

# SAFETY ISSUES UNIQUE TO ENGINEERING GROUP

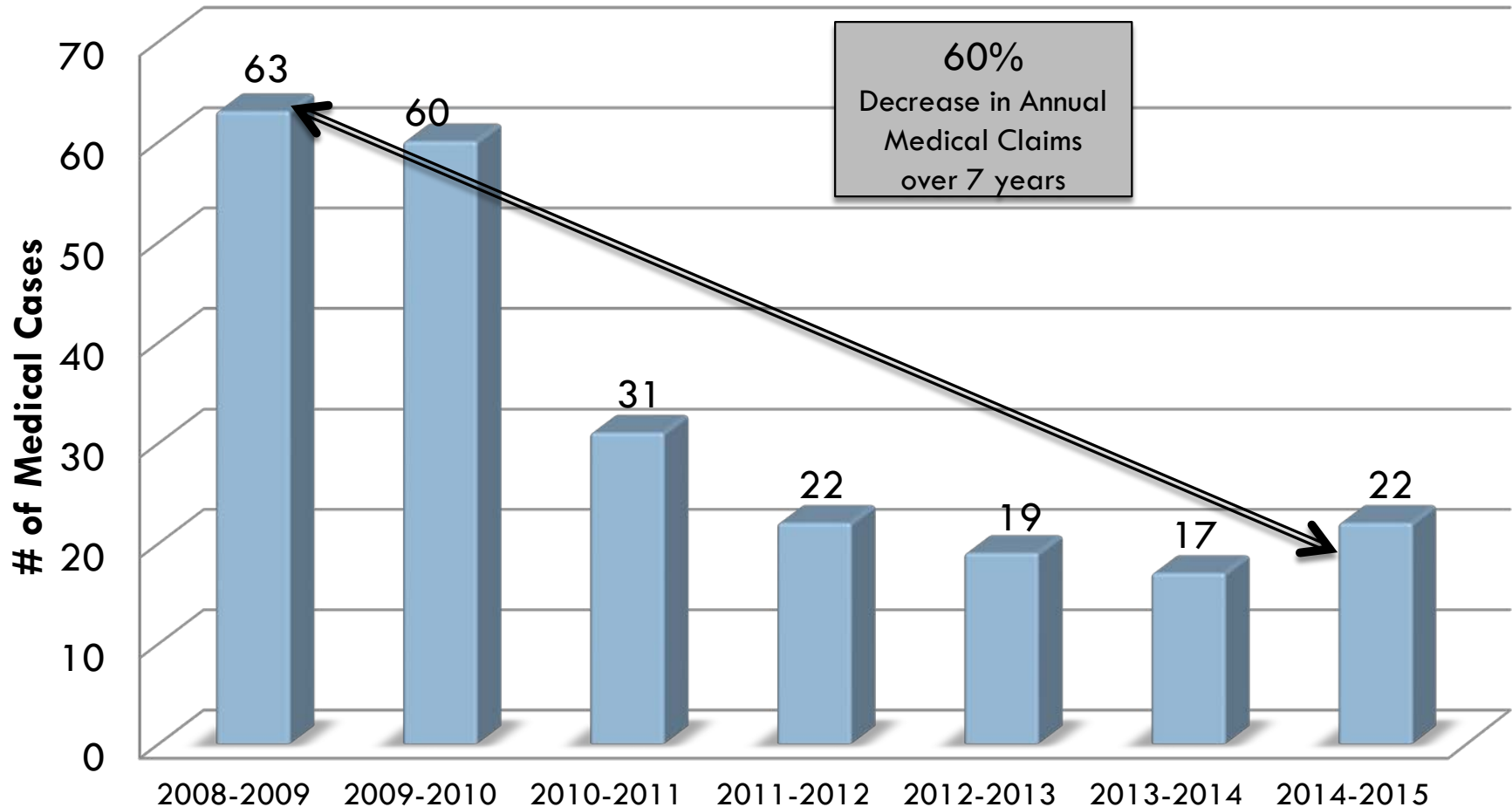


May 11, 2016

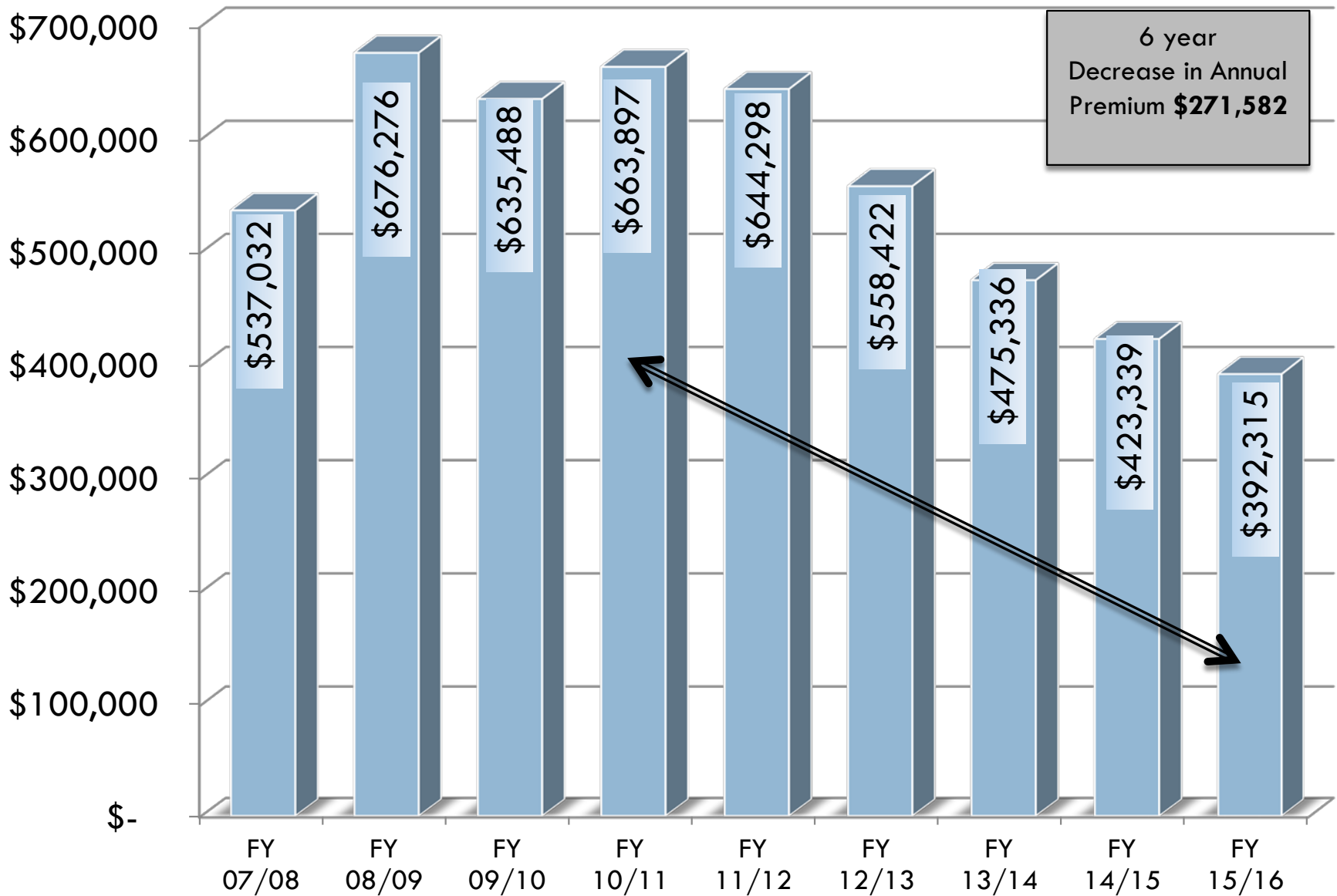
Kelly Crowell, Safety Director

# Houston County Medical Cases

2



# Worker's Comp Premiums



Note: Audit Adjustments Included thru FY 11.

# Houston County Road & Bridge Department

4

- 94 employees – R & B
- Maintain & service:
  - ▣ 578 Square miles
  - ▣ 948 miles of County road (800 paved)
  - ▣ 79 Bridges, 73 Box Culverts
  - ▣ 3 State Parks
  - ▣ 12 Municipalities
- 2015 - Highest Graded Roads in the State



# Work Zone Safety





# R & B crew

6

Multiple hazards on  
a daily basis



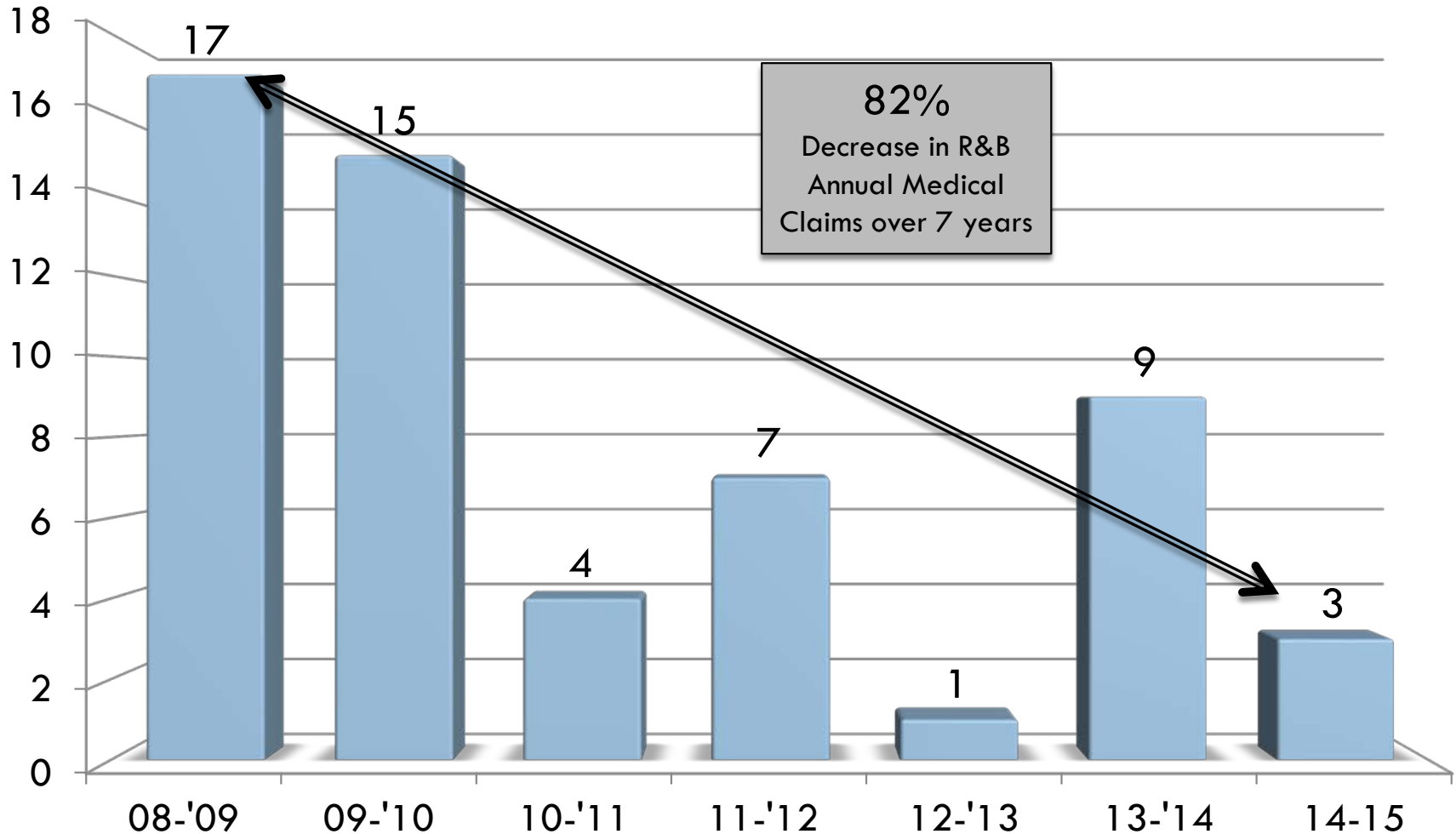


# R & B Unique Situations



# Road & Bridge Medical Cases

8



# R & B Maintenance Shop

9

- R & B Shop responsible for service, maintenance & repair of R & B fleet, Sanitation Fleet & Sheriff Dept. vehicles
- Heavy equipment
- Fabrication & welding





# R & B Shop

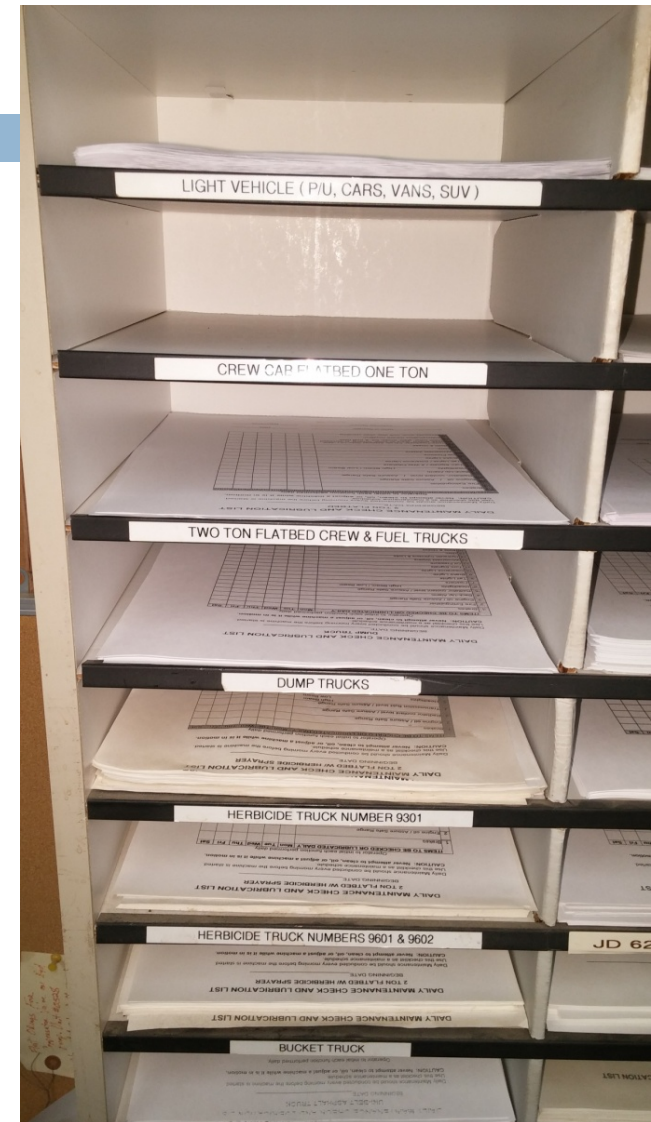
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- Inspect Vehicles Daily
  - ▣ Fluids, tire pressure, back up alarms, strobe lights, cleanliness
  - ▣ Random checks by supervisors



# R & B Maintenance Shop

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# Best Practices – Fleet Visibility

12

- Visibility of fleet - contd.





# Best Practices – Fleet Visibility

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- ▣ Work daylight to dusk & in all weather conditions
- ▣ Flags, light bars, strobes, banner, signage



# Best Practices - Fleet

14

## □ Visibility of fleet - contd.





# Best Practices - Fleet

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- ❑ Transporting Equipment
  - ❑ Flagging on end of pipe
  - ❑ Cargo chains – use industry standard
  - ❑ Correct # of chains & binders for the load per DOT requirements



# Best Practices - Fleet



# Houston County Road & Bridge Department

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- Responsible for Sanitation Department
  - ▣ 12 employees, 6 automated trucks
  - ▣ Each truck runs 80-200 miles/day
  - ▣ Service 12,000 households weekly (400-600 homes per day, per truck)



# Sanitation Department

18





# Sanitation Department

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### 1-10-12 Sanitation Accident

Citizen placed this product in trash for disposal. Upon compaction in the truck, The container burst and sprayed muriatic acid on two Houston County sanitation workers injuring them.



# Sanitation Department

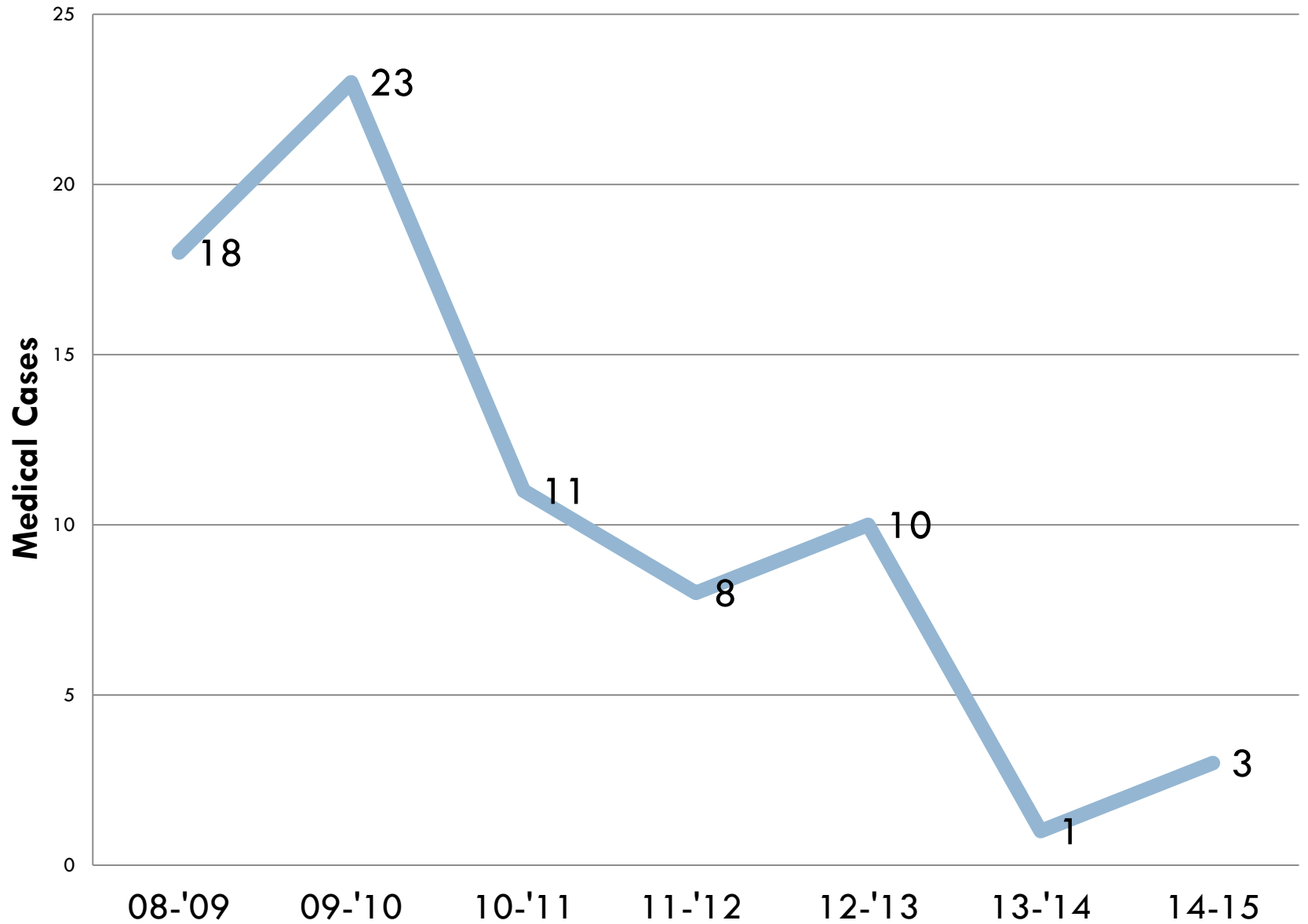
21

- Began making the transition to fully automated trucks in fall of 2014.
- Trial route, worked great
- Purchased 5 new automated trucks
- Equipped 2 back up trucks with tippers – use these on dirt roads when it rains



6-1-12 Sanitation Truck accident — Wallace Buie Rd

# Sanitation Medical Cases





# Interacting with the public

24

- Work zone may upset people – holding them up
- Feel like you are encroaching on their property
- Ask you to do work on their property

# Interacting with the Public

25

- Use the media - Press releases
  - Road closures (cross drains replacement, saw crew, ditch digging, bearing pad replacement)
  - Work Zones (shoulder work, zipping, pipe crew)
  - Storm Pick up (notify the public after storm events)
  - Detours





# Best Practices - Work Zone Safety

27

- Flagger Safety Awareness Training
  - ▣ Paddle Height
  - ▣ Class II Hi Vis clothing
  - ▣ Flagger placement
- Barricade & signage placement
- Pilot Car
- News media
- Sheriff Deputy's involvement



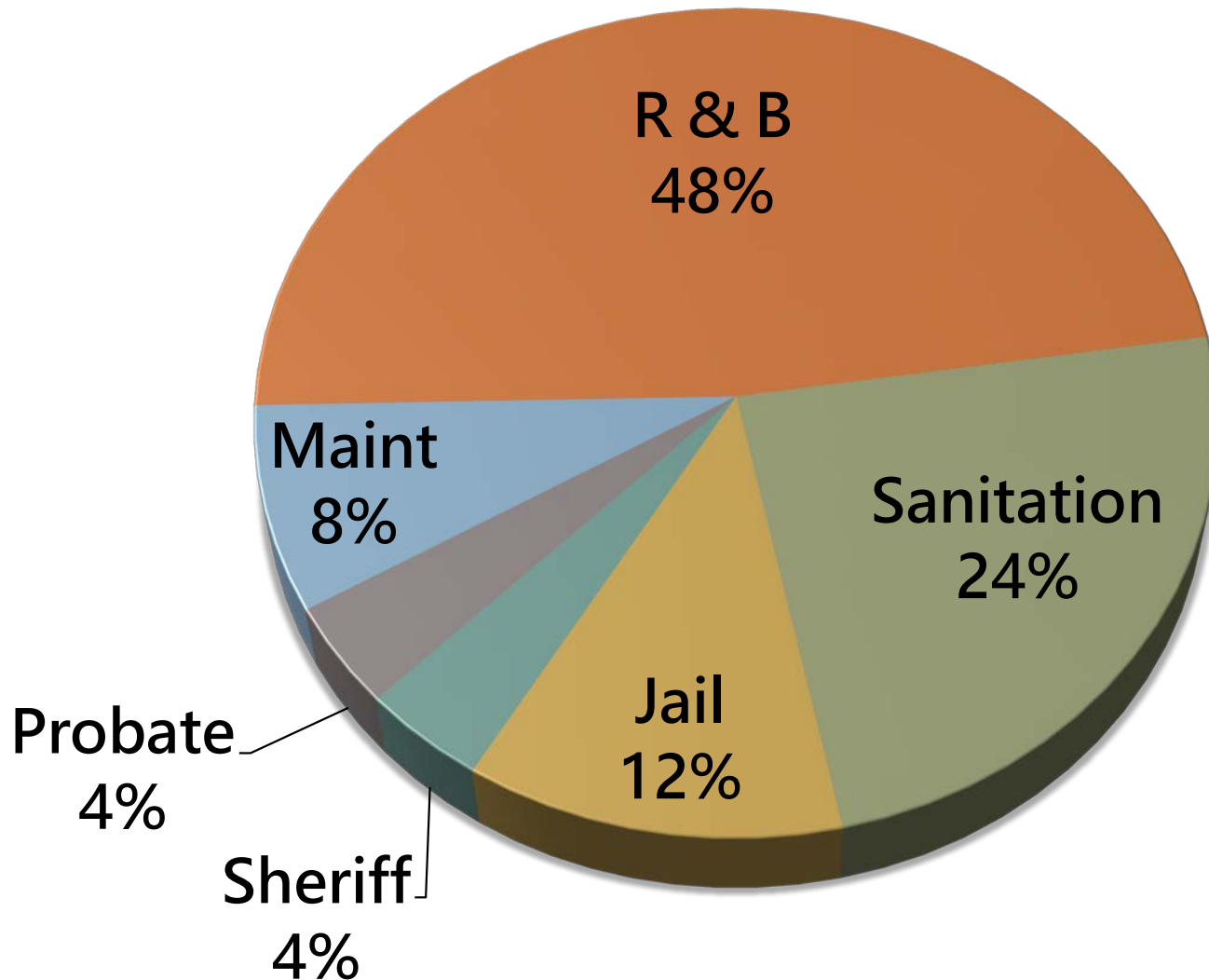
# Trend Analysis

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- Develop internal data base. Track all incidents even if you don't submit them to Meadowbrook
- Identify loss trends or patterns or employees
- Use to measure effectiveness of Safety Program



# Eye Injuries 2003-March 2011



# Eye Injuries

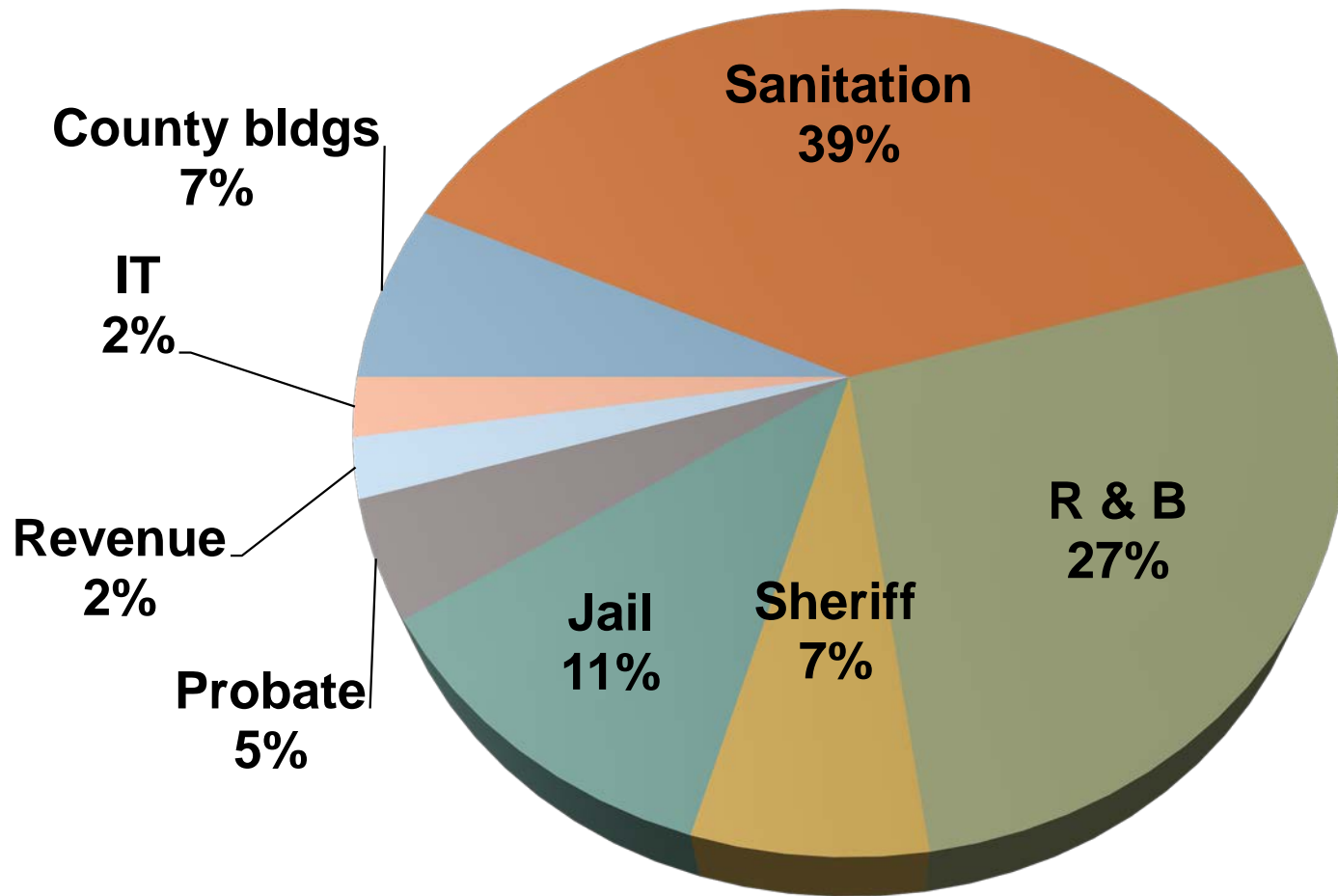
	Before Policy	After Policy	Reduction
Sanitation	6	3	50%
R & B	12	1	92%
Combined	18	4	78%



Of this 4 only one was a  
Medical case

# Foot , Ankle, Toe Injuries by Department

2003-March 2011



# Foot, Ankle, Toe Injuries

	Before Policy	After Policy	Reduction
Sanitation	17	4	76%
R & B	12	5	58%
Combined	29	9	69%



Of this 9 – two were Medical cases  
and 7 were Report Only.

# Trend Analysis - Liability

Date	Claimant	Employee	Description of Claim	Dept
2/7/2013		Perkins, J	<b>Backing up</b> Lowboy & trailer in the rain & hit parked 1992 Crew cab truck damaging front R	R & B
2/20/2013	Turner, J		Claimant says he hit a pothole in road & now his car has vibration problem	R & B
3/13/2013	Johnson, F		Law Enforcement Bodily Injury	Sheriff/jail
3/26/2013		Harrell, T	<b>Backing up</b> in dump truck #0726 & hit a parked dump truck #0728 breaking light headlight cover	R & B
3/30/2013	Mathews, J	Edwards, M	Rocks fell from dump truck #0732 - hitting citizen windshield causing damage	R & B
4/1/2013		Ward, C	<b>Backing up</b> on back hoe #0523 & hit tailgate of County truck #0410	R & B
4/20/2013		Woodard, M	<b>Backing truck</b> out of service bay & struck front of #9220 backhoe damaging truck	R & B
5/9/2013		Huffman, L	Cutting grass at water tower by McLane's & rock hit side window of parked POV working nearby	Farm Ctr.
5/13/2013		Harrell, T	Emp. Loading dump truck with CAT loader & hit dump trk fuel tank causing dent in fuel tank	R & B
5/24/2013		Mathis, D	<b>Backing truck</b> #0734 in co. yard to park it between 2 parked trucks & hit truck #1402	R & B
6/11/2013	White, M	Taylor, A	County vehicle rolled forward at traffic light & bumped citizen vehicle damaging citizen's bumper	Cty. Bldg.



# Trend Analysis Result

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## At Risk employees (updated 1-3-13)

<u>Name</u>	<u>Dept</u>	<u>Qty</u>	<u>Date of Injuries</u>
Anderson, B	(3-Road, 3-Sanitation)	7	12-6-03, 8-4-05, 10-3-05, 12-10-07, 2-2-10, 9-4-10, 12-4-12
Blalock, A (quit)	(4-Road, 1-?)	5	5-26-05, 7-11-05, 7-25-05, 9-29-05, 4-15-08
Coleman, J	(3-Road, 2-Sanitation, 1-?)	6	1-18-07, 7-30-07, 4-3-08, 3-31-09, 2-15-11, 12-22-11
Duckett, B (terminated)	(6-Road)	6	11-9-04, 8-9-05, 12-4-06, 7-12-06, 3-6-06, 5-17-06
Evans, M (quit)	(1-Road, 6-Shop, 1-?)	8	7-17-06, 1-2-09, 10-8-09, 4-4-08, 5-23-07, 2-23-10, 7-10-12, 9-5-12
Fields, S (terminated)	5 (Sanitation)	5	8-30-07, 11-10-08, 4-20-10, 8-26-10, 7-19-11
Flowers, K (terminated)	(3-Road, 3-Sanitation)	6	3-19-07, 11-28-07, 11-25-08, 9-14-09, 10-13-09, 4-25-10
Hatcher, D	(3-Road, 2-?)	5	9-13-05, 6-26-07, 8-30-07, 4-19-08, 10-9-08
Heinrich, T	(3-Road, 5 Sanitation)	8	4-17-07, 7-30-07, 12-3-07, 6-16-08, 11-26-08, 10-14-09, 11-25-9, 5-12-10
Henderson, T (terminated)	(1-Road, 9-Sanitation, 1-?)	11	2-7-07, 2-26-07, 4-18-07, 7-17-07, 8-9-07, 9-20-07, 8-27-08, 9-15-08, 11-10-08, 11-24-08, 3-4-09
Hussey, R (retired)	(5-Road)	5	5-6-04, 3-20-06, 10-10-06, 3-10-08, 2-3-11
Johnson, I	(6-Road)	6	1-30-07, 7-21-09, 8-2-10, 1-27-11, 5-2-11, 6-20-12
Johnson, T	(5-Road)	5	10-17-03, 9-29-05, 1-10-07, 6-25-07, 7-22-09
Jones, R	(4-Road)	5	2-10-04, 8-9-04, 3-8-05, 3-31-08, 12-21-11
Mercer, S	(4-Road, 1-Shop)	5	7-27-04, 8-9-04, 2-14-05, 3-2-05, 3-19-10
Powell, K (quit)	(13-Sanitation)	13	6-2-04, 5-25-06, 4-30-08, 5-5-09, 6-23-09, 11-29-06, 1-14-10, 1-20-10, 5-20-10, 4-14-11, 7-7-11, 11-1-11, 8-2-12
Strickland, G	(7-Sanitation)	8	11-23-07, 12-10-07, 8-28-08, 10-1-09, 10-26-09, 1-5-11, 2-8-11, 1-10-12
Stringer, G	(4-Road, 4-Shop)	8	8-17-05, 8-22-05, 11-17-05, 10-13-06, 2-28-07, 3-12-08, 5-18-11
Tallman, W	(9-Road, 4-Shop,)	13	8-4-04, 7-21-05, 8-22-05, 9-28-05, 8-24-06, 11-13-06, 2-28-07, 11-15-07, 3-4-08, 6-12-08, 9-17-09, 1-11-10, 9-28-10
Ward, C	(5-Road)	5	12-9-03, 4-12-05, 5-11-06, 6-15-06, 12-28-09?

# Quality Workforce

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- Pre Hire Criteria
  - ▣ Physical based on job classification
- Background Check
- Probationary period
- Performance Reviews – total package
  - ▣ Annually
  - ▣ Look at absenteeism, accidents, quality of work, safety write ups



# DOT – CDL card

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- 2014
- Grandfathered in existing employees
- Required for new hires or promotions
- Employees responsible for the cost & keeping them current

Medical Examiner's Certificate			
I certify that I have examined _____ in accordance with the federal Motor Carrier Safety Regulations (49 CFR 391.41-391.49) and with knowledge of the driving duties, I find this person is qualified, and, if applicable, only when:			
<input checked="" type="checkbox"/> Wearing corrective lenses	<input type="checkbox"/> Driving within an exempt intracity zone 46 CFR 391.62		
<input type="checkbox"/> Wearing hearing aid	<input type="checkbox"/> Accompanied by a Skill Performance Evaluation Certificate (SPE)		
<input type="checkbox"/> Accompanied by a waiver/exemption	<input type="checkbox"/> Qualified by operation of 49 CFR 391.64		
The information I have provided regarding this physical examination is true and complete. A complete examination form with any attachment embodies my findings completely and correctly, and is on file in my office.			
Signature of Medical Examiner		Telephone	
Brandy Duke DD		Date	
		04/06/2016	
Medical Examiner's Name		<input type="checkbox"/> MD <input type="checkbox"/> Chiropractor	
Brandy Duke		<input checked="" type="checkbox"/> DO <input type="checkbox"/> NP	
Medical Examiner's License or Certificate No.	Issuing State	<input type="checkbox"/> PA <input type="checkbox"/> Other	
DO 1422	AL		
National Registry No.			
93			
Signature of Driver		Intrastate Only	CDL
Denny D. Williams		<input checked="" type="checkbox"/> Yes	<input checked="" type="checkbox"/> Yes
		<input checked="" type="checkbox"/> No	<input type="checkbox"/> No
Driver's License No.		State	
L...996		AL	
Address of Driver			
36 intv rd 81			
Slocum 6375			
Medical Certification Expiration Date			
04/06/2017			

## 649-F (6045)

2. HEALTH HISTORY		Driver completes this section, but medical examiner is encouraged to discuss with driver.	
Yes	No	Yes	No
<input type="checkbox"/>	<input checked="" type="checkbox"/> Any illness or injury in the last 5 years?	<input type="checkbox"/>	<input checked="" type="checkbox"/> Lung disease, emphysema, asthma, chronic bronchitis
<input type="checkbox"/>	<input checked="" type="checkbox"/> Head/Brain injuries, disorders or illnesses	<input type="checkbox"/>	<input checked="" type="checkbox"/> Kidney disease, dialysis
<input type="checkbox"/>	<input checked="" type="checkbox"/> Seizures, epilepsy <input type="checkbox"/> medication _____	<input type="checkbox"/>	<input checked="" type="checkbox"/> Liver disease
<input type="checkbox"/>	<input checked="" type="checkbox"/> Eye disorders or impaired vision (except corrective lenses)	<input type="checkbox"/>	<input checked="" type="checkbox"/> Digestive problems
<input type="checkbox"/>	<input checked="" type="checkbox"/> Ear disorders, loss of hearing or balance	<input type="checkbox"/>	<input checked="" type="checkbox"/> Diabetes or elevated blood sugar controlled by: <input type="checkbox"/> diet <input type="checkbox"/> pills <input type="checkbox"/> insulin
<input type="checkbox"/>	<input checked="" type="checkbox"/> Heart disease or heart attack; other cardiovascular condition <input type="checkbox"/> medication _____	<input type="checkbox"/>	<input checked="" type="checkbox"/> Nervous or psychiatric disorders, e.g., severe depression medication _____
<input type="checkbox"/>	<input checked="" type="checkbox"/> Heart surgery (valve replacement/bypass, angioplasty, pacemaker)	<input type="checkbox"/>	<input checked="" type="checkbox"/> Loss of, or altered consciousness
<input checked="" type="checkbox"/>	<input type="checkbox"/> High blood pressure <input type="checkbox"/> medication _____		
<input type="checkbox"/>	<input checked="" type="checkbox"/> Muscular disease		
<input type="checkbox"/>	<input checked="" type="checkbox"/> Shortness of breath		
		<input type="checkbox"/>	<input checked="" type="checkbox"/> Fainting, dizziness
		<input type="checkbox"/>	<input checked="" type="checkbox"/> Sleep disorders, pauses in breathing while asleep, daytime sleepiness, loud snoring
		<input type="checkbox"/>	<input checked="" type="checkbox"/> Stroke or paralysis
		<input type="checkbox"/>	<input checked="" type="checkbox"/> Missing or impaired hand, arm, foot, leg, finger, toe
		<input type="checkbox"/>	<input checked="" type="checkbox"/> Spinal injury or disease
		<input type="checkbox"/>	<input checked="" type="checkbox"/> Chronic low back pain
		<input type="checkbox"/>	<input checked="" type="checkbox"/> Regular, frequent alcohol use
		<input type="checkbox"/>	<input checked="" type="checkbox"/> Narcotic or habit forming drug use

I certify that the above information is complete and true. I understand that inaccurate, false or missing information may invalidate the examination and my Medical Examiner's Certificate.

**Driver's Signature**

Date 4/6/2016

**Medical Examiner's Comments on Health History** (The medical examiner must review and discuss with the driver any "yes" answers and potential hazards of medications, including over-the-counter medications, while driving. This discussion must be documented below. )

HTN is controlled on meds.

# Employee Development

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## □ Supervisors

- Hire or promote the best candidate for the job. Look at qualifications & potential & not just on seniority
- With advancing technology – Need experience in surveying, understanding of grades, elevations & data collection.
- 10 hour OSHA certificates for Supv.
- Emergency 1<sup>st</sup> aid & CPR – all Supv & lead men
- Computer basics – Excel
- Accident Investigation

# Employee Development

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- Employees
  - ▣ Excavation & Trenching class
  - ▣ Work Zone Safety
    - Temporary traffic control
    - Flagger training – 4 hour
  - ▣ Radiation (Nuclear Gauge)
  - ▣ Concrete
  - ▣ Roadway tech
  - ▣ Bridge inspection
  - ▣ Herbicide school

# Handling Injuries

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- ❑ Emergency First Aid training for supervisors
- ❑ CPR/AED certified
- ❑ First aid Kits in vehicles
- ❑ Handling Injuries checklist in vehicles
- ❑ One jug of Gatorade & one of ice water per truck



# Managing Injuries

42

- Designated Occupational Medical Provider
- RTW program
- Coordinate with Meadowbrook
- Follow up with employee
- Close the loop

# Best Practices – Post Accident

- Accidents can have a positive side
  - ▣ Brings forward unrecognized hazards
  - ▣ Allows for Corrective Action
  - ▣ Prevents Recurrence



# Best Practices – Post Accident

- Accidents can have a positive side
  - ▣ Hit & Run involving Sanitation truck
    - Developed a Vehicular Accident guidelines
    - Accident packet added to each vehicle
    - Reinforced need for policy (investigation, documentation, post accident testing)



# Best Practices – Post Accident

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## Vehicular Accident checklist

Any Houston County employee involved in an on the job vehicular accident will be expected to do the following unless injuries or other circumstances prevent them from doing so:

- Immediately stop your vehicle. Do not leave the accident scene. (If it appears that the other vehicle is not going to stop, try and get a tag number and a description of the vehicle).
- Activate your emergency flashers. Warning signals and lights may be turned on. Rotating beacon(s) may be used – if vehicle is so equipped.
- Exit your vehicle if safe to do so.
- Take whatever actions that can be done safely to prevent another accident from occurring. If you must move your vehicle for safety reasons, take a photo of the scene first.
- Deploy warning flags, reflector triangles or other emergency equipment if the accident scene is in a high traffic area.
- Call 911 to report the accident and provide pertinent information concerning the accident.
- Notify your supervisor immediately.
- Drivers should inquire if anyone is hurt or needs medical attention and assist if possible.
- Do not admit negligence or liability or give your opinion on the accident. Do not attempt settlement, regardless of how minor.
- While waiting for Law Enforcement to arrive, gather information for the accident investigation such as photographs of the scene & damage to vehicles involved. Witness names, addresses and phone numbers should be obtained, if possible. A Houston County Accident/Incident Investigation Form can be used for this (attached).
- DO NOT leave the accident scene until law enforcement has responded.
- **Information on the County vehicle and insurance letter is located in the glove box of the vehicle.**
- Drivers should keep their up-to-date drivers license and CDL card (if applicable) with them when they are operating a county vehicle.
- Drivers should speak freely and accurately to law enforcement personnel.
- Once the law enforcement investigation is completed, the driver will be taken by his/her supervisor for a drug screen and blood alcohol test as required by the Houston County Employee Handbook.
- All personal injuries to an employee shall be reported immediately to the Supervisor, Personnel Department, and the Safety Director following the procedures outlined in the Handling Employee Injuries Summary Sheet (attached)
- Employees and supervisors who fail to report accidents involving county vehicles shall be subject to disciplinary action. These offenses shall be treated as a Group II Offense in accordance with the Houston County Employee Handbook.

## Handling an Employee Injury

Employee reports an injury to their Supervisor.

Supervisor notifies the Personnel Director or Safety Director of the injury and discusses treatment options.

### "Record Only"

- Incident does not require treatment at that time but the employee wants to report it in case of future problems
- Supervisor fills out an Accident/Incident Report and forwards it to Personnel (Tonnilynn Hicks) or the Sheriff's office (Steve Flemister). They will fill out a First Report of Injury and note "Record Only" on it and submit it to our Worker's Compensation carrier.

### First Aid or Minor Injury

- Supervisor can use the First Aid kit in the area to treat the injury
- Supervisor fills out an Accident/Incident Report and forwards it to Personnel /Sheriff's Office. A First Report of Injury in "Record Only" status will be sent to w.c. carrier.
- If injury treatment is questionable, call Personnel or the Safety Director to discuss options.

### Medical Treatment

- If the injury requires off site medical treatment, the employee should be taken to Houston County's occupational medical provider, Prime Care of Dothan. All non life threatening injuries should be treated here initially. If the injury requires specialty treatment, Prime Care will refer the employee to the appropriate specialist and assist them in getting a timely appointment. If an injury occurs after Prime Care's normal business hours (M-F 8:00am – 7:00pm and Sat. 8:00am to noon) the employee should be taken Southeast Alabama Medical Center Emergency Room for treatment with follow up with Prime Care the next day.
- A drug test/breath alcohol test should be administered at the time of the visit.
- Supervisor fills out an Accident/Incident Report and forwards it to Personnel /Sheriff's Office. A First Report of Injury will be sent to w.c. carrier.

### Serious or life threatening injury

- Call 911 and request Emergency Medical Services (EMS).
- Supervisor should:
  - Contact the Dept. Head, Personnel Director or Safety Director and inform them of the injury and where the employee is being taken, if known.
  - Secure the area where the accident occurred.
  - Document details of the accident scene.
  - Go to the treating medical facility to be available for any questions that might arise about the nature of the accident or injury.

Once the employee's injuries have been treated, the supervisor should begin the initial accident investigation and complete the Accident/Incident Report. This information should be forwarded to the Safety Director and Personnel on the day of the injury, if at all possible. A First Report of Injury will be completed and sent to our worker's compensation carrier.

Failure to report a workplace injury could result in denial of worker's compensation benefits or disciplinary action up to and including termination.

Upon discharge from the treating medical facility, the employee should be given a work status report which details any modified duty requirements. The employee must give this to their supervisor prior to them being allowed to return to work.

### Contact Information

Personnel Director – Sheri Thompson

Work Phone 334-677-4778  
Cell phone 334-618-5600

Safety Director – Kelly Crowell

Work phone 334-677-4784  
Work cell phone 334-796-2471

# Best Practices – Post Accident

## HOUSTON COUNTY ACCIDENT / INCIDENT REPORT PRELIMINARY INVESTIGATION

### BACKGROUND INFORMATION:

Accident/Incident Occurred:	Date:	Time:	Day of the Week Accident Happened:
Accident / Incident Reported:	Date:	Time:	___(M) ___(T) ___(W) ___(T)
Accident/Incident Investigation Began:	Date:	Time:	___(F) ___(Sa) ___(S)

\_\_\_ WORKER'S COMP ONLY    \_\_\_ LIABILITY ONLY    \_\_\_ WORKER'S COMP & LIABILITY

### EMPLOYEE INFORMATION

Name (Last, First, MI)	Job Title at time of Injury / Illness:
	# Years in Job Position:
Home Address:	Supv. at Time of Injury / Illness:
	Location at time of Injury/Illness:
Phone #:	Witness(es):
Date of Birth:	

### NON-EMPLOYEE INFORMATION (CLAIMANT) Fill out if another party was involved in the Accident / Incident

Claimant Name: (Last, First, MI)	Address:
Phone Number:	

### ACCIDENT / INCIDENT LEVEL

<b>A. No Injury</b>	<b>B. Injury</b>
___ At Risk Behavior	___ Record Only
___ Near Miss	___ First Aid by Employer
___ Property Damage	___ Medical Treatment
	___ Lost Time
	___ Fatality
	___ Other

Description of Injury or Illness, Part of Body Affected and Treatment Received: ( Check if Drug Test Only ☐ )

Doctor / Hospital Name and Address:

Description of Accident / Incident:

Corrective Actions taken to prevent recurrence:

Also complete the reverse side (or page 2) if the accident involves a motorized vehicle

Employee's Signature: \_\_\_\_\_

Person Completing Form: \_\_\_\_\_ Contact Phone #: \_\_\_\_\_

## HOUSTON COUNTY ACCIDENT / INCIDENT REPORT

Complete this form if the accident/incident is related to a motorized vehicle.

### COUNTY VEHICLE:

Driver:	
Address:	
Telephone:	
Driver's License:	
Date of Birth:	
Owner of Vehicle:	
Make, Model, & Year of Vehicle:	
Tag Number:	
County Vehicle ID#:	

### OTHER VEHICLE:

Driver:	
Address:	
Telephone:	
Driver's License:	
Date of Birth:	
Owner of Vehicle:	
Make, Model, & Year of Vehicle:	
Tag Number:	

LOCATION OF ACCIDENT / INCIDENT:

DESCRIPTION OF ACCIDENT:

### Witness(es)

Name:	Name:
Address:	Address:
Phone #:	Phone #:

Person Completing Form: \_\_\_\_\_ Phone # \_\_\_\_\_

# Safety efforts pay off

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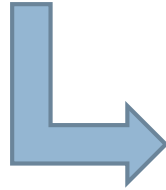
- Combined Workers Comp and Liability savings to Houston County have been almost \$500,000 since 2008 due to departmental safety efforts, policy implementations, training & the management & oversight of injuries.



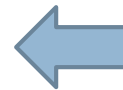
# Houston County Road & Bridge & Sanitation Departments Safety Records

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Road & Bridge - 90 employees - 382 days without a Medical Case



Sanitation - 20 employees -  
349 days without a Medical case



# Thanks !

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Kelly Crowell

[kcrowell@houstoncounty.org](mailto:kcrowell@houstoncounty.org)

334-796-2471

