduced) debris should enter and exit through an access point other than that of all other traffic. This reduces the site management and debris monitor confusion regarding debris being deposited or removed from the site.

5.3.3 Volume Reduction Methods

Volume reduction methods minimize the volume of disaster debris to decrease impact on disposal facilities or create opportunities to reuse debris. San Juan County Public Works has a list of contractors that may provide these services during an incident. Descriptions of volume reduction methods are presented below.

Chipping and Grinding

Chipping and grinding reduces the volume of some debris types by as much as 75 percent. This method is commonly used to reduce the volume of disaster debris including vegetative debris, construction demolition debris, plastics, rubber, and metals. Clean wood can also be reduced and used for mulch, while other debris such as plastic and metals can be chipped to reduce the overall bulk of the material prior to transportation or disposal. The benefit of using a reduction method can be increased by identifying alternate uses for the residual material. The ability to use

recycled wood chips as mulch for agricultural purposes, fuel for industrial heating, or in a cogeneration power plant helps to offset the cost of the chipping and grinding operations. Jurisdictions using chipping and grinding to reduce the volume of vegetative debris must be careful to ensure that contaminants such as plastics, soils, rocks, and special wastes are not present in the vegetative debris to be processed. Care must also be taken when reducing construction and demolition debris to ensure that it does not contain hazardous materials, such as asbestos.

Privately owned wood grinders including tub grinders may be available in the County and include:

- Midnight's Farm (David Bill) – Center Road, Lopez Island
- Mike Carlson Enterprises (Mike Carlson) – West Valley Road, San Juan Island
- Black Family Enterprises (Thor Black) – Blake Way, San Juan Island
- Charlie Nigretto Enterprises (Charlie Nigretto) – Orcas Road, Orcas Island

Incineration

Curtain pit incineration, portable incinerators, and controlled incineration in rural areas are all methods for reducing disaster debris. The decision to use incineration as a reduction strategy for some types of debris would be made by the jurisdiction. The following subsections discuss the various incineration methods.

Hog Fuel Incinerators

Hog fuel is made up of a specific grade of ground-up wood and bark. It varies in size, generally somewhere between 1/2-inch and 6-inch screen size. In the Pacific Northwest, wood and paper processing companies that use hog fuel-to-fuel boilers have facilities for storing hog fuel. These companies may purchase surplus storm debris that is processed into hog fuel, depending on market conditions and their existing supply, which is lowest in the spring. Depending on the quality of the material used to create the hog fuel, the jurisdiction agency may need to relax the permit restrictions for any hog fuel burners that burn hog fuel processed from disaster debris.

Air Curtain Pit Incineration

Air curtain pit incineration offers an effective means to expedite the volume reduction process, while substantially reducing the environmental concerns caused by open-air incineration. The air curtain incineration method uses a pit constructed by digging below grade or building above grade (if a high water table exists) and a blower unit. The blower unit and pit comprise an engineered system that must be precisely configured to function properly. The blower units deliver air at predetermined velocities and capacities. The blower unit must have adequate air velocity to provide a "curtain effect" to hold smoke in and to feed air to the fire below. A 20-foot long nozzle provides air at a velocity of over 120 miles per hour and will deliver over 20,000 cubic feet of air per minute to the fire. The air traps smoke and small particles, recirculating them to enhance combustion, which takes place at over 2,500 degrees Fahrenheit.

Pre-permitted Portable Incinerators

Portable incinerators use the same methods as air curtain pit incinerator systems. The only difference is that portable incinerators use a pre-manufactured pit instead of an onsite constructed earth/limestone pit. Portable air curtain incinerators are the most efficient incineration systems available because the pre-manufactured pit is engineered to precise dimensions to complement the blower system. The pre-manufactured pit requires little or no maintenance compared to earth or limestone constructed pits, which are susceptible to erosion. Portable air curtain units are ideal for areas with high water tables and sandy soils and areas where smoke opacity must be kept to a minimum.

Rural Controlled Incineration

Controlled open-air incineration is a cost effective method for reducing clean, woody debris in rural areas. Jurisdictions should consult with their local fire departments and the County Fire Marshall's Office to determine what permits are necessary for rural incineration. Ash from rural incineration may be used as a soil additive; however, local health departments and agricultural extension personnel should be consulted to confirm whether this is allowed in any specific jurisdiction. The controlled open-air incineration option should be terminated if mixed debris enters the waste stream.

Composting and Recycling

Wood debris, chipping and grinding wood waste could be composted with other feedstocks depending on site availability and volumes generated during a disaster event. The finished compost may be available for use by farmers, local landscapers, and residents. Debris collected after a disaster event could be recycled for reuse including construction materials, vehicles, boats, etc. All attempts in finding the owner of materials will be taken but recycling and reuse of these materials in the County should be considered before permanent landfilling.

5.3.4 Environmental Monitoring Program

Additional data should be collected on a continuous basis during site operations to support site closeout and quality assurance. The data can be compared to the previously established information in order to determine any remediation that may be necessary.

Debris management site operations may expand, contract, or shift on the site. It is important to track reduction, hazardous waste collection, fuel, and equipment storage in order to sample soil and water for contaminants. Periodically, map or sketch out activity locations so that areas of concern can be pinpointed later for additional sampling and testing. If the site is also an equipment staging area, monitor fueling and equipment repair to prevent and mitigate spills (e.g., petroleum products and hydraulic fluids). Include clauses in the contract scope of work to require immediate cleanup by the contractor.

5.3.5 Site Closure

After the site operations are complete, the property must be restored to its pre-activity environmental state. Restoration of a site involves removing all traces of the operations and possible remediation of any contamination that may have taken place during the operations. Debris, processing equipment, storage tanks, protection berms, and other structures constructed on the site should be removed from the site upon completion of all debris removal and processing operations.

5.3.6 Site Evaluation and Restoration

Final restoration of the landscape must be acceptable to the landowner, within reasonable expectations. Therefore, plan the landscape restoration as early as possible, preferably incorporating provisions within the lease.

The final environmental site evaluation is an extension of the environmental monitoring program. Testing, similar to that which is done for the baseline study, should be conducted to confirm that the site has been returned to its pre-activity state. Test samples should be taken at the same locations as those of the initial assessment and monitoring program. However, if warranted, additional test samples may be needed at other locations on, or adjacent to, the site. Based on the results of the testing, additional remediation may be required before the owner takes final acceptance of the site. The lease agreement should have provisions to release the County from future damages when the site is returned to its original condition, or when final acceptance is received from the owner.

6 CONTRACTED SERVICES

This section addresses establishing and maintaining contracts for debris management services including debris clearance, removal, processing, and disposal.

6.1 EXISTING DEBRIS MANAGEMENT AND SOLID WASTE CONTRACTS

Prior to engaging additional resources for debris collection and hauling, it is imperative that the County consult with its current solid waste collection companies and identify their available resources. This would include the County's certificated hauler San Juan Sanitation and Town of Friday Harbor Utilities Department.

6.2 CONTRACT DEBRIS MANAGEMENT RESOURCE NEEDS

Based on current resources identified in Attachment 3, "Debris Resources", San Juan County recognizes additional resources may be needed:

- Right-of-Way (ROW) vegetative debris removal;
- ROW construction and demolition debris removal;
- ROW HHW collection and disposal;
- ROW tree trimming and clearing;
- General debris collection;
- General debris hauling;
- Debris processing and reduction;
- Commercial and private property demolition and debris removal;
- Commercial and private property sediment removal;
- DMS management; and
- Debris monitoring and inspection.

An updated list of debris management resources including emergency contact information is maintained by the San Juan County Public Works Department.

6.3 EMERGENCY CONTRACTING/PROCUREMENT PROCEDURES

It is advisable for the County to contract for debris management resources prior to a debris-causing incident or to pre-qualify contractors who may perform debris management operations. If emergency contracts must be established during an event the following general emergency contract rules apply:

1. The contractor must be licensed and bonded;

2. The contractor must have adequate insurance; and

3. The contract must comply with state and Federal procurement standards including provisions of 44 CFR Part 13.

The contractor cannot be on either the Washington Department of Labor and Industries Debarred Contractors list or the Federal Debarred Contractor's list, if federal assistance is utilized.

In addition, San Juan County emergency contracting and procurement procedures must be followed. Contracts should always be reviewed by a legal representative of the County and/or finance department before they are signed.

6.3.1 Types of Contracts

The type of contract used to supply debris management services will vary depending on the type of work to be performed and how soon after the incident the work is planned. The three recommended contract vehicles for debris operations are:

1. **Unit Price Contract**: A unit price contract is based on weight (tons) or volume (cubic yards) of debris hauled. This kind of contract should only be used when the scope of work is not well defined. It requires close monitoring of debris collection, transportation, and disposal to ensure that quantities are accurate. A unit price contract may be complicated by the need to segregate debris for disposal.

2. **Lump Sum Contract**: A lump sum contract is used when the scope of work is clearly defined and the areas of work are specifically quantified. Lump sum contracts require the least monitoring by the contracting County.

3. **Time and Materials Contract**: Under a time and materials contract, the contractor is paid based on time spent and resources used in accomplishing debris management tasks. Time and materials contracts are extremely flexible and especially suitable for early debris right-of-way clearance jobs and hot spot cleanups. The use of time and materials contracts are limited to the first 70 work hours after a disaster; they are very limited and *strongly* discouraged under FEMA Public Assistance rules.

The following contract vehicles *are specifically not allowed under federal contracting regulations or are to be used with extreme caution and under the guidelines described:*

1. **Cost plus Percentage of Cost**: A cost-plus-percentage-of-cost contract is one whereby the contractor is compensated for work performed, such as a time and materials contract, but also compensated an additional percentage of that compensation.

2. **Contingency Contract (Conditional upon Federal Reimbursement)**: This type of contract only reimburses contractors if the region receives federal funding.

Piggyback Contracts: Pursuant to 44 CFR Part 13 and Public Assistance guidelines, a piggyback contract is a concept of expanding a previously awarded contract. As such, it does not meet established guidelines due to its lack of a competitive bid process. Additionally, the fact

that the established contract on which the piggy-backing occurs may have an inappropriate price structure further restricts the ability to piggyback contracts. An acceptable piggyback contract would be to utilize another jurisdiction's contract for equipment or supplies (such as a Washington State Department of Enterprise Services contract). Utilize pre-established DES lists are not considered piggybacking, and is acceptable pursuant to FEMA.

6.3.2 Competitive Bid Process

During a declared emergency, it is possible to develop an expedited process to competitively bid work. In the past, the County has developed scopes-of-work, identified contractors that can do the work, made telephone invitations for bids, and received competitive bids.

7 PRIVATE PROPERTY DEMOLITION AND DEBRIS REMOVAL

Private property debris removal refers to the demolition and removal of disaster debris on private, commercial, or residential property. Generally, removal of debris from private property is not recommended. The following section provides an example and information on a potential process which may be utilized to demolish and remove disaster debris on private property with or without owner consent. The County's Code shall be consulted prior to any action being taken to make certain the most current policies are being followed, as should the County Legal Department. The following outlines the general procedures that the County will need to follow during or resulting from a disaster event in order to potentially receive expense reimbursement through the Public Assistance Program.

7.1 DEBRIS REMOVAL AND DEMOLITION PERMITTING AND PROCEDURES

In order to eliminate immediate threats to life, public health and safety after a debris-causing incident, the County may need to enter a private property to demolish private structures made unsafe by the disaster. The demolition of privately owned structures deemed unsafe, and subsequent removal of demolition debris, may be required when the following conditions are met:

1. A County building official identifies that the structure is unsafe and poses an immediate threat to the public. An unsafe structure is so damaged or structurally unsafe that partial or complete collapse is imminent.

2. San Juan County demonstrates that it has the authority and legal responsibility to enter private property to perform the demolition. The legal basis for this responsibility must be established by law, ordinance, or code at the time of the disaster and must be relevant to the post-disaster condition representing an immediate threat to life, public health, and safety, not merely defining the applicant's uniform level of services.

3. A legally authorized official has ordered the demolition of unsafe structures and removal of demolition debris.

The condemnation and demolition of structures must comply with existing local and county condemnation and demolition procedures unless expedited procedures are in place due to the severity of the incident. Additional information on condemnation and demolition are provided below.

7.1.1 Demolition Documentation

The following documents should be collected and/or completed prior to demolition in order to comply with County Code Regulations. San Juan County's Code should be reviewed prior to any steps being taken as well as the FEMA reimbursement guidelines.

1. **Verification of ownership.** Ensures the proper site and owner are identified and that the owner is aware of the nature of the scheduled building assessment.

2. **Right-of-entry (ROE) form.** Signed by the property owner, which allows the building official to enter the property to complete the assessment. It often contains a hold harmless agreement that documents the property owner's promise that he or she will not bring legal action against the applicant if there is damage or harm done to the property. A sample Right-of-Entry form is included in Attachment 5 of this plan.

3. **Building official assessment.** Documentation of the structure's damage and a description of the threat to public health and safety. This assessment often contains the building official's determination as to whether the structure should be condemned, repaired or demolished. This may be in the form of an official structural assessment.

4. **Verification of insurance information.** Provides a remedy to pursue financial compensation if the property owner's homeowner insurance policy covers demolition and debris removal.

5. **Archeological review.** Outlines the archeological stipulations for demolition and debris removal activities. It also highlights the implications for the applicant if they fail to comply with the guidelines.

6. **Environmental review.** Ensures adverse impacts to protected environmental resources are minimized or avoided when removing debris from the proposed site. These reviews should be acceptable to the appropriate resource agency. Wetland and other water resources, hazardous materials, and habitats of endangered species are among the resources of most frequent concern.

7. **Washington Historical Preservation Office Review.** Confirms the Washington State Historical Preservation Office has been notified along with correspondence from the office absolving the area of any historic significance.

8. **Photographs.** Documents and highlights the disaster-damaged condition of the property prior to beginning demolition work. Photographs should confirm the address and scope of work on the property. If demolition is necessary, additional documentation may be required in order to protect the applicant from legal repercussions as well as the public's health and safety during the demolition and debris removal operations.

9. **Letter or notice of condemnation.** Document signed by County building official outlining the specific threat to public safety and health.

10. **Notice of demolition.** Issued to inform the property owner when demolition will begin and posted in advance to provide a reasonable period of time for personal property to be removed. Every attempt should be made to notify the property owner, if not already contacted, through direct mail and local media.

11. **Notice of intent to demolish.** A notice conspicuously posted on the structure to be demolished intended for the public health and safety of neighboring residents.

7.1.2 Inspections

A few days prior to the demolition, a County representative should conduct an inspection of the site. The inspector should take photographs at each site visit for their records. These inspections and verifications generally include the following:

1. **Water and sewer/septic tank inspection.** Verify utilities have been terminated and isolated from the proposed sphere of influence during the demolition operations. The inspector should verify all other utilities have been terminated during the same visit.

2. **Occupancy inspection.** Conducted immediately prior to demolition to ensure no one is physically in the building.

3. **Open void inspection.** Performed if the structure has a basement that is to be filled. This inspection will be conducted once the above-grade structure is gone and the inspector can visually see the entire below-grade excavation.

4. **Post-demolition inspection.** Completed once the structure is demolished, the debris is removed, and the site is graded.

7.1.3 Debris Removal and Demolition of Private Property without Owner Consent

If a privately owned structure meets the requirements for demolition but the consent by the owner is not obtained, an abbreviated and expedited procedure shall take place. The County or specific jurisdiction's legal department must be consulted in advance of any operations. Once verified, the procedure for County residents may consist of the following:

- A notice describing the area and/or parcel of land where debris removal will take place shall be published in the officially designated local area newspaper(s) (based upon the most expedient publication deadline) at least seven calendar days prior to the beginning of the debris removal. During this seven day period, property owners shall have the right and opportunity to go upon their property and remove such items as they deem appropriate, under rules promulgated by the jurisdiction.

- A notice shall be clearly posted in the area where debris removal will take place. The media will be advised of this action so as to give the broadest public notice. The notice shall contain the following information:

  - A general description of the area where debris removal shall take place.
  - The date and time when debris removal will begin.
  - The name and telephone number of the office where the property owner can secure information with regard to the debris removal.
  - A statement of the reason for the debris removal.

- In addition to requirement of publishing the above referenced notice, an attempt must be made to identify and contact the owner of the structure. Attempt to contact shall only be required to consist of those measures reasonable and possible based upon the state of available records and communication channels, which may have been severely diminished as a consequence of the disaster.

- A determination by a designated officer of the building or planning department that the structure is unsafe, unfit for human habitation, or presents a danger to the public in its existing state.

- A notice of condemnation with issuing jurisdiction's point of contact, a phone number and physical address will be posted on the structure; the notice will include the posting date as well as the time available prior to demolition during which the owner can contact the jurisdiction.

There is a required seven-day waiting period from the time the notice is posted; during this period, the property owner may contact the municipality and present compelling evidence to the director of the building or planning department why the condemned structure should not be removed.

At the next County Council Meeting which includes the seven-day period and sufficient time to post notice of a public hearing, a public hearing shall be held. Upon confirmation of adjudication of condemnation of a structure, the structure shall be demolished.

If an owner does contact the County as provided in the notice, and the County Planning & Community Development Department does not conclude that the evidence presented by the owner alleviates the danger to the public, an owner aggrieved of this process may appeal to the Hearings Examiner by written notice to the council prior to the demolition of the structure.

However, while County officials should make every effort to schedule demolitions to allow time for such an appeal, no appeal shall be allowed to jeopardize the health and safety of the rest of the citizens by causing a postponement of demolition beyond the next County Council meeting following the filing of such an appeal, unless postponement is ordered by the County.

7.2 MOBILE HOME PARK PROCEDURES

Higher structure density situations, specifically mobile home parks, create an extensive amount of mixed debris in a relatively small area. The most complex aspect of debris operations in a mobile home park is documenting ownership and legal responsibility for cleanup within the park.

The mobile home park site is sometimes owned, operated, and maintained by multiple parties. The individual homes may be owned by a landlord or agency, or by the individuals that occupy the structures.

7.3 NAVIGATION HAZARD REMOVAL

Damage to marinas and navigable waterways can include abandoned sunken boats and other debris that may impede navigation. Marine debris removal will be coordinated with the United States Coast Guard. Debris removal may also include assistance from marine salvage contractors, commercial divers, and certified surveyors to ensure that navigation hazards are removed safely and efficiently.

The two main challenges with navigation hazards are 1) locating the debris, and 2) finding the legal owners. Marinas can be visually inspected by helicopter or by boat. Sonar or dive teams may need to be employed for submerged vessels. A location or flotation marker may be helpful in order to keep vessel positions documented. The legal owner's information may be obtained by using a vessel's registration number and marina records.

7.4 VEHICLES AND VESSELS (AND DOCKS)

Vehicles, vessels, and other legally registered personal property present challenges, if abandoned, following an event due to their need to be individually processed and stored until they can be sold or destroyed based on an official declaration of abandonment. Municipalities must follow all local, county and state laws that apply to the impoundment, and the resulting salvage, or sale of the vehicle or vessel. The following procedures have been identified to impound and handle abandoned vehicles:

1. Abandoned vehicles or vessels that are left and present a public nuisance will be tagged with a readily visible notification sticker. The sticker shall contain the following information:
    a. The date and time the sticker was attached.
    b. The identity of the individual tagging the vehicle.
    c. A statement that if the vehicle is not removed within 24 hours from the time the sticker is attached, the vehicle may be taken into custody and stored at the owner's expense.
    d. The address and telephone number where additional information may be obtained.

2. If the vehicle has current Washington registration plates, the municipality shall check the records to learn the identity of the last owner of record and shall make a reasonable effort to contact the owner by telephone in order to give the owner the information on the notification sticker.

3. If the vehicle is not removed within 24 hours from the time the notification sticker is attached, the County may take custody of the vehicle and provide for the vehicle's

removal to a safe location. This location may include an impound yard or the yard of a registered tow-truck operator.

After a vehicle has been impounded, San Juan County will again notify the registered and legal owner that the vehicle has been declared abandoned in accordance with RCW 45.55.110. If the registered or legal owner has not contacted the jurisdiction within 15 days, the vehicle or vessel will either be junked, or sold at auction.

7.5 HISTORICAL PRESERVATION PROCEDURES

San Juan County is filled with many historical and culturally sensitive treasures and to lose any of them would be tragic. Every effort should be taken to identify affected items and preserve them from further damage. This may require the aid of local historic preservation groups, County Museum curator and equipment as well as University expertise to fulfill this effort. Efforts include:

- Federal Register;
- State Historical Preservation Office;
- Local historic and cultural groups; and
- Other groups.

Items that can be collected should be photographed, numbered, placed in a storage container, and accompanied with a brief description of the contents. A structurally sound, climate-controlled building should be identified and used for item storage (if possible).

This plan incorporates guidance for compliance with Section 106 of the National Historic Preservation Act. If there is a Native American burial site in the vicinity of a debris management or cleanup site, the work will be performed under the guidance of an archeologist. Archeological or historical objects, such as ruins, sites, buildings, artifacts, fossils, or other objects of antiquity that may have significance from a historical or scientific standpoint, which may be encountered by the contractor or County personnel, shall not be further disturbed. The contractor or County personnel shall immediately notify the Operations Manager and the Debris Project Manager or designee will notify an archeologist of any such findings.

8 PUBLIC INFORMATION PLAN

The goal of the public information plan is to ensure that the residents are given accurate and timely information for their use and their own individual planning purposes. If information is not distributed quickly, rumors and misinformation spread and erode confidence in applicant management of the recovery operations. This section provides information on the Public Information Plan to assist in debris management operations.

8.1 PUBLIC INFORMATION OFFICER

The incident command structure for all debris incidents should include a Public Information Officer (PIO) to distribute information and educate citizens about the debris operations. Section 2, Roles and Responsibilities, contains a description of the role and responsibilities of a PIO.

8.2 COMMUNICATION AND PUBLIC EDUCATION STRATEGY PRIOR TO AN INCIDENT

San Juan County has developed a public information campaign around disaster debris causing incidents. San Juan County will work with surrounding public information officers, public educators, as well as the health department and other County departments to disseminate information surrounding disaster debris causing incidents. This coordinated effort is designed to provide information to jurisdiction employees, stakeholders, and the public before, during, and after a debris causing incident.

Following a disaster, individuals and businesses will look for direction concerning collection and disposal of unwanted debris. A pre-incident public education and communication debris management strategy will help ensure the readiness of residential and business populations and municipal agencies. Accurate and timely information sharing will minimize the burden on localities while simultaneously dispelling rumors.

8.2.1 Special Waste Considerations

Special waste items are those requiring special handling, treatment, and disposal due to their hazardous potential, large volumes, or other problematic characteristics. In conjunction with San Juan County's Health and Community Services Department and San Juan County Division of Emergency Management, messages will be provided to the public concerning:

1. How to identify Special Waste;
2. Why they should separate Special Waste; and
3. Precautions to be taken if placing Special Waste in the Right of Way.

Also, refer to the following guidance:

- EPA Household Hazardous Waste Guide – https://www.epa.gov/hw/household-hazardous-waste-hhw#MGMT
- EPA Planning for Disaster Debris – https://www3.epa.gov/epawaste/conserve/imr/cdm/pubs/dstr-pdf.pdf
- FEMA Debris Management Guide – https://www.fema.gov/pdf/plan/ehp/final_h.pdf

8.3 PUBLIC INFORMATION STRATEGY DURING AN INCIDENT

At a minimum, a PIO will be available to provide information to media outlets and the public during an incident. These activities may be provided solely by the County, or through the cooperation of multiple jurisdictions.

8.3.1 Coordination with the Joint Information Center (JIC)

Public communication(s) should be coordinated through the Joint Information Center (JIC) or Joint Information System (JIS). If a JIC or JIS has not been established, coordination should take place through San Juan Emergency Management's PIO.

If a JIC is established during a debris-causing incident, it will be managed by San Juan County Emergency Management. A debris liaison or subject matter expert will be requested of the JIC to assist the PIOs. The debris liaison or subject matter expert will provide current information on such topics as:

1. Cleanup instructions;
2. Status of cleanup;
3. Locations of drop-off or collection sites;
4. How to source-separate waste;
5. Handling procedures;
6. Illegal dumping provisions; and
7. Addressing complaints regarding debris piles or illegal dumping.

8.3.2 Pre-scripted Information

Debris management public information products should use various types of information vehicles (print, social media, radio, internet, etc.) and include pre-scripted information concerning topics, such as:

1. Debris pick-up schedules;

2. Disposal methods and ongoing actions to comply with federal, state, and local environmental regulations;

3. Disposal procedures for self-help and independent contractors;

4. Restrictions and penalties for creating illegal dumps;

5. Curbside debris segregation instructions;

6. Public drop-off locations for all debris types; and

7. Process for answering the public's questions concerning debris removal.

Pre-scripted messages for debris management will be coordinated with the San Juan Emergency Management, County Public Educators, and Countywide PIO's working group.

8.3.3 Distribution Strategy

The public information strategy should include methods to disseminate the prepared information to the general public. This can be accomplished in a number of ways. The following are suggested vehicles for dissemination of information:

1. **Media** – Local television, radio, newspapers, or community newsletters;

2. **Internet Site** – County's websites;

3. **Social Media Sites** – Twitter, Facebook;

4. **Public Forums** – Interactive meetings at town hall or shopping locations;

5. **Direct Mail Products** – Door hangers, direct mail, fact sheets, flyers within billings, and billboards; and

6. **Telephone Information Hotline** – Pre-identified telephone number that citizens can call to get recorded information.

8.3.4 Media Distribution

San Juan County PIO personnel maintain a listing of available media outlets and contact information which is regularly updated. The public information staff must take advantage of every information vehicle available if power, utilities, cell phone towers, internet, and other infrastructure have been damaged. Often, the best carriers of information are the responders in the field. The general public recognizes their role and frequently asks questions regarding the operations. Stocking the equipment and trucks with flyers, fact sheets, updates, and other print media allows responders to perform their duties while also satisfying the public's need for information.

8.3.5 Developing Messages in Alternate Languages and Formats

Message materials have been developed in alternate languages that are spoken in the community. Based on community demographics in San Juan County, messages may need to be developed in Spanish.

Additional WEB sites that can help with translations are:

- http://www.allwords.com/
- http://www.freetranslation.com/
- http://babelfish.yahoo.com/
- http://www.paralink.com/

Special Needs Message Development Resources

- SignOn: A Sign Language Interpreting Resource, Inc.
- DSHS - Office of the Deaf and Hard of Hearing
- Washington Telecommunications Relay Service
- Compass Mental Health
- Northwest Braille Services

9 REFERENCES

FEMA. 2016. Debris Management Planning for State, Tribal, Territorial and Local Officials. Course Number E0202. Presented by the Federal Emergency Management Agency, U.S. Department of Homeland Security. September.

FEMA. 2010. Debris Estimating Field Guide. FEMA 329. Prepared by the Federal Emergency Management Agency, U.S. Department of Homeland Security. September

Washington State. 2016. Comprehensive Emergency Management Plan. Basic Plan. Prepared by the Washington Military Department, Emergency Management Unit. June.

San Juan County. 2018. San Juan County Public Works Emergency Operations Plan. Prepared by San Juan County Public Works, Friday Harbor, Washington.

San Juan County. 2009. San Juan County/Town of Friday Harbor Comprehensive Emergency Management Plan. Prepared by San Juan County Department of Emergency Management, Friday Harbor, Washington. February.

Neck Point Cove Beach Landing

Shaw Public Works Shop Yard

San Juan Transfer Station and Sutton Rd Property

Odlin Park Marine Facility

Port Stanley Gravel Pit

Beaverton Valley Rd Property

Griffin Bay Barge Site

Lopez Public Works Shop Yard

Port Stanley Closed Landfill

Debris Management Sites

Figure 1 - San Juan Island, San Juan County, WA

SAN JUAN COUNTY WASHINGTON

This map is derived from San Juan County's Geographic Information System (GIS). It is intended for reference only and

0 1 2 3 4 Miles

Path: O:\Projects\Solid Waste\Debris Sites\Solid Waste Debris Sites.mxd

Drawn By: Greg Sutherland

Date: August 15, 2018 Time: 9:24:25 AM

SAN JUAN COUNTY WASHINGTON

This map is derived from San Juan County's Geographic Information System (GIS). It is intended for reference only and

0 1 2 3 Miles

Debris Management Sites

Figure 2 - Orcas Island, San Juan County, WA

Path: O:\Projects\Solid Waste\Debris Sites\Solid Waste Debris Sites.mxd

Drawn By: Greg Sutherland

Date: August 15, 2018 Time: 10:30:15 AM

Neck Point
Cove Beach
Landing

Cameron Rd

Neck Point Rd

Ben Nevis Loop

Smugglers Cove Rd

Blind Bay Rd

Shaw
Public Works
Shop Yard

Squaw Bay Rd

Shady Ln

Hoffman Cove Rd

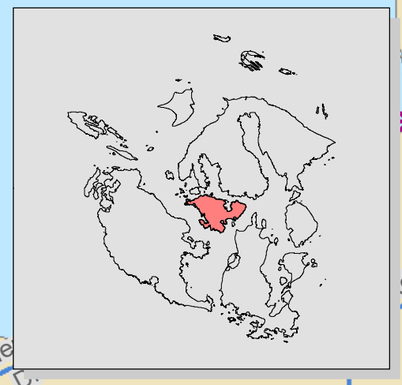
Terrace Dr

Hoyt Ln

Terrace Dr

Blake Way

University Rd



SAN JUAN COUNTY WASHINGTON

This map is derived from San Juan County's Geographic Information System (GIS). It is intended for reference only and

0 Miles 1

Debris Management Sites

Figure 3 - Shaw Island, San Juan County, WA

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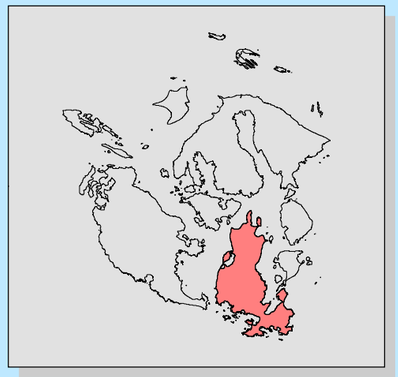
Drawn By: Greg Sutherland

Date: August 15, 2018 Time: 9:24:27 AM

Shaw Public Works Shop Yard
Odlin Park Marine Facility
Port Stanley Gravel Pit
San Juan Transfer Station and Sutton Rd Property
Beaverton Valley Rd Property
Griffin Bay Barge Site
Lopez Public Works Shop Yard
Port Stanley Closed Landfill
Hunter Bay Marine Facility
MacKaye Harbor Gravel Pit & Marine Facility
Eureka Dr
Roche Harbor Rd
Egg Lake Rd
Timber Ln
Beaverton Valley Rd
Lampard Rd
J D Ln
San Juan Valley Rd
Mullis St
Argyle Ave
Turn Point Rd
Pear Point Rd
Mill St
Douglas Rd
Burton Ln
Evergreen Ln
Bailer Hill Rd
Treeline Dr
Cattle Point Rd
Cape Dr
Ferry Rd
Lopez Rd
Village Rd
Cross Rd
Bakerview Rd
Bayshore Rd
Center Rd
Dill Rd
Channel Rd
Airport Rd
School Rd
Shark Reef Rd
Davis Bay Rd
Richardson Rd
Cousins Rd
Vista Rd
Islandale Rd
Pavey Blvd
Sperry Rd
Aleck Bay Rd



SAN JUAN COUNTY WASHINGTON

This map is derived from San Juan County's Geographic Information System (GIS). It is intended for reference only and

0 1 2 3 Miles

Debris Management Sites

Figure 4 - Lopez Island, San Juan County, WA

Path: O:\Projects\Solid Waste\Debris Sites\Solid Waste Debris Sites.mxd

Drawn By: Greg Sutherland

Date: August 15, 2018 Time: 9:24:29 AM

ATTACHMENT 1

FEMA Forms

DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

REQUEST FOR PUBLIC ASSISTANCE

OMB Control Number 1660-0017
Expires December 31, 2019

Paperwork Burden Disclosure Notice

Public reporting burden for this data collection is estimated to average 15 minutes per response. The burden estimate includes the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and submitting this form. This collection of information is required to obtain or retain benefits. You are not required to respond to this collection of information unless a valid OMB control number is displayed in the upper right corner of this form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing the burden to: Information Collections Management, Department of Homeland Security, Federal Emergency Management Agency, 500 C Street, SW., Washington, DC 20472, Paperwork Reduction Project (1660-0017) **NOTE: Do not send your completed form to this address.**

Privacy Act Statement

Authority: FEMA is authorized to collect the information requested pursuant to the Robert T. Stafford Disaster Relief and Emergency Assistance Act, §§ 402-403, 406-407. 417, 423, and 427, 42 U.S.C. 5170a-b, 5172-73, 5184, 5189a, 5189e; The American Recovery and Reinvestment Act of 2009, Public Law No. 111-5, § 601; and "Public Assistance Project Administration," 44 C.F.R. §§ 206.202, and 206.209.

APPLICANT (Political subdivision or eligible applicant)	DATE SUBMITTED

COUNTY (Location of Damages. If located in multiple counties, please indicate)

APPLICANT PHYSICAL LOCATION

STREET ADDRESS			
CITY	COUNTY	STATE	ZIP CODE

MAILING ADDRESS (If different from Physical Location)

STREET ADDRESS			
POST OFFICE BOX	CITY	STATE	ZIP CODE

Primary Contact/Applicant's Authorized Agent	**Alternate Contact**
NAME	NAME
TITLE	TITLE
BUSINESS PHONE	BUSINESS PHONE
FAX NUMBER	FAX NUMBER
HOME PHONE (Optional)	HOME PHONE (Optional)
CELL PHONE	CELL PHONE
E-MAIL ADDRESS	E-MAIL ADDRESS
PAGER & PIN NUMBER	PAGER & PIN NUMBER

Did you participate in the Federal/State Preliminary Damage Assessment (PDA)? ☐ YES ☐ NO

Private Non-Profit Organization? ☐ YES ☐ NO

If yes, which of the facilities identified below best describe your organization? _____

Title 44 CFR, part 206.221(e) defines an eligible private non-profit facility as: "... any private non-profit educational, utility, emergency, medical or custodial care facility, including a facility for the aged or disabled, and other facility providing essential governmental type services to the general public, and such facilities on Indian reservations." "Other essential governmental service facility means museums, zoos, community centers, libraries, homeless shelters, senior citizen centers, rehabilitation facilities, shelter workshops and facilities which provide health and safety safety services of a governmental nature. All such facilities must be open to the general public."

Private Non-Profit Organizations must attach copies of their Tax Exemption Certificate and Organization Charter or By-Laws. If your organization is a school or educational facility, please attach information on accreditation or certification.

OFFICIAL USE ONLY: FEMA - _____ **-DR-** _____ **-** _____ **FIPS#** _____ **DATE RECEIVED** _____

DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

FORCE ACCOUNT LABOR SUMMARY

PAGE _____ OF _____

O.M.B. Control Number: 1660-0017

Expires: December 31, 2019

PAPERWORK BURDEN DISCLOSURE NOTICE

Public reporting burden for this data collection is estimated to average .5 hours per response. The burden estimates includes time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and submitting this form. You are not required to respond to this collection of information unless a valid OMB control number is displayed on this form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing the burden to: Information Collections Management, Department of Homeland Security, Federal Emergency Management Agency, 500 C Street, SW, Washington, DC 20472-3100, Paperwork Reduction Project (1660-0017). **NOTE: Do not send your completed questionnaire to this address.**

APPLICANT	PA ID #	PROJECT #	DISASTER

LOCATION/SITE	CATEGORY	PERIOD COVERING

DESCRIPTION OF WORK PERFORMED

NAME / JOB TITLE	DATES AND HOURS WORKED EACH WEEK								COSTS				
	DATE								TOTAL HOURS	HOURLY RATE	BENEFIT RATE/HR	TOTAL HOURLY RATE	TOTAL COSTS
NAME / JOB TITLE	REG.												
	O.T.												
NAME / JOB TITLE	REG.												
	O.T.												
NAME / JOB TITLE	REG.												
	O.T.												
NAME / JOB TITLE	REG.												
	O.T.												

TOTAL COSTS FOR FORCE ACCOUNT LABOR REGULAR TIME	$
TOTAL COST FOR FORCE ACCOUNT LABOR OVERTIME	$

I CERTIFY THAT THE INFORMATION ABOVE WAS OBTAINED FROM PAYROLL RECORDS, INVOICES, OR OTHER DOCUMENTS THAT ARE AVAILABLE FOR AUDIT.

CERTIFIED	TITLE	DATE

DEPARTMENT OF HOMELAND SECURITY

Federal Emergency Management Agency

FORCE ACCOUNT EQUIPMENT SUMMARY RECORD

PAGE _____ OF _____

O.M.B. Control Number: 1660-0017

Expires: December 31, 2019

PAPERWORK BURDEN DISCLOSURE NOTICE

Public reporting burden for this data collection is estimated to average .5 hours per response. The burden estimates includes time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and submitting this form. You are not required to respond to this collection of information unless a valid OMB control number is displayed on this form. Send comments regarding the accuracy of the burden estimate and any suggestions for reducing the burden to: Information Collections Management, Department of Homeland Security, Federal Emergency Management Agency, 500 C Street, SW, Washington, DC 20472-3100, Paperwork Reduction Project (1660-0017). **NOTE: Do not send your completed questionnaire to this address.**

APPLICANT	PA ID #	PROJECT #	DISASTER

LOCATION/SITE	CATEGORY	PERIOD COVERING

DESCRIPTION OF WORK PERFORMED

TYPE OF EQUIPMENT		OPERATOR'S NAME	DATES AND HOURS USED EACH DAY								COSTS		
INDICATE SIZE, CAPACITY, HOURSEPOWER, MAKE AND MODEL AS APPROPRIATE	EQUIPMENT CODE NUMBER		DATE								TOTAL HOURS	EQUIPMENT RATE	TOTAL COST
			HOURS										
			HOURS										
			HOURS										
			HOURS										
			HOURS										
			HOURS										
			HOURS										
			HOURS										
GRAND TOTAL													

I CERTIFY THAT THE ABOVE INFORMATION WAS OBTAINED FROM PAYROL RECORDS, INVOICES, OR OTHER DOCUMENTS THAT ARE AVAILABLE FOR AUDIT.

CERTIFIED	TITLE	DATE

DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY

HAZARD MITIGATION PROPOSAL (HMP)

Sheet _____ of _____ Sheets

NAME OF APPLICANT	CATEGORY	DSR NUMBER

SCOPE OF MITIGATION WORK:

ESTIMATE OF WORK

QUANTITY	UNIT	MATERIAL AND/OR DESCRIPTION	UNIT	COST (Dollars)
		TOTAL (Not to be included in DSR)		

RECOMMENDED BY (Signature)*	AGENCY	DATE
CONCURRENCE BY STATE INSPECTOR (Signature)*	AGENCY	DATE
CONCURRENCE BY LOCAL REPRESENTATIVE (Signature)*	AGENCY	DATE

NOTE: *Signature by the Federal Inspector is not an approval of this work, and signature by the State and local applicant is not a commitment to perform the work.

U.S. DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY

PROJECT WORKSHEET

O.M.B. No. 1660-0017
Expires October 31, 2008

PAPERWORK BURDEN DISCLOSURE NOTICE

Public reporting burden for this form is estimated to average 90 minutes per response. Burden means the time, effort and financial resources expended by persons to generate, maintain, disclose, or to provide information to us. You may send comments regarding the burden estimate or any aspect of the collection, including suggestions for reducing the burden to: Information Collections Management, U.S. Department of Homeland Security, Federal Emergency Management Agency, 500 C Street, SW, Washington, DC 20472, Paperwork Reduction Project (OMB Control Number 1660-0017). You are not required to respond to this collection of information unless a valid OMB number appears in the upper right corner of this form. **NOTE: Do not send your completed questionnaire to this address**.

DISASTER FEMA-_____-DR-____	PROJECT NO.	PA ID NO.	DATE	CATEGORY
DAMAGED FACILITY			WORK COMPLETE AS OF _____ : _____ %	
APPLICANT	COUNTY			
LOCATION			LATITUDE	LONGITUDE
DAMAGE DESCRIPTION AND DIMENSIONS				
SCOPE OF WORK				

Does the Scope of Work change the pre-disaster conditions at the site? ☐ Yes ☐ No

Special Considerations issues included? ☐ Yes ☐ No Hazard Mitigation proposal included? ☐ Yes ☐ No

Is there insurance coverage on this facility? ☐ Yes ☐ No

PROJECT COST

ITEM	CODE	NARRATIVE	QUANTITY/UNIT	UNIT PRICE	COST
				TOTAL COST ▶	

PREPARED BY	TITLE	SIGNATURE
APPLICANT REP.	TITLE	SIGNATURE

U.S. DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY

PROJECT WORKSHEET - Cost Estimate Continuation Sheet

O.M.B. No. 1660-0017
Expires October 31, 2008

DISASTER	PROJECT NO.	PA ID NO.	DATE	CATEGORY
______ ___				

APPLICANT	COUNTY

PROJECT COST

ITEM	CODE	NARRATIVE	QUANTITY/UNIT	UNIT PRICE	COST
				TOTAL COST ►	

PREPARED BY:	TITLE:

PROJECT WORKSHEET
INSTRUCTIONS

The Project Worksheet must be completed for each identified damaged project. A project may include damages more than one site.

After completing all Project Worksheets, submit the worksheets to your Public Assistance Coordinator.

Identifying Information

Disaster: Indicate the disaster declaration number as established by FEMA (i.e. "FEMA 1136-DR-TN", etc.).
Project No.: Indicate the project designation number you established to track the project in your system (i.e. 1,2,3, etc.).
PA ID No.: Indicate your Public Assistance identification number on this space. This is optional.
Date: Indicate the date the worksheet was prepared in MM/DD/YY format.
Category: Indicate the category of the project according to FEMA specified work categories (i.e., A,B,C,D,E,F,G). This is optional.
Applicant: Name of the government or other legal entity to which the funds will be awarded.
County: Name of the county where the damaged facility is located. If located in multiple counties, indicate "Multi-County."
Damage facility: Identify the facility and describe its basic function and pre-disaster condition.
Work Complete as of: Indicate the date the work was assessed in the format of MM/DD/YY and the percentage of work completed to that date.
Location: This item can range anywhere from an "address," "intersection of...," "1 mile south of...on..." to "county wide." If damages are in different locations or different counties please list each location. Include latitude and longitude of the project if known.
Damage Description and Dimensions: Describe the disaster-related damage to the facility, including the cause of the damage and the area or components affected.
Scope of Work: List work that has been completed, and work to be completed, which, is necessary to repair disaster-related damage.
Does the Scope of Work change the pre-disaster conditions of the site: If the work described under the Scope of Work changes the site conditions (i.e. increases/decreases the size or function of the facility or does not replace damage components in kind with like materials), check (x) yes. If the Scope of Work returns the site to its pre-disaster configuration, capacity and dimensions check (x) no.
Special Considerations: If the project includes insurable work, and/or is affected by environmental (NEPA) or historic concerns, check (x) either the Yes or No box so that appropriate action can be initiated to avoid delays in funding. Refer to *Applicant Handbook* for further information.
Hazard Mitigation: If the pre-disaster conditions at the site can be changed to prevent or reduce the disaster-related damage, check (x) Yes. If no opportunities for hazard mitigation exist check (x) no. Appropriate action will be initiated and avoid delays in funding. Refer to *Applicant Handbook* for further information.
Is there insurance coverage on this facility: Federal law requires that FEMA be notified of any entitlement for proceeds to repair disaster-related damages from insurance or any other source. Check (x) yes if any funding or proceeds can be received for the work within the Scope of Work from any source besides FEMA.

Project Cost

Item: Indicate the item number on the column (i.e. 1, 2, 3, etc.). Use additional forms as necessary to include all items.
Code: If using the FEMA cost codes, place the appropriate number here.
Narrative: Indicate the work, material or service that best describes the work (i.e. "force account labor overtime", "42 in. RCP", "sheet rock replacement", etc.).
Quantity/Unit: List the amount of units and the unit of measure ("48/cy", "32/lf", "6/ea", etc.).
Unit Price: Indicate the price per unit.
Cost: This item can be developed from cost to date, contracts, bids, applicant's experience in that particular repair work, books which lend themselves to work estimates, such as RS Means, or by using cost codes supplied by FEMA.
Total Cost: Record total cost of the project.

Prepared By: Record the name, title, and signature of the person completing the Project Worksheet.
Applicant Rep.: Record the name, title, and signature of Applicant's representative.

Records Requirements

Please review the *Applicant Handbook, FEMA 323* for detailed instructions and examples.
For all completed work, the applicant must keep the following records:

- *Force account labor documentation sheets identifying the employee, hours worked, date and location;
- *Force account equipment documentation sheets identifying specific equipment, operator, usage by hour/mile and cost used;
- *Material documentation sheets identifying the type of material, quantity used and cost;
- *Copies of all contracts for work and any lease/rental equipment costs.

For all estimated work, keep calculations, quantity estimates, pricing information, etc. as part of the records to document the "cost/estimate" for which funding is being requested.

U.S. DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY

PROJECT WORKSHEET - Maps and Sketches Sheet

O.M.B. No. 1660-0017
Expires October 31, 2008

DISASTER FEMA-_____ -DR-____	PROJECT NO.	PA ID NO.	DATE	CATEGORY
APPLICANT		COUNTY		

U.S. DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY

PROJECT WORKSHEET - Photo Sheet

O.M.B. No. 1660-0017
Expires October 31, 2008

DISASTER FEMA-_____ -DR-____	PROJECT NO.	PA ID NO.	DATE	CATEGORY
APPLICANT		COUNTY		

PHOTO	PHOTO
DESCRIPTION	DESCRIPTION

DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY

VALIDATION WORKSHEET

DISASTER:

FEMA- _____ **-DR-** _____

APPLICANT	PA ID NO.	PROJECT WORKSHEET NO.
SPECIALIST	**AGENCY**	**TELEPHONE NO.**

I- GENERAL- ALL PROJECTS

VALIDATION ITEM	REMARKS

☐ Review projects
☐ Visit site
☐ Statement of work
  ☐ Accurate
  ☐ Complete
  ☐ Eligible
☐ Pictures
☐ Sketches/drawings	

II- COMPLETED WORK

☐ Forced Account Labor
  ☐ Eligible employee
  ☐ Hours
  ☐ Regular
  ☐ Overtime
☐ Fringe benefits
  ☐ Regular
  ☐ Overtime
☐ Calculations	

III- FORCE ACCOUNT EQUIPMENT

☐ Labor hours exceeds or match Equipment hours ☐ FEMA rates used ☐ PAC approved rates used ☐ Mileage used for automobiles, busses, pickups, and ambulances ☐ Calculations	

IV- LEASED/RENTAL EQUIPMENT

☐ Invoice ☐ Price reasonable ☐ Operation/labor cost ☐ Gasoline/oil/lubricants ☐ Eligible repairs/parts ☐ Calculations	

V- MATERIALS

☐ Purchase orders/invoices ☐ Inventory records/stock tickets ☐ Calculations	

VI- CONTRACT	
VALIDATION ITEM	**REMARKS**
☐ Price reasonable ☐ Competitive bids ☐ Exception ☐ Follow procurement procedures ☐ Calculations	
VII- WORK TO BE COMPLETED	
☐ Cost estimating method approved by PAC ☐ Calculations	
VIII- SPECIAL CONSIDERATIONS	
☐ Insurance ☐ Mitigation ☐ Environmental ☐ Historic	

ADDITIONAL REMARKS

DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY

PROJECT VALIDATION FORM

DISASTER:
FEMA- _____ **-DR-** _____

APPLICANT	DATE	PA ID NO.

SPECIALIST	AGENCY

CONTACT PERSON	TELEPHONE NO.

The projects listed below were validated from:

☐ **Sample 1 C.V.** ☐ **Sample 1 and 2 C.V.**

VALIDATION

A	B	C	D	E
Project Worksheet No.	**Applicant Estimate**	**Eligibility Variance**	**Cost Estimate Variance**	**Comments**
	$	$	$	
SUBTOTAL	B $	C $	D $	**PERCENT OF VARIANCE** **%** *(F divided by B)*
TOTAL VARIANCE (COL. C + D) = F			F $	

II-VALADIATION RESULTS

☐ VARIANCE WITHIN 20% 1st VALIDATION ☐ VARIANCE WITHIN 20% 2nd VALIDATION
☐ VARIANCE WITHIN 20% 1st & 2nd VALIDATION

III-RECOMMENDATION

☐ APPROVE FUNDING, VARIANCE WITHIN 20% ☐ PROVIDE TECHNICAL ASSISTANCE, VARIANCE EXCEEDS 20%

DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY
SPECIAL CONSIDERATION QUESTIONS

O.M.B. NO. 1660-0017
Expires October 31, 2008

APPLICANT	PA ID NO.	DATE

PROJECT NAME	PROJECT NO.	LOCATION

Form must be filledout - for each project.

1. Does the damaged facility or item of work have insurance and/or is it an insurable risk? (e.g., buildings, equipment, vehicles, etc.)
☐ Yes ☐ No ☐ Unsure
Comments

2. Is the damaged facility located within a floodplain or coastal high hazard area/or does ti have an impact on a floodplain or wetland?
☐ Yes ☐ No ☐ Unsure
Comments

3. Is the damaged facility or item of work located within or adjacent to a Coastal Barrier Resource System Unit or an Otherwise Protected rea?
☐ Yes ☐ No ☐ Unsure
Comments

4. Will the proposed facility repairs/reconstruction change the pre-disaster condition? (e.g., footprint, material, location, capacity, use or function)
☐ Yes ☐ No ☐ Unsure
Comments

5. Dose the applicant have a hazard mitigation proposal or would the applicant like technical assistance for a hazard mitigation proposal?
☐ Yes ☐ No ☐ Unsure
Comments

6. Is the damaged facility on the National Register of Historic Places or the state historic listing? Is it older than 50 years? Are there other, sililar buildings near the site? ☐ Yes ☐ No ☐ Unsure
Comments

7. Are there any pristine or undisturbed areas on, or near, the project site? Are there large tracts of forestland?
☐ Yes ☐ No ☐ Unsure
Comments

8. Are there any hazardous materials at or adjacnt to the damaged facility and/or item of work?
☐ Yes ☐ No ☐ Unsure
Comments

9.Are there any other environmental or controversial issues associated with the damaged facility and/or item of work?
☐ Yes ☐ No ☐ Unsure
Comments

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DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY
PNP FACILITY QUESTIONNAIRE

O.M.B. NO. 1660-0017
Expires December 31, 2011

PAPERWORK BURDEN DISCLOSURE NOTICE

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FEMA and State personnel will use this questionnaire to determine the eligibility of specific facilities of an approved Private Non-Profit (PNP) organization (See 44 CFR 206.221). Owners of critical facilities (i.e., power, water (including providing by an irrigation organization or facility, if it is not provided solely for irrigation purposes), sewer, wastewater treatment, communications and emergency medical care) can apply directly to FEMA for assistance for emergency work (debris removal and emergency protective measures) and permanent work (repair, restore or replace a damaged facility). Owners of non-critical facilities can apply directly to FEMA for assistance for emergency work, but must first apply to the U. S. Small Business Administration (SBA) for assistance for permanent work. If the owner of a non-critical facility does not qualify for an SBA loan or the cost to repair the damaged facility exceeds the SBA loan amount, the owner may apply to FEMA for assistance.

1. Name of PNP Organization _____

2. Name of the damaged facility and location

_____

3. What was the primary purpose of the damaged facility _____

4. Is the facility a critical facility as described above? ☐ Yes ☐ No

5. Who may use the faciltiy _____

6. What fee, if any, is charged for the use of the faciltiy _____

7. Was the facility in use at the time of the disaster? ☐ Yes ☐ No

8. Did the facility sustain damage as a direct result of the disaster? ☐ Yes ☐ No

9. What type of assistance is being requested? _____

10. Does the PNP organization own the facility? ☐ Yes ☐ No

11. If "Yes" obtain proof of ownership; check here if attached. ☐

12. Does the PNP organization have the legal responsibility to repair the facility? ☐ Yes ☐ No

13. If "Yes", provide proof of legal responsibility; check here if attached. ☐ Yes ☐ No

14. Is the facility insured? ☐ Yes ☐ No

15. If "Yes", obtain a copy of the insurance policy; check here if attached. ☐

Additional information or comments:

CONTACT PERSON	DATE

DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY

HISTORIC REVIEW ASSESSMENT FOR DETERMINATION OF ADVERSE EFFECT

PA ID NO.	PROJECT NO.	LATITUDE/LONGITUDE

ADDRESS/LOCATION OF FACILITY/SITE	HISTORIC NAME AND ID #

HISTORIC STATUS ☐ NHL ☐ NR/NR eligible ☐ State Register or other ☐ Contributing to Historic District

1. Describe disaster damage, particularly as it relates to character-defining features:

2. The proposed scope of work will (check all that apply):

☐ Repair or replace non character-defining features
☐ Repair and or/replace historic features/elements in kind to return facility to pre-disaster condition.
☐ Alter or remove historic features/elements.
☐ Add non-historic features/elements to a historic facility, setting or
☐ Disturb, destroy or make archeological resources
☐ Include mitigation, an alternate project or an improved project.
☐ Other _____

3. Describe measures to prevent or minimize loss or impairment of character-defining features:

4. Attachments:

☐ Maps ☐ Field Notes ☐ Scope of Work ☐ Site Plan ☐ Nation Register Nomination Form
☐ Drawings ☐ Research Material ☐ Project Worksheet ☐ Specifications ☐ Summary Views of Interested Parties
☐ Photographs ☐ Archeological ☐ Other

5. Conclusions:

☐ 5a. No Character-defining features will be affected.
☐ 5b. The above action(s) meets the conditions for a Programmatic Exclusion #_____ of the Programmatic Agreement governing historic review.
☐ 5c. The above action(s) substantially conforms with the applicable parts of the Secretary of Interior's Standards and Guidelines for Archeology and Historic Preservation.
☐ 5d. Further consultation with the SHPO and applicant in accordance with the Programmatic Agreement is required.
☐ 5e. Development of STMA or Memorandum of Agreement is required to treat the adverse effect.

6. Assessment of Adverse Effect (check one) ☐ No Adverse Effect ☐ Adverse Effect

7. Specialist: Your signature shows that you have reviewed this form and related material for conformity with requirements in FEMA's Programmatic Agreement governing compliance with the National Historic Preservation Act; applicable parts of the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings 1992 (Standards), the Secretary of the Interior's Guidelines for Archeological Documentation (Guidelines), or any other applicable Secretary of the Interior's Standards, CR 44 CFR Part 206, and FEMA Management Policies, and have provided your best professional opinion.

COMMENTS

NAME	FIELD OF EXPERTISE	DATE

8. Action Taken and Date

DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY
MATERIALS SUMMARY RECORD

PAGE _____ OF _____

O.M.B. No. 1660-0017
Expires December 31, 2011

APPLICANT	PA ID NO.	PROJECT NO.	DISASTER
LOCATION/SITE		CATEGORY	PERIOD COVERING

DESCRIPTION OF WORK PERFORMED

VENDOR	DESCRIPTION	QUAN.	UNIT PRICE	TOTAL PRICE	DATE PURCHASED	DATE USED	INFO FROM (CHECK ONE) INVOICE	STOCK
GRAND TOTAL								

I CERTIFY THAT THE INFORMATION WAS OBTAINED FROM PAYROLL RECORDS, INVOICES, OR OTHER DOCUMENTS THAT ARE AVAILABLE FOR AUDIT.

CERTIFIED	TITLE	DATE

FEMA Form 90-124, FEB 09

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DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY

RENTED EQUIPMENT SUMMARY RECORD

PAGE _____ OF _____

O.M.B. No. 1660-0017
Expires December 31, 2011

APPLICANT	PA ID NO.	PROJECT NO.	DISASTER

LOCATION/SITE	CATEGORY	PERIOD COVERING

DESCRIPTION OF WORK PERFORMED

TYPE OF EQUIPMENT Indicate size, Capacity, Horsepower Make and Model as Appropriate	DATES AND HOURS USED	RATE PER HOUR		TOTAL COST	VENDOR	INVOICE NO.	DATE AND AMOUNT PAID	CHECK NO.
		W/OPR	W/OUT OPR					

GRAND TOTAL _____

I CERTIFY THAT THE ABOVE INFORMATION WAS OBTAINED FROM PAYROLL RECORDS, INVOICES, OR OTHER DOCUMENTS THAT ARE AVAILABLE FOR AUDIT.

CERTIFIED	TITLE	DATE

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DEPARTMENT OF HOMELAND SECURITY
FEDERAL EMERGENCY MANAGEMENT AGENCY
CONTRACT WORK SUMMARY RECORD

PAGE _____ OF _____

O.M.B. No. 1660-0017
Expires December 31, 2011

APPLICANT	PA ID NO.	PROJECT NO.	DISASTER

LOCATIOJN/SITE	CATEGORY	PERIOD COVERING

DESCRIPTION OF WORK PERFORMED

DATES WORKED	CONTRACTOR	BILLING/INVOICE NUMBER	AMOUNT	COMMENTS- SCOPE
GRAND TOTAL				

I CERTIFY THAT THE INFORMATION WAS OBTAINED FROM PAYROLL, INVOICES, OR OTHER DOCUMENT THAT ARE AVAILABLE FOR AUDIT.

CERTIFIED	TITLE	DATE

Print Form

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DEPARTMENT OF HOMELAND SECURITY FEDERAL EMERGENCY MANAGEMENT AGENCY APPLICANT'S BENEFITS CALCULATION WORKSHEET	PAGE _____ OF _____	***O.M.B. No. 1660-0017*** ***Expires December 31, 2011***

APPLICANT	PA ID NO.
DISASTER	PROJECT NO.

FRINGE BENEFITS (by %)	REGULAR TIME	OVERTIME
HOLIDAYS		
VACATION LEAVE		
SICK LEAVE		
SOCIAL SECURITY		
MEDICARE		
UNEMPLOYMENT		
WORKER'S COMP.		
RETIREMENT		
HEALTH BENEFITS		
LIFE INS. BENEFITS		
OTHER		
TOTAL in % annual salary		

COMMENTS

I CERTIFY THAT THE INFORMATION ABOVE WAS TRANSCRIBED FROM PAYROLL RECORDS OR OTHER DOCUMENTS WHICH ARE AVAILABLE

Name	TITLE	DATE

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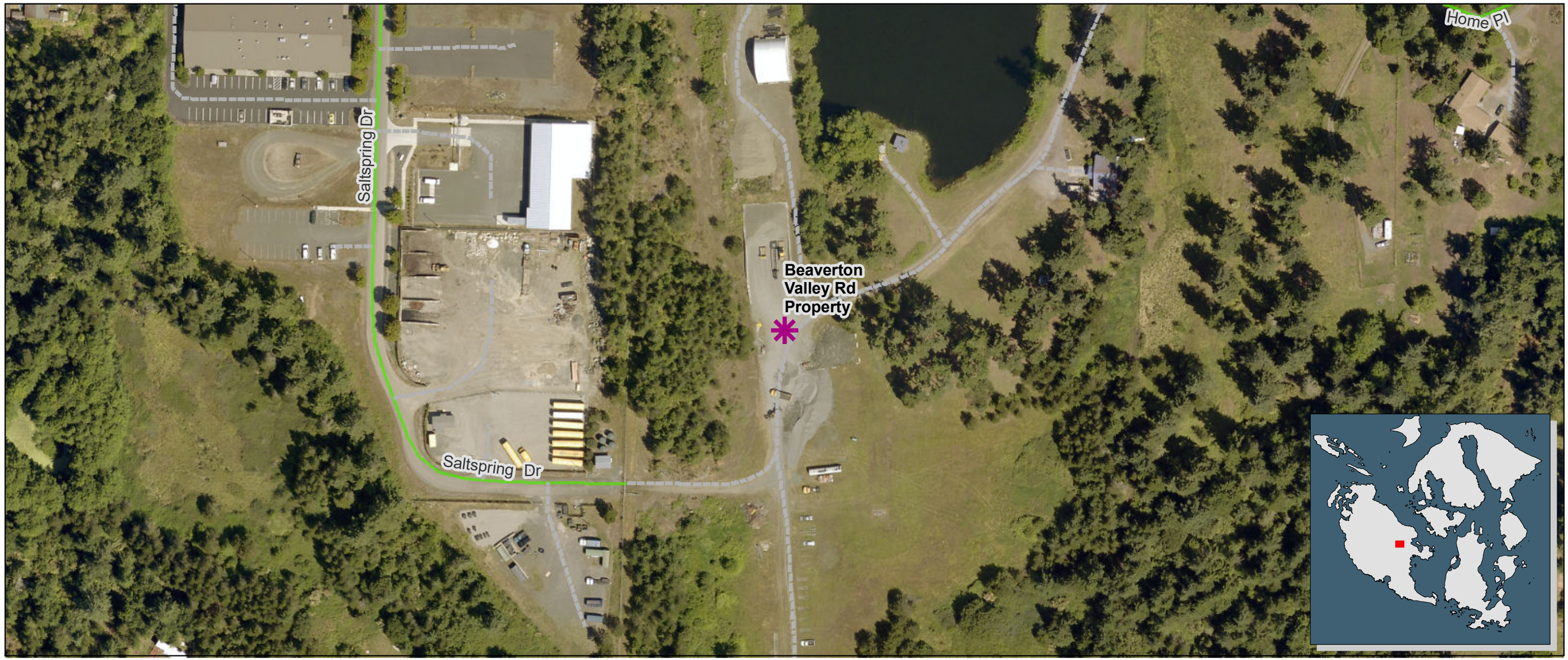
ATTACHMENT 2

DMS Site Selection Worksheets, Site Plans, and Priority Road Routes



Site Name: Beaverton Valley Rd Property (SJI1)
Site Location: 1609 Beaverton Valley Rd - San Juan Island
Owner: SJC Contact: Mark Herrenkohl - MarkH@sanjuanco.com

Types of Debris/Site: Temporary Storage
Debris Volume (Cubic Yards): TBD
Total Acres: 27.5 Usable Acres: ~10

Notes: This site is currently under development and may have limited space for temporary storage of debris in the future.

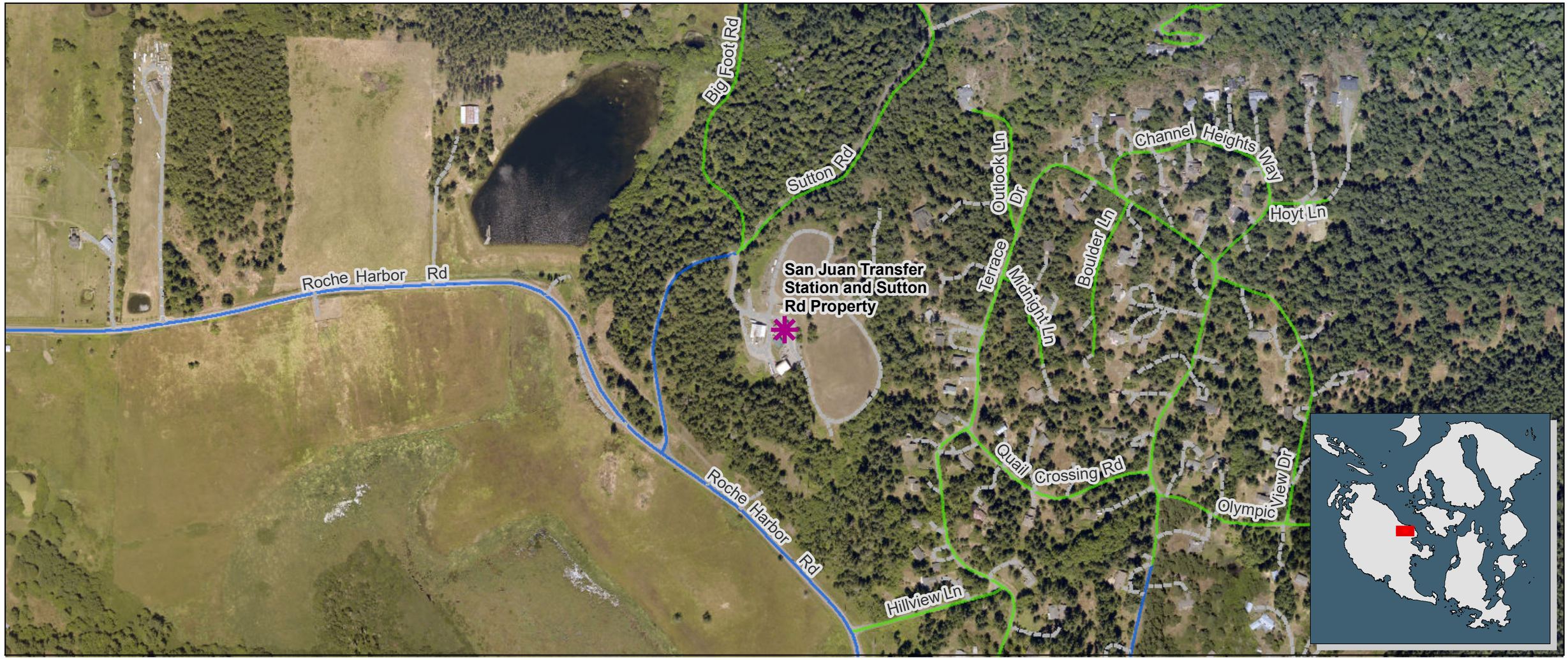
SAN JUAN COUNTY WASHINGTON

This map is derived from San Juan County's Geographic Information System (GIS). It is intended for reference only and

0 60 120 240 360 480 Feet

Debris Management Sites

Beaverton Valley Rd Property



Site Name: San Juan Transfer Station and Sutton Rd Property (SJI2)
Site Location: 212 Sutton Rd - San Juan Island
Owner: SJC/TOFH Contact: Mark Herrenkohl - MarkH@sanjuanco.com

Types of Debris/Site: Temporary Storage
Debris Volume (Cubic Yards): TBD
Total Acres: 7/27 Usable Acres: ~5/5

Notes: The SJC Sutton Road property is currently undeveloped and has limited space for temporary storage due to tree cover.

SAN JUAN COUNTY WASHINGTON

This map is derived from San Juan County's Geographic Information System (GIS). It is intended for reference only and

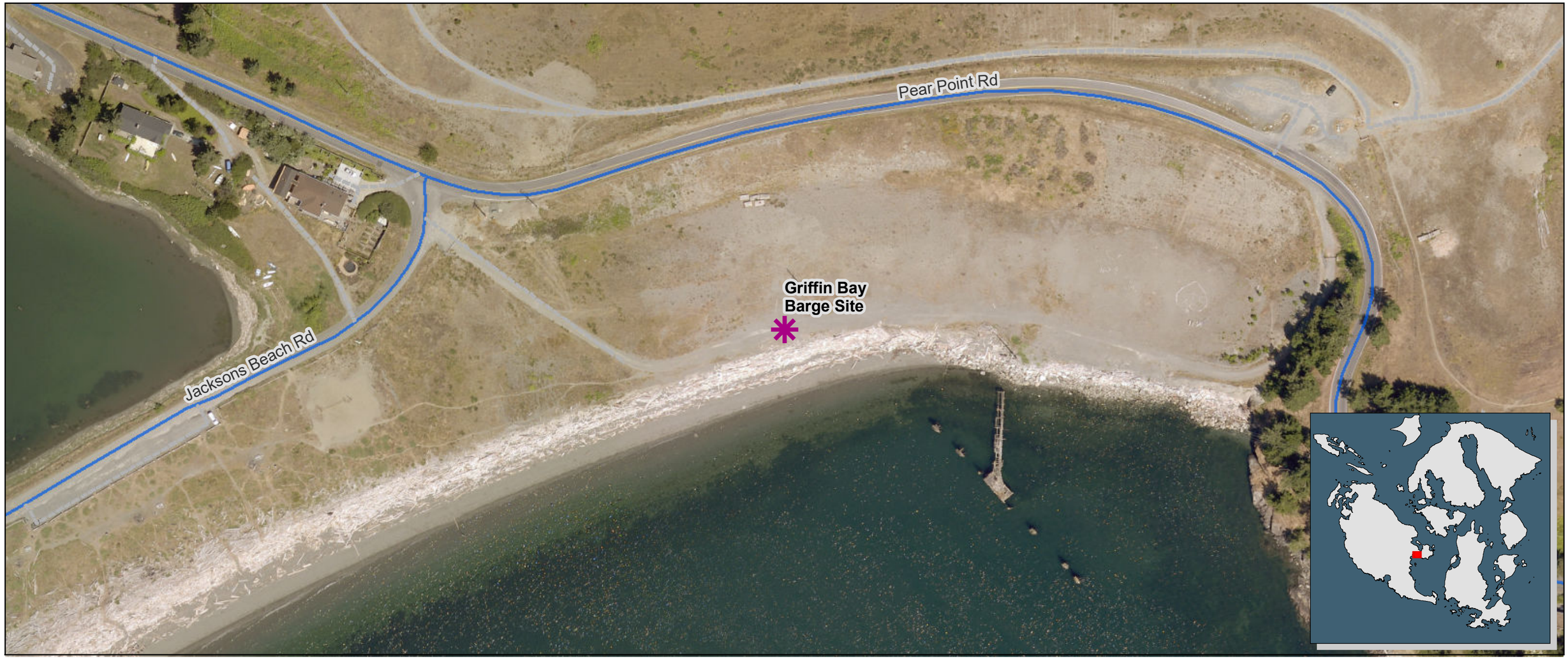
0 205 410 820 1,230 1,640 Feet

Debris Management Sites

San Juan Transfer Station and Sutton Rd Property

Path: O:\Projects\Solid Waste\Debris Sites\Solid Waste Debris Sites by Site_DDP.mxd

Drawn By: Greg Sutherland Date: August 16, 2018 Time: 12:06:27 PM



Site Name: Griffin Bay Barge Site (SJI3)
Site Location: Corner of Jacksons Beach and Pear Point Rds - San Juan Island
Owner: SJC Contact: Mark Herrenkohl - MarkH@sanjuanco.com

Types of Debris/Site: Transport Location
Debris Volume (Cubic Yards): NA
Total Acres: NA Usable Acres: NA

Notes: The Griffin Bay barge landing is a central location on San Juan Island for transporting equipment and debris material.

SAN JUAN COUNTY WASHINGTON

This map is derived from San Juan County's Geographic Information System (GIS). It is intended for reference only and

0 60 120 240 360 480 Feet

Debris Management Sites

Griffin Bay Barge Site

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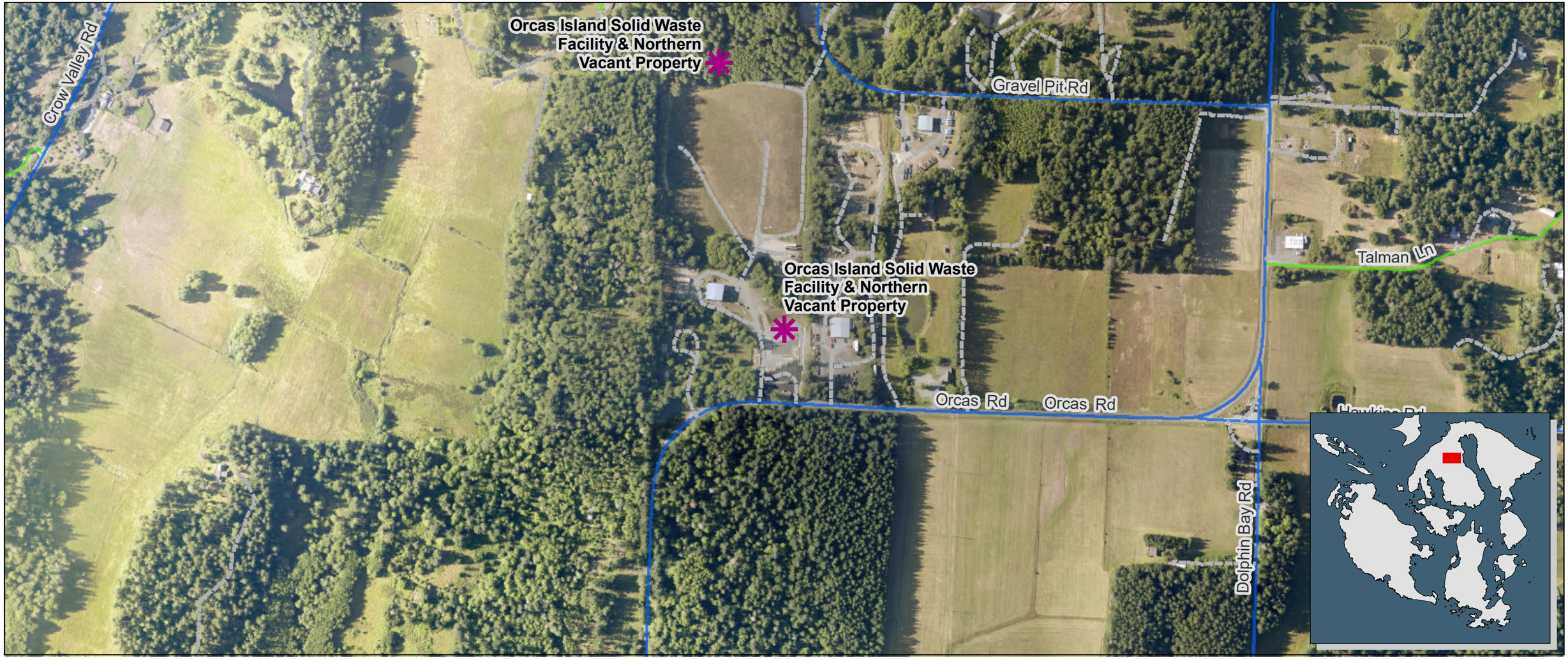
Drawn By: Greg Sutherland

Date: August 16, 2018 Time: 12:06:30 PM



Site Name: Orcas Island Solid Waste Facility & Northern Vacant Property (OI1)
Site Location: 3398 Orcas Rd - Orcas Island
Owner: SJC Contact: Mark Herrenkohl - MarkH@sanjuanco.com

Types of Debris/Site: Temporary Storage
Debris Volume (Cubic Yards): TBD
Total Acres: 17/15 Usable Acres: ~10/15

Notes: A central location for temporary storage of debris material on Orcas Island. The 15 acre vacant property to the north of the landfill could be cleared and used for temporary/permanent storage of debris.

SAN JUAN COUNTY WASHINGTON

This map is derived from San Juan County's Geographic Information System (GIS). It is intended for reference only and

0 205 410 820 1,230 1,640 Feet

Debris Management Sites

Orcas Island Solid Waste Facility & Northern Vacant Property

Path: O:\Projects\Solid Waste\Debris Sites\Solid Waste Debris Sites by Site_DDP.mxd

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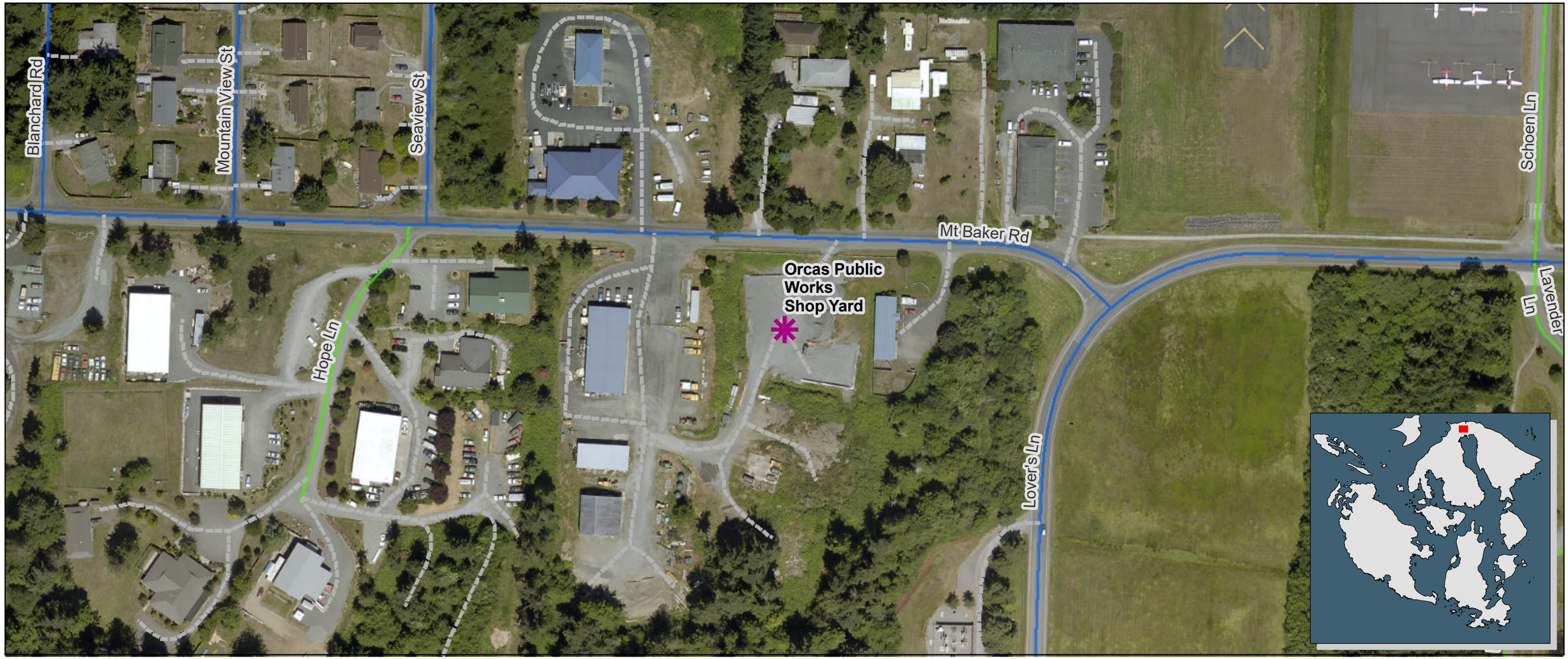


Site Name: Orcas Public Works Shop Yard (OI2)
Site Location: 1395 Mt Baker Rd - Orcas Island
Owner: SJC Contact: Mark Herrenkohl - MarkH@sanjuanco.com

Types of Debris/Site: Temporary Storage
Debris Volume (Cubic Yards): TBD
Total Acres: ~8 Usable Acres: ~4

Notes: Limited space for debris material storage but there is room for equipment storage.

SAN JUAN COUNTY WASHINGTON

This map is derived from San Juan County's Geographic Information System (GIS). It is intended for reference only and

0 60 120 240 360 480 Feet

Debris Management Sites

Orcas Public Works Shop Yard

Site Name: Obstruction Pass Marine Facility (OI3)
Site Location: 1933 Obstruction Pass Rd - Orcas Island
Owner: SJC Contact: Mark Herrenkohl - MarkH@sanjuanco.com

Types of Debris/Site: Transport Location
Debris Volume (Cubic Yards): NA
Total Acres: NA Usable Acres: NA

Notes: Transport location for eastern Orcas Island.

SAN JUAN COUNTY WASHINGTON

This map is derived from San Juan County's Geographic Information System (GIS). It is intended for reference only and

0 60 120 240 360 480 Feet

Debris Management Sites

Obstruction Pass Marine Facility

Path: O:\Projects\Solid Waste\Debris Sites\Solid Waste Debris Sites by Site_DDP.mxd

Drawn By: Greg Sutherland Date: August 16, 2018 Time: 12:06:31 PM

Site Name: Port Stanley Closed Landfill (LI1)
Site Location: 3971 Port Stanley Rd - Lopez Island
Owner: SJC Contact: Mark Herrenkohl - MarkH@sanjuanco.com

Types of Debris/Site: Temporary Storage
Debris Volume (Cubic Yards): TBD
Total Acres: 20 Usable Acres: ~15

Notes: A central location for temporary storage of debris material on Lopez Island.

SAN JUAN COUNTY WASHINGTON

0 60 120 240 360 480 Feet

Debris Management Sites

Port Stanley Closed Landfill

Site Name: Lopez Public Works Shop Yard (LI2)
Site Location: 2467 Fisherman Bay Rd - Lopez Island
Owner: SJC Contact: Mark Herrenkohl - MarkH@sanjuanco.com

Types of Debris/Site: Temporary Storage
Debris Volume (Cubic Yards): TBD
Total Acres: ~3 Usable Acres: ~1.5

Notes: Limited space for debris material storage but room for equipment storage.

SAN JUAN COUNTY WASHINGTON

This map is derived from San Juan County's Geographic Information System (GIS). It is intended for reference only and

0 60 120 240 360 480 Feet

Debris Management Sites

Lopez Public Works Shop Yard

Site Name: MacKaye Harbor Gravel Pit & Marine Facility (LI3)
Site Location: 74 Norman Rd - Lopez Island
Owner: SJC Contact: Mark Herrenkohl - MarkH@sanjuanco.com

Types of Debris/Site: Temporary Storage and Transport
Debris Volume (Cubic Yards): TBD
Total Acres: ~2 Usable Acres: ~1

Notes: Some storage for debris material on south side of Lopez Island. Transport of debris material and equipment from boat ramp.

SAN JUAN COUNTY WASHINGTON

0 185 370 740 1,110 1,480 Feet

Debris Management Sites

MacKaye Harbor Gravel Pit & Marine Facility

Path: O:\Projects\Solid Waste\Debris Sites\Solid Waste Debris Sites by Site_DDP.mxd

Drawn By: Greg Sutherland Date: August 16, 2018 Time: 12:06:21 PM

Site Name: Port Stanley Gravel Pit (LI4)
Site Location: 680 Port Stanley Rd, Lopez, WA - Lopez Island
Owner: SJC Contact: Mark Herrenkohl - MarkH@sanjuanco.com

Types of Debris/Site: Temporary Storage
Debris Volume (Cubic Yards): TBD
Total Acres: 7.5 Usable Acres: ~5

Notes: Storage for debris material on north side of Lopez Island.

SAN JUAN COUNTY WASHINGTON

This map is derived from San Juan County's Geographic Information System (GIS). It is intended for reference only and

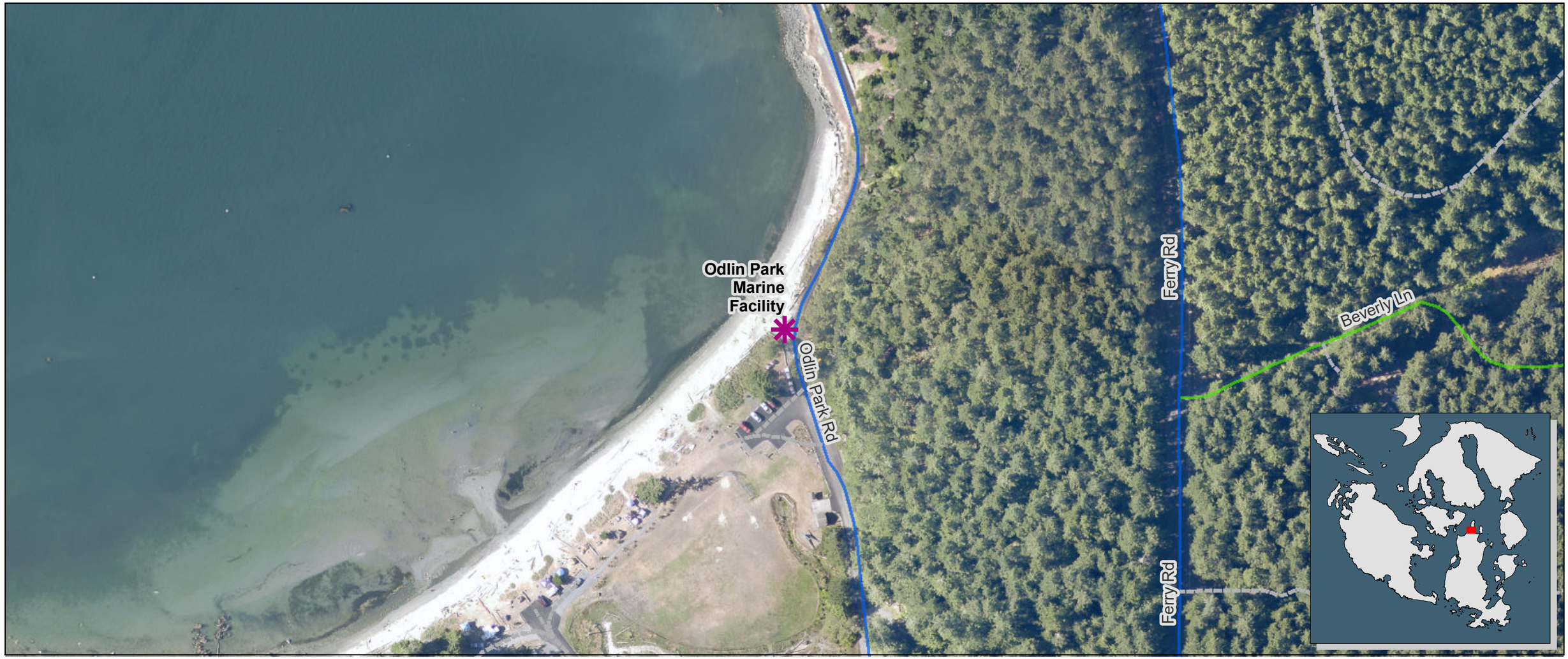
0 60 120 240 360 480 Feet

Debris Management Sites

Port Stanley Gravel Pit

Path: O:\Projects\Solid Waste\Debris Sites\Solid Waste Debris Sites by Site_DDP.mxd

Drawn By: Greg Sutherland Date: August 16, 2018 Time: 12:06:17 PM



Site Name: Odlin Park Marine Facility (LI5)
Site Location: Near end of Odlin Park Rd (off Ferry Rd) - Lopez Island
Owner: SJC Contact: Mark Herrenkohl - MarkH@sanjuanco.com

Types of Debris/Site: Transport Location
Debris Volume (Cubic Yards): NA
Total Acres: NA Usable Acres: NA

Notes: Transport location for northern Lopez Island.

SAN JUAN COUNTY WASHINGTON

This map is derived from San Juan County's Geographic Information System (GIS). It is intended for reference only and

0 60 120 240 360 480 Feet

Debris Management Sites

Odlin Park Marine Facility

Site Name: Hunter Bay Marine Facility (LI6)
Site Location: Islandale Rd (Crab Island Rd) - Lopez Island
Owner: SJC Contact: Mark Herrenkohl - MarkH@sanjuanco.com

Types of Debris/Site: Transport Location
Debris Volume (Cubic Yards): NA
Total Acres: NA Usable Acres: NA

Notes: Transport location for southeastern Lopez Island.

SAN JUAN COUNTY WASHINGTON

This map is derived from San Juan County's Geographic Information System (GIS). It is intended for reference only and

0 60 120 240 360 480 Feet

Debris Management Sites

Hunter Bay Marine Facility

Path: O:\Projects\Solid Waste\Debris Sites\Solid Waste Debris Sites by Site_DDP.mxd

Drawn By: Greg Sutherland

Date: August 16, 2018 Time: 12:06:23 PM

Site Name: Shaw Public Works Shop Yard (SI1)
Site Location: Corner of Blind Bay and Squaw Bay Rds - Shaw Island
Owner: SJC Contact: Mark Herrenkohl - MarkH@sanjuanco.com

Types of Debris/Site: Temporary Storage
Debris Volume (Cubic Yards): TBD
Total Acres: 1 Usable Acres: 0.5

Notes: Limited space for debris material storage but room for equipment storage.

SAN JUAN COUNTY WASHINGTON

This map is derived from San Juan County's Geographic Information System (GIS). It is intended for reference only and

0 60 120 240 360 480 Feet

Debris Management Sites

Shaw Public Works Shop Yard

Path: O:\Projects\Solid Waste\Debris Sites\Solid Waste Debris Sites by Site_DDP.mxd

Drawn By: Greg Sutherland Date: August 16, 2018 Time: 12:06:15 PM

Site Name: Neck Point Cove Beach Landing (SI2)
Site Location: End of Harbor Way - Shaw Island
Owner: Public Contact: Mark Herrenkohl - MarkH@sanjuanco.com

Types of Debris/Site: Transport Location
Debris Volume (Cubic Yards): NA
Total Acres: NA Usable Acres: NA

Notes: Limited transport location for Shaw Island.

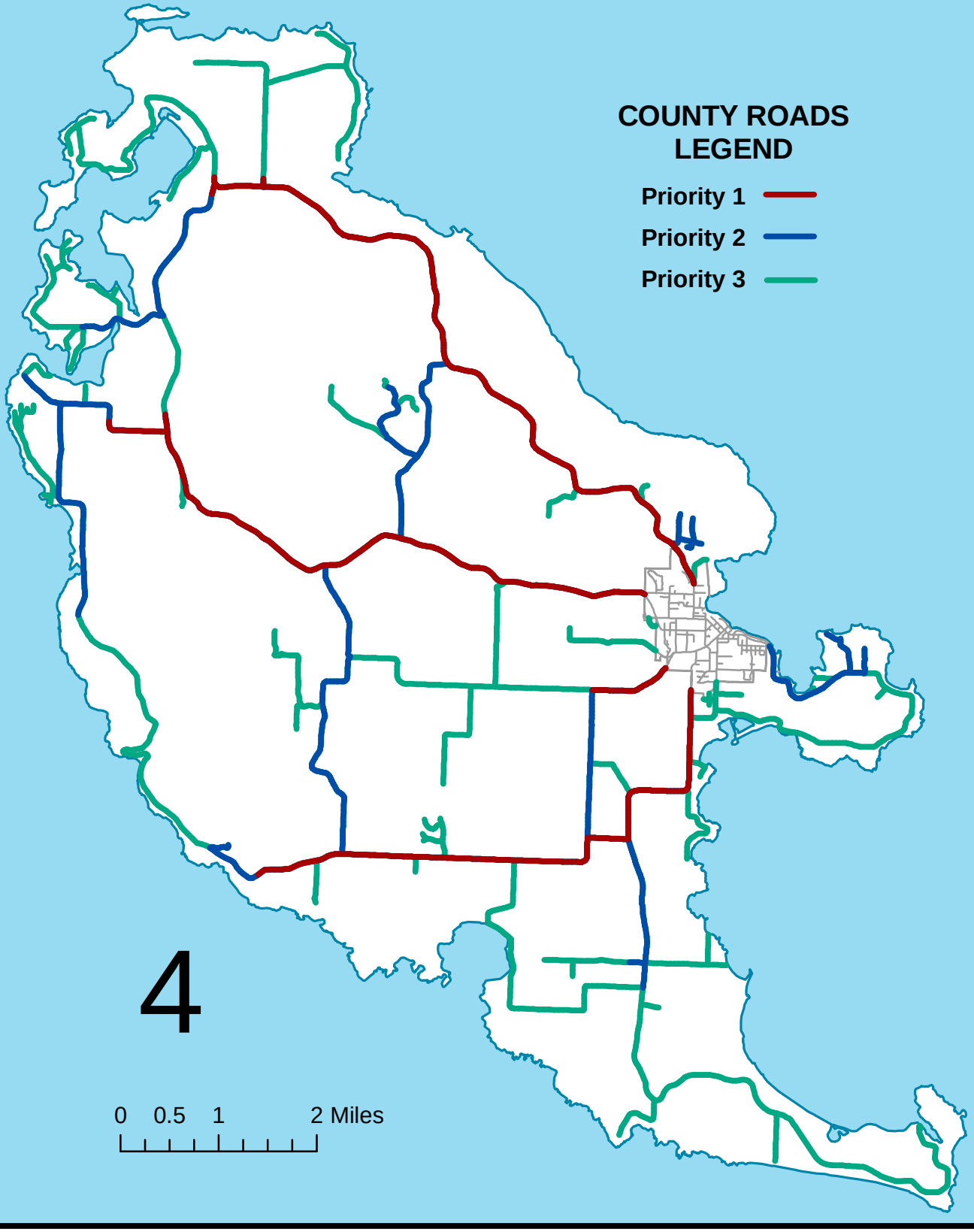
SAN JUAN COUNTY WASHINGTON

0 60 120 240 360 480 Feet

Debris Management Sites

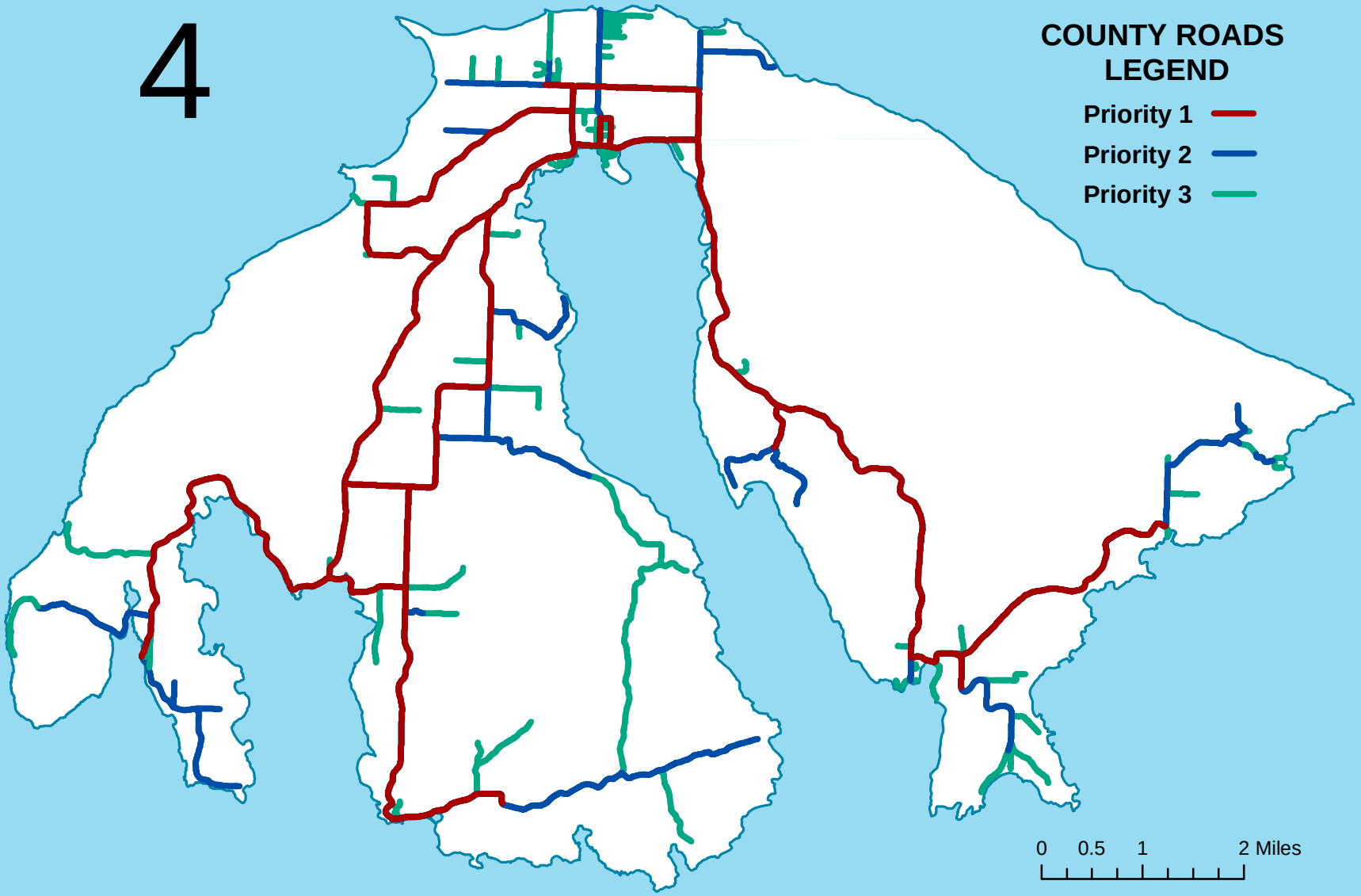
Neck Point Cove Beach Landing

SAN JUAN ISLAND
PRIORITY SNOW ROUTES



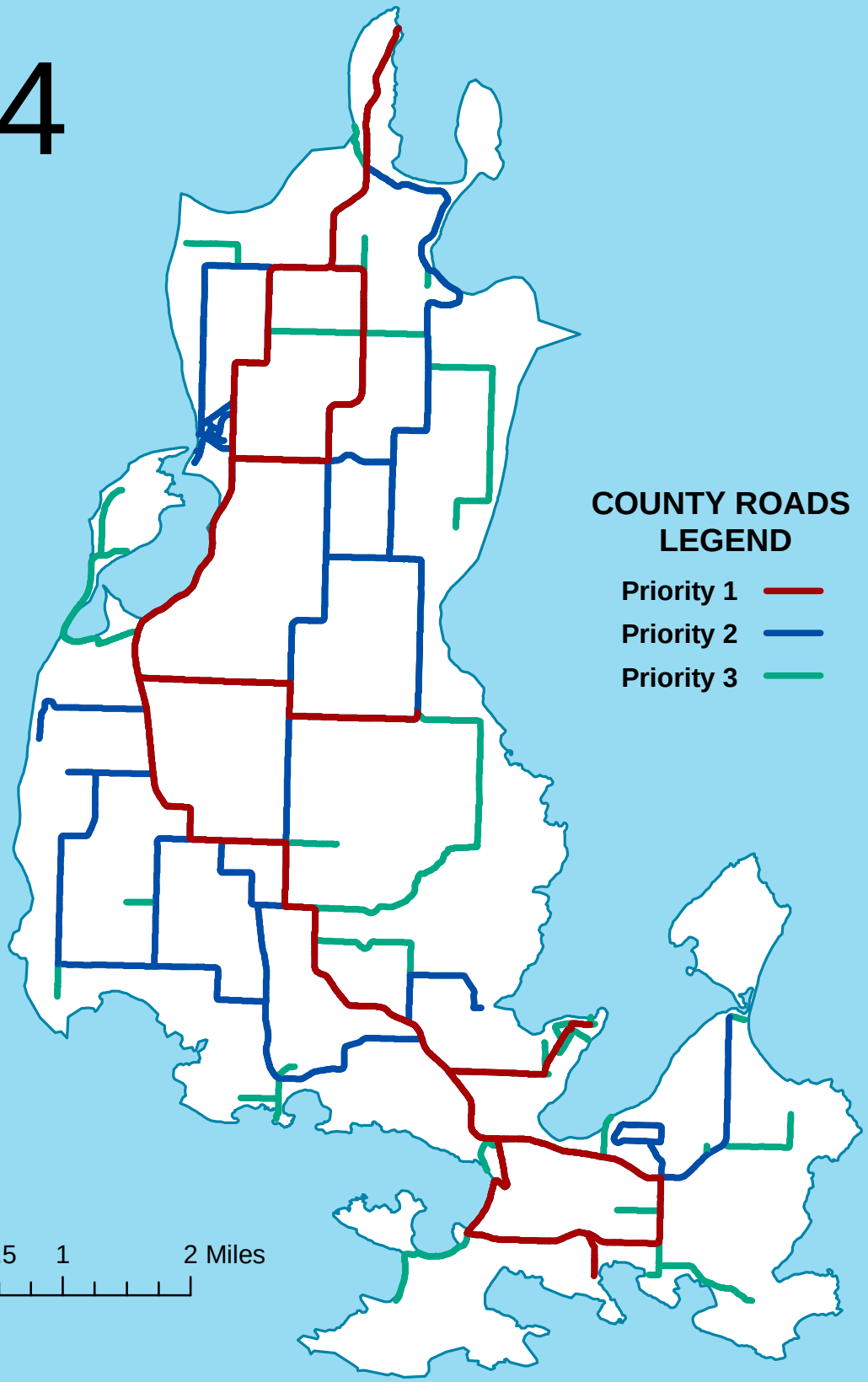
ORCAS ISLAND
PRIORITY SNOW ROUTES

4



LOPEZ ISLAND
PRIORITY SNOW ROUTES

4



ATTACHMENT 3

Debris Resources and List of Pre-Qualified Contractors

Pre-qualified Washington State contractors include:

- San Juan Sanitation (Certificate No. G-144) – Washington Utilities and Transportation Commission Certificated Hauler of Solid Waste for San Juan County;
- Stericycle of Washington, Inc. (Certificate No. G-244) – Washington State Approved Medical Waste Collection and Disposal Contractor; and
- Waste Management – Healthcare Solutions of Washington (Certificate No. G-237) – Washington State Approved Medical Waste Collection and Disposal Contractor.

Additional pre-approved contractors will be provided when available.

Unit Price Contract for Debris Removal

ARTICLE 1. AGREEMENT BETWEEN PARTIES

This contract is made and entered into on this the ____ day of_____, 20___, by and between the jurisdiction of _____, hereinafter called the ENTITY, and _____, hereinafter called the CONTRACTOR.

ARTICLE 2. SCOPE OF WORK

This contract is issued pursuant to the Solicitation and Procurement on _____, for the removal of debris caused by the sudden natural or human-made disaster of _____ to _____. It is the intent of this contract to provide equipment and personnel to remove all hazards to life and property in the affected communities. Cleanup, demolition, and removal will be limited to 1) that which is determined to be in the interest of public safety, and 2) that which is considered essential to the economic recovery of the affected area.

The Work shall consist of cleanup or demolition and removal as outlined in the specifications, on drawings, and on block sector maps attached to the invitation for bid number _____.

ARTICLE 3. SCHEDULE OF WORK

Time is of the essence for this debris removal contract. Notice to proceed with the Work: The Work under this contract will commence on _____, 20__. Maximum allowable time for completion will be _____ calendar days, unless the ENTITY initiates additions or deletions by written change order. Subsequent changes in cost and completion time will be equitably negotiated by both parties pursuant to applicable State law. Liquidated damages shall be assessed at $_____/calendar day for any days over the approved contract amount.

ARTICLE 4. CONTRACT PRICE

The unit prices for performing the Work stipulated in the contract documents, which have been transposed from the low bidder's bid schedule, are as follows:

Quantity	Unit of Measure	Description	Unit Cost	Total
Subtotal				$
Cost of Bonds				$
Grand Total				$
Debris shall be classified as one of the following units: cubic yards, each, square foot, Lineal foot, gallon, or an approved unit measure applicable to the specific material to be removed.				

ARTICLE 5. PAYMENT

The Contractor shall submit certified pay requests for completed Work. The ENTITY shall have ten (10) calendar days to approve or disapprove the pay request. The ENTITY shall pay the CONTRACTOR for his performance under the contract within twenty (20) days of approval of the pay estimate. On contracts over thirty (30) days in duration, the ENTITY shall pay the CONTRACTOR a pro-rata percentage of the contract amount on a monthly basis, based on the amount of work completed and approved in that month. The ENTITY will remunerate the CONTRACTOR within thirty (30) days of the approved application for payment, after which interest will be added at a rate of _____ per annum. Payments shall be subject to a retainage of _____ on each payment. Retainage shall be released upon substantial completion of the Work. Funding for this contract is authorized pursuant to Public Law of the State of _____ _____ _____ (local statute or ordinance).

ARTICLE 6. CLAIMS

If the CONTRACTOR wishes to make a claim for additional compensation for work or materials not clearly covered in the contract, or not ordered by the ENTITY as a modification to the contract, CONTRACTOR shall notify the ENTITY in writing. The CONTRACTOR and the ENTITY will negotiate the amount of adjustment promptly; however, if no agreement is reached, a binding settlement will be determined by a third party acceptable to both ENTITY and CONTRACTOR under the auspices of applicable State law.

ARTICLE 7. CONTRACTOR'S OBLIGATIONS

The CONTRACTOR shall supervise and direct the Work, using skillful labor and proper equipment for all tasks. Safety of the CONTRACTOR's personnel and equipment is the responsibility of the CONTRACTOR. Additionally, the CONTRACTOR shall pay for all materials, equipment, personnel, taxes, and fees necessary to perform under the terms of the contract. Any unusual, concealed, or changed conditions are to be immediately reported to the ENTITY. The CONTRACTOR shall be responsible for the protection of existing utilities, sidewalks, roads, buildings, and other permanent fixtures. Any unnecessary damage will be repaired at the CONTRACTORs expense.

ARTICLE 8. ENTITY'S OBLIGATIONS

The ENTITY's representative(s) shall furnish all information, documents, and utility locations necessary for commencement of Work. Costs of construction permits and authority approvals will be borne by the ENTITY. A representative will be designated by the ENTITY for inspecting the work and answering and onsite questions. The ENTITY shall designate the public and private property areas where the disaster mitigation Work is to be performed. Copies of complete "Right of Entry" forms, where they are required by State or local law for private property, shall be furnished to the CONTRACTOR by the ENTITY. The ENTITY shall hold harmless and indemnify the CONTRACTOR judgments and awards alleged to have been caused by services rendered under this contract for disaster relief work unless such claims are caused by the gross negligence of the CONTRACTOR, his subcontractors, or his employees. The ENTITY will terminate the contract for failure to perform as specified. or for default by the CONTRACTOR.

ARTICLE 9. INSURANCE AND BONDS

The CONTRACTOR shall furnish proof of Worker's Compensation Coverage, Automobile Liability Coverage, and Comprehensive General Liability Insurance (Premises-Operations, Personal Injury, etc., as deemed necessary by the ENTITY).
Surety: The CONTRACTOR shall deliver to the ENTITY fully executed Performance and Payment Bonds in the amount of one hundred percent (100%) of the contract amount, if required by the specifications. or general or special conditions of the contract. The ENTITY will reimburse the CONTRACTOR for the costs of the bonds, the costs of which will be included in the base bid.

THIS CONTRACT IS DULY SIGNED BY ALL PARTIES HERETO: ENTITY (City, County, Town, Etc.)

_____ Seal CONTRACTOR
(Include Address, City, State)

by_____ the Principal of the Firm

ATTACHMENT 4

Mutual Aid Agreements

The Washington Mutual Aid System (WAMAS) allows for exchange of local government personnel and resources between Cities, Towns, and Counties across Washington. San Juan County is a participant in WAMAS.

In a major debris causing disaster, San Juan County may look for government staff or resources from outside the State of Washington. This exchange of resources is governed by the Emergency Management Assistance Compact (EMAC). San Juan County has a signed preliminary EMAC agreement in place.

ATTACHMENT 5

Miscellaneous Debris Management Forms

San Juan County Load Ticket

Load Ticket			
Ticket Number			
Contract Number			
Contractor			
Date			
Debris Quantity			
Truck No:		Truck Weight (ton)	
Load Size (Tons):			
Truck Driver			
Debris Classification			
	Burnable		
	Non-Burnable		
	Mixed		
	Other		
Location			
Section/Area:		Dumpsite	
	Time		**Inspector**
Loading			
Dumping			
Eligibility (Y/N):	Original: City/County/State Yellow: Contractor Pink: Driver Gold: FEMA		

LOAD TICKET

Ticket Number	
Invoice Date	

PO Number (EMA Will Assign)	

SOLD TO:	SHIP TO:

DRIVER	**TRUCK NUMBER**	**TRUCK CAPACITY (Cubic Yards)**	**ZONE/SECTOR**

Loading Time	**Dump Time**	**Load Description**	**Unit: (Cubic Yards)**	**Zone/Sector/Area**
	Signatures:	**Loading Site Monitor:** _____		
		Dump Site Monitor: _____		

NOTE: ***Driver retains the Original and Pink copy. Yellow Copy must be torn out & submitted to the DMS or Landfill for processing.***

Ticket Information: **Record size of load in Cubic Yards.**

Debris Calculation Worksheet

Damage Class	Quantity	CY of Debris Each	Total Debris
Mobile Home (25-30 CY Each)			
Destroyed			
Major			
Minor			
Affected			
Sub-Total			
Single Family w/o Basement (25-30 CY Each)			
Destroyed			
Major			
Minor			
Affected			
Sub-Total			
Single Family w/Basement (45-50 CY Each)			
Destroyed			
Major			
Minor			
Affected			
Sub-Total			
Multiple Family w/o Basement (55-60 CY Each)			
Destroyed			
Major			
Minor			
Affected			
Sub-Total			
Other			
Double Storage Units			
Single Storage Units			
Inaccessible			
Sub-Total			
Total			

ROE No. _____ GPS Location: Longitude_____

San Juan County Latitude_____

Right-of-Entry on Private Property for Debris Removal

Property Address/Description _____

Name (Owner or Tenant) _____

City _____

Right of Entry

Right of Entry I certify that I am the owner, or an owner's authorized agent, of the property described above. I grant, freely and without coercion, the right of access and entry to said property to the United States Government, including but not limited to the US Army Corps of Engineers and the Federal Emergency Management Agency (FEMA), the State of Washington, San Juan County or specific jurisdiction, and each of their agencies, agents, contractors, and subcontractors, for the purpose of removing and/or clearing any or all storm-generated debris from the above-described property.

Hold Harmless

I understand that this permit is not an obligation upon the government to perform debris removal. I agree to indemnify and hold harmless the United States Government, the US Army Corps of Engineers, FEMA, the State of Washington, San Juan County or specific jurisdiction, and any of their agencies, agents, contractors, and subcontractors, for damages of any type whatsoever, either to the above described property or to persons situated thereon. I release, discharge, and waive any action, either legal or equitable, that might arise by reason of any action of the above entities. I will mark any sewer lines, septic tanks, water lines, and utilities located on the described property.

Duplication of Benefit

Most homeowner's insurance policies have coverage to pay for removal of storm-generated debris. I understand that Federal law (42 United States Code 5155 et seq.) requires me to reimburse the Federal government, through San Juan County or specific jurisdiction, the cost of removing the storm-generated debris to the extent covered in my insurance policy. I also understand that I must provide a copy of the proof/statement of loss from my insurance company to San Juan County or specific jurisdiction. If I have received payment, or when I receive payment, for debris removal from my insurance company, or any other source, I agree to notify and send payment and proof/statement of loss to San Juan County or specific jurisdiction for final recovery by FEMA. I understand that all disaster related funding, including that for debris removal from private property, is subject to audit. (I/We) acknowledge(s) that information submitted will be shared with other government agencies, federal and nonfederal, and contractors, their subcontractors and employees for purposes of disaster relief management and for the objectives of this right of entry.

By signing this document, (I/we) certify that (I/we) (am/are) the owner of this property and /or that (I/we) (am/are) authorized to sign this right of entry.

For the consideration and purposes set forth herein, I hereby acknowledge by my dated signature below.
Signed this ___day of _____,20__.

(All owners must sign)
Print Name: _____ Signature: _____

Print Name: _____ Signature: _____

Print Name: _____ Signature: _____

Mailing Address (if different from municipal address listed above):

Property Address/Description _____

Name (Owner or Tenant) _____

City _____

Current Telephone Number(s)

_____ _____

Name of Insurance Company: _____

Policy Number: _____

Please do not remove the following items:

_____

_____

_____

_____

ATTACHMENT 6
San Juan County Health and Safety Plan Supplement

Purpose
The purpose of this Health and Safety Supplement is to support the existing San Juan County safety plan and/or procedures in regards to debris removal activities. These are recommended baseline safety provisions only. Ultimately, health and safety is the responsibility of the contracted parties involved in debris removal activities. This attachment outlines some of the general steps necessary to provide a safe work environment for debris removal and monitoring employees. In addition, this attachment identifies some representative work hazards and the appropriate measures to reduce risk of injury.

Dissemination of Information
The debris-hauling contractor(s) and monitoring firm project managers will be provided with this document and will be expected to disseminate the information and guidelines to their respective personnel. A copy of this supplemental document should be available for consultation. In addition, elements of the document will be reviewed periodically during the project to increase worker awareness.

Compliance
The debris-hauling contractor and monitoring firm project managers are responsible for health and safety compliance of their respective personnel and subcontractors. Any crews or individuals that are not compliant shall be suspended from debris removal activities until the situation is remedied. Offenders of safety policies and procedures will be dismissed from the project entirely.

Job Hazard Assessment
Though debris removal activities are fairly similar among events, assessing the particular hazards of each disaster is an important part of maintaining health and safety for the debris removal workers. At a minimum, the following areas of focus should be considered as part of job hazard assessment:

- **Disaster Debris** – Disasters that result in property damage typically generate large quantities of debris, which must be collected and transported for disposal. The type of debris varies depending on the characteristics of the region (e.g., terrain, climate, dwelling and building types, population, etc.), age, and use of structure and the debris-generating event (e.g. type, event strength, duration, etc.). In addition, the disaster debris produces a host of uneven surfaces, which must be negotiated.

- **Debris Removal** – Often the removal of disaster debris involves working with splintered, sharp edges of vegetative or construction material debris. Many disasters involve heavy rains or flooding. Consequently, disaster debris is damp and heavier than usual. As weights increase, so does the risk of injury.

- **Removal Equipment** – In most disasters, debris must be removed from the public Right-of-Way (ROW) to provide access for emergency vehicles and subsequent recovery efforts. Debris collection and removal requires the use of heavy equipment and power tools to trim, separate and clear disaster debris.

- **Traffic Safety** – The ROW is located primarily on publicly maintained roads. As a result, much of the debris removal process takes place in traffic of varying levels of congestion. In addition, disasters often damage road signs, challenging safety on the road.

- **Wildlife Awareness** – Disasters are traumatic events for people as well as wildlife. Displaced animals (rodents), reptiles and insects pose a hazard to debris removal workers.

- **Debris Disposal** – After disaster debris is collected it is often transported to a temporary debris management site (DMS). Upon entry to a DMS, the monitoring firm will assess the volume of disaster debris being transported. The collection vehicle will then dispose of the disaster debris and the debris will be reduced either through a grinding operation or incineration or sent offsite for recycling. The DMS is a common area for injury. Response and recovery workers in this environment are more likely to be exposed to falling debris, heavy construction traffic, high noise levels, dust and airborne particles from the reduction process. Load spotters will be trained to watch for hazardous waste and other items that do not belong at the DMS.

- **Climate** – Debris-generating disasters often occur in areas or seasons with extreme weather conditions. The effects of temperature and humidity on physical labor must be monitored, and proper work-rest intervals must be assessed.

Administrative and Engineering Controls

The use of administrative and engineering controls can greatly reduce the threats to public health and safety in debris removal activities. Some common administrative and engineering controls used in the debris removal process are:

<u>Collection Operations</u>

- Conduct debris removal operations during daylight hours only (unless site is fully lit for nighttime operations).
- Limit cleanup operations to one side of the road at a time.
- Limit collection work under overhead lines; work with OPALCO to clear fallen lines prior to working in that area.
- Inspect piles before using heavy equipment to remove them to ensure that there are no hazardous obstructions or materials.
- Make sure that all collection vehicles have properly functioning lights, horns and back-up alarms.
- Load collection vehicles properly (not overloaded or unbalanced).
- Cover and secure loads, if necessary.

- When monitoring the collection process, stay alert in traffic and use safe driving techniques.
- Watch for hazardous waste, white goods, propane tanks and other hazardous materials.

Power Tools

- Inspect all power tools before use.
- Do not use damaged or defective equipment.
- Use power tools for their intended purpose.
- Avoid using power tools in wet areas.

Debris Reducing Machinery (Grinders/Wood Chippers)

- Do not wear loose-fitting clothing.
- Follow the manufacturer's guidelines and safety instructions.
- Guard the feed and discharge ports.
- Do not open access doors while equipment is running.
- Always chock the trailer wheels to restrict rolling.
- Maintain safe distances.
- Never reach into operating equipment.
- Use lock out/tag out protocol when maintaining equipment.

Debris Management Site/Disposal Operations

- Use jersey barriers and cones to properly mark traffic patterns.
- Use proper flagging techniques for directing traffic.
- Monitor towers must not exit into traffic and should have hand and guard rails to reduce trips and falls.
- Monitor towers must have properly constructed access stairways with proper treads and risers and proper ascent angle (4:1 height/width ratio).
- Monitor towers must be surrounded by jersey barriers, which protect the tower and monitors from being struck by inbound or outbound collection vehicles.
- Monitor towers should be located upwind from dust- and particulate generating activities.
- A water truck should spray the site as necessary to control airborne dust and debris.

Personal Protective Equipment

Personal Protective Equipment (PPE) is the last resort to providing a safe working environment for workers. PPE does not eliminate or even reduce hazards as administrative and engineering controls do. PPE works to reduce the risk of injury by creating a protective barrier between the individuals and work place hazards. Proper use of PPE includes using PPE for its intended purpose. For example, using the wrong type of respirator might expose the worker to carcinogenic or toxic particulates. Properly fitting the equipment to the user may require examination by a medical professional. PPE that does not fit well will not provide maximum protection and will decrease the likelihood of the individual continuing to use the equipment. In addition, improper use may result in serious injury or death. The proper use of the equipment is outlined in detail in the manufacturer's instructions.

The following PPE may be applicable in standard ROW, Right-of-Entry (ROE), and vegetative and construction & demolition debris removal activities:

- **Head Protection** – Equipment designed to provide protection for an individual's head against hazards such as falling objects or the possibility of striking one's head against low hanging objects. PPE used to protect the head must comply with ANSI Z89.1-1986, "American National Standard for Personnel Protection - Protective Headwear for Industrial Workers – Requirements."
- **Foot Protection** – Equipment designed to provide protection for an individual's feet and toes against hazards such as falling or rolling objects, objects that may pierce the sole or upper section of the foot, etc. PPE used to protect the feet and toes must comply with ANSI Z-41-1991, "American National Standard for Personal Protection-Protective Footwear."
- **Hand Protection** – Equipment designed to provide protection for an individual's hands against hazards such as sharp or abrasive surfaces. The proper hand protection necessary is dependent upon the situation and characteristics of the gloves. For instance, specific gloves would be used for protection against electrical hazards while the same gloves may not be appropriate in dealing with sharp or abrasive surfaces.
- **Vision/Face Protection** – Equipment designed to provide protection for an individual's eyes or face against hazards such as flying objects. PPE used to protect eyes and face must comply with ANSI Z87.1-1989, "American National Standard Practice for Occupational and Educational Eye and Face Protection." Again, the proper eye/face protection necessary is dependent upon the situation and characteristics of the equipment. For instance, eye and face protection used by individuals who are welding may not be appropriate for individuals operating a wood chipper.
- **Hearing Protection** – Equipment designed to provide protection for an individual's hearing against prolonged exposure to high noise levels. According to Washington Industrial Safety and Health Act (WISHA), the permissible level of sound is an average of 85 decibels over the course of an eight (8) hour workday. Above the sound exposure level, hearing protection is required. PPE used to protect hearing must comply with ANSI S3.19-1974, "American National Standard Practice for Personal Protection-Hearing Protection."
- **Respiratory Protection** – Equipment designed to provide protection for an individual's respiratory system against breathing air contaminated with hazardous gases, vapors, airborne particles, etc. PPE used to the respiratory system must comply with ANSI Z88.2-1992. In addition, the use of respiratory protection requires a qualitative fit test and in some cases a pulmonary fit test by a licensed medical professional.

PPE Debris Removal Activity

PPE requirements are made based upon the results of the job hazards assessment. The following list of PPE is organized by debris removal activity and is meant to be a representative list. Specific PPE requirements vary from location to location. In general, individuals involved in the debris removal process should personally monitor water consumption to avoid dehydration and use appropriate skin protection (breathable clothes, light colors, sunscreen, etc.). Ultimately, the selection of PPE is the responsibility of the debris-hauling contractor and monitoring firm project managers.

Debris Collection Monitoring

The hazards of disaster debris collection monitoring include, but are not limited to: struck by vehicles, falls or trips on uneven surfaces, cuts, abrasions or punctures from vegetative or C&D sharps. PPE requirements include:

- Reflective vest;
- Foot protection (rugged shoes or boots, steel toe and shank if required); and
- Long pants.

Debris Disposal Monitoring

The hazards of disaster debris disposal monitoring include, but are not limited to: struck by or caught in/between vehicles, falls or trips on stairs or uneven surfaces, cuts, abrasions or punctures from vegetative or C&D sharps and struck by falling disaster debris. Monitor towers must be equipped with a first aid kit. PPE requirements include:

- Reflective vest;
- Foot protection (rugged shoes or boots, steel toe if required);
- Long pants; and
- Hard Hat.

Debris Removal

The hazards of disaster debris removal include, but are not limited to: struck by vehicles, falls or trips on uneven surfaces, cuts, abrasions or punctures from vegetative or C&D sharps and airborne debris. In addition, PPE requirements include:

- Reflective vest;
- Vision and hearing protection;
- Foot protection (rugged shoes or boots, steel toe and shank if required); and
- Long pants.

Debris Disposal, Reduction, and Recycling

The hazards of disaster debris disposal, recycling, and reduction include, but are not limited to: struck by or caught in/between vehicles, falls or trips on uneven surfaces, cuts, abrasions or punctures from vegetative or C&D, hazardous waste, sharps, struck by falling disaster debris and airborne particles. PPE requirements include:

- Reflective Vest;
- Foot protection (rugged shoes or boots, steel toe if required);
- Vision and hearing protection;
- Long pants;
- Gloves; and
- Hard Hat.

Debris Cutting and Trim Work

The hazards of disaster debris cutting and trimming work include, but are not limited to: struck by or caught in/between vehicles, falls or trips on uneven surfaces, cuts, abrasions or punctures from power tools, vegetative or C&D sharps, struck by falling disaster debris and airborne particles. PPE requirements include:

- Reflective Vest;
- Hand and Foot protection (rugged shoes or boots, steel toe if required);
- Vision and hearing protection
- Long pants; and
- Hard Hat

For additional information regarding health and safety requirements, please contact WISHA.

ATTACHMENT 7

FEMA Approval of Plan

U.S. Department of Homeland Security
FEMA Region X
Federal Regional Center
130 228th Street, SW
Bothell, WA 98021-8627

FEMA

April 8, 2019

Mr. Gary Urbas
Deputy State Coordinating Officer – Public Assistance
State of Washington Military Department
Emergency Management Division
MS: TA-20, Building 20
Camp Murray, Washington 98430

Dear Mr. Urbas:

This letter responds to your request received February 18, 2019 for the U.S. Department of Homeland Security's Federal Emergency Management Agency (FEMA) to accept San Juan County's Debris Management Plan (Plan) for participation in the Public Assistance (PA) Alternative Procedures Pilot Program for Debris Removal. This pilot program allows a one-time two (2) percent Federal cost share increase for debris removal operations performed within 90 days from the start of the incident period of a major disaster or emergency declaration.

FEMA Region X has determined that the Plan contains the basic planning elements of a Debris Management Plan along with at least one prequalified debris and wreckage removal contractor (see enclosed Debris Management Plan Checklist). Therefore, FEMA has determined the Plan is acceptable. Accordingly, San Juan County may receive a one-time two (2) percent Federal cost share increase as part of the PA Alternative Procedures Pilot Program for Debris Removal. Your office should notify FEMA when San Juan County wishes to apply the incentive to its debris removal work.

Acceptance of this Plan does not mean that FEMA is approving any operational component of the plan nor does it mean that the Federal government will fund work conducted under any aspect of the Plan. Eligibility of costs for debris removal and management in a declared major disaster or emergency will be determined based on established PA Program authorities, regulations, policies and guidance. Subgrantees must comply with Federal procurement requirements (i.e., competitive bidding), as outlined in 44 CFR §13.36 in the procurement of debris removal services.

Should you have any questions, you may contact Trevor Stanley, at (425) 487-4722.

Sincerely,

Anna Daggett
Public Assistance Branch Chief

Enclosure: San Juan County, Debris Management Plan Checklist

FEMA

Debris Management Plan Checklist

San Juan County	Washington
Applicant Name	State/Territory/Tribe
Mike Mestas	505 334 7700
Applicant Point of Contact	Contact Number

FEMA Reviewer Tammie Sheehan

Yes	No	Plan Requirements	Comment
✓		**Overview** – Does the plan describe the purpose and objectives?	**Section 1** - Introduction
✓		**Incidents and Assumptions** – Does the plan provide information on the types and anticipated quantities of debris that will be generated from various types and sizes of incidents?	**Section 3 –** Situations and Assumptions
✓		**Debris Collection and Removal** – Does the plan have a debris collection strategy? Does the plan discuss the methods that will be used to remove debris and establish priorities for clearance and removal? Does the plan outline the roles and responsibilities of the various functions involved (Public Works, Finance, and Solid Waste Departments, etc.)?	**Section 2 –** Roles and Responsibilities **Section 4 –** Debris Collection Plan 4.1 – Priorities 4.4 – Response Operations 4.5 – Recovery Operations **Debris sites submitted**
✓		**Debris Removal on Private Property** – Does the plan address the authority and processes for private property debris removal?	**Section 7** Private Property Demolition and Debris Removal
✓		**Public Information** – Does the plan include a public information strategy to ensure that residents receive accurate and timely information about debris operations?	**Section 8** Public Information Plan
✓		**Health and Safety Requirements** – Does the plan describe how workers and the public will be protected and discuss the specific measures for adherence to safety rules and procedures?	**Section 2.2.3** Public Safety Officer **Section 2.4** Public Safety Plan **Attachment 6 –** San Juan Health & Safety Plan Supplement
✓		**Environmental Considerations and Other Regulatory Requirements** – Does the plan identify all debris operations that will trigger compliance with environmental and historic preservation laws and how compliance will be attained?	**Section 4.4.4** Collecting Hazardous Waste, White Goods and E-Waste. **Section 5.3.4** Environmental Monitoring Program **Section 7.3** – Navigation Hazard Removal **Section 7.5** Historical Preservation Procedures Procedures have been established in DMP, address the NHPA section 106 compliance.

✓		**Debris Management Sites and Disposal Locations** – Does the plan identify where the disaster debris will be segregated, reduced, and disposed or whether debris will be hauled to a recycler?	**Section 5 –** Debris Management Sites
✓		**Use and Force Account or Contracted Resources and Procurement** – Does the plan define the types of work force account labor will accomplish and the types of debris operations that will be contracted? Does the plan describe the process and procedure for acquiring competitively procured contracted services? Does the jurisdiction identify debris contractors that it has prequalified?	**Section 6 –** Contracted Services Attachment 3 – List of prequalified contractors not referenced in DMP
✓		**Monitoring of Debris Operations** – Does the plan describe how debris removal contractors will be monitored and who will monitor at pickup sites, Debris Management Sites / Temporary Debris Storage and Reduction Sites, and final disposal?	**2.2.1 –** Debris Project Manager **Attachment 2** – Site Selection Worksheets, site plans and priority road routes