

**HAULPASS**

Automated Debris Management System (ADMS)



## Leveraging Technology in Disaster Recovery

AAEES Excellence in Environmental Engineering and  
Science Awards April 25, 2013

## One Family – Many Names

**HAULPASS**



❖ Parent Company



❖ Emergency Mgmt Subsidiary



❖ ADMS Product

- ❖ Paperless electronic data collection and management
- ❖ Limited opportunities for data entry errors and no legibility issues
- ❖ Satellite based GPS technology allows accurate automated debris pickup location
- ❖ Near real time event status using web-based reporting and GIS tools
- ❖ Timely reconciliation of contractor invoices

## History of HaulPass®



- ❖ Conceived based on Debris Monitoring experience
- ❖ Developed to eliminate paper load tickets and manual entry
- ❖ First demonstrated to USACE in 2006
- ❖ Selected as part of every winning team in 2008 ACI procurement
- ❖ Utilized by USACE following Hurricane Ike and Joplin Tornado
- ❖ Utilized by numerous municipalities 2006-2011
- ❖ Utilized following Haiti earthquake in 2010
- ❖ Has evolved into full suite of debris recovery software

- ❖ Paperless electronic data collection and management
- ❖ Limited opportunities for data entry errors and no legibility issues
- ❖ Satellite based GPS technology allows accurate automated debris pickup location
- ❖ Near real time event status using web-based reporting and GIS tools
- ❖ Timely reconciliation of contractor invoices

# Deployments



- ❖ Hancock County, MS 2006
- ❖ Erie County (Buffalo), NY 2006
- ❖ US Coast Guard, LA 2007
- ❖ USACE Texas DOT 2008
- ❖ USACE Cameron Parish, LA 2008
- ❖ USACE Vermillion Parish, LA 2008
- ❖ City of Humble, TX 2008
- ❖ City of Nassau Bay, TX 2008
- ❖ City of Piney Point, TX 2008
- ❖ Port-au-Prince, Haiti 2010
- ❖ Birmingham, AL 2011
- ❖ USACE Joplin, MO 2011
- ❖ James City County, VA 2011
- ❖ York County, VA 2011
- ❖ Williamsburg, VA 2011

- Easy to use filters
- Create reports from filtered data
- Visual Aids – color themes below

## Joplin, Missouri 2011 Tornado

*HAULPASS*

- ❖ USACE procured ADMS services
- ❖ Deployment within 24 hrs of NTP
- ❖ 60+ Field Staff
- ❖ 1600+ ROE/PPDR Projects
- ❖ Hundreds of Certified Trucks
- ❖ 5 Dump Sites



## Why ADMS?

*HAULPASS*

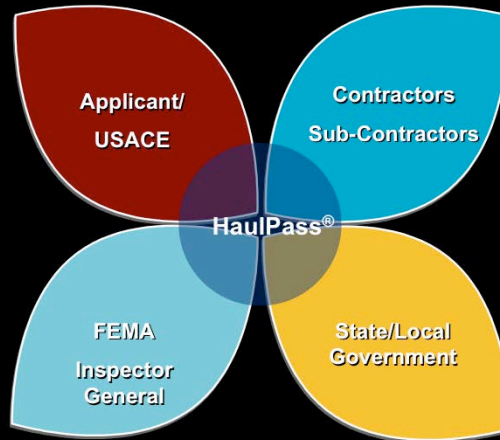
- ❖ Electronic data collection and management
- ❖ Limits data entry errors - no legibility issues
- ❖ GPS for accurate debris geotagging
- ❖ Near real time status on web with GIS
- ❖ Expedited ticketing process
- ❖ Timely reconciliation of contractor invoices

- ❖ Paperless electronic data collection and management
- ❖ Limited opportunities for data entry errors and no legibility issues
- ❖ Satellite based GPS technology allows accurate automated debris pickup location
- ❖ Near real time event status using web-based reporting and GIS tools
- ❖ Timely reconciliation of contractor invoices

# HaulPass® – Common Source



Enabling all parties  
to view the same  
data set



## Complete Data Management

**HAULPASS**

### HaulPass® Manages Multiple Debris Streams

- ❖ Right-of-Way (ROW) Debris Removal
- ❖ Private Property Debris Removal (PPDR)
- ❖ Stumps
- ❖ Leaners & Hangers
- ❖ White Goods (clean and dirty)
- ❖ Configurable For Other Types of Debris

HaulPass™ addresses multiple debris streams:

- Right-of-Way Debris Removal
- Right-of-Entry Debris Removal
- Stumps
- Leaners & Hangers
- White Goods (clean and dirty)
- Configurable to handle other waste streams

Fully automated data management starts with equipment certification and QA/QC monitor registration.



# Ticket Process



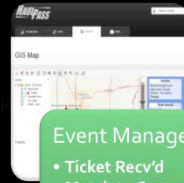
## Field

- GPS Reading
- Card Verified
- Data Stored On Card



## Tower

- Card Verified
- Load Call
- Card Cleared
- Data Transmit



## Event Manager

- Ticket Recv'd
- Match to Cert
- Mapped
- Retrievable

## Field Components

**HAULPASS**

- ❖ Industry Standard Components
- ❖ Smartcard Technology
- ❖ GPS Enabled Rugged Handheld PDA
- ❖ Belt Printers for Receipts at Tower
- ❖ Laptop Certification Computers
- ❖ Cellular Transmission When Available



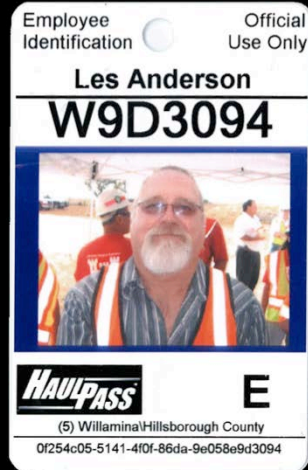
Starting with industry standard smart card technology, the HaulPass™ System uses GPS enabled rugged mobile handhelds to manage the debris process from collection to disposal.

Disposal sites are equipped to print debris load tickets for drivers, contractors, and applicants.

# Employee Registration

**HAULPASS**

- ❖ Initial Role Identified
- ❖ Name
- ❖ Full Employee ID
- ❖ Mission Information
- ❖ Limits Software Access
- ❖ Documents People Using System
- ❖ Enables Use of PDAs & Laptops
- ❖ Used as Identification
- ❖ Track Assets Assigned to Employee
- ❖ Image Capture
- ❖ Image Electronically Stored on Card for added Security



This card shows Brian Klett  
Employee number WB94F1  
W = ROW role  
Working Hurricane George – Polk County  
Mission Applicant = 5  
Full Employee ID Number at bottom of card starts with 5fae...

# Equipment Certification



HAULPASS - On-Site Management System [Equipment Certification]

File Tools Help

Equipment Certifications

Certifications (Select One or Select New): 3DCASFF (6/9/2008)

Add Contractor: [Dropdown] Add

Contractors (Tip in Primary, List is sub-contractors in order of parent/sub.)

- Phillips & Jordan (05A78F8)
- G.E.B.A (A064148)
- Rio Bak (F997F25)

Remove

Notes

Attach Photo [Icon] Remove Photo [Icon]

Placard #: 3DCASFF

Capacity Information (Decimal Feet)

Container Type: Rectangle

Primary Measurement: Height: 6.25 x Width: 7.25 x Length: 18 / 27 = Total: 30.2 c.y. **Certified Capacity: 29.6 c.y.**

Tandem Certification:  Front  Back

Modifications

Modification Type: Dog House

Height: 0 x Width: 0 x Length: 0 Total: 0 c.y. Add [Icon]

+/-	Type	Capacity	Length	Width	Height
-	Dog House	0.6	3	2.5	2.25

Delete [Icon]

Print Card - Step 1 [Icon] Issue Cert - Step 2 [Icon] Reprint Placard [Icon] Save Cert. [Icon]

# Equipment Certification

**HAULPASS**

- ❖ Uses Smart Card
- ❖ Certification Number
- ❖ Alternate Placard Number
- ❖ Mission Information
- ❖ Full Certification ID
- ❖ Image Stored On Card
- ❖ Certification Information On Card
- ❖ Driver Information
- ❖ Equipment Information
- ❖ Contractor Hierarchy
- ❖ Measurements
- ❖ Notes
- ❖ Known as "The HaulPass Card"



Shows an equipment certification card for  
ID Starts with 91b11...  
Hurricane George City of Tampa  
Mission Applicant 5

MA's must match (employee and cert)

Multiple certs can be issued per piece of equipment


Card acts as the traveling database

# Field Data Collection

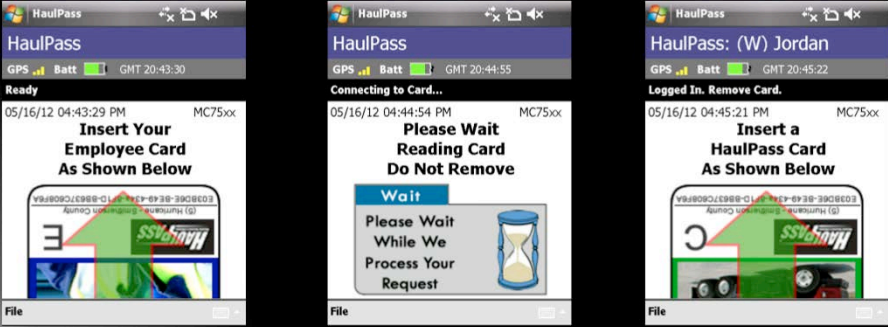
*HAULPASS*



# Employee Login



1. Insert employee card
2. Employee card is read and verified
3. Access granted, ready to initiate tickets



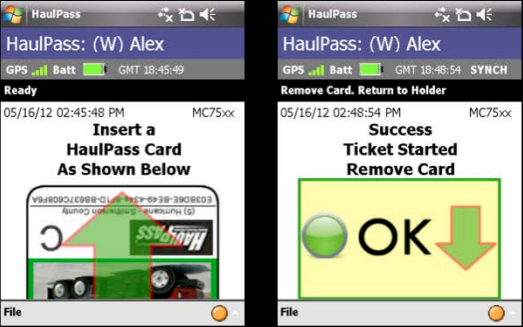
Driver will present a HaulPass Card. Insert card into slot.

Ticket data is automatically initiated.

No data entry required.

## Example: ROW Pickup

1. Driver Presents HaulPass Card
2. Ticket Started On Card
3. No Data Entry
4. Card Returned to Driver
5. Driver Takes Card to DMS



The image displays two screenshots of the HaulPass mobile application interface. The left screenshot shows the 'Ready' state with a prompt to 'Insert a HaulPass Card As Shown Below' and an image of the card. The right screenshot shows the 'Success' state with the message 'Ticket Started Remove Card' and an 'OK' button with a downward arrow.

Driver will present a HaulPass Card. Insert card into slot.

Ticket data is automatically initiated.

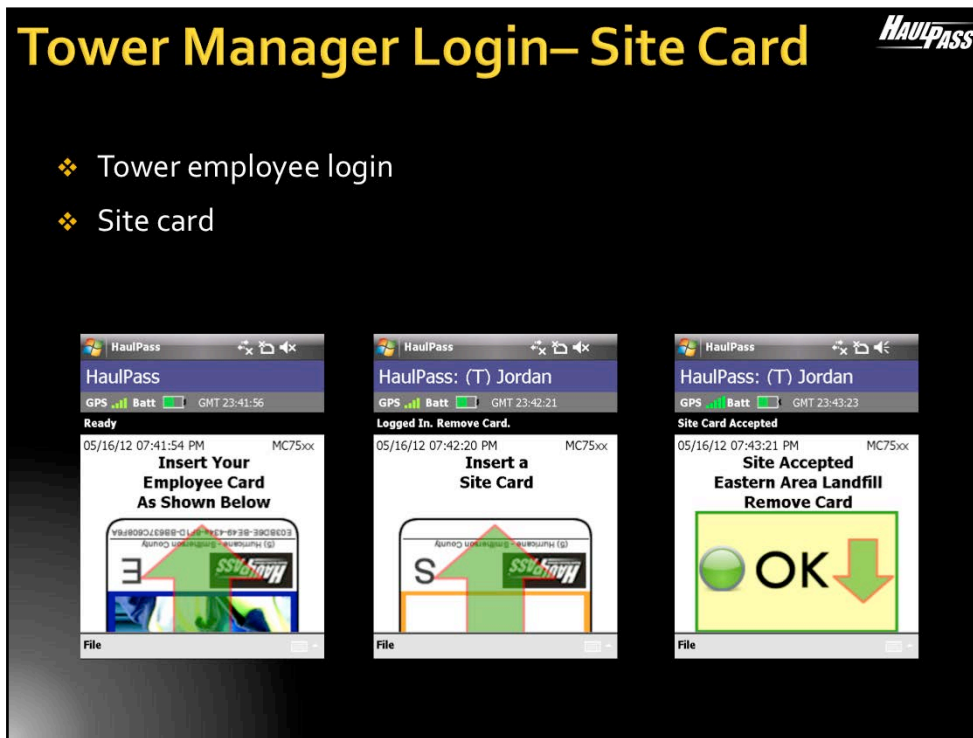
No data entry required.



# Tower

*HAULPASS*





Confirm the measured capacity on the truck placard to the data on screen.

Confirm the picture of the truck on screen matches and no alterations have been made.

# Tower Manager – Confirm

- ❖ Confirm Placard Number
- ❖ Confirm Picture on Card and Screen
- ❖ Check for Alterations


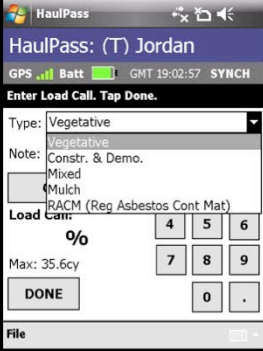
The image displays two side-by-side screenshots of the HaulPass mobile application. Both screens show the user's name 'HaulPass: (T) Jordan' and status 'SYNCH'. The left screen features a 'NEXT' button and a list of truck details: '8560A50', 'Alt: DTIFNEWW', 'Max Capacity: 35.6', 'Travis Mays Hauling', and 'G.E.B.A.'. The right screen shows a full-screen view of a truck image with the text 'Tap Picture To Resize' overlaid.

Confirm the measured capacity on the truck placard to the data on screen.

Confirm the picture of the truck on screen matches and no alterations have been made.

# Tower Manager – Close Ticket *HAULPASS*

- ❖ Select Debris Type (configurable)
- ❖ Enter Load Call (CY, Percent Full, or Weight)
- ❖ Data pushed to server





### Load Call and Finalize Ticket

- Select the debris type.
- Drag the slider bar to the appropriate load call percentage.
- Press the “Complete” button.

# Receipt Sample

- ❖ ROW Receipt Sample
- ❖ Multiple Copies As-needed
- ❖ Number of Copies Configurable at Tower

HAULPASS™		City of Tampa Hurricane George	
www.haulpasscdms.net			
Ticket #	Alt. Cert #	Calc. Qty	
F78F8B0	FS00239	20.3cy	
			
<b>Contractor Information</b>			
Certification #.....	2709E92		
Alternate Certification #.....	FS00239		
Prime Contractor.....	Andrew Grubbs Debris Removal		
Sub-Contractor.....	Dale S. Root		
<b>Load Information</b>			
QA Monitor.....	903094		
Ticket Type.....	ROW		
Debris Type.....	Vegetative		
Field Debris Type.....	Constr. & Demo.		
Latitude.....	030 41.4993° N		
Longitude.....	088 02.5780° W		
GMT Load Time.....	03/08/2010 21:54:28		
Local Load Time (-5).....	03/08/2010 04:54:28 PM		
<b>Unload Information</b>			
Site Name.....	Random		
Tower Name.....	tower 1		
Tower Monitor ID.....	8837B5		
GMT Tower Time.....	03/08/2010 21:55:41		
Local Tower Time (-5).....	03/08/2010 04:55:41 PM		
Max Capacity.....	27.1		
Call Type.....	Percent Full		
Percent Full.....	75.0		
Calculated Quantity.....	20.3		
Version: 3.0.0.103			
<b>CONTRACTOR COPY</b>			

# Event Manager Website



U   [Sign In](#)  
Forgot your password?

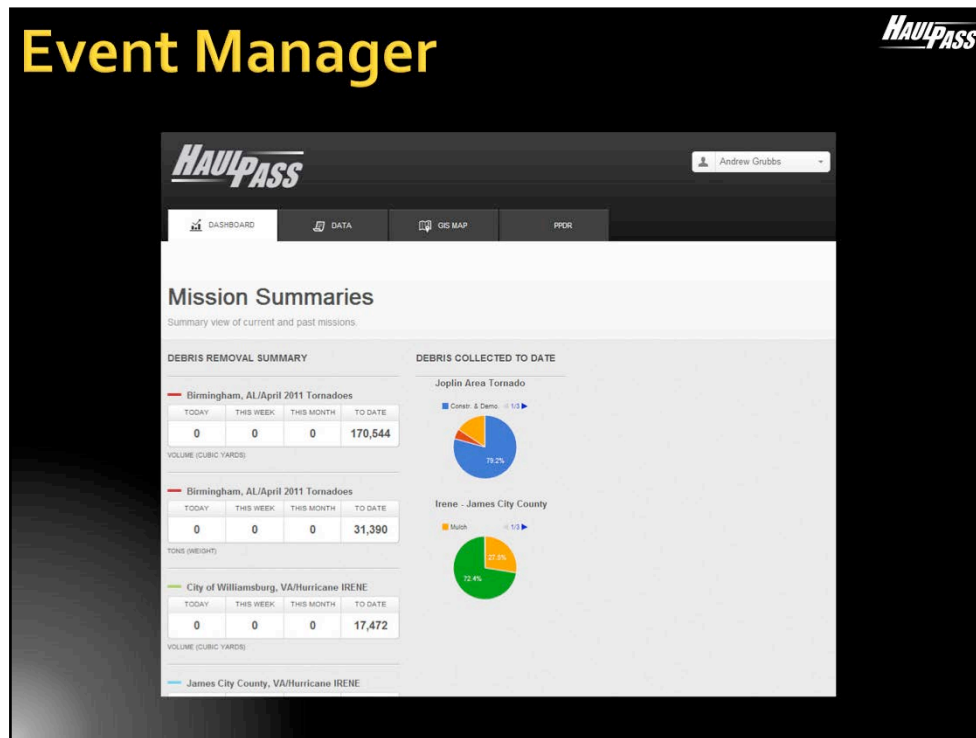
[Home](#) [Links](#)



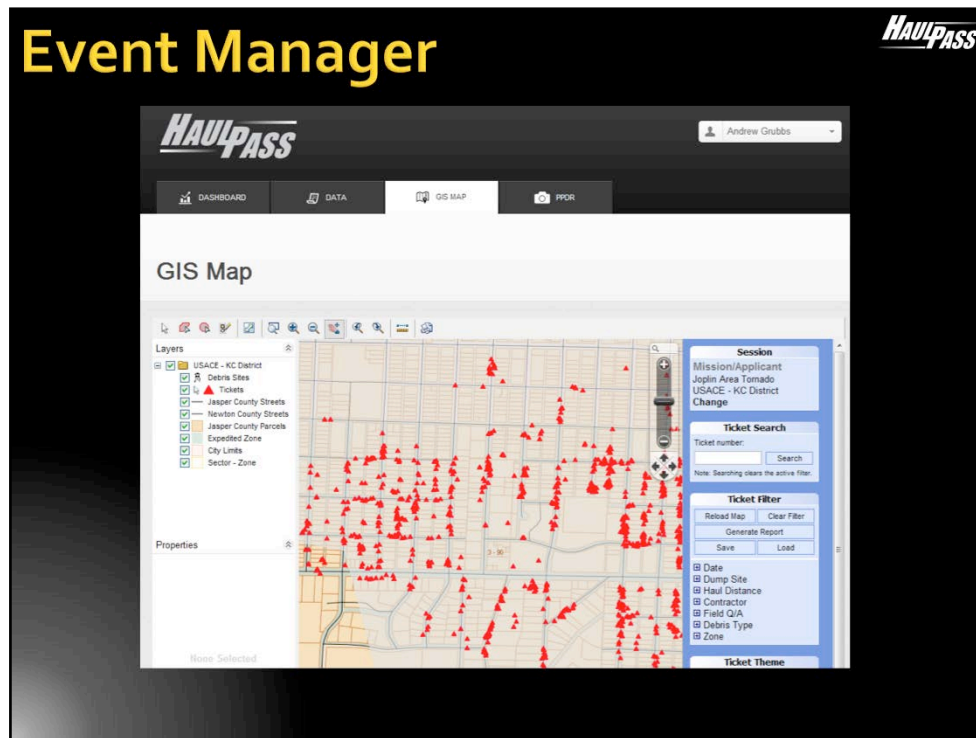
To get started on your debris cleanup call [813.903.3100](tel:813.903.3100).

- ✓ No Capital Investment
- ✓ Validated US Army Corps of Engineers

When it comes to disaster recovery operations, the HaulPass™ Automated Debris Management System (ADMS) puts the power of wireless data collection and management right in your hands.



- Easy to use filters
- Create reports from filtered data
- Visual Aids – color themes below



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# Joplin ROE/PPDR Mission **HAULPASS**

- ❖ Field Personnel & Units
- ❖ Support documentation of cleanup
- ❖ Each property had 4 before images
- ❖ Each property had 4 after images
- ❖ Complete documentation of cleanup effort

ROE# 0143D  
Address: 4571 E 25th ST  
Date: 8/5/11  
QA: KINSER



# Field PDA



- ❖ PDA with Built in Camera and GPS
- ❖ Allows for Work Order Number /Address Tracking
- ❖ Allows for Multiple Pictures per Property/Location
- ❖ Images and Data Tagged with GPS
- ❖ Clearly Document Work Completed

HaulPass

Enter Type/Note, Aim, Tap Snap then Save

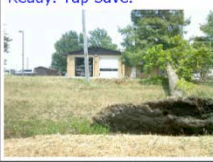
GPS GMT Time

Type:

Site:

Note:

Ready. Tap Save.



Snap

Save

File

HaulPass

Enter Type/Note, Aim, Tap Snap then Save

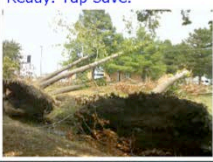
GPS GMT Time

Type:

Site:

Note:

Ready. Tap Save.



Snap

Save

File

### Load Call and Finalize Ticket

- Select the debris type.
- Drag the slider bar to the appropriate load call percentage.
- Press the "Complete" button.

# Event Manager

- ❖ Before and After Images
- ❖ All images stored by property
- ❖ Image files tagged
- ❖ Improved Reporting Times
- ❖ Faster management review



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# Federal Government Acceptance

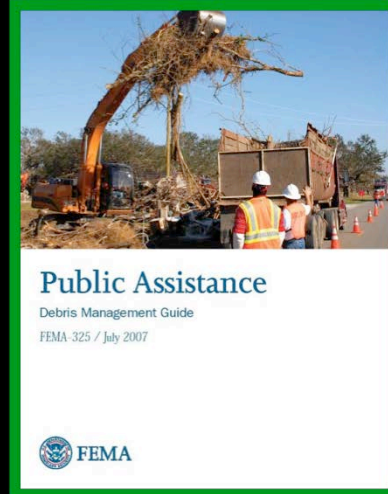
**HAULPASS**

❖ **FEMA**

FEMA 325 Debris Management Guide acknowledges use of Automated Debris Management Systems

❖ **USACE**

Validated by the US Army Corps of Engineers



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## HaulPass® Differentiators

**HAULPASS**

- ❖ Rapid deployment
- ❖ Quick training of field staff
- ❖ Minimal hardware management in field
- ❖ No reliance on paper
- ❖ Highest levels of security
- ❖ Electronically encrypted data throughout process
- ❖ Network/cell availability not required during operations
- ❖ Ruggedized field hardware



- ❖ Paperless electronic data collection and management
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- ❖ Satellite based GPS technology allows accurate automated debris pickup location
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# Questions

# HAULPASS<sup>®</sup>

