



Mayor – Sandy Sanders

City Administrator – Ray Gosack

City Clerk – Sherri Gard

**Board of Directors**

Ward 1 – Keith D. Lau

Ward 2 – Andre' Good

Ward 3 – Mike Lorenz

Ward 4 – George Catsavis

At Large Position 5 – Pam Weber

At Large Position 6 – Kevin Settle

At Large Position 7 – Philip H. Merry Jr.

**AGENDA**  
**Fort Smith Board of Directors**  
**Study Session**  
**September 10, 2013 ~ 12:00 Noon**  
**Fort Smith Public Library Community Room**  
**3201 Rogers Avenue**

1. Review sewer backup policy and settling of tort claims
2. Discussion regarding CNG Vehicle Program ~ *Settle/Catsavis placed on agenda at the August 20, 2013 regular meeting ~*
3. Review preliminary agenda for the September 17, 2013 regular meeting

## INTER-OFFICE MEMO

**TO:** Ray Gosack, City Administrator

**DATE:** September 5, 2013

**FROM:** Steve Parke, Director of Utilities

**SUBJECT:** Sewer Back-Up Claims

The city's current policy for the consideration for payment of claims related to sanitary sewer back-ups was put in place in 1999 by Ordinance 20-99. This limited policy for hearing and settling of tort claims has been amended three times over the years to add the consideration of damages related to water main breaks, displaced manhole covers and building foundation settlement. Ordinance 68-12 adopted in September 2012 is the most recently adopted policy for the hearing and settlement of claims. A copy of that policy is attached.

The policy to address sewer back-up claims was designed to encourage property owners to purchase an insurance endorsement covering back-up of drains and to also install backflow protection devices such as relief valves on their sewer service lines. Such devices relieve, or greatly reduce the potential for, a sewer back-up before it enters a residence or business. A property owner may receive only one reimbursement for a particular location. The \$500 limit for payment of claims related to sanitary sewer back-ups is intended to meet the insurance deductible and to close the gap in coverage to prevent any out-of-pocket expense.

The Board recently expressed an interest in reviewing the financial impact of adjusting the \$500 limit for sewer back-up claims to \$1,000. It seems that some insurance companies have adjusted their deductibles to \$1,000 or that it is becoming more common for property owners to choose a \$1,000 deductible in order to reduce their overall cost of insurance.

A table summarizing the sewer back-up claims submitted and amount paid for Years 2009 through mid-2013 is attached. A column is included to show the amount which would have been paid had those same claims been allowed a \$1,000 maximum limit.

Should you or members of the Board have any questions or desire additional information, please let me know.

attachment

pc: Jeff Dingman

**SEWER BACK-UP CLAIMS 2009 THROUGH MID-2013**

Year	Claims Filed	Dry Weather	Wet Weather	Insured		Amount Requested	Amount Paid Under Current \$500 Maximum	Amount Paid If Adjusted To \$1,000 Maximum
				Yes	No			
2009	12	9	3	0	12	\$7,463	\$4,835	\$6,481
2010	8	7	0	1	7	\$10,865	\$3,866	\$6,479
2011	13	10	3	3	10	\$21,185	\$6,148	\$10,066
2012	11	8	3	4	7	\$12,622	\$5,454	\$9,667
2013	6	5	1	3	3	\$37,435	\$3,000	\$4,001

AN ORDINANCE ESTABLISHING A LIMITED POLICY OF THE  
CITY OF FORT SMITH, ARKANSAS, FOR THE HEARING AND SETTLING  
OF SPECIFICALLY IDENTIFIED TORT CLAIMS

BE IT ORDAINED AND ENACTED BY THE BOARD OF DIRECTORS OF THE  
CITY OF FORT SMITH, ARKANSAS, that:

Section 1: The attached Limited Policy of the City of Fort Smith, Arkansas, for the  
Hearing and Settling of Specifically Identified Tort Claims ("Policy") is hereby adopted. The  
Policy supercedes the City's previous policy adopted by Ordinance No. 69-02.

Section 2: Chapter 2, Article V, Section 2-221 of the Fort Smith Municipal Code is  
hereby amended to provide as follows:

The "Limited Policy Of The City Of Fort Smith, Arkansas, For The Hearing And  
Settling Of Specifically Identified Tort Claims" incorporated herein and made a  
part hereof, is hereby adopted. The Policy is not set out herein, but is on file and  
available for inspection in the office of the city clerk. The city administrator is  
hereby authorized to approve for payment claims resolved under the policy from  
funds appropriated for that purpose. The maximum reimbursement shall not  
exceed five hundred dollars (\$500.00) per structure per occurrence for sanitary  
sewer backup claims. The maximum reimbursement shall not exceed three  
thousand dollars (\$3,000.00) per property per occurrence for water main line  
break claims. The maximum reimbursement shall not exceed five hundred dollars  
(\$500.00) per claim for vehicle damage caused by displace manhole lid. The  
maximum reimbursement shall not exceed ten thousand dollars (\$10,000.00) per  
single property for building foundation settlement claims.

Section 3: Emergency Clause. It is determined that the adoption of an amended policy  
for the hearing and settling of specifically identified tort claims is essential to the appropriate  
administration of the relationship of the city with potential claimants and that the amendments  
adopted by this Ordinance are in the public interest. Therefore an emergency is declared to exist,  
and this Ordinance, being necessary to preserve the health, safety and welfare of the inhabitants

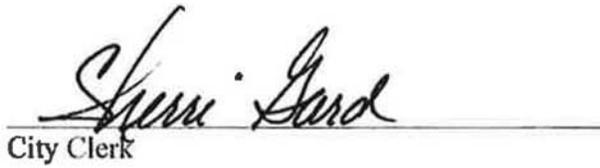
of the city, shall be in effect from and after its date of approval.

This Ordinance Passed and Approved this 4<sup>th</sup> day of September 2012.

APPROVED:

  
Mayor

ATTEST:

  
City Clerk

APPROVED AS TO FORM:

 Publish 1 Time

## **LIMITED POLICY OF THE CITY OF FORT SMITH, ARKANSAS FOR THE HEARING AND SETTLING OF SPECIFICALLY IDENTIFIED TORT CLAIMS**

This policy is established to govern the hearing and settling of tort claims arising because of the actions of the employees of the City of Fort Smith. The City acknowledges its immunity from liability, except to the extent that the City may be covered by liability insurance, for damages and further acknowledges that no tort action is permitted to lie against the City because of the acts of its agents and employees. A. C. A. Section 21-9-301 (Repl. 1995). The City determines, by this policy, to hear and settle only those specifically identified tort claims described in the policy and no others, and the City agrees to hear and settle the specifically identified claims only pursuant to the expressed procedures and limitations of liability set forth in this policy. The City reserves the right to amend or repeal in its entirety the policy at any time irrespective of any prior occurrence which could result in a claim(s) or the pendency of a claim(s).

### **I. TORT CLAIMS AS TO WHICH POLICY APPLIES.**

Unless limited by the third sentence of this paragraph I, and according to the limitations and procedures set forth in this policy the City shall receive for hearing and settling tort claims involving allegations of property damage from a sanitary sewer back-up a water main line break, vehicle damage caused by displaced manhole lid or building foundation settlement caused by excavation associated with a City owned underground utility line or facility arising from the negligent actions of employees of the City. No other tort claims shall be received for processing pursuant to this policy.

Specifically, this policy shall not authorize the processing of claims of personal injury or claims arising from intentional acts of City agents and employees, claims of strict liability, claims

not directly related to the performance of the job duties of the involved City employees (even though they may have been "at work" at the time of the occurrence), or claims covered by any liability insurance policy obtained by the City, obtained by others for the benefit of the City, or obtained by others for their own benefit.

"Sanitary sewer back-up" shall refer solely to property damage claims arising from the negligent actions of City employees proximately causing sanitary sewer flows to discharge from the City's sanitary sewer lines directly (not by over land surface flow) into a structure then utilized for residential, commercial or industrial purpose.

"Water main line break" shall refer solely to property damage claims arising from the negligent actions of city employees proximately resulting in water flow from breaks in City water distribution lines (but not service lines from distribution lines to individual water meters) to enter into residences or structures, or which otherwise causes damage to property.

"Vehicle damage caused by displaced manhole lid" shall refer solely to damage to a vehicle arising from the vehicle striking a sanitary sewer manhole in a public roadway where the manhole lid has been displaced.

"Building foundation settlement" shall refer solely to property damage arising from the negligent actions of City employees during excavation associated with a City owned underground utility line or facility.

## **II. PROCEDURE FOR PROCESSING CLAIMS.**

The following procedures shall govern the processing of claims submitted pursuant to this policy.

- (a) The term "City Administrator" shall refer to the City Administrator or his designated agent.

- (b) All claims resulting from an occurrence of back-up on a date prior to the adoption of this policy shall be processed under the policy established by Ordinance 69-02. All claims resulting from an occurrence of back-up or water main line break on the date or the after the date of adoption of this policy shall be processed under this policy. All claims resulting from an occurrence of building foundation settlement associated with excavation on a date after January 1, 2009, shall be processed under this policy.
- (c) Any person making a sanitary sewer backup claim, a water main line break claim, or a vehicle damage claim may provide in writing to the City Administrator within thirty (30) days of the occurrence a notice of intention to file a claim. Notice of intention to file a building foundation settlement claim must be provided to the City Administration within three hundred sixty-five (365) days of the excavation activity proximately resulting in the building foundation settlement (any foundation settlement claim asserted with reference to excavation work occurring after January 1, 2009, and presented to the City Administrator prior to the adoption of this 2012 amended policy will be considered as meeting the required notice). Any person who complies with this notice provision may thereafter, within the time limit and according to the procedures set forth in (d) below, file a written claim.
- (d) All claims shall be submitted in writing (containing the name, address and telephone number of the claimant) delivered to the City Administrator within the time periods provided in (c) or, if notice of intention to file a claims has been provided pursuant to (c), within sixty (60) days of delivery of the notice of intention to file a claim. If delivered in writing within the time period provided in (d), the claimant may request an extension of time for filing a claim which may be considered at the discretion of the City Administrator.
- (e) All claims from a sanitary sewer back-up into a single structure shall be consolidated and handled as one claim subject to the \$500.00 limitation provided by Section III (b). All claims from a water main line break across a single property shall be consolidated and handled as on claim subject to the \$3,000.00 limitation provided by Section III (b). All claims for vehicle damage arising from a single occurrence of displaced manhole lid shall be subject to the \$500.00

limitation provided by Section III (b). All claims of building foundation settlement for individual buildings (including detached structures) across a single property shall be consolidated and handled as a claim subject to the \$10,000.00 limitation provided by this policy.

When used in this policy, the term “single property” refers to real property, irrespective of platting or description as more than one lot or parcel, owned by the same person, persons, entity or entities.

- (f) All claims, shall be considered by the City Administrator, who shall determine all requisite facts under this policy, including the existence of negligence as described in Section I. The City Administrator shall have the authority to recommend for payment, from funds appropriated for that purpose, such claims. With reference to the existence of negligence on sanitary sewer backup claims, the City Administrator shall assume that any discharge originating in the sewer system of the City (as opposed to the claimant’s service line) proximately arose from a negligent action of the City unless the City Administrator determines there is objective evidence of another caused of the back-up. With reference to the existence of negligence on water main line break claims, the City Administrator shall assume that any flow of water from a broken City water main line proximately arose from a negligent action of the City unless the City Administrator determines there is objective evidence of another cause of the water main break. With reference to the existence of negligence on vehicle damage from a displaced manhole lid, the City Administrator shall assume that any such damage proximately arose from a negligent action of the City unless the City Administrator determines there is objective evidence of another cause of the displaced manhole lid. With reference to the existence of negligence on building foundation settlement, the City Administrator shall assume that any such damage proximately arose from a negligent action of the City unless the City Administrator determines there is objective evidence of another cause of the building foundation settlement.
- (g) Claims denied, in whole or part, by the City Administrator may be appealed to the Board of Directors of the City. A claimant shall have a period of ten (10) days, from the date of notification by the City Administrator, to appeal the decision to

the governing body of the City. Said notification shall be issued by first class mail to the address indicated by the written claim of the claimant. The ten day period will run from the date of issuance of notification for any claimant whose address is located within the City of Fort Smith. In the event that the claimant's address is located outside the City of Fort Smith, a period of four (4) days shall be added to the period in which an appeal to the governing body may be submitted.

- (h) A claimant's appeal shall be filed in writing and filed with the City Administrator, and the appeal shall be scheduled before the Board of Directors of the City and the claimant notified of the date of the hearing.
- (i) In addition to the other limitations set forth in this policy, compensation paid for damage to real or personal property shall be limited to the cost of repair of the damage or, in the event that the cost of repair exceeds the fair market value of the subject property, less salvage value, compensation shall be limited to the fair market value of the damage property minus any salvage value. No compensation shall be granted for inconvenience, loss of use, loss of profits, dislocation expenses or personal injury including, without limitation, emotional distress.
- (j) Unless the requirement is waived or modified by the City Administrator, the claimant shall submit three qualified estimates of the cost of repair of the property in question or three opinions of qualified persons of the fair market value, minus salvage costs, of damaged property.
- (k) For vehicle damage claims arising from a displaced manhole lid, the claimant must also submit a police report documenting the incident.
- (l) The provision of this policy regarding types of claims subject to the policy, limitation periods, limitations on coverage and the other provisions of the policy shall be applicable to all claims including those appealed to the Board of Directors.

### **III. ADDITIONAL LIMITATIONS ON CLAIMS.**

In addition to limitations set forth at other places in this policy, all claims shall be subject

to the following limitations.

- (a) No compensation shall be paid on the basis of any claim accruing to the benefit, directly or indirectly, of an insurance carrier. In particular, no compensation shall be based on any claim for property damage if the item of expense is covered by any insurance provision. Any claim may be rejected by the City Administrator or the Board of Directors from further handling in the event that the claimant fails to comply with any reasonable requirement of the City Administrator or the Board of Directors regarding determinations of insurance coverage.
- (b) Under no circumstances shall the City pay in excess of \$500.00 on any sewer backup claim or any vehicle damage claim. Under no circumstances shall the City pay in excess of \$3,000.00 on any water main line break claim. Under no circumstances shall the City pay in excess of \$10,000.00 on any building foundation settlement claim.
- (c) During any budget year, no claim shall be processed if the total budget appropriation for handling the claims has been expended.
- (d) Acceptance of the sum paid by the City on a claim will constitute a release and discharge of the City from any and all other liability for existing or future claims arising from the occurrence which gave rise to the claim of back-up. Additionally, the acceptance shall acknowledge the limitation set forth in the next sub-paragraph regarding future occurrences.
- (e) After the City has paid a sewer back-up claim at a location in the City (either under this policy, the policy or previous policies), the City shall not thereafter consider or pay a claim under this policy arising from a sewer back-up at the same location presented by the previously paid claimant or said claimant's spouse or immediate family member (parent or child or related person residing in same household).
- (f) This policy shall not apply where there is a written agreement absolving or releasing the City of liability from damage caused by a water main line break.

- (g) As to building foundation settlement claims, this policy shall not permit the processing or paying of a claim of damage to a building which encroaches into a dedicated easement, prescriptive easement area, right-of-way or setback area established by City ordinances which benefit City installation, replacement or maintenance of an underground utility line or facility or where there is a written agreement absolving or releasing the City from liability for damage which may occur due to the presence of an existing or future City underground utility line or facility.

Dated this 4<sup>th</sup> day of September, 2012.

# Memo



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**To:** Ray Gosack, City Administrator  
**From:** Jeff Dingman, Deputy City Administrator  
**Date:** 9/6/2013  
**Re:** Update on CNG Vehicle Pilot Program

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In keeping with the objective of increasing the city's "green" policies, the city embarked on a pilot project to convert four vehicles to Compressed Natural Gas (CNG) fueling systems. We took advantage of a program from the Arkansas Economic Development Commission's Energy Office that paid for 50% of the cost of converting vehicles from gasoline to CNG, thereby reducing the Return On Investment (ROI) time frame that weighs the cost of conversion against the operating benefits of lower fuel costs and preventative maintenance cost for the vehicles useful life. Fuel cost for CNG is generally one-third the cost of gasoline, and preventative maintenance dollars can be stretched by performing oil/filter changes less frequently.

Two of the vehicles are 2012 Chevrolet half-ton pickups that were purchased new, and the CNG conversion kit was installed by the local Chevrolet dealer before the city took delivery. A third vehicle is a 2010 Chevrolet Tahoe patrol vehicle that was already in the police department's fleet, the local Chevrolet dealer installed the conversion kit. All three of these passenger vehicles received a CNG conversion that allows the use of CNG or unleaded gasoline. The fourth vehicle converted was a 2011 Ford E450 transit bus, and required a full conversion making the vehicle CNG only.

The conversion kits for the half-ton pickups were \$10,500 each (the city's cost was half, or \$5,250). The Tahoe conversion cost was \$12,200 (again the city's cost was half). The conversion cost for the transit bus was \$20,750, of which the city paid half. The user evaluation summaries below are based on the city's year-to-date average fuel cost of gasoline of \$3.32 per gallon, compared the current \$1.01 gasoline gallon/equivalent (gge) cost of CNG for a savings of \$2.31 per gallon. Where gasoline prices can fluctuate daily, CNG prices are adjusted twice per year. It is also presumed that paying the full cost of the conversions would double the estimated payback time, thereby reducing the remaining useful life of the vehicle after the cost of the conversion is offset by operating savings.

1. The **Fire Department's 2012 Chevrolet Silverado 1500** 4x4 Extended Cab has been in service by the Fire Marshall since April 4, 2012. It averages 1,000 miles per month at 15 miles per gallon, or approximately 70 gge per month. The monthly savings in fuel cost is approximately \$161 per month. At the cost (to the city) for the conversion of \$5,250 the city will reach break-even after 33 months of service, or approximately January, 2015. At that point, it is estimated that the vehicle will still have seven years of service life left as a fire department administration vehicle (reduce that to 4.5 years based on the full cost of conversion). Added value to the operating cost is realized as the oil change cycle has been increased from every 3,000 miles on gasoline to every 5,000 miles on CNG due to using the cleaner burning fuel.

The Fire Department reports that its performance experience has been very good. They have had no maintenance issues with the vehicle, and do not notice a performance difference in either responsiveness or fuel economy whether the vehicle is operating on gasoline or CNG, averaging 15 miles per gallon regardless of fuel. It takes approximately eight minutes to refuel the pickup.

2. The **Customer Service Department's 2012 Chevrolet Silverado 1500** 2x4 Standard cab has also been in service since April, 2012. The vehicle is driven approximately 100 miles per day, and has gone about 1400 miles per month. They are experiencing about 14 miles/gge on CNG or gasoline, using approximately 100 gallons per month. At the \$2.31/gallon savings, the break-even point on the conversion cost of \$5,250 is about 23 months, so approximately March, 2014. At that point, the vehicle will have about six years left in a normal life cycle for a Customer Service vehicle (reduce that to about four years remaining based on full cost of conversion).

The Customer Service department isn't quite as satisfied with the performance of the vehicle or its application as the Fire department is. While the fueling time of 8 minutes is about similar, the fact that there is only one fueling station in town often requires additional time in line waiting to fuel. The fuel tanks hold about 16 gallons, requiring refueling every other day or so, and it often has to switch to gasoline based on where it travels during the day and time considerations if there is a line to fuel. This unit required several service trips over its first 15,000 miles, due to "bugs" in the CNG system, including one instance it was out of service for an entire week. The dealer suggested using only ethanol-free gasoline (premium...these units always start on gasoline and then switch over the CNG unless told not to) even though the engines are designed for ethanol use. They report that it hesitates on take-off while on CNG, and also hesitates to pick up speed while driving.

This department services oil changes every 5,000 miles on all of its vehicles, so has not realized an operational savings in that regard. The high pressure filter change/replacement does cost more than a typical filter, and the unit requires a CNG service check every 7,500 miles, resulting in it being out of service for at least a day. The department manager believes that the dealer-installed conversion was problematic because it took the first 15,000 miles to get it running the way it should.

3. The **Police Department's 2010 Chevrolet Tahoe Police Pursuit Vehicle** was an existing fleet vehicle that went in service (partially) with its CNG system in April, 2012. Due to unforeseen ground clearance regulations for police vehicles caused by mounting the CNG tanks under the vehicle, it was not placed in service as a patrol vehicle until mid-May, 2012. The city's expense to install the conversion kit was \$6,100. This vehicle has averaged 1,640 miles per month from May, 2012 to present, but it experienced a few very heavy months and several months with low mileage due to being out of service. While on patrol full time, this vehicle operated at about 12.5 miles/gge. This averages to 131 gallons per month over the last 16 months. At the \$2.31/gallon savings, the break-even point on the conversion cost of \$6,100 for this vehicle is just over 20 months, so at that rate of usage the break-even date would be about January, 2014.

These vehicles are generally replaced on five year cycles, so this one would have about a year of useful life remaining at that time if it could maintain the high monthly usage. Breaking-even on the full cost of converting such a vehicle would be about 40 months based on patrol usage, so conversion would only make sense on a new vehicle. Additionally, the police department generally changes the oil in these vehicles every 5,000 miles, but based on an analysis of the CNG vehicle's oil showed the oil to be exceptionally clean, so they have reduced the frequency of oil changes to 7,000 miles on this vehicle and continue to evaluate its performance.

The above fuel cost analysis assumes continued use as a high mileage patrol vehicle. The unit ran as a normal patrol vehicle until April, 2013, but due to maintenance concerns it was moved to a reduced role as a patrol supervisor unit, thereby reducing its average monthly mileage, which will extend the time for payout. In its year of operating as a full time patrol vehicle, it only had a few months where it was in service the entire month. It had several visits to the repair shop, sometimes staying a week at a time to try to resolve issues with rough idling and throwing the "check-engine" sensors, which automatically shut down the CNG system and allow the vehicle to use gasoline only. It has had much better luck since being moved to a supervisor vehicle with a lighter workload, but this means fewer miles driven.

When it is used on patrol, the size and location of the fuel tanks are an issue. The tanks are mounted under the rear of the vehicle. The vehicle chassis had to be lifted in order to give proper ground clearance for the tanks, which still hang as the lowest point of the vehicle's underside. The tanks themselves are small so that they are able to fit the available space, causing officers to have to fuel up twice during their shift, or turn off the CNG system and use gasoline. The remedy for the small tanks & poor location would be to mount a larger tank inside the vehicle, which could be done but would likely add to the conversion cost, would place the tank inside the passenger compartment, and reduce the storage area for necessary police equipment.

The police department reportedly observed a reduction of power when operating on CNG. CNG works for performing normal driving activities but does not allow an officer to initiate a swift response to a fleeing subject when the situation requires, especially as compared to the gasoline-powered vehicles. The lack of responsiveness for quick acceleration motivates the operator to switch to gasoline for full power. Switching to gasoline for this reason, or for issues with fuel

capacity noted above, reduces the efficiency of the CNG system and extends the payout period for the conversion cost.

The police department's overall observation is that much has been learned from this test vehicle, and it will continue to be used and tested, but unless modifications to CNG installations can be made to make the vehicles more conducive to the driving demands and high mileage usage of patrol vehicles, they will not be as reliable as gasoline powered patrol vehicles.

4. The **Transit Department's 2011 Ford E450 Bus** was different from the other three vehicles in the pilot program because it required a full conversion. It did not maintain its capacity to use gasoline, and is fully dependent on its CNG system. After an additional federal grant reimbursement specific to the Transit department, the city's share of the \$10,375 conversion cost was reduced to \$2,075. However, this conversion could not be done locally, so the bus was sent to a conversion facility near Norman, Oklahoma. The conversion did not go smoothly, and it took approximately nine months to get all of the bugs worked out of the conversion so the bus would operate as it should. That said, the bus has been in full service for approximately six months, although its role has been modified from the fixed route system to a demand route vehicle due to the fact that its fuel capacity will not last an entire fixed route shift. Please see the attached memo from Ken Savage outlining his observations of the CNG vehicle and his approach to expanding the number of CNG vehicles in the Transit Department's fleet.

Other city departments have continued to investigate the possibilities of CNG conversions, but in almost all instances the cost of conversion remains prohibitive. The Arkansas Energy Office no longer has funding available to support vehicle conversions, so the city would bear 100% of the cost of conversion (with the exception of Transit, as noted). The city certainly has many pickups and passenger vehicles that could be converted to CNG, but it appears only vehicles that experience very high mileage/usage would have any significant useful life remaining after the operating savings pays for the full cost of conversion. The high mileage/usage required to achieve the savings to pay for the conversion has, in our limited experience, made the vehicles prone to maintenance issues. The current cost of the conversion kit, according to our local dealer, is \$200 higher than they were when we purchased them 18 months ago. Interestingly, Ford announced last month that it would start building a "factory installed" CNG vehicle in a V6 version of the F150 pickup, but still at an increased cost of \$8000 over the gasoline version (the city has not historically purchased many pickups with a V6 engine). Up to this point, conversion kits had to be installed on regular vehicles for CNG operation after manufacture.

The Department of Sanitation (DOS) in particular has paid attention to other cities experimenting with CNG vehicles for sanitation services (San Antonio, TX; Tampa, FL; Clearwater, FL for example). Those large vehicles must be built as CNG vehicles, as they cannot be efficiently converted, and the CNG vehicles carry an increased purchase price by 10% or more. The maintenance facility and fueling concerns for the DOS are similar to those noted in the Transit memo, and the residual value of the vehicles (for trade in) is almost nothing, as there is no market for the used equipment.

At this time, it appears it does not make sense to convert passenger vehicles or service trucks to CNG fueling systems due to the high cost of the conversion kits and comparing the ROI period to the useful vehicle life. The fact that there is only one fueling station in town is a limiting factor, especially when fuel capacity on the vehicle itself is an issue. The Transit Department will continue to evaluate options for methodically increasing CNG in its fleet, supported by transit-specific grant funding as noted. Other alternative fuel vehicles, such as hybrid-electric passenger vehicles, are listed on the state purchasing contracts, but also carry a higher cost than their gasoline powered equivalents and would warrant a separate evaluation.

Representatives from each department that participated in the CNG program will be available at the September 10 study session to answer particular questions you may have about their experience. Representatives from AOG, a proponent and heavy user of CNG vehicles locally, have also been invited to attend. Please let me know if there is interest in pursuing any further CNG options, or any other alternative fuel vehicle options.



**M E M O R A N D U M**  
**August 26, 2013**

**TO:** Jeff Dingman, Deputy City Administrator  
**FROM:** Ken Savage, Transit Director  
**SUBJECT:** Compressed Natural Gas Vehicles for Transit

The following is information pertaining to the Compressed Natural Gas (CNG) bus the transit department began operating after conversion in 2012. Overall we are satisfied with the CNG vehicle when used in its current capacity as a night service demand response bus. Staff feels confident CNG buses would be a good fit for our total demand response service needs. Demand response vehicles consist of approximately 40 percent of the department's fleet. Operating the demand response service entirely on CNG would produce an annual estimated savings of \$76,256 based on 231,000 total miles of service.

There are some funding incentives available for public transportation to use CNG that may not necessarily be available to other departments. The conversion for one CNG bus costs \$20,750. The department received an energy rebate of \$10,375 and federal grant reimbursement from the department's operating grant of \$8,300 (80% of remaining costs). After all reimbursements were applied \$2,075 was the balance remaining as the local match participation.

Staff estimates an annual savings of approximately \$8,800 for the night bus based on 28,000 miles of use. Annual fuel costs at roughly 4,400 gallons/units at 6.3 miles per gallon for CNG are estimated at \$4,900 at the current CNG rate. The same number of miles for a similar bus operating on unleaded costs approximately \$13,700. The payback for the transit bus occurred in approximately three months considering local funds only.

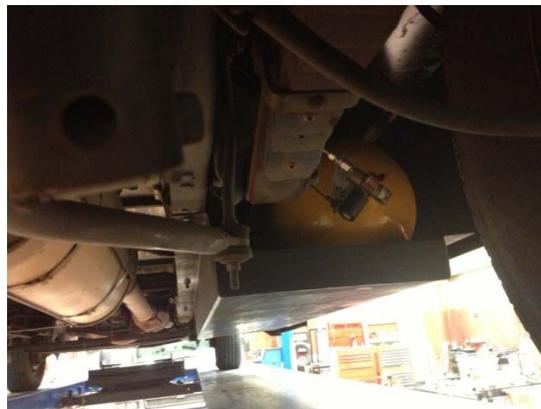
There has been some information and experiences gained with the transit conversion that staff will consider during future recommendations. It has been fifteen (15) months since the vehicle was converted and it has been out of service a total of nine (9) months including installation. Staff was informed the twenty-five foot passenger bus would have to be solely operated on CNG due to fuel tank space limitations and conversion capabilities for the size of equipment. There were custom tanks installed to maintain the same 38 gallon gasoline equivalent supply of CNG fuel, however the bus will not operate a full day without refueling.

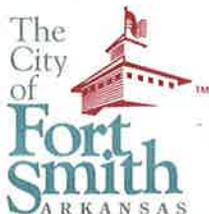
All transit vehicles, with exception of the night service vehicle, operate the entire day on one fueling. Demand response vehicles are being considered because they can schedule a fueling stop without passengers on board. The size of fixed route vehicles operated in Fort Smith is not compatible to operate CNG on one fueling due to limitations on fuel storage. If the storage limitations could be resolved then the added weight would create an issue on the smaller buses. Larger more CNG accommodating vehicles cost approximately three times the cost of the department's current vehicles.

There are some facility modifications to consider for safety when performing on site maintenance repairs to vehicles equipped with CNG. A visit to the Tulsa Transit revealed several facility modifications such as encased lighting, heating and a robust ventilation system in their maintenance garage. Tulsa Transit also equipped their site with a slow fill system which consists of fuel line drops on the parameter fencing to accommodate overnight fueling. Also on site was a fast fueling station with large tanks and compressors, as well as a defueling station to extract fuel when making repairs to the fuel system. Their problems noted during the visit were related to the fast fuel system depleting the supply line to the site.

Staff desires to approach the conversion to a CNG fleet slowly and methodically to minimize disruptions in passenger service and forecast any related expenses. The ultimate goal would include on site fueling capabilities and the necessary safety amenities in the maintenance garage. Staff's short term goals include the replacement of demand response buses as needed followed by the addition of CNG conversion kits prior to service implementation. Staff has secured 90% federal funding necessary for the replacement of demand response buses, pending final grant approval by December 2013.

Please feel free to call my office for further information.





September 4, 2013

TO: Members of the Board of Directors  
Members of the Central Business Improvement District

RE: Appointments:

A new position has been added to the Central Business Improvement District. In accordance with Ordinance No. 2926 applications for this prospective vacancy are now being received. Applicants must be residents and registered voters in the City of Fort Smith.

Please submit applications to the city administrator's office no later than the close of business on October 2nd, 2013. A list will be compiled for review by the Board of Directors. Applications are available on the City of Fort Smith website. Go to [www.fortsmithar.gov](http://www.fortsmithar.gov) and click on boards and commissions.

Sincerely,

A handwritten signature in blue ink that reads "Ray Gosack".

Ray Gosack  
City Administrator

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