# Methodology for I-BPA Award and Dispatch Priority

Revised December 18, 2012

# Table of Contents

# Methodology for I-BPA Award and Dispatch Priority

## Disclaimer:

**This document is current through FY 2011. Beginning with FY 2012, all methodology for Choosing by Advantages (CBA) used for placement on Dispatch Priority Lists (DPL), is incorporated in to the solicitation itself.**

## Purpose:

This document explains the process of developing the Choosing by Advantages (CBA) methodology used in preseason Incident Blanket Purchase Agreements (I-BPAs) and provides a historical reference for past solicitations.

The CBA methodology was adopted by agency experts representing Acquisition Management (AQM) and Fire and Aviation Management (FAM) as a means of evaluating equipment offered for use on incidents by not only price but also equipment attributes. CBA was first implemented in 2007 for water handling equipment. Beginning with the 2008 solicitations, the Contract Equipment Task Team (CETT) developed and recommended attributes and advantage points for equipment scheduled for solicitation each year. The CETT was chartered under the direction of the National Wildfire Coordinating Group (NWCG) Equipment Technology Committee (ETC), formerly known as the Fire Equipment Working Team (FEWT). The original committee as well as the CETT membership is listed in Appendix C.

## Process of Methodology:

The methodology is a two step process.

**STEP 1:** Award the Incident Blanket Purchase Agreement (I-BPA) using a reasonable price/technically acceptable method. I-BPAs will be awarded to those vendors who offer a fair and reasonable price as determined by the Contracting Officer. In addition, the vendor must "pass" the following equipment and personnel requirements:

- Equipment meets the minimum specifications and quality standards
- Key personnel possess the minimum training qualifications
- Vendor has acceptable past performance

**STEP 2:** Rank the equipment on awarded I-BPAs on a dispatch priority list (DPL). All equipment on an awarded I-BPA will be ranked individually on the DPL according to the advantages the equipment has to offer. The vendor will provide their equipment information when submitting an offer in response to a solicitation. This information will be validated by the Contracting Officer, or their assistant(s), prior to awarding an I-BPA.

Each type of equipment has identified criteria that are important to the agency. Each criterion has a "relative importance" when compared to the other criteria for that equipment type, and has multiple attributes. A point value is assigned to each attribute of that criterion. The attribute point value multiplied by the criterion's relative importance provides the advantage

points for that equipment criterion. When points are assigned to all advantages of all equipment, they are added to obtain the total advantage points for the equipment. Each point total is divided by the price for that equipment, resulting in *"Total Advantage per Dollar of Cost".* It may not be the cheapest price, it may not be the best equipment, but it will show the greatest advantage to the Government. Those pieces of equipment offering the greatest

advantage in relation to price (highest total advantage per dollar) will be ranked highest on the DPL. As stated previously, for some equipment there were no advantage points identified, price was the only factor.

This method is based on the principle of "Choosing by Advantages" (CBA), a well-tested and widely used decision making process the Forest Service utilizes extensively, as do other government agencies and private industry. In concept, the process is simple and accurate: "Decisions must be based on the importance of advantages." (See Appendix B for background of the Choosing by Advantages process)

Inspections - If a preseason inspection is accomplished by the Government, equipment advantages listed by the vendor on the resource category form will be validated for each piece of equipment being offered. The DPL will be used to systematically mobilize, in priority order, specific vendors/equipment from the "pool" of contractors deemed to have acceptable prices and to be technically acceptable. In anticipation that there will be a range in equipment quality and various prices offered, the Forest Service has developed a method for assessing advantages that will be simple to assemble and use, fair, and defensible. An example of this method is listed below.

## Example of Choosing by Advantages: Engines

**Consider Three Type 6 Engines:**

- **Engine 1** is a new engine (excellent condition), hauling 200 gallons, with a siphon foam applicator, and pump performance evaluated as excellent, offered by the vendor at $2,300 / day.
- **Engine 2** is a three-year old engine in good condition with a 350 gallon tank and an automatic foam applicator, with good pump performance, offered by the vendor at $2,000 / day.
- **Engine 3** is a 10-year old engine in good condition with a 300 gallon tank, a siphon foam system, and good pump performance, offered by the vendor at $1,200 / day.

**Using the Table Above, Calculate the Advantage Points Per Dollar for Each Engine:**

1) By the above table, it is easy to determine that Engine #1 has a total ***advantage point value*** of 100 points (20+0+50+0+30). Assuming the Vendor is really proud of this investment and charges $ 2,300 per day, the advantage/$ = 100/$2,300 = 0.0435 advantage points per dollar.

2) Similarly, Engine #2 has 94 advantage points, and an advantage point/dollar ratio of 94/ $2,000 = 0.0470. It would then be in the government's best interest to select the second engine over the first.

3) Finally, Engine #3 has an advantage point / dollar ratio of 55/$1,200 = 0.0458. This engine falls between the first two engines in terms of advantages provided (value) per dollar spent. These examples are summarized below.

| Engine | Advantage | Cost | Advantage Points per Dollar | Ranking |
|---|---|---|---|---|

| | Points | | | |
|---|---|---|---|---|
| 1 | 100 | $ 2,300 | 0.0435 | 3 |
| 2 | 94 | $ 2,000 | 0.0470 | 1 |
| 3 | 55 | $ 1,200 | 0.0458 | 2 |

Clearly, it is not necessarily in the government's best interest to select either the lowest price equipment or the newest equipment. The methodology developed here will easily rank equipment based on (1) important characteristics necessary to meet the government's requirements and (2) the cost to the government to receive those characteristics. The result is that engine 2, ranked # 1 using CBA, is in fact the ***greatest advantage*** to the government.

The committee is aware the maximum point values for each of the factors are 20, 10, 50, and 30 for Age, Foam Application System, Mechanical Condition, and Gallons Hauled, respectively. Accordingly, it can be said with confidence, that the importance of Age is twice that of the Foam Application System, the Mechanical Condition is five times as important, and Gallons Hauled is three times more important. Also, if each attribute is assigned a point value between one and ten and then multiplied by the importance factor (between one and five), an identical table would be generated.

Appendix A explains in more detail the criterion that was used to determine the attributes to include the advantage points if applicable, for each of the equipment categories included on the National Solicitation Plan for I-BPAs. For some equipment categories, price was the only criteria. Equipment categories are categorized by the year they were solicited for and summarized below:

**2007 Solicitations:**
- Engines
- Support Water Tender
- Tactical Water Tender

**2008 Solicitations:**
- Single Faller and Faller Module
- GIS Unit
- Clerical Support Unit
- Tent
- Refrigerated Trailer
- Mechanic with Service Truck

**2009 Solicitations:**
- Mobile Laundry
- Portable Toilet, Portable Handwashing Station, and Wheelchair Accessible Portable Toilet
- Potable Water, Gray Water, and Trailer Mounted Handwashing Station
- Heavy Equipment (Dozer, Excavator, Tractor Plow, and Transport)*

*The Heavy Equipment solicitation was piloted in Region 8 in 2009 and 2010 for possible inclusion in the National Solicitation Plan for the 2011 season.

**2010 Solicitations:**

- Heavy Equipment with Water (Skidgines, Pumper Cats, and Softtracks)
- Water Handling (Engines, Type 3-6; Support Water Tender, Type 1-3; and Tactical Water Tender, Type 1-2)

**2011 Solicitations:**

- Weed Washing Unit
- Communications Trailer
- Bus, Crew Carrier*
- Heavy Equipment (Dozer, Excavator, Tractor Plow, and Transport)
- Fuel Tender
- Vehicle with Driver
- Trailer, Helicopter Operations Support

*Bus, Crew Carrier was originally solicited for in 2010, but because of protest, solicitation was extended and awarded in 2011)

# 2007 Solicitation

Engines – Support Water Tenders – Tactical Water Tenders

**EQUIPMENT BEING EVALUATED: Engines**

| Criteria | Attributes | Value | Importance Factor | Advantage Points |
|---|---|---|---|---|
| Age | 10+years | 0 | 2 | 0 |
| | 9 years | 1 | | 2 |
| | 8 years | 2 | | 4 |
| | 7 years | 3 | | 6 |
| | 6 years | 4 | | 8 |
| | 5 years | 5 | | 10 |
| | 4 years | 6 | | 12 |
| | 3 years | 7 | | 14 |
| | 2 years | 8 | | 16 |
| | 1 years | 9 | | 18 |
| | Current Year | 10 | | 20 |
| Foam Application System | Siphon | 0 | 1 | 0 |
| | Manually Adjustable | 5 | | 5 |
| | Automatic Adjustment | 10 | | 10 |
| Mechanical Condition *(See Page 13)* | Acceptable | 0 | 5 | 0 |
| | Good | 5 | | 25 |
| | Excellent | 10 | | 50 |
| Gallons Hauled Type 6 | 150-225 | 0 | 3 | 0 |
| | 226-300 | 5 | | 15 |
| | 301-399 | 10 | | 30 |
| Gallons Hauled Type 5 | 400-500 | 0 | 3 | 0 |
| | 501-625 | 5 | | 15 |
| | 626-749 | 10 | | 30 |
| Gallons Hauled Type 4 | 750-850 | 0 | 3 | 0 |
| | 851-999 | 5 | | 15 |
| | 1000-1200 | 10 | | 30 |
| Gallons Hauled Type 3 | 500-599 | 0 | 3 | 0 |
| | 600-749 | 5 | | 15 |
| | 750-1000 | 10 | | 30 |
| Pump performance Type 4,5,6 *(See Page 18)* | Acceptable | 0 | 3 | 0 |
| | Good | 5 | | 15 |
| | Excellent | 10 | | 30 |
| Pump performance Type 3 *(See Page 18)* | Acceptable | 0 | 3 | 0 |
| | Good | 5 | | 15 |
| | Excellent | 10 | | 30 |

NOTE: A CBA purist will note that point values overlap, when typically they would not (i.e. 10 points for a 5 year old engine and 10 points for an automatic adjustment foam application system). In the pure CBA process, one of these advantages would be considered more important than the other, and assigned more points (even if it is only one additional point). Because the intent of our process is to allow one person (rather than a CBA panel) to quickly evaluate a lot of equipment, we considered this minor deviation acceptable.

## EQUIPMENT BEING EVALUATED: Support Water Tender

| Criteria | Attributes | Value | Importance Factor | Advantage Points |
|---|---|---|---|---|
| Age | 16+ years | 0 | 1 | 0 |
| | 12 years to 15 years | 1 | | 1 |
| | 8 years to 11 years | 3 | | 3 |
| | 4 years to 7 years | 6 | | 6 |
| | Current year to 3 years | 10 | | 10 |
| Suspension | Air Bag | 0 | 2.5 | 0 |
| | Walking Beam or Single Rear Axle | 10 | | 25 |
| Mechanical Condition | Acceptable | 0 | 5 | 0 |
| | Good | 5 | | 25 |
| | Excellent | 10 | | 50 |
| Spray Bar Configuration | Gravity F or R | 0 | 3 | 0 |
| | Gravity F & R | 3 | | 9 |
| | Pressure F or R | 7 | | 21 |
| | Pressure F & R | 10 | | 30 |
| Gallons Hauled Type 3 | 1000-1500 | 0 | 5 | 0 |
| | 1501-2000 | 5 | | 25 |
| | 2001-2499 | 10 | | 50 |
| Gallons Hauled Type 2 | 2500-3000 | 0 | 5 | 0 |
| | 3001-3500 | 6 | | 30 |
| | 3501-4000 | 8 | | 40 |
| | More than 4000 | 10 | | 50 |
| Gallons Hauled Type 1 | Trailer >5000 | 0 | 5 | 0 |
| | Single Unit > 5000 | 10 | | 50 |

Support and Tactical Water Tenders were given values based on operational characteristics that would make the equipment more valuable for supporting fire fighting efforts. For Support Water Tenders, age was the least important factor followed by axle configuration (suspension), spray bar configuration, gallons hauled and mechanical condition. Gallons hauled and mechanical condition was given the most weight in the rating criteria because the task of delivering water to support fire operations is the most important.

Tactical Water Tenders were rated very similarly to Support Water Tenders with the exception of less value being placed on the ability to transport larger quantities of water. The committee decided that having a more maneuverable apparatus was more valuable then having the ability to transport more water (suspension was added as a criterion). Values were also given to monitors and foam, with monitors having more value than the foam device due to the tactical use of running attacks and being able to place large amounts of water at precise locations. Spray bar values were expanded to give more value to pressurized side sprays for use during running attack or wet lines to aid in burn out.

## EQUIPMENT BEING EVALUATED: Tactical Water Tender

### CBA: Simplifying Equipment Evaluation

| Criteria | Attributes | Value | Importance Factor | Advantage Points |
|---|---|---|---|---|
| Age | 16+ years | 0 | 1 | 0 |
| | 12 years to 15 years | 1 | | 0 |
| | 8 years to 11 years | 3 | | 3 |
| | 4 years to 7 years | 6 | | 6 |
| | Current year to 3 years | 10 | | 10 |
| Foam Application System | Siphon | 0 | 1 | 0 |
| | Manually Adjustable | 5 | | 5 |
| | Automatic Adjustment | 10 | | 10 |
| Monitor | None | 0 | 2 | 0 |
| | Manual | 5 | | 10 |
| | Remote | 10 | | 20 |
| Suspension | Airbag | 0 | 2.5 | 0 |
| | Walking Beam or Single Rear Axle | 10 | | 25 |
| All wheel drive | No | 0 | 3 | 0 |
| | Yes | 10 | | 30 |
| Spray Bar Configuration | Gravity any combination | 0 | 3 | 0 |
| | Pressure F or R | 3 | | 9 |
| | Pressure F & R | 7 | | 21 |
| | Pressure F, R & Side | 10 | | 30 |
| Mechanical Condition | Acceptable | 0 | 5 | 0 |
| | Good | 5 | | 25 |
| | Excellent | 10 | | 50 |
| Gallons Hauled Type 3 | 1000-1500 | 0 | 2 | 0 |
| | 1501-2000 | 5 | | 10 |
| | 2001-2499 | 10 | | 20 |
| Gallons Hauled Type 2 | 2500-3000 | 0 | 2 | 0 |
| | 3001-3500 | 6 | | 12 |
| | 3501-3999 | 8 | | 16 |
| | More than 4000 | 10 | | 20 |

The evaluation of many of the criterion in the tables above, (including age, foam application system, gallons hauled, suspension, and spray bar configuration, monitors, and all wheel drive) is evident after a quick inspection. Detailed criteria have been developed to ensure that the remaining criteria in the CBA analysis are easily quantifiable. The process for quantifying these criteria is explained in **Mechanical Condition Rating** and **Pump Performance Rating**. Mechanical Condition and Pump Performance are based on an independent inspection, using criteria published in the solicitation and included in these appendices.

The ultimate result is that no technical knowledge is required to assign point values to attributes of specific equipment. Given a spreadsheet or database with an input form for easy entry, two pieces or 2,000 pieces of equipment can be quickly, easily and accurately ranked from most value per dollar to least value per dollar by anyone.

## Explanation of Criteria and Attribute Advantages to the Government

The table below summarizes the criteria that are used in evaluating CBA for engines and water tenders, and the relative advantages of the attributes that make up each criterion.

| Criteria | Attributes | Advantage | Criterion Advantage |
|---|---|---|---|
| Age (Engines) | 10+years | None | Age limit of 10 years is based on USFS historical data of engine replacement cycles and is based on the year-model on the registration certificate.<br><br>Past experience demonstrates that newer equipment is less problematic and more efficient. |
| | 9 years | 1+ years newer | |
| | 8 years | 2+ years newer | |
| | 7 years | 3+ years newer | |
| | 6 years | 4+ years newer | |
| | 5 years | 5+ years newer | |
| | 4 years | 6+ years newer | |
| | 3 years | 7+ years newer | |
| | 2 years | 8+ years newer | |
| | 1 years | 9+ years newer | |
| | Current Year | 10+ years newer | |
| Age (Tenders) | 16+ years | None | Age limit of 16 years is based on USFS historical data of heavy truck replacement cycles and is based on the year-model on the registration<br><br>Past experience demonstrates that newer equipment is less problematic and more efficient. |
| | 12 years to 15 years | 1-4 years newer | |
| | 8 years to 11 years | 5-8 years newer | |
| | 4 years to 7 years | 9-12 years newer | |
| | Current year to 3 years | 13-16 years newer | |
| Foam Application System | None (R6 only) | None | Automatic application systems maintain a more accurate range of foam concentrate flow, improving performance and economy compared to manual system and siphon systems. |
| | Siphon | Little Control | |
| | Manually Adjustable | Manual Control | |
| | Automatic Adjustment | Automatic | |
| Mechanical Condition | Acceptable | Marginal Condition-Expect Some Breakdowns | Past experience demonstrates that equipment in better mechanical condition breaks down less and is more reliable. |
| | Good | Fewer Breakdowns | |
| | Excellent | Like New Condition or Extremely well maintained | |
| Pump Performance | Acceptable | None | Wildland firefighting historically uses less volume and more pressure. Higher pressures allow firefighters to move water through hoses to locations further from the engine, which increases productivity. |
| | Good | Greater PSI | |
| | Excellent | Greatest PSI | |

| Criteria | Attributes | Advantage | Criterion Advantage |
|---|---|---|---|
| Suspension | Airbag | Not as stable over rough terrain | Large deviations in the road surface or terrain, such as unimproved Forest roads, can cause unstable load changes while driving, possibly creating a hazardous driving situation. Therefore, walking beam or single rear axle suspension is preferred. |
| | Walking Beam or Single Rear Axle | Suspension can flex or move and maintain a uniform load over each wheel which then promotes maximum traction on rough surfaces | |
| Spray Bar Configuration | Gravity F or R | Minimally acceptable | Gravity is acceptable for watering roads, but the coverage of the watering bar changes as the head pressure of the load increases or decreases. Pressurized water applications are easy to regulate and historically provide better coverage. |
| | Gravity F & R | More water, but variable coverage | |
| | Pressure F or R | Consistent coverage | |
| | Pressure F & R | Most acceptable - More water and consistent coverage | |
| Gallons Hauled | Low Capacity | Minimum Capacity | The more water hauled is a more efficient use of the fire crew with less time spent driving to and from a water refill site. |
| | Medium Capacity | Greater Capacity | |
| | Large Capacity | Greatest Capacity | |
| Monitor | None | None | Monitors may help knock down flames for a more direct attack. Remotely operated monitors are more responsive to running attack and can be aimed from the operators chair while seated in the cab which is preferred for safety reasons. |
| | Manual | Manual control | |
| | Remote | Remote control | |
| All Wheel Drive | No | None | All Wheel drive is a tactical advantage over two wheel drive vehicles due to the ability to travel over rougher terrain. |
| | Yes | Greater ability to travel on rough terrain | |

## Mechanical Condition Rating

### ***Mechanical Condition Rating for Engines***

| Rating | Rating Criteria | Yes | No |
|---|---|---|---|
| Excellent | No visual leaks from main seals (Front and Rear). | | |
| | Transmission/ transfer case (External housing is oil free). | | |
| | Front and rear differentials are oil free. | | |
| | All tires have 11/32" or greater tire tread depth. | | |
| | Storage boxes are tightly secured. Equipment complement is readily accessible in compartments and/or tool boxes. | | |
| | Vehicle has a maximum of 75,000 miles. | | |
| | * 0 Safety Item deficiencies are noted on the ***initial inspection*** (See pre-award inspection form and notice below). | | |
| Good | Seep may occur from a maximum of two main seals. | | |
| | Transmission/Transfer case (external housing is not oil free, but cause no pooling of fluids). | | |
| | Differentials are not oil free, but cause no pooling of fluids. | | |
| | All tires have between 6/32" to 10/32" tire tread depth. | | |
| | Storage boxes are tightly secured. Equipment complement is accessible in compartments and/or tool boxes. Organization of complement is minimal. | | |
| | Vehicle has a maximum of 100,000 miles. | | |
| | * 1-2 Safety Item deficiencies may be noted on the ***initial inspection*** (See pre-award inspection form and notice below) | | |
| **Acceptable** | Main seals, transmission or differentials have drips with accumulation of dirt and pooling on the ground while vehicle is parked or running | | |
| | Fire Apparatus meets minimum standards. Storage compartments are not sufficiently sized to hold all equipment or the bottom of any compartment is lower than the bottom of the rear differential. Complement and equipment is not readily found or retrieved due to poor organization. | | |
| | Mileage exceeds 100,000 | | |
| | All tires have the between the minimum specified depth and 6/32" depth. | | |
| | * 3+ Safety Item deficiencies may be noted on the ***initial inspection*** (See pre-award inspection form and notice below) | | |

- **A seep is a wet area on any seal, and has light dust collected on the fluid.**
- **A leak is a wet area with fluid that is running down the housing but not pooling under vehicle.**
- **Pooling is a leak that is dripping more than a few drops of fluid during the inspection period. A pool larger than 2" diameter is not acceptable OR more than 10 drops in a minute is not acceptable and must be repaired prior to award.**
- **Tire tread requirements apply to the spare tire(s) as well as mounted tires.**

**NOTICE TO EQUIPMENT INSPECTORS AND VENDORS:**
***Any and all safety item deficiencies MUST be corrected prior to award.***

## ***Mechanical Condition Rating for Water Tenders***

| Rating | Rating Criteria | Yes | No |
|---|---|---|---|
| Excellent | No visual leaks from main seals (Front and Rear) | | |
| | Transmission (External housing is oil free) | | |
| | Front and rear differentials are oil free | | |
| | All tires have 9/32" or greater tire tread depth | | |
| | Storage boxes are tightly secured. Equipment complement is readily accessible in compartments and/or tool boxes | | |
| | * 0 Safety Item deficiencies are noted on the ***initial inspection*** (See pre-award inspection form and notice below). | | |
| Good | Seep may occur from a maximum of two main seals. | | |
| | Transmission/Transfer case (external housing is not oil free, but cause no pooling of fluid). | | |
| | Differentials are not oil free, but cause no pooling of fluids | | |
| | All tires have between 6/32" to 8/32" tire tread depth. | | |
| | Storage boxes are tightly secured. Equipment complement is accessible in compartments and/or tool boxes. Organization of complement is minimal. | | |
| | * 1-2 deficiencies on Safety items noted on ***initial inspection*** (See pre-award inspection form and notice below) | | |
| Acceptable | Main seals, transmission or differentials have drips with accumulation of dirt and some seeps or pooling on the ground while vehicle is parked or running | | |
| | Storage compartments are not sufficiently sized to hold all equipment or the bottom of any compartment is lower than the bottom of the rear differential. Complement and equipment is not readily found or retrieved due to poor organization. | | |
| | All tires have the between the minimum specified depth and 5/32" depth. | | |
| | * 3+ deficiencies on Safety items noted on ***initial inspection*** (See pre-award inspection form and notice below) | | |

- **A seep is a wet area on any seal, and has light dust collected on the fluid.**
- **A leak is a wet area with fluid that is running down the housing but not pooling under vehicle.**
- **Pooling is a leak that is dripping more than a few drops of fluid during the inspection period. A pool larger than 2" diameter is not acceptable OR more than 10 drops in a minute is not acceptable and must be repaired prior to award.**
- **Tire tread requirements apply to the spare tire(s) as well as mounted tires.**

**NOTICE TO EQUIPMENT INSPECTORS AND VENDORS:**
***Any and all safety item deficiencies MUST be corrected prior to award.***

## Determination of Equipment Mechanical Condition

The following table shows how the pre-award inspection marks determine the mechanical condition (Excellent, Good, or Acceptable), which is the attribute rated in the evaluation table.

| **Minimum Number of Positive Marks Required to Obtain Stated Overall Ratings** | | | **Maximum Safety Item Deficiencies to Obtain Stated Overall Ratings**** | | **Maximum Number of Marks in Below Category to Reduce Overall Rating at Left One Level** |
|---|---|---|---|---|---|
| Overall Rating | Positive (Yes) Marks | | | | |
| | Engines | Water Tenders | Engines | Water Tenders | |
| Excellent | 4 | 4 | 0 | 0 | 1 Acceptable |
| Good | 4 | 4 | 2 | 2 | 2 Acceptable |
| Acceptable | 3 | 3 | 3 | 3 | |

**** NOTICE TO EQUIPMENT INSPECTORS AND VENDORS:**
***Maximum Safety Item Deficiencies to Obtain Stated Overall Ratings refers to deficiencies found during the initial inspection. Any and all safety item deficiencies MUST be corrected prior to award.***

## Pump Performance Rating

### Pressure and Flow Testing of Pumps

Flow may be tested with a flow meter or a simple sharp edged orifice. A simple testing kit will contain a 1.5 inch threaded pipe cap for type 4-6 engines, while a 2.5 inch threaded cap will be used for type 3 engines. Testing devices will have a designated size opening cut through the center of the cap. Testing will be conducted as close to the pump as possible and the pump's pressure gauge may be used or an auxiliary testing gauge may be mounted in front of the sharp edged orifice.

The following flows will result:

.520 diameter sharp edged orifice:

| Pressure | Flow |
|---|---|
| 100 psi | 50 gpm |
| 125 psi | 56 gpm |
| 150 psi | 61 gpm |

.716 diameter sharp edged orifice:

| Pressure | Flow |
|---|---|
| 250 psi | 150 gpm |
| 312.5 psi | 167 gpm |
| 375 psi | 183 gpm |

**The Resultant figures will be applied to the pump ratings as follows:**

**Type 3 Engines**
Pressure measured with .716 diameter sharp edged orifice installed.

| PSI | Rating |
|---|---|
| 250 to 312 psi | Acceptable |
| 312.5 to 374 psi | Good |
| 375 psi or more | Excellent |

**Type 4, 5, 6 Engines**
Pressure measured with a .520 diameter sharp edged orifice installed.

| PSI | Rating |
|---|---|
| 100 to 124 psi | Acceptable |
| 125 to 149 psi | Good |
| 150 psi or more | Excellent |

# 2008 Solicitations

Single Faller and Faller Module – GIS Unit – Clerical Support Unit – Tent – Refrigerated Trailer – Mechanic with Service Truck

## EQUIPMENT BEING EVALUATED: Single Faller and Faller Module

Within each small business program category, priority will be given according to the price offered for the type of resource. The price will be based on the daily rate, with the lowest price being ranked highest on the DPL. Separate DPLs will be generated for single fallers and faller modules.

## EQUIPMENT BEING EVALUATED: GIS Unit

Within each small business program category, priority will be given according to the price offered for the type of resource. The price will be based on the daily rate offered, with the lowest price being ranked highest on the DPL. Mobilization/demobilization and GIS Specialist rates will not be considered in the calculation.

## EQUIPMENT BEING EVALUATED: Clerical Support Unit

Within each small business program category, priority will be given according to the lowest price using the following calculation considering both the daily rate and cost per copy offered (see calculation below), with the lowest price being ranked highest on the DPL. Plotted sheets, laminating, faxing, binding and mobilization/demobilization will not be included in the calculation.

B&W: (8.5 X 11 (cost/copy) x 70%) + (11 X 17 (cost/copy) x 30%) X 95%
Color: (8.5 X 11 (cost/copy) x 70%) + (11 X 17 (cost/copy) x 30%) X 5%
B&W + Color = Score
**Price = (Score x 1000 x 70%) + (Daily Rate x 30%)**

## EQUIPMENT BEING EVALUATED: Tent

Within each small business program category, priority will be given according to the price offered for the type of resource. The following calculation will be used to determine the lowest price, with the lowest price being ranked highest on the DPL: (Daily Rate + Weekly Rate + Monthly Rate/38). The daily, weekly, monthly rate for Type 1 and 2 canopies will be calculated by adding the canopy (sf) and sidewall (lf) prices. Delivery/Pickup fee and optional items will not be considered in the calculation.

## EQUIPMENT BEING EVALUATED: Refrigerated Trailer

Within each small business program category, priority will be given according to the price offered for the type of resource. The following calculation will be used to determine the lowest price, with the lowest price being ranked highest on the DPL. (Daily Rate + Weekly Rate + Monthly Rate/38). Separate priority lists will be generated for each Type of Refrigerated Trailer Unit.

## EQUIPMENT BEING EVALUATED: Mechanic with Service Truck

Within each small business program category, priority will be based on the advantages the resource has to offer. Information on the advantages shall be submitted by the Contractor with their quote. A separate DPL will be generated for each type of mechanic.

The following criteria have been developed to assess the advantages for dispatch priority. Advantages will be given a point value. The total points for each resource's advantage are then divided by the price resulting in dispatch priority with highest total advantage per dollar being ranked highest on the DPL. The following is a list of the advantages and associated points for each category. A complete breakdown is on the following page.

Mechanic with Service Truck Type 1

| Factors | Attributes | Value | Importance Factor | Advantage Points** |
|---|---|---|---|---|
| Current ASE Certifications | Both Truck and Auto Master | 10 | 5 | 50 |
| | Truck Master Only | 8 | | 40 |
| | Auto Master Only | 7 | | 35 |
| | 5 or more certificates | 5 | | 25 |
| Vocational School or Manufacture Diesel/Heavy Equipment Mechanic certificate | Yes | 10 | 7 | 70 |
| | No | 0 | | 0 |
| Experience in years Heavy Equipment | 10+ | 10 | 8 | 80 |
| | 6 to 9 | 5 | | 40 |
| | 3 to 5 | 0 | | 0 |

Mechanic with Service Truck Type 2 & 3

| Factors | Attributes | Value | Importance Factor | Advantage Points** |
|---|---|---|---|---|
| Current ASE Certifications | Both Truck and Auto Master | 10 | 5 | 50 |
| | Truck Master Only | 8 | | 40 |
| | Auto Master Only | 7 | | 35 |
| | 5 or more certificates | 5 | | 25 |
| Current EVT Certifications | Master | 10 | 7 | 70 |
| | Level II | 8 | | 56 |
| | Level I | 6 | | 42 |
| Experience in years | 10+ | 10 | 8 | 80 |
| | 6 to 9 | 5 | | 40 |
| | 3 to 5 | 0 | | 0 |
| Fire Apparatus Mechanic | 5+ years working primarily on fire apparatus | 10 | 10 | 100 |
| | 0-4 years | 0 | | 0 |

NOTE: The CETT has identified an issue with the mechanic having advantage points, rather than the company. This will be something that will be reviewed and likely changed the next 3-year cycle.

## Explanation of Criteria and Attribute Advantages to the Government

The table below summarizes the criteria that are used in evaluating CBA for 2008 Solicitations. The table below displays those resource categories that were based on lowest price. The next two tables summarize the criteria for the Service Truck with Mechanic, and the relative advantages of the attributes that make up each criterion.

| Resource Category | Rationale for Using Price Only |
|---|---|
| Single Faller and Faller Module | The solicitation requires a minimum number of years of experience for a faller to qualify for a certain type (i.e., Type 1 or 2). The CETT could not determine any measurable criteria for a faller in either resource category that would be easy to assess. If a faller meets the minimum requirements, has acceptable past performance, and their price is reasonable, the vendor will be awarded an agreement.<br><br>Performance once assigned to an incident will be the more critical element. Once past performance is gathered and tracked for a faller it would be difficult to use that in future awards because with past performance there is a certain element of subjectivity. |
| GIS Unit | The CETT could not determine any measurable criteria for this resource category that would be easy to assess. If a GIS Unit meets the minimum requirements, has acceptable past performance, and their price is reasonable, the vendor will be awarded an agreement. |
| Clerical Support Unit | The CETT could not determine any measurable criteria for this resource category that would be easy to assess. If the Clerical Support Unit meets the minimum requirements, has acceptable past performance, and their price is reasonable, the vendor will be awarded an agreement. |
| Tent | The CETT could not determine any measurable criteria for this resource category that would be easy to assess. If the Tent meets the minimum requirements, has acceptable past performance, and their price is reasonable, the vendor will be awarded an agreement. |
| Refrigerated Trailer | The CETT could not determine any measurable criteria for this resource category that would be easy to assess. If the Refrigerated Trailer meets the minimum requirements, has acceptable past performance, and their price is reasonable, the vendor will be awarded an agreement. |

## Explanation of Criteria and Attribute Advantages to the Government

The table below summarizes the criteria that are used in evaluating CBA for Mechanics with Service Trucks (Type 1 and Type 2 & 3), and the relative advantages of the attributes that make up each criterion.

### Mechanic with Service Truck, Type 1

| Criteria | Attributes | Advantage | Criterion Advantage |
|---|---|---|---|
| Current ASE Certification | Both Truck and Auto Master | Training in all truck and auto categories | ASE Certification levels were used to determine the breadth of knowledge a mechanic has, the more certifications a mechanic has the more points they will get for this attribute. |
| | Truck Master Only | Training in all truck categories | |
| | Auto Master Only | Training in all auto categories | |
| | 5 or more certificates | First level, meets minimum requirements for points | |
| Vocational School or Manufacture Diesel/Heavy Equipment Mechanic Certificate | Yes | Has additional training, above the ASE Certification | This is training over and above the ASE Certification. Again, demonstrating additional knowledge and breadth of experience of the mechanic. |
| | No | None | |
| Experience in years for Heavy Equipment | 10+ | Most experience | The more experienced the mechanic is the easier it will be for them to deal with difficult situations that may be arise on an incident. |
| | 6 to 9 | More experience | |
| | 3 to 5 | None | |

## Mechanic with Service Truck, Type 2 & 3

| Criteria | Attributes | Advantage | Criterion Advantage |
|---|---|---|---|
| Current ASE Certification | Both Truck and Auto Master | Training in all truck and auto categories | ASE Certification levels were used to determine the breadth of knowledge a mechanic has, the more certifications a mechanic has the more points they will get for this attribute. |
| | Truck Master Only | Training in all truck categories | |
| | Auto Master Only | Training in all auto categories | |
| | 5 or more certificates | First level, meets minimum requirements for points | |
| Current EVT Certifications | Master | Most experience | This is training over and above the ASE Certification. Again, demonstrating additional knowledge and breadth of experience of the mechanic. |
| | Level II | More experience | |
| | Level I | Less experience | |
| Experience in years | 10+ | Most experience | The more experienced the mechanic is the easier it will be for them to deal with difficult situations that may be arise on an incident. |
| | 6 to 9 | More experience | |
| | 3 to 5 | None | |
| Fire Apparatus Mechanic | 5+ years working primarily on fire apparatus | Good experience | The more experienced the mechanic is in working on fire apparatus the easier it will be for them to deal with difficult situations that may be arise on an incident. |
| | 0-4 years | None | |

# 2009 Solicitations

Mobile Laundry – Portable Toilet, Portable Handwashing Station, and Wheelchair Accessible Portable Toilet – Trailer Mounted Handwashing Station - Potable Water, Gray Water,– Heavy Equipment (Dozer, Excavator, Tractor Plow, and Transport) [Heavy Equipment will be piloted by Region 8 in 2009 and 2010]

## EQUIPMENT BEING EVALUATED: Mobile Laundry

Within each small business program category, priority will be given according to the lowest price using the following calculation considering both the daily rate and price per pound offered, with the lowest price being ranked highest on the DPL.

Price = (Cost per pound x 1000 x 50%) + (Daily Rate x 50%)

## EQUIPMENT BEING EVALUATED: Portable Toilet, Portable Handwashing Station, and Wheelchair Accessible Portable Toilet

Within each small business program category, priority will be given according to the price offered for the type of resource. The following calculation will be used to determine the lowest price, with the lowest price being ranked highest on the DPL: (Daily Rate + Weekly Rate + Monthly Rate/38). Only the rate for the portable toilets will be included in the calculation. Handwashing stations, wheelchair accessible units, Delivery/ Pickup, additional service calls, and reset fee will not be considered in the calculation. One DPL will be generated for portable toilets, wheelchair accessible portable toilets, and portable handwashing stations. Contracting Officers will determine price reasonableness for the wheelchair accessible portable toilets and portable handwashing stations.

## EQUIPMENT BEING EVALUATED: Trailer Mounted Handwashing Station

Within each small business program category, priority will be given for the type of resource as shown below. Separate DPLs will be generated for each type of equipment. The following calculation will be used to determine the lowest price for handwashing stations, with the lowest price being ranked highest on the DPL: (Daily Rate + Weekly Rate + Monthly Rate/38).

## EQUIPMENT BEING EVALUATED: Potable Water Truck and Gray Water Truck

Within each small business program category, priority will be given for the type of resource as shown below. Separate DPLs will be generated for each type of equipment. Criteria have been developed for the potable water truck and the gray water truck to assess the advantages for dispatch priority. Advantages will be given a point value. The total points for each piece of equipment's advantages are then divided by the price resulting in dispatch priority with highest total advantage per dollar being ranked highest on the DPL. The following is a list of the advantages and associated points for each equipment category. A complete breakdown can be found on the following page.

## EQUIPMENT BEING EVALUATED: Dozer, Tractor Plow

Within each small business program category, priority will be given for the type of resource as shown below. Separate DPLs will be generated for each type of equipment. Criteria have been developed for the Dozer and Tractor Plow resource categories to assess the advantages for dispatch priority. Advantages will be given a point value. The total points for each piece of equipment's advantages are then divided by the price resulting in dispatch priority with highest total advantage per dollar being ranked highest on the DPL. The following is a list of the advantages and associated points for each equipment category. A complete breakdown can be found on the following page.

It was requested by the Contract Equipment Task Team (CETT) to add attributes that are not given points to the Dispatch Priority List (DPL) for the Dozer and Tractor Plow, resource categories. If this attribute was identified and ordered by the Incident Management Team (IMT) and if a vendor did not have the attribute ordered, they could be passed over for a vendor that did have the attribute. The following attributes, not given points, will be added to the DPLs:

Attribute, not given points:
- Ripper
- Grapple
- Low Ground Pressure

## EQUIPMENT BEING EVALUATED: Excavator

Within each small business program category, priority will be given for the type of resource as shown below. Separate DPLs will be generated for each type of equipment. The price will be based on the daily rate, with the lowest price being ranked highest on the dispatch list.

It was requested by the Contract Equipment Task Team (CETT) to add attributes that are not given points to the Dispatch Priority List (DPL) for the Excavator resource category. If this attribute was identified and ordered by the Incident Management Team (IMT) and if a vendor did not have the attribute ordered, they could be passed over for a vendor that did have the attribute. The following attributes, not given points, will be added to the DPLs:

Attribute, not given points
- Clamshell Bucket
- Up Down Blade or Dozer Blade
- Steep Ground Excavator

NOTE: These attributes will be listed on the priority dispatch list and if the incident specifically orders the equipment with this attribute, vendors offering that attribute will be given preference as they appear on the priority dispatch list.

## EQUIPMENT BEING EVALUATED: Transport

Within each small business program category, priority will be given for the type of resource as shown below. Separate DPLs will be generated for each type of equipment. The price will be based on the daily rate, with the lowest price being ranked highest on the dispatch list.

## EQUIPMENT BEING EVALUATED: Potable Water Trucks

Potable Water Trucks

| Factors | Attributes | Value | Importance Factor | Advantage Points |
|---|---|---|---|---|
| Gallons Hauled Type 4 | 400-999 | 5 | 2 | 10 |
| Gallons Hauled Type 3 | 1000-1500 | 5 | 2 | 10 |
| | 1501-2000 | 5.5 | | 11 |
| | 2001-2499 | 6 | | 12 |
| Gallons Hauled Type 2 | 2500-3000 | 5 | 2 | 10 |
| | 3001-3500 | 5.5 | | 11 |
| | 3501-3999 | 6 | | 12 |
| Gallons Hauled Type 1 | 4000-5000 | 5 | 2 | 10 |
| | >5000 | 5.5 | | 11 |

## EQUIPMENT BEING EVALUATED: Gray Water Trucks

Gray Water Trucks

| Factors | Attributes | Value | Importance Factor | Advantage Points |
|---|---|---|---|---|
| Gallons Hauled Type 4 | 400-999 | 5 | 2 | 10 |
| Gallons Hauled Type 3 | 1000-1500 | 5 | 2 | 10 |
| | 1501-2000 | 5.5 | | 11 |
| | 2001-2499 | 6 | | 12 |
| Gallons Hauled Type 2 | 2500-3000 | 5 | 2 | 10 |
| | 3001-3500 | 5.5 | | 11 |
| | 3501-3999 | 6 | | 12 |
| Gallons Hauled Type 1 | 4000-5000 | 5 | 2 | 10 |
| | >5000 | 5.5 | | 11 |
| Pump Type | Centrifugal (Drafting) | 0 | 1 | 0 |
| | Vacuum | 1 | | 1 |

## EQUIPMENT BEING EVALUATED: Dozer/Tractor Plow

Type 3 Dozer/Tractor Plow

| Factors | Attributes | Value | Importance Factor | Advantage Points** |
|---|---|---|---|---|
| Horsepower | 50-74 | 1 | 3 | 3 |
| | 75-99 | 2 | | 6 |
| Winch | No | 0 | 1 | 0 |
| | Yes | 1 | | 1 |
| Blade Type | Straight | 0 | 2 | 0 |
| | Manual Angle | 1 | | 2 |
| | 6-Way Hydraulic | 3 | | 6 |

Type 2 Dozer/Tractor Plow

| Factors | Attributes | Value | Importance Factor | Advantage Points** |
|---|---|---|---|---|
| Horsepower | 100-132 | 1 | 3 | 3 |
| | 133-165 | 2 | | 6 |
| | 166-199 | 3 | | 9 |
| Winch | No | 0 | 1 | 0 |
| | Yes | 1 | | 1 |
| Blade Type | Straight | 0 | 2 | 0 |
| | Manual Angle | 1 | | 2 |
| | 6-Way Hydraulic | 3 | | 6 |

Type 1 Dozer

| Factors | Attributes | Value | Importance Factor | Advantage Points** |
|---|---|---|---|---|
| Horsepower | 200-241 | 1 | 3 | 3 |
| | 242-281 | 2 | | 6 |
| | 281-350 | 3 | | 9 |
| Winch | No | 0 | 1 | 0 |
| | Yes | 1 | | 1 |
| Blade Type | Straight | 0 | 2 | 0 |
| | Manual Angle | 1 | | 2 |
| | 6-Way Hydraulic | 3 | | 6 |

## Explanation of Criteria and Attribute Advantages to the Government

The table below summarizes the criteria that are used in evaluating CBA for 2009 Solicitations. The table below displays those resource categories that were based on lowest price. The next two tables summarize the criteria for the Potable Water Truck and Gray Water Truck, and the relative advantages of the attributes that make up each criterion.

| Resource Category | Rationale for Using Price Only |
|---|---|
| Mobile Laundry | The CETT could not determine any measurable criteria for this resource category that would be easy to assess. If the Mobile Laundry vendor unit meets the minimum requirements, has acceptable past performance, and their price is reasonable, the vendor will be awarded an agreement. |
| Portable Toilet, Portable Handwashing Station, and Wheelchair Accessible Portable Toilet | The CETT could not determine any measurable criteria for this resource category that would be easy to assess. If the Portable Toilet, Portable Handwashing Station, and Wheelchair Accessible Portable Toilet meets the minimum requirements, has acceptable past performance, and their price is reasonable, the vendor will be awarded an agreement. |
| Trailer Mounted Handwashing Station | The CETT could not determine any measurable criteria for this resource category that would be easy to assess. If the Trailer Mounted Handwashing Station meets the minimum requirements, has acceptable past performance, and their price is reasonable, the vendor will be awarded an agreement. |
| Excavator | The CETT could not determine any measurable criteria for this resource category that would be easy to assess. If the Excavator meets the minimum requirements, has acceptable past performance, and their price is reasonable, the vendor will be awarded an agreement. |
| Transport | The CETT could not determine any measurable criteria for this resource category that would be easy to assess. If the Transport meets the minimum requirements, has acceptable past performance, and their price is reasonable, the vendor will be awarded an agreement. |

Potable Water Trucks

| Criteria | Attributes | Advantage | Criterion Advantage |
|---|---|---|---|
| Gallons Hauled Type 4 | 400-999 | Greatest capacity | The more water hauled is a more efficient use of the equipment and to the incident; and, the less time spent driving to and from a potable water source. |
| Gallons Hauled Type 3 | 1000-1500 | Minimum capacity | The more water hauled is a more efficient use of the equipment and to the incident; and, the less time spent driving to and from a potable water source. |
| | 1501-2000 | Greater capacity | |
| | 2001-2499 | Greatest capacity | |
| Gallons Hauled Type 2 | 2500-3000 | Minimum capacity | The more water hauled is a more efficient use of the equipment and to the incident; and, the less time spent driving to and from a potable water source. |
| | 3001-3500 | Greater capacity | |
| | 3501-3999 | Greatest capacity | |
| Gallons Hauled Type 1 | 4000-5000 | Minimum capacity | The more water hauled is a more efficient use of the equipment and to the incident; and, the less time spent driving to and from a potable water source. |
| | >5000 | Greatest ability to remove gray water | |

Gray Water Trucks

| Criteria | Attributes | Advantage | Criterion Advantage |
|---|---|---|---|
| Gallons Hauled Type 4 | 400-999 | Greatest capacity | The more water hauled is a more efficient use of the equipment and to the incident; and, the less time spent driving to and from a disposal site. |
| Gallons Hauled Type 3 | 1000-1500 | Minimum capacity | The more water hauled is a more efficient use of the equipment and to the incident; and, the less time spent driving to and from a disposal site. |
| | 1501-2000 | Greater capacity | |
| | 2001-2499 | Greatest capacity | |
| Gallons Hauled Type 2 | 2500-3000 | Minimum capacity | The more water hauled is a more efficient use of the equipment and to the incident; and, the less time spent driving to and from a disposal site. |
| | 3001-3500 | Greater capacity | |
| | 3501-3999 | Greatest capacity | |
| Gallons Hauled Type 1 | 4000-5000 | Minimum capacity | The more water hauled is a more efficient use of the equipment and to the incident; and, the less time spent driving to and from a disposal site. |
| Pump Type | Centrifugal (Drafting) | None | The vacuum pump offers greater efficiency over the centrifugal pump (drafting). |
| | Vacuum | Greatest efficiency | |

Dozers/Tractor Plow

| Criteria | Attributes | Advantage | Criterion Advantage |
|---|---|---|---|
| Horsepower Type 3 | 50-74 | Minimum Performance | Increased horsepower offers greater equipment performance and capability. |
| | 75-99 | Greater Performance | |
| Horsepower Type 2 | 100-132 | Minimum Performance | Increased horsepower offers greater equipment performance and capability. |
| | 133-165 | Greater Performance | |
| | 166-199 | Greatest Performance | |
| Horsepower Type 1 | 200-241 | Minimum Performance | Increased horsepower offers greater equipment performance and capability. |
| | 242-281 | Greater Performance | |
| | 281-350 | Greatest Performance | |
| Winch | No | None | A winch allows for more capacity for this equipment, offering an advantage. |
| | Yes | More Capacity | |
| Blade | Straight | Minimum Performance | Increased blade capability offers an advantage with increased performance of the equipment. |
| | Manual Angle | Greater Performance | |
| | 6-Way Hydraulic | Greatest Performance | |

# 2010 Solicitations

Heavy Equipment with Water: Skidgines, Pumper Cats, and Softtracks – Water Handling: Engines, Type 3-6; Support Water Tender, Type 1-3; and Tactical Water Tender, Type 1-2

**EQUIPMENT BEING EVALUATED: Heavy Equipment with Water (Skidgines, Pumper Cats, Softtracks)**

Within each small business program category, priority will be given as shown below.

Criteria have been developed for each category of equipment to assess the advantages for dispatch priority. Advantages will be given a point value. The total points for each piece of equipment's advantages are then divided by the price resulting in dispatch priority with highest total advantage per dollar being ranked highest on the DPL. The following is a list of the advantages and associated points for each equipment category. A complete breakdown can be found on the following pages.

**EQUIPMENT BEING EVALUATED: Water Handling (Engines Type 3-6, Support Water Tenders Type 1-3, Tactical Water Tenders Type 1-2)**

Within each small business program category, priority will be given as shown below.

Criteria have been developed for each category of equipment to assess the advantages for dispatch priority. Advantages will be given a point value. The total points for each piece of equipment's advantages are then divided by the price resulting in dispatch priority with highest total advantage per dollar being ranked highest on the DPL. The

following tables provide a list of the advantages and associated points for each equipment category. A complete breakdown can be found on the following pages.

NOTE: Water handling is a re-solicitation of equipment. Based on experiences with the 2007 solicitation and the advantage points assigned the attributes, the Government was paying more for some attributes than the value being received. Therefore, advantage points were reevaluated and changed to give a better value for the benefit received for this equipment. Mechanical condition was removed as an advantage because it was found to be too subjective.

NOTE: The 2007 Solicitations section in this document is included as it was originally written in the "Methodology for EERA Award and Dispatch Priority" in April 2007.

## EQUIPMENT BEING EVALUATED: Skidgines

Skidgine Advantages

| Factors | Attributes | Value | Importance Factor | Advantage Points** |
|---|---|---|---|---|
| Gallons Hauled Type 1 | 1200-1499 gallons | 95.5 | 2 | 191 |
| | 1500-2499 gallons | 116 | | 232 |
| | 2500+ gallons | 137 | | 274 |
| Gallons Hauled Type 2 | 800-999 gallons | 97 | 2 | 194 |
| | 1000-1199 gallons | 118 | | 236 |
| Gallons Hauled Type 3 | 400 to 599 gallons | 65 | 2 | 130 |
| | 600 to 799 gallons | 75 | | 150 |
| Gallons Hauled Type 4 | 200 to 299 gallons | 65 | 2 | 130 |
| | 300 to 399 gallons | 75 | | 150 |
| Foam Proportioner System (Type 1 and 2) | None | 21 | 1 | 21 |
| | Manually Regulated Proportioner | 24 | | 24 |
| | Automatic Regulating Proportioner | 27 | | 27 |
| Foam Proportioner System (Type 3 and 4) | None | 52 | 1 | 52 |
| | Manually Regulated Proportioner | 56 | | 56 |
| | Automatic Regulating Proportioner | 60 | | 60 |
| Monitor (Type 1 and 2 only) | No | 22 | 1 | 22 |
| | Yes | 27 | | 27 |
| Winch or Grapple that is usable (Type 3 and 4 only) | No | 104 | 1 | 104 |
| | Yes | 118 | | 118 |

## EQUIPMENT BEING EVALUATED: Pumper Cats

Pumper Cat Advantages

| Factors | Attributes | Value | Importance Factor | Advantage Points** |
|---|---|---|---|---|
| Gallons Hauled Type 1 | 500-649 gallons | 47 | 2 | 94 |
| | 650 gallons + | 63.5 | | 127 |
| Gallons Hauled Type 2 | 325-399 gallons | 47 | 2 | 94 |
| | 400-499 gallons | 63.5 | | 127 |
| Gallons Hauled Type 3 | 200-274 gallons | 47 | 2 | 94 |
| | 275-324 gallons | 63.5 | | 127 |
| Angle Blade | Straight Blade | 94 | 1 | 94 |
| | Manual Angle | 110 | | 110 |
| | 6 way Hydraulic | 127 | | 127 |
| Winch that is usable | No | 36 | 1 | 36 |
| | Yes | 47 | | 47 |
| Foam Proportioner System | None | 19 | 1 | 19 |
| | Manually Regulated Proportioner | 23 | | 23 |
| | Automatic Regulating Proportioner | 27 | | 27 |

## EQUIPMENT BEING EVALUATED: Softtrack

Softtrack Advantages

| Factors | Attributes | Value | Importance Factor | Advantage Points** |
|---|---|---|---|---|
| Gallons Hauled Type 1 | 600-1199 gallons | 85 | 2 | 170 |
| | 1200 gallons + | 118 | | 236 |
| Winch that is usable | No | 32 | 1 | 32 |
| | Yes | 44 | | 44 |
| Monitor | No | 17 | 1 | 17 |
| | Yes | 24 | | 24 |
| Foam Proportioner System | None | 18 | 1 | 18 |
| | Manually Regulated Proportioner | 21 | | 21 |
| | Automatic Regulating Proportioner | 24 | | 24 |
| Monitor | No | 17 | 1 | 17 |
| | Yes | 24 | | 24 |

## EQUIPMENT BEING EVALUATED: Water Handling Equipment

All equipment on an awarded Agreement will be ranked on the dispatch list according to the advantages the equipment has to offer. During the preseason inspection, information on each piece of equipment's advantages will be collected. Those pieces of equipment receiving an award will then be moved to the next step of ranking for the dispatch priority list.

Criteria have been developed for each category of equipment to assess the advantages for dispatch priority. Advantages will be given a point value. The total points for each piece of equipment's advantages are then divided by the price resulting in dispatch priority with highest total advantage per dollar being ranked highest on the dispatch list. The following tables provide a list of the advantages and associated points for each equipment category. A complete breakdown can be found on the following pages.

## EQUIPMENT BEING EVALUATED: Engines

Engine Advantages

| Criteria | Attributes | Value | Importance Factor | Advantage Points |
|---|---|---|---|---|
| Gallons Hauled Type 6 | 150-225 | 97 | 2 | 194 |
| | 226-300 | 106 | | 212 |
| | 301-399 | 115 | | 230 |
| Gallons Hauled Type 5 | 400-500 | 97 | 2 | 194 |
| | 501-625 | 106 | | 212 |
| | 626-749 | 115 | | 230 |
| Gallons Hauled Type 4 | 750-850 | 97 | 2 | 194 |
| | 851-999 | 106 | | 212 |
| | 1000-1200 | 115 | | 230 |
| Gallons Hauled Type 3 | 500-599 | 97 | 2 | 194 |
| | 600-749 | 106 | | 212 |
| | 750-1000 | 115 | | 230 |
| Pump Performance Type 3,4,5,6 | Acceptable | 23.5 | 2 | 47 |
| | Good | 26.5 | | 53 |
| | Excellent | 28 | | 56 |
| Age | 10+years | 25 | 1 | 25 |
| | 8-9 years | 26 | | 26 |
| | 6-7 years | 27 | | 27 |
| | 4-5 years | 28 | | 28 |
| | 2-3 years | 29 | | 29 |
| | Current Year to 1 year | 30 | | 30 |
| Foam Proportioner System | Manually Regulated Proportioner | 11 | 1 | 11 |
| | Automatic Regulating Proportioner | 12 | | 12 |

**Pressure and Flow Testing of Pumps**

Testing will be conducted as close to the pump as possible using a calibrated, liquid-filled pressure gauge.

The following flows will result:

.520 diameter sharp edged orifice.

| Pressure | Flow |
|---|---|
| 100 psi | 50 gpm |
| 125 psi | 56 gpm |
| 150 psi | 61 gpm |

.716 diameter sharp edged orifice.

| Pressure | Flow |
|---|---|
| 250 psi | 150 gpm |
| 312.5 psi | 167 gpm |
| 375 psi | 183 gpm |

The resultant figures will be applied to the pump ratings as follows:

Type 3 engines

Pressure with .716 diameter sharp edged orifice installed

- 250 to 312 psi is a rating of “Acceptable”
- 312.5 to 374 psi is a rating of “Good”
- 375 psi or more is a rating of “Excellent”

Type 4, 5, 6 engines

Pressure measured with a .520 diameter sharp edged orifice installed

- 100 psi to 124 psi is a rating of “Acceptable”
- 125 psi to 149 psi is a rating of “Good”
- 150 psi or more is a rating of “Excellent”

## EQUIPMENT BEING EVALUATED: Support Water Tenders

Support Water Tender Advantages

| Criteria | Attributes | Value | Importance Factor | Advantage Points |
|---|---|---|---|---|
| Gallons Hauled Type 3 | 1000-1499 | 94.5 | 2 | 189 |
| | 1500-1999 | 102.5 | | 205 |
| | 2000-2499 | 111.5 | | 223 |
| Gallons Hauled Type 2 | 2500-2999 | 94.5 | 2 | 189 |
| | 3000-3499 | 102.5 | | 205 |
| | 3500-3999 | 111.5 | | 223 |
| Gallons Hauled Type 1 | 4000-4499 | 94.5 | 2 | 189 |
| | 4500-4999 | 102.5 | | 205 |
| | 5000 + | 111.5 | | 223 |
| Suspension Type 1 & 2 | Air Bag | 23.5 | 2 | 47 |
| | Vocational Duty | 28 | | 56 |
| Suspension Type 3 | Single Rear Axle | 23.5 | 2 | 47 |
| | Single Rear Axle with E-locker or Interlock | 28 | | 56 |
| Age | 16+ years | 29 | 1 | 29 |
| | 12 years to 15 years | 30 | | 30 |
| | 8 years to 11 years | 31 | | 31 |
| | 4 years to 7 years | 32 | | 32 |
| | Current year to 3 years | 33 | | 33 |
| Spray Bar Configuration | Gravity F or R | 13 | 1 | 13 |
| | Gravity F & R | 14 | | 14 |
| | Pressure F or R | 15 | | 15 |
| | Pressure F & R | 16 | | 16 |

## EQUIPMENT BEING EVALUATED: Tactical Water Tenders

Tactical Water Tender Advantages

| Criteria | Attributes | Value | Importance Factor | Advantage Points |
|---|---|---|---|---|
| Gallons Hauled Type 2 | 1000-1499 | 61.5 | 2 | 123 |
| | 1500-1999 | 69 | | 138 |
| Gallons Hauled Type 1 | 2000-2499 | 61.5 | 2 | 123 |
| | 2500 + | 69 | | 138 |
| Monitor | None | 57 | 1 | 57 |
| | Manual | 62 | | 62 |
| | Remote | 66 | | 66 |
| Suspension | Air Bag | 28.5 | 2 | 57 |
| | Vocational Duty | 33 | | 66 |
| Age | 16+ years | 22 | 1 | 22 |
| | 12 years to 15 years | 23 | | 23 |
| | 8 years to 11 years | 24 | | 24 |
| | 4 years to 7 years | 25 | | 25 |
| | Current year to 3 years | 26 | | 26 |
| Spray Bar Configuration | Gravity F or R | 17 | 1 | 17 |
| | Gravity F & R | 18 | | 18 |
| | Pressure F or R | 19 | | 19 |
| | Pressure F & R | 20 | | 20 |
| Foam Proportioner System | Manually Regulated Proportioner | 11 | 1 | 11 |
| | Automatic Regulating Proportioner | 12 | | 12 |

## Explanation of Criteria and Attribute Advantages to the Government

The table below summarizes the criteria that are used in evaluating CBA for 2010 Solicitations. The table below displays the resource category that will be based on lowest price. The next several tables summarize the criteria for the Heavy Equipment with Water (Skidgines, Pumper Cats, and Softtracks) and Water Handling Equipment (Engines, Type 3-6; Support Water Tenders, Type 1-2; and Tactical Water Tenders, Type 1-2), and the relative advantages of the attributes that make up each criterion.

## Skidgines

| Criteria | Attributes | Advantage | Criterion Advantage |
|---|---|---|---|
| Gallons Hauled Type 1 | 1200-1499 | Minimum capacity | The more water hauled is a more efficient use of the equipment and to the incident; and, the less time spent looking for an acceptable water source. |
| | 1500-2499 | Greater capacity | |
| | 2500+ | Greatest capacity | |
| Gallons Hauled Type 2 | 800-999 | Minimum capacity | The more water hauled is a more efficient use of the equipment and to the incident; and, the less time spent looking for an acceptable water source. |
| | 1000-1199 | Greatest capacity | |
| Gallons Hauled Type 3 | 400-599 | Minimum capacity | The more water hauled is a more efficient use of the equipment and to the incident; and, the less time spent looking for an acceptable water source. |
| | 600-799 | Greatest capacity | |
| Gallons Hauled Type 4 | 200-299 | Minimum capacity | The more water hauled is a more efficient use of the equipment and to the incident; and, the less time spent looking for an acceptable water source. |
| | 300-3999 | Greatest capacity | |
| Foam Proportioner System | None | None | Automatic proportioners regulate foam concentrate at a more constant rate therefore providing a constant foam percentage and use less foam concentrate than a manually regulated system. Saves money, less foam concentrate is used.<br><br>Automatic offers an advantage over the manual and manual offers an advantage over none. |
| | Manually Regulating Proportioner | Manual control | |
| | Automatic Regulating Proportioner | Automatic control | |
| Monitor (Type 1 and 2 only) | No | None | A monitor will be an advantage. |
| | Yes | Has Monitor | |
| Winch or Grapple that is usable (Type 3 and 4 only) | No | None | A winch or grapple offers an advantage. |
| | Yes | Grapple or Winch | |

## Pumper Cats

| Criteria | Attributes | Advantage | Criterion Advantage |
|---|---|---|---|
| Gallons Hauled Type 1 | 500-649 | Minimum capacity | The more water hauled is a more efficient use of the equipment and to the incident; and, the less time spent looking for an acceptable water source. |
| | 650+ | Greatest capacity | |
| Gallons Hauled Type 2 | 325-399 | Minimum capacity | The more water hauled is a more efficient use of the equipment and to the incident; and, the less time spent looking for an acceptable water source. |
| | 400-499 | Greatest capacity | |
| Gallons Hauled Type 3 | 200-274 | Minimum capacity | The more water hauled is a more efficient use of the equipment and to the incident; and, the less time spent looking for an acceptable water source. |
| | 275-324 | Greatest capacity | |
| Angle Blade | Straight Blade | None | The 6 way hydraulic blade offers the greatest efficiency, the manual blade offers some efficiency, and the straight blade offers none. |
| | Manual Blade | Greater efficiency | |
| | 6 way Hydraulic | Greatest efficiency | |
| Winch that is usable | No | None | Having a winch that is usable allows for more capacity for this equipment |
| | Yes | Greatest capacity | |
| Foam Proportioner System | None | None | Automatic proportioners regulate foam concentrate at a more constant rate therefore providing a constant foam percentage and use less foam concentrate than a manually regulated system. Saves money, less foam concentrate is used.<br><br>Automatic offers an advantage over the manual and manual offers an advantage over none. |
| | Manually Regulating Proportioner | Manual control | |
| | Automatic Regulating Proportioner | Automatic control | |

Softtrack

| Criteria | Attributes | Advantage | Criterion Advantage |
|---|---|---|---|
| Gallons Hauled Type 1 | 600-1199 | None | The more water hauled is a more efficient use of the equipment and to the incident; and, the less time spent looking for an acceptable water source. |
| | 1200+ | Greatest capacity | |
| Winch that is usable | No | None | Having a winch that is usable allows for more capacity for this equipment |
| | Yes | Greatest efficiency | |
| Monitor | No | None | A monitor will be an advantage. |
| | Yes | Greatest capacity | |
| Foam Proportioner System | None | None | Automatic proportioners regulate foam concentrate at a more constant rate therefore providing a constant foam percentage and use less foam concentrate than a manually regulated system. Saves money, less foam concentrate is used.<br><br>Automatic offers an advantage over the manual and manual offers an advantage over none. |
| | Manually Regulating Proportioner | Manual control | |
| | Automatic Regulating Proportioner | Automatic control | |

## Engines

| Criteria | Attributes | Advantage | Advantage Points |
|---|---|---|---|
| Gallons Hauled Type 6 | 150-225 | Minimum capacity | The more water hauled is a more efficient use of the fire crew with less time spent driving to and from a water refill site. |
| | 226-300 | Greater capacity | |
| | 301-399 | Greatest capacity | |
| Gallons Hauled Type 5 | 400-500 | Minimum capacity | The more water hauled is a more efficient use of the fire crew with less time spent driving to and from a water refill site. |
| | 501-625 | Greater capacity | |
| | 626-749 | Greatest capacity | |
| Gallons Hauled Type 4 | 750-850 | Minimum capacity | The more water hauled is a more efficient use of the fire crew with less time spent driving to and from a water refill site. |
| | 851-999 | Greater capacity | |
| | 1000-1200 | Greatest capacity | |
| Gallons Hauled Type 3 | 500-599 | Minimum capacity | The more water hauled is a more efficient use of the fire crew with less time spent driving to and from a water refill site. |
| | 600-749 | Greater capacity | |
| | 750-1000 | Greatest capacity | |
| Age | 10+ years | None | Value given for newer vehicles is limited to 10 years. This rationale is based on USFS historical data and depreciation cycles. Older Engines are acceptable, but no given advantage points. Engine age is based on the model year referenced on the registration certificate.<br><br>Past experience demonstrates that newer equipment is less problematic and more efficient. |
| | 9 years | 1+ years newer | |
| | 8 years | 2+ years newer | |
| | 7 years | 3+ years newer | |
| | 6 years | 4+ years newer | |
| | 5 years | 5+ years newer | |
| | 4 years | 6+ years newer | |
| | 3 years | 7+ years newer | |
| | 2 years | 8+ years newer | |
| | 1 year | 9+ years newer | |
| | Current Year | 10+ years newer | |
| Pump Performance Type 3,4,5,6 | Acceptable | None | Wildland firefighting historically uses less volume and more pressure. Higher pressures allow firefighters to move water through hoses to locations further from the engine, which increases productivity. |
| | Good | Greater PSI | |
| | Excellent | Greatest PSI | |
| Foam Proportioner System | Manually Regulating Proportioner | Manual Control (none) | Automatic proportioners regulate foam concentrate at a more constant rate therefore providing a constant foam percentage and use less foam concentrate than a manually regulated system. Saves money, less foam concentrate is used. |
| | Automatic Regulating Proportioner | Automatic | |

## Support Water Tenders

| Criteria | Attributes | Advantage | Advantage Points |
|---|---|---|---|
| Gallons Hauled Type 3 | 1000-1499 | Minimum capacity | The more water hauled is a more efficient use of the fire crew with less time spent driving to and from a water refill site. |
| | 1500-1999 | Greater capacity | |
| | 2000-2499 | Greatest capacity | |
| Gallons Hauled Type 2 | 2500-2999 | Minimum capacity | The more water hauled is a more efficient use of the fire crew with less time spent driving to and from a water refill site. |
| | 3000-3499 | Greater capacity | |
| | 3500-3999 | Greatest capacity | |
| Gallons Hauled Type 1 | 4000-4499 | Minimum capacity | The more water hauled is a more efficient use of the fire crew with less time spent driving to and from a water refill site. |
| | 4500-4999 | Greater capacity | |
| | 5000+ | Greatest capacity | |
| Spray Bar Configuration | Gravity F or R | Minimal acceptable | Gravity is acceptable for watering roads, but the coverage of the watering bar changes as the head pressure of the load increases or decreases. Pressurized water applications are easy to regulate and historically provide better coverage. |
| | Gravity F & R | More water, but variable coverage | |
| | Pressure F or R | Consistent coverage | |
| | Pressure F & R | Most acceptable. More water and consistent coverage | |
| Suspension | Air Bag | Not as stable over rough terrain | Large deviations in the road surface or terrain, such as unimproved Forest roads, can cause unstable load changes while driving, possibly creating a hazardous driving situation. Therefore, walking beam or single rear axle suspension is preferred. |
| | Vocational Duty | Suspension can flex or move and maintain a uniform load over each wheel which then promotes maximum traction on rough surfaces | |
| Age | 10+ years | None | Value given for newer vehicles is limited to 10 years. This rationale is based on USFS historical data and depreciation cycles. Older Engines are acceptable, but no given advantage points. Engine age is based on the model year referenced on the registration certificate.<br><br>Past experience demonstrates that newer equipment is less problematic and more efficient. |
| | 12 to 15 years | 1 to 4 years newer | |
| | 8 to 11 years | 5 to 8 years newer | |
| | 4 to 7 years | 9 to 12 years newer | |
| | Current Year to 3 years | 13 to 16 years newer | |

## Tactical Water Tenders

| Criteria | Attributes | Advantage | Advantage Points |
|---|---|---|---|
| Gallons Hauled Type 2 | 1000-1499 | Minimum capacity | The more water hauled is a more efficient use of the fire crew with less time spent driving to and from a water refill site. |
| | 1500-1999 | Greatest capacity | |
| Gallons Hauled Type 1 | 2000-2499 | Minimum capacity | The more water hauled is a more efficient use of the fire crew with less time spent driving to and from a water refill site. |
| | 2500+ | Greatest capacity | |
| Spray Bar Configuration | Gravity F or R | Minimal acceptable | Gravity is acceptable for watering roads, but the coverage of the watering bar changes as the head pressure of the load increases or decreases. Pressurized water applications are easy to regulate and historically provide better coverage. |
| | Gravity F & R | More water, but variable coverage | |
| | Pressure F or R | Consistent coverage | |
| | Pressure F & R | Most acceptable. More water and consistent coverage | |
| Suspension | Air Bag | Not as stable over rough terrain | Large deviations in the road surface or terrain, such as unimproved Forest roads, can cause unstable load changes while driving, possibly creating a hazardous driving situation. Therefore, walking beam or single rear axle suspension is preferred. |
| | Vocational Duty | Suspension can flex or move and maintain a uniform load over each wheel which then promotes maximum traction on rough surfaces | |
| Foam Proportioner System | Manually Regulating Proportioner | Manual Control (none) | Automatic proportioners regulate foam concentrate at a more constant rate therefore providing a constant foam percentage and use less foam concentrate than a manually regulated system. Saves money, less foam concentrate is used. |
| | Automatic Regulating Proportioner | Automatic | |
| Age | 16+ years | None | Value given for newer vehicles is limited to 10 years. This rationale is based on USFS historical data and depreciation cycles. Older Engines are acceptable, but no given advantage points. Engine age is based on the model year referenced on the registration certificate.<br><br>Past experience demonstrates that newer equipment is less problematic and more efficient. |
| | 12 to 15 years | 1 to 4 years newer | |
| | 8 to 11 years | 5 to 8 years newer | |
| | 4 to 7 years | 9 to 12 years newer | |
| | Current year to 3 years | 13 to 16 years newer | |
| Monitor | None | None | Monitors may help knock down flames for a more direct attack. Remotely operated monitors are more responsive to running attack and can be aimed from the operators chair while seated in the cab which is preferred for safety reasons. |
| | Manual | Manual Control | |
| | Remote | Remote Control | |

# 2011 Solicitations

Weed Washing Unit, Communications Trailer, Bus, Crew Carrier
Heavy Equipment, Fuel Tender, Vehicle with Driver
Helicopter Operations Support Trailer; Resolicitation for GIS Unit, Tent and Canopy,
Mechanic with Service Truck, Clerical Support Unit, Single Faller and Faller Module

## EQUIPMENT BEING EVALUATED: Weed Washing Unit

Within each small business program category, priority will be given according to the price offered for the type of resource. The price will be based on the daily rate offered, with the lowest price being ranked highest on the dispatch list.

## EQUIPMENT BEING EVALUATED: Communications Trailer

Within each small business program category, priority will be given according to the price offered for the type of resource. The price will be based on the daily rate offered, with the lowest price being ranked highest on the dispatch list.

## EQUIPMENT BEING EVALUATED: Bus, Crew Carrier

Within each small business program category, priority will be given according to the lowest price using the following calculation, considering both the minimum daily guarantee and the mileage rate offered, with the lowest price being ranked highest on the DPL.

(Minimum Daily Guarantee X 80%) + (Mileage Rate X 20%) = low price

Note: It was determined by the CETT that price is the only CBA attribute to be used to determine dispatch priority for Crew Carrier, Bus. Other attributes related to the quality of the equipment were discussed (vehicle age, mileage, useful life, and mechanical condition) however, none of these attributes were deemed to be a definitive, objective indicator of an advantage. Rather, they represent criteria required to be met by the vendor when adhering to the required equipment specifications. The minimum requirements were developed to ensure that equipment can perform acceptably to meet incident needs, and take into consideration safety concerns (e.g., buses must be 1977 or newer).

## EQUIPMENT BEING EVALUATED: Heavy Equipment

Within each small business program category, priority will be given as shown below. The minimum daily guarantee and mileage for the transport will not be considered in the ranking.

NOTE: For some equipment there will be attributes identified on the dispatch priority list that may be required by the Government. These attributes will not be given points but if the attribute is specifically ordered by the Incident Management Team, a vendor that offers the attribute on their equipment shall be given preference for the order.

The following criteria have been developed to assess the advantages for dispatch priority, and each advantage is given a point value. The total points for each resource's advantage are then divided by the daily rate resulting in dispatch priority with the highest total advantage per dollar being ranked highest on the dispatch list. The following is a list of the advantages and associated points for each category

Dozer (Type 1)

a. Horsepower - 9 possible points
b. Blade - 6 possible points
c. Winch - 1 possible point

Dozer/Tractor Plow (Type 2)

a. Horsepower - 9 possible points
b. Blade - 6 possible points
c. Winch - 1 possible point

Dozer/Tractor Plow (Type 3)

a. Horsepower - 6 possible points
b. Blade - 6 possible points
c. Winch - 1 possible point

Attribute, not given points

a. Ripper
b. Grapple
c. Low Ground Pressure
d. Horsepower, 282 and greater

Excavators: Price offered for the type of resource. The price will be based on the daily rate, with the lowest price being ranked highest on the dispatch list. Separate priority lists will be generated for each Type of excavator.

Attribute, not given points

a. Clamshell Bucket
b. Up Down Blade or Dozer Blade
c. Steep Ground Excavator

Transports: Within each small business program category, equipment will be dispatched based on the attributes that best meet the needs of the government. The following criteria have been developed to assess the advantages for dispatch priority, and each advantage is given a point value. The total points for each resource's advantage are then divided by the daily rate resulting in dispatch priority with the highest total advantage per dollar being ranked highest on the dispatch list.

**EQUIPMENT BEING EVALUATED: Fuel Tender**

Within each small business program category, priority will be given according to the price offered for the type of resource. The price will be based on the daily rate offered, with the lowest price being ranked highest on the dispatch list.

**EQUIPMENT BEING EVALUATED: Vehicle with Driver**

Within each small business program category, priority will be given according to the lowest price using the following calculation, considering both the daily rate and the mileage rate offered, with the lowest price being ranked highest on the DPL.

(Daily Rate X 80%) + (Mileage Rate X 20%) = low price

**EQUIPMENT BEING EVALUATED: Helicopter Operations Support Trailer**

Within each small business program category, priority will be given according to the price offered for the type of resource. The price will be based on the daily rate offered, with the lowest price being ranked highest on the dispatch list.

**EQUIPMENT BEING EVALUATED: GIS Unit**

Within each small business program category, priority will be given according to the price offered for the type of resource. The price will be based on the daily rate offered, with the lowest price being ranked highest on the dispatch list. GIS Specialist rates will not be considered in the calculation.

**EQUIPMENT BEING EVALUATED: Tent and Canopy**

Within each small business program category, priority will be given according to the price offered for the type of resource. The following calculation will be used to determine the lowest price, with the lowest price being ranked highest on the dispatch list. ((Daily Rate + Weekly Rate/8) x 0.7) + ((Monthly Rate/30) x 0.3).

**EQUIPMENT BEING EVALUATED: Mechanic with Service Truck**

Within each small business program category, priority will be based on the advantages the resource has to offer. The following criteria have been developed to assess the advantages for dispatch priority. Advantages will be given a point value. The total points for each resource's advantage are then divided by the price resulting in dispatch priority with highest total advantage per dollar being ranked highest on the dispatch list. The following is a list of the advantages and associated points for each category:

**Advantages**

1. Mechanic with Service Truck (Type 1)
    a. Current Automotive Service Excellence (ASE) Certification - 50 possible points
    b. Vocational School or Manufacturer Diesel/ Heavy Equipment Mechanic Certificate - 70 possible points
    c. Years of Experience (Heavy Equipment) - 80 possible points

2. Mechanic with Service Truck (Type 2)
    a. Current Automotive Service Excellence (ASE) Certification - 50 possible points
    b. Current Emergency Vehicle Technician (EVT) Certification - 70 possible points
    c. Years of Experience - 80 possible points
    d. Fire Apparatus Mechanic - 100 possible points

**EQUIPMENT BEING EVALUATED: Clerical Support Unit**

Within each small business program category, priority will be given according to the lowest price using the following calculation considering both the daily rate and cost per copy offered (see calculation below), with the lowest price being ranked highest on the dispatch list. Plotted sheets, laminating, faxing, and binding will not be included in the calculation.

Black and White: (8 ½" X 11" (cost/copy) x 70%) + (11" X 17" (cost/copy) x 30%) X 95% Color: (8 ½" X 11" (cost/copy) x 70%) + (11" X 17" (cost/copy) x 30%) X 5%
Black and White + Color = Score
Price (calculation for placement on dispatch priority list) = (Score x 1000 x 70%) + (Daily Rate x 30%)

**EQUIPMENT BEING EVALUATED: Single Faller and Faller Module**

Within each small business program category, priority will be given according to the price offered for the type of resource. The price will be based on the daily rate, with the lowest price being ranked highest on the dispatch list. Separate priority lists will be generated for single fallers and faller modules.

## Explanation of Criteria and Attribute Advantages to the Government

The table below summarizes the criteria that are used in evaluating CBA for 2010 Solicitations. The table below displays the resource category that will be based on lowest price.

| Resource Category | Rationale for using Price Only |
|---|---|
| Crew Carrier Buses | The CETT could not determine any measurable criteria for this resource category that would be easy to assess. If the Crew Carrier Bus meets the minimum requirements, has acceptable past performance, and their price is reasonable, the vendor will be awarded an agreement. Age was considered but the CETT felt the vendors that are currently out there providing buses are all using an older model of bus and that adding age as an attribute would not get us anything different than what we are currently getting. |
| Single Faller & Faller Module | FAM could not determine any measurable criteria for this resource category that would be easy to assess. If Single Faller and Faller Module meet the minimum requirements, has acceptable past performance, and their price is reasonable, the vendor will be awarded an agreement. |
| GIS Unit & Communications Trailer, Helicopter Operations Support Trailer | FAM could not determine any measurable criteria for this resource category that would be easy to assess. If GIS Unit, Communications Trailer, and Helicopter Operations Support Trailers meet the minimum requirements, has acceptable past performance, and their price is reasonable, the vendor will be awarded an agreement. |
| Weed Washing Unit | FAM could not determine any measurable criteria for this resource category that would be easy to assess. If the Weed Washing Unit meets the minimum requirements, has acceptable past performance, and their price is reasonable, the vendor will be awarded an agreement. |
| Vehicle with Driver | FAM could not determine any measurable criteria for this resource category that would be easy to assess. If the Vehicle with Driver meets the minimum requirements, has acceptable past performance, and their price is reasonable, the vendor will be awarded an agreement. |
| Fuel Tender | FAM could not determine any measurable criteria for this resource category that would be easy to assess. If the Fuel Tender meets the minimum requirements, has acceptable past performance, and their price is reasonable, the vendor will be awarded an agreement. |

# Appendix B: History of Choosing by Advantages

For a brief history and description of the CBA process start at this website: http://www.decisioninnovations.com/about.html. For convenience, excerpts from the page are displayed below.

> *Decades of research — sponsored by the USDA Forest Service, in cooperation with Utah State University — led to the discovery that sound methods of decision making do not base decisions on the importance of factors, criteria, goals, roles, objectives, categories, attributes, advantages and disadvantages, or pros and cons. Instead, sound methods base decisions on the importance of advantages. Therefore, "Choosing By Advantages" is the name we selected for the set of decision making concepts and methods that are being taught by the Institute for Decision Innovations, Inc. Another name that could have been selected is "Sound Decision making."*
>
> *Choosing By Advantages (CBA) is not just a set of decision making concepts and methods. It is a decision making system. The CBA system includes a wide variety of decision making tools, techniques, and methods — sharing just one set of definitions, principles, and models.*
>
> *Examples of CBA Definitions*
>
> *The essential decision making terms are much more precisely defined in the CBA vocabulary (the sound-decision making vocabulary) than in common usage. In particular, the terms factor, criterion, attribute, and advantage are often used interchangeably in common usage, but in the CBA vocabulary they are never used interchangeably.*
>
> *To illustrate the logic and simplicity of the CBA vocabulary, following are the CBA definitions of the terms attribute and advantage:*
>
> - *An attribute is a characteristic, quality, or consequence of ONE alternative.*
> - *An advantage is a beneficial difference between the attributes of TWO alternatives.*
>
> *An example that is often used in CBA workshops to illustrate these definitions is the choice between two canoes: Canoe C and Canoe K. In the canoe-weight factor, the attribute of C is 65 Pounds. In this same factor, the attribute of K is 75 Pounds.*
>
> *Given these attributes, the workshop participants are asked, "Assuming that the stakeholders in this decision would prefer the lighter canoe-weight (but not necessarily the lighter canoe, because other factors will need to be considered) which canoe has the advantage in weight?" Of course, the participants say that Canoe C has the advantage in this factor. This sets the stage for the following series of questions and answers:*

*Q: How large is the advantage of C, compared with K?*
*A: The participants nearly always give the following correct answer: 10 Pounds.*

*Q: Which canoe has the disadvantage in weight?*
*A: Canoe K.*

*Q: How large is the disadvantage of K, compared with C?*
*A: The participants nearly always give the same correct answer: 10 Pounds.*

*Notice that the 10-pound disadvantage of K is exactly the same 10 pounds as the 10-pound advantage of C.*

*The Fundamental Rule of Sound Decision making*

*In 1981, the CBA system came to life when it was discovered and verified that, without exception, a disadvantage of one alternative is an advantage of another. Decisions must be based on the importance of advantages.*

# Appendix C: Committee/Task Team Membership

Original EERA Methodology Committee Membership

| Name | Role | Forest Service Unit |
|---|---|---|
| Byron Brown | Procurement Analyst, AQM | Washington Office |
| Carl Culham | Procurement Analyst, AQM | Washington Office |
| Cheryl Emch | Management Analyst, AQM | Washington Office |
| Cliff Northrop | Civil Engineer, National Forest Systems | Region 8 |
| Dick Reynolds | Contract / Logistics Specialist, FAM | Region 5 |
| Emmy Ibison | Assistant Coordinator, National Incident Administration, FAM | Washington Office |
| John Parsons | Acting Fire Operations Equipment Specialist, FAM | Region 6 |
| Kevin Erickson | Fire Equipment Specialist, FAM | Region 1 |
| Peggy Toya | Contract Specialist, AQM | Region 3 |
| Ron Schilz | Procurement Analyst, AQM | Washington Office |

Contract Equipment Task Team (CETT) Membership Chartered under NWCG

| Name | Role | Forest Service Unit |
|---|---|---|
| Shane LaValley | Procurement Analyst, AQM; CETT Co-chair | Washington Office |
| Laurie Sonju | Procurement Analyst, AQM | Washington Office |
| Dick Reynolds | Contract/Logistics Specialist, FAM; CETT Chair | Region 5 |
| Kevin Erickson | Fire Equipment Specialist, FAM | Region 1 |
| Richard Nieto | Director, FAM | Region 3 |
| Steve Waters | Emergency Management Specialist, FAM | Region 4 |
| Patrick Gallegos | Contracting Officer/Procurement Unit Leader, AQM | Region 5 |
| LuAnn Grover | Contract Operations Assistant, FAM | Region 6 |
| Willie Begay | Fire Operations Specialist, FAM | Region 6 |
| Terry Eller | Forestry Technician | Region 8 |
| Cheryl Molis | Administrative Officer, NIFC | Washington Office |
| Judy Dunnam | Emergency Operations Specialist, NICC (2008-2009) | BLM |
| Emil Magallanes | Emergency Operations Specialist, NICC | BLM |