

**CERTIFIED COPY OF ORDER**

STATE OF MISSOURI }  
 County of Boone } ea.

May Session of the May Adjourned Term. 20 03

In the County Commission of said county, on the 22<sup>nd</sup> day of May 20 03  
 the following, among other proceedings, were had, viz:

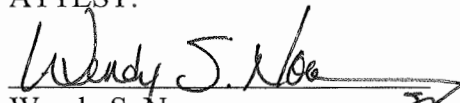
Now on this day the County Commission of the County of Boone does hereby approve the following budget revision:

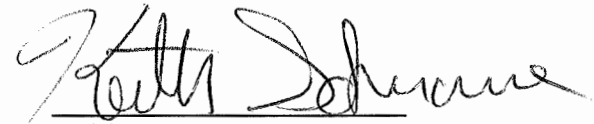
DEPARTMENT ACCOUNT AND TITLE	AMOUNT DECREASE	AMOUNT INCREASE
1123-86800: Emergency and Contingency	\$16,305.00	
1121-92000: Circuit Clerk – Replacement Office Equipment		\$16,305.00

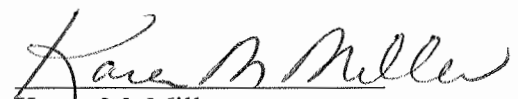
Said budget revision is for the purchase of a microfilmer for the Circuit Clerk's Office.

Done this 22<sup>nd</sup> day of May, 2003.

ATTEST:

  
 Wendy S. Noren  
 Clerk of the County Commission

  
 Keith Schnarre  
 Presiding Commissioner

  
 Karen M. Miller  
 District I Commissioner

  
 Skip Elkin  
 District II Commissioner





5/20/2003

FY 2003  
Budget Amendments/Revisions  
Circuit Clerk (1221)

<u>Index #</u>	<u>Date Recd</u>	<u>Account</u>	<u>Account Name</u>	<u>\$Increase</u>	<u>\$Decrease</u>	<u>Reason/Justification</u>	<u>Comments</u>
1	1/3/2003	10510 1123-86850	CERF-Employer Paid Contrib Emergency-Contingency	780	780	Move budget for additional 4% CERF from Contingency to individual dept class 1	
2	5/19/2003	92000 1123-86800	Replace Office Equipment Emergency	16,305	16,305	purchase microimager camera	

**CERTIFIED COPY OF ORDER**

260 -2003

STATE OF MISSOURI }  
County of Boone } ea.

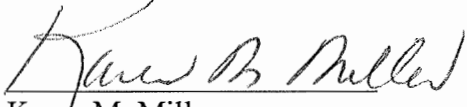
May Session of the May Adjourned Term. 20 03


In the County Commission of said county, on the 22<sup>nd</sup> day of May 20 03  
the following, among other proceedings, were had, viz:

Now on this day the County Commission of the County of Boone does hereby award bid 29-22APR03 for a Microfilmer to Imaging Solutions. It is further ordered that the Presiding Commissioner be hereby authorized to sign said contract.

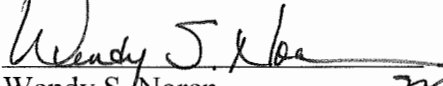
Done this 22<sup>nd</sup> day of May, 2003.

  
Keith Schnarre  
Presiding Commissioner

  
Karen M. Miller  
District I Commissioner

  
Skip Elkin  
District II Commissioner

ATTEST:

  
Wendy S. Noren  
Clerk of the County Commission

# Boone County Purchasing

Marlene Ridgway  
Buyer



601 E. Walnut, Rm 209  
Columbia, MO 65201  
(573) 886-4392  
Fax (573) 886-4390

260-2003

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## MEMORANDUM

TO: Boone County Commission  
FROM: Marlene Ridgway *MR*  
RE: 29-22APR03 - Microfilmer  
DATE: May 15, 2003

The Circuit Clerk's office and I have reviewed the responses received and recommend the following. We recommend rejecting the bid from Tipton Systems for the reason that they bid a refurbished machine while this purchase is for new equipment. We further recommend award to Imaging Solutions for the base bid and the two alternates a contract amount of \$29,304.70. The contractor understands that this purchase will be made cooperatively with the State of Missouri paying \$13,000.00 and Boone County paying \$16,304.70. This award is contingent on approval of a budget revision.

The bid tabulation is attached.

# Bid Tabulation

29-22APR03 - Microfilmer

		Imaging Solutions	Tipton Systems
4.7.	Description	Pricing	Pricing
4.7.1.	Microfimer as Describes in section2	\$ 25,369.00	\$ 19,900.00
4.7.2.	Brand	Kodack	Kodack
4.7.3.	Model	Imagelink 30 microimager	Imagelink 30 microimager Refurbished
4.7.4.	Kodak Imagelink Image Marker (Blips)	\$ 3,245.40	\$ 1,800.00
4.7.5.	Kodak Imagelink Workstation Side Console	\$ 690.30	\$ 320.00
4.7.6.	Kodak Imagelink Bar Code Reader	Not Available	Not Available
4.7.7.	Grand Total including add alternates	\$ 29,304.70	\$ 22,020.00
4.7.8.	Warranty	All Service,Parts, Labor & Travel	30 Day Parts & Labor
4.7.9.	Annual Maintenance agreement per section 2	\$ 3,400.00	\$ 2,900.00
4.7.10.	Cost per roll for 100' rolls of 16mm film.	7.72 w/o processing 10.26 w/ processing	990.00 (100' or 215' roll)
	Brand	Kodack HQAHU 822-3232	Kodack
4.7.11.	Delivery after Reciept of Order	10-15 Working days	10-15 Days
4.7.12.	Co-op	Yes	Yes

No Bid

EDCO Group Inc.

Virtual Image Technology

RECEIVED  
MAY 19 2003

# PURCHASE REQUISITION BOONE COUNTY, MISSOURI

5/7/03

DATE

NEW

Imaging Solutions

VENDOR NO.

VENDOR NAME

PHONE #

ADDRESS

CITY

STATE

ZIP

260-2003

**BID DOCUMENTATION**

This field **MUST** be completed to demonstrate compliance with statutory bidding requirements.  
Refer to RSMo 50.660, 50.753-50.790, and the Purchasing Manual—Section 3

- Bid /RFP (enter # below)
- Sole Source (enter # below)
- Emergency Procurement (enter # below)
- Written Quotes (3) attached (<\$750 to \$4,449)
- <\$750 No Bids Required (enter bid # below if you are purchasing from a bid, even if this purchase is <\$750)
- Professional Services (see Purchasing Policy Section 3-103)

- Transaction Not Subject To Bidding For The Following Reason:**
- Utility
  - Travel
  - Dues
  - Refund
  - Cooperative Agreement
  - Other (Explain):
  - Training
  - Pub/Subscriptions
  - Required Gov Payment
  - Agency Fund Distribution

#29-22APR03

(Enter Applicable Bid / Sole Source / Emergency Number)

Ship To Department # 1221

Bill To Department # 1221

Department				Account				Item Description	Qty	Unit Price	Amount	
1	2	2	1	9	2	0	0	0	Kodak Imagelink 30	1	16,304.70	16,304.70

Fixed Assets

**CLERK'S OFFICE**

\*DO NOT UNSTAPLE THESE PAGES  
\*THE ONLY ACTION NEEDED IS TO WRITE THE COMM ORDER # ON THE FORM AND RETURN TO AUDITOR'S OFFICE.

I certify that the goods, services or charges specified above are necessary for the use of this department, are solely for the benefit of county, and have been procured in accordance with statutory bidding requirements.

*[Signature]*  
Requesting Official

*[Signature]*  
Auditor Approval



**PURCHASE AGREEMENT FOR  
MICROFILMER**

**THIS AGREEMENT** dated the 22 day of MAY 2003 is made between Boone County, Missouri, a political subdivision of the State of Missouri through the Boone County Commission, herein "County" and Imaging Solutions, herein "Contractor."

**IN CONSIDERATION** of the parties performance of the respective obligations contained herein, the parties agree as follows:

1. **Contract Documents** - This agreement shall consist of this Purchase Agreement for Microfilmer, County of Boone Request for Bid for Microfilmer, bid number 29-22APR03 including Instructions and General Conditions of Bidding, Primary Specifications, Response Presentation and Review, the unexecuted Response Form, as well as the Contractor's bid response dated April 11, 2003 executed by Kay Goldstein on behalf of the Contractor. All such documents shall constitute the contract documents which are attached hereto and incorporated herein by reference. Service or product data, specification and literature submitted with bid response may be permanently maintained in the County Purchasing Office bid file for this bid if not attached. In the event of conflict between any of the foregoing documents, the terms, conditions, provisions and requirements contained in the bid specifications including Instructions and General Conditions of Bidding, Primary Specifications, Response Presentation and Review and the unexecuted Response Form shall prevail and control over the Contractor's bid response.
2. **Purchase** - The County agrees to purchase from the Contractor and the Contractor agrees to supply the County with one (1) Kodak Imagemark 30 Microimager including add alternates, Image Marker and Side Console, as specified and responded to in the bid specifications for a contract price of \$29,304.70. The Contractor understands that this purchase is made cooperatively between the County and the State of Missouri.
3. **Delivery** - Contractor agrees to deliver the microfilmer as stated above to the Circuit Clerk's office within fifteen (15) days after order.
4. **Billing and Payment** - All billing shall be mailed to the Circuit Clerk's Office. The Contractor agrees to bill the County for \$16,304.70 and bill the State of Missouri the remaining \$13,000.00. Billings may only include the prices listed in the Contractor's bid response. No additional fees for delivery or extra services or taxes shall be included as additional charges in excess of the charges in the Contractor's bid response to the specifications. The County agrees to pay all invoices within thirty days of receipt; Contractor agrees to honor any cash or prompt payment discounts offered in its bid response if county makes payment as provided therein. In the event of a billing dispute, the County reserves the right to withhold payment on the disputed amount; in the event the billing dispute is resolved in favor of the Contractor, the County agrees to pay interest at a rate of 9% per annum on disputed amounts withheld commencing from the last date that payment was due.
5. **Binding Effect** - This agreement shall be binding upon the parties hereto and their successors and assigns for so long as this agreement remains in full force and effect.

6. **Entire Agreement** - This agreement constitutes the entire agreement between the parties and supersedes any prior negotiations, written or verbal, and any other bid or bid specification or contractual agreement. This agreement may only be amended by a signed writing executed with the same formality as this agreement.

7. **Termination** - This agreement may be terminated by the County upon thirty days advance written notice for any of the following reasons or under any of the following circumstances:

- a. County may terminate this agreement due to material breach of any term or condition of this agreement, or
- b. County may terminate this agreement if in the opinion of the Boone County Commission if delivery of products are delayed or products delivered are not in conformity with bidding specifications or variances authorized by County, or
- c. If appropriations are not made available and budgeted for any calendar year.

**IN WITNESS WHEREOF** the parties through their duly authorized representatives have executed this agreement on the day and year first above written.

**IMAGING SOLUTIONS**

by Kay Goodstein  
title Account Manager  
Kodak Products + Services

APPROVED AS TO FORM:

[Signature]  
County Counselor

**BOONE COUNTY, MISSOURI**

by: Boone County Commission  
[Signature]  
Keith Schnarre, Presiding Commissioner

ATTEST:

[Signature]  
Wendy S. Noren, County Clerk

**AUDITOR CERTIFICATION**

In accordance with RSMo 50.660, I hereby certify that a sufficient unencumbered appropriation balance exists and is available to satisfy the obligation(s) arising from this contract. (Note: Certification is not required if the terms of this contract do not create a measurable county obligation at this time.)

1221-92000 - \$16,304.70

Signature June Pitchford by KF Date 5/20/2003 Appropriation Account

*(Pending budget revision approval)*

261 -2003

# CERTIFIED COPY OF ORDER

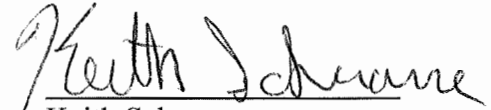
STATE OF MISSOURI }  
County of Boone } ea.

May Session of the May Adjourned Term. 20 03

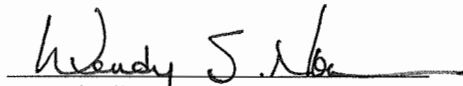
In the County Commission of said county, on the 22<sup>nd</sup> day of May 20 03  
the following, among other proceedings, were had, viz:

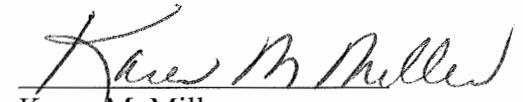
Now on this day the County Commission of the County of Boone does hereby award bid 34-05MAY03 for the 2003 Box Culvert Projects to C. L. Richardson Construction Company, Inc. It is further ordered that the Presiding Commissioner be hereby authorized to sign said contract.

Done this 22<sup>nd</sup> day of May, 2003.

  
Keith Schnarre  
Presiding Commissioner

ATTEST:

  
Wendy S. Noren  
Clerk of the County Commission

  
Karen M. Miller  
District I Commissioner

  
Skip Elkin  
District II Commissioner

# Boone County Purchasing

Marlene Ridgway  
Buyer



601 E. Walnut, Rm 209  
Columbia, MO 65201  
(573) 886-4392  
Fax (573) 886-4390

261-2003

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## MEMORANDUM

TO: Boone County Commission  
FROM: Marlene Ridgway *MR*  
RE: 34-05MAY03 – 2003 Box Culvert Projects  
DATE: May 15, 2003

The Public Works Department and I have reviewed the responses received for the above reference bid. We recommend awarding to C. L. Richardson Construction Co., Inc. for having the lowest and best bid meeting the minimum requirements. The bid amount is \$130,690.38 with a contingency amount of \$13,309.62 to make a total contract award amount of \$144,000.00. The amount budgeted for this project was \$160,000.00. This is to be paid from organization 2045 account 71100.

The bid tabulation is attached.

**Bid Tabulation**  
**34-05MAY03 - 2003 Box Culvert Projects**

Lehman Construction	N-J Wilson	APLEX
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**Locust Grove Road Box Culvert- Include DBE**

Item #	Bid Item Description	Units	Qty	Unit Price	Total	Unit Price	Total	Unit Price	Total
1	Mobilization/Const.	LS	1	\$4,000.00	\$4,000.00	\$3,600.00	\$3,600.00	\$5,000.00	\$5,000.00
2	Excavation/Embankmen	LS	1	\$4,000.00	\$4,000.00	\$4,320.00	\$4,320.00	\$8,300.00	\$8,300.00
3	Removals	LS	1	\$4,000.00	\$4,000.00	\$2,210.00	\$2,210.00	\$2,000.00	\$2,000.00
4	Class B Concrete	Cy	69	\$300.00	\$20,700.00	\$350.00	\$24,150.00	\$365.00	\$25,185.00
5	Reinforcing Steel	LBS	9,033	\$0.80	\$7,226.40	\$0.56	\$5,058.48	\$0.60	\$5,419.80
6	1" Surface Aggregate	TON	33	\$15.00	\$495.00	\$16.45	\$542.85	\$40.00	\$1,320.00
7	2½" Minus Base Rock	TON	98	\$20.00	\$1,960.00	\$15.70	\$1,538.60	\$30.00	\$2,940.00
8	Type 1 Rock Blanket	TON	85	\$20.00	\$1,700.00	\$22.00	\$1,870.00	\$35.00	\$2,975.00
9	Seed/Fertilize/Mulch	LS	1	\$150.00	\$150.00	\$1,500.00	\$1,500.00	\$2,000.00	\$2,000.00
10	Object Markers	EAC	4	\$150.00	\$600.00	\$100.00	\$400.00	\$300.00	\$1,200.00
11	Traffic Control	LS	1	\$2,000.00	\$2,000.00	\$2,133.00	\$2,133.00	\$1,600.00	\$1,600.00

**Olden Road Box Culvert- Include DBE**

Item #	Bid Item Description	Units	Qty	Unit Price	Total	Unit Price	Total	Unit Price	Total
1	Mobilization/Const.	LS	1	\$4,000.00	\$4,000.00	\$3,400.00	\$3,400.00	\$5,000.00	\$5,000.00
2	Excavation/Embankmen	LS	1	\$2,000.00	\$2,000.00	\$5,700.00	\$5,700.00	\$10,000.00	\$10,000.00
3	Removals	LS	1	\$4,000.00	\$4,000.00	\$2,250.00	\$2,250.00	\$3,000.00	\$3,000.00
4	Class B Concrete	Cy	44	\$400.00	\$17,600.00	\$413.00	\$18,172.00	\$375.00	\$16,500.00
5	Reinforcing Steel	LBS	5,123	\$0.80	\$4,098.40	\$0.56	\$2,868.88	\$0.70	\$3,586.10
6	1" Surface Aggregate	TON	18	\$25.00	\$450.00	\$15.70	\$282.60	\$40.00	\$720.00
7	2½" Minus Base Rock	TON	104	\$17.00	\$1,768.00	\$15.33	\$1,594.32	\$30.00	\$3,120.00
8	Type 1 Rock Blanket	TON	143	\$20.00	\$2,860.00	\$20.80	\$2,974.40	\$35.00	\$5,005.00
9	Fence	LS	1	\$4,000.00	\$4,000.00	\$3,500.00	\$3,500.00	\$3,500.00	\$3,500.00
10	Seed/Fertilize/Mulch	LS	1	\$1,500.00	\$1,500.00	\$1,800.00	\$1,800.00	\$2,500.00	\$2,500.00
11	Object Markers	EAC	4	\$150.00	\$600.00	\$100.00	\$400.00	\$300.00	\$1,200.00
12	Traffic Control	LS	1	\$2,000.00	\$2,000.00	\$2,133.00	\$2,133.00	\$1,600.00	\$1,600.00

**New Salem Lane Box Culvert**

Item #	Bid Item Description	Units	Qty	Unit Price	Total	Unit Price	Total	Unit Price	Total
1	Mobilization/Const.	LS	1	\$4,000.00	\$4,000.00	\$3,200.00	\$3,200.00	\$5,000.00	\$5,000.00
2	Excavation/Embankmen	LS	1	\$2,000.00	\$2,000.00	\$4,800.00	\$4,800.00	\$14,000.00	\$14,000.00
3	Removals	LS	1	\$4,000.00	\$4,000.00	\$2,800.00	\$2,800.00	\$2,500.00	\$2,500.00
4	Class B Concrete	Cy	42	\$400.00	\$16,800.00	\$413.00	\$17,346.00	\$400.00	\$16,800.00
5	Reinforcing Steel	LBS	5,766	\$0.80	\$4,612.80	\$0.56	\$3,228.96	\$0.70	\$4,036.20
6	1" Surface Aggregate	TON	20	\$11.00	\$220.00	\$17.75	\$355.00	\$40.00	\$800.00
7	2½" Minus Base Rock	TON	88	\$15.00	\$1,320.00	\$16.90	\$1,487.20	\$30.00	\$2,640.00
8	Type 1 Rock Blanket	TON	171	\$20.00	\$3,420.00	\$22.20	\$3,796.20	\$35.00	\$5,985.00
9	Seed/Fertilize/Mulch	LS	1	\$1,500.00	\$1,500.00	\$1,500.00	\$1,500.00	\$3,000.00	\$3,000.00
10	Object Markers	EAC	4	\$150.00	\$600.00	\$100.00	\$400.00	\$300.00	\$1,200.00
11	Traffic Control	LS	1	\$2,000.00	\$2,000.00	\$2,133.00	\$2,133.00	\$2,000.00	\$2,000.00

**Bid Total=**

**\$132,180.60**

**\$133,444.49**

**\$171,632.10**

*Arch*

5/15/03

# PURCHASE REQUISITION BOONE COUNTY, MISSOURI

DATE  
21803

C. L. Richardson Construction

VENDOR NO.

VENDOR NAME PHONE #

ADDRESS CITY STATE ZIP

261-2003

### BID DOCUMENTATION

This field MUST be completed to demonstrate compliance with statutory bidding requirements. Refer to RSMo 50.660, 50.753-50.790, and the Purchasing Manual—Section 3

- Bid /RFP (enter # below)
- Sole Source (enter # below)
- Emergency Procurement (enter # below)
- Written Quotes (3) attached (<\$750 to \$4,449)
- <\$750 No Bids Required (enter bid # below if you are purchasing from a bid, even if this purchase is <\$750)
- Professional Services (see Purchasing Policy Section 3-103)

- Transaction Not Subject To Bidding For The Following Reason:
- Utility
  - Travel
  - Dues
  - Refund
  - Cooperative Agreement
  - Other (Explain):
  - Training
  - Pub/Subscriptions
  - Required Gov Payment
  - Agency Fund Distribution

#34-05May03  
(Enter Applicable Bid / Sole Source / Emergency Number)

Ship To Department # 2045

Bill To Department # 2045

Department	Account	Item Description	Qty	Unit Price	Amount
2 0 4 5	7 1 1 0 0	2003 Box Culvert Projects	1	130690.38	130690.38
		10% contingency		13309.62	13,309.62
		<b>Total</b>			<b>144,000.</b>
<b>CLERK'S OFFICE</b>					
*DO NOT UNSTAPLE THESE PAGES					
*THE ONLY ACTION NEEDED IS TO WRITE THE COMM ORDER # ON THE FORM AND RETURN TO AUDITOR'S OFFICE.					

I certify that the goods, services or charges specified above are necessary for the use of this department, are solely for the benefit of the county, and have been procured in accordance with statutory bidding requirements.

*David Mills*  
Requesting Official

*KF*  
Auditor Approval

261-2003

**CONTRACT AGREEMENT**

THIS AGREEMENT, made and entered into by and between the County of Boone through the Boone County Commission (hereinafter referred to as the Owner), and C.L. Richardson Construction Co., Inc. (hereinafter referred to as the Contractor).

WITNESSETH: That for and in consideration of the acceptance of Contractor's bid and the award of this contract to said Contractor by the Owner and in further consideration of the agreements of the parties herein contained, to be well and truly observed and faithfully kept by them, and each of them, it is agreed between the parties as follows, to wit:

The Contractor at his own Expense hereby agrees to do or furnish all labor, materials, and equipment called for in the bid designated and marked:

BID NUMBER 34-05MAY03  
2003 Box Culvert Projects  
PROJECT NO. 9756  
BOONE COUNTY, MISSOURI

and agrees to perform all the work required by the contract as shown on the plans and specifications. The contract award includes all line items on the *Bid Form* for the amount of \$130,690.38.

The following contract documents and any applicable Addenda are made a part hereof as fully as if set out herein: Change orders issued subsequent to this contract shall be subject to the terms and conditions of the agreement unless otherwise specified in writing.

1. Notice to Bidders
2. Bid Response
3. Statement of Bidders Qualifications
4. Instructions to Bidders
5. Bid Form
6. Anti-Collusion Statement
7. Signature and Identity of Bidder
8. Bidder's Acknowledgment
9. Insurance Requirements
10. Contract Conditions
11. Contract Agreement
12. Performance Bond
13. Labor & Material Payment Bond
14. General Specifications
15. Technical Specifications
16. Affidavit - Prevailing Wage
17. State Prevailing Wage Rates
18. DBE Requirements
19. Boone County Standard Terms and Conditions
20. All applicable addenda
21. Construction Plans
22. Permits
23. Geotechnical Report

It is understood and agreed that, except as may be otherwise provided for by the "General Specifications, and "Technical Specifications," and "Special Provisions" the work shall be done in accordance with the "Missouri Standard

Specifications for Highway Construction, 1999", a copy of which can be obtained from the State of Missouri, Missouri Highway and Transportation Division in Jefferson City, Missouri. Said Specifications are part and parcel of this contract, and are incorporated in this contract as fully and effectively as if set forth in detail herein.

The Contractor further agrees that he is fully informed regarding all of the conditions affecting the work to be done, and labor and materials to be furnished for the completion of this contract, and that his information was secured by personal investigation and research and not from any estimates of the Owner; and that he will make no claim against the Owner by reason of estimates, tests, or representation of any officer, agent, or employees of the Owner.

The said Contractor agrees further to begin work not later than the authorized date in the Notice to Proceed, and to complete the work within the time specified in the contract documents or such additional time as may be allowed by the Engineer under the contract.

The work shall be done to complete satisfaction of the Owner and, in the case the Federal Government or any agency thereof is participating in the payment of the cost of construction of the work, the work shall also be subject to inspection and approval at all times by the proper agent or officials of such government agency.

The parties hereto agree that this contract in all things shall be governed by the laws of the State of Missouri.

Contractor agrees it will pay not less than the prevailing hourly rate of wages to all workers performing work under the contract in accordance with the prevailing wage determination issued by the Division of Labor Standards of the Department of Labor and Industrial Relations for the State of Missouri and as maintained on file with the Boone County Public Works Department.

The Contractor further agrees that it shall forfeit as a penalty to the County of Boone the sum of \$10.00 for each worker employed for each calendar day or portion thereof such worker is paid less than the stipulated rates set forth in the prevailing wage determination for the project for any work done under this contract by the Contractor or by any Subcontractor employed by the Contractor pursuant to the provisions of Section 290.250 RSMo. The Contractor further agrees that it will abide by all provisions of the prevailing wage law as set forth in Chapter 290 RSMo. and rules and regulations issued thereunder and that any penalties assessed may be withheld from sums due to the Contractor by the Owner.

The contractor agrees that he will comply with all federal, state, and local laws and regulations and ordinances and that he/she will comply and cause each of his/her subcontractors, and directives pertaining to nondiscrimination against any person on the grounds of race, color, religion, creed, sex, age, ancestry, or national origin in connection with this contract, including procurement of materials and lease of equipment; therefore, in accordance with the special provisions on that subject attached hereto, incorporated in and made a part of the Contract.

The Contractor expressly warrants that he/she has employed no third person to solicit or obtain this contract in his behalf, or to cause or procure the same to be obtained upon compensation in any way contingent, in whole or in part, upon such procurement; and that he has not paid, or promised or agreed to pay to any third person, in consideration of such procurement, or in compensation for services in connection therewith, any brokerage, commission or percentage upon the amount receivable by him hereunder; and that he has not, in estimating the contract price demand by him, included any sum by reason of such brokerage, commission, or percentage; and that all moneys payable to him hereunder are free from obligation of any other person for services rendered, or supposed to have been rendered, in the procurement of this contract. He further agrees that any breach of this warranty shall constitute adequate cause for the annulment of this contract by the Owner, and that the Owner may retain to its own use from any sums due to or to become due hereunder an amount equal to any brokerage, commission, or percentage so paid, or agreed to be paid.



The Owner agrees to pay the Contractor in the amount:

**One hundred Thirty thousand Six Hundred ninety dollars and thirty-eight cents (\$130,690.38)**

as full compensation for the performance of work embraced in this contract, subject to the terms of payment as provided in the contract documents and subject to adjustment as provided for changes in quantities and approved change orders.

IN WITNESS WHEREOF, the parties hereto have signed and entered this agreement on 22 MAY 2003 at Columbia, Missouri.  
(Date)

OWNER, BOONE COUNTY, MISSOURI

By: Keith Schnarre  
Keith Schnarre, Presiding Commissioner

ATTEST:

CONTRACTOR: C.L. RICHARDSON CONTRSRUCTION CO., INC.

Wendy J. Moren  
Wendy Moren, County Clerk

By: C.L. Richardson  
Authorized Representative Signature

By: C.L. Richardson  
Authorized Representative Printed Name

Title: President

Approved as to Legal Form:

John Patton  
Boone County Counselor

AUDITOR CERTIFICATION

In accordance with RSMo 50.660, I hereby certify that a sufficient unencumbered appropriation balance exists and is available to satisfy the obligation(s) incurred by this contract. (Note: Certification of this contract is not required if the terms of the contract do not result in a measurable county obligation at this time.)

2045-71100

Signature June Pitchford by KF Date 5/19/2003 Appropriation Account \_\_\_\_\_

# NOTICE TO PROCEED

DATE: June 19, 2003

TO: C.L. Richardson

ADDRESS: 15475 Highway 63 South  
Ashland, MO 65010

PROJECT: Bid Number 34 – 05 MAY 03  
2003 Box Culvert Projects

You are hereby notified that the Contract Time under the above contract will commence on **June 30, 2003**. You may start performing your obligations under the Contract Documents as of this date. In accordance with Instructions to Bidders, section 4.2, Contract Time shall not exceed **90** working days.

**All inspections for this project should be called in to the Design & Construction office at 449-8515. If the party who you wish to speak with is not in, please leave your message with the receptionist. Do not leave messages concerning an inspection on voice mail.**

A minimum of 24 hours notice must be given before you start.

OWNER, Boone County, Missouri

By: John P. Watkins II  
Date: 6/19/03

John P. Watkins II  
Project Development Manager

cc. County Clerk ✓  
Purchasing  
Director  
R.O.W. Department  
Inspection Department  
Project File

261-2003

# CERTIFIED COPY OF ORDER

STATE OF MISSOURI }  
County of Boone } ea.

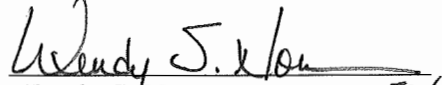
May Session of the May Adjourned Term. 20 03

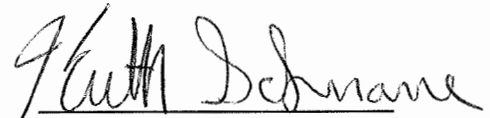
In the County Commission of said county, on the 22<sup>nd</sup> day of May 20 03  
the following, among other proceedings, were had, viz:

Now on this day the County Commission of the County of Boone does hereby adopt the Boone County/City of Columbia Emergency Operations Plan – Basic Plan and Annex A – Direction and Control.

Done this 22<sup>nd</sup> day of May, 2003.

ATTEST:

  
Wendy S. Noren  
Clerk of the County Commission

  
Keith Schnarre  
Presiding Commissioner

  
Karen M. Miller  
District I Commissioner

  
Skip Elkin  
District II Commissioner

**BOONE COUNTY/ CITY OF COLUMBIA  
EMERGENCY OPERATIONS PLAN**

**BASIC PLAN**

**I. PURPOSE**

This plan establishes policies and procedures that will allow the respective governments of the city of Columbia and Boone County to save lives, minimize injuries, protect property, preserve functioning civil government, and maintain economic activities essential to their survival and recovery from natural and technological hazards. It establishes the guidelines for conducting efficient, effective, coordinated emergency operations involving the use of all resources belonging to these jurisdictions or available to them.

**II. SITUATION AND ASSUMPTIONS**

**A. Situation**

1. Boone County, a First Class County, is located in the central part of the state within the Missouri River Basin. The Missouri River is the southwestern border of the county, with Cedar Creek forming the county line on the southeast. Counties that border Boone are: Randolph on the north, Audrain on the northeast, Callaway on the east, Cole on the south, Moniteau and Cooper on the southwest, and Howard on the west.

Boone County is traversed with U.S. Highway 63 and Interstate 70 , as well as State highways 124 and 22. They are all traveled with major interstate truck shipments of all types of goods, some of which are classified as hazardous or radioactive materials. Boone County is also serviced or crossed by three railroads, which haul all types of goods, including hazardous and radioactive materials.

2. Based on the U.S. Census Bureau's 2000 census, Boone County has a population of 135,454. The largest community is Columbia, the county seat, with a population of 84,531. Other communities include the cities of Centralia, 3,774; Ashland, (1869); Sturgeon, 944; Hallsville, 978; and Rocheport, 208; the towns of Harrisburg, 184; Hartsburg, 108; and McBaine, 17.

3. The main campus of the University of Missouri is located in Columbia, along with two other institutions of higher learning, Stephens College and Columbia College. This means that during periods the institutions are operating, the population of this city is much greater than times when classes are not held. The University of Missouri-Columbia has an average enrollment of about 23,000 students. Stephens has an average enrollment of

about 1,000, while Columbia College has an average enrollment of about 1600 at its main campus in Columbia.

4. The land area of Boone County is 687 square miles with an approximate east to west width of 22 miles, and a north to south width of 42 miles. The local economy is based primarily on education, health care, agriculture, manufacturing, and insurance industries. Columbia, the governmental seat of Boone County, has a council-manager form of government. In Columbia, the University of Missouri is the county's largest employer with 14,000 faculty, staff and administrators. Stephens and Columbia College add several hundred more jobs, while local hospitals employ another several thousand people. The city is also national headquarters for Shelter Insurance, and regional headquarters to State Farm Insurance companies.

5. Boone County and its communities are vulnerable to many hazards, all of which have the potential to disrupt the community, cause damage, and create casualties. The identified natural and technological hazards include the following (see Appendix 5 to the Basic Plan for further information):

- |                         |                              |
|-------------------------|------------------------------|
| floods                  | urban/structural fire        |
| tornadoes               | hazardous materials incident |
| wildfires               | transportation accident      |
| earthquake              | power failure                |
| drought                 | civil disorder               |
| severe winter storms    | terrorism                    |
| dam failure             | nuclear attack               |
| heat wave               | nuclear power plant incident |
| public health emergency |                              |

6. The City of Columbia-Boone County Emergency Operations Plan was developed for Columbia, Boone County, and its other municipalities. For more information, see Sec. III, A 7 in this Basic Plan.

7. The Boone County Local Emergency Planning Committee (LEPC) is responsible for the development of a hazardous materials plan for the county and its municipalities. This plan is included as Annex H.

8. Incidents involving acts of terrorism will be managed as established in Presidential Decision Directive 39 (PDD-39) which provides specific policy guidance regarding the response to acts of terrorism. The response to a terrorist incident involves two major components: a law enforcement response (crisis management) and an emergency management response (consequence management). These components may progress concurrently or consecutively. See Appendix 4 to Annex E for further information on terrorism incidents. For Public Information procedures in response to terrorism incidents, see Appendix 6 to Annex C.

9. Columbia, Boone County and its other municipalities have capabilities and resources, which, if effectively employed, would minimize or eliminate the loss of life and damage to property in the event of an emergency or major disaster. This must include the utilization of private and volunteer organizations to the greatest extent possible.
10. Mutual aid agreements, both written and verbal, exist between many of the emergency service agencies, subdivisions in the county and surrounding areas.
11. This emergency management plan is being developed and maintained as required by local executive order, pursuant to Missouri State Law, Chapter 44, RSMo, and the all-hazard emergency planning guidance developed by the State Emergency Management Agency (SEMA).

B. Assumptions

1. Some of the situations as previously stated may occur after implementation of warning and other preparedness measures, but others may occur with little or no warning.
2. County and city/community officials throughout Boone County are aware of the possible occurrence of an emergency or major disaster and are also aware of their responsibilities in the execution of this plan and will fulfill these responsibilities as needed.
3. In major emergencies, communities in the county which have no emergency management organization will be assisted by the county or the closest municipality with an emergency management agency.
4. The proper implementation of this plan will reduce or prevent the loss of lives and damage to property in Columbia, Boone County, and its other municipalities.
5. Depending upon the severity and magnitude of the situation, local resources may not be adequate to deal with every occurrence. It may be necessary to request assistance through volunteer organizations, the private sector, mutual aid agreements, or state and federal sources.

### III. CONCEPT OF OPERATIONS

A. General

1. It is the responsibility of local government to provide for a comprehensive emergency management program that meets the emergency needs of those who either have been or might be affected by an emergency or major disaster.

When the emergency exceeds the local government's capability to respond, assistance will be requested from the state government. If additional assistance is needed beyond state capabilities, the state will coordinate requests to the proper federal agencies.

2. The chief executive officer is ultimately responsible for emergency management activities within the boundaries of the jurisdiction. The Presiding Commissioner of Boone County is responsible for those activities in the unincorporated areas of the county (see Title II, Division 10, Chapter 11, of the Missouri Code of Regulations). The chief executive officer of each municipality (i.e., Mayor, Chairman) has a similar responsibility within their corporate boundaries. These officials can delegate their authority, but never their responsibility.
3. At no time will the County Commission supersede the authority of the elected officials, or their designee, of any of the incorporated subdivisions unless: (1) requested to do so by those elected officials, (2) the local subdivisions' governmental body is incapacitated or ceases to exist, or (3) empowered to do so by the governor under the authority of Chapter 44, RSMo.
4. This plan is based on the concept that the emergency functions assigned to the various groups, organizations, and individuals involved in this plan will parallel their normal day-to-day functions as closely as possible. The same personnel and material resources will be employed as much as possible in both normal and emergency functions.
5. Those day-to-day functions that do not contribute directly to emergency operations may be suspended during the emergency. The efforts that would normally be required for those functions will be redirected to the accomplishment of emergency tasks by the agency concerned.
6. This plan or portions thereof will be implemented according to the emergency classification and control procedures set forth in Appendix 3 to this Basic Plan. The procedures discussed under this Appendix will describe what happens when an emergency/disaster occurs, activation of the EOC, response procedures that will take place, and notification of departments/individuals.
7. Under a formal written agreement dated July 16, 1974, the City of Columbia and Boone County established a joint city-county responsibility for emergency management. This plan was developed for Columbia and Boone County, to include its smaller municipalities. However, many of the other municipalities, emergency response organizations and special facilities in the county typically maintain separate, but compatible, emergency operations plans, safety plans, and/or other emergency management policies and procedures specific to their needs.

5. Insure proper functioning and staffing of the Emergency Operations Center (EOC) and coordinate EOC operations during an emergency.
  6. Prepare emergency proclamation/resolution of a state of emergency when/if appropriate (see Appendix 6 to this Basic Plan).
  7. Act as liaison with other local, state, and federal emergency management agencies.
  8. Other duties as outlined in the local ordinances, court orders, and agreements.
- C. Emergency Operations Center (EOC)
1. Direction and control will originate from the EOC..
  2. The primary EOC for Columbia and Boone County is a joint facility established at the former National Guard Armory, 701 East Ash, Columbia, Mo. In the event that EOC cannot be used, an alternate EOC location will be identified. See Annex A for further EOC information.
  3. The EOC will be staffed according to the level of emergency. See Appendix 3 to this Basic Plan.

## **VI. CONTINUITY OF GOVERNMENT**

- A. Lines of Succession
1. Columbia
    - a. City Manager
    - b. Acting Manager as described by ordinance
    - c.. Department Heads
  2. Boone County
    - a. Presiding Commissioner
    - b. Commissioner, District 1
    - c. Commissioner, District 2
  3. Municipalities other than Columbia

The line of succession for each incorporated subdivision is from the Mayor (or Chairman) to the Mayor Pro-Tem to be followed by members of the City Council (or Board of Aldermen) as they decide.



4. Columbia- Boone County Emergency Management Agency
  - a. Emergency Management Director
  - b. Assistant Emergency Management Director
  - c. Communications Officer
5. Emergency Management for Municipalities other than Columbia

The line of succession from Emergency Management Director to Deputy Emergency Management Director applies to other individual jurisdictions in the county having an emergency management agency.

6. The individual or agency responsible for each annex (emergency function) identified in this plan must establish a line of succession and insure that departmental personnel and the Emergency Management Director are informed of this line of succession (refer to each annex of this plan).
7. In the event circumstances resulting from a disaster prevent a political entity from performing effective operations, the next higher political subdivision may assume authority until that political entity is able to adequately resume operations.

#### B. Preservation of Records

1. Vital records for Columbia and Boone County are in various forms such as written, microfilmed, or computerized. Essential records for Columbia and the other municipalities are available at each city hall and/or city department. For Boone County, these records are kept in the Johnson Building, Government Center.
2. In order to provide normal government operations after a disaster, all vital records of both a public and private nature recorded by such county and city officials as the clerk, collector, assessor, etc., must be protected and preserved. These would include legal documents, property deeds, tax records, etc. The following guidelines will apply:
  - a. Certain records and documents are vital to the continuance of government following a major disruption of normal activities such as a major disaster. These records and documents are to be identified by officials responsible for their day-to-day maintenance.
  - b. Resources from local government will be allocated to provide for one or more of the following options: (1) duplication of all such records, (2) timely movement to secure or safe areas outside the danger area, and/or (3) development of secure and safe storage areas within the jurisdiction.

3. Each emergency support service (i.e., law enforcement, fire, public works, health, etc.) must establish procedures to protect records deemed essential for continuing government functions and the conduct of emergency operations.
4. Further information on preservation of records can be obtained by contacting the Secretary of State's Office located in Jefferson City.

## **VII. ADMINISTRATION AND LOGISTICS**

- A. Whenever possible, procurement of necessary resources will be accomplished using normal, day-to-day channels.
- B. During unusual situations when such constraints would result in the loss of life and property, normal requisition procedures can be circumvented. This will be done under the authorities and by the procedures set forth in the local ordinances.
- C. Accurate records of all actions taken in an emergency are essential for the design of mitigation activities, training and settling possible litigation. Each department head, or that person responsible for an emergency function, must keep detailed, accurate records of all actions taken during an emergency.
- D. Agreements and understandings with other local jurisdictions, higher levels of government, and other agencies can be utilized to supplement local resources should an emergency situation exhaust the capabilities of Columbia and Boone County. Requests for such assistance will be made in accordance with negotiated mutual aid agreements and understandings. All such agreements should be formalized in writing whenever possible.
- E. Disaster assistance from the state or federal government will be utilized in accordance with their provisions and statutes. Requests for such assistance will be made in accordance with the procedures as set forth in Appendix 4 to this Basic Plan.
- F. Resource and supply matters have been addressed in Annex G. The Resource and Supply Coordinator has identified those resources available in Columbia and Boone County. This list will be expanded to include critical resources and those available from neighboring jurisdictions, military installations, and the state and federal government.
- G. Procedures for the inventory, storage, and maintenance of resources, including donations and services of the private sector, will be as specified in the appropriate annexes or standard operating guidelines.
- H. Discrimination on the grounds of race, color, religion, nationality, sex, age, physical impairment, or economic status will not be allowed in the execution of emergency management functions. This policy applies to all levels of government and the private sector.

## **VIII. PLAN DEVELOPMENT AND MAINTENANCE**

- A. Review and written concurrence of this plan and its annexes will be accomplished as follows: Each agency/department of government and private sector organizations assigned emergency responsibilities will review this plan. They will report their concurrence to their chief executive officer through the Columbia-Boone County Emergency Management Director. The County Commissioners, City Manager and Emergency Management Director will sign the promulgation document for all departments and organizations.
- B. The Columbia-Boone County Emergency Management Director will instigate an annual review of the plan by all officials and agencies. The city-county Director will ensure that necessary changes and revisions to the plan are prepared, coordinated, published, and distributed. The Director will provide a copy of the plan revisions to all organizations/agencies assigned responsibility for implementation of the plan.
- C. This plan will be activated once a year in the form of a simulated emergency, taking into account actual events in order to determine if revisions can be made that would improve disaster response and recovery operations. This will also provide practical controlled operations experience to those who have EOC responsibilities. This will be done by the city-county Emergency Management Director with the approval of their chief executive officer.

## **IX. AUTHORITIES AND REFERENCES**

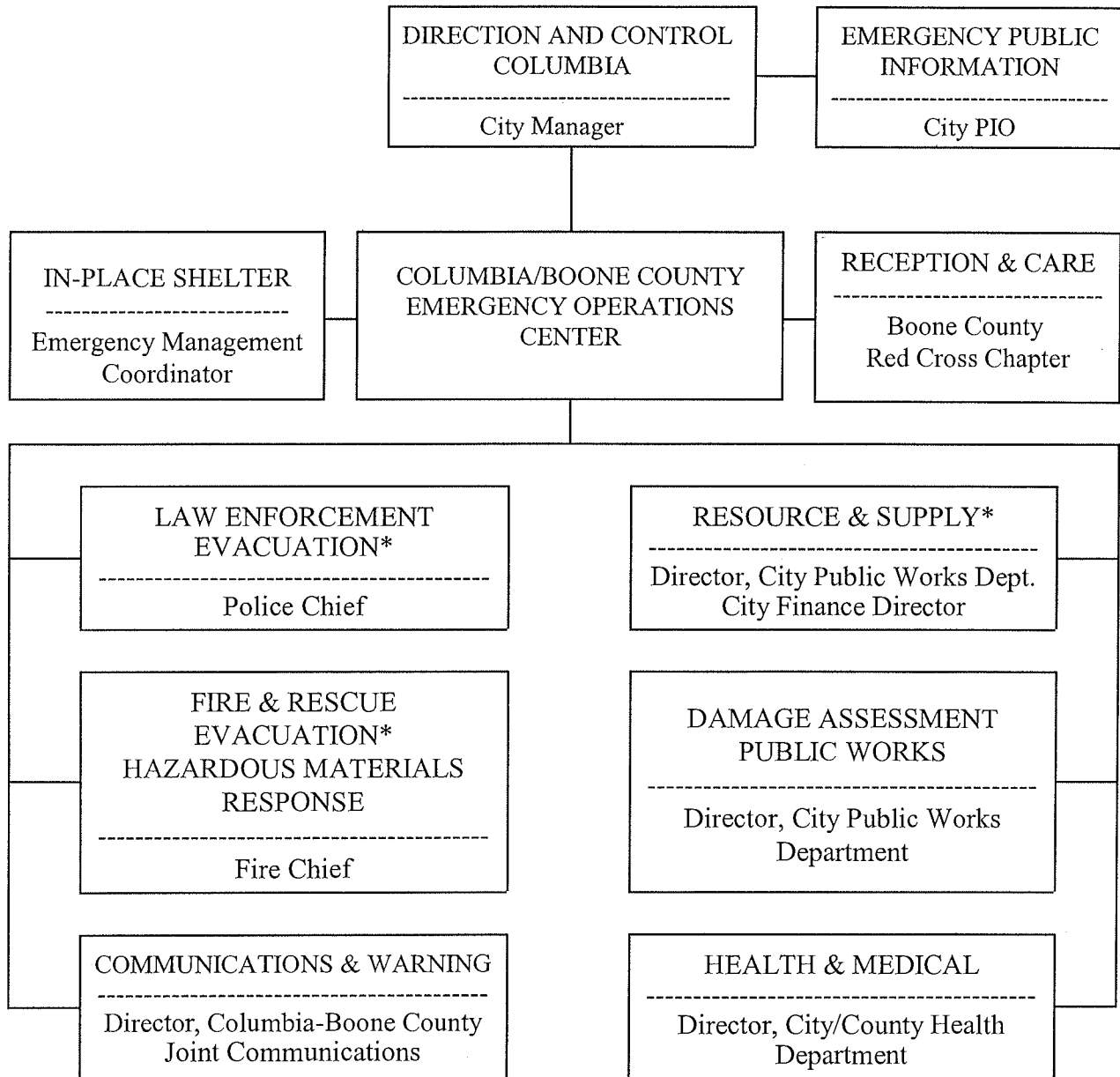
- A. Federal Public Law 93-288, Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended.
- B. Federal Public Law 99-499, SARA, Title III.
- C. Presidential Decision Directive 39 (PDD-39), U.S. Policy on Counterterrorism.
- D. Guide for All-Hazard Emergency Operations Planning, SLG 101, FEMA, September 1996.
- E. Revised Statutes of Missouri, Chapter 44, as amended.
- F. Revised Statutes of Missouri, 49.070.
- G. Missouri Code of State Regulations, Chapter 292, Spill Bill.
- H. Missouri Code of State Regulation, Title XI, Division 10, Chapter 11.
- I. State of Missouri Emergency Operations Plan, as amended.
- J. Missouri All-Hazard Emergency Planning Guidance, SEMA, as amended.

- K. Missouri Hazard Analysis, SEMA, as amended.
- L. City of Columbia Code, Chapter 7, "Civil Defense"
- M. City-County Disaster Preparedness Agreement dated July 16, 1974.
- N. Columbia/Boone County Joint Communications Center Operations Manual.
- O. Boone County Order 224-2003 "Local Emergency Management Regulation"

**APPENDICES**

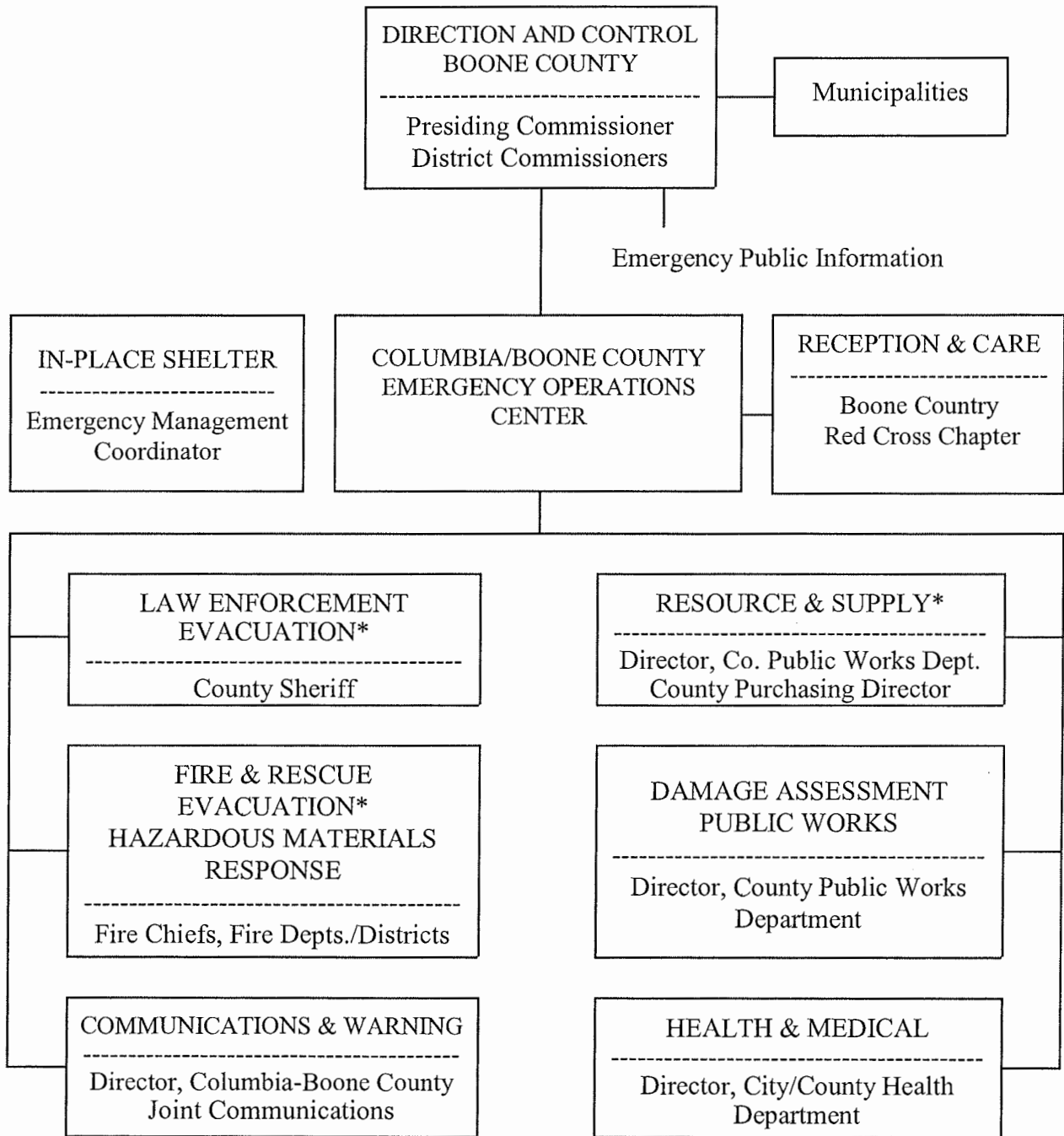
- 1. Emergency Management Diagram by Emergency Function (Columbia-Boone County)
- 2. Assignment of Responsibilities, Functions & Responsibility Charts
  - Attachment A - City of Columbia
  - Attachment B - Boone County
  - Attachment C - Other Municipalities in Boone County
  - Attachment D - Task Assignments by Function
- 3. Emergency (Disaster) Classification and Control Procedures
- 4. Procedures for Requesting State and Federal Assistance
- 5. Columbia-Boone County Hazard Analysis
  - Attachment A -Earthquake Response
    - Addendum 1 - Projected Earthquake Intensities (map)
  - Attachment B - Dam Failure
    - Addendum 1 - Boone County Dam Inventory
    - Addendum 2 - Dam Locations (Map)
  - Attachment C - National Flood Insurance Program Information
  - Attachment D - Callaway Nuclear Plant Emergency Planning Zones
  - Attachment E - Columbia/Boone County Risk Area: Civil Unrest, Explosive, Chemical and Biological Agent, Nuclear Incident.
- 6. Emergency Government Proclamation and/or Resolution of a State of Emergency in Columbia/Boone County.

**COLUMBIA EMERGENCY MANAGEMENT DIAGRAM  
BY EMERGENCY FUNCTION**



\*Joint Primary Responsibility

**BOONE COUNTY EMERGENCY MANAGEMENT DIAGRAM  
BY EMERGENCY FUNCTION**



\*Joint Primary Responsibility

Appendix 2 to the Basic Plan

**ASSIGNMENT OF RESPONSIBILITIES**

A. Functions and Responsibility Charts (Attachment A)

1. These charts assign specific agencies and/or individuals the responsibility to prepare for and to perform each of the thirteen identified emergency management functions (see Part IV of this Basic Plan), and also whether it is a primary or supporting role.
2. There are two such charts, one for Columbia and one for Boone County. These charts are general in nature and should not be considered all inclusive.

B. Task Assignments by Function (Attachment B)

1. Following the P & S Charts there is a basic list of tasks to be assigned to each function. These are only general lists that will be expanded in the various annexes.
2. There is one list of tasks for each function whether it is for the county or the municipality. Some tasks may be common to more than one function.

Attachment A to Appendix 2 of the Basic Plan

**FUNCTIONS & RESPONSIBILITY CHART  
CITY OF COLUMBIA**

FUNCTIONAL ANNEX	A	B	C	D	E	F	G	H	I	J	K	L	M
P = Primary Responsibility S = Support Responsibility * = Joint Responsibility  Department/Individual	DIRECTION & CONTROL	COMMUNICATIONS & WARNING	EMERGENCY PUBLIC INFORMATION	DAMAGE ASSESSMENT	LAW ENFORCEMENT	FIRE & RESCUE	RESOURCE & SUPPLY	HAZARDOUS MATERIALS	PUBLIC WORKS	EVACUATION	IN-PLACE SHELTER	RECEPTION & CARE	HEALTH & MEDICAL
City Manager	P	S	S				S						
Director of Joint Communications		P	S							S			
City Public Information Officer			P							S		S	
City Public Works Director	S			P			P*		P				
City Finance Director							P*						
City Police Chief	S	S			P					P*			
City Fire Chief						P		P		P*			
Boone County LEPC								S					
City/County Emergency Management Director	S	S	S	S						S	P		
Boone County Red Cross Chapter												P	
City County Public Health Director													P
Hospital Ambulance Services													S
County Coroner													S
City Power and Light				S			S						
City Parks Director							S						
Missouri State Highway Patrol	S	S			S			S		S			

Attachment B to Appendix 2 of the Basic Plan



**FUNCTIONS & RESPONSIBILITY CHART  
BOONE COUNTY**

FUNCTIONAL ANNEX	A	B	C	D	E	F	G	H	I	J	K	L	M	
P = Primary Responsibility S = Support Responsibility * = Joint Responsibility  Department/Individual	FUNCTION	DIRECTION & CONTROL	COMMUNICATIONS & WARNING	EMERGENCY PUBLIC INFORMATION	DAMAGE ASSESSMENT	LAW ENFORCEMENT	FIRE & RESCUE	RESOURCE & SUPPLY	HAZARDOUS MATERIALS	PUBLIC WORKS	EVACUATION	IN-PLACE SHELTER	RECEPTION & CARE	HEALTH & MEDICAL
Boone County Commission	P		P											
County Sheriff		S			P					P*				
City/County Emergency Management Director		S								S	P	S		
County Public Works				P			P*		P					
County Purchasing Director							P*							
County Auditor							S							
County Fire Protection Districts/Depts.						P		P		P*		S	S	
Boone County LEPC								S						
City/County Director of Joint Communications		P							P					
County Division of Family Services												S		
City/County Public Health Administrator														P
Hospital Ambulance Services														S
County Assessor				S										
County Planning & Building Inspector							S							
County Coroner														S
Missouri State Highway Patrol	S	S			S			S		S				
Boone County Red Cross Chapter												S		

**FUNCTIONS & RESPONSIBILITY CHART  
OTHER MUNICIPALITIES**

FUNCTIONAL ANNEX	A	B	C	D	E	F	G	H	I	J	K	L	M
P = Primary Support S = Support Responsibility J* = Joint Responsibility  Department/Individual	DIRECTION & CONTROL	COMMUNICATIONS & WARNING	EMERGENCY PUBLIC INFORMATION	DAMAGE ASSESSMENT	LAW ENFORCEMENT	FIRE & RESCUE	RESOURCE & SUPPLY	HAZARDOUS MATERIALS	PUBLIC WORKS	EVACUATION	IN-PLACE SHELTER	RECEPTION & CARE	HEALTH & MEDICAL
Mayor	P												
Chief of Police / Marshall		P			P								
City Emergency Management Director										P	P		
Public Information Officer			P										
City Streets/Public Works Dept.				P					P				
City / Rural Fire Departments						P							
County Fire Protection Districts								P					
City Clerk							P						
Boone County Red Cross Chapter												S	
Hospital Ambulance Services													S
City /County Health Department													P
Boone County LEPC								S					
Medical Examiner													S

Attachment D to Appendix 2  
of the Basic Plan

**TASKS ASSIGNMENTS BY FUNCTION**

The following is a basic list of tasks assigned to each function. These task assignments are common to both county and city organizations. Specific tasks are listed in the appropriate Annex.

A. Direction and Control (Annex A)

City of Columbia -- City Manager

Boone County -- Presiding Commissioner / Mayors (for other municipalities)

1. Make policy decisions relating to emergency management.
2. Plan for emergency management activities.
3. Oversee hazard mitigation activities.
4. Control operations during disasters.
5. Coordinate and direct relief and recovery operations.
6. Coordinate emergency management activities.
7. Maintain an exercise program.
8. Supervise the emergency public information function.

B. Communications and Warning (Annex B)

City of Columbia - - Director, Public Safety Joint Communications

Boone County – Director, Public Safety Joint Communications

1. Monitor all emergency situations to insure proper response.
2. Train personnel (full-time and supplementary).
3. Support all other emergency functions when needed.
4. Develop warning plans and procedures for all identified hazards (see Basic Plan, Situation and Assumptions).
5. Maintain and expand warning and alert devices (sirens, tone-activated receivers, etc.).

C. Emergency Public Information (Annex C)

City of Columbia - City Public Information Officer

Boone County - Presiding Commissioner/Mayors (for other municipalities)

1. Predesignate an information officer which will be the point of contact for the media during disaster situations (see Appendix 3 to Annex C for a terrorist incident).
2. Coordinate with the various departments concerning the release of public information.
3. Develop procedures for rumor control and information authentication.
4. Clear information with the chief executive officer and incident commander (as appropriate) before release to the public.
5. Use all news media for the release of information.

6. Maintain and release as appropriate EPIs for all identified hazards.
7. Conduct annual programs to acquaint news media with emergency plans.

D. Damage Assessment (Annex D)

City of Columbia - City Public Works Director

Boone County – County Public Works Director/city public works (for other municipalities).

1. Maintain plans and procedures consistent with those of the state and federal government.
2. Recruit and train personnel.
3. Provide disaster information to Direction and Control.
4. Assist federal and state officials in damage estimation.
5. Assist in mitigation activities by identifying potential problem areas.

E. Law Enforcement (Annex E)

City of Columbia - Chief of Police

Boone County - County Sheriff's Department / City Police (for other municipalities).

1. Maintain law and order during emergency operations.
2. Provide necessary support during emergency operations (i.e., site security, access control, traffic control, EOC security, etc.)
3. Provide and/or support communications and warning.
4. Lend support to fire, medical, hazardous materials and other emergency services as dictated by the situation.
5. Coordinate with other law enforcement groups.
6. Implement and/or continue training courses for auxiliaries and reserves.
7. Provide personnel with the appropriate level of hazardous materials training (coordinate with LEPC).

F. Fire and Rescue (Annex F)

City of Columbia - Columbia Fire Department

Boone County - Boone County Fire Protection District/Southern Boone County Fire Protection District.

1. Control fires during emergency operations.
2. Conduct fire prevention inspections.
3. Assist with search and rescue operations.
4. Support health and medical, communications and warning.
5. Respond to hazardous materials incidents.
6. Maintain/develop plans and procedures as required or conditions change.
7. Conduct training courses in self-help fire prevention techniques, as well as, fire prevention inspections.
8. Provide personnel with the appropriate level of hazardous materials training (coordinate with LEPC).

G. Resource and Supply (Annex G)

City of Columbia - (Resources) - City Public Works Director  
(Supply) - City Finance Director

Boone County - (Resources) - County Public Works Director /  
City Clerk (for other municipalities).  
(Supply) - County Purchasing Director/  
City Clerk/ (for other municipalities).

1. Maintain and update resource lists of supplies and personnel for use in disasters.
2. Identify potential resource requirements.
3. Coordinate with other agencies and departments to fill resource shortages.
4. Assist with the stocking of shelters.
5. Establish plans and procedures on how to channel donations and offers of volunteer assistance following a large scale disaster situation.

H. Hazardous Materials Response (Annex H)

City of Columbia - Columbia Fire Department

Boone County - Boone County Fire Protection District/  
Southern Boone Fire Protection District.

1. Develop/maintain hazard analysis.
2. Provide initial hazard assessment to response personnel and the general public.
3. Lead the initial environmental assessment.
4. Prescribe personnel protective measures.
5. Issue public warning.
6. Establish an on-scene command post.
7. Determine when reentry is possible.
8. Provide response personnel (i.e., law enforcement, fire, public works, health and medical) with the appropriate level of hazardous materials training.
9. Work with nearby hospitals to insure procedures are available to handle contaminated patients and to decontaminate and isolate such patients.
10. Maintain a peace-time radiological accident capability.
11. Maintain the inventory of radiological equipment from the state.

I. Public Works (Annex I)

City of Columbia - City Public Works Director

Boone County - County Public Works Director/  
City Street Department (for other municipalities)

1. Remove debris and dispose of garbage.
2. Make emergency road and bridge repairs.
3. Restore utility service, especially to critical facilities.
4. Assist with flood control and emergency snow removal.
5. Gather damage assessment information.
6. Provide necessary support to other departments (i.e., heavy equipment, barricades, etc.).

B. Operational Time Frames

This plan is concerned with all types of hazards that may develop in Boone County and must account for activities before, during, and after an occurrence. The following operational time frames were established for the various actions to be performed within the scope of this plan:

1. Mitigation -- A period of time during which activities are undertaken by individuals/departments to improve their capabilities to respond to a potential emergency and fulfill their assigned responsibilities.
2. Preparedness -- A period of time during which activities are undertaken by individuals/departments to increase their readiness posture during periods of heightened risk.
3. Response -- A period of time during which activities are undertaken by individuals/departments to respond to an occurrence that threatens or harms people/property.
4. Recovery -- A period of time during which activities are undertaken by individuals/departments to provide for the welfare of the people following a disaster and/or emergency.

**IV. ORGANIZATION AND ASSIGNMENT OF RESPONSIBILITIES**

A. Organization

1. The emergency management organization for Columbia and Boone County will be set up along the following functional lines:
  - a. Direction and Control Annex A
  - b. Communications and Warning Annex B
  - c. Emergency Public Information Annex C
  - d. Damage Assessment Annex D
  - e. Law Enforcement Annex E
  - f. Fire and Rescue Annex F
  - g. Resource and Supply Annex G
  - h. Hazardous Materials Response Annex H
  - I. Public Works Annex I
  - j. Evacuation Annex J
  - k. In-Place Shelter Annex K
  - l. Reception and Care Annex L
  - m. Health and Medical Annex M
2. Columbia and Boone County have established an organization and developed plans and procedures to perform the functions listed above using all available resources.

3. Diagrams of the emergency management structure by emergency function for Columbia and Boone County is located in Appendix 1 to this Basic Plan.

B. Assignment of Responsibilities

1. Specific groups, departments/agencies, and individuals will be assigned a primary responsibility to prepare for and to perform (coordinate) each of the functions listed previously. Others will be assigned a support responsibility. In some cases a function will be assigned to a county official or agency, while others to city agencies or a combination thereof. Assignments for Columbia and Boone County are identified on charts in Appendix 2 to this Basic Plan.
2. The specific tasks to be performed in each function are found in detail in each functional annex. Appendix 2 to this Basic Plan contains a basic list of task assignments by function common for both the county and city organizations.
3. It will be the responsibility of those agencies and individuals having a primary and/or support assignment to develop and maintain current standard operating guidelines (SOGs) and checklists which detail how their assigned tasks will be performed to implement this plan.
4. Departments and organizations tasked with emergency responsibilities will address the requirements of special needs groups (i.e., provide for medical needs, transportation, and other emergency support for the handicapped, elderly, etc.).

V. **DIRECTION AND CONTROL**

- A. The Presiding Commissioner of Boone County, the City Manager of Columbia and the mayors of other municipalities (or their designated representative) are responsible for all emergency management activities to include implementing this plan and directing emergency response within their jurisdiction. These officials are also responsible for declaring a state of emergency and requesting state and federal assistance when appropriate (see Appendices 4 and 6 to this Basic Plan).
- B. The Emergency Management Director is responsible for the following:
  1. Brief appropriate officials and new employees on their roles in emergency management.
  2. Coordinate all emergency management activities.
  3. Make decisions on routine day-to-day matters pertaining to emergency management.
  4. Advise elected officials on courses of action available for major decisions.

7. Provide personnel with the appropriate level of hazardous materials training. Coordinate with LEPC.
8. Refuel county/city vehicles.

J. Evacuation (Annex J)

City of Columbia - Chief of Police/Fire Chief

Boone County - County Sheriff/Fire Chiefs; Police Chief/  
Fire Chiefs (for other municipalities)

1. Verify evacuation routes and implement evacuations plans.
2. Identify affected facilities or individuals with special needs (nursing homes, invalids).
3. Make arrangements to keep essential facilities operating.
4. Maintain a continuous and orderly flow of traffic.
5. Furnish to the Public Information Officer instructions regarding evacuation procedures (i.e., rest areas, fuel stops, etc.) for release to the public.

K. In-Place Shelter (Annex K)

City of Columbia - Columbia/Boone County Emergency Management Director

Boone County - Columbia/Boone County Emergency Management Director

1. Advise the public on what protective actions to take.
2. Identify warning procedures.
3. Maintain emergency public information materials.
4. Identify/Provide protective shelter for the population in situations for which such action is appropriate. Coordinate with Reception and Care, Annex L.
5. Assist with the movement of people to shelters if necessary.
6. Nuclear attack sheltering will require implementing special procedures (i.e., marking, stocking, and upgrading).

L. Reception and Care (Annex L)

City of Columbia and Boone County - Boone County Red Cross Chapter

1. Review list of designated temporary lodging and feeding facilities.
2. Review procedures for the management of reception and care activities (feeding, registration, lodging, etc.).
3. Designate facilities for special needs groups.
4. Maintain supply of registration forms.
5. Coordinate mass feeding operations with Resource and Supply.
6. Identify facilities for pet/animal shelters.

M. Health and Medical (Annex M)

City of Columbia and Boone County - Columbia/Boone County Public Health Dept.

1. Provide for public health services during an emergency.
2. Coordinate plans with representatives of private health sector to include nearby hospitals, nursing homes, etc.
3. Implement plans for mass inoculation.



4. Review provisions for expanded mortuary services.
5. Develop procedures to augment regular medical staff.
6. Develop plans to provide medical care in shelters.
7. Provide personnel with the appropriate level of hazardous materials training (coordinate with LEPC).

## Appendix 3 to the Basic Plan

### **EMERGENCY (DISASTER) CLASSIFICATION & CONTROL PROCEDURES**

#### I. PURPOSE

To establish emergency/disaster classification and control procedures for county and/or city officials and emergency response personnel during periods of emergency/disaster.

#### II. EMERGENCY CLASSIFICATION

- A. Level I Emergency is an occurrence that can be handled routinely by one or more departments within the County and/or City. It has the potential to require resources in excess of those available to the responding agency(ies) through mutual aid agreements, etc., to bring the situation under control. (Example: bomb threat, traffic accident with fuel spill, etc.)
- B. Level II Emergency is an occurrence that requires a major response and the significant commitment of resources from several governmental agencies, but will still be within the capabilities of local resources to control. (Example: localized flooding, isolated tornado damage, structure fire with hazardous materials involved, etc.)
- C. Level III Emergency is an occurrence that requires an extensive response and commitment of resources from all departments/agencies and could necessitate requesting outside assistance from state and federal agencies. (Example: earthquake, major tornado damage over large areas with extensive casualties, extensive flooding or any incident requiring an evacuation of a significant sized area.)

#### III. RESPONSE PROCEDURES

- A. The dispatcher, upon notification of an emergency, shall notify the appropriate response agencies to respond. (The term dispatcher when used in these procedures refers to the Columbia-Boone County Joint Communications/ E-911 Dispatch Center.)
- B. On-scene command and control of the affected area will be established by the first ranking officer of the responding agency at the scene of the incident. For incidents involving hazardous materials, the Incident Command System (ICS) will be implemented and the Incident Commander will be responsible for directing response operations.
- C. The on-scene commanding officer will maintain radio contact with the dispatcher to advise of the situation and to alert additional response agencies as necessary.

- D. When it becomes apparent to the commanding officer at the scene that control of the incident is beyond the response capabilities of the initial responding agency(ies) and the emergency has escalated from Level I to Level II or higher, the officer will instruct the dispatcher to notify the next in command (i.e., Sheriff, Police Chief, Fire Chief, Emergency Management Director, etc.) of the seriousness of the disaster.
- E. The next in command will in turn, advise the chief executive officer (i.e., Presiding Commissioner for Boone County or City Manager/ Mayor of the involved municipality) of the situation, at which time a determination will be made as to whether or not the EOC should be activated and personnel should be assembled.
- F. Should it be decided to assemble the EOC staff, each requested member of the EOC staff will be contacted by the dispatcher and advised to report to the EOC. The dispatcher will be assisted by the on-duty personnel at the department and/or the Emergency Management Director to make the notifications if necessary (See Appendix 2 to Annex A for EOC Staffing Roster/Call-Up List).
- G. After the EOC Direction and Control staff has assembled, it will be determined what personnel will be required to control operations. This determination will be made by the officials present.

#### IV. NOTIFICATION PROCEDURES

- A. It will be the responsibility of the dispatcher on duty to notify the law enforcement and fire department command personnel. If necessary, one administrative assistant from each above mentioned department will be notified. The administrative assistants will report to the EOC and contact all other parties on the EOC call out list.
- B. The dispatcher will have available at the communications center the necessary call-up/notification lists which include names and telephone numbers of individuals and organizations to contact. It is the responsibility of the dispatcher along with each organization/department to see that these lists are kept current.
- C. In some cases it will be the responsibility of the first organization member contacted to notify and/or recall the necessary personnel within that organization to respond to the incident. Therefore, each organization must maintain current internal personnel notification/recall rosters and a means to implement them.
- D. Depending upon the type of emergency, the dispatcher will notify/warn special locations such as schools, nursing homes, factories and places of public assembly by using all methods as outlined in the Communications and Warning Annex (i.e., outdoor sirens, cable television interrupt, news media alert).
- E. It is the responsibility of the EOC clerking staff to keep a log of all messages received and sent (See Annex A for copies of message and log forms).

- F. Operational procedures/checklists will be established and utilized in so far as possible.
- G. Situations requiring notification that are not covered by these checklists will be handled on a case by case basis by the Emergency Management Director and her/his staff.

## Appendix 4 to the Basic Plan

### **PROCEDURES FOR REQUESTING STATE AND FEDERAL ASSISTANCE**

#### **I. STATE AND FEDERAL ASSISTANCE**

- A. Assistance from State and/or Federal agencies such as the Department of Conservation, Department of Natural Resources, U.S. Army Corps of Engineers, etc. can be requested directly by calling the appropriate agency (see each Annex of this plan for specific agencies and their contact points). State and/or Federal assistance may also be requested through the State Emergency Management Agency (SEMA).
- B. SEMA Notification
1. SEMA has a 24-hour telephone number to request assistance in a disaster or emergency: 573-751-2748.
    - a. Business hours: Your call will be answered by personnel on duty in the EOC.
    - b. Non-business hours: Leave your name and a call back number. Your call will be returned by the Duty Officer.
  2. If the telephone lines are down, the Duty Officer can still be contacted. The Missouri State Highway Patrol can relay the information to Troop F in Jefferson City by radio. During working hours, the Missouri Uniform Law Enforcement System (MULES) can also be used to transmit messages to the MULES terminal in the State Emergency Operations Center.

#### **II. NATIONAL GUARD ASSISTANCE**

- A. General Facts
1. Requests for such assistance can only be made by the chief executive officer or designated successor as outlined in this plan (see Part VI of the Basic Plan, Continuity of Government).
  2. Requests should only be made after local resources are exhausted.
  3. The State Emergency Management Agency (SEMA) should be informed prior to making such a request.
- B. Procedures

1. Analyze the situation to determine:
  - a. If threat to life or property still exists.
  - b. To insure all local resources are committed.
2. Make the request directly to the Governor through SEMA by the quickest means possible. If the telephone or radio is used, a hard copy should follow.

## Appendix 5 to the Basic Plan

### BOONE COUNTY/CITY OF COLUMBIA HAZARD ANALYSIS

This Appendix is designed to provide an overview of the hazards that could affect the City of Columbia and Boone County. In general, hazards can be placed into two (2) categories: Natural and Technological.

#### I. NATURAL HAZARDS

##### A. Tornado

Since Missouri lies in the heart of the nation's "tornado alley," its residents are particularly vulnerable to tornadoes. Seventy percent (70%) of Missouri's tornadoes occur during the months of March, April, May and June, but a tornado can occur at any time of the year. In past years from 1950 to 2000, Boone County has recorded 30 tornado touchdowns. Boone County currently ranks third in the state in terms of the frequency of tornadoes, although there have been no deaths. The most recent devastating tornado occurred on November 10, 1998 when such a storm swept through southern Boone County, striking the Southridge and El Chaparral subdivisions, along with the LeMone Industrial Park. More than 258 homes and businesses were damaged by that tornado, causing millions of dollars in damage. Based on such prior history, Boone County is considered "at risk" to tornadoes.

##### B. Winter Storms

Although excessive snowfalls with prolonged severe cold or storms producing blizzard conditions are rare in Missouri, they do occur. Most snow usually falls during the months of December, January, and February. Although recent Missouri winters have been mild, weather data indicates that counties north of the Missouri River may receive up to 18 to 22 inches of snow a year. A large winter storm accompanied by severe cold could cause numerous secondary hazards such as: power failure, transportation incidents, and fuel shortages.

##### C. Floods

Flooding has historically posed problems for many parts of Boone County and several of its communities. Another potential for flooding in the county stems from the numerous dams throughout the county.

##### D. Earthquake

Although earthquakes in the Midwest occur less frequently than on the west coast, the threat of earthquake to Missouri residents is high. In the event of a magnitude 7.6 earthquake along the New Madrid seismic zone, the City of Columbia and Boone County could experience an intensity of VII on the Modified Mercalli Scale. See

F. Civil Disorder

Any incident intended to disrupt community affairs and requiring police intervention to maintain public safety. Civil disorders include the following types: riots, strikes resulting in violence, and demonstrations resulting in police intervention and arrests. Although, the target areas of strikes are generally more easily defined, areas subject to riots or demonstration may encompass large portions of the community. The types of facilities that could be targets of such activities include government buildings, military bases, schools/universities, and correctional facilities.

G. Terrorism

Terrorism as defined by the FBI includes: “the unlawful use of force or violence, committed by a group(s) of two or more individuals, against persons or property to intimidate or coerce a government, the civilian population, or any segment thereof, in furtherance of political or social objectives.” According to the FBI there are two types of terrorism: Domestic Terrorism and International Terrorism.

Terrorism can take place in various forms, depending on the technological means available to the terrorist group, the nature of the political issue motivating the attack, and the points of weakness of their target. Potential terrorist actions include: bombings, airline attacks, nuclear/biological/chemical attacks, infrastructure attack, arson, and kidnappings/assassinations.

Although this state has identified several different extremist groups operating here, there have been no indications of any specific terrorist activities. The potential does remain for some new extremist and/or terrorist group to move into the state. An open society such as ours, which is dependent upon technology for its continued smooth operation, remains a potential target for terrorists.

Columbia/Boone County has included a Risk Area inventory of potential facilities and locations which could be impacted in the event of civil unrest, explosive, chemical and biological agent, or nuclear incident from a terrorist attack. See Appendix 5, Attachment E in this Basic Plan. Additional information on terrorism is found in Annex E, Appendix 4. For Public Information procedures regarding a terrorist incident, see Annex C, Appendix 3.

H. Nuclear Attack/Detonation

Radioactive fallout from the detonation of a nuclear device could pose a serious threat to the residents of Boone County. The State Emergency Management Agency (SEMA) is responsible for assisting local government in the development of plans in the event of a nuclear attack. There are two types of protective planning used to address this threat. The first type of planning is in-place sheltering should an attack occur with little or no warning. The second type of planning is relocation from a risk area. Relocation is only a viable option if the attack is preceded by a period of



heightened tension. This period would then allow risk area populations to relocate to a safer reception and care area. For more information, contact the Columbia-Boone County Emergency Management Director, or the State Emergency Management Agency.

#### I. Nuclear Power Plant Incident

The Callaway Nuclear Plant is a commercial nuclear power reactor located east of Columbia/Boone County in Callaway County. The plant is owned and operated by AmerenUE, St. Louis. The Callaway Plant has declared nine Unusual Events since it came on line in 1984. To date, the last declared event was in 1999.

In a worst case scenario where a significant release of radioactive material has occurred, food sources out to a 50-mile radius of the plant could be contaminated. All of Boone County is within the 50-mile Emergency Planning Zone (EPZ). A map of the Callaway Nuclear Plant EPZ is provided in Attachment D to this Appendix. The State of Missouri as well as the utility company have developed emergency operations plans to ensure the health and safety of the general population within the emergency planning zones.

Columbia/Boone County lies within the ingestion exposure pathway of the Callaway Nuclear Plant. The ingestion exposure pathway is the area within a 50-mile radius around a commercial nuclear power plant in which people may be indirectly exposed to radiation by eating or drinking contaminated food, milk, and water.

The safety of the food supply within the 50-mile ingestion exposure pathway could also be a concern to members of the agricultural community if a radiological release to the atmosphere occurred. This could affect dairy farms, dairy processing plants, egg processors and distributors, grain warehouses, meat processing plants, commercial fruit and vegetable producers. The agricultural community would be notified and advised on what actions to take in the event of a radiological emergency.

#### J. Public Health Emergency

Public health emergencies can take many forms - disease epidemics, large-scale incidents of food or water contamination, or extended periods without adequate water and sewer services. There can also be harmful exposure to chemical, radiological or biological agents, and large-scale infestations of disease-carrying insects or rodents - to name just a few. Public health emergencies can occur as primary events by themselves, or they may be secondary events to another disaster or emergency, such as flood, tornado, or hazardous material incident. The common characteristic of most public health emergencies is that they adversely impact, or have the potential to adversely impact, a large number of people. They can be statewide, regional, or localized.

In particular, two public health hazards have recently emerged as issues of great

concern, with far reaching consequences. One would be the intentional release of a radiological, chemical, or biological agent, as a terrorist act of sabotage, to adversely impact a large number of people. The second hazard would be a deadly flu outbreak (influenza pandemic) that could kill or sicken thousands of people across the country or around the globe, as in the case of the Spanish Flu epidemic of 1918-19. Such a pandemic could occur either by a natural means, or man-caused as a bio-chemical terrorist activity.

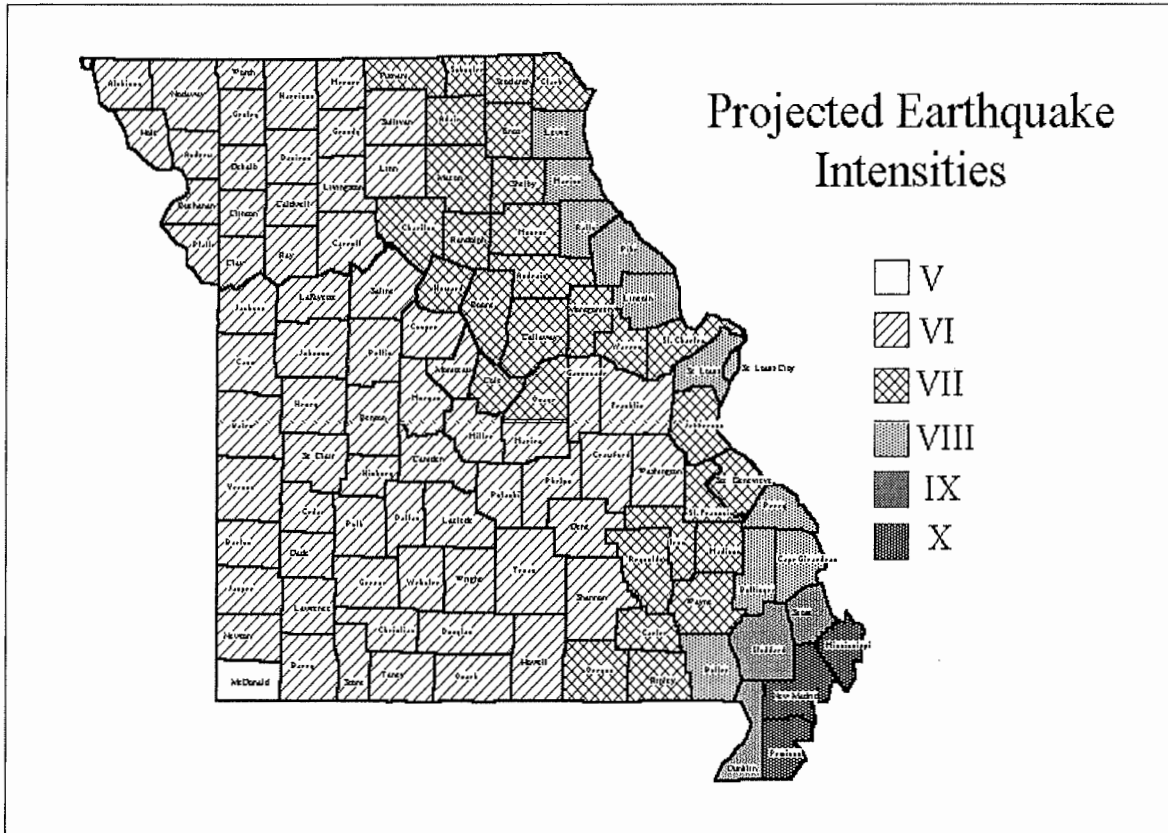
Attachment A  
Appendix 5 to the Basic Plan

**EARTHQUAKE RESPONSE**

- A. The New Madrid Seismic Zone is centered in Southeast Missouri and northeast Arkansas, but extends into parts of Illinois, Indiana, Kentucky, Mississippi and Tennessee. The region is considered to pose the greatest danger and have the highest seismicity level of any area east of the Rocky Mountains. Due to the geology of the area, damages could be spread over a large area of the Central United States.
- B. Addendum 1 to this Appendix illustrates the projected Modified Mercalli intensities for Missouri should a 7.6 magnitude earthquake occur anywhere along the New Madrid Seismic Zone. Columbia and Boone County can expect to feel the effects of a VII intensity on the Modified Mercalli scale. See Addendum 1 to this Attachment for a list of these effects for Columbia/Boone County.
- C. A major earthquake could cause massive casualties and injuries, as well as severe damage to private and public property. (Most casualties and injuries are due to falling objects and debris, not from the actual movement of the ground.) Railroads, highways, bridges, telecommunications, and utilities could also be severely damaged. An earthquake could trigger secondary events such as explosions, fires, landslides, flooding, liquefaction and hazardous materials releases. Natural gas and petroleum pipelines could rupture, causing fires and explosions. Dam failures are also likely to follow a major earthquake.
- D. A major earthquake would overwhelm a local jurisdiction's ability to adequately respond to the situation.
- E. Earthquakes are more likely to hinder emergency operations than most other disasters or emergencies (i.e., difficulties coordinating services and acquiring resources could be much more critical).
- F. Access to and from the damaged area may be severely restricted for hours at least, if not days. Communications and life-support systems may be severely hampered or destroyed.
- G. Seismic caused ground motions and its resulting damage may vary within a geographical region. There could be heavy damage in one area and only slight damage in another area. Initial reports of the earthquake may not reflect the true nature of the problem.
- H. A catastrophic earthquake would result in an immediate declaration of a "State of Emergency" by the Governor, followed later by a Presidential Disaster Declaration. This would allow state and federal emergency operations to begin.
- I. Local jurisdictions may have to "go it alone" for the first 72 hours after an earthquake, before state and federal assistance arrives.

Addendum 1 to Attachment A  
Appendix 5 to the Basic Plan

**PROJECTED EARTHQUAKE INTENSITIES**



This map shows the highest projected Modified Mercalli intensities by county from a potential magnitude 7.6 earthquake whose epicenter could be anywhere along the length of the New Madrid seismic zone.

Earthquake effects - Intensity VII: People have difficulty standing. Considerable damage in poorly built or badly designed buildings, adobe houses, old walls, spires and others. Damage is slight to moderate in well-built buildings. Numerous windows are broken. Weak chimneys break at roof lines. Cornices from towers and high buildings fall. Loose bricks fall from buildings. Heavy furniture is overturned and damaged. Some sand and gravel stream banks cave in.

Attachment B  
Appendix 5 to the Basic Plan

**DAM FAILURE**

I. DEFINITION

Dam Failure is defined as downstream flooding due to the partial or complete collapse of any impoundment.

II. SITUATION

- A. Dam failure is associated with intense rainfall and prolonged flood conditions. However, dam breaks may also occur during dry periods as a result of progressive erosion of an embankment caused by seepage leaks. Dam failure may also be caused by earthquake.
- B. The greatest threat from dam breaks is to areas immediately downstream. The seriously affected population would be located in the potential downstream inundation area as identified by the U.S. Army Corps of Engineers or state agencies.

III. 1980 DAM INVENTORY

- A. An inventory of dams in Missouri is maintained by the Missouri Department of Natural Resources, Division of Geology and Land Survey. The inventory has identified one hundred and twenty three (123) dams in Boone County, including twenty seven (27) that are rated high hazard, twenty four (24) that are significant hazard, and seventy two (72) that are low hazard dams. These dams are listed in Addendum 1 to this Attachment. A map showing their location is provided in Addendum 2.
- B. The term "dam," is defined as an artificial barrier which impounds or diverts water and:
  - 1. Is more than 6 feet high and stores 50 acre-feet or more, or,
  - 2. Is 25 feet or more high and stores more than 15 acre-feet.

Excluded are:

- 1. Levees used to prevent water from reaching certain areas.
- 2. Sewage lagoon levees.

Attachment A to this Appendix for additional information.

E. Drought

Drought is defined as a prolonged period with no rain that can affect agricultural areas and impact water supply systems. Because of its geographical location and characteristic weather patterns, Missouri is vulnerable to drought conditions. Agricultural droughts are the most common of record, particularly those inflicting damage to corn crop yields.

The Department of Natural Resources (DNR) has divided the state into three regions which are prioritized according to drought susceptibility: Region A - slight, Region B - moderate, Region C - high. Boone County is located in Region B. Region B has moderate drought susceptibility. In this region the groundwater resources are adequate to meet domestic and municipal water needs, but due to required well depths, irrigation wells are very expensive. The topography generally is unsuitable for row-crop irrigation. During much of the year 2000, drought conditions for Boone County and most of the state were assessed at Phase II, Alert Level by DNR's Drought Assessment Committee, which was activated during the Drought of 1999-2000. For counties under Phase II, the state regularly monitors conditions, as some public water systems may have trouble meeting increased demands.

F. Heat Wave

A heat wave is defined by the National Weather Service as three consecutive days of 90 degree Fahrenheit plus temperatures. These high temperatures generally occur from June through September, but are most prevalent in the months of July and August. When heat indexes of 105 degrees are reached for a large portion of the state, the Missouri Department of Health will announce a hot weather health advisory, warning or emergency depending upon the duration. Heat waves are often a major contributing factor to power outages (brownouts, etc.) as the high temperatures result in a tremendous demand for electricity for cooling purposes.

G. Wildfire

A wildfire is the uncontrolled burning in grasslands, brush, or forest/woodlands. The majority of fires and the greatest acreage loss will occur during the spring fire season, which is normally between February and May and July, August and September. During the spring of 2000, more than 70 brush and wildfires erupted around the state, prompting the Governor to declare a State of Emergency. The state received a federal grant to offset the costs of fire suppression for some local fire departments/districts.

## II. TECHNOLOGICAL HAZARDS

### A. Hazardous Materials

Columbia/Boone County is prone to hazardous materials incidents from fixed facilities and transportation accidents. Several major highways traverse the county (i.e., Interstate 70, U.S. Highway 63 and Missouri Highways 24 and 22). There are two railroad lines through the county. In addition, there are natural gas pipelines, crude oil pipelines, other product pipelines and bulk terminals running through the county. The Columbia Regional Airport presents the potential for both hazardous materials incidents (agricultural products) and fatalities due to airplane crashes. (See Annex H)

### B. Transportation Accident

This type of accident involves passenger air or rail travel that results in death or injury. Highway incidents are usually excluded under this hazard and addressed under hazardous materials incidents.

### C. Dam Failure

There are 123 dams located in Boone County. Of these dams, 27 are high hazard dams, 24 significant hazard, and 72 are low hazard. The hazard rating is based on the contents of the downstream environment zone (permanent dwellings, public buildings, campgrounds with permanent water/sewer/electrical services, industrial buildings, etc.). Partial or complete collapse of any of these dams has the potential to cause downstream flooding problems in the county. See Attachment B to this Appendix for a list of dams in Boone County.

### D. Urban and Structural Fire

Fire is the primary cause of accidental death in the United States, surpassing floods, automobile accidents and other disasters (20 times more deaths are caused by fire than by floods, hurricanes, tornadoes and earthquakes combined.) Fires are by far the most frequent hazard that will affect Columbia and Boone County. Fires may be accidental (lightning) or intentional (arson) and have the potential to cause major conflagrations, leading to secondary hazards, such as a hazardous materials incidents.

### E. Power Failure

This type of incident involves any interruption or loss of electrical service due to disruption of power generation or transmission caused by accident, natural hazards, equipment failure, or fuel shortage. A significant power failure would require the involvement of the emergency management organization to coordinate provision of sheltering, heating/cooling, etc.

Addendum 1  
Attachment B to Appendix 5

**BOONE COUNTY DAM INVENTORY**

<u>Map*</u> <u>ID</u> <u>No.</u>	<u>Dam</u> <u>ID No.</u>	<u>Name</u>	<u>Dam</u> <u>Height</u>	<u>Reservoir/ Lake Area</u>	<u>Hazard**</u>
1	MO10015	Lake Chateau Dam	31	330	High
2	MO10016	County Downes Lake Dam	37	310	Significant
3	MO10019	Perry Phillips Dam	40	440	High
4	MO10020	Gurwitt Lake Dam	35	152	Low
5	MO10121	Callahan Creek Watershed D. C-1	35	187	Low
6	MO10122	Bailey Lake Dam	15	603	Low
7	MO10235	Windmiller Dam 1	30	330	High
8	MO10236	defunct (Laboratory Dam)			
9	MO10263	Boone County B-1	15	302	Low
10	MO10102	Tri-City Community Lake Dam	25	233	Low
11	MO10224	Hood Lake Dam	25	167	Low
12	MO10552	Turkey Farm Lake Dam	20	87	Significant
13	MO10724	Montgomery Lake Dam	25	50	Low
14	MO10725	McKenzie Lake Dam	25	63	Significant
15	MO10726	Hulen Lake West	50	309	High
16	MO10730	Wabash Lake Dam	15	175	Low
17	MO10731	Roemers Lake Dam	40	347	Significant
18	MO10733	Welch Lake Dam	25	75	High
19	MO10844	Rocky Fork Creek Dam	15	275	Low
20	MO10892	Columbia Sportsman's Club L & D	20	167	Low
21	MO10893	Boco Mo Dam	33	705	High
22	MO10894	Cedar Lake Dam -Sec. 23	30	80	Low
23	MO10895	Columbia Municipal Golf Course Lower L. Dam	15	19	High
24	MO10899	Smarr Lake Dam	25	17	Low
25	MO10904	Bumgarner Lake Dam-Sec. 3	25	83	Low
26	MO10905	Upper Lake Chapperal Dam	25	183	Low
27	MO10908	Little Leech Dam	21	21	Low
28	MO10975	Hulen Lake East	50	141	High
29	MO10976	Fairview Lake Dam	35	29	High
30	MO11019	Andy Lake Dam	25	33	Significant
31	MO11020	Lake Lavista Dam	25	183	Significant
32	MO11157	Hagan Lake Dam	32	75	High
33	MO11058	defunct (Mononame)			

\* Map identification number corresponds to the map of dams in Addendum 2 to this Attachment.

\*\* The hazard rating is based on the contents of the downstream environment zone (permanent dwellings, public buildings, campgrounds with permanent water/sewer/electrical services, industrial buildings, etc.).



## BOONE COUNTY DAM INVENTORY (Continued)

Map* <u>ID</u> <u>No.</u>	Dam <u>ID No.</u>	<u>Name</u>	Dam <u>Height</u>	Reservoir/ <u>Lake Area</u>	<u>Hazard**</u>
34	MO11068	Columbia Mun. Golf Course Dam	17		High
35	MO11171	Country Club of Mo. Lake Dam	30	80	Significant
36	MO11172	Stephens Lake Dam	25	92	High
37	MO11173	Moores Lake Dam	33	77	High
38	MO11205	Smith Hatchery Lake Dam	25	50	Significant
39	MO11318	Ginn Lake Dam	30	80	Significant
40	MO11319	Peterson Lake Dam	30	60	Low
41	MO11321	Landhuis Lake Dam	25	158	Low
42	MO11336	Musgraves Lake Dam	23	85	Significant
43	MO11427	Cunninghams Lake Dam	25	85	Low
44	MO11428	Walsey Lake Dam	25	33	Low
45	MO11429	Scott Lake Dam	25	25	Significant
46	MO11430	Schnarre Lake Dam Sec. 23	25	108	Low
47	MO11431	Schnarre Lake Dam Sec. 24	20	80	Low
48	MO11432	Forrest Lake Dam	25	50	Low
49	MO11433	Lower Lake Chapparel Dam	50	750	Low
50	MO11434	Bunns Lake Dam East	15	70	Low
51	MO11435	Bunns Lake Dam West	25	200	Low
52	MO11436	Fountain Lake Dam	25	75	Significant
53	MO11437	Roberts Lake Dam	25	33	Low
54	MO11573	North 40 Lake Dam	25	33	Low
55	MO11574	Angel Lake Dam	29	77	Low
56	MO11575	Wayland Lake Dam	25	42	Low
57	MO11576	Pollock Lake Dam	25	33	Low
58	MO11577	Salmons Dam	35	35	Low
59	MO11578	Bumgarner Lake Dam Sec. 11	24	80	Low
60	MO11579	Country Boy Estates Lake Dam	40	100	Low
61	MO11580	Arron Lake Dam	20	67	Significant
62	MO11581	Silver Creek Lake Dam	40	270	Low
63	MO11582	Country View Acres Lake Dam	25	50	Low
64	MO11583	Lewis Lake Dam South	25	17	Low
65	MO11584	Lewis Lake Dam North	25	100	Significant
66	MO11585	Garrett Lake Dam	25	42	Low
67	MO11586	Walnut Crest Lake Dam	25	25	Significant
68	MO11588	Weil Lake Dam	25	25	Significant
69	MO11589	Hopper Dam	25	25	Low

\* Map identification number corresponds to the map of dams in Addendum 2 to this Attachment.

\*\* The hazard rating is based on the contents of the downstream environment zone (permanent dwellings, public buildings, campgrounds with permanent water/sewer/electrical services, industrial buildings, etc.

## BOONE COUNTY DAM INVENTORY (Continued)

<u>Map*</u> <u>ID No.</u>	<u>Dam</u> <u>ID No.</u>	<u>Name</u>	<u>Dam</u> <u>Height</u>	<u>Reservoir/ Lake</u> <u>Area</u>	<u>Hazard<sup>1**</sup></u>
70	MO11590	Seltsam Lake Dam	25	25	Significant
71	MO11592	Bon-Gor Lake Dam	20	60	Low
72	MO11593	Rayfield Lake Dam	25	25	Significant
73	MO11594	Mills Lake Dam	30	30	Significant
74	MO11595	Ausburn's Lake Dam	19	51	Low
75	MO11596	Lake Cyrene Dam	25	58	High
76	MO11597	Moon Valley Lake Dam	16	80	High
77	MO11598	Shady Lake Dam	28	37	High
78	MO11601	Liddle Dam	25	25	Low
79	MO11602	Fletchall Lake Dam	17	25	Low
80	MO11605	Smith Lake Dam Sec. 1	25	25	Low
81	MO11606	Univ. of Mo.-RI Dam	18	73	Significant
82	MO11607	Smith Lake Dam	30	90	Low
83	MO11609	Tincher Lake North Dam	25	50	Low
84	MO11637	Sapp Lake Dam	25	50	Low
85	MO11640	Rapp Lake Dam	30	40	Low
86	MO11641	Kimmy Lake Dam	25	42	Low
87	MO11642	Dexter Lake Dam	25	25	Low
88	MO11643	Kreisel Lake Dam Sect 3	30	150	Low
89	MO11644	Callahan Creek Watershed Dam A-4	40	147	Low
90	MO11645	Bennett Lake Dam	20	85	Low
91	MO11646	Callahan CR Watershed Dam A-1	30	220	Low
92	MO11647	Callahan CR Watershed Dam A-6	25	50	Low
93	MO11648	Lohmar Lake Dam	30	80	Low
94	MO11649	Llorens Lake Dam	30	80	Low
95	MO11651	Blakemore Lake Dam	30	40	Low
96	MO11675	Windmiller Dam 2	20	70	High
97	MO11774	Callahan CR Watershed Dam C-2	50	1000	Significant
98	MO12102	defunct (Hogan Lake Lower Dam)			
99	MO12104	Tincher Lake South Dam	25	160	Low
100	MO12107	Roddy Lake Dam	25	85	Low
101	MO30498	Woodbine Lake Dam	25	25	Low
102	MO30499	Hill Creek Acres Lake Dam	40	93	Low

\* Map identification number corresponds to the map of dams in Addendum 2 to this Attachment.

\*\* The hazard rating is based on the contents of the downstream environment zone (permanent dwellings, public buildings, campgrounds with permanent water/sewer/electrical services, industrial buildings, etc).

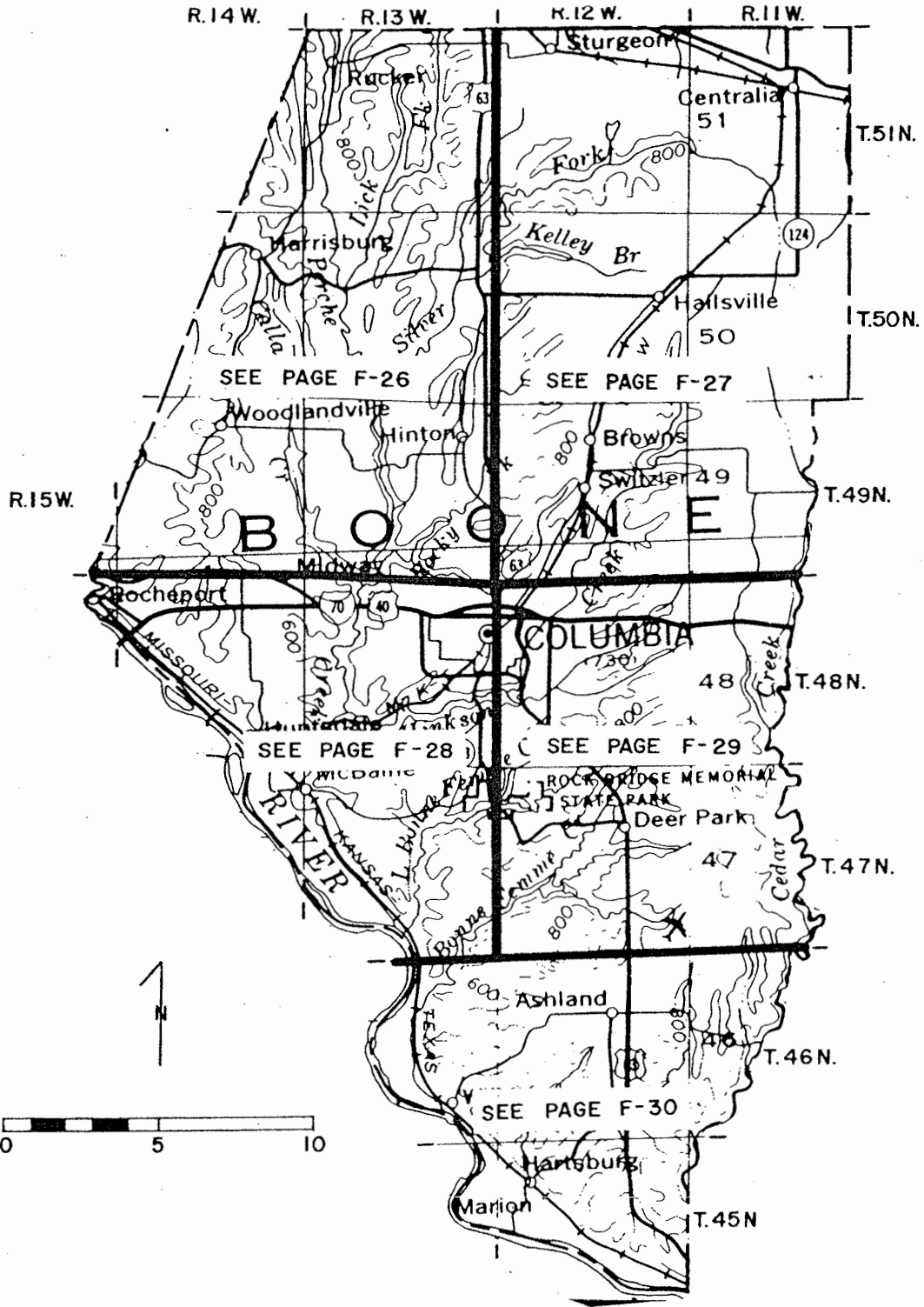
## BOONE COUNTY DAM INVENTORY (Continued)

Map* ID No.	Dam ID No.	Name	Dam Height	Reservoir/ Lake Area	Hazard**
103	MO30880	Lake Champetra Dam	58	602	High
104	MO30909	Henry Dam	15	20	Low
105	MO31060	Cheng Lake Dam	15	50	Low
106	MO31555	Demarco Lake Dam		36	High
	MO1237	Arrowhead Dam	37	42	Significant
	MO1003	Ashland Wildlife Dam	44	29	Low
	MO1222	B & C Subdivision Dam	34	38	High
	MO1223	Brandel Lake Dam	46	1	High
	MO1224	Callahan Creek Site B-3	33	6	Low
	MO1216	Callahan Creek Watershed Dam-A2	29	5	Low
	MO1216	Callahan Creek Watershed B-3	0	0	Significant
	MO1105	Cedar Lake Dam	42	8	High
	MO1223	F.E.M. Inc. Lake Dam	42	13	Low
	MO1221	Fingers Lake Dam North	26	48	Low
	MO1221	Fingers Lake Dam South	44	48	Low
	MO1225	Harrison Lake Dam	24	0	
	MO1221	Highlands Lake Dam	34	5	
	MO1223	Highlands Lower Lake Dam	30	4	High
	MO1223	Highlands South Lake Dam	30	1	High
	MO1225	Horner Lake Dam	26	0	
	MO1090	Limerick Lake Dam	21	2	Low
	MO1210	Waters Edge Estates Lake Dam	25	17	High
	MO1225	Woodmill Lake Dam	25	0	
	MO1160	Woodrail Lake Dam	54	12	High

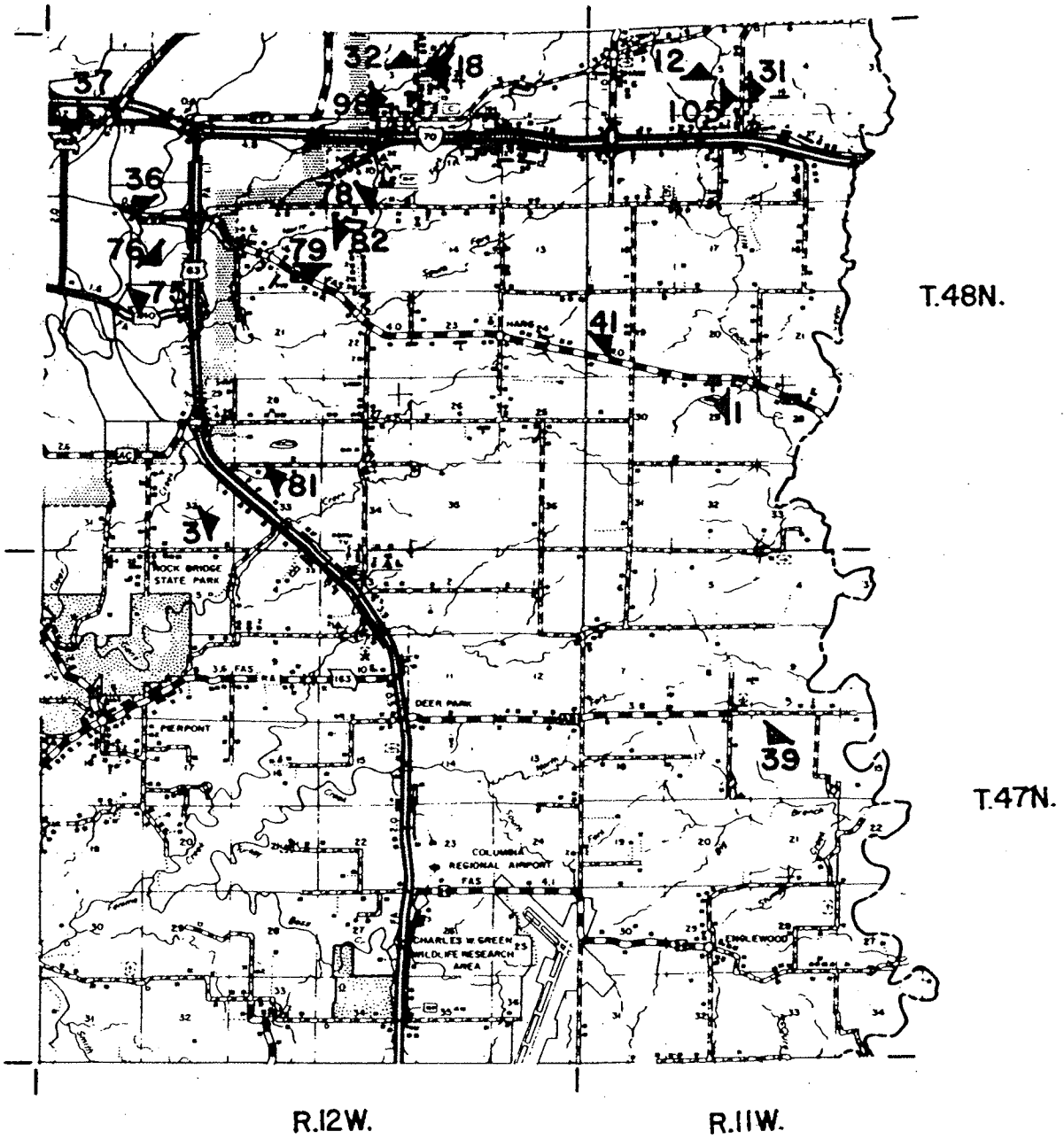
\* Map identification number corresponds to the map of dams in Addendum 2 to this Attachment.

\*\* The hazard rating is based on the contents of the downstream environment zone (permanent dwellings, public buildings, campgrounds with permanent water/sewer/electrical services, industrial buildings, etc.

**BOONE COUNTY DAM LOCATION MAPS**



Dam Symbol and Reference Number.  
The bar represents the dam and  
the point indicates upstream.



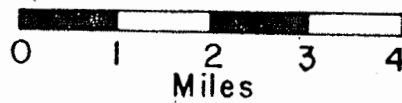
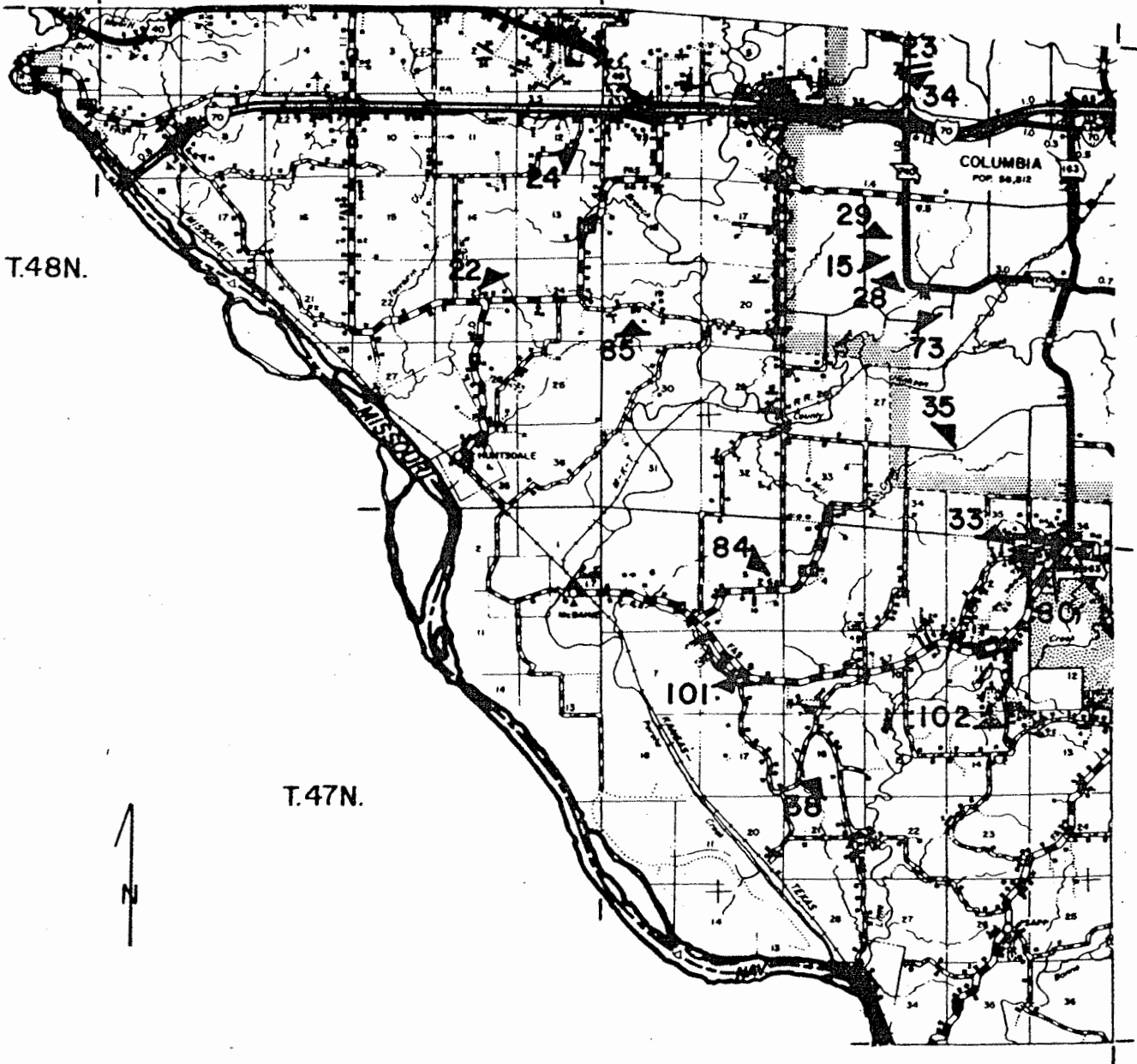
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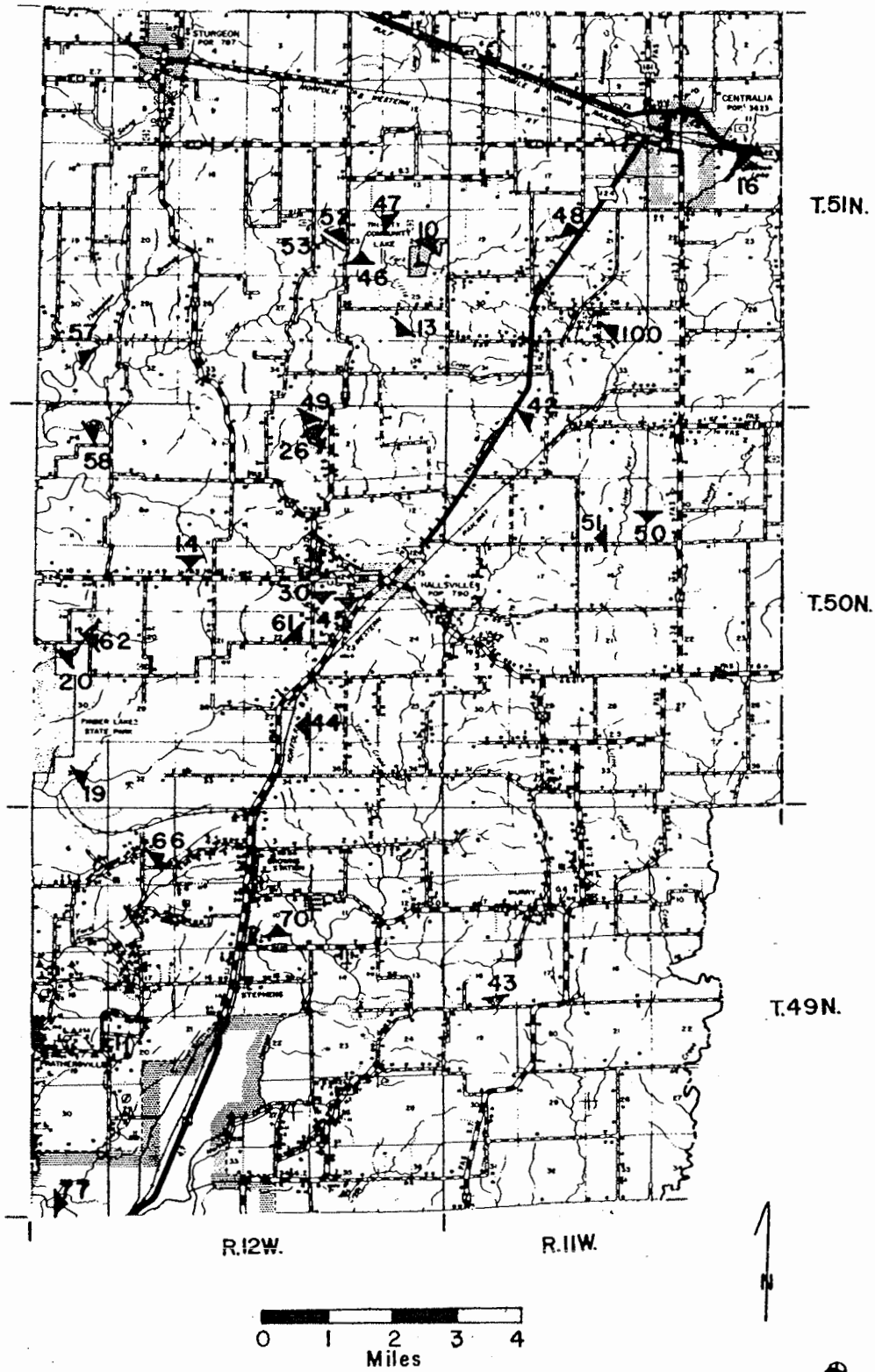
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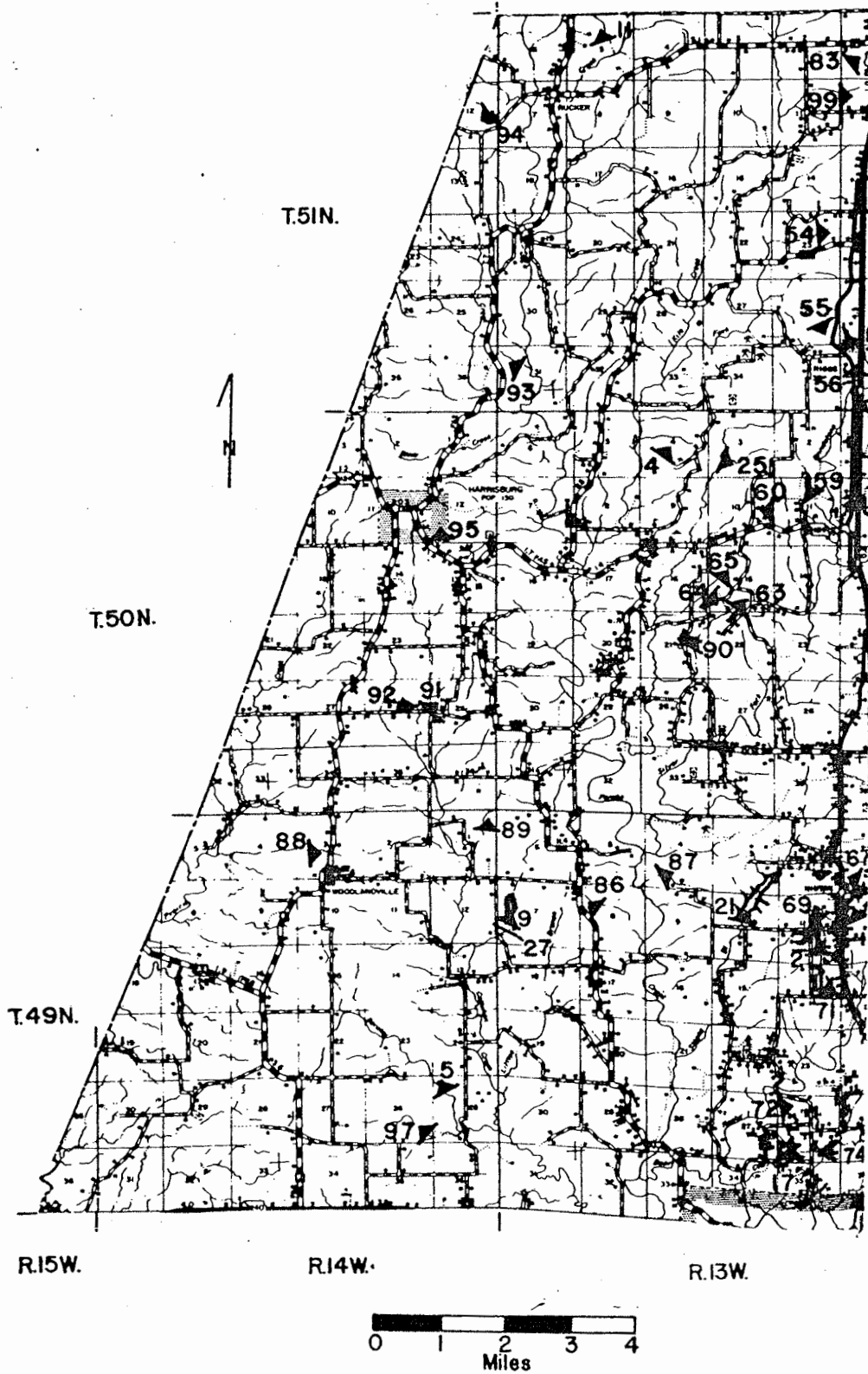
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T.48N.

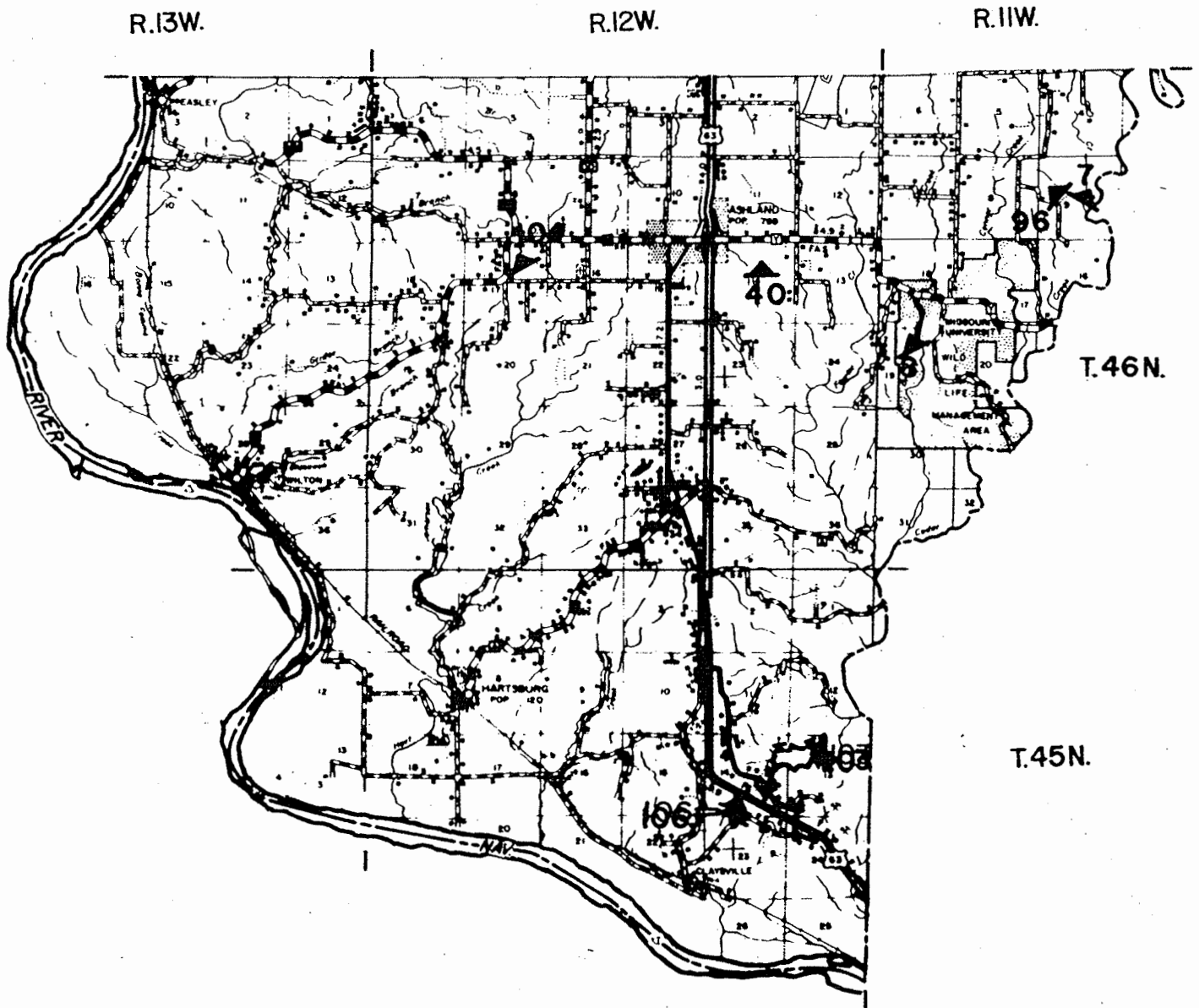
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Attachment C  
Appendix 5 to the Basic Plan

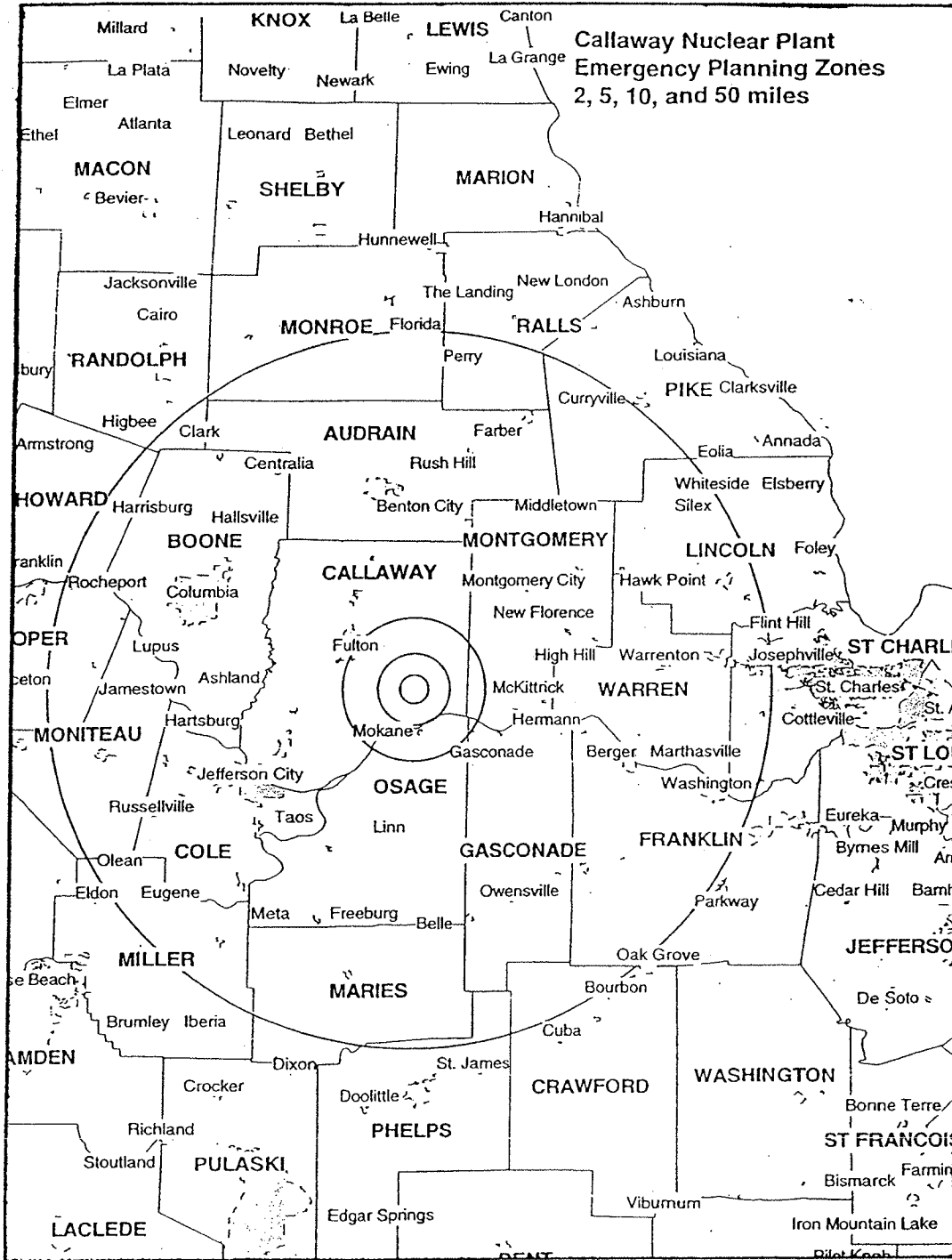
**NATIONAL FLOOD INSURANCE PROGRAM INFORMATION**

<u>Community Name</u>	<u>NFIP Status</u>	<u>Special Flood Hazard</u>	<u>Date on which Sanctions apply</u>	<u>Policies</u>
Boone County	Yes	Yes	6/15/83	39
Columbia	Yes	Yes	8/27/71	68
Centralia	Yes	Yes	4/15/77	1
Ashland	Yes	No	8/24/84	1
Sturgeon	Yes	Yes	5/01/87	1
Rocheport	Yes	Yes	8/02/82	4
Hartsburg	Yes	Yes	8/16/82	26
Hallsville	No	No		NA
Harrisburg	No	No		NA

KEY: NFIP National Flood Insurance Program  
 F Effective Map is a Flood Insurance Rate Map  
 R Indicates entry in Regular Program

Attachment D  
Appendix 5 to the Basic Plan

**CALLAWAY NUCLEAR PLANT  
EMERGENCY PLANNING ZONES  
2, 5, 10 AND 50 MILES**



Attachment E  
Appendix 5 to the Basic Plan

**Columbia/Boone County Risk Area**  
**Civil Unrest, Explosive, Chemical and Biological Agent, Nuclear Incident**

I. PURPOSE

To provide information regarding the identification of potential facilities and locations most likely at risk and to provide for the protection of life and property during an incident, emergency, or disaster involving civil unrest or terrorism in Columbia, Boone County or outlying areas that could have an effect. This attachment also provides a risk assessment level for city fixed facilities (Highest Risk, Moderate Risk, and Lowest Risk).

1. **City Fixed Facilities**

- A. Columbia Police Department
- B. Joint Communications Information Center (JCIC)
- C. Water Administration Offices
- D. Water Treatment Plant and other substations
- E. Electric Distribution Buildings (Heachan, Storage and Maintenance Buildings)
- F. Columbia Regional Airport
- G. Power Generating Plant
- H. Daniel Boone Building

2. **Other Physical Facilities**

- A. University of Missouri Nuclear Research Reactor
- B. Boone Hospital
- C. University of Missouri Hospital and Clinics
- D. Columbia Regional Hospital
- E. Ellis and Rusk Rehabilitation
- F. University Power Plant
- G. Boone County Offices
- H. Federal Building
- I. Islamic Center and Mosque
- J. Hearnes Center
- K. Faurot Field
- L. B'nai Birth Synagogue
- M. Callaway Nuclear Power Plant
- N. Ameren Generator
- O. ROTC/Reserves
- P. Boone County Court House and Administrative Center
- Q. Boone County Jail/Justice Center
- R. Columbia Main Post Office

3. **EVENTS**
- A. University of Missouri Football and Basketball Events
  - B. Show-Me State Competition
  - C. Earth Day Celebration
  - D. Parades: Memorial Day Air Show and Holiday Parades
  - E. University Concert Series
  - F. Ramaden - Month of November
  - G. Yom Kippur and Rosh Hanna - September and December
  - H. Festivals: Twilight Festival, First Night, Fall Festival of Arts, Heritage Festival
  - I. Boone County Fair
  - J. Soccer Saturdays - Cosmo Park

4. **TRANSPORTATION ROUTES**
- A. I-70 between Lake of the Woods and Midway
  - B. I-70 Bridge over Perche Creek
  - C. Rocheport Bridge
  - D. Downtown City Complex: From Broadway to Sixth Street, to Walnut to 7<sup>th</sup> Street, to Ash to 8<sup>th</sup> Street to Broadway.
  - E. Intersection of 6<sup>th</sup> and 7<sup>th</sup> Streets and Broadway.

Appendix 6 to the Basic Plan

**EMERGENCY GOVERNMENT PROCLAMATION AND/OR RESOLUTION  
OF A STATE OF EMERGENCY IN COLUMBIA/ BOONE COUNTY**

WHEREAS, Boone County/Columbia, Missouri, has encountered \_\_\_\_\_ conditions, and a threat exists to the lives and property of the people of Columbia/Boone County, Missouri, and;

WHEREAS, that areas within the boundaries of Columbia/ Boone County, Missouri, are immediately threatened with \_\_\_\_\_ and curtailing the protection of the lives and property contained in Boone County, Missouri, and an emergency exists:

NOW THEREFORE, we \_\_\_\_\_, City Manager of the City of Columbia, Missouri, and \_\_\_\_\_, \_\_\_\_\_ the Board of County Commissioners, Boone County, Missouri, hereby declare that a state of emergency exists in Columbia/Boone County, Missouri, and we hereby invoke and declare in full force and effect in Columbia/ Boone County, Missouri, all laws, statutes, of the State of Missouri, the City of Columbia and Boone County, for the exercise of all necessary emergency authority for the protection of the lives and property of the people of Columbia/Boone County, Missouri, and the restoration of local government with a minimum of interruption.

As pursuant with Chapter 44 of the Revised Missouri State Statutes, City Ordinances and County Court Orders, as pertinent to:

All public offices and employees of Columbia/Boone County, Missouri, are hereby directed to exercise the utmost diligence in discharge of duties required of them for the duration of the emergency and in the execution of emergency laws, regulations, and directives state, and local.

All citizens are called upon and directed to comply with necessary emergency measures, to cooperate with public officials and the Columbia/Boone County Emergency Management Agency's forces in executing emergency operational plans, and to obey and comply with the lawful directions of properly identified public offices.

In witness, we have hereunto set our hand at \_\_\_\_\_ hours, the \_\_\_\_ day of \_\_\_\_\_, 20\_\_\_\_ A.D.

CITY OF COLUMBIA

COUNTY OF BOONE

\_\_\_\_\_  
CITY MANAGER

\_\_\_\_\_  
Commissioner

\_\_\_\_\_  
Commissioner

\_\_\_\_\_  
Commissioner

## ANNEX A

## DIRECTION &amp; CONTROL

I. PURPOSE

This annex will develop a capability for the chief executive and key individuals of Columbia and Boone County to direct and control response and recovery operations from a centralized facility in the event of an emergency.

II. SITUATION AND ASSUMPTIONS

## A. Situation

Columbia and Boone County will control operations from either an Incident Command Post, or a joint Emergency Operations Center, depending on the scope of the emergency/disaster situation. If the other incorporated subdivisions do not have an emergency management organization, the county will assume that role upon request.

1. Incident Command System: For emergency response to the majority of its disaster situations, the city of Columbia and Boone County both utilize an on-scene Incident Command Post and implement the Incident Command System (ICS). ICS is a management tool consisting of procedures for organizing personnel, facilities, equipment and communications at the scene of an emergency. Title III of the Superfund Amendments and Reauthorization Act (SARA), requires that organizations that deal with hazardous material incidents must operate under an Incident Command System (see Annex H, Hazardous Materials Response). For additional information on ICS, see Section III, Response Procedures in Appendix 3 to the Basic Plan.
2. Primary EOC
  - a. There are emergency/disaster situations for which it is necessary to activate an Emergency Operations Center (EOC). Some examples would include a terrorist incident and/or use of Weapons of Mass Destruction (WMD), riots, or other event causing multiple disaster sites in the city, other municipalities, or across the county. This would make it impractical or even dangerous for key local officials/decision makers to report to each scene for any length of time. In such cases, Columbia and Boone County will direct and control operations from its Emergency Operations Center (EOC), located at the former National Guard Armory, Seventh and Ash

streets, Columbia, Mo.; hereafter designated as the primary EOC. With the EOC activated, the on-scene Command Post and ICS would continue to function for as long as necessary. For further information, EOC standard operations guidelines are located in Appendix 4 to this Annex.

- b. The Columbia/Boone County Public Safety Joint Communications/E-911 dispatch center is staffed 24 hours a day and has the communications equipment to communicate with county, city and state departments and agencies. This includes contact with the State Highway Patrol, Troop F in Jefferson City; area fire, law enforcement, medical services; and local government agencies. **A diesel powered generator is available for emergencies.** See Annex B for more detailed information.

3. Alternate EOCs

- a. The city/county has pre identified specific facilities that may be used as an alternate EOC.
  - b. The alternate EOC facility would become the official site for all county and city officials and departments/agencies having emergency functions should the primary EOC become inoperable.
4. Space will be provided in the EOC for the chief executive and Direction and Control staff (see Appendix 2 to this Annex). Space for briefing the media will be available but separate from the actual operations room. State and/or federal officials that support disaster operations will also be provided space to operate in the EOC.

B. Assumptions

1. When an emergency/disaster occurs or threatens to occur, the EOC will be activated in a timely manner. Local officials will respond as directed in this Annex and Appendix 3 to the Basic Plan.
2. Should a total evacuation become necessary, operations can be successfully controlled from nearby safe locations.
3. Close coordination must be maintained between the EOC and the disaster scene to identify special considerations, secondary threats, and available resources.



4. Most emergency situations are handled routinely by emergency response personnel and can be managed at the field level under established departmental procedures.

### **III. CONCEPT OF OPERATIONS**

Direction and Control operations will be performed according to the operational time frames (mitigation, preparedness, response, and recovery) established in the Basic Plan.

- A. The EOC will be activated by the jurisdiction's executive officer or in accordance with Appendix 3 to the Basic Plan.
- B. The County Commission and/or Mayor along with representatives of county and city departments (i.e., Direction and Control Staff) will assemble in the EOC to direct, control, and coordinate emergency response operations within their respective jurisdiction.
- C. Staffing of the EOC will be determined by the severity of the situation.
- D. The FBI has been designated as the Lead Federal Agency (LFA) for Crisis Management (the law enforcement response) in a terrorist event, to include weapons of mass destruction. FEMA is designated as the LFA for Consequence Management for federal/state/local government response. At the onset of a terrorist event, the FBI (Crisis) is the overall LFA. Once the Crisis phase has diminished, the overall LFA role will change to FEMA for Consequence Management in the event the terrorist incident has impacted citizens and local government. Local and state agencies pertinent to crisis management, to include certain consequence groups, are to work jointly with the FBI in resolving the Crisis aspect of a terrorist situation. See Appendix 4 to Annex E for further information on terrorism incidents.
- E. The on-scene incident commander will direct and control operations at the disaster site. The incident commander will maintain contact with the EOC and keep them informed of the situation.
- F. Those emergency support services that do not operate from the EOC will designate and establish a work/control center to manage organizational resources and response personnel. During emergency situations they will maintain contact with the EOC through their designated representative.
- G. Emergency response personnel provided by the various organizations/agencies to support emergency operations will remain under the direction and control of the sponsoring organization, but will be assigned by the EOC to respond to a specific disaster location.

- H. Each emergency response service (i.e., fire, law enforcement, etc.) will provide for the continuous staffing of emergency response jobs. Work shifts will be established to provide the necessary response.
- I. Procedures for handling reports/messages coming in and out of the EOC (i.e. review, verification, distribution, etc.) will be as outlined in Appendix 3 to this Annex.
- J. Information received in the EOC from field units and other reliable sources will be compiled and reported to the State Emergency Management Agency as requested and/or required. This information will be displayed in an appropriate place in the EOC.
- K. State and/or Federal officials will support disaster operations as appropriate. These officials will coordinate their efforts through the designated EOC.
- L. Should a life-threatening situation emerge, emergency instructions to the public will be disseminated by all available means (see Annex C).
- M. EOC operations will continue as determined by the situation, and will conclude by order of the executive officer.

#### **IV. ORGANIZATION AND RESPONSIBILITIES**

##### **A. Organization**

Diagrams of the Direction and Control function for Columbia and Boone County are shown in Appendix 1 to this Annex.

##### **B. Responsibilities**

1. The primary responsibility for Direction and Control in Columbia rests with the City Manager. For Boone County, the Presiding Commissioner has the primary responsibility for Direction and Control. See Section VI of the Basic Plan for line of succession. This Direction and Control Coordinator will:
  - a. Implement this Emergency Operations Plan.
  - b. Activate response personnel and direct emergency response operations upon the advice of EOC staff.
  - c. Declare a state of emergency and request state and federal assistance when appropriate.

- d. Summarize damage assessment information and submit appropriate reports.
2. All departments, agencies, and individuals support the Direction and Control function as follows:
    - a. Coordinate their activities with the EOC (through established lines of communications or by designating a representative to report to the EOC).
    - b. Advise the Direction and Control staff in their area of expertise/responsibility.
    - c. Include in their SOGs the specific emergency authorities that may be assumed by a designated successor, the circumstances under which this authority would become effective, and when it would be terminated.
    - d. Compile damage assessment figures.
    - e. Tabulate expenditure data for the emergency situation.
  3. In addition to the aforementioned responsibilities, the following have these assignments:
    - a. Emergency Management Director
      - (1) Maintain the operational readiness of the EOC necessary for a continuous 24-hour operation (i.e., identify EOC personnel, stock administrative supplies and equipment, prepare status boards, furnish maps to plot data and set up displays to post damage assessment information).
      - (2) Train the EOC staff through tests and exercises.
      - (3) Coordinate and manage EOC operations.
      - (4) Implement message handling procedures (see Appendix 3 to this Annex).
      - (5) Conduct regular briefings while the EOC is activated.
    - b. The Law Enforcement Coordinator is responsible for providing

security in the EOC.

- c. The Communications and Warning Coordinator is responsible for establishing an EOC communications capability.
- d. The Public Works Coordinator is responsible for ensuring that utilities are restored to the EOC after a disaster has occurred.

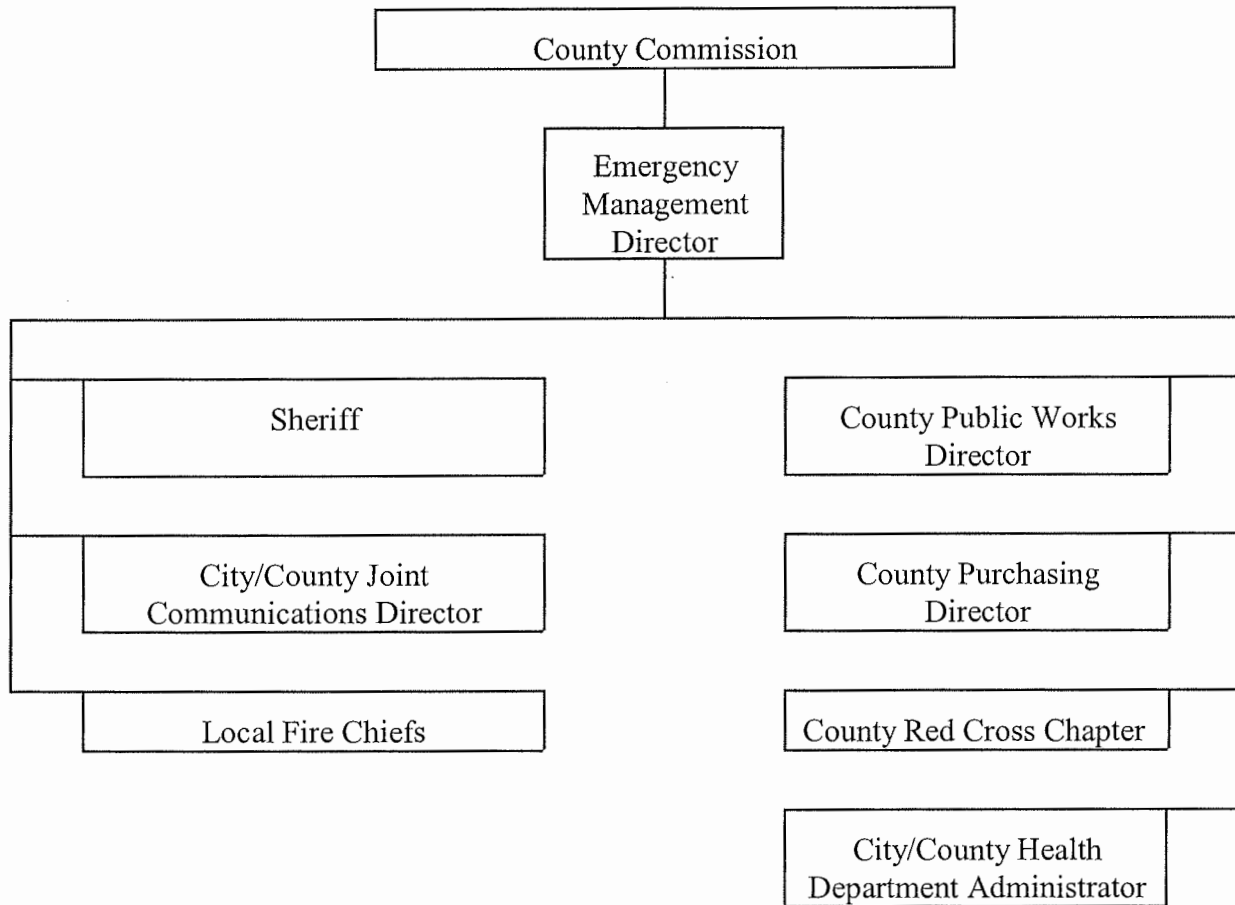
## V. CONTINUITY OF GOVERNMENT

- A. If the primary EOC is not able to function (i.e., EOC is damaged, inaccessible, etc.), an alternate EOC will be activated (see Section II of this Annex). It is the responsibility of the Emergency Management Director to: manage the alternate EOC, provide for the relocation of staff members to this facility, and transfer direction and control authority from the primary EOC.
- B. Should it become necessary to evacuate the entire county, the EOC will be moved to the nearest safe location.
- C. The lines of succession for elected officials and county/city departments are identified in Section VI of the Basic Plan and each annex of this plan.
- D. Essential records vital to the direction and control function should be duplicated and maintained at another location, or plans should be made to move these records to a safe location.

## VI. ADMINISTRATION AND LOGISTICS

- A. The EOC will serve as a central point for coordinating the operational, logistical, and administrative support needs of response personnel at the disaster site, public shelters, and agency work/control/dispatch centers.
- B. Requests for assistance, general messages, and reports will be handled using the procedures and forms in Appendix 3 to this Annex.
- C. A record of all persons entering and departing the EOC will be maintained by security personnel at the entrance. All personnel will be issued a pass to be worn while in the EOC and to be returned when departing from the premises.

# BOONE COUNTY DIRECTION AND CONTROL FUNCTIONAL DIAGRAM



Appendix 2 to Annex A

**EOC STAFFING ROSTER AND CALL-UP LIST**

The key individuals and agencies that will direct/coordinate operations from the Columbia/Boone County EOC are identified here. Names and telephone numbers are not published because they change frequently and therefore will be outdated quickly. This information will be maintained by the Columbia/Boone County Emergency Management Director and the Public Safety Joint Communications/E-911 dispatch center. Not all county and city services or organizations are listed here. Additional contact lists can be found in other Annexes to this plan (i.e., utility companies, medical services, rural fire departments/districts, etc.). The procedures for staffing the EOC are explained further in Appendix 3 to the Basic Plan.

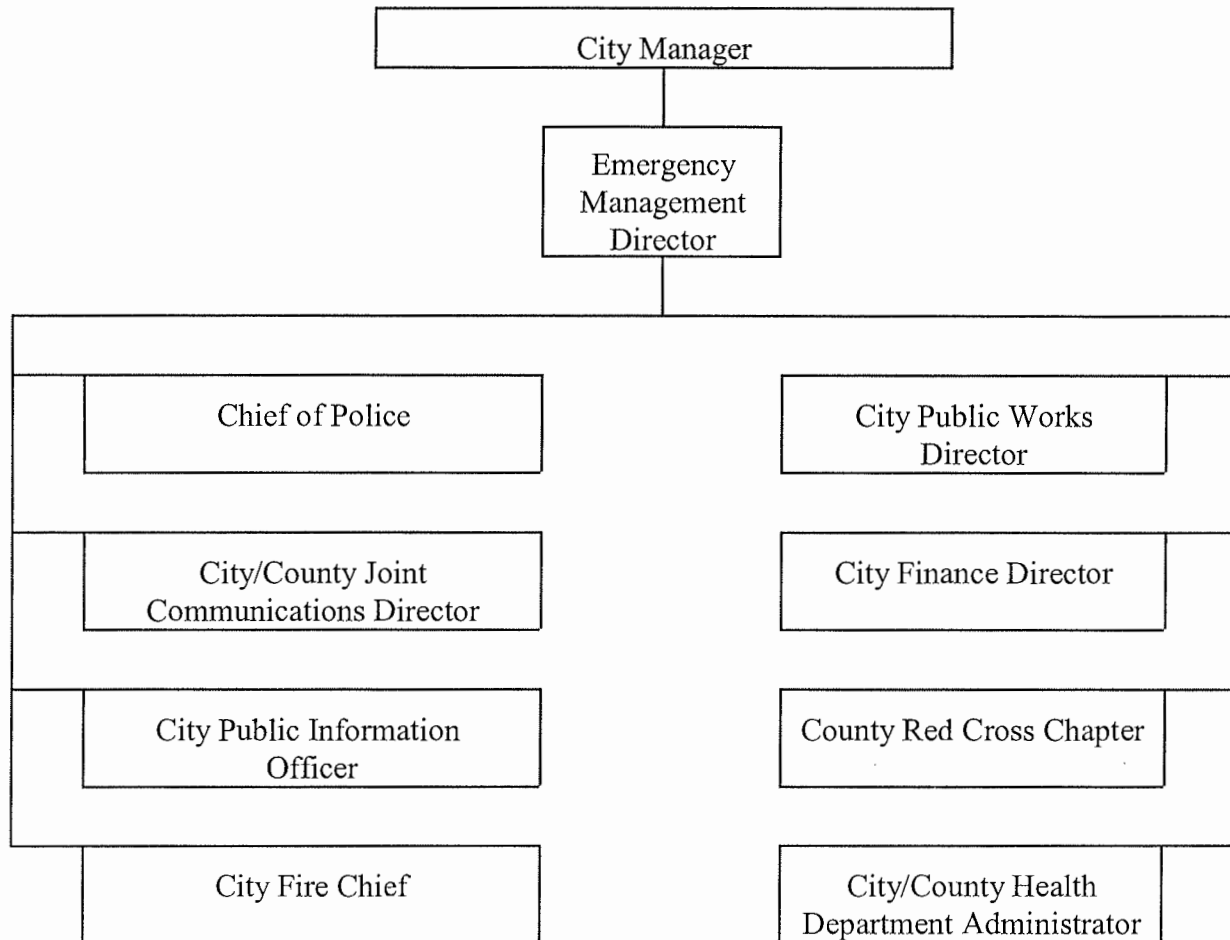
**CITY OF COLUMBIA**

<u>Title</u>	<u>Name</u>	<u>Telephone Numbers</u>		
		<u>Business</u>	<u>Home</u>	<u>Other</u>
City Mayor	Darwin Hindman	443-1602	449-5227	356-6023
City Manager*	Raymond Beck	874-7217	445-4041	864-9122
City Council	Almeta Crayton	256-1543	874-2475	449-3370
	Christopher Janku	635-4128	817-2248	
	Bob Hutton	875-7301	442-5423	268-8118
	Jim Loveless	445-3882	445-8880	424-5700
	John John	449-5646	442-7833	881-0332
	Brian Ash	817-2378	443-5882	
Emergency Management Director*	James P. Mc Nabb	874-7400	214-0086	874-6381
City Public Information Officer*	Robert Ross	874-7220	815-0707	499-8814
Police Chief*	Randy Boehm	874-7402	443-5616	499-8770
Fire Chief*	William Markgraf	874-7391	446-1641	219-0573
City Finance Director*	Lori Fleming	874-7368	874-3230	
City Public Works Dir.*	Lowell Paterson	874-7439	445-9893	864-9100

## **APPENDICES**

1. Direction and Control Functional Diagrams (Columbia and Boone County)
2. EOC Staffing Roster and Call-Up List
3. Message Handling Procedures  
  
Attachment A - Message Form  
Attachment B - Communications Log  
Attachment C - Significant Events Log
4. EOC Standard Operating Guidelines

**CITY OF COLUMBIA DIRECTION AND CONTROL FUNCTIONAL DIAGRAM**





City Attorney	Fred Boeckmann	874-7227	442-9691	
Boone County LEPC, Chairman	Kenneth Hines	447-5000	445-2526	864-4103
Boone County Chapter American Red Cross, Dir.*	Meisha Simmons	445-9411	214-2655	819-0880
Medical Examiner	Jay Dix	474-2700	442-4216	442-1871
City/County Health Dept., Director*	Stephanie Browning	874-7343	445-5100	864-9110
Mo. Div. of Family Services Dir., Boone County Office*	Marta J. Halter	474-4140	882-9681	

\* Denotes EOC Direction and Control Staff that have been assigned primary responsibility for the emergency management functions.

### EOC STAFFING ROSTER/CALL-UP LIST

#### BOONE COUNTY

<u>Title</u>	<u>Name</u>	<u>Telephone Numbers</u>		
		<u>Business</u>	<u>Home</u>	<u>Other</u>
Presiding Commissioner*	Keith Schnarre	886-4305	682-2936	881-9001
Commissioner, Northern	Skip Elkin	886-4305	696-2326	881-3556
Commissioner, Southern	Karen Miller	886-4305	474-9782	864-2405
Emergency Management Director.*	James P. Mc Nabb	874-7400	214-0086	874-6381
Public Information Officer*	Keith Schnarre	886-4305	682-2936	881-9001
County Sheriff*	Ted Boehm	875-1111	449-4110	219-1628
County Auditor	June Pitchford	886-4275	442-3114	268-0345
Purchasing Director*	Melinie Bobbitt	886-4391		

County Assessor	Tom Schauwecker	886-4270	446-0593	
County Clerk	Wendy Noren	886-4295	875-0355	
Medical Examiner	Eddie Adelstein	882-1300		
Prosecuting Attorney	Kevin Crane	886-4100	875-0803	864-3919
County Treasurer	Kay Murray	886-4367	445-3227	424-8696
County Public Administrator	Connie Hendren	874-0111	876-3706	999-2001
County Circuit Clerk	Cheryl Whitmarsh	886-4041	696-0577	864-7386
County Recorder	Bettie Johnson	886-4360	443-7679	424-2649
Circuit Court/Presiding Judge	Gene Hamilton	886-4055		
County Counsel	John Patton	886-4313		
Purchasing	Melinda Bobbitt	886-4391		
Planning and Building Inspector	Stan Shawver	886-4336		
Facilities Manger	Ken Roberts	886-4400		
County Public Works Director*	David Mink	449-8515		
City/County Health Dept., Director*	Stephanie Browning	874-7343	445-5100	864-9110
County LEPC, Chairman	Ken Hines	447-5000	445-2526	864-4103
Mo. Division of Family Services, Director, County Office	Marta J. Halter	474-4140	882-9681	
County Area Chapter Red Cross, Director*	Meisha Simmons	445-9411	214-2655	819-0880
Fire Districts/Depts. Chiefs*				
Boone County Fire Protection Dist.	Steve Pausell	447-5000	442-9250	268-5938
Southern Boone Fire Protection	John Thomas	882-8981	657-2396	864-4100
(see Annex F)				

University Hospitals and Clinics (Safety Coordinator)	Dan Wood	882-8783	474-5178	882-4141
Boone Hospital Center	Randy Gay	815-3706	814-2627	499-8591
Columbia Regional Hospital	Norma Johnson	875-9957	874-1883	817-3931
Truman Veterans Hospital (Safety Coordinator)	Mike Williamson	660-848-2597	814-6000-433	
Ellis Fischel Cancer Center	Dan Wood	882-8783	474-5178	882-4141
Southern Boone Co. R-1 Supt.	Mitch Holbrook	657-2147	657-9668	
Boone Co. R- IV Supt. Hallsville	Steve McIntosh	696-5512		
Sturgeon R-V Supt.	Frank Curtis	687-3515	687-3512	
Centralia R-VI Supt.	Glenn Brown	682-3561	682-1198	819-4278
Harrisburg R-VIII Supt.	Bill View	875-5604	874-2904	819-0931

\* Denotes EOC Direction and Control Staff that have been assigned primary responsibility for the emergency management functions.

**EOC STAFFING ROSTER/CALL-UP LIST  
MUNICIPALITIES**

<u>Title</u>	<u>Name</u>	<u>Telephone Numbers</u>		
		<u>Business</u>	<u>Business/Home/Other</u>	<u>Home</u>
<b><u>Ashland</u>–657-2091</b>				
Mayor	Alan Bauer		657-2487	
City Council Members:	Mike Asmus		657-1492	
	John Johnson		657-4564	
	Linda Miller		657-4278	
	Price Nichols		657-2983	
	Carl Long		657-9634	
	Randy Eckley		657-9165	
City Clerk	Darla Sapp	657-2091	657-9645	
City Administrator	Ken Eftink	657-2091	657-1671	
Police Chief	Melvin Rupard	657-9062	657-1008	876-9168
<b><u>Centralia</u>–682-2139</b>				
Mayor	Jerry Parmeley		682-3399	
Aldermen:	Bob Hartel		682-3132	
	Donald Bagley		682-2304	
	Alan Denk	449-3979		
	Don Bobbitt		682-3006	
	vacant			
	Ron Duran			
City Clerk	Kathy Colvin	682-2139	682-3995	
City Administrator	Lynn Behrns	682-2139	682-3755	
Chief of Police	Sam Hartsell	682-2132	682-5802	
Fire Chief	Marvin Rodgers	682-8407	682-2915	
Em. Mgmt. Director	William Platt		682-1118	

## Appendix 3 to Annex A

### MESSAGE HANDLING PROCEDURES

- A. All reports/messages coming into the EOC will be acknowledged by recording them on the message form (see Attachment A to this Appendix). This procedure applies to anyone receiving a message by radio, telephone, etc.
- B. Each message will be entered into the communications/message log (see Attachment B to this Appendix). The log will show date and time the message was received along with the individual/department sending it.
- C. After the message has been logged, it will be given to the Emergency Management Coordinator for routing to the appropriate function coordinator(s). A copy of each message that contains damage information will also be given to the damage assessment coordinator for collection, analysis and display of information in the EOC.
- D. If the information contained in the message is vitally important, it will be entered into a significant events log. This log will be used to record key disaster related information (i.e., casualty information, health concerns, property damage, fire status, size of risk area, scope of the hazard to the public, number of evacuees, radiation dose, etc.). See Attachment C to this Appendix for a copy of the log.
- E. The message receiver is responsible for checking the accuracy of the message. (If the message is found to be inaccurate, the Emergency Management Director will be notified who will then inform any others who have also received this message.) The appropriate action will be taken to either complete the request or if unable to respond, forward it to the Emergency Management Director.
- F. The response to the message will be disseminated as appropriate (i.e. reported to response personnel in the field, provided to the EOC staff through regularly scheduled briefings, forwarded to state officials, or disseminated to the public.) Means to communicate message will include radio, telephone, runner, etc..
- G. Outgoing messages from the EOC will also be entered into the communications/message log as mentioned previously. This will include messages that originate from the EOC which are also to be recorded on a message form.
- H. Personnel required for message handling will be furnished by the Emergency Management Director and/or E-911 Dispatch Center.

Attachment A  
Appendix 3 to Annex A

**MESSAGE FORM**

\_\_\_\_\_  
DATE

\_\_\_\_\_  
TIME

INCOMING

OUTGOING

TO: \_\_\_\_\_

FROM: \_\_\_\_\_

MESSAGE:

[Large empty rectangular box for message content]

ROUTED TO: \_\_\_\_\_

INFORMATION COPY TO: \_\_\_\_\_

RECEIVED

SENT

BY \_\_\_\_\_

Attachment B  
Appendix 3 to Annex A

**COMMUNICATIONS LOG**

**DATE:**

TO	FROM	IN/OUT	SUBJECT	TIME





## CHIEF EXECUTIVE EOC OPERATING GUIDELINES

### NOTIFICATION

- Executive contacted regarding Disaster or Major Incident by:
  - Department Head Involved (or designee)
  - Emergency Management Director (J. Mc Nabb, or designee)

### BRIEFING and DISCUSSION

- Determine level of emergency
  - **Level 1** - Occurrence that could be handled by one or more city departments (Examples: bomb threat, traffic accident with fuel spill, severe weather)
  - **Level 2** - Occurrence that requires major response and significant commitment of city, county and perhaps other area & local agency resources (Examples: local flooding, isolated tornado damage, structure fire with hazardous materials involved, etc.)
  - **Level 3** - Occurrence that is considered a disaster and requires extensive commitment of resources from many agencies including state and federal assistance (Examples: extensive flooding, major tornado over large areas with casualties/major injuries, large area evacuation, terrorist incident)
- Determine level of Emergency Operation Center activation, if any (depending on severity of incident, and if operations need to extend beyond an Incident or Unified Command system)
  - **Stand By**—EOC personnel notified and on a ready to respond basis. EOC staff is on site at the EOC.
  - **Partial**—EOC staff is on site at the EOC and certain select Department heads and staff are on site.
  - **Full**—EOC staff is on site at the EOC, Department Heads and their support staff is on site and the EOC is performing an operational role in the event.
- If Emergency Operation Center activated (partial or full), confirm location
- Set time for briefing at Emergency Operation Center with all those notified

## NOTIFICATION

- Emergency Management Director (or designee) makes required Emergency Operation Center notifications
- Executive contacts Mayor and Council/Commission, as appropriate
- Emergency Management Director activates or places in standby position Emergency Operation Center, as discussed with Executive
- All persons directed to the Emergency Operation Center will meet at designated time for briefing
- Briefing would be provided by City Executive and Emergency Management Director as directed
- Emergency Operation Center protocol will then be initiated according to Basic Plan and the Direction and Control Function (annex A)

**Fallsville**–696-3885

Mayor	Carl M. South	690-2769	696-3171	228-2500
Aldermen:	Brian Doerge		696-1465	
	Stephen Smith		696-1100	
	John Darby		696-3043	
	Glenda L. Nichols		696-3526	
City Administrator	Pete Herring	696-3838	696-3122	499-8843
City Clerk	Cheri Reisch	696-3885	696-2474	876-3387
Public Works	Pete Herring	696-3838	696-3122	499-8843
Chief of Police	Pete Herring	696-3838	696-3122	499-8843

**Harrisburg**–874-0138

Chairman of the Board	Junior Carter		875-5620	819-0255
Board of Trustees	Charlie Twenter		875-5731	
	Pam Timmermann	445-6513	875-5726	
	David Larkin		499-1449	
	Dene Lehnen		499-4740	
City Clerk	Kathy Wilhite	875-5602	874-0138	808-0360

**Hartsburg**–657-2729

Chairman	Nancy Grant		657-9581	
Aldermen:	John Thomas	882-8981	657-2396	
	Jeanette Crawford		657-4529	
	Laura Kays	657-0068	657-0308	
	Robert Tyler		657-9585	
City Clerk	Carl Thomas	657-2729		

**Huntsdale**--445-3996

Mayor	Debbie Lancaster	447-5000	445-4155
Alderman	Walter Mersch		
	Dallas E. Lancaster		445-4155
	Ed McGee		445-3996
	Katherine McGee		445-3996
City Clerk	Katherine McGee		445-3996

**McBaine**

Board of Trustees	Dale Roberts		
	John Schroeder		
	Gerald Leaton		

City Clerk	Lucille Coleman		
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**Rocheport**--698-3245

Mayor	Frances L. Turner		698-3524
Alderman	Joe Wolfe		698-2101
	Todd Schapire	698-3000	698-2308
	Gayla Neumeyer	882-8366	698-2140
	Deb Lynch	698-3000	698-3502

City Clerk	Shirley M. Jenkins	698-3245	874-3538
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**Sturgeon**--687-3321

Mayor	Gene Kelly	687-8493	687-3982
-------	------------	----------	----------

Council	Ann Kelly		687-3982
	Jeff Stephens		687-3533
	Anrew Perkin		687-3075
	Eddie Drinkard		687-3001

City Clerk	Jean Richards	687-3321	687-1257
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Police Chief	Tim Kamp	687-3300	687-9099
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Maintenance Supervisor	Dean Connolly	687-3321	687-3749
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# CERTIFIED COPY OF ORDER

STATE OF MISSOURI }  
County of Boone } ea.

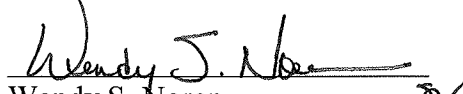
May Session of the May Adjourned Term. 20 03


In the County Commission of said county, on the 22<sup>nd</sup> day of May 20 03  
the following, among other proceedings, were had, viz:

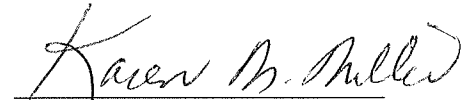
Now on this day the County Commission of the County of Boone does hereby approve a letter of commitment to Dr. Thomas Clevenger, Director of Missouri Water Resources Center regarding the Corridor Plan for South Two Mile Prairie Protection of Ozark-Fringe System Letter of Intent for Case Match for EPA-earmark for up to \$44,000 in County Funds and \$45,000 in in-kind labor for the total project.

Done this 22<sup>nd</sup> day of May, 2003.

ATTEST:

  
Wendy S. Noren  
Clerk of the County Commission

  
Keith Schnarre  
Presiding Commissioner

  
Karen M. Miller  
District I Commissioner

  
Skip Elkin  
District II Commissioner

Keith Schnarre, Presiding Commissioner  
Karen M. Miller, District I Commissioner  
Skip Elkin, District II Commissioner



263  
Roger B. Wilson  
Boone County Government Center  
801 East Walnut Room 245  
Columbia, MO 65201-7732  
573-886-4305 • FAX 573-886-4311

# Boone County Commission

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May 17, 2003

Dr. Thomas Clevenger, Director  
Missouri Water Resources Center  
University of Missouri-Columbia  
Columbia, MO 65211

RE: Corridor Plan for South Two Mile Prairie  
Protection of Ozark-Fringe System  
Letter of Intent for Cash Match for EPA- earmark

Dear Dr. Clevenger,

This letter is to confirm our commitment to the above referenced project. The Boone County Commission intends to fund this project <sup>up to</sup> with \$44,000 in county funds and is also committed to providing \$45,000 of in-kind labor during the total project period.

As you are aware, Boone County has a complete planning staff, which will be involved in the project development, demographics, field review, population projections, etc. necessary to develop a comprehensive land use plan.

We are excited about addressing the land use and environmental issues of the sensitive and protected streams in southern Boone County. The Three Creeks State Forest, Cedar Creek watershed, in addition to the environmentally sensitive Karst topography and Ozark fringe streams found in southern Boone County are a valuable asset to our communities, county and state. The preservation and protection of these assets has become a high priority for the County Commission.

Sincerely,  
Boone County Commission

Keith Schnarre  
Presiding Commissioner

Karen M. Miller  
District I Commissioner

Skip Elkin  
District II Commissioner

3312 LeMone Industrial Blvd.  
Columbia, MO 65201

ALLSTATE CONSULTANTS, P.C.

Phone: (573) 875-8799  
Fax: (573) 875-8850  
E-Mail: allstate@allstateconsultants.net

**FAX**



To: Karen Miller	From: Chad Sayre
Fax: 886 4311	Pages:
Phone:	Date:
Re:	Cc:

Urgent  
 Please Comment  
 Please Recycle

For Review  
 Please Reply  
 Hard Copy to Follow

• Comments:

Karen,  
Please find the attached 1999 letter. It references the "sustainable Grant". This needs to be changed to Regional Sewer study on some variation of Corridor plan for South Two Mile Prairie. We request the commission contribute a total of \$20,000.00 in addition to the original \$24,000.00 allocation. If more funds are available, please include in the letter.

TOTAL P. 02

Don Stamer, Presiding Commissioner  
 Karen M. Miller, District I Commissioner  
 Linda Vogt, District II Commissioner



Boone County Government Center  
 801 East Walnut Room 24  
 Columbia, MO 65201-773  
 573-886-4305 • FAX 573-886-4311

# Boone County Commission

September 29, 1999

Dr. Thomas Clevenger, Director  
 Missouri Water Resources Center  
 University of Missouri-Columbia  
 Columbia, MO 65211

RE: Corridor Plan for South Two-Mile Prairie  
 Protection of Ozark-Fringe System  
 Letter of Intent for Cash Match for EPA-Sustainable Grant

Dear Dr. Clevenger;

This letter is intended to confirm our commitment to the above referenced project. The Boone County Commission intends to fund this project with \$24,000.00 in county funds and is also committed to providing \$45,000.00 of in-kind labor during the total project period.

As you are aware, Boone County has a complete planning staff, which will be involved in the project development, demographics, field review, population projections, etc. necessary to develop a comprehensive sustainable land use plan.

The Boone County Commission would like to commend the cooperation and community involvement in your efforts. This past summer we had a college intern that worked on developing a process for County Visioning that will include a high degree of sustainability. We are confident that this will certainly be an asset in the overall project development.

We are excited about addressing the land use and environmental issues of the sensitive and protected streams in southern Boone County. The Three Creeks State Forest, Cedar Creek watershed, in addition to the environmentally sensitive Karst topography and Ozark fringe streams found in southern Boone County are a valuable asset to our communities, county and state. The preservation and protection of these assets has become a high priority for the County Commission.

Sincerely,  
 Boone County Commission

Don Stamer  
 Presiding Commissioner

Karen M. Miller  
 District I Commissioner

Linda Vogt  
 District II Commissioner





Department of Civil and  
Environmental Engineering

University of Missouri-Columbia

E2509 Engineering Building East  
Columbia, MO 65211-2200

PHONE (573) 882-6269

FAX (573) 882-4784

E-MAIL McCushM@missouri.edu

January 24, 2003

TO: PRIME Committee Members

FROM: Sam Kiger, Chair  
Civil and Environmental Engineering

The Department of Civil and Environmental Engineering is pleased to support the proposal submitted by Dr. Kathleen Trauth, entitled "Corridor Plan for South Two-Mile Prairie: Protection of Ozark Fringe Streams" which will be submitted to the US Environmental Protection Agency.

The contribution will be as follows:

Missouri Water Resources Research Center	\$23,626
Civil and Environmental Engr.	\$15,750
PRIME Fund	\$39,376
Request to Agency	\$242,500

Thank you for considering Dr. Trauth's proposal.

Sam Kiger, Ph.D., P.E.  
Chairman and C.W. La Pierre  
Professor of Engineering  
573/882-3285

Satish Nair, Ph.D., P.E.  
Assoc. Dean for Research  
College of Engineering  
573/884-7872

AS 2/6/03



**PRIME Fund Program**  
 (Program for Research Infrastructure and Matching Expenses)  
Cover Page  
 Please Type

Proposal Number  
 \_\_\_\_\_

Kathleen Trauth  
 Name  
Civil and Environmental Engineering  
 Department  
E2509 Engineering Bldg. East  
 Campus Address  
882-5843  
 Campus Phone #  
EPA  
 External Funding Source

Assistant Professor  
 Title  
Engineering  
 Division/College  
291-68-8853  
 Social Security Number  
1/1/2000  
 Date employed at MU

882=4784      882=4784      TrauthK@missouri.edu      no specific date  
 Campus Fax #      Campus Fax #      e-mail address      External Proposal Due Date

Corridor Plan for South Two-Mile Prairie: Protection of Ozark Fringe Streams  
 Project Title

Submission Type:  New Submission       Revised Submission  
 \$ 39,376      \$ 39,376      \$ 242,500  
 PRIME Funds Requested (A)      Divisional/Department Match (B)      External Amount Requested (C)  
 \$ 56,651      Funds are to be used for:  General       Equipment       Instructional  
 Total Project Budget (A+B+C)

Co-Investigators (please include their department)      Collaborators (please state their campus/business affiliation)  
Tom Clevenger      CEE  
Aderbal Correa      CEE

**ABSTRACT** - Include description of research and how PRIME funds will be used, or if it is for instruction, please address the specific research components of your project.

Please see attached.

Signatures (Required)  
 Applicant: [Signature]      Date: 12/23/02  
 Chair/Instructor: [Signature]      Date: 1/5/03  
 Date: 2/6/03

To complete this application, please provide the information requested in the guidelines along with the PRIME Budget Form.

## Wastewater Construction Planning for South Two-Mile Prairie Region

### Abstract

The goal of this 2.5-year project is to provide sound designs and cost estimates for the variety of engineered solutions handling projected wastewater and storm water loads for the South Two-Mile Prairie. The University has geographic data and modeling to support the Boone County staff predicting wastewater and storm water loads, and to evaluate the impacts of discharges to the sensitive Ozark-fringe streams. It is planned to determine environmental impact of future development by:

1. Monitoring water quality (nutrients, solids, algae, sediments, BOD) and stream flow in the Three Creeks Watershed (3 sites), Ashland lagoon discharge, and the Fowler /Cedar Creek watershed (4 sites) Reporting on the existing water quality and its suitability for indigenous aquatic life support.
2. Collecting and reviewing all Missouri Department of Conservation and US Dept. of Fish and Wildlife fish sampling data for southern Boone County creeks. Cooperatively exchange information regarding Topeka Shiner habitat health, populations, and restoration programs.
3. Performing a hydrological analysis using Geographic Information Systems (GIS) watershed simulation of run-off conditions in the Three Creeks Watershed to compare hydrographs and sediment loads associated with unaltered landscape, historical land-use, present land-use, and projected development scenarios.
4. Evaluating the downstream environmental impacts of various centralized wastewater treatment options including upgrading the existing lagoons in Ashland and the airport, replacing them with treatment plants, placing a treatment plant in the Fowler/Cedar Creek watershed, placing a lagoon/wetlands treatment system in the Missouri River bottom near Hartsburg, or constructing a wastewater pipeline to the Jefferson City Wastewater facility.

The Prime funds that are requested will support two graduate students for two years. One will work on the Remote sensing/GIS aspect of the project while the other student will study the water quality of the streams by performing analyses in the University laboratories. The research results produced by these two students will greatly add to the existing knowledge. It is anticipated that new methods will be developed to better utilize GIS/RS data for environmental assessments. Better planning tools can be developed. The data collected on the streams in the region will be utilized to determine if existing state regulatory models are correct or should be modified. This information will be of use nationally

## PRIME Budget Page

Please complete the following budget for your PRIME application. Complete the shaded areas only if this request involves multiple years of support.

	Total Amount	Year 1	Year 2	Year 3	Year 4	Year 5
PRIME Funds Requested (A)	\$ 39,376	19,397	19,979			
Department/Division Match (B) (Attach commitment letters)	\$ 39,376	19,397	19,979			
External Grant Amount (C)	\$ 242,252	127,907	114,593			
Total Project Budget (A+B+C)	\$ 321,252	166,701	154,551			

**Points to Consider:**

- Is the requested PRIME amount equal to or less than 25% of the total external budget amount needed for the project?
- Does the requested PRIME amount equal the amount of the Department/College match?
- Is it clear how the PRIME funds will be spent in your research project?
- Did you breakdown the amount you require from PRIME by fiscal year, if applicable?

**Comments:** (If the PRIME match is over 25% of the external budget, the department match is not equal to PRIME, or there is a lack of explanation in the budget breakdown for PRIME, please use the comments section below.)

There will be additional cost sharing provided by external sources. Please see budget attached.

Expense Category	EPA Request			MU Cost Share			External Cost Share		
	Year 1	Year 2	Total	Year 1	Year 2	Total	Year 1	Year 2	Total
<b>A. Senior Personnel</b>									
1. Principal Investigator: K. Trauth									
1 ss month	7,120	7,334	14,454						
ay months									
2. Co-Investigator: T. Clevenger									
1 ss month	8,893	9,160	18,053						
ay months									
3. Co-Investigator: A. Correa									
1 cy month	7,197	7,413	14,610						
ay months									
<b>Total A</b>	<b>23,210</b>	<b>23,907</b>	<b>47,117</b>						
<b>B. Other Personnel**</b>									
1. City of Ashland - staff							1,500	1,500	3,000
2. Boone County - staff							20,000	15,000	35,000
3. Boone County Regional Sewer District - staff							7,500	7,500	15,000
<b>Total B</b>							<b>29,000</b>	<b>24,000</b>	<b>53,000</b>
<b>C. Other Personnel</b>									
1. (2) Graduate Research Assistant (M.S. level)				27,796	28,630	56,426			
0.5 FTE, 12 months									
2. Undergraduate Employees	600	625	1,225						
<b>Total C</b>	<b>600</b>	<b>625</b>	<b>1,225</b>	<b>27,796</b>	<b>28,630</b>	<b>56,426</b>			
<b>D. Fringe Benefits</b>									
1. 21.83% of A	5,067	5,219	10,286						
2. Tuition for C1-3				8,800	9,064	17,864			
3. Medical Insurance for C1				2,198	2,264	4,462			
<b>Total D</b>	<b>5,067</b>	<b>5,219</b>	<b>10,286</b>	<b>10,998</b>	<b>11,328</b>	<b>22,326</b>			
<b>Total A + B + C + D</b>	<b>28,877</b>	<b>29,751</b>	<b>58,628</b>	<b>38,794</b>	<b>39,958</b>	<b>78,752</b>	<b>29,000</b>	<b>24,000</b>	<b>53,000</b>
<b>E. Equipment (over \$5,000)</b>									

<b>I. Travel</b>										
Domestic	1,500	500	2,000							
Foreign										
<b>3. Materials and Supplies</b>										
	1,800	503	2,303							
<b>4. Publications</b>										
<b>Subawards</b>										
1. Sampling	70,000	70,000	140,000							
2. Service Contract for Facilities Plan*							65,000		65,000	
<b>J. Other</b>										
<b>Total Direct Costs</b>	<b>102,177</b>	<b>100,754</b>	<b>202,931</b>		<b>38,794</b>	<b>39,958</b>	<b>78,752</b>	<b>94,000</b>	<b>24,000</b>	<b>118,000</b>
<i>Modified Total Direct Cost Base</i>	<i>57,177</i>	<i>30,754</i>			<i>29,994</i>	<i>30,894</i>				
<b>Facilities &amp; Administrative (F&amp;A) Costs (45% MTDC)</b>	<b>25,730</b>	<b>13,839</b>	<b>39,569</b>		<b>13,497</b>	<b>13,902</b>	<b>27,399</b>			
<b>Total Project Costs</b>	<b>127,907</b>	<b>114,593</b>	<b>242,500</b>		<b>52,291</b>	<b>53,860</b>	<b>106,151</b>	<b>94,000</b>	<b>24,000</b>	<b>118,000</b>
<b>*Cash Contributions:</b>										
Boone County Commission	15,000									
Missouri Dept. of Natural Resources	50,000									
<b>**In-Kind Contributions</b>										
City of Ashland - staff	3,000									
Boone County - staff	35,000									
Boone County Regional Sewer District - staff	15,000									

## Wastewater Construction Planning for South Two-Mile Prairie Region

### Project Overview

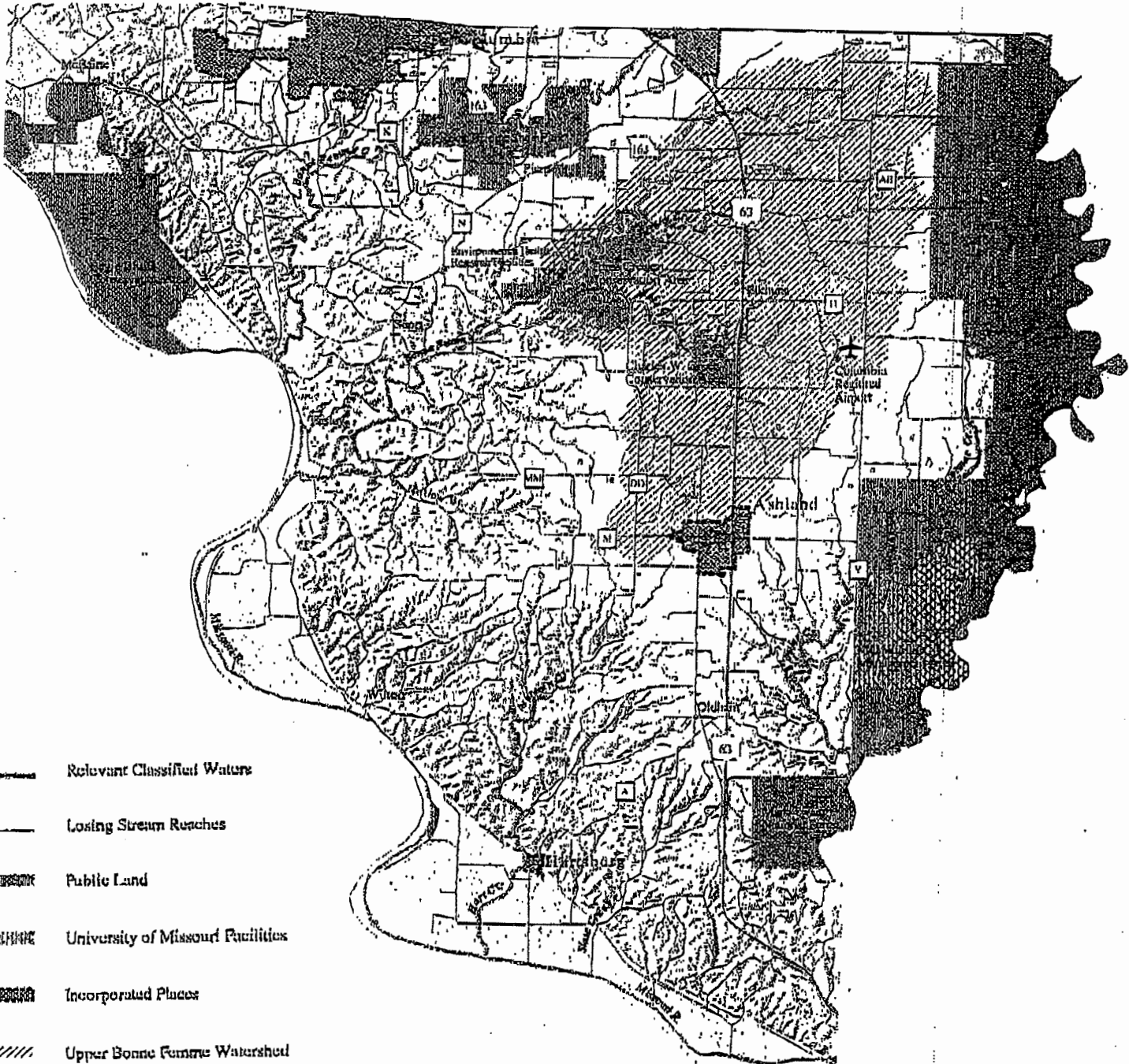
The goal of this 2.5-year project is to provide sound designs and cost estimates for the variety of engineered solutions handling projected wastewater and stormwater loads for the South Two-Mile Prairie. The University has geographic data and modeling to support the Boone County staff predicting wastewater and stormwater loads, and to evaluate the impacts of discharges to the sensitive Ozark-fringe streams.







This unique region (see map) encompasses the southern end of Boone County bounded on the north by the upper Three Creeks Watershed above the confluence of Smith Branch and Bonne Femme Creek, extends eastward to the Mark Twain National Forest, westward along Bonne Femme Creek to the Missouri River bottoms, and southward following the Missouri River and Mark Twain Forest to the confluence of Cedar Creek and the Missouri River. The topography is dominated by the southern end of Two-Mile (wide) Prairie forming the upper watersheds of several Ozark-fringe streams including the Outstanding State Resource Waters of Three Creeks (Bass, Turkey, and Bonne Femme), which are habitat to the Topeka Shiner, and the spectacular Cedar Creek. Bordering the prairie are karst areas and heavily forested steep terrain. Several of the streams (Fox Hollow, Slate, tributaries of Jamerson, Fowler, Bonne Femme) are protected from wastewater discharges because they are "losing streams", i.e., they have direct connection to subterranean streams and caverns serving as habitat to threatened species and they recharge shallow drinking water aquifers. Most of the streams do not flow during dry periods and aquatic life retreats to "sustaining pools". Thus, rural residents are obligated to use on-site treatment and disposal for domestic wastewater, although such systems may not offer the best protection of the ecosystems with high rural population density.

The Columbia Regional Airport lies at the upper reaches of Bass and Turkey Creek and is served by a no-discharge lagoon/land irrigation system. Recently, a light-industrial development proposal for the airport area was rejected by Boone County Commissioners due to lack of wastewater infrastructure and uncertain environmental impacts of storm water runoff and development. However, a sentiment to accommodate growth is generally expressed by region inhabitants if it can occur in an environmentally sound manner.

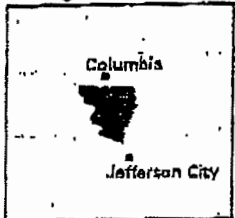
Residents of this area enjoy a unique, high quality of life arising from the "small town" atmosphere of Ashland, cosmopolitan Columbia to the north, state capital City of Jefferson to the south, a rural setting, and surrounding parcels of public lands serving recreational and preservation needs. Ashland has a lagoon treatment system that discharges a poor quality effluent to a tributary of Cedar Creek. Due to proximity and desirability for development, Ashland is experiencing rapid growth. There is a need for a centralized wastewater treatment plant.

# Significant Features of the South Two-Mile Prairie Area



-  Relevant Classified Waters
-  Losing Stream Reaches
-  Public Land
-  University of Missouri Facilities
-  Incorporated Places
-  Upper Bonne Femme Watershed

### Regional Locator



### State Locator



Map data (1998).  
 U.S. Dept. of Commerce,  
 National Oceanic and Atmospheric Administration,  
 the Census Bureau,  
 CSR 20-7, 10/1/96.  
 CSR 20-7, 6/30/96.

Geographic Resources Center,  
 Geography, University of Missouri,  
 1999.





The siting of a regional wastewater plant and routing of mains is critical in protecting environmental sensitive areas and focus it to areas of minimal impact and maximum economic benefit. Highly-treated wastewater could be used to supplement stream flows or a wetlands treatment system in the Missouri River Bottoms could be used to enhance wildlife. The vision includes creating a greater sense of community in the region through participation in the planning process as community led to this vision. The project leaders and collaborators have a stake in finding solutions to the wastewater issue within a fragile natural and cultural environment because they are regional residents.

### ***SUSTAINABILITY***

***Residential Infrastructure/Tax Base Problem.*** Ashland and the southern Boone County area have developed in a mostly residential mode. Ashland is experiencing the early stages of an accelerated growth pattern with the population doubling the last 10 years to 2,400 and a projected population of 3,400 by 2005. In the next year, the Ashland sewage treatment lagoons will be upgraded to accommodate increased flows. Growing as a bedroom community, the associated infrastructure is expensive for Ashland when compared to the economic benefits derived as tax dollars. Most residents spend their consumer dollars in Jefferson City, Fulton, and Columbia; thus, associated sales tax revenues are not available to Ashland.

***Airport Industrial Park Problem.*** In 1997, the Boone County Commission denied a permit for the development of an industrial park adjacent to the Columbia Regional Airport because inadequate infrastructure existed for handling wastewater runoff. The airport area is within the watershed of Bass and Turkey creeks, which support populations of the endangered Topeka Shiner. A comprehensive land use plan for the Three Creeks Watershed that protects the Topeka Shiner habitat is needed before industrial and commercial development occur. The area surrounding the Columbia Regional Airport, located three miles northeast of Ashland, is well-suited for development, but the airport area is severed by a small no-discharge lagoon system that cannot be sufficiently increased in capacity. Options will be suggested for handling stormwater and wastewater from the airport area development.

***Topeka Shiner Habitat Problem.*** A recent action plan by the Missouri Department of Conservation identified several potential causes of Topeka Shiner population decline. In summary, the causes were habitat destruction, increased predation, and water quality deterioration. Intensive agriculture was a source of many adverse forces, including streambed sedimentation. Any wastewater plan will have to consider any impact on the species.

Several ecosystems are addressed in this proposal including: northern Ozark-fringe stream headwaters, southern Two-mile Prairie, karst areas, and tributary streams to the Missouri River. This project will identify sensitive areas and examine the impact of various development scenarios on those areas. The Three Creeks Watershed will receive priority because it hosts an endangered species and has extensive karst topography. The costs and benefit analysis associated with land-use planning will include ecological

factors that link quality of life for all members of the ecosystem: plants, animals, and humans. Of particular concern is the impact of runoff from the impervious land cover associated with urbanization.

All concerned people in the community will be heard in public meetings of the Planning Commission and open hearings of the County Commissioners. The Corridor Plan will reflect the consensus of community leaders and all concerned citizens regarding technical information and data provided by the project team. Unanimous agreement by the community on every matter is not expected. However, decisions regarding wastewater handling based on majority votes will ultimately serve the best interest of the community.

The final report will contain valuable monitoring data, modeling projections, analyses, and a centralized wastewater facility site plan. It is likely that in the process of its development over the next three years, the community will become more educated about its local environment, the impacts of development, and the benefits of sustainable development. Environmental awareness will promote the implementation of sustainable development.

Numerous on-site and lagoon wastewater treatment systems may be found throughout Boone County. To the north, Columbia had more than a dozen large lagoons in outlying areas before centralized treatment was installed in 1972, after which the lagoons were systematically eliminated. Ultimately, Columbia found that discharge from their treatment plant was harmful to Hinkson Creek, an Ozark fringe stream, and built a pipeline to a wetland treatment system discharging to the Eagle Bluffs Conservation Area in the Missouri River bottoms. In the bedroom growth pattern, lagoons and on-site systems are removed from service as outlying areas are annexed. Presently, the Boone County Sewer District owns and operates over 100 small treatment plants throughout the region and oversees thousands of on-site systems. Centralized treatment and collection would avoid the costs and accumulated adverse environmental impacts of the numerous systems that would occur with growth.

### ***COMMUNITY COMMITMENT AND CONTRIBUTION***

The Mayor of Ashland and City Council represent the interests of Ashland residents. The elected Boone County Commission represents the citizens of the county. The Boone County Sewer District, a non-profit organization, is charged with providing regional wastewater management to Boone County. These entities are all supportive of this project. By working with the Missouri Department of Natural Resources, state concerns are addressed. Specialists from the University of Missouri-Columbia will lend unbiased, technical expertise to address the impacts of runoff and wastewater discharges.

All concerned individuals may become involved through open meetings and forums. They may communicate directly with their community leaders. Progress Reports will be made available to the public.

**WORK PLAN**

Public Involvement

1. Assemble a viable stakeholders group to review planned activities. Identify all concerns and interests.
2. Hold public project update/review meetings in Ashland.
3. Present potential wastewater treatment sites to public and prioritize acceptance.
4. Review costs and environmental impact.

Environmental Impact Assessment of Development

1. Monitor water quality (nutrients, solids, algae, sediments, BOD) and stream flow in the Three Creeks Watershed (3 sites), Ashland lagoon discharge, and the Fowler /Cedar Creek watershed (4 sites) for two summer/fall periods and two winter/spring periods. Report on the existing water quality and its suitability for indigenous aquatic life support.
2. Collect and review all Missouri Department of Conservation and US Dept. of Fish and Wildlife fish sampling data for southern Boone County creeks. Cooperatively exchange information regarding Topeka Shiner habitat health, populations, and restoration programs. Make land use planning recommendations.
3. Perform a hydrological analysis using Geographic Information Systems (GIS) watershed simulation of run-off conditions in the Three Creeks Watershed to compare hydrographs and sediment loads associated with unaltered landscape, historical land-use, present land-use, and projected development scenarios.
4. Evaluate the downstream environmental impacts of various centralized wastewater treatment options including upgrading the existing lagoons in Ashland and the airport, replacing them with treatment plants, placing a treatment plant in the Fowler/Cedar Creek watershed, placing a lagoon/wetlands treatment system in the Missouri River bottom near Hartsburg, or constructing a wastewater pipeline to the Jefferson City Wastewater facility.

**TASK AND TIME LINE**

The project duration is 2.5 years. This period was deemed necessary to complete all the data collection, analysis, integration, planning and dissemination. A summary of the water quality monitoring results and significant events will be reported in a quarterly newsletter. The public involvement process will be continued throughout the entire period. Closed work sessions will be held regularly as needed.

Convene project team, first public meeting.....	April 2002
Field review, assess impacts of all potential WWTP sites....	June 2003
Assemble, review, and present all fish monitoring data.....	Sept 2003
GIS land use database, initial runoff modeling of TCW.....	Sept 2003