

CITY OF CHENEY, KANSAS
DEBRIS MANAGEMENT PLAN



ADOPTED _____ 2014

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1. INTRODUCTION

1.1. Purpose

- To provide policies and guidance to the City of Cheney for the removal and disposition of debris caused by a major disaster.
- To facilitate and coordinate the management of debris following a disaster in order to mitigate against any potential threat to the lives, health, safety, and welfare of the impacted citizens, expedite recovery efforts in the impacted areas, and address any threat of significant damage to improved public or private property.

1.2 Situation and Assumptions

1.2.1. Situation

- The City of Cheney has been, and will be in the future, subject to weather-related events that can cause major damage.
- Natural and manmade disasters precipitate a variety of debris that include, but not limited to, such as trees, sand gravel, building construction material, vehicles, personal property, and hazardous materials.
- The quantity and type of debris generated from any particular disaster will be 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 where it is dispersed will have a direct impact on the type of collection and disposal methods utilized to address the debris problem, associated costs incurred, and how quickly the problem can be addressed.
- In a major or catastrophic disaster, many local and state governments will have difficulty in locating staff, equipment, and funds to devote to debris removal, in the short-term and long-term.

1.2.2. Assumptions

- A natural disaster that requires the removal of debris from public and private property and waters could occur at any time.
- The amount of debris resulting from an event of disaster could exceed the City of Cheney ability to dispose of it.
- If the natural disaster requires, Sedgwick County Emergency Management would declare a Local Disaster Emergency with notification to the Kansas Division of Emergency Management (KDEM) for request to the Governor of Kansas to declare a state of emergency that authorizes the use of state resources to assist in the removal and disposal of debris. In the event Federal resources are required, the Governor would request through the Federal Emergency Management Agency (FEMA) a presidential Disaster Declaration.
- Private contractors will play a significant role in the debris removal, collection, reduction, and disposal process.
- The debris management program implemented by the City of Cheney will be based on the waste management approach of reduction, reclamation, resource recovery, incineration, and transportation to transfer stations.

2. CONCEPT OF OPERATIONS

2.1 City Emergency Operations Center Activation

- The City Emergency Operations Center (EOC) will be designated as City Hall, unless otherwise determined by the Mayor during the initial hours following the occurrence of a disaster and in accordance with the city's Continuity of Operations Plan (COOP).
- A Debris Management Task Force (DMTF) will be formed and consist of the **Public Works Director, City Administrator, Fire Chief, and Mayor**.
- The Public Works Director or designee will be the Storm Debris Manager (SDM). The SDM will coordinate the overall debris removal and disposal process.
- The Public Works Director, or designee, will coordinate the work at the Temporary Debris Storage and Reduction (TSDR) sites.
- The Fire Chief will contact fire department personnel for safety issues and working with law enforcement on traffic control.
- The Mayor and or City Administrator will be responsible for establishing contact with contractors and government agencies for debris removal equipment and coordination.
- The SDM, along with the Public Works Director, or designee, will determine the extent of the damage and resulting debris. Directives to implement in the removal will be issued from the SDM or their designee.

2.2 Estimating the Type and Amount of Debris

- The SDM and agents will assess the amount of debris
- The methods for the assessment will be:
 - Conduct a drive-through "windshield" damage assessment
 - Use of Geographic Information System (GIS) aerial photos and information
 - Any other methods that are deemed appropriate

3. DEBRIS REMOVAL

3.1 General

- Tornadoes and other natural disasters can generate unprecedented amounts of debris in a short time. The debris may be equally heavy in both commercial and residential areas depending on the magnitude of the trees blown down and associated structural damage such as homes, businesses, utilities, and signs. This section provides guidelines on debris removal issues, including emergency roadway clearance, public right-of-ways, private property, water hazards, and Household Hazardous Waste (HHW).
- Debris removal, regardless of source, becomes a high priority following a disaster. Debris management strategy for a large-scale debris removal operation divides the operation into two (2) phases:

Phase 1 – Emergency Response

This phase consists of the clearance of the debris that hinders immediate life safety actions being taken within the disaster area and the clearance of the debris that poses an immediate threat to public health and safety. The immediate response will be to maintain public safety, support law enforcement, and support medical services as required. These actions will vary as to the nature of the storm, assistance required, and the type and amount of debris. An initial assessment will be made based on an immediate survey of the storm area, and on requests for assistance received.

Phase 2 – Debris Management

Operations consist of the removal and disposal of that debris that is determined necessary to ensure the orderly recovery of the community and to eliminate immediate threats to public health and safety. Following, or during, the emergency response phase, exact plans will be made to manage debris from the storm. This phase will begin with a thorough assessment of the extent of the damage and debris, and communicating information to the SDM. Based on this information, the development of a specific clean-up operation will be made.

3.2 Emergency Response Operations (Phase 1)

3.2.1. Clearance and Typing

- Roadway clearance will begin on the major arterial streets first.
- Once the major streets are clear, then clearance of secondary or collector streets will begin.
- There will be no attempt to physically remove or dispose of debris, only to clear key access routes to expedite the following:
 - Movement of emergency vehicles;
 - Resumption of critical services; and,
 - Assessment of damage to key public facilities and utilities such as schools, hospitals, government buildings, and municipal owned utilities.
- The type of debris that may be encountered: Blown down trees and limbs, shrubs, yard trash (trash cans, outdoor furniture, etc), utility poles and power lines, telecommunications lines, personal property (clothing, appliances, vehicles, etc.), e-waste (computers and electronics), and household hazardous waste (paint cans, gasoline cans, etc.).
- A major priority is to open access to other critical community facilities such as municipal buildings, water and wastewater treatment plants/stations, power substations, etc.
- Contact utility company representatives

3.2.2. Local, State and Federal Assistance

- See Appendix B for contact information

3.2.3 Special Consideration

- The immediate debris clearing (Phase 1) actions will be under the direction of the SDM, or designee. Additional requests for assistance will be made through the Sedgwick

County EOC to the Kansas EOC. Requests for Federal assistance will be requested through the State Coordinating Officer (SCO) to the FEMA Federal Coordinating Officer (FCO).

- When live electric lines are involved, work crews will coordinate with local utility companies to have power lines de-energized.
- Coordinate special crews and their activities to ensure safety considerations to reduce the chance of injury and possible loss of life. All safety procedures and equipment are to be used and followed to include personal protective equipment.
- Front-end loaders and dozers should be equipped with protective cabs.
- Driveway cutouts, fire hydrants, valves, and stormwater inlets should be left unobstructed.

3.3 Debris Management Operations (Phase 2)

Individuals will be sent into the affected areas to survey the damage, and estimate the amount of debris from the storm. Once the extent of the storm damage is known, a number of factors are taken into consideration while developing a specific management plan.

- The DMTF will be assigned areas to supervise the removal and disposal of debris. This will include, but is not limited to, any area of destruction or Temporary Debris Storage and Reduction (TDSR) site. The SDM, or designee, will make these assignments.
- Each DMTF member that has been assigned an area will be responsible for the work in their area. Any request for additional personnel and equipment will be made to the SDM or designee, who will determine the validity of each request and make adjustments in equipment and personnel as needed.
- Review any Mutual Aid Agreements and activate as necessary. The SDM, or designee, will activate the Mutual Aid Agreements.
- The SDM, or designee, will determine if local contractors will be needed. When needed, the contractor will sign a contract to specify the extent pricing of their work. The City Attorney will monitor these contracts and approved through City Finance.
- Wichita-Sedgwick County Code Enforcement (MABCD) and the SDM will inspect the structures in the affected area for damage. The inspectors will use the guidelines established in the latest adopted edition of the Uniform Building Code. All affected structures will be marked as to their structural integrity.
- Daily meetings will be conducted with the SDM, or designee, area debris managers, inspection team leader, law enforcement, and the Mayor. This meeting will discuss progress, procedures, and any changes.
- Establish a proactive information management plan. Emphasis should be placed on actions that the public can perform to expedite the cleanup process, such as separating burnable and non-burnable debris; segregating HHW; placing debris at the curbside; keeping debris piles away from fire hydrants and valves; reporting locations of illegal dump sites or incidents of illegal dumping; and, segregating recyclable materials.

3.3.1. Public Notification

- Citizens will be notified of events and situations concerning the removal of debris by the following: Radio and television, personal contact, social media, daily flyers (see Appendix C for sample) to be left at public locations such as City Hall, Police Department, City Library, schools, churches, stores, and any other method deemed appropriate. These flyers will be prepared by the City Clerk (in advance) as directed by the SDM and distributed by civic organizations and area scouts.

3.3.2. Private Property Debris Removal

- As stated elsewhere in this plan, it is the intention of the City of Cheney to collect debris located and/or placed in curbside rights-of-way and city staff, contractors or other representatives will not enter onto private property to collect such debris. In the event that damage is not abated and/or debris is not removed and such conditions are deemed to constitute a dangerous or nuisance condition, necessary authority will be provided by the City of Cheney Council.
- If deemed appropriate due to the scope of the disaster and/or debris generated by such a disaster, the City Council may take additional formal executive action to authorize collection of debris on private property, provided such authorization ensures that the applicable property owner(s) execute a waiver or release of liability developed by City of Cheney in coordination with FEMA or other applicable State & Federal agencies.
- Prior to any removal of debris from the private property, the following documentation will be sent to FEMA's FCO:
- Documentation confirming the existence of an immediate threat on public property (44 CFR 206.224(a));
 - Immediate threat to life, public health, and/or safety
 - Immediate threat to improved property determination
 - Removal will expedite economic recovery of City of Cheney
- Documentation of the legal authority to enter that property (44 CFR 206.223(a)(3);
- Documentation that a legally authorized official has ordered the exercise of public authority to enter private property to perform debris removal (44 CFR 206.223(a)(3); and
 - Indemnification for the Federal government and its employees, agents, and contractors from any claims arising from the removal of debris (44 CFR 206.9).
- The FCO will approve or disapprove in writing the City of Cheney request. If approval is granted, debris removal can begin with the pre-determined scope of work; however the following documents will be created during debris management operations:
- Right-of-Entry — *This* document must be signed by the property owner and will

include a hold harmless agreement and indemnification applicable to the project's scope of work.

- Physical Documentation — Photos will be taken to show the condition of the property prior to the beginning of the work. Pictures will document the address and scope-of-work on the private property.
 - Private Property Debris Removal (PPDR) Assessment — A property specific assessment will be created to establish the scope of eligible work. The PPDR can be a map or other documentation system that serves as a guide indicating the location of the eligible items of work that present an immediate threat relative to the improved property or rights-of-way.
 - Documentation of Environmental and Historic Review — Documents environmental and historical preservation compliance as established in 44 CFR Parts 9 and 10 as well as any relevant Kansas or City of Cheney ordinance.
- Additional documentation may be required by the FCO on a case-by-case basis to demonstrate the proposed work is in compliance with all Federal, State, and local laws and regulations.

3.4 Household Hazardous Waste (HHW) Removal

- HHW may consist of common household chemicals, propane tanks, oxygen bottles, batteries, and industrial/agriculture chemicals. These items will be mixed into the debris stream and still require close attention throughout the debris removal and disposal process.
- A HHW response team will be assigned to respond ahead of any removal efforts, and will coordinate with regulatory agencies concerning possible regulatory waivers and other emergency response requirements.
- Arrange for salvageable household materials to be collected and segregated based on their intended use before building demolition begins. Properly trained personnel or emergency response HHW contractors should accomplish removal of hazardous waste. Coordinate with regulatory agencies to ensure cleanup actions meet local, State, and Federal regulations.
- In residential areas, the hazardous and toxic materials will be left at “the back of the curb” for disposal. The City will contract the disposal by a contractor for disposal. The pickup days will be determined by the SDM, or designee.
- A separate staging area for HHW materials, contaminated soils, and contaminated debris will be established at each TSDR site.

3.5 Treatment, Storage, Disposal, Requirements Site

- Once the debris is removed from the damaged area, it will be taken to a TSDR site.
- Removal and disposal actions should be handled at the lowest level (local, county, and State) possible based on the magnitude of the event. When resources are exceeded at each level of responsibility, Federal assistance resources may be requested according to established procedures. Because of the limited debris removal and reduction resources, the establishment and operation of TSDR sites are generally accomplished by contracts.

- The DMTF will review all debris disposal contracts and monitoring to ensure contractor performance meets with the contract.

3.5.1. TSDR Site Selection Priorities

- The SDM will determine the number of TSDR sites to be needed for the collection and processing of debris.
- The TSDR site will be opened based on the amount of estimated debris and the following priorities:
 - Pre-determined TSDR sites
 - Public property
 - Private property

3.5.2. Pre-Designated TSDR Sites

- Considerations for identifying a TSDR site include, but not limited to: size, location, ingress and egress routes, environmental assessments, physical and biological features, soil, and water analyses.

Environmental Requirements

A baseline environmental collection study will also be conducted prior to a Debris Management Site (DMS) establishment. This baseline data is essential in assuring that the land is returned to its original condition following the end of all debris management operations. The following methods may be used to document new or updated baseline data:

- Videotape and/or Photograph the Site — Thoroughly videotape and/or photograph (ground or aerial) each site before beginning any activities.
- Document Physical Features — Note existing structures, fences, culverts, irrigation systems, and landscaping that can help evaluate possible damage claims made later.
- Investigation of the Historical Significance — Research the past use and ownership of the property to document any issues regarding the existence of historic structures or archeological sites.
- Sample Soil and Water — Soil and groundwater samples will be collected prior to use of the site. Planned HHW, ash, and fuel storage areas will also be sampled prior to site setup.

As operations proceed additional data will be collected throughout the operation for closeout and quality assurance reasons. The data can be compared to the previously established information in order to determine any remediation that may be necessary. The following tools can be utilized:

- Sketch Site Operation Layout — DMS operations may grow, shrink, 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.
- Document Quality Assurance Issues — Document operations that will have a bearing on site closeout, such as petroleum spills at fueling sites, hydraulic fluid spills at equipment breakdowns, control, discovery of HHW, and commercial, agricultural, or industrial hazardous and toxic waste storage and disposal.
- Restoration of Site — Final restoration of the landscape must be acceptable to the landowner, but within reasonable expectations. Therefore, the restoration of the landscape will be planned for as early as possible during debris management operations.

3.5.3. TDSR Site Preparation

- The actions that need to be accomplished after the pre-designated TSDR site has been selected will be determined by the SDM or designee in accordance with the TSDR site Memorandum of Agreement/Memorandum of Understanding.

3.5.4. TDSR Site Operations

- Establish lined temporary storage areas for ash, HHW, fuels, and other materials that can contaminate soils, groundwater, and surface water.
- Set up plastic liners, when possible, under stationary equipment such as generators and mobile lighting equipment. This should be included as a requirement of the contract's scope of work.
- If the site is also an equipment staging area, monitor fueling and equipment repair to prevent and mitigate spills such as petroleum products and hydraulic fluids. Include clauses in the contract's scope of work to require immediate cleanup by the contractor.
- Be aware of and mitigate things that will be a nuisance to nearby residents and businesses to include:
 - Smoke – Proper construction and operation of incineration pits
 - Dust – Employ water trucks or fire trucks as needed for control
 - Noise – Construct perimeter berms and consider distance
 - Traffic – Proper layout of ingress and egress procedures to help traffic flow to include one way directional movement

3.5.5. Disposal at TDSR Sites

- At the TSDR sites, the debris will be separated into several stockpiles, including but not limited to:
 - Burnable – trees, limbs, brush, untreated structural stockpiles

- Non-Burnable – treated lumber, plastics, glass, rubber products, metal products, sheet rock, cloth/upholstered items, carpeting
- White Metals – household appliances
- Hazardous/Toxic materials; and,
- E-Waste – Computers and other electronics

4. DEBRIS REDUCTION METHODS

4.1 Volume Reduction by Incineration

- There are several methods of debris reduction available.
 - Uncontrolled Open Incineration: Least desirable method for volume reduction due to lacking environmental controls.
 - Controlled Open Incineration: Cost-effective method for reducing clean wood debris. This option may not be used if the debris includes treated limber, poles, nails, bolts, tin, and aluminum sheeting.
 - Air Curtain Incineration: Offers an effective means to expedite the volume reduction process by substantially reducing the environmental concerns caused by open incineration.
 - Refractor Lined Pit Incineration: An alternative to air curtain open pit incineration. This system allows for a reduction rate of approximately 95% with minimum air pollution.

4.2 Environmental Control

- A burn permit must be obtained from Cheney Fire Department, whether the site is within or outside the city limits, prior to any burning.

4.3 Volume Reduction by Chipping

- Clean wood debris can be chipped and turned into mulch. The chipped material may also be burned; however, this is not a cost-effective method.

4.4 Volume Reduction by Recycling

- This is strongly urged for volume reduction by recycling.
- The recycled material will be separated in the following material areas, including but not limited to:
 - Metals – Can be sold to a recycle center.
 - Soil – May be re-used; however, caution must be used to verify that hazardous materials have not contaminated the soil. Based on recommendations of the Kansas Department of Health and Environment (KDHE), contaminated soil may be land farmed rather than disposed of.
 - Wood – May be chipped for mulch applications.
 - Construction Material – Concrete blocks and bricks may be re-used. Other building material may be shredded to reduce volume.
 - Residue Material – Will be sent to the transfer station for disposal.

4.5 TDSR Site Closeout Procedures

- After all debris has been removed from the TSDR, it must be restored to its previous condition and use. The contractor should be required to remove and dispose of all mixed debris, construction and demolition debris residue to approved landfills.
- Quality assurance inspectors should monitor all closeout and disposal activities to ensure that contractors complied with contract specifications.
- Additional measures will be necessary to meet local, State and Federal environmental requirements because of the nature of the staging and reduction operation.
- The contractor must assure the DMTF that all sites are properly remediated. There will be significant costs associated with this operation as well as close scrutiny by the local media and environmental audit or assessment.
- Develop a remediation or restoration plan approved by the appropriate environmental agency
- Execute the plan
- Get acceptance from the landowner
- Terminate lease payments if applicable

4.6 Site Remediation

- Contact the KDHE for the requirements and support for implementation of a site remediation plan.

5. ORGANIZATION AND RESPONSIBILITIES

- The SDM, or designee, will monitor the personnel and material used by other agencies. This will be used to support any federal assistance that may be requested or required.
- Request for support and/or assistance will be in the following order:
 - City of Cheney Police Chief
 - Sedgwick County EOC
 - State of Kansas EOC
- Requests for Federal assistance will be made through the Sedgwick County EOC and forwarded through the State of Kansas EOC as outlined in the Federal Response Framework.
- The City of Cheney will ensure 24-hour staffing during the implementation of this plan, if the emergency or disaster requires.
- This plan will be updated annually or as required at the direction of the Mayor or City Council.

Stockpiled Debris Field Survey Form

Type of Material:

Clean Vegetative ___ Mixed ___ C&D ___ Mulch ___ Other _____

Stockpile Location: _____ Date: _____

Average Length of Stockpile: _____ Feet

Average Width of Stockpile: _____ Feet

Average Height of Stockpile: _____ Feet

Total Cubic Feet : _____ Cubic Feet

Total Cubic Yards:(Cubic Feet divided by 27) _____ Cubic Yards

Contractor's Representative: _____ Date _____

Government's Representative: _____ Date _____

Remarks: _____

See Sketch of Site on Reverse Side

Stockpiled Debris Field Survey Form

Stockpile Location: _____

Width _____ Feet

Height _____ Feet

Length _____ Feet

Height _____ Feet

Length _____ Feet

Remarks: _____

$\frac{L \times W \times H}{27} = \text{CY}$

Height _____ Feet

Width _____ Feet

Load Ticket

LOAD TICKET		Ticket No.
Section 1		
Prime Contractor:	Date:	
Subcontractor (Hauler):	Departure Time:	
Driver:	Truck Plate No.:	
Measured Bed Capacity (cu. yds.):		
Debris Pickup Site Location: (must be a street address)		
Debris Type:	<input type="checkbox"/> Vegetation	<input type="checkbox"/> Construction & Demolition
	<input type="checkbox"/> Mixed	<input type="checkbox"/> Other:
Loading Site Monitor: Print Name:		

Signature:		
Remarks:		
Section 2		
Debris Disposal Site Location:		
Estimate Debris Quantity (cu. yds.):	I Arrival Time:	
Disposal Site Monitor: Print Name:		

Signature:		
Remarks:		
Copies: White — Load Site Monitor		Disposal Site Monitor
Onsite Contractor's Representative or Driver		

Annual Training Workshop

The SDM will be responsible for coordinating an annual training workshop for all assigned DCOT personnel. The purpose of the workshop is to review the Debris Management Plan procedures and to ensure that the DCOT operation works smoothly. Items of discussion will include:

1. Contractor responsibility
2. Mobilization sites
3. Logistical support
4. Pre-storm mobilization
5. Procedures for call-up of Contractor personnel and equipment
6. Haul routing
7. Contractor vehicle identification and registration
8. Debris hauling load ticket administration
9. Mobilization and operation of the TDSR sites
10. Contractor payment request submission, review, and verification
11. Special procedures for Household Hazardous Waste
12. TDSR site closure requirements

This training will be scheduled annually in the Spring before storm season begins.

Debris Loading Site Monitoring Checklist

Date: _____
Arrival Time: _____ Departure Time: _____ Weather Conditions: _____
Loading Site Location: _____
(Street address or nearest intersection)
GPS Location: **N** _____ ; **W** _____

Loading Site Monitor's Name _____
(Print Name)
Roaming Monitor's Name: _____
(Print Name)

(Signature)

Loading Site

1. Is the Site Monitor filling out the Load Ticket properly? YES NO
If NO, explain actions taken:

2. Is the Contractor loading eligible debris from the designated right-of way (approximately 15' from curb)? YES NO
If NO, explain actions taken:

3. Is the Contractor loading trucks to capacity? YES NO
If NO, explain actions taken:

4 Identify Contractor's truck numbers observed while on site:

5. Were photographs taken at the loading site? YES NO
If YES, list photo log numbers:
____; ____; ____; ____; ____; ____; ____; ____; ____; ____; ____; ____; ____;

General Notes and Comments: (Include observations within the general area as to overall cleanup activities)

(Use reverse side if necessary)

Debris Estimating Formulas

Estimating Rule of Thumb:

- 15 trees, 8 inches in diameter = 40 CY
- Single wide mobile home = 290 CY
- Double wide mobile home = 415 CY
- Root system (8'-10' dia.) = One flatbed trailer to move
- Treat debris piles as a cube, not a cone, when performing estimates.
- Average pace = 2' 6"

Formulas

Conversions:

- 27 cubic feet=1 cubic yard
- One mile=5280 feet or 1760 yards

Building formula:

L'xW' (building footprint) x No. of Stories x 0.2 = _____ Cubic Yards of debris

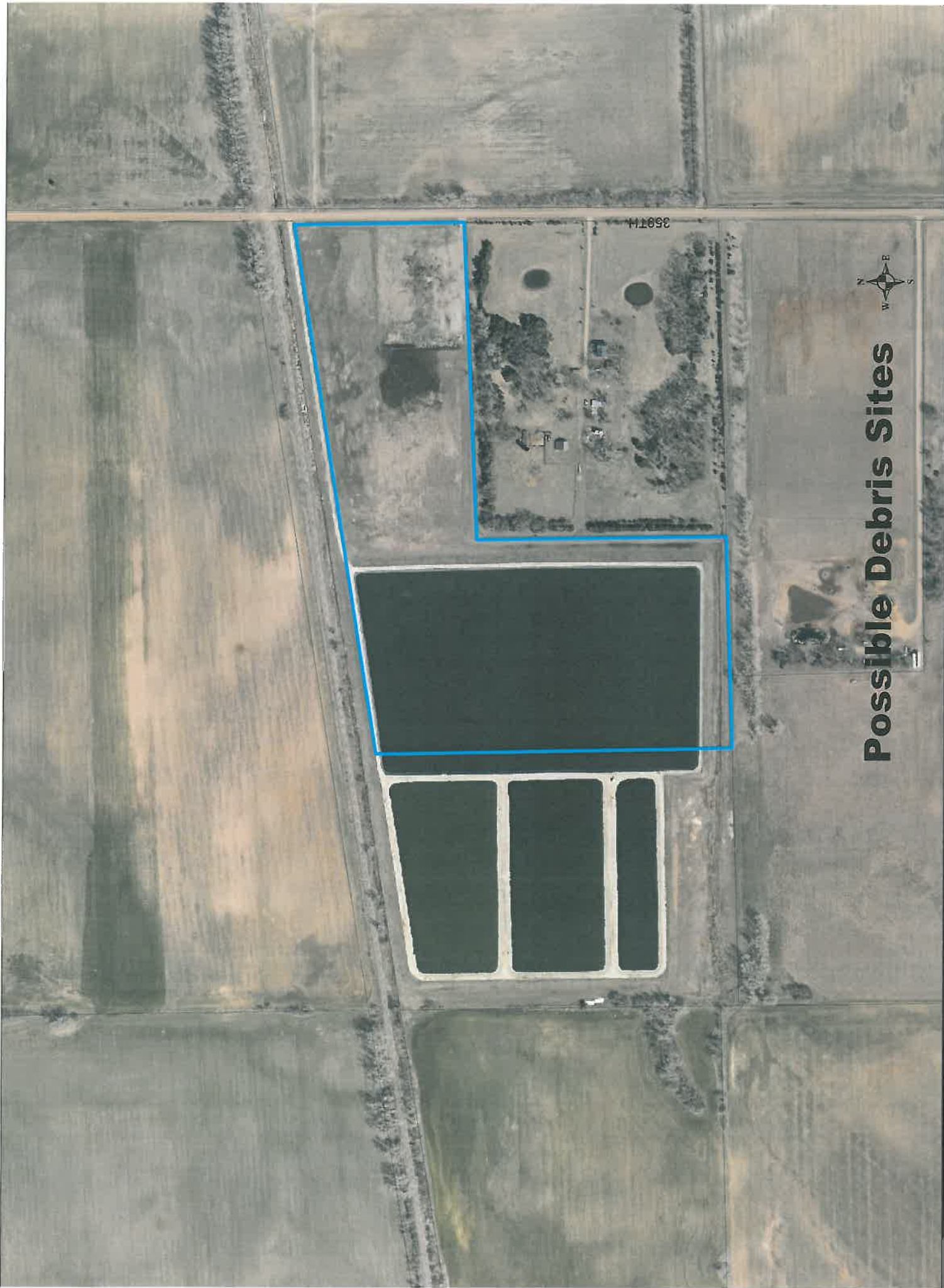
Debris pile formula:

L'xW'xH'= Cubic Yards of debris.

27

Conversion Factors from Cubic Yards to Tons

- Mixed Construction & Demolition Debris = 500 LBS/CY or CY x 0.25 = Tons
- Yard Vegetation = 300 LBS/CY or CY x 0.15 = Tons
- Mulch = 500 LBS/CY or CY x 0.25 = Tons
- Regular Trash = 300 LBS/CY or CY x 0.15 = Tons
- Concrete = 2000 LBS/CY or CY x 1.0 = Tons
- Sand = 2600 LBS/CY or CY x 1.3 = Tons
- Land Clearing (Root balls with dirt) 1500 LBS/CY or CY x 0.75 = Tons

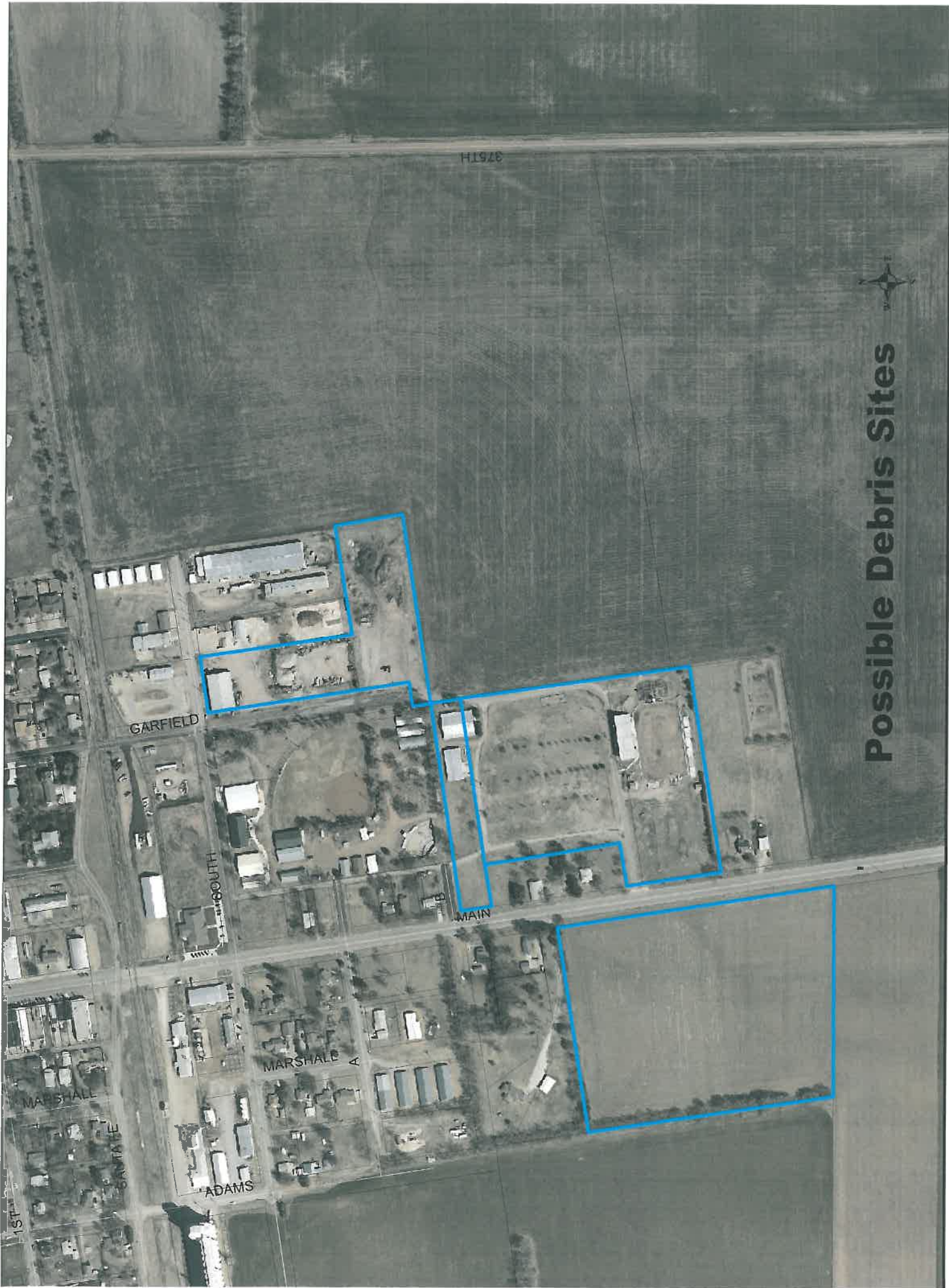


3681H



Possible Debris Sites





376TH



Possible Debris Sites

0 350 700 1,400 Feet

GARFIELD

SOUTH

MAIN

MARSHALL A

MARSHALL

ADAMS

1ST

SANTO