New York State
Department of Environmental Conservation

Division of Solid & Hazardous Materials

Waste Tire Management & Recycling Act of 2003

NEW YORK STATE WASTE TIRE STOCKPILE ABATEMENT PLAN

A COMPREHENSIVE PLAN DESIGNED TO ABATE ALL NONCOMPLIANT WASTE TIRE STOCKPILES BY DECEMBER 31, 2010

July 2004

George E. Pataki, *Governor*

Erin M. Crotty, *Commissioner*

Waste Tire Stockpile Abatement Plan

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Executive Summary

The "Waste Tire Management and Recycling Act of 2003" (Act) was enacted to ensure the proper management of waste tires in New York State. The Act, among other things, established waste tire management priorities for New York State, enacted a waste tire management and recycling fee of $2.50 per new tire sold, established the Waste Tire Management and Recycling Fund to which the waste tire management and recycling fee will be deposited, and required the New York State Department of Environmental Conservation (DEC) to prepare a comprehensive plan by September 12, 2004 designed to abate all noncompliant waste tire stockpiles in New York State by December 31, 2010.

Consistent with the requirements of the Act, this Waste Tire Stockpile Abatement Plan (Plan) is a comprehensive plan designed to abate all noncompliant waste tire stockpiles in New York State by December 31, 2010, seeking abatement first through voluntary efforts, where feasible, and by DEC direct action where voluntary efforts are not feasible or are unsuccessful.

To develop this Plan, DEC undertook an enumeration and assessment effort to verify the existence of suspected waste tire stockpiles and estimate the number of tires at each noncompliant site. During the summer and fall of 2003, DEC staff visited 162 locations that were identified as potential waste tire stockpiles which resulted in the documentation of 95 noncompliant waste tire stockpiles.

There are an estimated 29 million waste tires currently stockpiled in the 95 noncompliant waste tire stockpile sites identified throughout the State. Five sites have 1 million or more stockpiled waste tires present. In total, these five sites contain approximately 24.7 million waste tires, representing approximately 85% of all waste tires stockpiled throughout the State. Five sites have fewer than 1 million but 175,000 or more waste tires present, representing approximately 8% of all waste tires stockpiled. Forty-two sites have fewer than 175,000 but 10,000 or more waste tires present, representing approximately 6% of the total waste tires stockpiled, and 43 sites have fewer than 10,000 waste tires present, representing the remaining approximately 1% of total waste tires stockpiled.

There are currently 4 permitted and 19 registered compliant waste tire facilities in New York State permitted or registered in accordance with New York State Solid Waste Management Facility Regulations (6 NYCRR Part 360).

The five largest noncompliant waste tire stockpiles in New York State, representing approximately 85% of all stockpiled tires, are located at:

Fortino Site	West Monroe, NY	10,000,000 tires
Mohawk Tire Recycling	Waterford, NY	8,000,000 tires
Hornburg Tire	Sinclairville, NY	3,500,000 tires
New York Tire/Izzo Property	Smithtown, NY	2,000,000 tires
Cycletech	Hudson, NY	1,200,000 tires

A priority list for abatement of each noncompliant waste tire stockpile was developed by establishing criteria to assess potential adverse impacts on public health, safety or welfare, the environment, or natural resources. After consideration of a wide array of potential factors, the following eight criteria were selected to evaluate each of the 95 noncompliant waste tire stockpiles in an effort to formulate an abatement priority list:

- number of waste tires on site;
- location over a primary aquifer;
- proximity to Class C or higher streams (located within 250 meters);
- proximity to regulated State wetlands (located within 250 meters);
- location within a potential environmental justice area;
- proximity to schools (located within 1 kilometer);
- proximity to hospitals (located within 1 kilometer); and
- proximity to population centers (located within 1 kilometer).

A scoring system was developed with the possible range of scores from 1 to 15. Sites with the highest scores were afforded the highest priority on the abatement priority list. The Fortino Site scored the highest with a score of 10. Mohawk Tire Recycling and New York Tire/Izzo Property received the next highest ranking with a score of 9. The remaining 92 sites received scores ranging from 8 to 1 and are more completely described in Chapter 3.

Based on this evaluation, a priority list for abatement of sites was established. It was determined that the sites with a score of 5 or higher should be the initial target sites for abatement activities:

Fortino Site	Oswego County	10 million tires
Mohawk Tire Recycling	Saratoga County	8 million tires
Hornburg Tire	Chautauqua County	3.5 million tires
New York Tire/Izzo Property	Suffolk County	2 million tires
Cycletech	Columbia County	1.2 million tires
Hutchings Automotive	Chenango County	0.8 million tires
Clarence Auto Parts	Erie County	0.65 million tires
Southern Tier Tire	Cattaraugus County	0.35 million tires
Tire Recycling	Ulster County	0.3 million tires
U Save Tire Corp	Clinton County	0.2 million tires
Coletta Recycling	Queens County	20,000 tires
Doc's Trucking & Auto Parts	Oneida County	10,000 tires

While initial work is ongoing at the priority sites, work will also be undertaken at the remaining sites as well. Initial work consists of a series of administrative and enforcement steps designed to encourage voluntary management of the tires by the site owners or operators. Should those steps not achieve abatement of these waste tire stockpiles in a timely manner, the DEC will assume abatement responsibility.

This Plan seeks to eliminate all noncompliant waste tire stockpiles in the State by December 31, 2010 by a combination of site owner/operator effort and DEC work, should the site owners/operators fail to abate the noncompliant waste tire stockpiles in a timely manner. In the event the DEC must assume abatement responsibility, DEC will seek beneficial uses for the tires. At the present time, DEC is developing plans to use waste tires in road construction activities in cooperation with the New York State Department of Transportation (DOT) and the New York State Thruway Authority (Thruway Authority) to beneficially use the bulk of the waste tires.

DEC recognizes that additional waste tire stockpile sites may be identified during the next few years. If this occurs, DEC will assess these noncompliant waste tire stockpiles as they are identified, determine their priority for cleanup, and incorporate them into the abatement schedule.

Chapter 1 - The Waste Tire Management and Recycling Act

The "Waste Tire Management and Recycling Act of 2003" (Act) was enacted to ensure the proper management of waste tires in New York State. The Act added Title 19 to Article 27 of the Environmental Conservation Law. Title 19 includes provisions that require the following:

1. Establishment of waste tire management priorities for New York State:

   - first, to reduce the number of waste tires generated;
   - second, to remediate waste tire stockpiles in noncompliance;
   - third, to recycle waste tires into value-added products;
   - fourth, to beneficially use waste tires in an environmentally acceptable manner, including the beneficial use in civil engineering applications; and
   - fifth, to recover, in an environmentally acceptable manner consistent with the purpose of the Act, energy from waste tires that cannot be economically recycled or otherwise beneficially used.

2. Establishment of the Waste Tire Management and Recycling Fund and enactment of a waste tire management and recycling fee of $2.50 per new tire sold including tires on new motor vehicles. Tire services must collect the waste tire management and recycling fee from the purchaser at the time of the sale and remit such fee to the Department of Taxation and Finance. The tire service shall be entitled to retain an allowance of 25 cents per tire from fees collected. The fee is mandated from the effective date until December 31, 2010.

3. Mandatory acceptance of used tires from customers by tire service centers until December 31, 2010. Customers may return tires in approximately the same size and in a quantity equal to the number of new tires purchased or installed. Sign posting requirements are also included for tire service centers.

4. Preparation, by the Department of Environmental Conservation (DEC), of a comprehensive plan designed to abate all noncompliant waste tire stockpiles by December 31, 2010. This plan is required to establish a priority list and schedule for abatement of each noncompliant waste tire stockpile based on potential adverse impacts on public health, safety or welfare, the environment, or natural resources. The plan must also include a census of compliant and noncompliant waste tire stockpiles in New York State and the number of waste tires believed to be stored at each site. The plan is to be submitted to the Governor and the Legislature by September 12, 2004. The Act provides DEC with authority to enter all noncompliant waste tire stockpiles for the purpose of investigation and abatement.

5. Publication, by DEC, of requests for proposals by September 12, 2005 seeking contractors to prepare waste tires at noncompliant waste tire stockpiles in accordance with fire safety requirements and for removal for appropriate processing, recycling or beneficial use or disposal as a last option.

6. The Department of Economic Development, by September 12, 2004, and annually thereafter to:

   a. Assist private market development with new technologies for waste tire reuse and recycling with an emphasis on higher-value end uses in order to further create and enhance sustainable markets;

   b. Provide industrial and consumer education on other benefits of recycled waste tire products through the preparation of fact sheets and public workshops; and

c. Prepare an annual summary report and analysis of markets and disposition of both New York State stockpiled tires and New York State annually generated waste tires. This report shall be submitted to DEC and the Legislature by the last day of March of each year.

7. Owners or operators of noncompliant waste tire stockpiles to submit to and/or cooperate with any and all remedial measures necessary for the abatement of noncompliant waste tire stockpiles.

8. Establishment of a prohibition of land burial of waste tires and prescribes that no moneys from the waste tire management and recycling fund can be used to dispose of waste tires in a landfill unless DEC has determined that it is not feasible to convert the waste tires to a beneficial use.

9. Funds from the waste tire management and recycling fund will be used for the following purposes:

   a. DEC:

      1. enumeration and assessment of noncompliant waste tire stockpiles, including aerial reconnaissance to locate, survey and characterize sites environmentally, for remote sensing, special analysis and scanning;
      2. abatement of noncompliant waste tire stockpiles; and
      3. administrative costs.

   b. New York State Department of Economic Development (Empire State Development):

      1. conducting an updated market analysis of outlets for waste tire utilization including recycling and energy recovery opportunities;
      2. establishment of a program to provide funds to businesses to develop technology that leads to increased markets for waste tires;
      3. funding of demonstration projects; and
      4. administrative costs.

   c. New York State Department of Transportation (DOT), and the New York State Thruway Authority (Thruway Authority):

      1. demonstration and other projects for road base;
      2. paving and other civil engineering uses; and
      3. administrative costs.

   d. New York State Energy Research and Development Authority:

      1. research projects which will enhance sustainable waste tire recycling activities; and
      2. administrative costs.

   e. New York State Department of Health:

      1. recommendations to protect public health; and
      2. administrative costs.

Chapter 2 - Waste Tire Enumeration and Assessment

Consistent with the requirements of the Act, this Waste Tire Stockpile Abatement Plan (Plan) is a comprehensive plan designed to abate all noncompliant waste tire stockpiles in New York State by December 31, 2010. The Plan must include a census of compliant and noncompliant waste tire stockpiles in New York State and the number of waste tires believed to be stored at each site.
This Chapter outlines the efforts undertaken by DEC to assess these waste tire stockpiles.

Field Reconnaissance

During the summer and fall of 2003, DEC staff visited 162 locations that were identified as potential waste tire stockpiles. Staff documented the conditions of each site, including site accessibility, the quality and nature of stockpiled waste tires, an estimate of the number of waste tires present, and the environmental factors at the site. Global Positioning System (GPS) coordinates were recorded for the location of each site, and digital photographs of the site were taken to document the condition of the site and the presence of waste tires.

Aerial Reconnaissance

During November and December of 2003, DEC, with the assistance of the New York State Police Aviation, conducted an aerial photography project to photograph each of the noncompliant waste tire stockpiles. Approximately half of the noncompliant waste tire stockpiles were photographed before snow cover conditions made continued aerial photography unproductive. Aerial photography of the remaining stockpiles resumed in Spring 2004 and was completed in June 2004.

Enumeration and Assessment Results

DEC's enumeration and assessment efforts led to the documentation of 95 noncompliant waste tire stockpiles. All information gathered for the noncompliant waste tire stockpile sites is summarized in "Site Assessment Summary Sheets," which are found in Appendix A.

Highlights from the enumeration and assessment effort are summarized below.

- There are an estimated 29 million waste tires currently stockpiled in 95 noncompliant waste tire stockpile sites throughout the State.

- There are 5 sites with 1 million or more stockpiled waste tires. In total, these 5 sites contain approximately 24.7 million waste tires, representing approximately 85% of all waste tires stockpiled throughout the State.

- There are 5 sites with fewer than 1 million but with 175,000 or more stockpiled waste tires. In total, these 5 sites contain slightly more than 2.3 million waste tires, representing approximately 8% of all waste tires stockpiled throughout the State.

- There are 11 sites with fewer than 175,000 but with 50,000 or more stockpiled waste tires. In total, these 11 sites containing slightly more than 1.2 million waste tires, representing approximately 4% of all waste tires stockpiled throughout the State.

- There are 31 sites with fewer than 50,000 but with 10,000 or more stockpiled waste tires. In total, these 31 sites contain approximately 575,000 tires, representing approximately 2% of all waste tires stockpiled throughout the State.

- There are 43 sites with fewer than 10,000 stockpiled waste tires. In total, these 43 sites contain slightly more than 200,000 waste tires, representing nearly 1% of all waste tires stockpiled throughout the State.

- There are 4 compliant waste tire storage facilities permitted in accordance with New York State Solid Waste Management Facility Regulations (6 NYCRR Part 360).

- There are 19 compliant waste tire storage facilities registered in accordance with the requirements of 6 NYCRR Part 360.

The following two figures summarize this data:

Figure 1 - Number of Noncompliant Waste Tire Stockpiles by Number of Waste Tires at Each Site

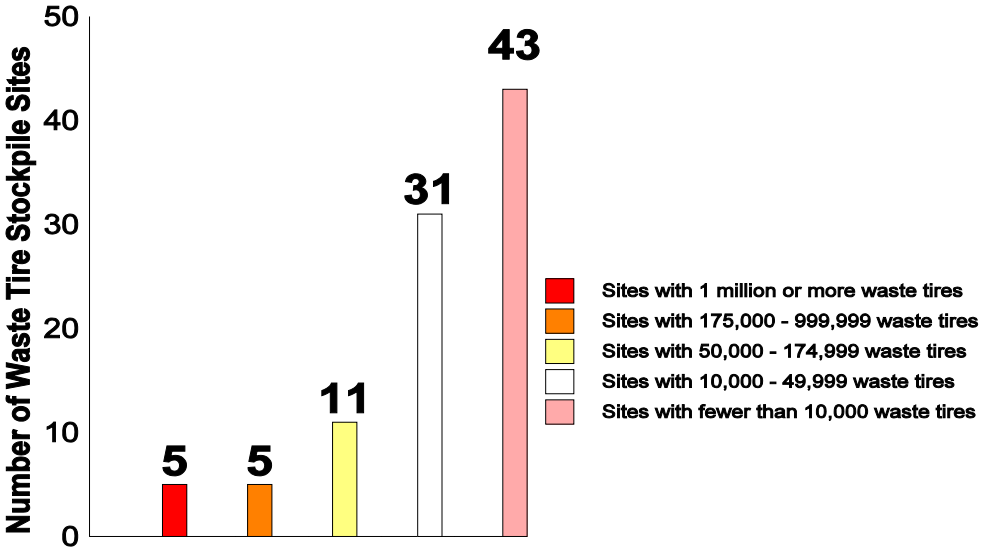
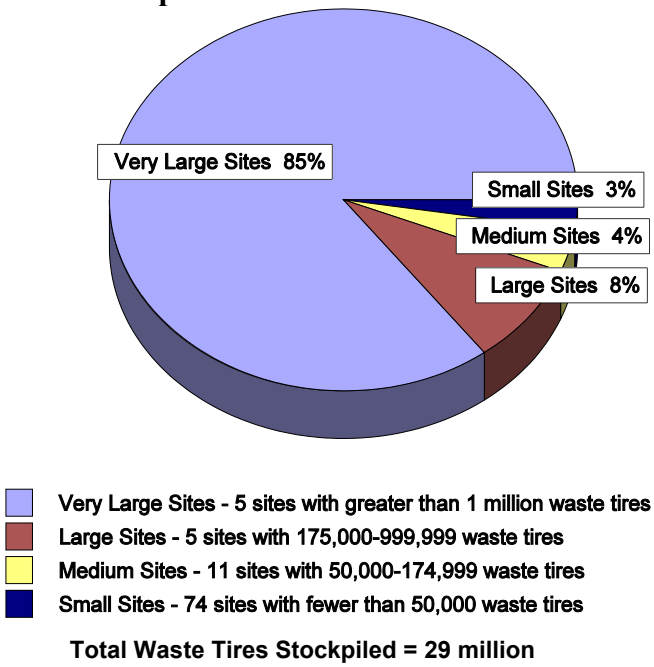


Figure 2 - Percentage of Total Waste Tires Stockpiled in New York State Per Stockpile Size



The five largest waste tire stockpiles in New York State representing approximately 85% of all stockpiled tires have been identified as follows:

Fortino Site	West Monroe, NY	10,000,000 waste tires
Mohawk Tire Recycling	Waterford, NY	8,000,000 waste tires
Hornburg Tire	Sinclairville, NY	3,500,000 waste tires
New York Tire/Izzo Property	Smithtown, NY	2,000,000 waste tires
Cycletech	Hudson, NY	1,200,000 waste tires

The census of the 95 noncompliant waste tire stockpiles is included in Table 1. These stockpiles are listed in descending order based on the estimated number of waste tires on site. The list includes 2 permitted and 2 registered waste tire storage facilities originally permitted or registered in accordance with the requirements of 6 NYCRR Part 360 that either exceed their permitted/authorized capacity or are in violation of the requirements of their waste tire storage facility permit or registration. Table 2 is a census of the 22 currently compliant permitted and registered waste tire storage facilities. This list will change based on any additions or deletions of permitted or registered waste tire storage facilities. The most current list of compliant permitted or registered waste tire storage facilities can be found on DEC's website at www.dec.state.ny.us.

Many of the known waste tire stockpiles are in remote locations and difficult to locate. Accordingly, DEC recognizes that additional waste tire stockpile sites may be identified during the next few years. If this occurs, DEC will assess these noncompliant waste tire stockpiles as they are identified, determine their priority for cleanup, and incorporate them into the abatement schedule.

Table 1
LIST OF NONCOMPLIANT WASTE TIRE STOCKPILES (indexed by No. of Tires)

Noncompliant Site Name	P/ R/ S	Site ID	County	Est Number of Tires
Fortino Site	S	7-01	Oswego	10,000,000
Mohawk Tire Recycling	S	5-01	Saratoga	8,000,000
Hornburg Tire	S	9-01	Chautauqua	3,500,000
New York Tire/Izzo Property	S	1-01	Suffolk	2,000,000
Cycletech, Inc.	P	4-03	Columbia	1,200,000
Hutchings Automotive	S	7-02	Chenango	800,000
Clarence Auto Parts	S	9-02	Erie	650,000
Southern Tier Tire	S	9-06	Cattaraugus	350,000
Tire Recycling, Inc.	S	3-06	Ulster	300,000
U Save Tire Corp.	P	5-15	Clinton	200,000
Ben Maglio Property	S	9-03	Wyoming	150,000
Stan's Auto	S	4-02	Albany	150,000
Thornton Property	S	9-07	Allegany	150,000
Title Town Tires	S	7-04	Madison	150,000
Mahopac Auto Wreckers	S	3-04	Putnam	140,000
Gerald J. Eagle Property	S	4-07	Rensselaer	120,000
Almag Construction	S	4-05	Rensselaer	110,000
A & A Recycling	S	4-09	Schoharie	75,000
White's Lisbon Site	S	6-12	St. Lawrence	60,000
Chris Sanders Property	S	4-06	Rensselaer	50,000
Jenkins Auto Parts	S	5-16	Saratoga	50,000
Pieropan Junkyard	S	7-06	Oswego	40,000
Rte. 20 Auto Parts	S	9-12	Erie	39,000
Don Case Auto Parts	S	9-05	Cattaraugus	35,000
Lyndacker Property	S	6-10	St. Lawrence	30,000
Valley Recycling, Inc	S	6-03	Herkimer	30,000
John Post Property	S	5-17	Saratoga	30,000
Finger Lakes Iron & Metal	S	6-04	Jefferson	30,000
William Port & Sons	S	8-04	Seneca	25,000
Myles Junkyard	S	9-14	Niagara	25,000
Kubis Auto Parts	S	7-03	Cayuga	23,000
Coletta Recycling	S	2-01	Queens	20,000
J&R Auto Salvage	S	5-02	Clinton	20,000
Twin Village Salvage	S	9-13	Erie	20,000
Jeffrey Brongo Property	S	8-11	Monroe	18,000
Welke Salvage	S	5-11	Fulton	15,000
Whipple-Dancosh Property	S	8-10	Yates	15,000
Brown's Auto Salvage	S	3-02	Orange	13,000
Charles Martin Property	S	8-02	Seneca	12,000
Matthew Furman Property	S	7-08	Tompkins	12,000
East Side Auto Body	S	5-23	Washington	12,000
Baums Towing	S	3-09	Sullivan	12,000
Tire Solutions, Inc.	R	8-03	Seneca	10,000
Kimberly Torrey Property	S	9-08	Allegany	10,000
HO Tires Extension	S	7-07	Madison	10,000
Rubberworks, Inc.	R	9-15	Erie	10,000
Doc's Trucking & Auto Parts	S	6-08	Oneida	10,000

Noncompliant Site Name	P/ R/ S	Site ID	County	Est Number of Tires
Lester's Auto	S	5-09	Saratoga	10,000
Junction Road Recycling	S	9-16	Niagara	10,000
Fletcher's Dump	S	5-08	Franklin	10,000
Dieckel Dump	S	5-22	Washington	10,000
Tire Traders	S	5-05	Clinton	10,000
Rice Property	S	6-11	St. Lawrence	9,500
Jim Cooper Auto Parts	S	4-08	Rensselaer	9,000
Andy's Auto Parts	S	8-05	Wayne	8,000
Hidden Valley Auto Parts	S	5-14	Fulton	8,000
Troups Creek Scrapyard	S	8-12	Steuben	8,000
Budget Auto Parts	S	8-06	Wayne	8,000
Lot 65 Newport Rd.	S	7-05	Onondaga	8,000
Ray's Salvage	S	5-20	Warren	7,500
Carl Bice Junkyard	S	7-10	Oswego	7,500
Juliano's Auto Parts	S	8-08	Wayne	7,000
Johnson's Auto Crushers	S	5-18	Saratoga	7,000
Wells Site	S	8-01	Orleans	7,000
Zahn's Junkyard	S	6-05	Jefferson	7,000
Peter Winkleman Property	S	7-09	Onondaga	7,000
Northern Scrap Metal	S	5-06	Essex	6,000
Shanahan Scrap	S	5-07	Essex	6,000
Canfield's Auto Parts	S	5-12	Saratoga	6,000
A-1 Auto Parts	S	6-07	Oneida	6,000
Hoke Site	S	6-13	Oneida	6,000
Clarkie's Auto Parts	S	5-13	Saratoga	5,000
Miller's Junkyard	S	5-03	Clinton	5,000
Napier Site	S	4-01	Albany	5,000
Klinger Property	S	4-04	Otsego	5,000
Gruttadoro Site	S	8-07	Wayne	4,000
Nixon's Truck Parts, Inc.	S	8-09	Wayne	4,000
Mor Ton Recycling	S	3-08	Sullivan	4,000
Hart's Parts	S	6-02	Herkimer	3,500
West Side Auto Supply, Inc.	S	5-21	Warren	3,500
Earth Waste Systems	S	5-04	Clinton	3,000
INS Scrap Processors	S	9-10	Erie	3,000
Clark Property	S	6-09	St. Lawrence	3,000
Bryson's 24 Hour Towing, Inc.	S	3-07	Westchester	2,500
Crew's Auto Recycling	S	6-01	Herkimer	2,500
Brim Auto Recyclers	S	3-01	Orange	2,000
Ernie Fancher Property	S	5-10	Fulton	2,000
Sunshine Mountain	S	3-05	Ulster	2,000
Van Patten Property	S	5-19	Saratoga	2,000
David Christian Tire Pile	S	9-04	Cattaraugus	2,000
Harris Junkyard	S	6-06	Lewis	2,000
East Park Auto	S	3-03	Dutchess	1,500
Kusior Auto Parts	S	9-11	Erie	1,500
Harris Auto Wrecking	S	9-09	Chautauqua	1,500
John Delaney Property	S	5-24	Washington	1,500

Note: **P = Permitted** **R = Registered** **S = Stockpile (not permitted, nor registered)**

Table 2
LIST OF COMPLIANT WASTE TIRE FACILITIES

Reg	County	Compliant Facility Name	Type of Operation
		Registered Facilities	**(15)**
2	Richmond	AJ Tire Repair	Tire Dealer selling used tires
3	Ulster	Unity Creations	Manufacturer of rubber products
4	Schenectady	BCD Tire Chip Manufacturing	Tire chipper
4	Schenectady	Recovery Technologies Group of NY	Manufacturer of rubber products
4	Albany	Terry-Haggerty Tire Co., Inc.	Waste tire retreader
6	Jefferson	Black River Power Electric Generating	Onsite energy recovery
7	Oswego	K&S Tires	Tire Dealer selling used tires
7	Cayuga	NUCOR Steel - Auburn	Manufacturer of steel
7	Cayuga	Interstate Recycling Corp.,	Manufacturer of rubber products
8	Genessee	Edward Arnold Scrap Processors, Inc.	Tire Dealer selling used tires
8	Seneca	SMI Waste Tire Facility	Tire chipper
9	Erie	Envirotire USA, Inc.	Retreader and Tire Dealer selling used tires
9	Erie	Fox Tire Company	Tire Dealer selling used tires
9	Niagara	High Tread International, LTD	Tire chipper
9	Niagara	WPS Niagara Generation, LLC	Onsite energy recovery
		Permitted Facilties	**(4)**
4	Greene	Casings, Inc.	Waste Tire chipper and broker
9	Erie	Integrated Tire	Waste Tire chipper and broker
9	Erie	Huron Recovery	Waste Tire chipper and broker
9	Erie	Modern Recycling	Waste Tire chipper and broker
		Registered Facilties - Inactive	**(4)**
4	Schenectady	Tire Conversion Tech. Inc.	Manufacturer of duraboard product
4	Albany	Shaker Tire Sales	Tire Dealer selling used tires
4	Albany	Acorn Processing, Inc.	Manufacturer of crumb rubber
7	Madison	Madison County Landfill	Tire chipper

Chapter 3 - Priority List

The Act requires the establishment of a priority list for abatement of each noncompliant waste tire stockpile based on potential adverse impacts on public health, safety or welfare, the environment, or natural resources to be included in the Plan.

This Chapter outlines the efforts undertaken by DEC to prioritize noncompliant waste tire stockpile sites for abatement.

As described in Chapter 2, approximately 85% of all waste tires stockpiled in New York State can be found at the five sites with 1 million or more waste tires present at each. Over one-third of all waste tires in the State are stockpiled at the Fortino Site in West Monroe and approximately one-quarter of all waste tires are stockpiled at the Mohawk Tire Recycling site in Waterford.

Evaluation Criteria

Although the number of waste tires on each site is a very important criterion and must be afforded appropriate consideration in formulating the priority list, other factors must be considered to assess potential adverse impacts on public health, safety or welfare, the environment, or natural resources.

Accordingly, after consideration of a wide array of potential factors, the following eight criteria were selected to evaluate each of the 95 noncompliant waste tire stockpiles to formulate the abatement priority list:

- number of waste tires on site;
- location over a primary aquifer;
- proximity to Class C or higher streams (located within 250 meters);
- proximity to regulated State wetlands (located within 250 meters);
- location within a potential environmental justice area;
- proximity to schools (located within 1 kilometer);
- proximity to hospitals (located within 1 kilometer); and
- proximity to population centers (located within 1 kilometer).

Scoring System

In order to balance the impacts of each of these factors and give due consideration to the significant impact and magnification effect the number of waste tires at these sites has on each of the other criteria, the following scoring system was developed.

The following seven criteria -- location over a primary aquifer, location within 250 meters of a Class C or higher stream, location within 250 meters of a regulated wetland, location within or immediately adjacent to a potential environmental justice area [a census block group that exceeds specific thresholds established by the United States Environmental Protection Agency (USEPA) for poverty and minority composition, using 2000 census data], location within 1 kilometer of a school, location within 1 kilometer of a hospital, and location within 1 kilometer of population centers (an area with a population density of 1000 or more individuals per square kilometer) -- are all considered of equal concern. Accordingly, for each site, one point was assigned for each of these criteria met. For the number of waste tires on each site, the following points were added:

Number of Waste Tires per Site	Score
1,000 - 24,999	1
25,000 - 74,999	2
75,000 - 174,999	3
175,000 - 299,999	4
300,000 - 749,999	5
750,000 - 1,499,999	6
1,500,000 - 4,999,999	7
5,000,000 or more	8

In this manner, a site that has a small number of waste tires present but has a wide array of other public health, environmental, or natural resource risks would be considered comparably with a site that has a large number of waste tires present but a lower number of other risk factors.

Evaluation

The possible range of scores were from 1 to 15. After applying the scoring criteria and system the final scores ranged from 1 to 10. The Fortino Site scored the highest with a score of 10. Mohawk Tire Recycling and New York Tire/Izzo Property are next highest with a score of 9. These sites were followed by Cycletech and Clarence Auto Parts with a score of 8; and Hornburg Tire and U Save Tire Corporation with a score of 7; Hutchings Automotive and Southern Tier Tire follow with a score of 6. Three sites -- Tire Recycling, Inc., Coletta Recycling, and Doc's Trucking and Auto Parts -- each had a score of 5. There were 13 sites with a score of 4, 15 sites with a score of 3, 33 sites with a score of 2, and 22 sites with a score of 1. A full listing of the scores for each site presented in descending order on a Statewide basis can be found in Table 3.

DEC's geographical information system capabilities were utilized to evaluate waste tire stockpile proximity to those receptors listed above. A data layer was created using GPS coordinates that were collected during the field reconnaissance phase. This data layer was then overlain on the other critical receptor layers available to the Department to determine the proximity of the noncompliant waste tire stockpiles to these critical receptors. That analysis yielded the waste tire stockpiles of concern and a map for each receptor was developed. Those "Prioritization Maps" can be found in Appendix B.

As listed on the bottom of Table 3, the following is a summary of the percentage of sites which met each of the seven criteria, other than number of waste tires on site.

- Primary Aquifer - 2.1%
- Class C or Higher Stream - 36.8%
- Regulated Wetland - 23.2%
- Environmental Justice Area - 9.5%
- Schools - 13.7%
- Hospitals - 1.1%
- Population Centers - 13.7%

This scoring information presented for each site in descending order on a DEC Region basis can be found in Table 4.

Table 3

ABATEMENT PRIORITY LIST FOR NONCOMPLIANT WASTE TIRE STOCKPILES

Site ID	Noncompliant Site Name	Est. Number of Tires	Size Score	Primary Aquifer	Stream	Wetland	Environ Justice	School	Hospital	Pop. Center	Total Score
7-01	Fortino Site	10,000,000	**8**		X	X					**10**
5-01	Mohawk Tire Recycling	8,000,000	**8**		X						**9**
1-01	New York Tire/Izzo Property	2,000,000	**7**	X						X	**9**
4-03	Cycletech, Inc.	1,200,000	**6**		X			X			**8**
9-02	Clarence Auto Parts	650,000	**6**		X	X					**8**
9-01	Hornburg Tire	3,500,000	**7**								**7**
5-15	U Save Tire Corp.	200,000	**4**				X	X		X	**7**
7-02	Hutchings Automotive	800,000	**6**								**6**
9-06	Southern Tier Tire	350,000	**5**		X						**6**
3-06	Tire Recycling, Inc.	300,000	**5**								**5**
2-01	Coletta Recycling	20,000	**1**				X	X	X	X	**5**
6-08	Doc's Trucking & Auto Parts	10,000	**1**		X	X		X		X	**5**
4-02	Stan's Auto	150,000	**3**		X						**4**
7-04	Title Town Tires	150,000	**3**		X						**4**
9-03	Ben Maglio Property	150,000	**3**							X	**4**
9-07	Thornton Property	150,000	**3**		X						**4**
3-04	Mahopac Auto Wreckers	140,000	**3**		X						**4**
4-07	Gerald J. Eagle Property	120,000	**3**		X						**4**
4-05	Almag Construction	110,000	**3**		X						**4**
4-09	A & A Recycling	75,000	**3**			X					**4**
8-04	William Port & Sons	25,000	**2**			X		X			**4**
7-03	Kubis Auto Parts	23,000	**1**				X	X		X	**4**
4-08	Jim Cooper Auto Parts	9,000	**1**		X	X		X			**4**
7-09	Peter Winkleman Property	7,000	**1**				X	X		X	**4**
6-07	A-1 Auto Parts	6,000	**1**		X	X				X	**4**
6-12	White's Lisbon Site	60,000	**2**			X					**3**
5-16	Jenkins Auto Parts	50,000	**2**							X	**3**
7-06	Pieropan Junkyard	40,000	**2**		X						**3**
9-12	Rte. 20 Auto Parts	39,000	**2**		X						**3**
3-02	Brown's Auto Salvage	13,000	**1**			X	X				**3**
5-23	East Side Auto Body	12,000	**1**					X		X	**3**
9-15	Rubberworks, Inc.	10,000	**1**					X		X	**3**
7-05	Lot 65 Newport Rd.	8,000	**1**	X		X					**3**
7-10	Carl Bice Junkyard	7,500	**1**		X	X					**3**
8-08	Juliano's Auto Parts	7,000	**1**		X	X					**3**
6-13	Hoke Site	6,000	**1**				X			X	**3**
3-08	Mor Ton Recycling	4,000	**1**				X	X			**3**
8-07	Gruttadoro Site	4,000	**1**		X	X					**3**
3-07	Bryson's 24 Hour Towing, Inc.	2,500	**1**		X			X			**3**
5-19	Van Patten Property	2,000	**1**		X	X					**3**
4-06	Chris Sanders Property	50,000	**2**								**2**
9-05	Don Case Auto Parts	35,000	**2**								**2**
5-17	John Post Property	30,000	**2**								**2**
6-03	Valley Recycling, Inc	30,000	**2**								**2**
6-04	Finger Lakes Iron & Metal	30,000	**2**								**2**
6-10	Lyndacker Property	30,000	**2**								**2**
9-14	Myles Junkyard	25,000	**2**								**2**
5-02	J&R Auto Salvage	20,000	**1**			X					**2**
8-11	Jeffrey Brongo Property	18,000	**1**		X						**2**
5-11	Welke Salvage	15,000	**1**			X					**2**
8-10	Whipple-Dancosh Property	15,000	**1**		X						**2**
3-09	Baums Towing	12,000	**1**			X					**2**
7-08	Matthew Furman Property	12,000	**1**		X						**2**
5-08	Fletcher's Dump	10,000	**1**		X						**2**
5-09	Lester's Auto	10,000	**1**			X					**2**
5-22	Dieckel Dump	10,000	**1**		X						**2**
7-07	HO Tires Extension	10,000	**1**		X						**2**
5-14	Hidden Valley Auto Parts	8,000	**1**			X					**2**
8-05	Andy's Auto Parts	8,000	**1**		X						**2**
8-12	Troups Creek Scrapyard	8,000	**1**		X						**2**
6-05	Zahn's Junkyard	7,000	**1**		X						**2**
8-01	Wells Site	7,000	**1**		X						**2**
5-12	Canfield's Auto Parts	6,000	**1**		X						**2**

Table 3

ABATEMENT PRIORITY LIST FOR NONCOMPLIANT WASTE TIRE STOCKPILES

Site ID	Noncompliant Site Name	Est. Number of Tires	Size Score	Primary Aquifer	Stream	Wetland	Environ Justice	School	Hospital	Pop. Center	Total Score
5-13	Clarkie's Auto Parts	5,000	**1**							**X**	**2**
8-09	Nixon's Truck Parts, Inc.	4,000	**1**			**X**					**2**
6-02	Hart's Parts	3,500	**1**				**X**				**2**
6-09	Clark Property	3,000	**1**			**X**					**2**
6-01	Crew's Auto Recycling	2,500	**1**		**X**						**2**
3-01	Brim Auto Recyclers	2,000	**1**			**X**					**2**
3-05	Sunshine Mountain	2,000	**1**				**X**				**2**
6-06	Harris Junkyard	2,000	**1**		**X**						**2**
3-03	East Park Auto	1,500	**1**					**X**			**2**
9-11	Kusior Auto Parts	1,500	**1**		**X**						**2**
9-13	Twin Village Salvage	20,000	**1**								**1**
8-02	Charles Martin Property	12,000	**1**								**1**
5-05	Tire Traders	10,000	**1**								**1**
8-03	Tire Solutions, Inc.	10,000	**1**								**1**
9-08	Kimberly Torrey Property	10,000	**1**								**1**
9-16	Junction Road Recycling	10,000	**1**								**1**
6-11	Rice Property	9,500	**1**								**1**
8-06	Budget Auto Parts	8,000	**1**								**1**
5-20	Ray's Salvage	7,500	**1**								**1**
5-18	Johnson's Auto Crushers	7,000	**1**								**1**
5-06	Northern Scrap Metal	6,000	**1**								**1**
5-07	Shanahan Scrap	6,000	**1**								**1**
4-01	Napier Site	5,000	**1**								**1**
4-04	Klinger Property	5,000	**1**								**1**
5-03	Miller's Junkyard	5,000	**1**								**1**
5-21	West Side Auto Supply, Inc.	3,500	**1**								**1**
5-04	Earth Waste Systems	3,000	**1**								**1**
9-10	INS Scrap Processors	3,000	**1**								**1**
5-10	Ernie Fancher Property	2,000	**1**								**1**
9-04	David Christian Tire Pile	2,000	**1**								**1**
5-24	John Delaney Property	1,500	**1**								**1**
9-09	Harris Auto Wrecking	1,500	**1**								**1**
	95 sites	**28,990,500**		**2**	**35**	**22**	**9**	**13**	**1**	**13**	
				2.1%	**36.8%**	**23.2%**	**9.5%**	**13.7%**	**1.1%**	**13.7%**	

Site Size Scoring	**Pts**
1,000-24,999	**1**
25,000-74,999	**2**
75,000-174,999	**3**
175,000-299,999	**4**
300,000-749,999	**5**
750,000-1,499,999	**6**
1,500,000-4,999,999	**7**
more than 5,000,000	**8**

Explanatory Notes

Primary Aquifer — A highly productive aquifer which is presently used as a source of public water supply by major municipal water supply systems. For the purposes of this report, "primary aquifer" also includes "sole-source aquifer"

Class "C" or Higher Stream — A stream which is suitable for fish propagation and survival, and for primary and secondary contact recreational uses.

Regulated State Wetland — Wetlands that are regulated under NYS Freshwater Wetlands Act outside the Adirondack Park

Potential Environmental Justice Area — A census block group that exceeds specific thresholds for poverty and minority composition using 2000 census data as specified in Commissioner Policy #29 - Environmental Justice Permitting

School — Data provided by NYS Dept. of Education containing primary public and private schools

Hospital — Data provided by NYS Dept. of Health containing containing acute care facilities licensed by the NYS Dept. of Health and covered by Article 28. It does not include psychiatric or federal hospitals.

Population Center — An area with a population density of 1,000 individuals or greater per square kilometer

Table 4
ABATEMENT PRIORITY LIST SORTED BY DEC REGION

Site ID	County	Noncompliant Site Name	Est. Number of Tires	Size Score	Primary Aquifer	Stream	Wetland	Environ Justice	School	Hospital	Pop. Center	Total Score
1-01	Suffolk	New York Tire/Izzo Property	2,000,000	**7**	**X**						**X**	**9**
2-01	Queens	Coletta Recycling	20,000	**1**				**X**	**X**	**X**	**X**	**5**
3-01	Orange	Brim Auto Recyclers	2,000	**1**			**X**					**2**
3-02	Orange	Brown's Auto Salvage	13,000	**1**			**X**	**X**				**3**
3-03	Dutchess	East Park Auto	1,500	**1**					**X**			**2**
3-04	Putnam	Mahopac Auto Wreckers	140,000	**3**		**X**						**4**
3-05	Ulster	Sunshine Mountain	2,000	**1**				**X**				**2**
3-06	Ulster	Tire Recycling, Inc.	300,000	**5**								**5**
3-07	Westchester	Bryson's 24 Hour Towing, Inc.	2,500	**1**		**X**			**X**			**3**
3-08	Sullivan	Mor Ton Recycling	4,000	**1**				**X**	**X**			**3**
3-09	Sullivan	Baums Towing	12,000	**1**			**X**					**2**
4-01	Albany	Napier Site	5,000	**1**								**1**
4-02	Albany	Stan's Auto	150,000	**3**		**X**						**4**
4-03	Columbia	Cycletech, Inc.	1,200,000	**6**		**X**			**X**			**8**
4-04	Otsego	Klinger Property	5,000	**1**								**1**
4-05	Rensselaer	Almag Construction	110,000	**3**		**X**						**4**
4-06	Rensselaer	Chris Sanders Property	50,000	**2**								**2**
4-07	Rensselaer	Gerald J. Eagle Property	120,000	**3**		**X**						**4**
4-08	Rensselaer	Jim Cooper Auto Parts	9,000	**1**		**X**	**X**		**X**			**4**
4-09	Schoharie	A & A Recycling	75,000	**3**			**X**					**4**
5-01	Saratoga	Mohawk Tire Recycling	8,000,000	**8**		**X**						**9**
5-02	Clinton	J&R Auto Salvage	20,000	**1**			**X**					**2**
5-03	Clinton	Miller's Junkyard	5,000	**1**								**1**
5-04	Clinton	Earth Waste Systems	3,000	**1**								**1**
5-05	Clinton	Tire Traders	10,000	**1**								**1**
5-06	Essex	Northern Scrap Metal	6,000	**1**								**1**
5-07	Essex	Shanahan Scrap	6,000	**1**								**1**
5-08	Franklin	Fletcher's Dump	10,000	**1**		**X**						**2**
5-09	Saratoga	Lester's Auto	10,000	**1**			**X**					**2**
5-10	Fulton	Ernie Fancher Property	2,000	**1**								**1**
5-11	Fulton	Welke Salvage	15,000	**1**			**X**					**2**
5-12	Saratoga	Canfield's Auto Parts	6,000	**1**		**X**						**2**
5-13	Saratoga	Clarkie's Auto Parts	5,000	**1**							**X**	**2**
5-14	Fulton	Hidden Valley Auto Parts	8,000	**1**			**X**					**2**
5-15	Clinton	U Save Tire Corp.	200,000	**4**				**X**	**X**		**X**	**7**
5-16	Saratoga	Jenkins Auto Parts	50,000	**2**							**X**	**3**
5-17	Saratoga	John Post Property	30,000	**2**								**2**
5-18	Saratoga	Johnson's Auto Crushers	7,000	**1**								**1**
5-19	Saratoga	Van Patten Property	2,000	**1**		**X**	**X**					**3**
5-20	Warren	Ray's Salvage	7,500	**1**								**1**
5-21	Warren	West Side Auto Supply, Inc.	3,500	**1**								**1**
5-22	Washington	Dieckel Dump	10,000	**1**		**X**						**2**
5-23	Washington	East Side Auto Body	12,000	**1**					**X**		**X**	**3**
5-24	Washington	John Delaney Property	1,500	**1**								**1**
6-01	Herkimer	Crew's Auto Recycling	2,500	**1**		**X**						**2**
6-02	Herkimer	Hart's Parts	3,500	**1**				**X**				**2**
6-03	Herkimer	Valley Recycling, Inc	30,000	**2**								**2**
6-04	Jefferson	Finger Lakes Iron & Metal	30,000	**2**								**2**
6-05	Jefferson	Zahn's Junkyard	7,000	**1**		**X**						**2**
6-06	Lewis	Harris Junkyard	2,000	**1**		**X**						**2**
6-07	Oneida	A-1 Auto Parts	6,000	**1**		**X**	**X**				**X**	**4**
6-08	Oneida	Doc's Trucking & Auto Parts	10,000	**1**		**X**	**X**		**X**		**X**	**5**
6-09	St. Lawrence	Clark Property	3,000	**1**			**X**					**2**
6-10	St. Lawrence	Lyndacker Property	30,000	**2**								**2**
6-11	St. Lawrence	Rice Property	9,500	**1**								**1**
6-12	St. Lawrence	White's Lisbon Site	60,000	**2**			**X**					**3**
6-13	Oneida	Hoke Site	6,000	**1**				**X**			**X**	**3**

Table 4
ABATEMENT PRIORITY LIST SORTED BY DEC REGION

Site ID	County	Noncompliant Site Name	Est. Number of Tires	Size Score	Primary Aquifer	Stream	Wetland	Environ Justice	School	Hospital	Pop. Center	Total Score
7-01	Oswego	Fortino Site	10,000,000	**8**		**X**	**X**					**10**
7-02	Chenango	Hutchings Automotive	800,000	**6**								**6**
7-03	Cayuga	Kubis Auto Parts	23,000	**1**				**X**	**X**		**X**	**4**
7-04	Madison	Title Town Tires	150,000	**3**		**X**						**4**
7-05	Onondaga	Lot 65 Newport Rd.	8,000	**1**	**X**		**X**					**3**
7-06	Oswego	Pieropan Junkyard	40,000	**2**		**X**						**3**
7-07	Tompkins	HO Tires Extension	10,000	**1**		**X**						**2**
7-08	Tompkins	Matthew Furman Property	12,000	**1**		**X**						**2**
7-09	Onondaga	Peter Winkleman Property	7,000	**1**				**X**	**X**		**X**	**4**
7-10	Oswego	Carl Bice Junkyard	7,500	**1**		**X**	**X**					**3**
8-01	Orleans	Wells Site	7,000	**1**		**X**						**2**
8-02	Seneca	Charles Martin Property	12,000	**1**								**1**
8-03	Seneca	Tire Solutions, Inc.	10,000	**1**								**1**
8-04	Seneca	William Port & Sons	25,000	**2**			**X**		**X**			**4**
8-05	Wayne	Andy's Auto Parts	8,000	**1**		**X**						**2**
8-06	Wayne	Budget Auto Parts	8,000	**1**								**1**
8-07	Wayne	Gruttadoro Site	4,000	**1**		**X**	**X**					**3**
8-08	Wayne	Juliano's Auto Parts	7,000	**1**		**X**	**X**					**3**
8-09	Wayne	Nixon's Truck Parts, Inc.	4,000	**1**			**X**					**2**
8-10	Yates	Whipple-Dancosh Property	15,000	**1**		**X**						**2**
8-11	Monroe	Jeffrey Brongo Property	18,000	**1**		**X**						**2**
8-12	Steuben	Troups Creek Scrapyard	8,000	**1**		**X**						**2**
9-01	Chautauqua	Hornburg Tire	3,500,000	**7**								**7**
9-02	Erie	Clarence Auto Parts	650,000	**6**		**X**	**X**					**8**
9-03	Wyoming	Ben Maglio Property	150,000	**3**							**X**	**4**
9-04	Cattaraugus	David Christian Tire Pile	2,000	**1**								**1**
9-05	Cattaraugus	Don Case Auto Parts	35,000	**2**								**2**
9-06	Cattaraugus	Southern Tier Tire	350,000	**5**		**X**						**6**
9-07	Allegany	Thornton Property	150,000	**3**		**X**						**4**
9-08	Allegany	Kimberly Torrey Property	10,000	**1**								**1**
9-09	Chautauqua	Harris Auto Wrecking	1,500	**1**								**1**
9-10	Erie	INS Scrap Processors	3,000	**1**								**1**
9-11	Erie	Kusior Auto Parts	1,500	**1**		**X**						**2**
9-12	Erie	Rte. 20 Auto Parts	39,000	**2**		**X**						**3**
9-13	Erie	Twin Village Salvage	20,000	**1**								**1**
9-14	Niagara	Myles Junkyard	25,000	**2**								**2**
9-15	Niagara	Rubberworks, Inc.	10,000	**1**					**X**		**X**	**3**
9-16	Niagara	Junction Road Recycling	10,000	**1**								**1**
		95 sites	**28,990,500**		**2**	**35**	**22**	**9**	**13**	**1**	**13**	
					2.1%	**36.8%**	**23.2%**	**9.5%**	**13.7%**	**1.1%**	**13.7%**	

Site Size Scoring	**Pts**
1,000-24,999	**1**
25,000-74,999	**2**
75,000-174,999	**3**
175,000-299,999	**4**
300,000-749,999	**5**
750,000-1,499,999	**6**
1,500,000-4,999,999	**7**
more than 5,000,000	**8**

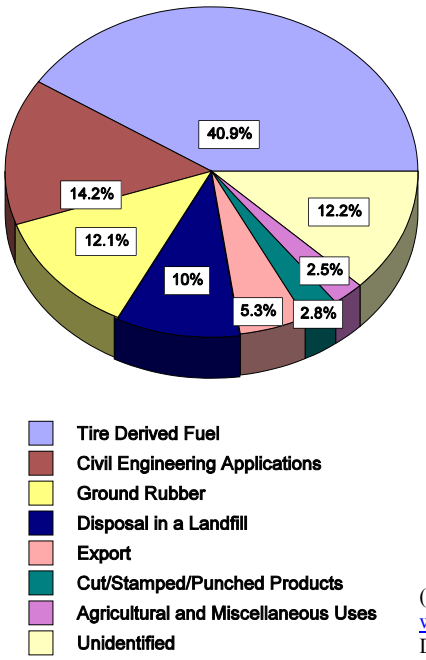
Chapter 4 - Material Use and Disposition Plan

The primary goal of the waste tire stockpile abatement program is to eliminate the potential adverse impacts on public health, safety or welfare, the environment, or natural resources. Significant concern exists at each of these sites in relation to potential fire hazard and as a potential breeding ground for mosquitos and other vectors. While primary plans for abatement activities at each site centers on the reduction of fire potential and vector control, beneficial use or disposition of these tires and any associated tire material must also be considered while formulating a proper waste tire stockpile abatement strategy.

Recycling and beneficial use of discarded waste tires presents serious challenges. In other states, disposal in a landfill and energy recovery have been the primary options for remediating waste tire stockpiles. The Act mandates that an attempt is made to use tires from noncompliant waste tire stockpiles in a beneficial manner with disposal in a solid waste facility as a last option. Targeting and developing beneficial uses for waste tires from noncompliant waste tire stockpiles will ultimately assist with the development and enhancement of a sustainable market infrastructure for newly generated waste tires in the State.

It is estimated that between 18 and 20 million waste tires are generated annually in New York State. Currently, newly generated waste tires are used in a number of ways including use as a fuel and in civil engineering applications. According to information obtained from USEPA, the predominant use of waste tires nationwide, (40.9%), is currently tire derived fuel. This is followed by: civil engineering applications (14.2%), ground rubber (12.1%), disposal in a landfill (10%), export (5.3%), cut/stamped/punched products (2.8%), and agricultural and miscellaneous uses (2.5%), with the remainder unidentified (See Figure 3 below). The development and enhancement of a sustainable market infrastructure for newly generated waste tires is a critical component of the overall waste tire management strategy in New York, and as outlined in the Act, will be the focus of Empire State Development's efforts.

Figure 3 - Waste Tire Disposition in the United States



(Source: USEPA website www.epa/gov/epaoswer/non-hw/muncpl/tires/basic.htm. Data as of June 2004)

Stockpiled waste tires present an even greater challenge to beneficially use than newly generated waste tires. A number of factors contribute to this challenge including: the age and condition of the tires, the manner in which the tires have been stored, the prolonged environmental exposure of the tires, the lack of uniformity and consistency of the tire type or materials, the routine presence of tires on rims, the routine presence of extraneous materials such as construction and demolition debris, and the high frequency of intermixing of tires with soil either by burial or during the forming of storage piles.

These conditions make beneficial use not only challenging, but costly. They limit the reasonable realm of potential uses and routinely render much of the material unusable, requiring eventual processing through combustion or disposal in a landfill. However, with a considerable investment, great effort, careful planning, and significant determination, material with beneficial uses can be produced.

Civil Engineering Uses

The most feasible and probable beneficial uses available for waste tires from waste tire stockpiles is in civil engineering applications.

Use as Lightweight Aggregate in Fill

The primary large scale beneficial use for this waste tire material is as a substitute for conventional aggregates used in road construction and lightweight fill applications. If prepared correctly, waste tire derived aggregate can routinely be used as a substitute for other conventional aggregates. In many instances, its properties as a lightweight fill are superior to those of other conventional aggregates. Waste tire derived aggregate can be used in routine

embankment construction or in a situation where a lightweight embankment material is specified due to potential settlement or stability problems or concerns.

There are numerous benefits in using waste tire derived aggregate in lieu of conventional soil, gravel or stone aggregate. The low dry unit weight of waste tire derived aggregate typically ranges from 45-58 pounds per cubic foot (pcf), whereas soil fill densities can range from 100 pcf to 125 pcf. This characteristic makes tire shreds ideal for construction when lightweight fills are desired or necessary, such as when building on soft soil or compressible soil foundations. Another positive aspect of using waste tire derived aggregate is its enhanced drainage characteristics over that of conventional soil, gravel or stone aggregate.

The use of properly prepared tire shreds in embankment and road construction necessitates meeting special design and construction requirements. Use of tire shreds in road and embankment construction is not new in the United States, and engineering guidelines have been developed for use of tire shred for these applications above the groundwater table. The American Society of Testing Materials (ASTM) has developed guidelines for the use of tire shreds for construction projects. ASTM D6270, "Standard Practices for Use of Scrap Tires in Civil Engineering Applications" is a reference used nationally for the incorporation of tire shreds in various types of construction.

Landfill Construction Uses

Another civil engineering use for waste tire derived aggregate is in landfill construction as part of the leachate and gas collection systems and as select waste and frost protection needed during landfill construction and development.

New York State has encouraged the use of waste tire derived aggregate for use in landfill primary leachate collection and removal systems (LCRS) via the equivalent design provision of the Solid Waste Management Facility regulations, 6 NYCRR 360-2.13(w).

Landfill liner systems are required to incorporate properly specified drainage layers designed to effectively remove leachate from the landfill. The utilization of waste stream derived construction materials has the potential for significant savings and the associated benefit of converting an unusable waste material into a useful part of a landfill's environmental containment system. Landfill construction can consume significant amounts of natural construction materials. By using waste tire derived aggregate in a landfill design, not only are natural resources conserved, but large volumes of waste tires are beneficially used. It takes approximately 60-70 passenger vehicle tire equivalents to create 1 cubic yard of waste tire derived aggregate compacted and compressed to their in place volume. For a 10-acre landfill cell requiring an 18-inch thick layer of waste tire derived aggregate as a component of the LCRS, more than 1.5 million passenger tire equivalents would be used to produce the volume of waste tire derived aggregate required for such use.

Waste tire derived aggregate also exhibits excellent thermal insulation properties when compared to conventional soil aggregate materials. The thermal property of waste tire derived aggregate can be a favorable characteristic in landfill applications where a thermal barrier is necessary in the upper portion of the LCRS to enhance the insulating properties of the landfill's

primary LCRS to address the regulatory requirement for liner protection from frost action. In these applications, the waste tire derived aggregate replace a portion of the conventional drainage soil aggregate, providing the needed frost protection and improving upon the protective qualities of the conventional primary LCRS.

Other Uses

Other potential civil engineering uses for waste tire derived aggregate include backfill behind retaining walls and subgrade thermal insulation. Use as backfill behind retaining walls is attractive due to their low compressed density which results in lower horizontal pressures and their high strength due to interlock of the waste tire derived aggregate which minimizes lateral loads on walls and abutments. This allows retaining walls to be thinner and often of simpler construction. Use as subgrade thermal insulation either under gravel surfaced roads, or around building foundations has also been successful. While these uses are also included within the road and landfill construction as previously discussed, the quantity of material required for these independent applications is generally smaller and more dispersed than for road and landfill construction projects.

DOT and Thruway Authority Cooperation

DOT and the Thruway Authority have expressed a desire to participate in the abatement and environmental resolution efforts set forth in the Act. Should DEC have to assume abatement responsibilities, as partner agencies, DOT and the Thruway Authority have committed to cooperate to ensure waste tires at these noncompliant waste tire stockpiles are used beneficially by incorporating waste tire derived aggregate wherever possible in their projects.

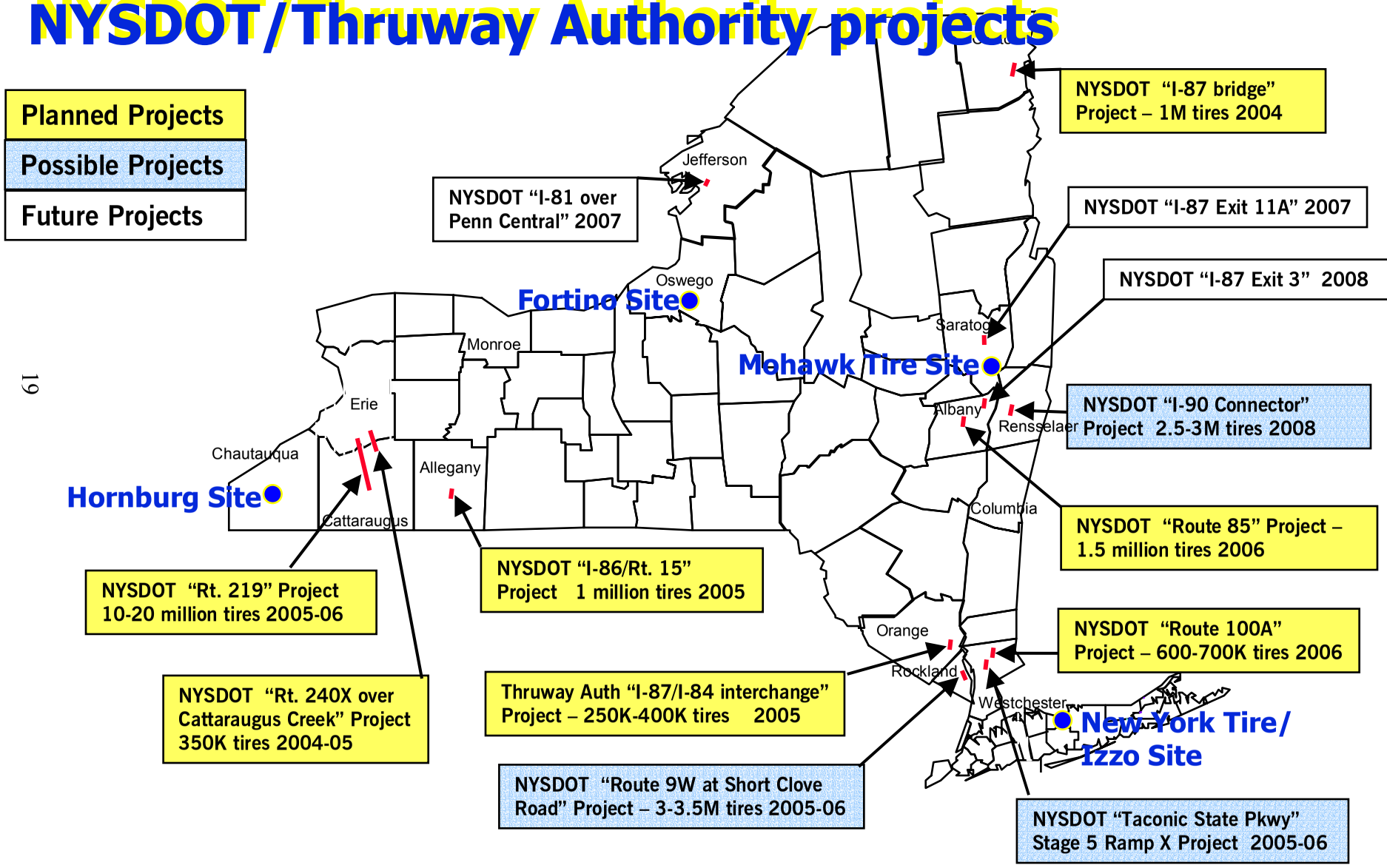
Accordingly, DOT has revised and updated its specifications for use of tire shred material in road and embankment construction. Additionally, DOT has worked with DEC, the Office of General Services (OGS) and a contracted engineering firm to develop quality assurance/quality control specifications for tire shreds from waste tire stockpiles for use in road and embankment construction.

Potential Road Construction Projects

DOT and the Thruway Authority evaluated their upcoming planned and projected road and embankment construction projects for candidates where the use of waste tire derived aggregate would be beneficial and appropriate. Currently, they have identified 12 planned, potential, or future projects expected to be undertaken between 2004 and 2008 that have a projected use of between 20 to 31.5 million waste tires, depending on the actual conditions and needs at each road construction site during construction. These planned, potential and future projects are identified in Figure 4. Additional projects may be added as they are proposed and approved. At this time, the largest planned road construction project where the use of waste tire derived aggregate is appropriate is a new section of State Route 219. For that project, DOT has indicated between 10 and 20 million tires over a two year period will be needed.

Figure 4

Potential waste tire fill use opportunities in NYSDOT/Thruway Authority projects



In the event that DEC must assume abatement responsibility, the initial waste tire stockpile abatement efforts will be directed primarily to reduce fire potential and control vectors. However, remediation project efforts and scheduling will also be geared toward shredding tires for beneficial use in road construction and other civil engineering applications. Cooperation and coordination with DOT and the Thruway Authority is critical to the success of DEC's waste tire abatement effort. The schedule of these road construction projects may vary significantly due to circumstances unrelated to the waste tire stockpile abatement efforts. This need for fluidity and flexibility in the abatement program scheduling and activities will continue to be addressed in all project and program planning aspects of the abatement effort.

Chapter 5 - Abatement Schedule

The Act requires the establishment of a priority list and schedule for abatement of each noncompliant waste tire stockpile based on potential adverse impacts on public health, safety or welfare, the environment, or natural resources to be included in the Plan.

This Chapter addresses the priority list and presents the schedule for abatement activities.

Initial Target Sites

Based on the evaluation described in Chapter 3, a priority list of sites was established and presented in Table 3. In evaluating this priority list, it was determined that the twelve sites with a score of 5 or higher should be the initial target sites for abatement activities. These sites, identified below, pose the greatest risks to public health, safety or welfare, the environment, or natural resources and contain approximately 27 million tires.

Fortino Site	Oswego County	10 million tires
Mohawk Tire Recycling	Saratoga County	8 million tires
Hornburg Tire	Chautauqua County	3.5 million tires
New York Tire/Izzo Property	Suffolk County	2 million tires
Cycletech	Columbia County	1.2 million tires
Hutchings Automotive	Chenango County	0.8 million tires
Clarence Auto Parts	Erie County	0.65 million tires
Southern Tier Tire	Cattaraugus County	0.35 million tires
Tire Recycling	Ulster County	0.3 million tires
U Save Tire Corp	Clinton County	0.2 million tires
Coletta Recycling	Queens County	20,000 tires
Doc's Trucking & Auto Parts	Oneida County	10,000 tires

Enforcement Activities

DEC will contact each known owner or operator of a noncompliant waste tire stockpile to determine whether that owner or operator is ready, willing, and able to undertake abatement in a timely manner. While DEC will encourage voluntary abatement, DEC will also use its enforcement authority to require abatement. Should owner or operator abatement efforts prove unsuccessful; or should the owner or operator not attempt abatement, DEC will assume responsibility and, consistent with the law, seek recovery of abatement costs incurred.

Abatement Project Elements

Each site has its own unique characteristics and challenges that require a specific abatement strategy and plan should DEC have to assume the abatement responsibility at the site. Certain basic elements remain consistent from site to site, such as the potential for production of a usable product, the need for on-site processing, an area for on-site material storage and ample physical access for transportation of waste tire derived aggregate should DEC have to assume the abatement responsibility at the site. The differences among sites can, however, be significant. These differences which have a great impact on project design and performance include, but are not limited to:

- the number of tires
- the condition of the tires (e.g., old weathered, intermixed with soil/debris, rimmed, burned, shredded)
- the location of the tires on-site (geographically, physically and environmentally)
- the method of placement of the tires (e.g., mechanically placed, surface dumped, buried)
- the types of tires (e.g., passenger, truck, off-the-road)
- the original physical and environmental conditions at the site
- the current physical and environmental conditions at the site
- access to power and water supply
- area of on-site land available for processing and storage
- physical access constraints (e.g., need to build or improve roads)
- presence of C&D debris and/or potentially hazardous or dangerous materials
- legal issues

Accordingly, each site needs to be evaluated from a physical engineering needs perspective for reduction of fire hazard and vector control or minimization. Additionally, each site needs to be evaluated in the context of its potential to supply specification waste tire derived aggregate to the proposed road and embankment construction projects as well as other potential civil engineering applications.

Priority Projects

The twelve initial target sites with a score of 5 or greater will be addressed first as priority projects. As indicated, each of these sites have their own unique characteristics that need consideration. The three sites of greatest concern are the Fortino Site, Mohawk Tire Recycling, and New York Tire/Izzo Property, the three highest scoring sites. These sites pose a significant threat to the environment and they will be considered the highest priority sites.

Fortino Site

It is estimated that the Fortino Site contains approximately 10 million waste tires. Tires at this site are primarily in one pile covering approximately 23 acres. A small old municipal landfill was operated on site before its use as a waste tire disposal location. The site is surrounded by a wetland area and over the years since the facility was operated, significant drainage problems have occurred and will need to be addressed. Currently, there is no vehicular access of any kind available to the site and there is very little dry land area currently available. In the event that DEC must assume abatement responsibility at the site, significant design and construction work will be necessary to make the site accessible and to support the production of DOT specification waste tire derived aggregate.

Mohawk Tire

The largest part of the Mohawk Tire Recycling site remaining today contains an estimated 8 million waste tires. Approximately half of these tires are currently separated into 20 large piles above grade with the remainder below grade at a depth of up to 30-40 feet.

After the site owners failure to comply with a DEC Summary Abatement Order directing them to abate the stockpile, in 2000 and 2001, DEC undertook a partial abatement action removing

approximately 2.7 million passenger tire equivalents establishing a site access road, installed a water supply to the site, and installed security fencing. On March 9, 2002, a fire at a portion of the site which stored an estimated 500,000 tires, occurred. The fire ultimately was contained due in large part to the initial work that was done at the site by DEC. Residue from the fire included wire residual from burned tires, partially burned tire carcasses, charred building debris, and contaminated soil. The residuals from this fire have required ongoing maintenance to collect contaminated run-off and to conduct sampling. To eliminate these ongoing maintenance costs at the high risk areas of the lower portion of the site, a contract was prepared and bids were received by DEC in November 2003 to remove burned tires, building debris, and contaminated soil and to restore surface conditions. The cost of this phase of work is being financed as part of an Environmental Benefit Project and the cost of an oversight contractor is being financed by the Waste Tire Management Fund.

New York Tire/Izzo Property

The New York Tire/Izzo Property site is the fourth largest waste tire stockpile in the State and has present nearly two million waste tire equivalents on site. This site presents unique challenges as well. There are approximately 500,000 waste tires above ground at the site, and an estimated
1.5 million passenger tire equivalents of tire shred buried below grade in a sand pit estimated to be up to 30 feet deep. Physical site access is currently very limited and in the event that DEC must assume abatement responsibility at the site, processing and material storage will be a significant obstacle to overcome.

Other Priority Sites

The next seven sites -- Cycletech, Clarence Auto Parts, Hornburg Tire, Hutchings Automotive, U Save Tire Corporation, Southern Tier Tire, and Tire Recycling -- all present unique challenges and considerations of their own. Although six of these seven sites have fewer tires than the three sites discussed above, they are nonetheless of significant concern. While each site is different, issues similar to those described above will need to be addressed and engineered specifically for each site if the DEC must assume abatement responsibility.

The remaining two priority sites contain far fewer tires than the other 10 priority sites, however, other environmental and public health concerns increase their priority ranking score. Coletta Recycling is a former 6 NYCRR Part 360 registered waste tire storage facility, and Doc's Trucking and Automotive is a nonoperating automobile dismantler. Due to the relatively small number of tires, along with the possibility of an expedient voluntary remedy by the owner, these two sites will initially be pursued administratively at this time, instead of expending resources from the Waste Tire Management Fund for remediation. If, however, these efforts prove unsuccessful, these sites will immediately be inserted into the abatement schedule.

Coordination with OGS

To expeditiously assume abatement responsibility for the twelve highest priority sites, should it have to do so, DEC partnered with OGS to use existing OGS term engineering contracts and was able to begin work in an efficient and expedited manner. Through these OGS contracts, DEC is using the services of four engineering consulting firms for investigation and design work on

these sites as well as working with DOT on developing/finalizing product specifications and quality assurance/quality control details for waste tire derived aggregate as a substitute for conventional aggregate. This aggressive schedule is not only important for abatement of the waste tire stockpiles, it is critical to provide specification waste tire derived aggregate to DOT and the Thruway Authority on schedule for their anticipated road and embankment construction projects.

This investigation and design work will lead to the development of construction drawings and contract specifications that will then be publically advertised for bid in 2004 through OGS on behalf of DEC. The cooperation and partnership with OGS has been critical to the development and advancement of this work effort.

Coordination with DOT/Thruway Authority

As discussed in Chapter 4 and referred to within this Chapter, coordinating with DOT and the Thruway Authority is critical to the expedient success of the abatement program. DOT, DEC, and OGS assigned engineering consultant have worked to develop the tire shred specifications as well as an appropriate quality assurance/quality control plan for the waste tire derived aggregate to be produced at each of these sites.

The site selection, scheduling and the work already undertaken at each of these sites derive in large part from the need to meet anticipated material needs for DOT and Thruway Authority road and embankment construction projects. The opportunity to beneficially use this material that up to now has been a blight on the environment and has posed such grave risks to public health, safety and welfare is one that cannot be lost.

It is recognized that construction schedules may deviate from those originally planned but the commitment for use of this material is the assurance that a DEC undertaken abatement project will ultimately be successful.

Schedule for Priority Sites

The schedule for each of these sites is variable and dependent on the specific conditions at each site. Currently, unknown conditions will likely be discovered at each site once work begins that may impact the schedule.

However, in order to expediently begin work to address potential fire hazards and control mosquitos and other vectors at each site where DEC must assume abatement responsibility, and to simultaneously meet the anticipated material needs of the DOT and Thruway Authority, construction work is expected to begin in 2004. The exact schedule for these individual sites cannot be accurately established at this time as engineering evaluations and designs are currently being conducted and developed.

Several of the sites will require significant infrastructure work. In addition, all necessary environmental safeguards and permitting concerns must be addressed before processing can begin. Depending on the site, this activity could take between 1 and 6 months.

Each site will require a similar processing system to be individually designed, selected, and established depending on the processing needs, for both the tire characteristics and the specification and quality of material that must be met. Each system will need to have the capability to pre-clean the tires, de-rim if necessary, shred, and clean in order to meet product specifications. A storage area for waste tire derived aggregate product prior to transportation to the appropriate road or embankment construction project or other civil engineering application will need to be constructed. It is anticipated that these construction needs could take between 1-3 months, depending on the site.

Operation of the processing equipment and associated transportation of specification waste tire derived aggregate from these sites will then follow. The schedule for this phase of the operation at these sites is speculative at this time as it is directly dependent on the individual site conditions as well as on the needs of DOT and the Thruway Authority.

If DEC must assume abatement responsibilities, in order to meet the currently anticipated waste tire derived aggregate needs for the identified road construction projects, a consistent rate of processing will need to begin in 2004 and continue at all priority sites until the inventory of waste tires able to be converted into a beneficial use are exhausted.

The life of a DEC undertaken abatement project at each site will depend on the number of tires initially present and could range from a few months for the smaller sites to up to 5 years, including final site restoration, at the largest sites.

Remaining Sites

While the initial work is ongoing at the twelve highest priority sites, work will also be undertaken at the remaining sites as well. As with the twelve initial target sites, DEC will pursue abatement of each noncompliant waste tire stockpile through an owner/operator conducted and financed remediation. It is DEC's intention to use the Waste Tire Management and Recycling Fund as judiciously as possible while expediently providing for the abatement of noncompliant waste tire stockpiles to limit the potential adverse impacts on public health, safety or welfare, the environment or natural resources.

Enforcement Activities

In the instance of the remaining sites, initial work will consist of series of administrative and enforcement steps designed to encourage voluntary management of the tires by the site owners/operators.

Due in large part to the relatively low number of tires located at the remaining sites and the desire to use funds from the Waste Tire Management Fund in as judicious a manner as possible, a series of administrative and enforcement steps will be undertaken for each of the sites.

DEC will contact the identified owners/operators/responsible parties for each of the sites informing them that they are in violation of the law. In some instances, formal enforcement will be brought immediately. Owners and operators of small stockpiles will be given an opportunity to execute a DEC Consent Order. In either case, the owners and operators will be required to

implement a DEC-approved plan of action for expedient removal of the waste tires under DEC oversight to ensure the owner/operator/responsible party is adhering to the DEC-approved abatement plan and schedule.

DEC has taken initial steps to begin this enforcement effort and will begin full implementation in 2004. The results of this enforcement program for these remaining sites will be known by 2005. For those sites where satisfactory removal is not accomplished, DEC will rely on the priority list outlined in Chapter 3, taking into account any updated information, and develop a schedule for their abatement. It is currently expected that the schedule will be developed in 2005 with abatement efforts to begin thereafter. The level of successful voluntary management at these sites cannot currently be accurately predicted.

Abatement Alternatives for the Remaining Sites

As previously noted, DEC prefers that noncompliant waste tire stockpile owners/operators abate their own stockpiles under schedules that will enable DEC to honor the December 31, 2010 deadline for all noncompliant waste tire stockpiles to be abated. However, should DEC have to assume abatement responsibility for a particular stockpile, depending upon the timing of the required abatement, the number of waste tires at the stockpile, specific conditions prevailing at the stockpile, and proximity of the stockpile to DOT or Thruway Authority road construction projects or other civil engineering applications, the most expedient and cost-effective means to abate the stockpile may be to remove the waste tires and process them into DOT specification waste tire-derived aggregate at an off-site centralized processing location. That decision, though, will have to be made after the results of the voluntary management and enforcement program are completed. At that time, the remaining universe of noncompliant waste tire stockpiles for which DEC must assume abatement responsibility will be known. If an off-site centralized processing location is necessary, it would be established through the development of a bid for services issued by OGS for a removal, transportation, and processing at a DEC-approved location or locations. That process could potentially establish a number of contractors capable of providing those services on an as-needed basis as DEC may direct.

Projected Tire Removal Schedule

Through a combination of voluntary management efforts and DEC undertaken abatement projects, abatement of all currently identified waste tire stockpiles in New York State can be achieved prior to the statutory date of December 31, 2010. As discussed in this Plan, at those sites where DEC must assume abatement responsibility for these stockpiles, the abatement schedule is linked to the road construction schedules of DOT and the Thruway Authority and other potential beneficial use projects.

Appendix A
Site Assessment Summary Sheets

Appendix B
Prioritization Maps