amec foster wheeler

March 29, 2016

Mr. Francisco T Calleja, P.E., Engineer
DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES
ENVIRONMENTAL RESOURCES MANAGEMENT, 7TH FLOOR
701 NW 1st Court
Miami, Florida 33136-3912

Reference: **AMERICAN TIRE RECYCLING GROUP, LLC**
2016 FINANCIAL ASSURANCE COST ESTIMATE
FDEP PERMIT # 0303329-WT-001-WT/RER NO. SW-1731
3551 NW 116TH STREET MIAMI, FLORIDA
AMEC FOSTER WHEELER PROJECT NUMBER 6783-10-2164

Dear Mr. Calleja:

On behalf of American Tire Recycling Group, Inc., thank you for your January 28, 2016 email regarding the 2015-2016 Financial Assurance Cost Estimate associated with the closure of the referenced facility. In compliance with Rule 62-711.500(3), I have researched the current tire disposal costs at the Miami Dade County Resource Recovery Facility (RRF) and met with the American Tire Recycling Group representatives. The current disposal fee for tires at the Miami Dade RRF is $115/ton, which is equivalent to approximately $1.15 per tire (assuming 100 tires per ton). We also obtained a third party quote for loading and transportation for $1/tire and a copy is attached. The total cost for loading, transportation and disposal is estimated at $1.15+$1.00 = $2.15/tire. Considering the permitted storage capacity of 9,000 tires within the facility, the estimate for tire abatement costs is 9,000*$2.15= $19,350.

Please note that the enclosed table, copied from the FDEP publication "WASTE TIRES IN FLORIDA STATE OF THE STATE August 27, 2015" indicates that the cost of tire abatement from a variety of sites (including landfills) is slightly less than $1.18 per tire. Based on actual experience documented within Florida, the cost of abatement of the referenced facility would be approximately $10,620. As such, and based on current experience with the referenced facility, we respectfully request that the Financial Assurance required amount be adjusted to $20,500, which is the sum of $19,350 and an approximately 5% safety factor.

Please call me if you have any questions or require any additional information.

RICARDO FRAXEDAS
LICENSE
43287
STATE OF FLORIDA
PROFESSIONAL ENGINEER

State of Florida No. 43287
Date: 3/29/16
Amec Foster Wheeler Environment & Infrastructure Inc.
5845 N.W. 158th Street
Miami Lakes, Florida 33014

Attachments: Subcontractor quote, Waste Tires in Florida, State of the State dated August 27, 2015

Distributions: Addressee (1)
Mr. Alfredo Reviati -American Tire Recycling Group (1)

March 9, 2016

Mr. Ricardo Fraxedas
AMEC FOSTER WHEELER ENVIRONMENT & INFRASTRUCTURE, INC.
5845 NW 158st Street
Miami Lakes, Florida 33014

Reference: **AMERICAN TIRE RECYCLING GROUP, LLC**
TIRE TRANSPORTATION QUOTE

Dear Mr. Fraxedas:

We are pleased to submit this proposal for disposal of tires from you facility to a landfill.

The cost estimate for loading and transportation of tires from American Tire Recycling Facility to Miami Dade County South Dade Landfill is $1/tire for all tire sizes.

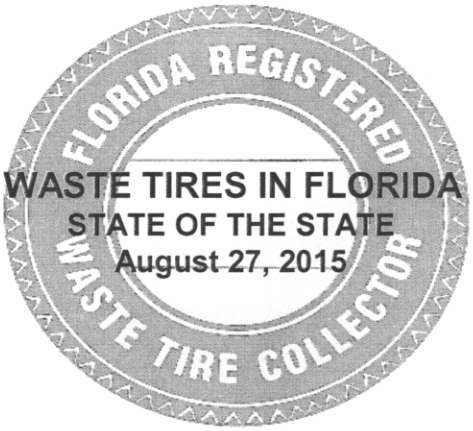
We appreciate the opportunity to bid on this project and are prepared to mobilize to the site upon your approval of our proposal.

Please call me if you have any questions or require any additional information.

Sincerely,

Global Tires & Wheels Solutions, Inc.

Global Tires & Wheels Solutions, Inc.
10630 NW 123rd Street Rd, Suite 101, Medley, FL 33178
Phone: 786-619-4747



WASTE TIRES IN FLORIDA
STATE OF THE STATE
August 27, 2015

I. GENERATION RATE

An estimated 15,600,000 automobile, light truck, and smaller tires plus 1,070,000 medium truck and larger tires were removed from vehicles in Florida in 2014. Adjusted for weight, this is 20,450,000 passenger tire equivalents (PTE) or an estimated 204,500 tons of waste tires.[1] Throughout this report, all tire quantities are stated as passenger tire equivalents.

II. MARKETS

Before Florida's waste tire management program was implemented in 1989, almost all waste tires in the state were landfilled or stockpiled. Starting in 1989, tires had to be cut or shredded into at least eight pieces prior to landfill disposal, thereby encouraging development of alternative uses. An increasing percentage has been diverted to a broad range of constructive applications. Table I shows the 2014 estimated usage of waste tires generated in Florida based on a detailed market survey. In total, 19.15 million (93%) of Florida's 20.45 million waste tires generated in 2014 were constructively utilized. The 1.3 million tires listed within the disposal classification include 442,000 tires landfilled in Dade County and over 250,000 tires landfilled in Alabama due to its allowance of low-cost whole tire monofills. Some shredded tires were imported into Florida from neighboring states for colored mulch feedstock. During 2010 – 2013, large quantities of waste tires were baled and exported from Florida through Vietnam to China, reportedly for conversion to diesel fuel in rural areas using crude pyrolysis technology that produces gross environmental contamination. Export volumes decreased significantly in 2013 and were negligible in 2014. This market shift clearly caused significant disruptions in traditional markets, but available tire volumes have been restored to traditional levels for established local processors and markets in 2014.

Florida's crumb rubber markets include asphalt modification, playground/sports surfacing, soil modification/cover and molded products. Florida Department of Transportation (FDOT) contractors purchased about 1,737 tons of crumb rubber in 2014 from Florida producers as part of the friction course and crack sealants used in roadway construction and maintenance. Manufacturing crumb rubber for this market consumes the weight equivalent of about 175,000 tires. Florida was the only state that specified rubber modified asphalt (RMA) for friction course pavement on most high-traffic state-maintained roads, but polymers have displaced crumb rubber in most road classes.

[1] A 20 pound passenger tire is 1 PTE; a 110 pound truck tire is 5.5 PTE.

FDOT formed a joint FDOT/Industry Task Team in 2010 to develop improved specifications for asphalt rubber. FDOT conducted laboratory work and placed field test sections. As a result of this effort, new asphalt rubber specifications (PG 76-22 ARB) were implemented in July, 2013 for major classes of friction course pavements and four suppliers were approved. The suppliers had some initial challenges meeting seasonal demand due to equipment outages and unusual schedule compression due to weather. These issues are being resolved, but future use will be dependent on the suppliers' performance and competitive product pricing. These changes will hopefully reverse declining asphalt rubber usage. Asphalt rubber is specified for the friction course of many Class C, D and E roads, potentially involving over 10% of the total asphalt placed by FDOT.

Playground surfacing, both loose-fill and poured-in-place, is a significant use for crumb rubber. To enhance market development, FDEP offered state demonstration grants in 2001 supporting up to 50% of crumb rubber purchase costs associated with surfacing materials intended to enhance safety and accessibility of playgrounds. Although this market has declined after completion of the grant program, the market has continued on its own merits. In addition, synthetic turf athletic fields utilizing crumb rubber in the turf surface structure have become a major market for crumb rubber. These two markets used about 3.6% of Florida's waste tires in 2014. In addition, Florida producers have significantly increased sales of crumb rubber to regional manufacturers of molded rubber products, such as tiles and mats, using 7.3% in 2014. Colored mulch has grown significantly with major production facilities in Florida consuming about 15.5% of Florida's waste tires in 2014. Florida producers are major regional and national suppliers to this market.

Florida utilized an estimated 5,590,000 waste tires in crumb rubber applications during 2014, representing 27.3% of total generation, above national crumb rubber markets averages. The crumb rubber industry has historically experienced excess capacity. There have been many business failures throughout the country, and some of the remaining companies are struggling to survive, but the industry seems to be stabilizing as synthetic athletic fields, colored mulch and molded products provide a high volume market foundation. These markets are maturing, so future growth will depend on innovations, economic conditions and international competition.

TABLE 1: 2014 ESTIMATED WASTE TIRE USAGE (in PTEs)

MARKET	2014 USAGE OF WASTE TIRES GENERATED IN FLORIDA (PTE)	APPLICATIONS	STATUS
Resale of Used Tires	1,120,000	Domestic and export sales of used tires have become major markets	An important revenue source for the industry
Crumb Rubber Applications			
Highway Uses	175,000	Rubberized asphalt, crack sealants	Still declining, but continuing DOT efforts to encourage its use
Playground/Sports Safety Surfaces	735,000	Cushioning material	Synthetic sports fields and playgrounds are major markets
On-ground Uses	3,180,000	Colored mulch	A large, mature market
Molded Products	1,500,000	Mats, tiles, outdoor products	Grew as Florida producers improved market penetration
Subtotal-Crumb Rubber	5,590,000		
Energy Use			
In-State Industrial TDF	3,100,000	Includes cement and paper companies	Cement usage increasing as economy and building rebounds
In-State WTE Use	4,490,000	Supplemental energy use by ten facilities, including Wheelabrator Ridge	Dependent on availability of WTE capacity
Out-of -State TDF	3,525,000	Paper/cement in Georgia and Alabama	Stable
Subtotal-TDF	11,115,000		
Civil Engineering			
Drainfield Aggregate	50,000	Replaces rock/aggregate	Still declining after initial rapid growth
Landfill Daily Cover	670,000	Displaces soil	Lowest-value use, but increasing due to absence of higher markets
Other CE Uses	650,000	Drainage layer, gas collection	Project dependent, but increasing due to available shredded tires
Subtotal-CE	1,325,000		
Disposal	1,300,000	Landfill disposal, primarily shredded tires in Dade County and whole tires in Alabama	Additional decreases limited by economics of whole tire monofills in Alabama
TOTAL	**20,450,000**		

As shown in Table 1, use of the hydrocarbon resources contained in waste tires as a supplemental energy resource was the largest application in 2014, consuming 54.3% of Florida's waste tire generation. Ten waste-to-energy facilities, including Wheelabrator Ridge Generating Station, consume tires to enhance their combustion temperature control and/or optimize electricity generation. Other industrial facilities utilizing tires as fuel within Florida and in neighboring states are economically supplied by Florida's well-developed tire collection and processing industry. Nationally, use of waste tires as an energy resource is by far the largest application, mirroring Florida's experience.

Florida has been one of the pioneers in large-scale use of shredded tires as a replacement for natural soil and aggregate in civil engineering applications such as landfill drainage layers, methane gas collection systems, and septic system drainage trenches. These uses consumed approximately 1,325,000 tires, or about 6.5%, of Florida's waste tires in 2014. Tire chips have become a proven, technically acceptable material for these applications, but market volume for tire chips is dependent on comparative economics and new landfill cell construction. Use of tire chips as daily cover has increased in the absence of higher value uses.

Continued market development is the controlling factor in diverting the remainder of unutilized waste tires from landfills and stockpiles. Cement production is increasing as the economy and construction rebound from the economic slowdown. Most of Florida's cement facilities utilize waste tires as a supplemental energy resource and some are also using fluff generated by tire processors for its energy content. Future usage will depend on economic conditions.

The Florida Department of Environmental Protection (DEP) is clearly interested in defining and initiating additional measures to enhance product markets and value in Florida. Possible examples intended to accelerate market development include identification and preliminary screening of manufacturing industries capable of utilizing crumb rubber, as well as other facilities capable of using tire-derived fuel (TDF) in a technically, economically and environmentally acceptable manner. Constructive utilization of all waste tires generated in Florida remains a sound objective, and significant progress has been made toward this objective since the waste tire program was established.

III. RESEARCH, DEMONSTRATION, AND SPECIAL PROJECTS

A. STATE SPONSORED RESEARCH AND DEMONSTRATION

1. Crumb rubber made from a small part of the tires from the Polk City Waste Tire Site was used to produce RMA for paving the Withlacoochee and Van Fleet trails in 1995. This was the first use of RMA for a trail in the U.S.

2. Research into the safety and effectiveness of using crumb rubber as a parking lot surface at a Florida Community College at Jacksonville facility in Nassau County was completed. The final report, issued in October 1999, found that this application is environmentally sound and identifies some design considerations, maintenance needs, and practical limitations of crumb rubber parking lots.

3. RMA was used to pave sections of the Nature Coast Trail in Dixie, Gilchrist, and Levy counties. A test section combining RMA with fine recycled glass cullet was completed in October 2000, demonstrating the first combined use of RMA and glass in paving.

B. SPECIAL PROJECTS

1. SUPPLEMENTAL PROGRAM FOR ACCELERATED WASTE TIRE SITE REMOVAL

In 2002 and 2003, a total of 30 Florida counties were placed under a medical alert for potentially serious diseases, namely West Nile Virus (WNV), Eastern Equine Encephalitis (EEE) and St. Louis Encephalitis (SLE). These diseases can be communicated to humans by mosquito species known to breed in stagnant water in outdoor containers, such as waste tires. To remove small waste tire accumulations in counties affected by the medical alert, DEP developed and continued its supplemental program to enhance cooperative efforts by state and county governments. Two Florida counties participated in the program in 2010.

The program uses the strengths of state and local governments to protect public health by accelerating collection, transportation, and processing of waste tires. DEP used existing contracts with processors to provide trailers, transport, and processing of collected waste tires for use in constructive applications. County governments used their capabilities to advertise the program, secure local collection sites and load trailers. Since 2001, almost 340,000 tires have been removed from 11 counties under this program.

Merging the capabilities of governments in this partnership accelerated waste tire removal from small accumulations and reduced this breeding ground for dangerous mosquitoes. West Nile Virus is expected to be present in Florida again, but this program has been suspended for lack of available funding.

2. MATCHING GRANTS FOR PLAYGROUND SURFACING PRODUCTS

The 2000 Legislature provided $1.5 million for matching grants to counties to purchase surfacing products made from Florida waste tires. The objective was to improve playground safety in Florida parks and schools while also promoting waste tire recycling. Surfacing products purchased under these grants had to meet applicable national safety and accessibility guidelines and be made from whole waste tires collected and processed in Florida.

The funds were distributed to participating counties on the basis of population, with a $4,000 minimum grant. A 50/50 match of funds was required. Only the direct costs of playground surfacing materials derived from recycled waste tires were reimbursed from grant funds, and not other materials, installation, or equipment. The grants were passed through to other local governments, school boards, and non-profit organizations via a competitive process.

At the end of the program in December, 2001, 22 counties had spent $343,265 in state matching grant funds. The program was responsible for the purchase of 3,620,154 pounds of loose fill rubber granules and 37,896 square feet of poured-in-place surfacing containing crumb rubber. This represents the use of about 310,000 passenger tire equivalents based on average manufacturing yields and surfacing composition. This was a one-time program.

3. PLAN FOR RECOVERY OF THE ARTIFICIAL TIRE REEF IN BROWARD COUNTY

During the 1970s, between one and two million tires were placed in the ocean off Broward County in an unsuccessful effort to create an artificial reef. Over the years, many of the tires were mobilized by tropical storms and hurricanes. The movement of these tires has caused damage to nearby existing coral reefs. A small tire retrieval program was conducted in 2001 by Dr. Robin Sherman of Nova Southeastern University, under a $30,000 grant from the National Oceanic and Atmospheric Administration (NOAA). Approximately 1,600 tires were retrieved at a cost of over $17.00/tire. Due to the magnitude of the project and the projected cost, the tire removal project was not continued.

The Department of Environmental Protection (DEP) was contacted by a Coastal America representative in 2006 and asked to work with them on a major project to remove the tires. Coastal America is a partnership of federal agencies tasked with the protection and restoration of our oceans and coasts. Coastal America organized a cooperative project with the U.S. Navy, US Army, US Coast Guard, NOAA, Broward County Environmental Protection Department and DEP to abate this tire accumulation that is endangering the Broward County Osborne Reef.

The NOAA Marine Debris Program funded a reconnaissance project that was conducted in August, 2006. The scope of work for this project included development of a strategy for removing and properly disposing of the tires.

Retrieval techniques were explored; 30 sample tires were retrieved and examined for processing suitability. Handling, staging and transportation methods were considered and end uses were explored. As there had not previously been a recovery of waste tires from the ocean of this scale, a pilot program was initiated in 2007 to test diver retrieval productivity, loading and transport methods, and tire processing and use.

The next steps included seeking funding for this major waste tire removal effort. Complete removal required Federal funding for military diver salvage operations and watercraft, as well as State funding for processing and disposal of the recovered tires. Project management for the 2007 pilot was provided by Broward County, and tire processing services were funded by DEP out of current year abatement funds. The Navy took the lead and organized the multiple military dive teams interested in recovering tires as a part of their annual training in 2007 and beyond.

Initially, the full abatement project was expected to last for portions of three years, depending on retrieval rates and the diving and watercraft units available each year. The extent of the funding required for full abatement was estimated to be about $3.4 million in state and county funds. Funding estimates for military participation were not calculated as their participation falls within the Integrated Readiness Training (IRT) funded through Department of Defense (DOD). The total cost per tire was estimated to be less than the $17.00/tire associated with the 2001 study conducted by NOVA Southeastern University, but the projected cost to transport and process the recovered tires exceeded amounts in DEP's current waste tire abatement contracts. As a result, Governor Crist recommended and the Legislature passed a $2 million special appropriation in 2007 for DEP to complete its share of the project.

The pilot program began in June 2007 and ran for 20 days. The IRT program provided forty military divers and one Landing Craft Unit (LCU) for the pilot. Broward County provided significant in-kind services that included all dockage and associated fees and all on-site management. The DEP provided funding for a tire processing contractor and for consumable supplies and equipment that the military could not provide.

Based on a conservative assumption, after pilot project completion, that military divers can remove 1,000 PTE/day (40 divers and 1 LCU), monthly tire removal is estimated at 20,000 PTE (1000 PTE/day x 5 days/wk x 4 wks/mo); a 3 month project would remove 60,000 PTE; and a 4-mo project would remove 80,000 PTE. At this rate, complete cleanup of the estimated tires would take about eight years, since weather conditions and military asset availability limit work to about three to four months per year. Actual productivity could increase with experience and these projections would be adjusted accordingly.

The plan was revised to focus on removing tires from the east face of the affected portion of the middle reef and adjacent areas of sand from which tires are likely to be transported to the middle reef face during storm events. In the revision, Priority area 1 was to be removed in a south to north direction first. Priority area 2, divided into five subareas, would be cleared beginning with area 2a (south to north), 2b, etc. Priority area 3 is relatively stable and will only be cleared after areas 1 and 2. The total area of priority area 1 and the revised priority area 2 is approximately 30 acres. Estimated combined tire quantity is 651,565 PTE as presented in Table 1.

Table 1. Summary of estimated tire quantities to be removed in priority areas.

Priority Areas	Area (yd^2)	Thickness (yards)	Volume (yd^3)	Density (PTE/yd^3)	Tire Quantity (PTE=-passenger tire equivalent)	
					PTE	Tons
1	26,494	1.00	26,287	14.0	368,018	3680
2 a	27,854	0.17	4653	15.0	69,797	698
2b	15,213	0.17	2586	15.0	38,790	388
2c	27,363	0.17	4652	15.0	69,780	698
2d	26,973	0.17	4585	15.0	68,775	688
2e	23,271	0.17	3956	15.0	59,340	593
TOTAL					651,565	6745

Using knowledge gained and lessons learned from the pilot project, the first full retrieval operation was successfully conducted in 2008. Divers worked 27 days with 16 dive days cancelled due to adverse weather conditions. An estimated 44,000 tires were removed over the course of the operation by approximately 66 military personnel, including boat drivers and LCU crew. When conditions were ideal (i.e. calm seas and no equipment failures), the divers were able to recover approximately 2,500 tires during a single day. This appears to be the maximum daily productivity that can be expected during the operation. The required time for the LCU to weigh anchors, return to Port Everglades, offload/reload trailers, and return to the dive site prevented more than one load (two trailers) being recovered in any given day.

The second full phase of the project began in July 2009. Divers worked an estimated 16 whole or partial days. An estimated 15,000 to 18,000 tires were removed over the course of the operation by approximately 50 military personnel, including boat drivers and LCU crew. Approximately 2,000 tires a day was the maximum productivity during this phase of the project. All subsequent removal activities have been deferred due to foreign military missions.

The third phase of the project resumed in May 2015 with use of a commercial salvage dive company. In this phase, divers are focused on removing tires from Priority Area 1. Between May and August, 2015, divers have removed an estimated 20,000 tires. To date, an estimated 80,000 tires have been removed from the Osborne Reef. Tire removal operations will continue as funding is available.

IV. LAW AND RULE CHANGES

The laws and rules governing Florida's waste tire management program have evolved since program inception. The 1995 Legislature expanded the allowable uses for waste tire grants-in-aid to counties to include operation of waste tire recycling and education programs, enforcement, and purchase of materials and products made from waste tires collected and recycled within the state. Small counties (under 100,000 population) were allowed to use their consolidated small county grant funds for any solid waste related purpose, including abatement of waste tires.

The Waste Tire Rule, Chapter 62-711, Florida Administrative Code (F.A.C.), was changed in 1996 to reduce the number of rules. In 1999, the definition of a waste tire site was changed from 1,000 to 1,500 waste tires in one location. Facilities that consume processed tires as a fuel or as a material for making a product were no longer required to obtain a permit if the tire material, inventory management practices, and storage configuration meet the standards in the rule.

Since 2001, funding levels and eligibility requirements for waste tire grants to counties have been legislatively modified numerous times. Currently these grants can be used can be used for waste tires or other general solid waste services provided by small counties. In 2008 and 2009 the small county grants were $9.4 million. These grants dropped to $2.6 million in 2010 and $2.4 million in 2011, 2012 and 2013. In 2014, small county grants was increased to $3.0 million and were awarded to 33 small counties.

V. PERMITS AND REGISTRATION

There are 47 permitted waste tire processors operating at landfills and other waste tire sites. Of the 47 processors, 43 are fixed site facilities and 4 are mobile. Annually, there are approximately 800 companies registered as waste tire collectors, using about 1,900 trucks to haul waste tires.

VI. ABATEMENT

Currently, there are 19 known waste tire sites in Florida with a total of 407,700 tires, as summarized in Table 3. DEP abatement of the last known site containing over 30,000 tires was completed in 2003, including one auto salvage yard with 140,000 waste tires. Since then, three additional piles containing 30,000 or more tires have been formed. In addition, DEP is continuing abatement of tires from the Osborne Reef which contains an estimated 570,000 tires. Please see section *III. Research, Demonstration and Special Projects* for more information on the Osborne Reef waste tire removal project.

Owners and operators of illegal waste tire sites are required to abate their own sites, and many have done so. A partial list of sites containing over 30,000 tires that have been abated by landowners or operators without expenditure of public waste tire account funds is provided in Table 4. Sites abated by owners are not necessarily reported to DEP if the action is taken in response to local government encouragement without DEP assistance.

In addition, counties have used waste tire grant funds to remove waste tires from public property and from the property of illegal dumping victims. Some counties have even abated major stockpiles, as illustrated by Table 5.

TABLE 3: EXISTING ILLEGAL SITE STATUS

SITE NAME	COUNTY	ESTIMATED TIRES	ABATED TIRES	REMAINING TIRES	STATUS
Bargain Eagle Tire	Pasco	5,400	300	5,100	Enforcement initiated
BJ Retreader Tires, Inc.	Miami-Dade	3,800	0	3,800	Enforcement initiated
Brennan d/b/a Big Bear Tire	Walton	15,000	1,000	14,000	Clean-up initiated
Complete Tire Recycling	Duval	390,000	140,000	250,000	Ongoing clean-up
E&L Tires	Putnam	2,500	0	2,500	Enforcement pending
El Dorado Auto Group	Orange	3,000	0	3,000	Clean-up pending
Florida Sterling Investments	Osceola	30,000	0	30,000	Enforcement pending
Green Wizard Tire Recyclers	Pasco	9,000	0	9,000	Ongoing enforcement
J&J Recycling	Flagler	10,500	0	10,500	Clean-up pending
John Morris property	Bay	16,000	0	16,000	Ongoing enforcement
McCargo Street	Duval	6,000	0	6,000	Ongoing compliance assistance
Newman Property	Osceola	2,000	0	2,000	Ongoing enforcement
Osceola Auto Salvage LLC	Osceola	10,000	0	10,000	Clean-up initiated
RL&C Tire Services LLC	Lafayette	3,800	0	3,800	Ongoing enforcement
Tire Discount	Lee	7,000	0	7,000	Enforcement initiated
Tire Doctor	Pasco	1,500	0	1,500	Ongoing Enforcement
Treasure Coast Land Clearing	St. Lucie	2,000	0	2,000	Ongoing enforcement
Tuberville WTS	Marion	1,500	0	1,500	Clean-up pending
Westcoast Tire Recycling Corp	Lee	30,000	0	30,000	Enforcement initiated
TOTALS		**549,000**	**141,300**	**407,700**	

TABLE 4: SITE ABATEMENT BY OWNERS OR OPERATORS WITHOUT WASTE TIRE FUNDS

(Sites over 30,000 tires known to DEP)

SITE	ESTIMATED TIRE QUANTITY	MARKET
Florida Tire Recycling	4,650,000	Landfill/fuel
Environmental Research	1,200,000	Landfilled
Anello - Celery Avenue	500,000	Unknown
OK Tire	350,000	Boiler Fuel
Conner Land	323,000	Waste to Energy
Shooting Range	250,000	Unknown
Caesar Street Warehouse	250,000	Unknown
Overland Road	200,000	Unknown
Calabrese	160,000	Landfilled
Pt. Everglades Warehouse	150,000	Landfill Cover
Burlington Street	150,000	Waste to Energy
Universal Tire	135,000	Waste to Energy
B & D Recycling	110,000	Waste to Energy
Ashley Tires Disposal	100,000	Waste to Energy
AB&B Auto Parts	90,000	Fuel
Florida Coastal Tire	90,000	Boiler Fuel
Tire Eagle	80,000	Landfilled
Clark Street	75,000	Unknown
Snake Road Auto Parts	61,000	Landfilled
Rainbow Industries	60,000	Unknown
Anello	50,000	Unknown
Boehm's Warehouse	43,000	Waste to Energy
Worldwide Tires-Orlando	35,000	Unknown
Green Tire of Orlando	35,000	Unknown
TOTAL	**9,147,000**	

(Sites over 100,000 tires)

SITE	TIRE QUANTITY	MARKET
Benton Yards	250,000	Landfill Cover
36th Street Acquisition	250,000	Landfill Cover
Port Everglades	250,000	Landfill Cover
Ricker Road	187,000	Landfill Cover
RC's Tri-county	130,000	Landfill Cover
TOTAL	**1,067,000**	

When the Department is forced to abate a site, it gains legal access and then assigns an experienced contractor the task of stabilizing and abating the site. When the contractor has completed the task, the Department must seek cost recovery from the owner and operator. In some cases, counties assist DEP by performing local contract/site management services. Table 6 lists sites abated under Department contracts.

TABLE 6: SITE ABATEMENT UNDER DEPARTMENT CONTRACTS

SITE	TIRE QUANTITY	COST	MARKET
Polk City	1,948,557	$2,593,000	Boiler Fuel
National Tire Recycling	1,021,695	$945,000	Boiler Fuel
Danco AQ	838,445	$872,000	Boiler Fuel
Import Auto Parts	390,275	$344,000	Landfill Construction
Narcoossee Road	176,939	$187,000	Landfill Construction
Coast Auto Parts	172,874	$218,000	Kiln Fuel
Gilliard Bros.	155,117	$154,000	Boiler Fuel
A Auto Parts	145,000	$202,000	Boiler Fuel
Bob's Garage	58,263	$118,000	Kiln Fuel
Burke Site	45,038	$47,000	Waste to Energy
Register	44,624	$51,162	Kiln Fuel
Draper	42,457	$59,824	Boiler Fuel
Florida State Tire	41,121	$78,000	Road Base
Old Bradenton Road	24,887	$33,590	Boiler Fuel
Thaggard	23,933	$83,053	Boiler Fuel
Oxborough Property	18,497	$51,000	Kiln Fuel
Curry	17,270	$27,000	Landfill Construction
Pioneer Mat	14,051	$19,521	Boiler Fuel
Griffin	13,847	$16,111	Landfill Construction
Reynolds Road	4,734	$7,158	Boiler Fuel
Swindle	2,035	$963	Drainfield Chips
Teaspoon	18,500	$24,000	Boiler Fuel
TOTAL	**5,218,159**	$6,131,382	

Total waste tire site abatement activity from the preceding tables is summarized in Table 7. Over 15,432,159 waste tires have been removed from waste tire sites in Florida since program inception. Approximately 59% have been removed by landowners or operators, often with encouragement from impending state and/or local enforcement action. Counties have removed 7% of the abated waste tires utilizing waste tire grant funds from the program. When other alternatives had been fully exhausted, over 5 million tires (representing 34%) have been abated under DEP contracts at a total cost of $6,258,720.

TABLE 7: SITE ABATEMENTSUMMARY
(From Tables 4-6)

ABATED BY	QUANTITY	% OF TOTAL TIRES
DEP	5,235,659	34%
County	1,067,000	7%
Owner or Operator	9,147,000	59%
TOTAL	**15,432,159**	**100%**

VII. SUMMARY

The Florida waste tire management program has made exceptional progress. In 2014, 93% of the 20.450 million waste tires generated in Florida were constructively utilized in diverse applications, compared to virtually no usage in 1990. High fuel prices attracted additional use of tires as a supplemental energy resource in new and retrofitted cement kilns, waste-to-energy facilities, and power boilers, with additional growth possible as economic conditions improve in the state. The Department continues to explore methods of encouraging and accelerating additional market development to achieve full utilization of this resource in the high value applications.

Waste tire stockpiles have been reduced by more than 15 million tires through persuasion of site owners, financing of county abatement actions, or abatement under department contracts. With continuing permitting and enforcement activity on both state and local levels, few new stockpiles have been created and existing stockpiles are continuing to be abated. Stockpiles have declined dramatically over the years, with the current list of known stockpiles containing approximately 407,700 waste tires. The Department is continuing its efforts to identify and abate all remaining stockpiles, as resources become available.