FLEET ASSET MANAGEMENT STRATEGY PLAN
FY 2013 through FY 2022

Fleet Management

Anytime, Anywhere, we keep BPA Rolling

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This asset strategy was prepared before BPA's proposal to reduce costs. Spending levels in this document may not tie to proposed reductions. The strategy will be revised upon conclusion of the CIR and the IPR.

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EXECUTIVE SUMMARY

The goal of any Fleet Asset Management process is to use a system-wide approach in order to improve operations and make the organization more effective by considering the full investment and life cycle of assets. The Fleet Management Department (FMD) is committed to managing its fleet assets in a manner that is sustainable and economical, in unison, to ensure the agency is equipped with the vehicles and equipment it requires to perform mission-critical assignments.

In October 2011, the inception of the centralized FMD emerged as a result of two independent studies, conducted by KEMA and Fleet Counselor Services (FCS). It became apparent that significant changes in the current decentralized management practices for fleet assets required prompt attention, and the majority of maintenance infrastructures entailed refurbishment to meet their recommended functionality rating. This dictated the need for improvements in managing and maintaining a sizeable fleet of vehicles/equipment and facility enhancements.

Therefore, the objective of this Fleet Asset Management Strategy Plan is to identify past, current/future operations and maintenance practices focusing on the strategic processes required, enabling the FMD to continue to provide effective and efficient services to all its internal customers.

The fleet is comprised of 2197 assets ranging from light to heavy duty vehicles, construction/mobile and material handling equipment, of which 1312 are BPA owned, and 885 are GSA leased. The net value of these owned assets is approximately $70 million. Currently, the annual operations and maintenance expenses for owned assets are budgeted at $10.1 million ($3.4M Operations/Support and $6.7M Maintenance). Recently, annual capital replacements have averaged $5.5 - $7 million. GSA lease expenses add an additional $6.5 million.

With this large inventory, FMD will work towards right-sizing its fleet and optimizing the lifecycle of the various vehicles and equipment to ensure proper fleet management responsibilities. Replacing vehicles at the optimal time, planning proper maintenance, reducing downtime and unplanned repairs, disposing of assets that are under-utilized, reducing annual rental rates and ensuring proper fiscal management are paramount to providing effective Fleet management. Additionally, FMD will continue to work closely with its customers to understand their needs and assure effective, timely communication and service.
The FMD will continue to improve to ensure operational requirements are met, Governmental mandates are adhered to, risks are minimized, reliability is increased and costs are reduced. Through planning and proper project management, the FMD is confident in making this transition a success.

Fleet Asset Management Strategy
FY 2013 through FY 2022

1. Introduction

The Bonneville Power Administration's (BPA's) Fleet Management Department (FMD) is committed to managing its fleet assets in a manner that is sustainable and economical, in unison with ensuring the agency is equipped with the vehicles and equipment it requires to perform mission-critical assignments.

As a result of two independent reviews, conducted by KEMA and Fleet Counselor Services (FCS), it was apparent that significant changes in the management practices for fleet assets needed to be addressed. The first study was conducted in 2006 by KEMA whom found that fleet management at BPA was highly fragmented, resulting in differing and conflicting priorities. In addition, KEMA determined that maintenance practices were not standardized, and that replacement criteria were not in place to optimize vehicle purchases. The Heavy Mobile Equipment Mechanic (HMEM) staff operations were largely reactive and emergency response-driven, rather than proactive and preventive maintenance strategy-driven.

The second study performed in 2009 by FCS assessed BPA's current state of operations against 20 categories of basic fleet management best practices. As illustrated below, BPA scored poorly passing only three of the 20 categories; Contract Work, Policies and Procedures and Parts Inventory.

Measurements and Standards Categories	**FSC Standard**	**BPA's Score**	**Result**
1. Employee Goals, Mission Statement and Business Plan (Foundation Category)	8	0	Not Pass
2. Facilities	7	0	Not Pass
3. Computer Systems	7	6	Not Pass
4. Shop Equipment	7	3	Not Pass
5. Staffing and Qualifications (Foundation Category)	8	0	Not Pass
6. Activity Based Costing and Productivity Analysis	8	0	Not Pass
7. Contract Work	6	8	**Pass**
8. Policies and Procedures (Foundation Category)	8	9	**Pass**
9. PM Program (Foundation Category)	8	2	Not Pass
10. Predictive Maintenance	8	0	Not Pass
11. Work Flow and Communication	6	4	Not Pass
12. Utilization Management (Foundation Category)	8	2	Not Pass
13. Replacement Program (Foundation Category)	8	0	Not Pass
14. Accounting and Billing	7	3	Not Pass
15. Customer Service Downtime and Performance Contract (Foundation Category)	8	0	Not Pass
16. Parts Inventory (Foundation Category)	8	10	**Pass**
17. Fuel Management and Alternative Fuel	8	6	Not Pass
18. Vehicle Procurement	8	7	Not Pass
19. Emergency Management and Disaster Preparedness	7	1	Not Pass
20. Safety and Environmental Policy	9	8	Not Pass
PERFORMANCE SCORE	**153 = 76%**	**69 = 35%**	**Not Pass**

It was these two studies, coupled with an internal agency analysis that piloted the centralization of BPA's Fleet Management functions and the industrious effort to mold BPA's Fleet Management practices into a group focused on industry best practices. These recent efforts have laid the groundwork for fleet asset management. Accountability has been established through the centralization of fleet related procurement, analysis, licensing, maintenance, rentals, loan pool operations and reporting.

This newly formed FMD has been focused on implementing a number of the KEMA and FCS recommendations, as well as identifying industry best practices that pertain to BPA's specific, yet unique operational requirements. The FMD will continue to improve to ensure operational requirements are met, Governmental mandates are adhered to, risks are minimized, reliability is increased and costs are minimized.

1.1 Purpose

With the assistance of both KEMA and FCS reviews, BPA conducted a detailed analysis of its fleet operations and evaluated them against industry best practices Upon completion of these reviews it was decided that in order to maximize the efficient use of the agency's fleet and personnel assets, BPA's fleet-related functions should be centralized into one FMD. Therefore, the inception of the centralized FMD emerged in October 2011.

1.2 Scope

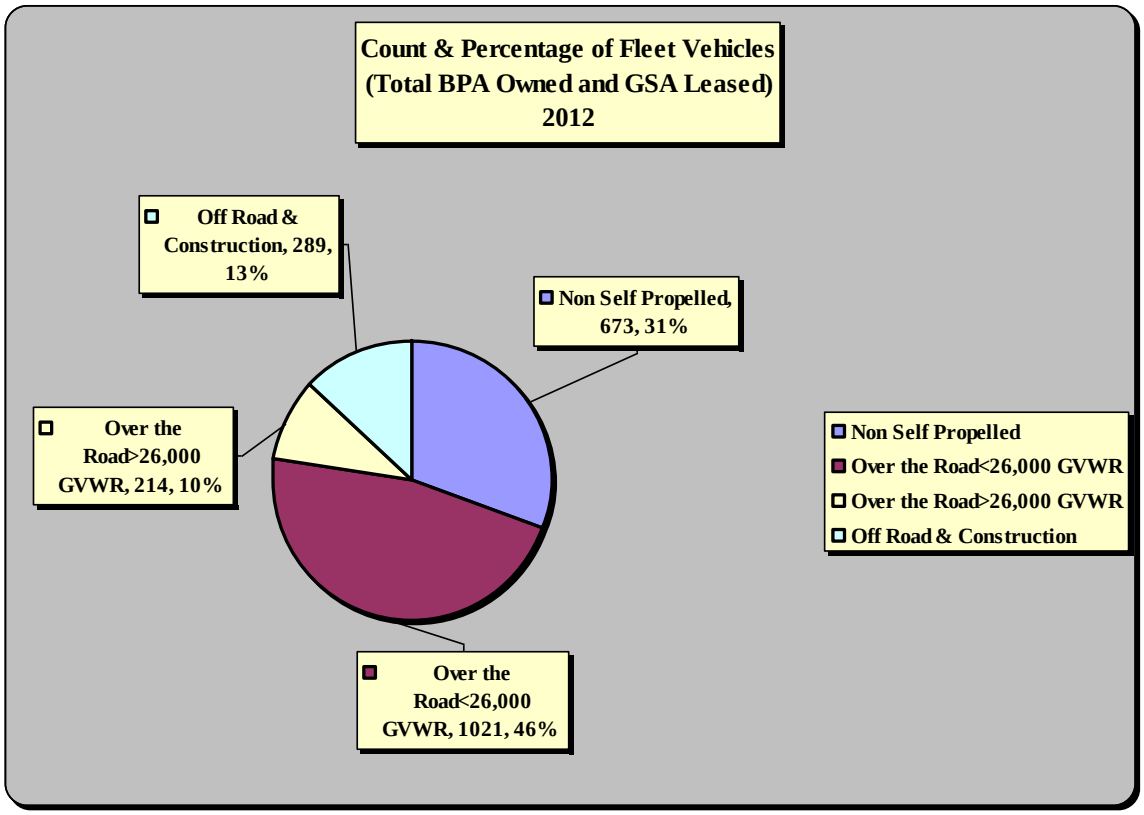
The FMD is responsible for the acquisition, maintenance, and overall asset management of BPA's fleet and the engine generators that support unmanned sub-maintenance facilities and system protection/communications functions. BPA owns, operates and maintains a wide variety of vehicles and equipment. The owned assets are comprised of trailers and mobile equipment such as cranes, man-lifts of various sizes (from 33' up to and including 180'), digger derrick trucks, pole trucks, substation maintenance route vans, small boom trucks, and man-lifts, along with other specialized equipment for stringing of conductor and overall maintenance of the transmission system. Other equipment consists of bulldozers, backhoes and snow cats.

Additionally, BPA leases GSA vehicles that range from sedans used by the agency's management and finance/support staff, to heavy duty pickups utilized by the agency's electrical, construction and field crews.

The fleet consists of 2197 assets, of which 1312 are BPA owned, and 885 are GSA leased. Of these assets, the mission critical equipment are the majority of BPA owned man-lifts, cranes, derricks, wire stringing equipment, work/crew trucks, pole trucks, and equipment/material hauling trucks (semi trucks/flatbed trucks) for maintaining and restoring BPA's electrical systems. The less critical, but support equipment, that

becomes mission critical and is dependent on inclement weather, are the snow cats, mobile generator, dozers, excavators, backhoes, and other specialized equipment.

Currently, the annual operations and maintenance expenses for owned assets are budgeted at $10.1 million ($3.4M Operations/Support and $6.7M Maintenance). Recently, annual capital replacements have averaged $5.5 - $7 million. GSA lease expenses add an additional $6.5 million.



2. Fleet Management Objectives and Strategies

The asset management objectives and strategies for fleet equipment are:

> **Reduce use of fossil fuels by right-sizing the fleet through a systematic analysis identifying compulsory requirements to conduct the agency's mission.** Evaluate the business case of each asset to determine whether reassigning, replacing, or eliminate the vehicle would reduce fossil fuel usage and costs without compromising fleet activities. A cross functional sustainability team has been established to conduct internal customer interviews and determine the minimum level of assets required to support mission requirements. Right-sizing the fleet will allow for more efficient operations practices by reducing GHG emissions and related pollutants, reduce fossil fuel consumption, reduce operating costs and free up capital funds. Expected completion is 4th quarter of FY-14.

Establish policy on the types of equipment that should be agency-owned versus locally rented, while leveraging the use of local rental sources. Routinely review BPA assets percentage of usage to determine retention, cost comparison, as well as assess local rentals to determine proper mix and best value to BPA and the FMD. The current Fleet Management System (FMS) makes this task daunting and labor intensive with incomplete but actionable results. Continual review will generate the proper mix and cost saving realizations. This strategy is on-going and under continuous scrutiny and will provide significantly better results upon fielding of a new FMS.

Focus on preventive/predictive maintenance to reduce the amount of emergency response and corrective maintenance. Ensure scheduled maintenance is in accordance with manufacturer's recommended intervals and identify those predictive assets that require additional review due to high usage. As stated previously and will be stated again, the current FMS makes this task more difficult to carry out and much more labor demanding with marginal results. Adhering to being focused on preventive/predictive maintenance will ensure equipment availability and reduce downtime. This approach is continual and specific to the asset being maintained.

Develop and implement a professional training and certification program for the FMD maintenance technicians. Identify gaps and determine/establish a training plan to meet maintenance technicians required skill-sets. Dedicated funding will determine success and deliverable of this objective. The institution of a professional training/certification program will enhance maintenance skill-sets and promote awareness of maintenance issues and implement solutions to ever-changing technologies. This is scheduled to commence late FY-14, but no later than mid FY-15.

Standardize to reduce acquisition, maintenance and inventory costs, and thereby possessing additional funds for recruitment/training. Conduct right-sizing review to determine minimum level of assets required to meet mission needs and standardize assets performing the same trade by numbers and types. A team has been created to tackle the right-sizing initiative to include internal customer engagement and buy-in. Establishing standardization will lead to reduced inventory, acquisition, maintenance and costs, thus allowing additional allocation of funds for improvements and training. This process is recurring.

Develop competency to prepare a life cycle analysis considering vehicle usage, condition, failure rates, maintenance costs, overall costs, etc. Determine net acquisition costs, establish estimated depreciation rates, identify other fixed costs, calculate estimated lifetime operating costs and add the estimated lifetime holding/operating costs to arrive at the estimated lifecycle. The existing FMS impedes this preparation and requires many man-hours to launch a life cycle analysis. Ongoing analysis of key factors that drive efficiency – maintenance, downtime, and fuel efficiency trends – are a must to uncover cost

savings/carbon reduction and create a concrete life cycle analysis. This method of analysis is quarterly and steady.

Improve tracking and reporting of expenditures. Assess the progress, set specific targets and monitor the sustainability performance over a monthly, quarterly and annual basis. Improvement will require a new FMS (**scheduled for FY 2014 per ACPRT approval in FY 2013**) and/or additional staffing. Tracking and reporting is the periodic scrutiny of FMDs success towards the goal of improving expenditures. This process is a daily function of the FMD.

Enhance data quality associated with vehicle cost and maintenance. Examine effects of asset component selection to determine cost and cost triggers, and then visually graph to depict "cradle to grave" history to determine optimal retention. An inapt FMS complicates the FMD's ability to enhance data quality. Improved data quality allows for efficient and effective management of fleet assets, and justifies decision-based actions regarding vehicle cost and maintenance. This task is a daily undertaking.

Improve capabilities for emergency response, while reducing frequency through implementation of a planned maintenance strategy. Schedule maintenance as recommended by the manufacture, and target those assets that are historically known to required additional maintenance due to volume of usage. Additional funding will be required to develop and implement a professional training/certification program for the FMD maintenance technicians to augment the required skill-sets, together with the modernization of the existing FMS. The improved capabilities will ensure asset availability for emergency responses that have been implemented by an effective maintenance strategy. This effort is underway, but will continue to be revisited as technology changes.

Enhance internal and external reporting capability. Identify reporting deficiencies between input versus output and label shortfalls to improve reporting function. The purchase of a new FMS or significant upgrades to the existing FMS are required, otherwise manual report compilation is the sole avenue of acquiring desired reporting. The foundation to a sound FMD is the ability to produce reports that provide value and assist with business making decisions. Estimated timeframe is 2015 - 2016 due to current ACPRT approval for a Fleet Management System in 2014.

Foster business driven decisions using analytics and metrics, measured against risk, to ensure agency needs are met in a cost-effective manner. Track and align core strategies and processes of transportation activities and metrics with business goals by creating a metrics framework to monitor and then develop/utilize the balance score card to manage/gage performance to maximize effectiveness and optimize the return of investment for the FMD. This process is attainable though labor intensive due to an inapt FMS. Promoting business driven decisions using analytics and metrics, to mitigate risk, provides actionable

business insights to improve Transportation's effectiveness and efficiency which enables the FMD to justify budgets based on returns and to drive organizational growth and innovation. This objective has commenced and will continue to evolve.

3. Key Factors for Agency Fleet Requirements

Key factors to the agency's fleet requirements are primarily centered on transmission system maintenance and reliability. However, when practical, secondary elements that aid these decisions are environmental stewardship and the assurance that the FMD has the necessary assets at the lowest life cycle cost.

Specific key factors are:

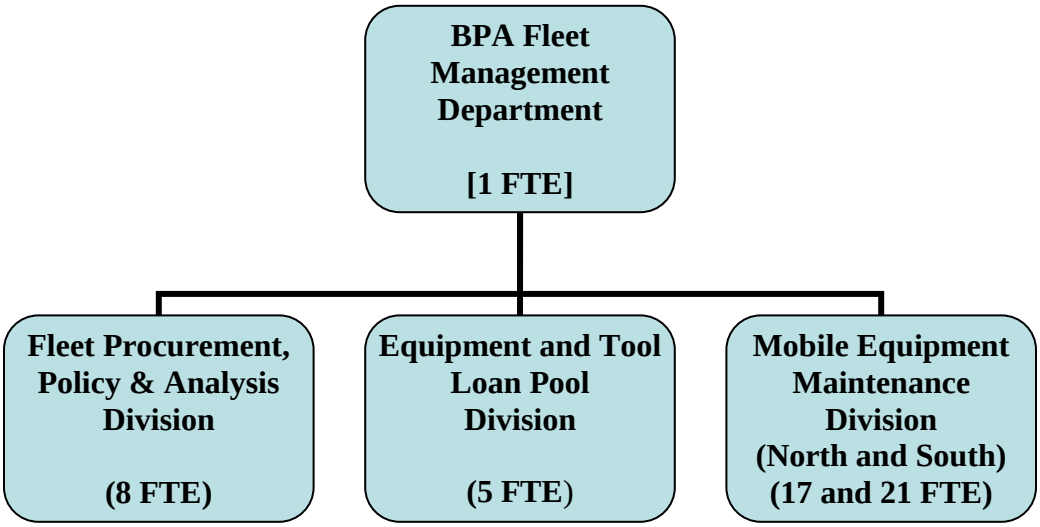
- The necessity to manage the mobile equipment and EG maintenance workload system wide
- The necessity to ensure the agency's maintenance technicians are a workforce comprised of highly skilled and trained technicians that possess a directed focus and skill-set designed to work on the myriad of equipment types the agency operates
- The necessity to right-sizing the fleet to ensure appropriate mix and quantity
- The necessity for a strategic plan, from a business and risk perspective, whereby equipment is rented as warranted versus identification of assets in the best interest of BPA that should be retained on hand either by GSA leased or owned assets
- The necessity to develop a life cycle analysis and optimal replacement criterion in order to construct comprehensive and detailed capital purchase plans

In order to achieve these key factors, the FMD must operate in accordance with a well-defined, proactive strategic workload management plan. Additionally, a concentrated effort on the development and execution of a robust continual training curriculum/program must materialize to ensure BPA HMEM technicians have the skill-sets and tools to perform work on BPA's mobile equipment assets located in improved and properly equipped HMEM facilities, as well as field locations.

4. Fleet Management Department Organizational Structure

In October 2011, BPA consolidated fleet operations into one organization designed to support, manage and oversee the agency's fleet requirements. This new organization is located in the Supply Chain portion of Internal Business Services. Major elements of the new FMD are the Fleet Analysis & Policy Division, the Equipment and Tool Loan Pool Division and the Mobile Equipment Maintenance Division.

BPA's Fleet Management Department
Organization Chart
(52 Total FTE)



4.1 The Fleet Procurement, Policy & Analysis Division is responsible for the acquisition of owned assets, as well as GSA leased vehicles. This includes data management and analysis, licensing and registration of BPA vehicles, the development and documentation of policies related to motor vehicles and equipment, the development and submission of reports and the basic life cycle analysis essential to execute Fleet Management.

4.2 The Equipment & Tool Loan Pool Division is responsible for meeting the equipment shortfall needs of the agency. This is accomplished by utilizing centrally managed assets that are operated, tracked and controlled by the loan pool personnel, or through the use of third party rentals. The Loan Pool ensures that the agency's field personnel have the tools and motor equipment necessary to perform the tasks at hand. Prior to the development of this centralized office, agency equipment rentals were not centrally captured, subsequently little historical data on the quantities and types of prior rentals are accessible. Conversely, from Oct 1, 2011 through May 23, 2012 the FMD has tracked and rented 108 pieces of equipment at a cost of approximately $290,000. It is projected that BPA's annual rentals will exceed 160 assets at an estimated cost of $600,000.

The goals of the FMD, through means of annual agreements, and more efficient use of local assets, are to reduce the average price and annual cost of agency's rentals. Notable success has materialized in the first eight months of this new organization with the establishment of standardized rental agreements equating to approximately a 20% savings with three major equipment providers.

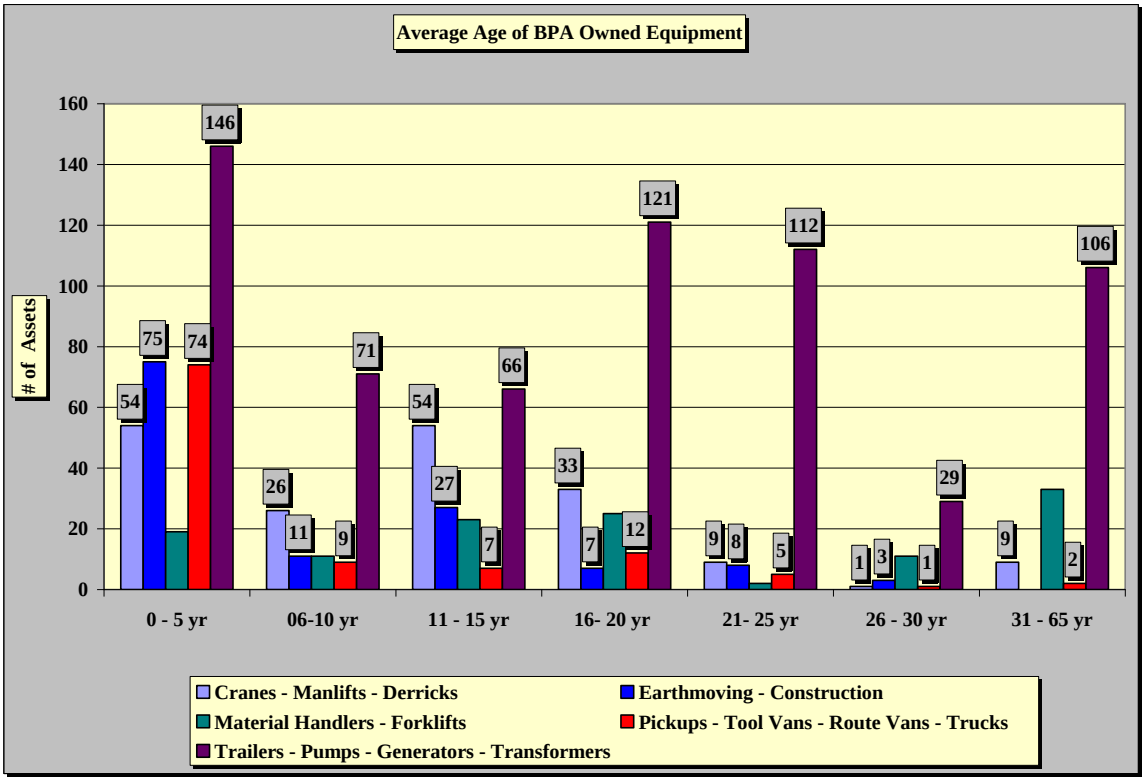
4.3 The Mobile Equipment Maintenance Division is responsible for the maintenance and repairs of the agency's fleet assets and the engine generators. Split between a Northern and a Southern group these technicians support the agency's operations by managing outsourced activities, mobile and in-shop maintenance. Maintenance levels range from basic lube and oil filter work, to major overhauls performed on chassis and aerial equipment/cranes. These technicians are also responsible for providing subject matter expertise related to GSA vehicle maintenance and vehicle up-fitting requirements, as well as damage assessments. In addition to vehicle maintenance, these technicians service the agency's 150 plus engine generators, some of which provide critical power needs at remote sites, ensuring substation and communication network systems remain operational year-round.

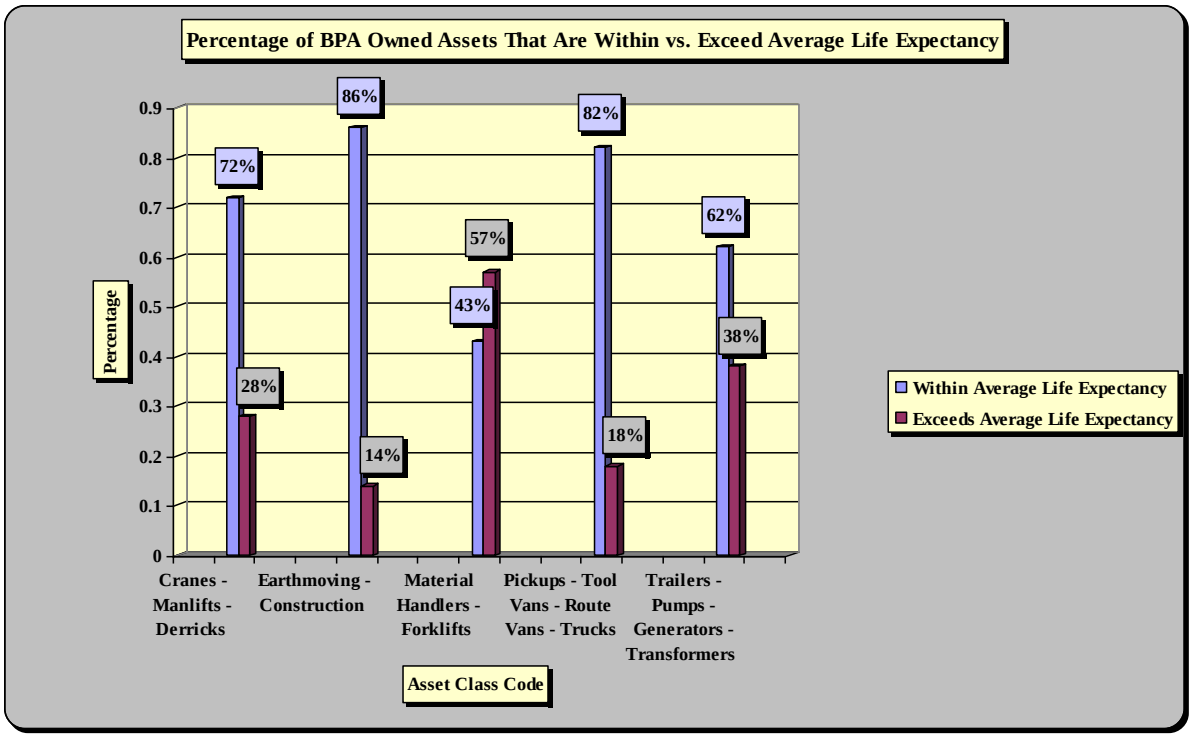
5. Age and Condition Assessment of BPA Owned Fleet

BPA's average fleet age ranges from approximately four to five years for owned pickups, to approximately 15 years for the cranes, man-lifts and digger derricks. In comparison, the average age of the aerial equipment supporting the utility industry is approximately ten years. The average age of earthmoving and construction equipment is 10-15 years. This has improved significantly with the recent updating of approximately half the fleet of backhoes, material handlers and bull dozers that until now averaged 25-30 years. In comparison, the average age for bulldozers and backhoes in the construction industry is ten years or less. The trend appears to be that BPA assets are five years older than the utilities and construction industries. As for BPA's fleet of trailers, these assets average well over 20 years and in some cases over 40 years.

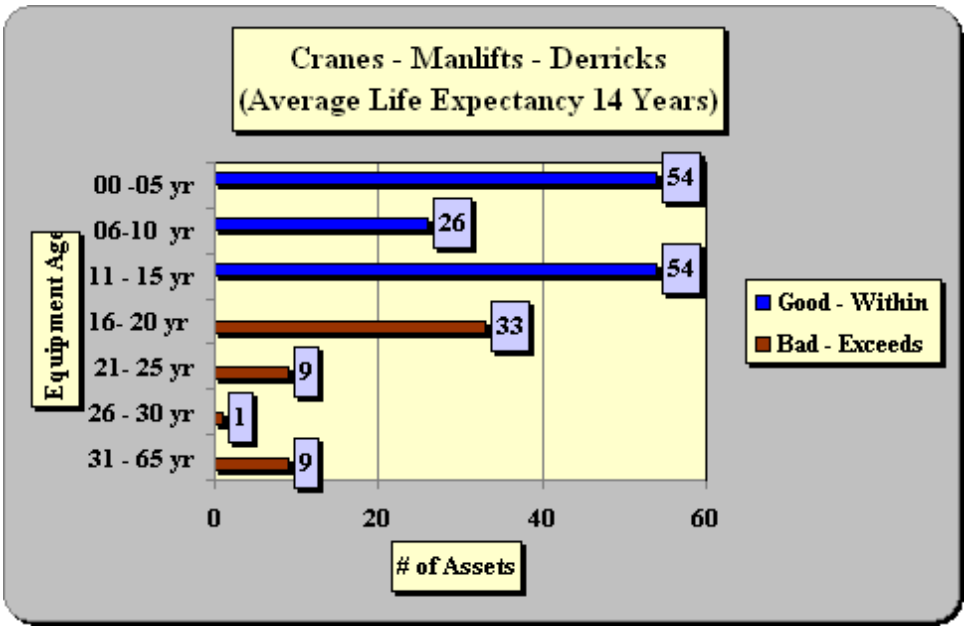
The graph below reflects the average age of BPA owned assets by class code excluding 102 utility terrain vehicles (UTVs) that were procured in 2010 in order to meet agency field and safety requirements. The second graph illustrates the overall percent of BPA owned assets that are within, vice those that exceed average life expectancy. The remaining five charts are broken out by each class code and compare the current equipment age against the average life expectancy by quantities.

Average Age and Life Expectancies of BPA Owned Equipment (Less UTV's)

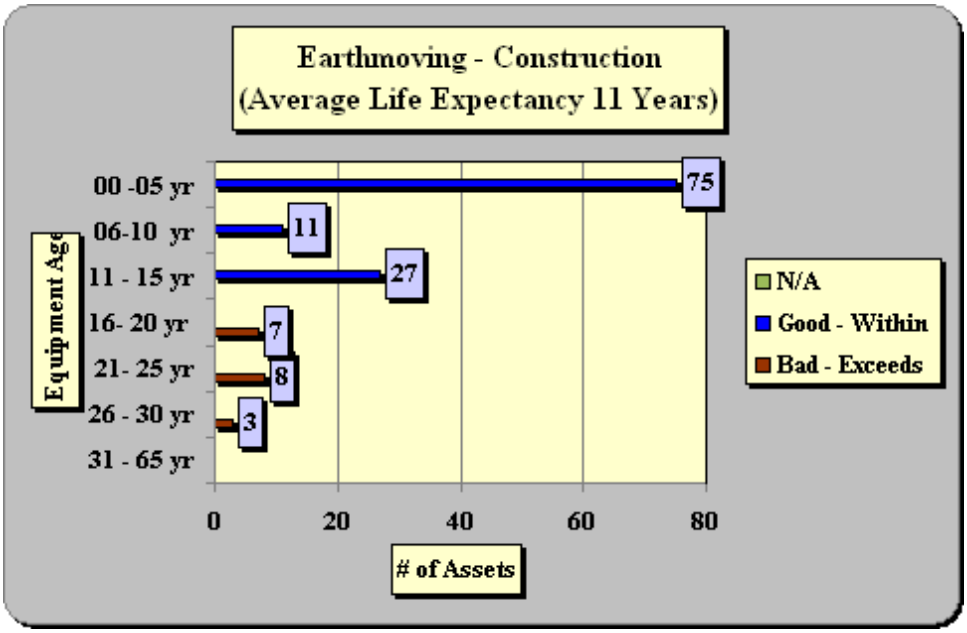




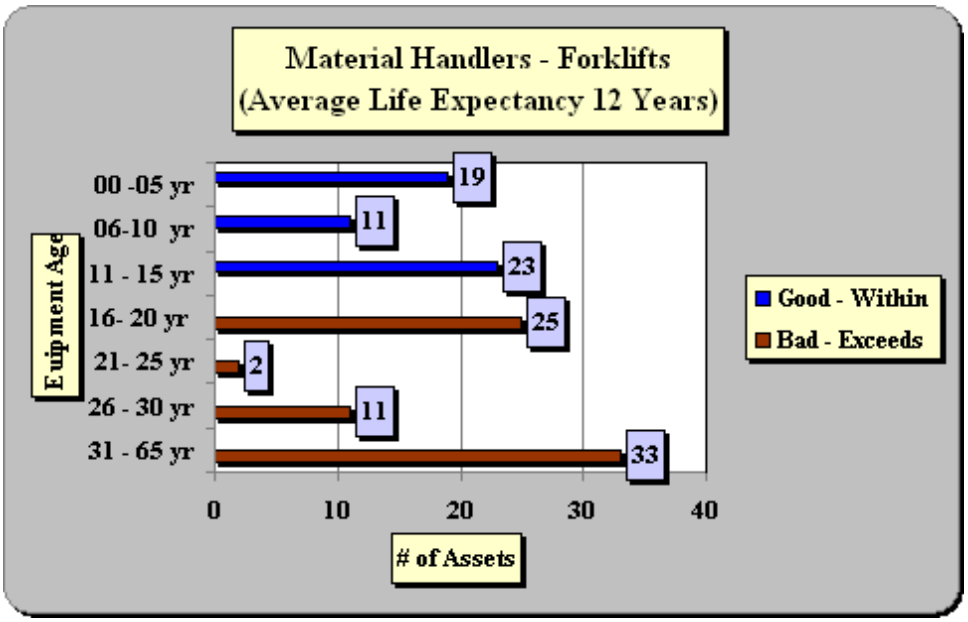
Cranes - Manlifts - Derricks (Average Life Expectancy 14 Years)		
Asset Age	**QUANTITY**	**STATUS**
00 -05 yr	54	Good - Within
06-10 yr	26	Good - Within
11 - 15 yr	54	Good - Within
16- 20 yr	**33**	**Bad - Exceeds**
21- 25 yr	**9**	**Bad - Exceeds**
26 - 30 yr	**1**	**Bad - Exceeds**
31 - 65 yr	**9**	**Bad - Exceeds**



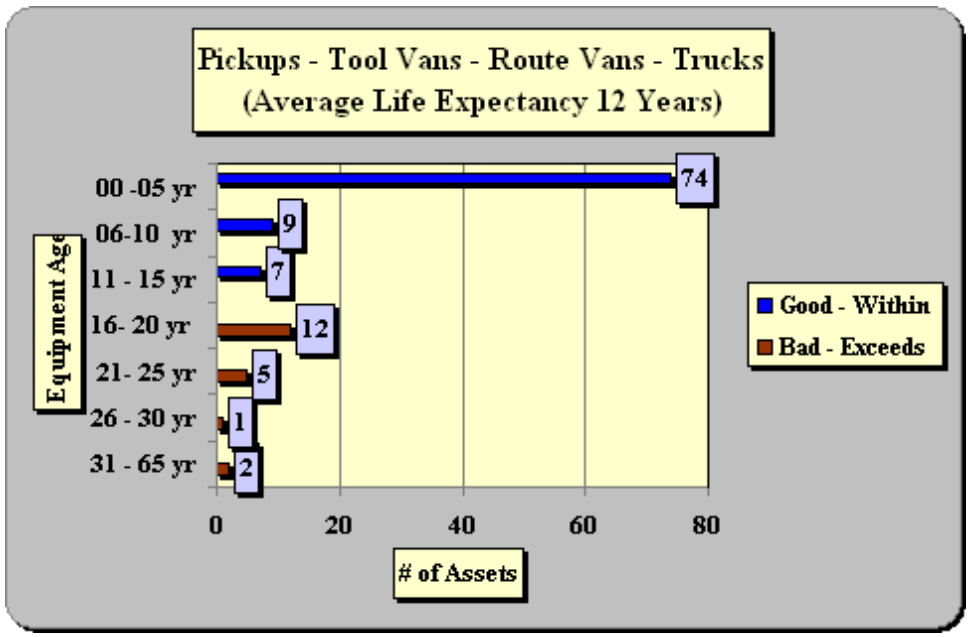
Earthmoving - Construction (Average Life Expectancy 11 Years)		
Asset Age	**QUANTITY**	**STATUS**
00 -05 yr	75	Good - Within
06-10 yr	11	Good - Within
11 - 15 yr	27	Good - Within
16- 20 yr	**7**	**Bad - Exceeds**
21- 25 yr	**8**	**Bad - Exceeds**
26 - 30 yr	**3**	**Bad - Exceeds**
31 - 65 yr	**0**	**N/A**



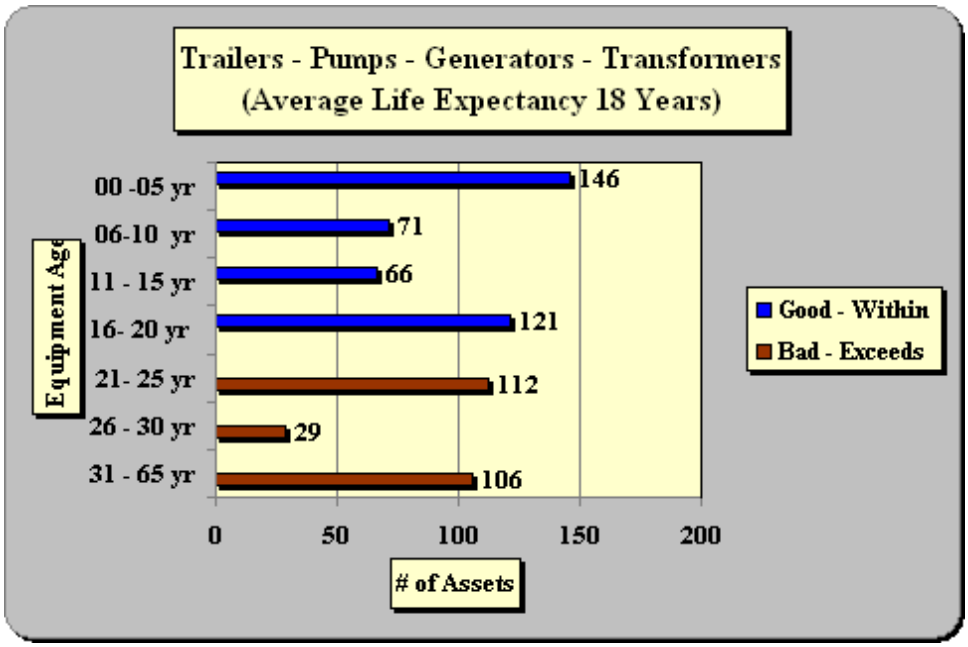
Material Handlers - Forklifts (Average Life Expectancy 12 Years)		
Asset Age	**QUANTITY**	**STATUS**
00 -05 yr	19	Good - Within
06-10 yr	11	Good - Within
11 - 15 yr	23	Good - Within
16- 20 yr	**25**	**Bad - Exceeds**
21- 25 yr	**2**	**Bad - Exceeds**
26 - 30 yr	**11**	**Bad - Exceeds**
31 - 65 yr	**33**	**Bad - Exceeds**



Pickups - Tool Vans - Route Vans - Trucks (Average Life Expectancy 12 Years)		
Asset Age	**QUANTITY**	**STATUS**
00 -05 yr	74	Good - Within
06-10 yr	9	Good - Within
11 - 15 yr	7	Good - Within
16- 20 yr	**12**	**Bad - Exceeds**
21- 25 yr	**5**	**Bad - Exceeds**
26 - 30 yr	**1**	**Bad - Exceeds**
31 - 65 yr	**2**	**Bad - Exceeds**



Trailers - Pumps - Generators - Transformers (Average Life Expectancy 18 Years)		
Asset Age	**QUANTITY**	**STATUS**
00 -05 yr	146	Good - Within
06-10 yr	71	Good - Within
11 - 15 yr	66	Good - Within
16- 20 yr	121	Good - Within
21- 25 yr	**112**	**Bad - Exceeds**
26 - 30 yr	**29**	**Bad - Exceeds**
31 - 65 yr	**106**	**Bad - Exceeds**



Furthermore, most of this equipment is utilized off-road in rough terrains/conditions that are more austere than the majority of the nation's utilities environment, which contributes to the acceleration of failure. The equipment age averages are significantly lower than in 2009 due to the efforts of the FMD that constructed a proactive life cycle replacement

plan that differs significantly from the previously decentralized management structure which was primarily based on the end-user's desires.

Consequently, this recent capital investment has increased the reliability of equipment utilized by the crews in their daily/emergency work, and has reduced the risk of delayed outage and/or negative impacts to daily work schedules. Fleet Management's objective is to develop a long-term systematic procurement effort that is projected to stabilize the procurement funding required to maintain an efficient and effective fleet. As the FMD works toward a long-term systematic procurement plan, these efforts are expected to level out the capital dollars necessary to maintain an updated and efficient fleet of vehicles. This will enable the FMD to successfully forecast upcoming replacement costs, while reducing maintenance costs long-term.

As stated above, in regards to BPA's owned assets, the FMD is working diligently to develop and refine an effective vehicle replacement plan that is based upon functional need and best cost/return, thereby optimizing the value of these assets. This life cycle analysis and replacement plan is projected to be developed by 2014. However, it continues to be a challenge due to the lack of accurate fleet management data, historically inaccurate reporting, as well as an inefficient FMS which is unable to provide accurate and easily retrievable maintenance trends and costs.

Although these constraints exist, it is apparent that numerous assets are either approaching the end of their useful life, or have surpassed it. It is evident that the FMD needs to determine what avenues to pursue, and the impact of these decisions. These avenues are as follows: Is it more cost-effective to replace the assets? Continue to operate and maintain an aging fleet? Or, dispose of and not replace under-utilized assets? The outcome of these decisions will weigh upon their impacts to the agencies mission. The criteria for earmarking an asset for replacement will be: is it unreliable for routine or emergency response, difficult to operate due to lack of operator proficiency (caused by equipment age and lack of standardization), or difficult to maintain due to obsolete parts and a subsequent gap in employee skill-sets.

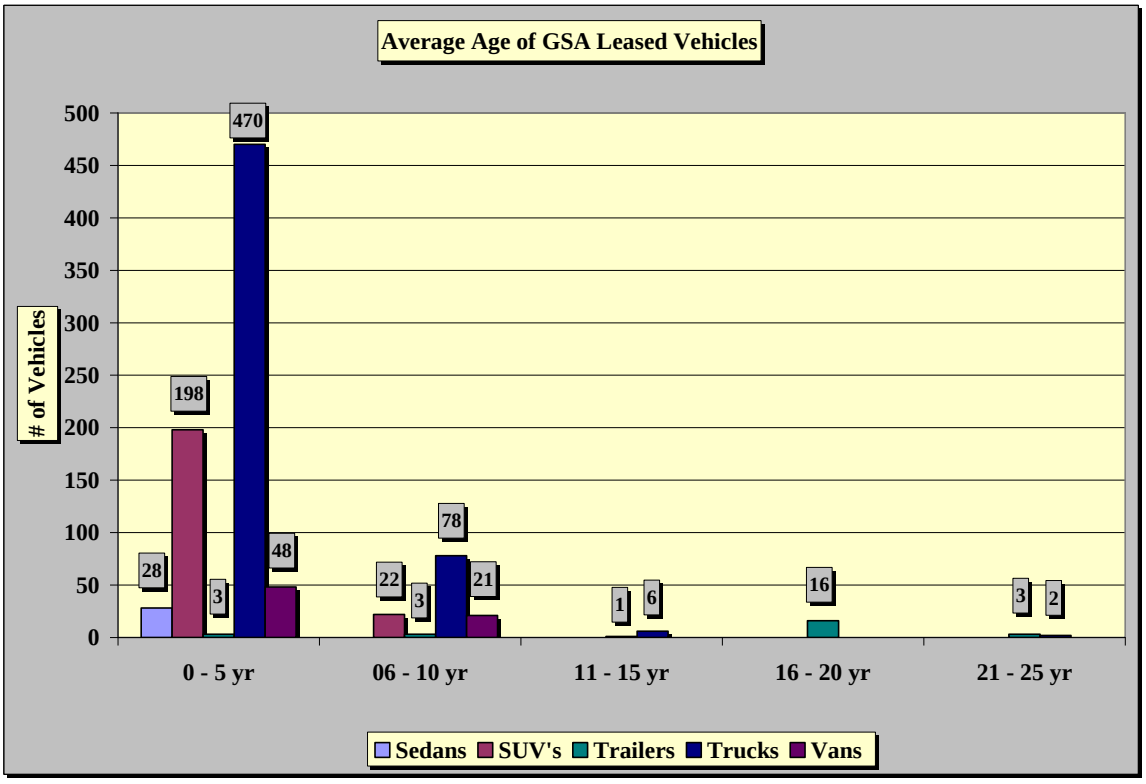
In order to develop and execute an effective fleet replacement plan, a key component is the need for an extensive "right-sizing" analysis. Right-sizing is a management practice that builds and maintains sustainable, fuel-efficient fleet by optimizing fleet size and composition. As such, the FMD can minimize vehicle use, conserve fuel, save money and ensure the proper equipment replacement.

There are three major components that have driven this need to right-size BPA's fleet. One is the direction from the Secretary of Energy to reduce the Department of Energy's fleet of over the road vehicles by 35%. Secondly, Executive Order 13514, "Federal Leadership in Environmental, Energy, and Economic Performance," which states to establish an integrated strategy towards sustainability in the Federal Government and to make reductions of green house gas emissions a priority for Federal agencies. And thirdly and most importantly, are BPA's business goals, regulatory requirements and the functional needs of the agency's maintenance crews.

The focus of this right-sizing initiative is two-fold. One is the development of vehicle standards, ensuring that the limited number of agency vehicular assets are appropriately allocated and out-fitted to support current and future business requirements of BPA. Secondly, the assurance that vehicles meet the functional needs of the associated work centers, while identifying reductions and reassignments of under-utilized assets.

5.1 BPA GSA Leased Fleet

The average age of BPA's GSA leased fleet is significantly less than that of BPA's owned fleet as it is based on detailed nationwide replacement criteria established by GSA. As seen in the graph below, the vast majority of the GSA leased fleet operates with an average age below five years. These leased vehicles, though they cost the agency significantly less than owned assets, often require up-fitting to meet the functional needs of the field operations groups, resulting in significant costs to expense budgets. However, with the progressive efforts of the FMD to right-size the fleet, and the development of a proactive procurement plan, the agency is seeking ways to reduce current up-fitting costs (more often expense vs. capital) that reoccur every five to seven years. One strategy is to reutilize previously used up-fittings and track/inventory attachments in the FMS (currently not possible with Asset Suites), consequentially resulting in hundreds of thousands of expense dollar savings. This would primarily impact Transmission.



5.2 Average Cost per Class Code for Over-The-Road Assets

The below table exhibits 2011 calendar year's average cost per mile/vehicle per class code for over-the road for both BPA owned and GSA leased assets.

Class Code	Description	Count	Cost Per Mile	Cost Per Vehicle
3.2	Mid-Size Car	24	$0.31	$4,560.87
3.3	Full-Size Car	5	$0.44	$5,191.63
6	Compact Pickup	26	$0.50	$6,249.97
7	Light Duty Pickup	116	$0.51	$7,540.06
8	Medium Duty Pickup	46	$0.70	$9,809.34
9	Heavy Duty Pickup	93	$1.04	$13,926.32
10.1	Compact SUV	27	$0.52	$7,191.98
10.2	Mid-Size SUV	36	$0.65	$7,012.19
10.3	Full-Size SUV	112	$0.62	$8,418.21
11	Van - Passenger	45	$0.66	$4,685.87
11.1	Van - Mini Cargo	14	$8.23	$3,697.47
11.2	Van - Cargo 150	7	$0.79	$4,287.42
11.3	Van - Cargo 250	2	$0.52	$6,509.91
11.4	Van - Cargo 350	10	$1.48	$5,115.46
11.5	Van - Cargo 450	2	$4.68	$5,573.86
12	Van - Cube / Walk-in etc.	24	$2.98	$13,799.22
13.1	Dump - Single Axle Truck	20	$3.43	$18,679.21
13.2	Dump - Tandem Axle Truck	3	$3.56	$19,421.54
14.1	Light Duty Service Truck	137	$1.16	$14,954.84
14.2	Medium Duty Service Truck	1	$13.80	$2,277.63

15	Stake Truck	60	$2.51	$13,201.75
16	Light Duty Aerial	52	$4.78	$14,807.23
17	Medium Duty Aerial	11	$3.06	$15,142.63
18	Heavy Duty Aerial	3	$7.38	$13,523.76
18.1	Super Heavy Duty Aerial	17	$16.75	$61,210.11
19	Digger Derrick	24	$12.22	$15,215.73
19.1	Super HD Diggers	17	$23.93	$54,668.69
20	Tankers	2	$15.77	$10,362.07
21	Semi-Tractor	12	$1.16	$31,793.75
22	Mobile Crane	19	$9.60	$21,073.07
99.1	Misc Vehicle	4	$7.43	$13,263.68
	Total	**971**		

6. Heavy Mobile Equipment Maintenance Facilities

In general, the newly formed FMD has a proactive maintenance program focused on fleet asset preventive/corrective maintenance, as well as stationary engine generator repairs. Work such as vehicle modifications, temporary workload spikes and overly complex repairs are typically sent to vendors for maintenance support.

BPA's fleet mobile technicians operate out of 16 separate Heavy Mobile Equipment Maintenance (HMEM) facilities with varied capabilities that either support basic preventive and corrective maintenance tasks, as in the case of one-man shops; to major overhauls, at Vancouver, Spokane and The Dalles maintenance headquarters. The HMEM facilities are a mix of relatively new and capable facilities, to a number of drastically inefficient and antiquated infrastructures that lack the production capability required for today's larger, more complex, utility equipment. In some instances, it is more efficient to perform vehicle maintenance external to the dedicated maintenance facility utilizing the technician's service truck, rather than the antiquated and/or inadequate facility.

The FCS study included an analysis of the capabilities and limitations of BPA HMEM facilities. As illustrated in the graph below (Section 6.1), the majority of BPA's facilities are below accepted industry standards and in some cases well below the threshold of functional efficiency required to perform sound operations. Although the report truly calls for the upgrade or replacement of a number of facilities, it specifically addresses the need to "remodel the Ross facility, to accommodate major work and inspections on most of the bucket trucks in the area." This statement is founded on the belief that with the mix of its centralized location, and the Portland/Vancouver metro areas strong vendor support, the Ross facility upgrade will have the single biggest impact on an improved mobile fleet equipment maintenance capability. Our internal functional assessments concur with FCS findings.

6.1 Maintenance Infrastructure Functionality Ratings

The below graph reflects FCS's rating of BPA's maintenance facilities. Only five (six since the completion of the new Bell HMEM facility in 2011) of the agencies 16 infrastructures meet their recommended functionality rating. Four facilities (shaded in gray) have been identified as requiring immediate replacement or refurbishment.

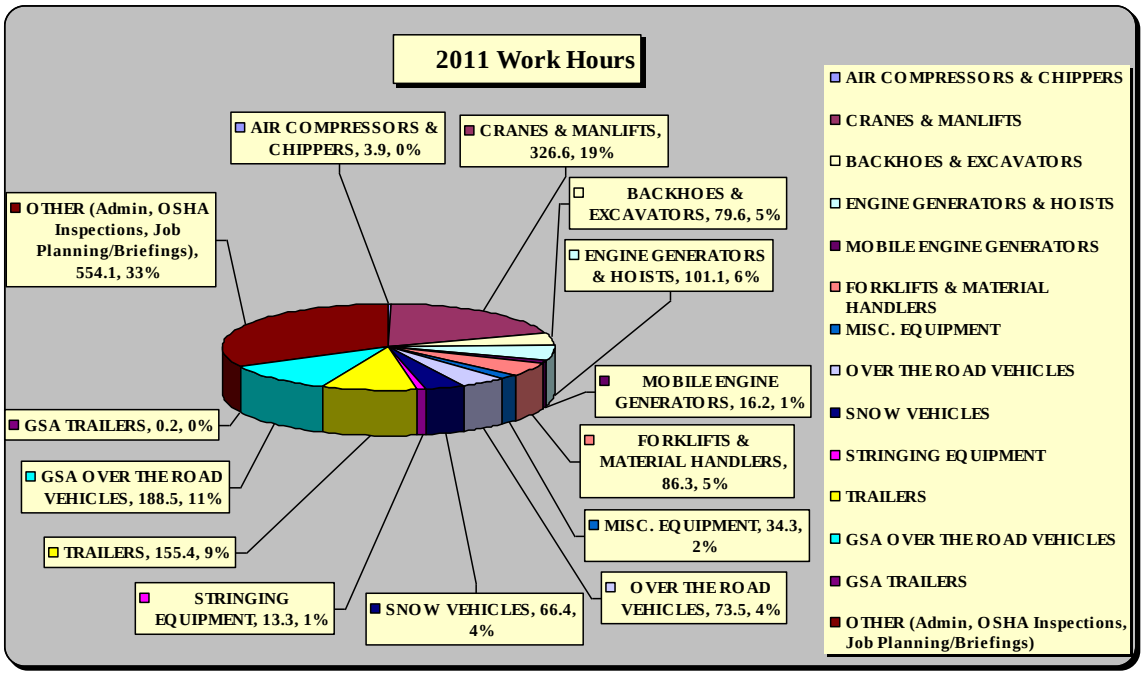
The professional, yet subjective criterion, used to develop these ratings is designed to allow a direct comparison of each BPA Fleet maintenance facility and includes but is not limited to: size, condition, age, and the ability to meet current maintenance needs and functionality.

Location	FCS Rating
Idaho Falls, ID 83042	3
North Bend, OR 97459	6
Keizer, OR 97303 (Chemawa)	7
Ellensburg, WA 98926	10
Redmond, OR 97756	6
Malin, OR 97632	8
Olympia, WA 98512	8
Kent, WA 98042 (Covington)	4
Snohomish, WA 98290	7
Kalispell, MT 59901	7
Grand Coulee, WA 99133	4
Pasco, WA 99301	6
Eugene, OR 97405 (Alve)	8
The Dalles, OR 97058	8
Vancouver, WA 98666 (Ross) See note 1 below.	4
Spokane, WA (Mead or Bell)	3
Average Rating	6.2
FCS's Recommended Rating	8

The Bell facility replaced in 2011 would rate a 9-10.

The most obvious concerns were with facilities whose design and functional capability were built around the agencies needs in the 1940s and 1950s. Deficiencies included items such as the shops not having sufficient overhead crane capabilities, and inadequate overhead height to deal with today's man-lifts, dump trucks, cranes, etc. Also, rudimentary work-based efficiency items such as drive-through bays, overhead lube racks and vehicle lifts are generally the exception versus the rule. Although great

improvements have been recognized over the last few years with newer facilities in Bell (Spokane), Ellensburg and The Dalles, internal expertise as well as this third party consultant review, have deemed facilities in Vancouver, Covington, Idaho Falls and Grand Coulee to be at a minimum a hindrance to effective productivity, with the Ross facility identified as the most critical. In addition, these reviews have found a number of the agency's facilities lack the tools, training and systems necessary to fully perform the task of heavy vehicle maintenance. To understand the varying types of maintenance BPA equipment technicians must perform, the graph below depicts the complexity and variance of jobs executed by the average HMEM facility.



Looking ahead, BPA's Fleet Management strategy regarding facilities and tools is to identify core maintenance responsibilities for the agency's mechanics and develop a prioritized focus on tool shortfalls, as well as facility needs. BPA Fleet Management is working with Facility Asset Management to develop and execute a feasibility study on a new Ross HMEM facility, as well as the design of the soon to be built Pasco Maintenance facility. Subsequent to that, an analysis to BPA's maintenance facility needs regarding quantity and location will be conducted to identify whether to recommend to Facility Asset Management the need to upgrade the Covington, Idaho Falls and Grand Coulee locations (and others), or to purse other alternatives for either facilities or vehicle maintenance

In regards to tools that are used in these facilities, an analysis of shortfalls and capability gaps have been conducted and Fleet Management has taken aggressive steps to ensure each shop has the tools required to perform their function. In addition, progress has been made on the development of a sustainable tool replacement program that ensures shop tools at all 16 locations are being replaced when no longer functional.

6.2 Maintenance Capabilities and Priorities

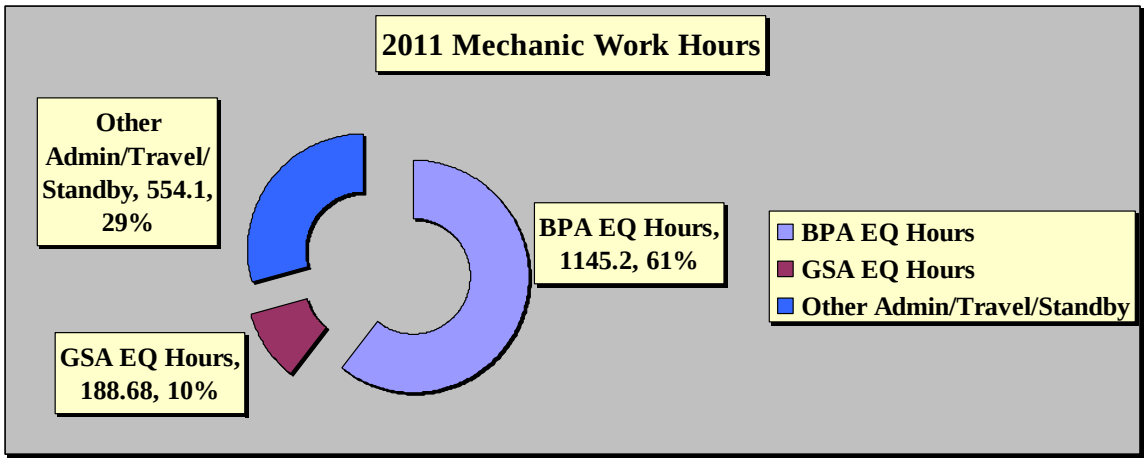
BPA's HMEMs are comprised of 35 (Government and contractor) highly experienced technicians who until recently lacked a systematic focus on technician training, maintenance priorities, maintenance practices and desired efforts. The newly formed FMD is equipped to identify what maintenance tasks should be performed by BPA technicians, and in general what work should be contracted out to third party vendors. This committed focus will successively provide a transparent path for technician training, manpower decisions and workload.

Historically, BPA has contracted out over $500,000 of preventive and corrective maintenance with each contracting decision being made at the discretion of the local mechanic. Discretion factors included the local mechanic's comfort level with the work to be performed, workload schedule, personal preference and lack of coordination between HMEM facilities, vice being evaluated upon a systematic analysis of the agency's workload and available resources.

Due to limited data availability, it is believed that the general trend of maintenance work being outsourced was major overhauls, acoustic type inspections for aerial equipment, and workload backlogs. Historically, maintenance performed on up-fittings/modifications of new GSA assets, remote site emergency generators, on-site electrical crew support and minor preventive maintenance (PM) work were performed by internal resources vice vendors.

With renewed emphasis on improved workload scheduling, and the leveraging of the entire cadre of mechanics into one group of HMEM technicians, BPA's FMD now has the improved visibility of system wide maintenance requirements as well as the flexibility to move technicians to where the workload is independent of their duty station. These efforts will improve system reliability through a reduction of past due/overdue maintenance, furthermore, reducing costs related to outsourcing preventive and corrective maintenance. In the future, the use of vendors should only be considered when unforeseeable workload surges occur and vehicle modifications/specialized maintenance needs are well outside the technical scope of the technicians, such as acoustic inspections.

Below is the average workload breakdown of BPA's technicians with the "Other" category accounting for employee breaks, job briefings and other tasks that were difficult to breakout due to previous data capturing practices.



As can be seen in the graph above, BPA technicians spend approximately 1334 hours a year, or just under 70% of their time, performing work directly attributed to mobile equipment, as well as engine generators. The remaining 30% of their time was executing the "other" tasks required to do their jobs. As provided through recent benchmarking efforts, BPA technicians' direct work compares to the utility industries estimated average of 1382 hours.

7. Key Fleet Management Department Accomplishments

The KEMA and FCS studies concluded that there were significant opportunities to improve BPA fleet management operations. Thus far, a number of moves have been made to lay the foundation for a BPA FMD built on industry best practices and the ability to capitalize on these opportunities.

Effective October 1, 2011, BPA's Fleet Operations (that include Procurement, Analysis, Licensing, Maintenance, Rentals and Loan Pool operations) was consolidated into a centralized department focused on managing fleet personnel and equipment as systematic assets. Lead by the Fleet Manager, the FMD, oversees vehicle maintenance and technicians, Loan Pool, as well as management/administrative staff throughout the agency's service region. The maintenance group works, in unison with the eight administrative staff, to manage the procurement of owned/leased equipment, ensure regulatory compliance, administer data needs and conduct the mandatory/discretionary reporting requirements of the agency. Additionally, there are five personnel who support the agency's temporary equipment requests through internal asset availability, or through third party rentals.

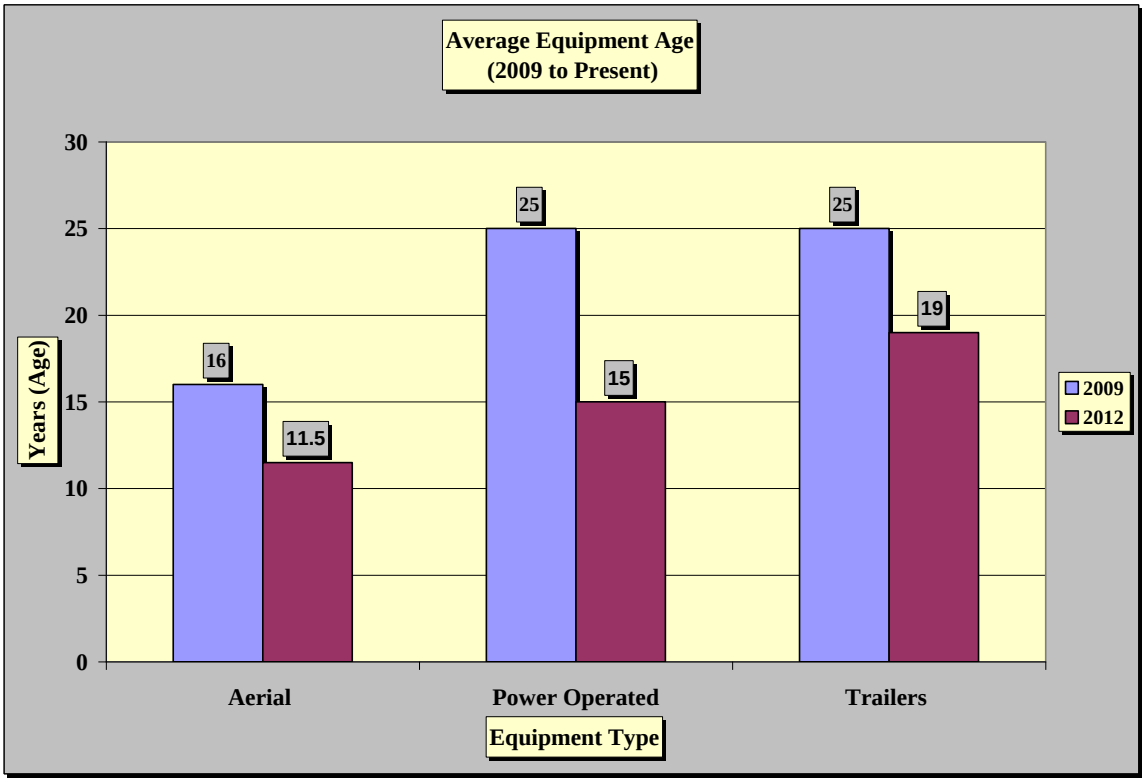
BPA's new FMD has commenced to standardize vehicle maintenance practice/priorities, in conjunction with launching/developing equipment life cycle analysis and utilization parameters. Over the last year and a half, the FMD has captured some of the data necessary to construct an analysis of usage trends, rental requests, opportunities for right-sizing, and vehicle sharing, in conjunction with the development of vehicle platforms capable of multiple functions. Through these basic levels of effort in 2010 and 2011, FMD has been able to realize positive financial results with fleet right-sizing savings of

over $200,000 in annual operational costs (expense), and approximately $3 million in avoided vehicle capital replacements.

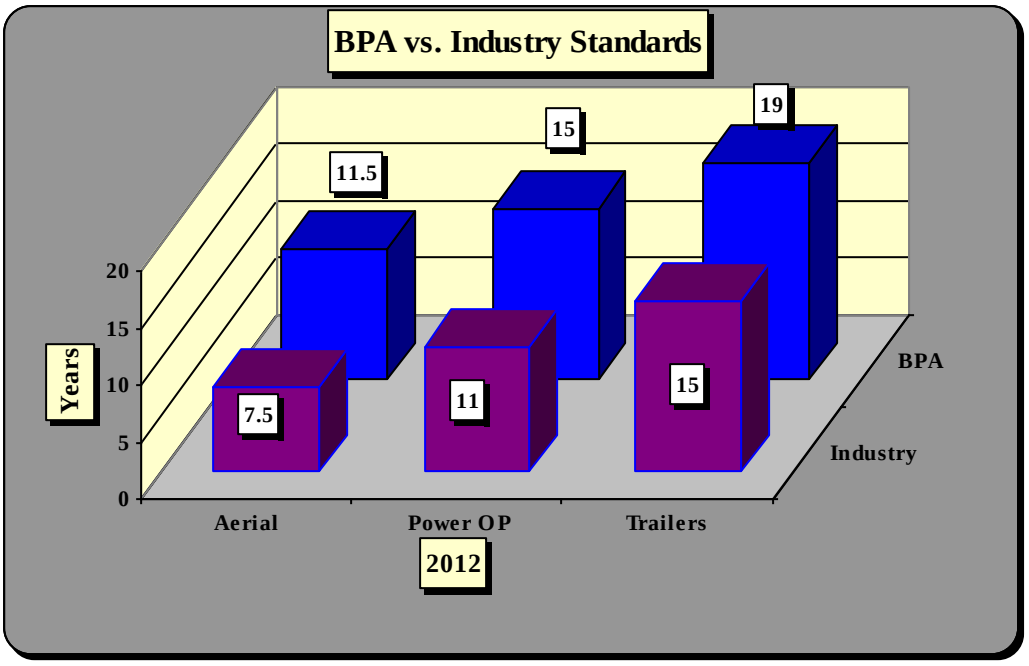
In addition to recent improvements in the organizational structure and asset management of BPA's mobile equipment fleet, the agency has made significant investments in the upgrading of its fleet assets. In 2010, BPA spent $8.2 million to purchase 153 vehicles/ equipment; and in 2011, another $8.6 million was obligated to procure 72 more assets. In 2012, BPA spent an additional $5.2 million purchasing 67 mobile equipment assets. This is a vast transformation, when compared to the previous four to five years when BPA annually spent roughly $2-4 million to procure approximately 25-35 vehicles/equipment. This previous practice produced an aging fleet, descending into technical obsolescence.

Recent procurement efforts have been geared towards the replacement of aging and antiquated aerial devices ranging from small manlifts, digger derricks and heavy cranes to transportation tractors and line stringing equipment. The substantial investments over the past three years, coupled with the planned procurement expenditures for 2013-2015, will transition BPA's fleet out of a backlogged replacement cycle for aging and obsolete equipment, to a significantly improved operationally efficient, effective and reliable one. These new assets will result in reduced operational costs when considering the full life-cycle cost of ownership and operations. Furthermore, the new assets should significantly reduce the Green House Gas emissions/Carbon footprint, thereby facilitating BPA's ability to achieve targeted governmentally directed compliance goals.

These advancements allow for further concentration to be placed on vehicle technician training, diagnostic equipment upgrades, and tool purchases as the FMD works toward standardizing its fleet. Moreover, it will eliminate the skill-level and technology gap that exists today between our 1970s, '80s and '90s vintage vehicles when compared to the improvements that have occurred in equipment technology over the last 20 plus years.



As previously discussed, BPA's FMD has recently made significant efforts to improve the material condition of the agency's Fleet/Mobile Equipment assets. In the last two years, BPA has replaced a significant number of legacy vehicles in excess of 20-30 years in age, in poor condition and cost prohibited to operate/maintain. BPA's efforts to improve the agency's mobile equipment capability and reliability have reduced the average age of the aerial equipment, cranes and trucks; and approximately 150 vehicles, from an average age of 16 years old to 11.5 years. These efforts have also reduced the average age of power operated equipment (dozers, backhoes, snow cats, skid steer loaders, etc.) from 25 to 15 years old and trailers down to 19 years old from an estimated average of 25 years. In comparison, utility industry averages for aerial equipment are approximately 7.5 years, approximately 11 years for power operated equipment and around 15 years for trailers. This does not take into account approximately 900 BPA's GSA leased vehicles that average a younger age of roughly three to four years due to GSA's robust lease rotation cycle.



The expectation of the newly centralized FMD is to develop standards, as well as life cycle analysis, that will enhance managing the fleet based upon asset management principles, and treating the agency's fleet as a "Systematic Asset," vice over 2,000 individual items. This will entail identifying optimum replacement windows for equipment based on operational and maintenance costs, working with end-user groups to develop vehicle standards to maximize the efficient use of existing assets, capitalize on the usage of the current fleet inventory and right-sizing where feasible. This asset management approach will launch the creation of a leaner, safer, more cost-effective and efficient fleet of vehicles and mobile equipment.

8. Risk Management

There are numerous risks that impact the implementation of the Fleet Asset Management Strategy. These management risks center around BPA's aging fleet, increased operational timelines/maintenance costs realized, antiquated facilities and/or tools, inapt Fleet Management Software system, limited access to short-term rentals and long-term leases or purchases, inconsistency of vehicle maintenance and process standardization, lack of adequate staffing, limited funding allocated for procurement plan, right-sizing issues and the ability to meet Government mandates of Green House Gas (GHG) emission and fossil fuel reductions.

All these risks will be identified, to include the source of each the risk, elements of the risk, and consequences/likelihood of the risk and recommendations for mitigating these issues:

- **Inapt Fleet Management Software System**

- **Risk Identification:** There is a risk that data management system requirements may not be met by current enterprise system.

- **Source of Risk:** Asset Suite is an inapt Fleet Management Software System that limits FMD's ability to properly manage and maintain its fleet.

- **Elements of Risk:** This software system impedes FMD's ability to fully capture current and historical data used to monitor the lifecycle of a vehicle, and establish guidelines for its maintenance and utilization. Additionally, there are no restricted security mechanisms in place to limit user access.

- **Consequences:** If Asset Suite Fleet Management continues to be the software of choice, then cost-effective and efficient fleet management operations will remain challenging.

- **Likelihood:** This circumstance is recognized now and contributes to sketchy present and limited historical data critical for a functional FMD to operate.

- **Mitigation:** Rectifying this problem will entail funding be set aside to either replace current fleet software, or annually procuring system upgrades as new reporting requirements and missions evolve over the years. A good FMS is essential and the most efficient way to maintain fleet records so information can be routinely analyzed and delivered to meet any reporting requirement in a timely manner. However, the FMD is unable to be more efficient with Asset Suite due to the huge risks associated with its reporting accuracy and capabilities.

- **BPA's Aging Fleet**

  - **Risk Identification**: There is a risk of not meeting agency's mission and needs of its customers in a timely manner.

  - **Source of Risk**: BPA's fleet is over age in many categories, resulting in frequent breakdowns, excessive repairs, and increased costs that could delay scheduled and/or unscheduled work requests.

  - **Elements of Risk**: The lack of reliable assets and frequent breakdowns, due to aging assets, directly contribute to the agency's field electric crews (as well as its support group) inability to ensure the transmission of safe and reliable power to its customer base.

- **Consequences**: Response time to a line outage for BPA customers is delayed significantly due to the unexpected breakdown of a BPA asset.

- **Likelihood**: The potential for this scenario to occur is inevitable. As BPA's fleet continues to age, the likelihood of increased breakdowns will contribute to further delays and lengthy power outages.

- **Mitigation**: To lessen or eliminate this risk is to develop an empirically validated vehicle replacement cycle with a sound 15 year procurement plan, by means of a three year budgeted procurement cycle, that identifies critical priority assets that have the most impact to the agency's mission, and begin to renew the fleet.

- **Increased Operational Timelines and Maintenance Costs Realized**

  - **Risk Identification:** There is a risk of significant increases to operational timelines and increased maintenance costs.

  - **Source of Risk:** The FMD is operating with over-aged and inefficient assets that have exceeded their useful life.

  - **Elements of Risk**: This deficiency contributes to substantial operational, fuel and maintenance costs in an effort to continue to maintain this aging fleet, where in some instances parts required are obsolete.

  - **Consequences:** Asset availability and maintenance downtime will continue to increase, as well as operational and rental costs, which directly impact the agency mission capability.

  - **Likelihood:** The probability of this risk is already apparent and is continuing to hinder Fleet Management's ability to provide reliable, fuel-efficient, assets to its customers and field crews.

  - **Mitigation:** Eradicating this known risk is as stated previously, to construct a sound 15 year procurement plan, with three year funded procurement cycle plan, that identifies critical priority assets that have the most impact to the agency's mission, and begin to renew the fleet thereby reducing operational, rental, fuel and maintenance costs. This will enable the FMD to provide reliable, fuel-efficient assets at a reduced rental rates.

- **Antiquated Facilities and/or Tools**

  - **Risk Identification:** There is a risk of inhibiting the timely completion of equipment maintenance as well as increased costs, either through

labor hours or through vendor maintenance requirements.

- **Source of Risk:** Mobile equipment maintenance is being performed in numerous antiquated facilities, with inadequate tools that contribute to some vendor repairs. These deficiencies include insufficient facility size, roof heights, tools, overhead cranes, layouts, etc.

- **Element of Risk:** These defects obstruct the FMDs ability to transition towards a more modernized operation founded on both industry and mobile equipment maintenance best practices.

- **Consequences:** If funding is not provided to improve mobile equipment maintenance infrastructures and updating of tools, the issues identified under "Risk Identification," will remain status quo.

- **Likelihood:** The odds of this risk already exist and have been documented by an independent study performed by FCS.

- **Mitigation:** Eliminating this risk will not be an effortless task. Funding availability will be the key component in order to raise BPA HMEM facilities to accepted industry standards, which subsequently will reduce all associated maintenance cost.

- **Limited Access to Short-Term Rentals and Long-Term Leases or Purchases**

  - **Risk Identification:** There is a risk of not having the means to acquire equipment either by short-term rentals, long-term leases or immediate purchases to support BPA's Transmission department's daily crew work or when major damage/unforeseen repairs transpire.

  - **Source of Risk:** Limited loan pool assets, the absence of pre-existing vehicle/equipment contracts, a shortage of local outside sources and inadequate procurement funds are all key components contributing to the struggles faced by the FMD to supply BPA's Transmission crew the vehicles/equipment required to support their mission, as well as all BPA customers.

  - **Elements of Risk:** The limitations addressed under "Source of Risk," section impedes the FMD's ability to expeditiously provide desired replacement assets when major equipment damage occurs resulting in extensive downtime or unanticipated repairs emerge.

  - **Consequences:** If these major concerns are not remedied, it affects BPA's Transmission department's ability to perform scheduled and unscheduled work.

- **Likelihood:** The chance of a work stoppage occurring due to the lack of alternative means of acquiring assets is plausible.

- **Mitigation:** Resolving this predicament will necessitate the need to right-size the loan pool, draft concrete vehicle/equipment contracts with vendors that are in the best interest of BPA, and budget appropriately for procurement to support these unforeseen contingencies. The FMD will be setup to rent, but historical data will primarily dictate owned assets. At this time, the limited availability of local outside sources is beyond our control, but shall be researched further.

- **Inconsistency of Vehicle Maintenance and Process Standardization**

  - **Risk Identification:** There is a risk of inconsistency in vehicle maintenance, process standardization, and fleet technician skill-sets, which collectively have a profound impact on vehicle maintenance.

  - **Source of Risk:** Conflicting maintenance practices and procedures throughout 16 maintenance facilities, the lack of established vehicle maintenance processes, non-existent Standard Operating Procedures (SOPs), and historically meager technical training result in maintenance repair not being performed, and/or not getting done correctly which contribute to excessive vendor use, rework and additional downtime.

  .

  - **Elements of Risk:** These disparities lack a systemic focus on maintenance priorities, procedures, practices and the desired concentration of effort which leads to poor maintenance planning, equipment failure, delayed turn around time and possible harm to employees or property.

  - **Consequences:** These inconsistencies of the 16 maintenance facilities, the absence of SOPs, limited technical training and the de-centralized organizational structure will foster this cycle of discrepancies resulting in additional costs for BPA and disgruntle customers.

  - **Likelihood:** This risk is transient due to the recent formation of the centralized FMD whom is tasked to correct these issues.

  - **Mitigation:** With the inception of the newly established FMD and the centralization of these facilities, this risk is in the process of being resolved. The FMD emphasis is to standardize maintenance practices/procedures and develop SOPs that clearly identify performance processes to improve visibility of system wide maintenance needs, in tandem with the flexibility of relocating

maintenance technicians where workload dictates. Furthermore, the FMD will pilot a robust training plan that will provide BPA's technician's the skill-sets necessary to effectively and efficiently perform work on the agencies varied fleet assets. These efforts will enhance system reliability through a reduction in past due and/overdue maintenance, as well as reduce overall maintenance costs, limit vendor usage and please FMD customers.

- **Lack of Adequate Staffing**

  - **Risk Identification:** There is a risk of not achieving the milestones of FMD Strategy Plan due to the lack of dedicated resources for leading implementation charters and steering change based results. Staffing requirements and skill-sets now may differ once the FMD is well established.

  - **Source of Risk:** Undefined FMD organizational staffing requirements for the short and long term are the consequence of a newly established organization still in the process of structuring its business and determining the appropriate staffing level, combined with resource funding restraints and the required skill-sets that could obstruct some performance indictor goals of the strategic plan

  - **Elements of Risk:** These predicaments place restraints on the FMD in its ability to fully execute an efficient and effective FMD Strategy Plan when adequate staffing level requirements are not yet determined, desired skill-set resources and additional funding for current/future staffing levels are unknown.

  - **Consequences:** If staffing and skilled resources are not defined for the short/long term and billet funding is not pre-determined, the FMD Strategy Plan will struggle to achieve all its intended milestones.

  - **Likelihood:** The prospect of this risk materializing is favorable if these issues are not addressed promptly.

  - **Mitigation:** Remedying the potential for failure in certain phases of the FMD Strategy Plan can be achieved by conducting a staffing study to determine appropriate level of personnel required (short and long term), performing desk audits on each position, and identifying candidates with the desired skill-sets. Foremost, compile and document all phases of these processes to justify to management that funding for additional billets, if required, is advantageous to the success of all phases of the FMD Strategy Plan.

- **Right-Sizing Issues**

- **Risk Identification:** There is a risk of not possessing the appropriate standardization, configurations and size of fleet assets to meet the compilation of tasks being accomplished on a regular basis.

- **Source of Risk:** The lack of a comprehensive transportation review with all end-users to fully understand their mission and properly identify vehicle/equipment requirements. And, the dilemmas of investigating ways to address vehicle shortfalls and fleet downsizing that achieve a transformation of behavior within the organization.

- **Elements of Risk:** These issues impede the FMD from optimizing its assets for building and maintaining a sustainable, fuel-efficient fleet. The retention of aged assets, specialized units that are rarely utilized and improper assets assignments all contribute to inefficient operating practices, increased maintenance and fuel costs, in conjunction with the inability to meet Governmental alternative fuel mandates.

- **Consequences:** If an across-the-board transportation review is not performed, along with the concurrence of all participants buying into the recommended changes, the attempt to right-size the fleet will not evolve.

- **Likelihood:** The possibility of right-sizing failure is depended upon the methods of choice used to determine data collection for changing fleet makeup. If a comprehensive transportation review is performed the likelihood of an ideal fleet is achievable.

- **Mitigation:** Right-sizing must be a fact-based, rational and defensible to all parties. This process involves analyzing and understanding the collection of tasks that the agency needs the fleet to accomplish. Conducting a thorough transportation review, with concurrence from all customers/in-house personnel, will mitigate right-sizing efforts. This review should account for the daily needs of the agency's personnel and mission and should also drive the replacement or disposal of assets that are technologically obsolete, have un-necessarily low utilization or can be more effectively sourced through third party rentals. The benefits of vehicle and fleet right-sizing include: more efficient operating practices, standardization, reduced fuel consumption and operating costs, and freed up expense and capital.

- **Meeting Government Mandates of GHG Emission Reductions and Fossil Fuel Reductions**

- **Risk Identification:** There is a risk in the ability to meet federal regulations, to include EO 13514 mandating GHG emission and fossil fuel reductions.

- **Source of Risk:** With the absence of a sound right-sizing plan, a strategic emission/fossil fuel reduction plan and limited AFV infrastructures, the GHG target and fossil fuel reductions may not be realized. This could require the FMD to weigh the potential impact on BPA's missions, considering available technology and the timeframe needed for complying. Conflicting priorities may emerge in implementing the goals of the new executive order.

- **Elements of Risk:** These setbacks inhibit the FMD in meeting EO 13514 requiring federal agencies to set GHG emissions reduction targets, increase energy efficiency, and reduce fleet petroleum consumption 30% by 2020.

- **Consequences:** If a right-sizing, GHG emission/fossil fuel reduction plan is not implemented, then all efforts in meeting federal regulations and EO 13514 are unattainable.

- **Likelihood:** Portions of this risk are unlikely to materialize. The FMD has taken action to specifically address the right-sizing issue and EO 13514 by developing a plan of action. Recently, the FMD has modernized some of its older fleet, thereby, reducing GHG emissions and petroleum usage. However, the availability of AFV infrastructures will continue to be an issue.

- **Mitigation**: Right-sizing the fleet and a strategic strategy for meeting EO 13514 must be executed. Fleet right-sizing will reduce the amount of capital investment in vehicles and lowered GHG emissions. Alternative fuel and fuel-efficient advanced vehicles will reduce petroleum use and can be economical options for the FMD. Cost savings from vehicle maintenance, operations, and fuel use typically offset higher purchase prices.

9. Prioritization of Repairs/Refurbishment vs. Replacement

Life cycle costing plays a huge role when determining whether to maintain and repair or to replace an asset. Seldom is it more economical to replace an asset prior to its life expectancy unless it has failed or additional capacity or capability is requirement. In general, it is more economical to maintain and repair an asset in order to extend the life cycle were feasible. The criteria listed below are designed to facilitate sound repair versus replace decisions.

It is BPA's policy that assets be considered for replacement when:

- An asset is near or beyond its expected life;
- The asset reliability and the consequences of failure poses an unacceptable risk;
- The repair/refurbishment costs exceed the life cycle cost of an asset replacement;
- The asset's performance has been unacceptable and corrective maintenance measures will not lead to acceptable performance;
- Additional asset capability is required and the replacement equipment provides that additional capability while improving operations, reducing costs, and making it easier to maintain;
- The existing equipment is technologically obsolete, spare parts are expensive or hard to get, and skill requirements to properly repair and maintain are difficult to find;
- The existing equipment poses an unacceptable security risk, health and safety risk, or environmental risk and the cost to mitigate the risk exceeds the asset life cycle replacement cost.

Due to limitations associated with BPA's informational resources and FMS shortfalls, priority repair/refurbish vs. replacement management decisions are based upon the following estimates: cost information, age, estimates on efficiency gained with new equipment, ease of maintenance, parts availability, and anticipated future maintenance costs. In general, the majority of equipment replaced over the last two years and planned for the next several years have exceeded optimal life cycle for reliable and cost-effective operations. Efforts are underway to justify the need for improving the fleet management tracking system, develop utilization standards, benchmark with like utilities (through nationally recognized organizations such as Utilimarc), and build the capability to execute a robust vehicle life cycle analysis.

9.1 Prioritization of Capital Replacements

As for prioritization of capital replacements, the FMD usually places the first priority on those operational assets necessary to maintain system reliability and maintenance, or equipment required for regulatory compliance. Difficult to rent items such as manlifts, digger derricks and cranes get first priority, followed by other mission essential items such as tool vans and line stringing equipment that are needed to maintain the systems operating during normal time, in addition to emergencies.

The second capital replacement priority is on assets essential for operational support functions such as Fleet Management, Transportation, Transmission Engineering, Facilities Management, etc. Introduction of decisions that pertain to new capability to the FMD fleet are vetted through BPA's Fleet Council for review and approval to ensure agency fleet assets only increase due to changes in mission or agency direction.

9.2 Fleet Capital Replacement Costs

The fleet budget is comprised of capital for equipment replacements and operations support, as well as expense dollars for maintaining/operating and supporting fleet assets needs. In regards to capital replacement, recent FMD efforts are keenly focused on updating BPA's fleet to approach utility industry standards which have evaluated lifecycles and costs. Through these efforts, combined with the introduction of a fleet-wide life cycle analysis capability, the FMD foresees a reduction in annual capital expenditures for vehicle replacement. The projected end results are the stabilization of expenditures/ replacement, in concert with an evenly distributed replacement program for the long-term.

For the first time these numbers will account for the sizeable costs of up-fitting both the line patrol and mobile technician vehicles that were previously charged to the Transmission Field District expense budgets with vast variances in dollars and capability between locations. The efforts of the FMD are expected to reduce overall agency wide fleet costs by hundreds of thousands of dollars associated with these vehicles though standardizing costs, ensuring multiple usage of the equipment being installed and managing the installation process.

2013-2022 Fleet Capital Replacement Plan

	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22
Capital funds	$7.5M	$5.5M	$5.5M	$6.0M	$6.2M	$6.7M	$7.2M	$7.5M	$8.0M	$8.2M
# units	64	45	52	47	55	46	55	43	57	60

The fleet replacement forecast, and associated capital cost estimates, are based upon actual costs to replace aerial and boom equipment prior to the third major overhaul (D-Service). Other equipment replacements are based upon estimated end-of-life decisions determined by age and obsolescence. As the centralized FMD matures and proceeds with the implementation of new vehicle and maintenance standard processes, a more comprehensive, transparent and robust vehicle replacement/acquisition plan will emerge.

9.3 Other Capital Costs

Other Capital is defined as operational costs, primarily travel, labor and vehicle use rate charges that are incurred by the Loan Pool support personnel and vehicle technicians/mechanics while supporting specific capital projects not associated with a specific vehicle, i.e. supporting a TLM crew on a wood replacement project.

	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22
Other	$1.2M	$1.3M	$1.4M	$1.5M	$1.6M	$1.7M	$1.8M	$1.9M	$2.0M	$2.1M

Capital										

9.4 Fleet Management Expense Forecast

Assumptions in Fleet Management Expense forecast: Fleet operational costs that are primarily expensed are budgeted for $9.2 million in FY 2013. The budget includes costs for personnel, travel and training costs for 52 employees (42 BFTE and 10 CFTE), the management of the equipment and Tool Loan Pools, as well as the functional costs associated with vehicle maintenance.

2013-2022 Fleet management - Expense

	FY 13	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22
Loan Pool	$1.7M	$1.8M	$1.85M	$1.85M	$1.85M	$1.9M	$1.9M	$1.95M	$1.95M	$1.95M
Vehicle Maintenance	$6.8M	$7.3M	$7.45M	$7.6M	$7.75M	$7.9M	$8.1M	$8.25M	$8.4M	$8.55M
Procurement, Policy, Analysis	$0.7M	$0.75M	$0.8M	$0.8M	$0.85M	$0.9M	$0.95M	$1.0M	$1.0M	$1.5M
TOTAL	$9.2M	$9.85M	$10.1M	$10.25M	$10.45M	$10.7M	$10.95M	$11.25M	$11.35M	$12M

Assumptions employed to develop capital and expense cost forecast were based on historical experience and anticipated savings attained through the centralization of fleet operations. The expenses associated with vehicle maintenance include major overhaul services (D-services) of the agency's aerial and boom equipment. Cost to perform these overhauls are highly variable (estimated range of $100-$200K) due to limited historical data. It is anticipated that D-Service costs will increase substantially from $250k in 2012 to an estimated $600k in FY 14-15. However, D-Service costs are projected to decrease to a steady-state of approximately $300K annually (adjusted for inflation) until 2020 when it is likely to increase, yet again, due to the volume of assets entering the D-Service window. However, efforts are underway to level these out and improve forecasting these costs.

These cost estimates do not capture GSA lease and fuel costs associated with assets that are not assigned to the FMD. These costs are captured in monthly charges and use rates collected from the user group's individual department budget.

10. Alternative Strategies/Scenarios Considered and Business Model Strategy Chosen

To determine the best avenue for managing BPA's fleet assets long-term, three alternatives were examined with one being adopted: 1) Status Quo; 2) Outsourcing of Fleet Operation; and 3) Centralize Fleet Operations.
The Status Quo alternative was to remain a decentralize fleet with no uniformity. As a result of two recent independent studies conducted by KEMA and FCS, it was quite apparent that BPA's fleet management practices were flawed and not in compliance with industry best practices. Moreover, internally, it was evident that BPA's fleet was being replaced in an improvised manner not taking into consideration analysis of operational

needs, coupled with lack of focus on life cycle analysis or current/future maintenance capabilities. Subsequent to some preliminary analysis, it was deemed that if Fleet Management continued these methods of management practices, the consequences would impact negatively on BPA policy and regulatory compliance, equipment reliability and financial efficiency. Therefore, in the best interest of BPA mission, and its fleet, this alternative was not chosen.

The second alternative was to outsource the entire BPA Fleet function. The risk of turning over fleet management to a third party was a real concern, and the question of "Will the transportation business still meet BPA's productivity and quality goals," was uncertain. Though these issues were valid, two contributing factors to eliminate this alternative was the A-76 study that concluded the agency should retain the maintenance function in-house, and outsourcing BPA fleet function would cost approximately $1 million more annually than retaining the entire transportation function in-house.

Another factor was that the internally resourced transportation model generally tends to be more efficient and reliable. Nonetheless, the major component for eliminating this alternative was the notion that if Fleet Management was managed efficiently and effectively focusing efforts on performing core work, then BPA technicians would be more cost-effective and responsive. Though, BPA technician's hourly wages are at the upper end, compared to other corporations, this is quickly offset by benefits loading and corporate profit margins. It takes subject matter expertise and unique skill-sets which demands competitive wages, in order to maintain equipment ranging from stationary engine generators to bulldozers and man-lifts.

These technical skill-sets and subject matter expertise, as highlighted by FCS study, are diminishing commercially due to retirements. And, the current industry trend is to retain heavy equipment maintenance in-house. Finally, the increased reliability afforded with internally managed and systematically focused technicians reduces the agency's risks associated with downtime of equipment thereby outsourcing the transportation function was rejected.

The third and chosen BPA business model alternative was to retain in-house transportation functions by centralizing fleet operations. This alternative was adopted and deemed to be more efficient than a decentralized approach and consistent with industry best practice.

10.1 Key Factors that Showcase the Chosen BPA Business Model

A few key success factors that are believed to showcase this centralized BPA business model and have proven to be successful are: reduction in vehicle modification costs; reductions in corrective maintenance actions and costs; and a by-asset life cycle analysis that predicts vehicle replacement years in advance and reduces vehicle downtime as technicians become more knowledgeable and trained in the variable equipment types BPA operates.

Based upon recent benchmarking efforts, BPA FMD believes that the accepted centralized fleet management BPA business model will reduce total agency fleet costs associated with GSA leases, contracted maintenance, fleet right-sizing, fuel use reductions, and other efficiency measures resulting in a savings of approximately $1 million in annual expense, as well as capital savings.

10.2 FMDs Asset Strategies

Below is a synopsis of the FMDs asset strategies that have been addressed and elaborated on in Sections Two and Eight of this strategic plan:

- Develop an pragmatic validated vehicle replacement cycle with a sound 15 year procurement plan, by means of a three year budgeted procurement cycle;
- Right-size through a systematic analysis in conjunction with reducing fossil fuel;
- Establish policy on the types of equipment that should be agency-owned versus locally rented;
- Focus on preventive/predictive maintenance;
- Develop and implement a professional training and certification program;
- Standardize to reduce acquisition, maintenance and inventory costs;
- Develop competency to prepare an asset life cycle;
- Improve tracking and reporting of expenditures;
- Enhance data quality associated with vehicle cost and maintenance;
- Improve capabilities for emergency response through implementation of a planned maintenance strategy;
- Enhance internal and external reporting capability;
- Foster business driven decisions using analytics and metrics, measured against risk;
- Achieve funding to raise BPA HMEM facilities to accepted industry standards;
- Attain funding for a new FMS;
- Limit access to short-term rentals and long-term leases/purchases;
- Standardize maintenance practices/procedures and develop SOPs;
- Conduct staffing study;
- Strive to meet Government mandates of GHG emission/fossil fuel reductions without comprising our customers and BPA's mission.

11. Summary

Overall, BPA's FMD's strategic goal is to increase reliability, standardize and right-size the fleet, increase equipment availability, in conjunction with reducing operational and capital costs. Furthermore, to address facility requirements in order to meet recommended functionality ratings while enhancing the skill-sets of HMEM technicians. Efforts are underway to achieve these goals, and the entire FMD staff is confident that this transition will be successful.

Financial Disclosure

This information has been made publicly available by BPA on February 18, 2014 and contains information not reported in BPA financial statements.