Workshop Objectives

Debris operations resulting from Hurricane Ike cost cities and counties over 500 million dollars and in a time of economic crisis understanding the financial implications of a catastrophic disaster may be as important as the debris removal operations themselves. This workshop will focus on considerations that should be explored to maintain the financial solvency of a community after a disaster and mitigate any risks of non-reimbursement by federal agencies.

Curriculum for Program

Part 1 – Introduction — 10 Minutes

Format: Interactive Lecture

- Introduction of instructors and participants

Part 2 – Purpose and Overview — 20 Minutes

Format: Interactive Lecture and Large Group Discussion

- Procurement
- Finance
- Reimbursement
- Questions and next steps

Case Study: Escambia County, Florida – Hurricane Ivan
City of Waveland, Mississippi – Hurricane Katrina
City of Galveston, Texas – Hurricane Ike

Part 3 – Procurement — 45 Minutes

Format: Interactive Lecture and Large Group Discussion

- Services to be procured
- Procurement guidelines
- Reasonable cost
- Procurement methods and types of contracts
- Procurement best practices

Case Study: City of Slidell, Louisiana – Hurricane Katrina

BREAK — 15 Minutes

Sponsored by: DRC Emergency Services

Part 4 – Finance — 40 Minutes

Format: Interactive Lecture and Large Group Discussion

- Immediate needs funding (INF)

- Advanced funding requests
- Project worksheets
- State of Texas Disaster Contingency Funds
- Ideas of note

Part 5 – Reimbursement 35 Minutes

Format: Interactive Lecture and Large Group Discussion

- Funding Sources
- Public Assistance (PA) Program
- Appeals
- Federal Highway Administration Emergency Relief (FHWA ER) Program
- Emergency Watershed Protection (EWP) Program

Part 6 – Questions/Next Steps 15 Minutes

Format: Interactive Lecture

- Resources and references
- Next workshop
- Questions

M. Wayne Floyd

East Carolina University
B.S. in Environmental Health

KEY EXPERTISE

- Debris Management
- Emergency Management and Response
- Debris Removal Operations
- Environmental Health
- Public *Assistance*

Mr. Floyd has over 25 years of hands-on experience in emergency management planning, disaster response and recovery and environmental health hazards associated with natural disasters. Most recently, Mr. Floyd has served as Program Manager for the Texas Department of Transportation (TxDOT) – Beaumont District currently conducting various debris missions throughout southeast Texas.

Previously, Mr. Floyd involved managing debris management operations for a number of jurisdictions in Florida in response to Hurricanes Charley and Frances. While under contract to NCDOT, Mr. Floyd served as an on-site construction manager responsible for coordinating the services of a staff of 27 public assistance (PA) profect officers in administering the Federal Emergency Management Agency (FEMA) PA Program. This involved working with NCDOT, the North Carolina Emergency Management Agency, FEMA and local governments in the development of 404 and 406 mitigation proposals. Mr. Floyd was responsible for obtaining data and developing the enviornmental aspects of the mitigation proposals and the damage survey reports. In addition, he provided oversight to management contracts.

In addition, Mr. Floyd worked as the State Deputy PA Officer for debris management while under contract with the Mississippi Emergency Management Agency (MEMA). He worked with FEMA, State PA Coordinators and Project Officers to develop validation guidelines for field operations and monitoring of debris removal operations throughout the State. Mr Floyd was responsible for the coordination between FEMA's Mission Assignment for Wet Debris/Sediment to the U.S. Coast Guard (USCG) and the Natural Resocurces Conservation Service (NRCS) Emergency Watershed Protection jurisdictional issues and funding opportunities available to local communities and state agencies. He facilitated the combined efforts of FEMA, USCG, the Mississippi Department of Marine Resources (MDMR), local counties and Fortune 100 private companies in the removal of a 15,000 cubic yard debris field deposited in a sensitive marine preserve.

WASTE MANAGEMENT OF TEXAS, INC. **CHARLES A. RIVETTE, P.E.**
Manager of Planning and Project Development

EDUCATION

University of Kentucky, Master of Science in Civil Engineering, 1981
University of Kentucky, Bachelor of Science in Civil Engineering, 1979

LICENSES AND AFFILIATIONS

Registered Professional Engineer: State of Texas, 1985
Board Member, TCEQ Municipal Solid Waste Advisory Committee (since 1997)
Member, National Society of Professional Engineers
Member, American Society of Civil Engineers
Former Company Representative, Geosynthetic Research Institute

CURRENT RESPONSIBILITIES

Mr. Rivette supports the planning, permitting, construction and operations of WM's 9 SE Texas landfills and two transfer stations. He has been directly involved in the debris management activities for Hurricanes Ike and Rita, and Tropical Storm Allison.

PROFESSIONAL EXPERIENCE

Mr. Rivette has directed daily landfill operations as a District Manager, as well as provided support to WM's Government Affairs Program. Prior to joining Waste Management, Mr. Rivette worked for BFI for 12 years. He held positions as the Manager of Geotechnical Engineering, as Director for Landfill Permitting and Development, as Assistant Regional Landfill Manager and as Area Landfill Manager. As Area Landfill Manager he was responsible for the operations of 22 landfills in the states of Texas, Oklahoma, and Arkansas. He has managed the construction, or the operations, or directly assisted in the permitting, for more than 50 different landfills. He has also provided expert testimony in association with landfill permitting activities.

Prior to working directly for a waste industry operations company, Mr. Rivette worked over eight years as a civil engineer with an international geoscience consulting firm. In this capacity, he provided consulting engineering design services for a diverse range of projects including solid waste landfills, liquid waste containment facilities, tall buildings, liquid storage tanks, roadway design, and very large deepwater offshore structures. Mr. Rivette worked in all facets of the geoscience consulting industry, including project management, field and construction supervision, proposal and cost analysis, in situ tool development and use, laboratory operations, special product research, and forensic studies

Mr. Rivette has authored or co-authored several published technical articles, including "Design and Cost Impacts of Subtitle D Regulations on Private Landfill Owners" published in the September 1993 Geotechnical News, and, "the Use of Calcium Sulfate as an Alternate Road Base Material" which was chosen by the Texas Section of ASCE as a winner of the Hawley Award.

John Buri

Mr. Buri is a versatile emergency management, disaster mitigation, preparedness, response and recovery professional with eight years of dedicated consulting experience on behalf of cities, counties, regional planning councils and state governments. Mr. Buri has assisted with the management of debris monitoring programs following some of the nation's worst natural disasters including Hurricane's Dolly, Gustav and Ike 2008. He has been responsible for general operations oversight and advisor to department heads and elected officials regarding disaster debris management and financial issues. Mr. Buri also is extremely familiar with policies associated with specialized debris missions including private property ROE administration, waterways cleanup and beach remediation services.

Through his disaster recovery work, Mr. Buri has developed significant knowledge of federal, state and local regulations pertaining to solid waste management, hazardous waste management. Mr. Buri is well versed in regulations, policies and reimbursement processes for state and federal agencies including: Division of Emergency Management, Department of Transportation, Department of Environmental Quality, State Historical Preservation Office, FEMA, OSHA and FHWA. In addition, Mr. Buri has been recognized throughout the State of Texas as an expert on debris management issues, conducting speaking engagements at the Texas Hurricane Conference, the Texas Homeland Security Conference and the Solid Waste Association of North America annual conferences over the last three years.

Mr. Buri also sits on the Disaster Recovery Committee for the National Hurricane Conference and is a member of the Board of Directors for the Emergency Management Association of Texas.

Texas State University
Master of Public Administration

University of Texas at Austin
B.A. in Government

KEY EXPERTISE

- FEMA PA Program Management
- Procurement, contracts and negotiations
- Federal reimbursement/appeals support
- Disaster debris management plans
- Government affairs

Mr. Mark Rose is President of the Living Earth Technology Company (LETCO) Group, LLC DBA and has been with the firm since 1995. He has over 32 years of experience in the soil, mulch and composting industry and is considered an expert in field of vegetative waste management.

In 2008, Mr. Rose was intimately involved in the City of Houston's debris management program following Hurricane Ike as a subject matter expert to city leadership. In addition, the LETCO Group, under his direction, was one of the primary markets for the reduced vegetative waste for the City's debris.

Mr. Rose is a member of the Texas Commission on Environmental Quality (TCEQ) Municipal Solid Waste and Resource Recovery Council and is president of the Compost Advisory Council of the State of Texas Alliance for Recycling.

Mark Rose

KEY EXPERTISE

- Solid waste management
- Composting
- Public policy

Workshop 4

April 29, 2010

Guest Speakers:
Mark Rose & Chuck Rivette

Topic:
Best Practices to Properly Dispose of Disaster Debris

WORKSHOP AGENDA

- Ensuring Proper Disposal of Debris
- End-Markets for Disaster Debris
- Disposing of Special Wastes

9:00 a.m. – 12:00 p.m.
H-GAC Conference Room
3555 Timmons Lane Houston, TX 77027

Reducing Your Disaster Footprint: An In-Depth Discussion of Debris Disposal Methods

INTRODUCTION

Presentation Team

John Buri

- Supported debris management for every Beck Disaster Recovery, Inc. (BDR) disaster response since 2004
- Provides subject matter expertise in disaster planning, operations, and grant funding opportunities
- Served as program manager for the City of Houston following Hurricane Ike

Wayne Floyd

- Serves as BDR's program manager for the Texas Department of Transportation debris projects
- Over 25 years of experience coordinating with local, state, and federal agencies in emergency management

TODAY'S AGENDA

- ✓ **SERIES MIDPOINT REVIEW**
- PURPOSE AND OVERVIEW
- ENSURING PROPER DISPOSAL
- END-MARKETS FOR DISASTER DEBRIS
- DISPOSING OF SPECIAL WASTES
- QUESTIONS/NEXT STEPS

SERIES MIDPOINT REVIEW

- Workshop #1: Getting Back to Basics
  - Review of previous events
  - Ideas for debris management planning
  - Review of H-GAC resources
- Participant feedback
- Outstanding questions

SERIES MIDPOINT REVIEW

- Workshop #2: All Hands on Deck
  - Triggers for state/federal mission assignments
  - Federal agencies
  - State agencies
- Participant feedback
- Outstanding questions

SERIES MIDPOINT REVIEW

- Workshop #3: Keeping It Between the Lines
  - Federal agencies – FEMA, OIG, EPA, USFWS, USACE
  - State agencies – TCEQ, THC, GLO, TDEM
  - Local jurisdictions
- Participant feedback
- Outstanding questions

TODAY'S AGENDA

- ✓ SERIES MIDPOINT REVIEW
- ✓ **PURPOSE AND OVERVIEW**
- ENSURING PROPER DISPOSAL
- END-MARKETS FOR DISASTER DEBRIS
- DISPOSING OF SPECIAL WASTES
- QUESTIONS/NEXT STEPS

PURPOSE AND OVERVIEW

- Provide information on proper disposal of disaster-generated debris
- Estimate potential debris volume
- Discuss required documentation for disposal
- Identify viable recycling programs
- Discuss end-markets
- Identify roles and responsibilities for final disposal
- Review state and federal regulations

TODAY'S AGENDA

- ✓ SERIES MIDPOINT REVIEW
- ✓ PURPOSE AND OVERVIEW
- ✓ **ENSURING PROPER DISPOSAL**
- END-MARKETS FOR DISASTER DEBRIS
- DISPOSING OF SPECIAL WASTES
- QUESTIONS/NEXT STEPS

ENSURING PROPER DISPOSAL

- Planning considerations
  - Landfill space
  - Recycling options
  - Labor resources
  - Equipment
  - Storage locations
  - Long-term impacts on landfill space

ENSURING PROPER DISPOSAL

- Waste streams
  - Vegetative
  - Construction and demolition (C&D)
  - Hazardous materials/toxic
  - Household hazardous waste
  - White goods
  - Putrescible waste
  - Vehicles and vessels
  - Electronic

ENSURING PROPER DISPOSAL

Volume

- Debris volume by event
  - Wind
  - Surge/flooding
  - Seismic
  - Man-made

ENSURING PROPER DISPOSAL

Volume

Location	Disaster	Impact/Debris Quantities
Los Angeles, California	Northridge earthquake	7,000,000 cubic yards (CY) 25,000 dwellings uninhabitable 7,000 buildings severely damaged
Escambia County, Florida	Hurricane Ivan	6,000,000 CY vegetative debris 1,000,000 CY C&D debris
New York, New York	World Trade Center	1,460,000 tons (~5,000,000 CY)
San Francisco, California	Loma Prieta earthquake	414 single family homes destroyed 18,000 single family homes damaged
Greene County, Missouri	2006 ice storm	1,250,000 CY vegetative
Mingo and Logan Counties, West Virginia	2004 floods	8,000 tons (~12,000 CY)
Sarasota County, Florida	Tropical Storm Gabrielle	150,000 CY vegetative debris

ENSURING PROPER DISPOSAL

Volume

- Debris volume by estimation
  - USACE Hurricane Debris Estimating Model considers the following factors:
    - Number of households
    - Storm category
    - Vegetation characteristic of the area
    - Storm precipitation characteristic
- FEMA 325 provides values for each of the above factors

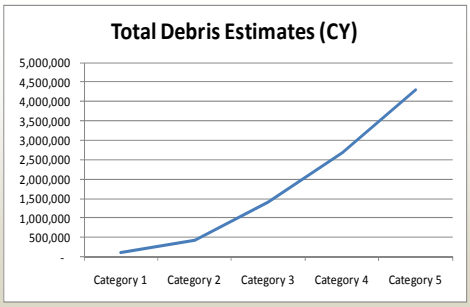
ENSURING PROPER DISPOSAL

Volume

- USACE Hurricane Debris Estimating Model
  - As the category of storm increases, the potential for debris grows exponentially.
  - The purpose of the model is to estimate potential debris volume for planning purposes.
  - Evaluate debris management site and landfill to determine capacity requirements.
  - Variables should be anticipated following an actual event.

ENSURING PROPER DISPOSAL

Volume



ENSURING PROPER DISPOSAL

Volume

ENSURING PROPER DISPOSAL

Volume

- Volume does not return to pre-storm levels
  - Volusia County, Florida following Hurricanes Charley, Francis, Ivan, and Jeanne:
    - Initial surge of vegetative debris immediately following the event
    - High levels remained for six months
    - Debris from demolitions expected to continue for another two years following the storms

ENSURING PROPER DISPOSAL

Case Study

Mecklenburg County, North Carolina – Hurricane Hugo

- An estimated decade's worth of vegetative debris was generated in three hours
- Only available landfill had less than 2.5 years of capacity remaining
- Burning was not an option due to air quality conditions
- Storm generated approximately 400,000 tons (1.6 million CY) of vegetative debris

ENSURING PROPER DISPOSAL

Case Study

Mecklenburg County, North Carolina – Hurricane Hugo (continued)

- County staged and reduced debris without using limited landfill space
- Media helped implement "Take-a-Ton" mulch give-away campaign
- Contractors hauled and sold mulch to local paper mills as boiler fuel

For more information on this study, visit the following Web site:

http://www.epa.gov/osw/conserve/rrr/imr/cdm/pubs/disaster.htm#examples

ENSURING PROPER DISPOSAL

Regulations

- State Regulations – TCEQ Regulatory Guidance
  - Traditional Municipal Solid Waste Disposal: A Guide for Local Governments
    - http://www.tceq.state.tx.us/comm_exec/forms_pubs/pubs/rg/rg-469.html/at_download/file

ENSURING PROPER DISPOSAL

Regulations

- State Regulations – Burning
  - Check local ordinances or other regulations about outdoor burning.
  - If a county has a burn ban in place, the TCEQ will not approve any exception to the rule.
  - For additional information concerning outdoor burning in Texas, consult the TCEQ's Outdoor Burning in Texas (RG-049).

ENSURING PROPER DISPOSAL

Regulations

- State Regulations – Burning
  - Burning of electrical insulation, treated lumber, plastics, non-wooden construction or demolition materials, heavy oils, asphaltic materials, potentially explosive materials, chemical wastes, or items that contain natural or synthetic rubber (for example, tires) is **strictly prohibited**.

ENSURING PROPER DISPOSAL

Regulations

- Federal Regulations
  - Hazardous waste – Resource Conservation and Recovery Act
  - Open burning – Section 110 under the Clean Air Act
  - Asbestos-containing material – 40 CFR 61.145(c)(10), NESHAP and OSHA regulations

ENSURING PROPER DISPOSAL

Regulations

- Federal Regulations – Final Disposal
  - Permitting
  - Bonded
  - Time conditions

TODAY'S AGENDA

- ✓ SERIES MIDPOINT REVIEW
- ✓ PURPOSE AND OVERVIEW
- ✓ ENSURING PROPER DISPOSAL
- ✓ **END-MARKETS FOR DISASTER DEBRIS**
- DISPOSING OF SPECIAL WASTES
- QUESTIONS/NEXT STEPS

END-MARKETS FOR DISASTER DEBRIS

- Landfills
- Biomass facilities
- Mulching and recycling facilities
- Paper mills
- Land applications of ash

END-MARKETS FOR DISASTER DEBRIS — Landfills

- Avoid landfilling reduced material
- Cost can be reasonable even if material is long-hauled
- FEMA pilot program may allow locals to keep money from recyclers
- Identify end-markets early to avoid flooded market
- Conduct due diligence for final disposal

END-MARKETS FOR DISASTER DEBRIS — Biomass Facilities

- Industrial
  - Paper mills
  - Fuel additive in boilers
- Agricultural
  - Soil amendment
- Compost facilities
  - Do not allow residents to pick up compost directly from debris management site

END-MARKETS FOR DISASTER DEBRIS — Mulching

- Chipping
  - Most expensive reduction method
  - 4:1 or 75 percent reduction
  - Grinding
  - Tub grinder
  - Belt grinder
  - Chipper
  - Wood chips must be of acceptable size

END-MARKETS FOR DISASTER DEBRIS — Mulching

- Limit contamination of material
- Mulch piles may be fire hazard if stored for extended periods of time
  - Only 15-20 feet high
  - Moved to final disposal facility quickly
- Several markets for wood chips
  - Landfill daily cover
  - Paper mill/industrial fuel
  - Soil amendment for agriculture

END-MARKETS FOR DISASTER DEBRIS — Incineration

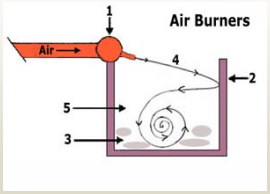
- Air curtain incinerators
  - More costly than open-burning
  - Referred to as “trench burning” or “pit burning”
  - Burns very hot (1,000º C) and reduces smoke
  - Not ideal in sandy/rocky soils or low-water table
  - Ash needs to be cleaned out periodically

END-MARKETS FOR DISASTER DEBRIS — Incineration

- Air curtain incinerators (continued)
  - In-ground or above ground
  - Speed of blower impacts amount of smoke
  - Construction of pit and berms
  - Should be managed 24 hours a day
  - Spot checks of material to ensure clean debris
  - Additional blower can increase production

END-MARKETS FOR DISASTER DEBRIS — Incineration

- Air curtain incinerators (continued)
  - Use backhoe to dig trench
  - Above ground
    - Import soil
    - Fire-box
  - Dimensions
    - 8-12' Wide
    - 12-20' Depth
    - Length of blower



END-MARKETS FOR DISASTER DEBRIS — Land Applications for Ash

- Ash
  - Agricultural benefits when added to soil
    - Replaces lime
  - Over 25 landfills in the region for use as daily cover
  - Numerous farms and ranches in region

Guest Speaker

Living Earth Technology Company

END-MARKETS FOR DISASTER DEBRIS — Recycling

- Metals
  - Market for ferrous metals is well established
  - Current market price for scrap metal is $90 to $100 per ton

END-MARKETS FOR DISASTER DEBRIS — Case Study

City of Houston, Texas – Hurricane Ike

- 3.9 million CY of vegetative debris
  - 12 debris management sites
  - 19 recycling facilities
  - 264,857 tons diverted from the waste stream
  - Erosion control at 5 landfills
  - Boiler fuel at 2 paper mills
- 1.5 million cubic yards of C&D
  - 6 final disposal sites

END-MARKETS FOR DISASTER DEBRIS — Financial Impact

- Reduce Costs
  - Pre-positioned contracts for hauling/disposal
  - Volume reduction efforts (burning, grinding, chipping, etc.)
  - Diversion of remaining debris (agricultural, industrial fuel, landfill erosion, daily cover, etc.)
- Revenue Sources
  - Sale of diverted material (metal, wood, etc.)

END-MARKETS FOR DISASTER DEBRIS

Financial Impact

- Reserve Funds
  - Restricted reserve for storm debris
  - Solid waste user fees (preferred)
    - Add to revenue requirement to be recovered through the base fee
- Special assessment
- General fund

END-MARKETS FOR DISASTER DEBRIS

- Search for industrial/manufacturing firms that may accept wood chips
  - www.RecycleTexasOnline.org
  - www.CleanTexas.org – search by material, location or business type
- EPA tool to search for end-users by area
  - http://www2.ergweb.com/bdrtool/login.asp

TODAY'S AGENDA

- ✓ SERIES MIDPOINT REVIEW
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- ✓ **DISPOSING OF SPECIAL WASTES**
- QUESTIONS/NEXT STEPS

DISPOSAL OF SPECIAL WASTES

Hazardous Material

- Flooding and Hazardous Waste
  - Flooding may cause hazardous and non-hazardous materials to be mixed.
  - Separation can be difficult or impossible under time constraints.
  - Mixed debris may end up being disposed of in a landfill not intended for mixed debris.

DISPOSAL OF SPECIAL WASTES

Regulated Asbestos Containing-Material

- Regulated Asbestos-Containing Material
  - Concern during demolition programs
  - Often in homes built before the late 1970s
  - Must be tested before initiating demolition
  - Must be disposed of in a classified landfill
  - EPA air quality monitoring
  - Plastic sheath wrapping for transportation
  - Certified asbestos supervisor on-site

DISPOSAL OF SPECIAL WASTES

Construction and Demolition

DISPOSAL OF SPECIAL WASTES

Construction and Demolition

- Mauling
  - Heavy equipment crushes material
  - 4:3 ratio or 25 percent reduction
- C&D Grinding
  - 4:2 ratio or 50 percent reduction
  - Specialized tub grinders
  - May be difficult to acquire

DISPOSAL OF SPECIAL WASTES

Construction and Demolition

- Must weigh benefits of reduction vs. direct haul
- Reduction rates lower than vegetative
  - C&D already a dense material
- Equipment breakdown can be problematic

Guest Speaker

Waste Management

TODAY'S AGENDA

- ✓ SERIES MIDPOINT REVIEW
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- ✓ END-MARKETS FOR DISASTER DEBRIS
- ✓ DISPOSING OF SPECIAL WASTES
- ✓ **QUESTIONS/NEXT STEPS**

QUESTIONS/NEXT STEPS

- Resources and References
  - EPA publication: Planning for Natural Disaster Debris
    - http://www.epa.gov/wastes/conserve/rrr/imr/cdm/pubs/pndd.pdf
  - CRS Report for Congress Managing Disaster Debris Overview of Regulatory Requirements, Agency Roles, and Selected Challenges
    - http://www.policyarchive.org/handle/10207/bitstreams/18988.pdf

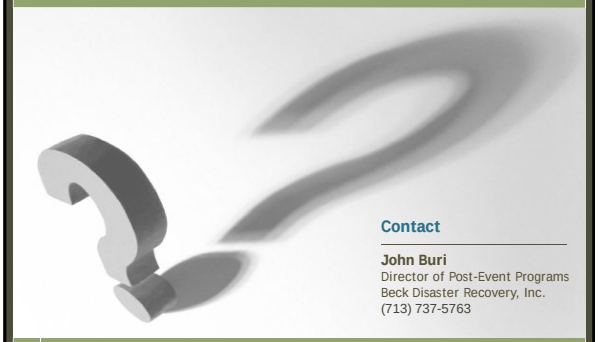
QUESTIONS/NEXT STEPS

- Workshop #5 – Sticker Shock: The Financial Realities of Debris Operations
  - Documentation guidelines
  - Federal funding sources
  - Activities that can jeopardize funding
  - Funding timeline
  - Cost-saving opportunities and strategies

QUESTIONS/NEXT STEPS

- Workshop #6 – What if…: Planning for Special Debris Operations
  - Household hazardous waste
  - Open fields
  - Hazardous trees
  - Wet debris
  - Private property
  - Time and materials operations
  - Vessels and vehicles
  - Animal carcasses

THANK YOU



Contact

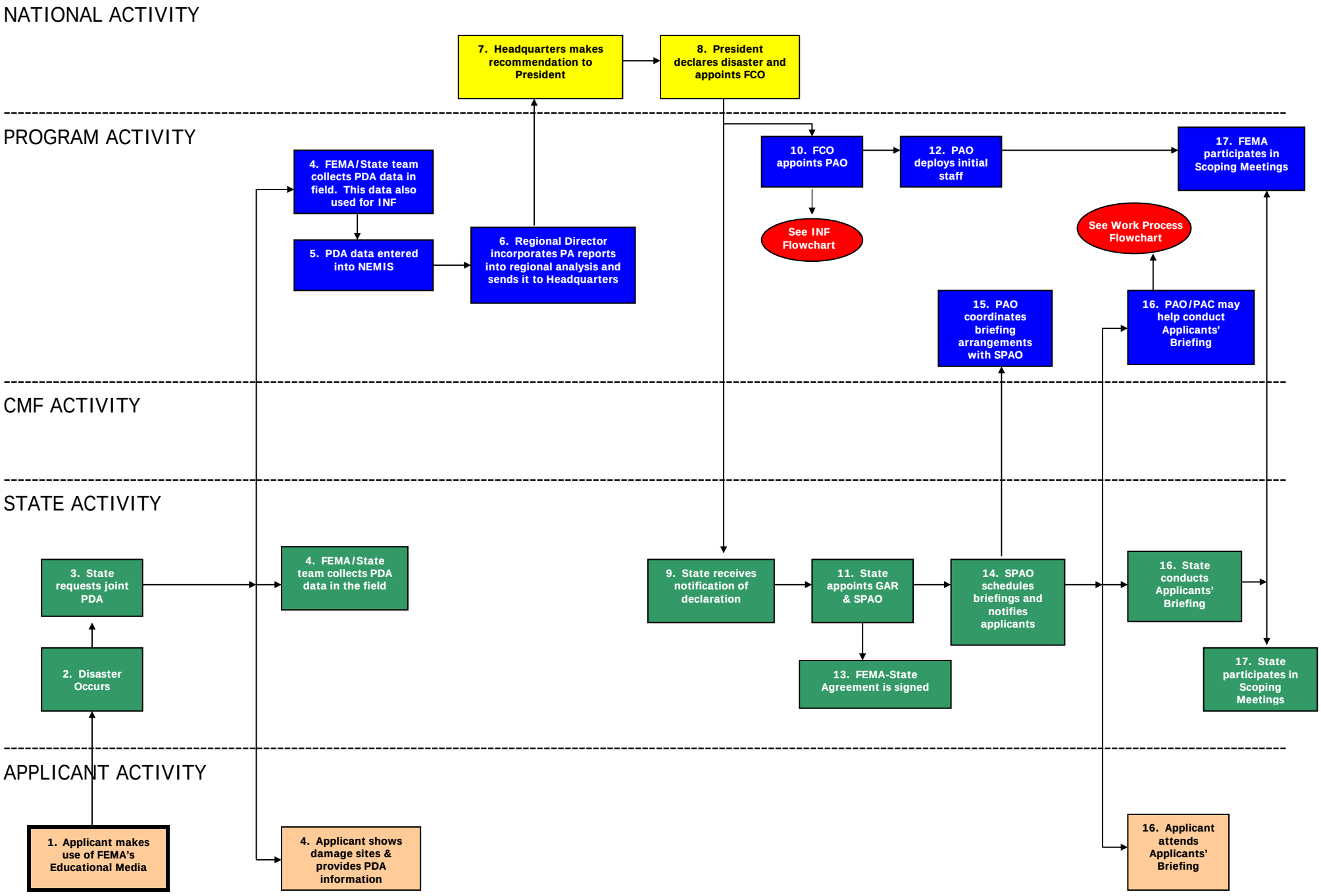
John Buri
Director of Post-Event Programs
Beck Disaster Recovery, Inc.
(713) 737-5763

	Estimated Quantity	Contractor B		Contractor A		Contractor C		Contractor D	
Eligible ROW Vegetative Debris Removal	Cubic Yards	$ Per CY		$ Per CY		$ Per CY		$ Per CY	
	1,000,000	$6.00	$6,000,000.00	$7.00	$7,000,000.00	$6.50	$6,500,000.00	$6.25	$6,250,000.00
Eligible ROW C&D Removal	Cubic Yards	$ Per CY		$ Per CY		$ Per CY		$ Per CY	
	250,000	$7.75	$1,937,500.00	$7.50	$1,875,000.00	$7.11	$1,777,500.00	$7.50	$1,875,000.00
TDSR Site MGT and Reduction Through Grinding	Cubic Yards	$ Per CY		$ Per CY		$ Per CY		$ Per CY	
	600,000	$1.50	$900,000.00	$2.25	$2.25	$1.75	$1,050,000.00	$2.25	$1,350,000.00
TDSR Site MGT and Reduction Through ACI	Cubic Yards	$ Per CY		$ Per CY		$ Per CY		$ Per CY	
	200,000	NO BID	$0.00	$3.00	$3.00	$0.10	$20,000.00	$2.00	$400,000.00
TDSR Site MGT and Reduction Through Open Burning	Cubic Yards	$ Per CY		$ Per CY		$ Per CY		$ Per CY	
	200,000	NO BID	$0.00	$2.25	$450,000.00	$0.25	$50,000.00	$1.50	$300,000.00
Haul-out of Debris to Final Disposal Site	Cubic Yards	$ Per CY		$ Per CY		$ Per CY		$ Per CY	
	180,000	$3.50	$630,000.00	$3.00	$540,000.00	$2.50	$450,000.00	$3.50	$630,000.00
Removal of Eligible Hazardous Trees and Limbs	Trees	$ Per Tree		$ Per Tree		$ Per Tree		$ Per Tree	
6 inch to 12.99 inch diameter	400	$45.00	$18,000.00	$40.00	$16,000.00	$150.00	$60,000.00	$75.00	$30,000.00
13 inch to 24.99 inch diameter	300	$50.00	$15,000.00	$75.00	$22,500.00	$250.00	$75,000.00	$95.00	$28,500.00
25 inch to 36.99 inch diameter	200	$110.00	$22,000.00	$120.00	$24,000.00	$0.50	$100.00	$125.00	$25,000.00
37 inch to 48.99 inch diameter	150	$125.00	$18,750.00	$140.00	$21,000.00	$0.50	$75.00	$135.00	$20,250.00
49 inch and larger diameter	100	$300.00	$30,000.00	$225.00	$22,500.00	$0.50	$50.00	$200.00	$20,000.00
Hanger Removal (per Tree)	7,000	$60.00	$420,000.00	$75.00	$525,000.00	$125.00	$875,000.00	$50.00	$350,000.00
Cost Proposal:		$9,991,250.00		$10,496,005.25		$10,857,725.00		$11,278,750.00	

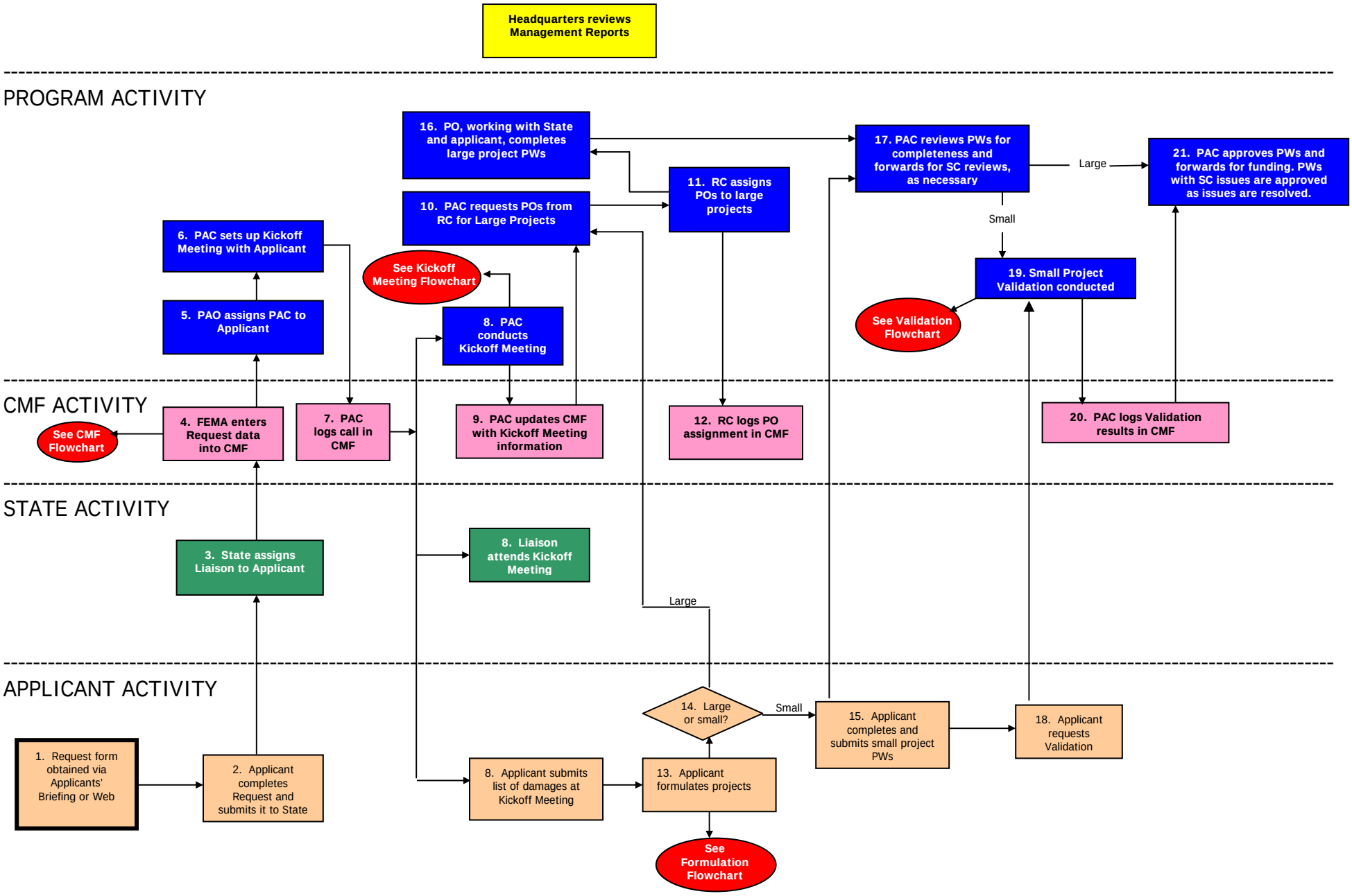
Sample Proposal Evaluation

Criteria	Contractor A	Contractor B	Contractor C
Past Performance: Projects managed in excess of 500,000 cubic yards and within the past five years.	Was a subcontractor on three projects in excess of 500,000 CY. Also listed two projects in which it acted as the primary contractor but the CY total is less than 500,000.	Listed four projects in which it was the primary contractor. However, all four projects listed occurred more than five years ago.	Listed three projects in which it was the primary contractor. All three projects were completed within the past five years.
Existing contracts:	Existing contracts in Texas and Mississippi.	Existing contracts in Texas, but no existing contracts in Louisiana.	Existing contracts in Texas and a significant number of existing contracts in Louisiana.
Percentage of use of local subcontractors:	Committed to DBE participation.	Committed to 10% use of local subcontractors.	Included documentation supporting attempts to reach out to local subcontractors to engage them in contracts.
Financial capacity:	Multiple lines of credit with banks.	Listed personal assets.	One line of credit
Project understanding and technical approach:	Included a projects understanding but no technical approach in their proposal.	Included project understanding and technical approach. The contractor also listed former FEMA, USACE, and DHS personnel on staff.	Included a project understanding and technical approach. The contractor also noted DC lobbying support capability.
Cost Proposal:	$10,000,000	$12,500,000	$15,000,000

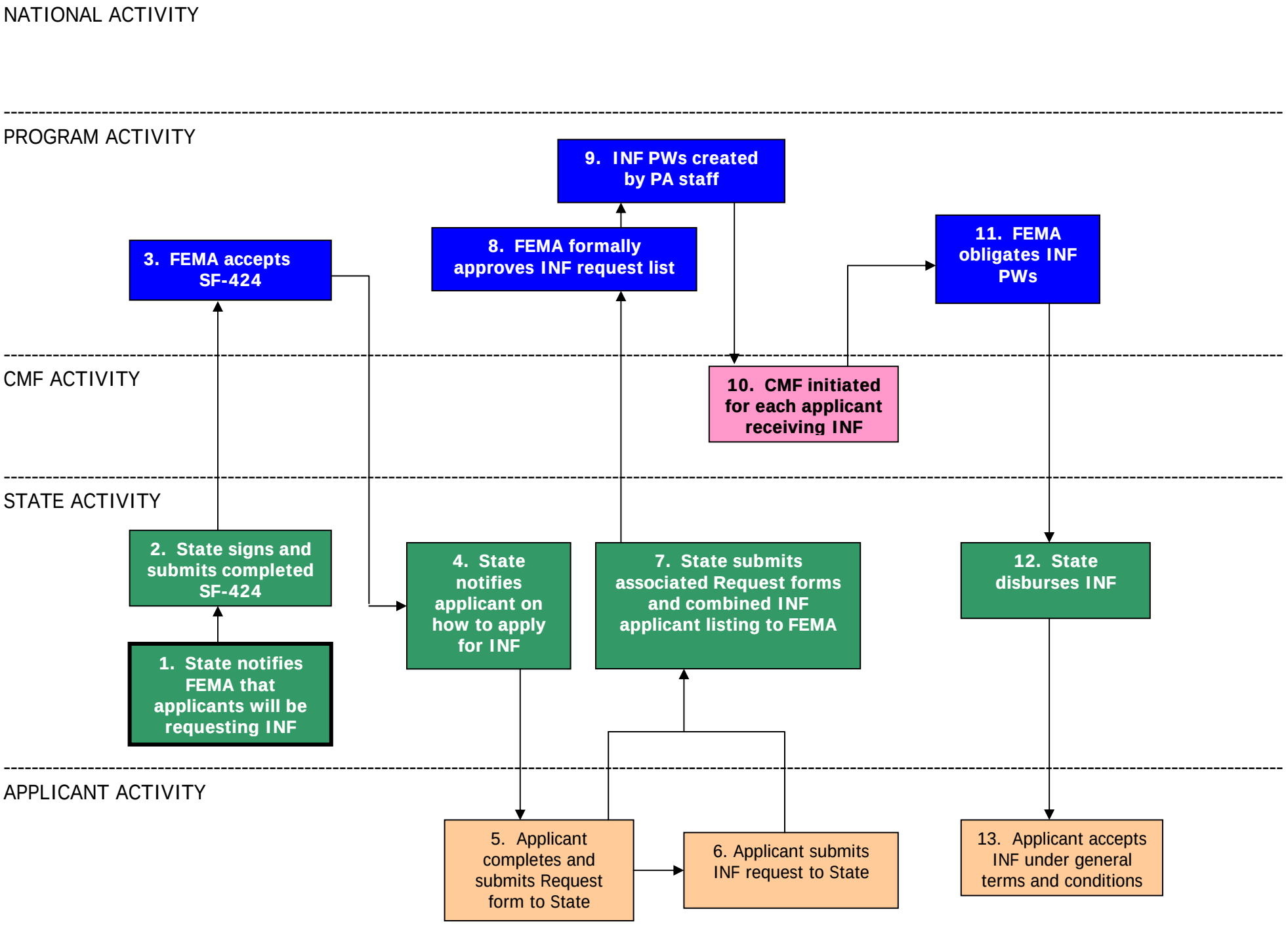
PA PROCESS MAP #1: PRE-DISASTER TO SCOPING MEETINGS



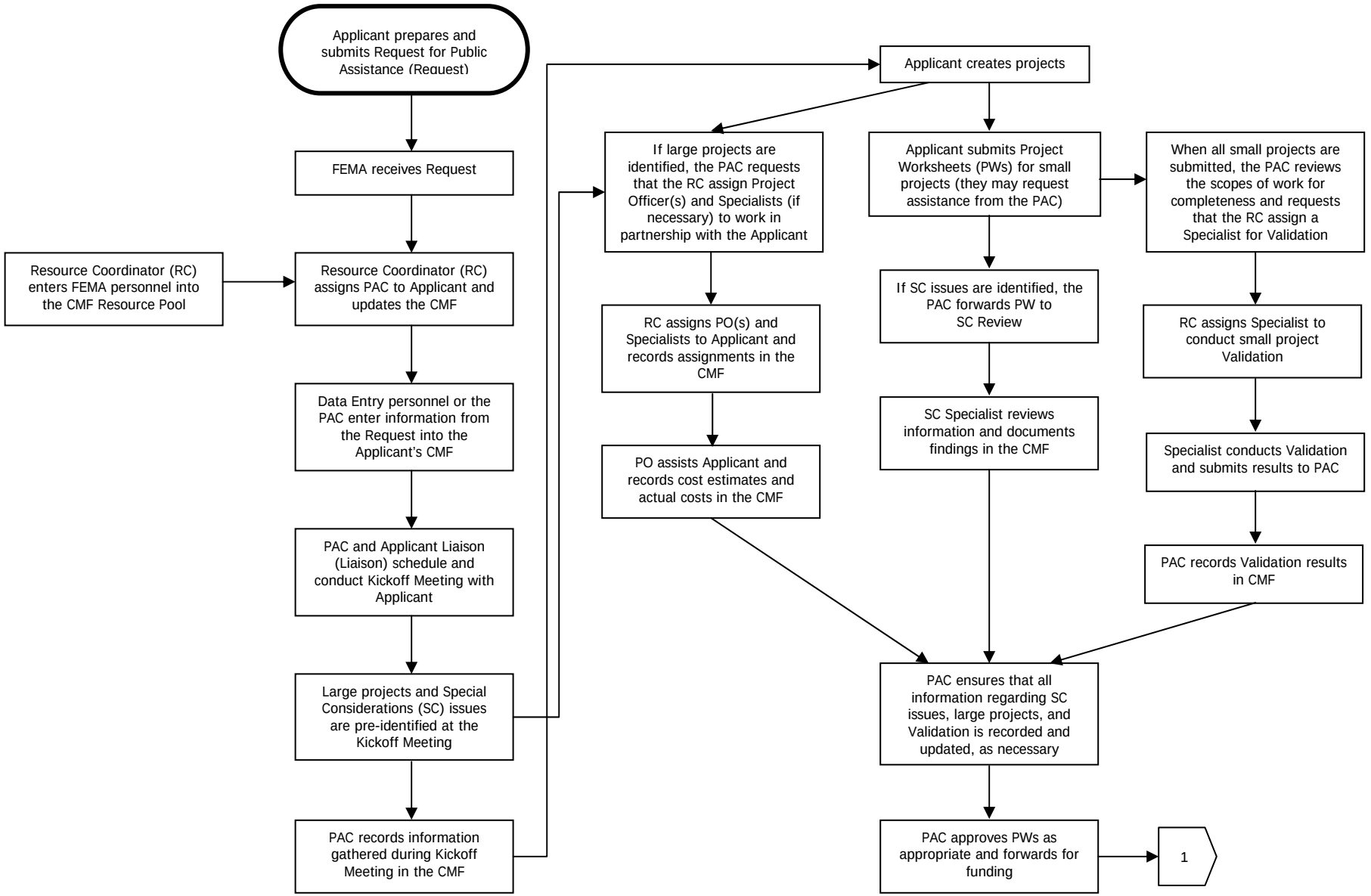
PA WORK PROCESS MAP #2: KICKOFF MEETING TO PROJECT APPROVAL



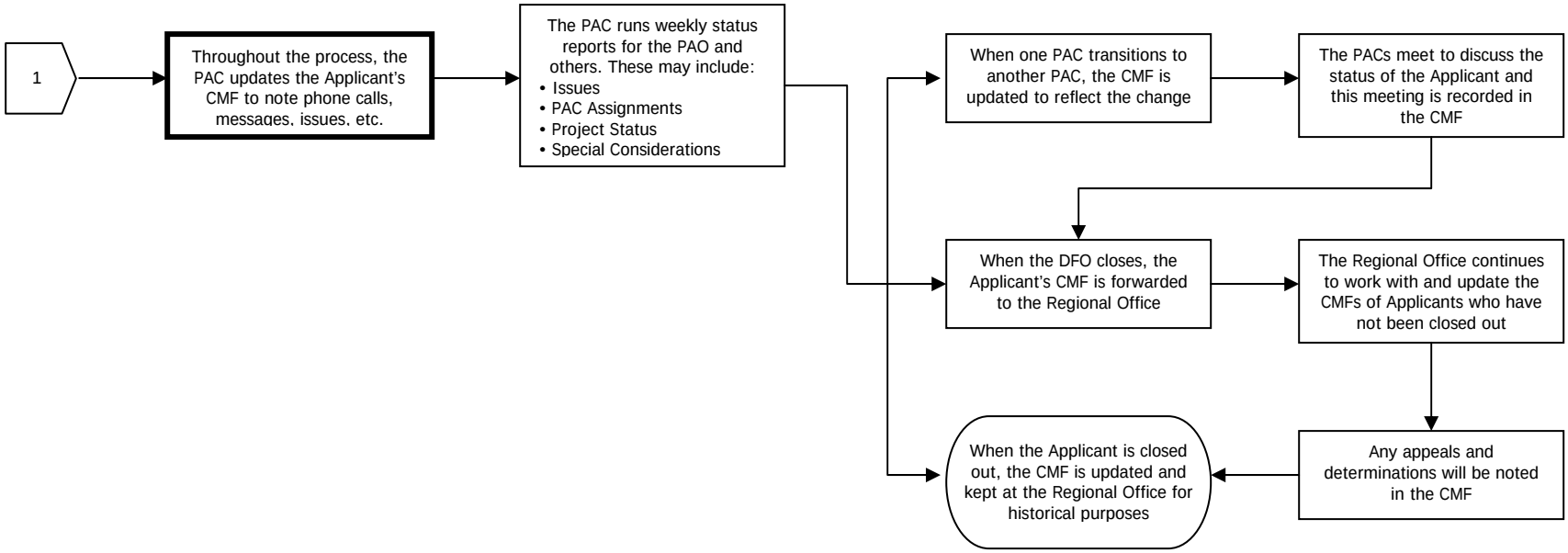
PA PROCESS MAP #3: IMMEDIATE NEEDS FUNDING



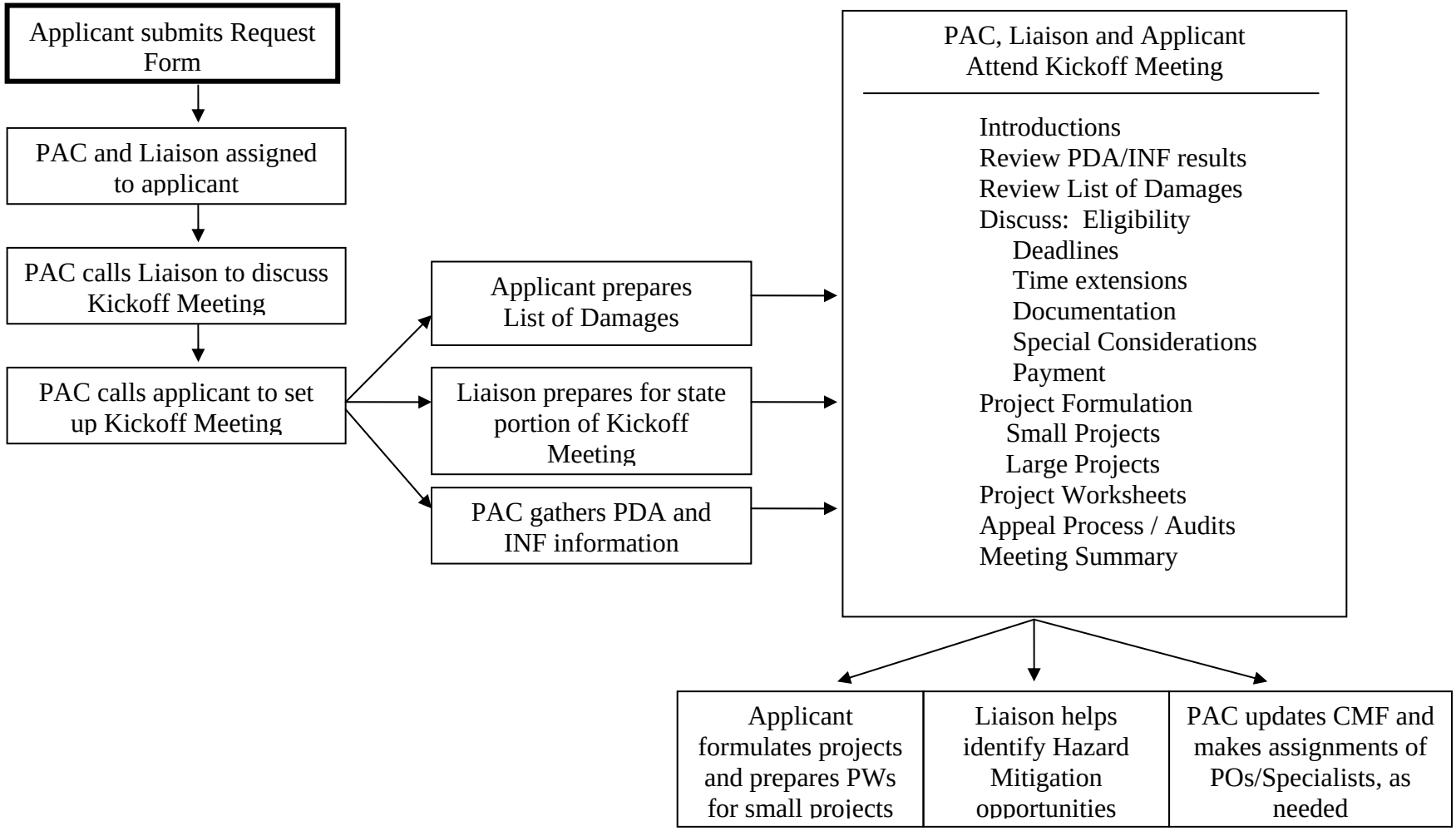
PA PROCESS MAP #4: CASE MANAGEMENT FILE



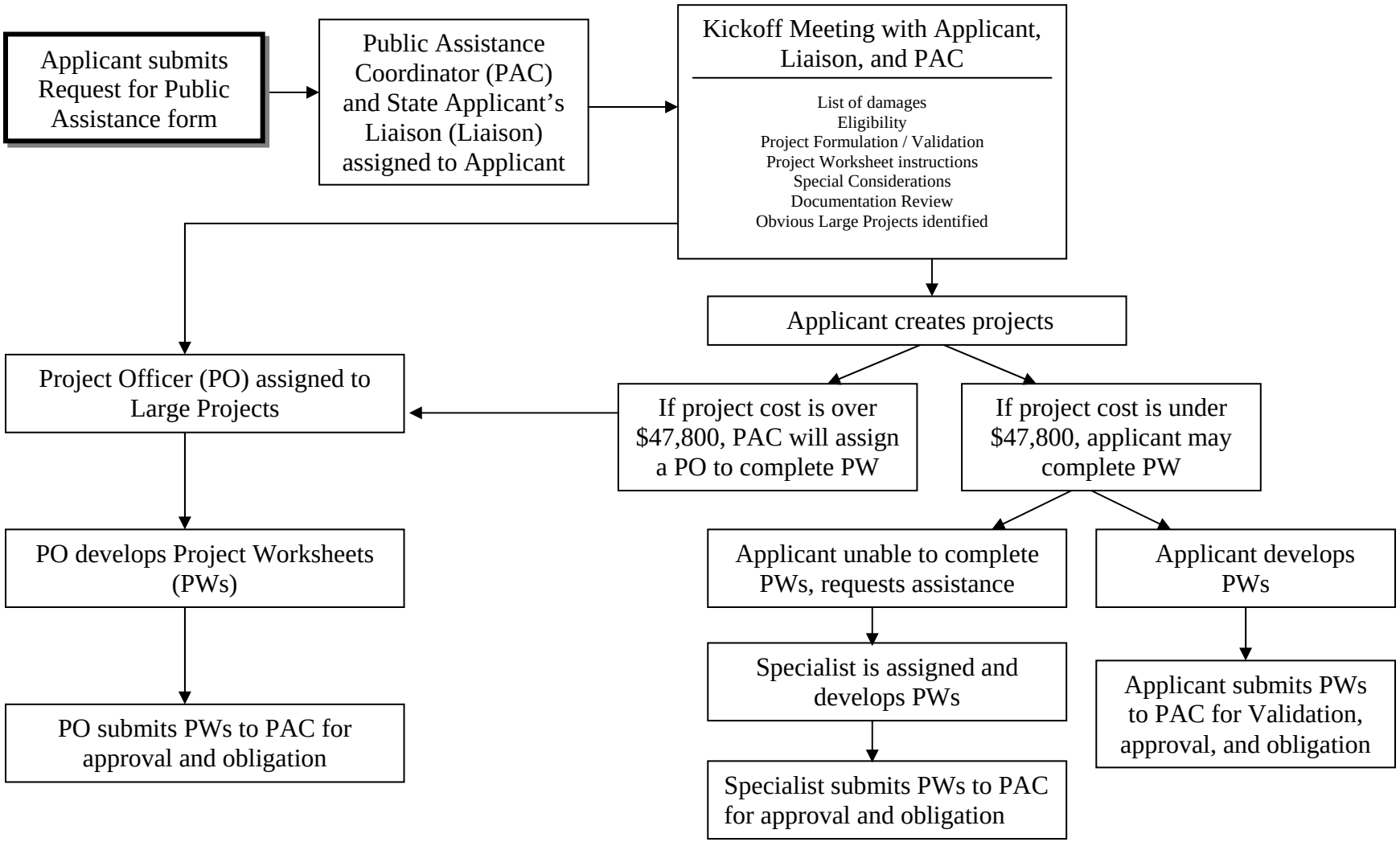
PA PROCESS MAP #4: CASE MANAGEMENT FILE - Continued



PA PROCESS MAP #5: KICKOFF MEETING



PA PROCESS MAP #6: PROJECT FORMULATION



PA PROCESS MAP #7: SMALL PROJECT VALIDATION