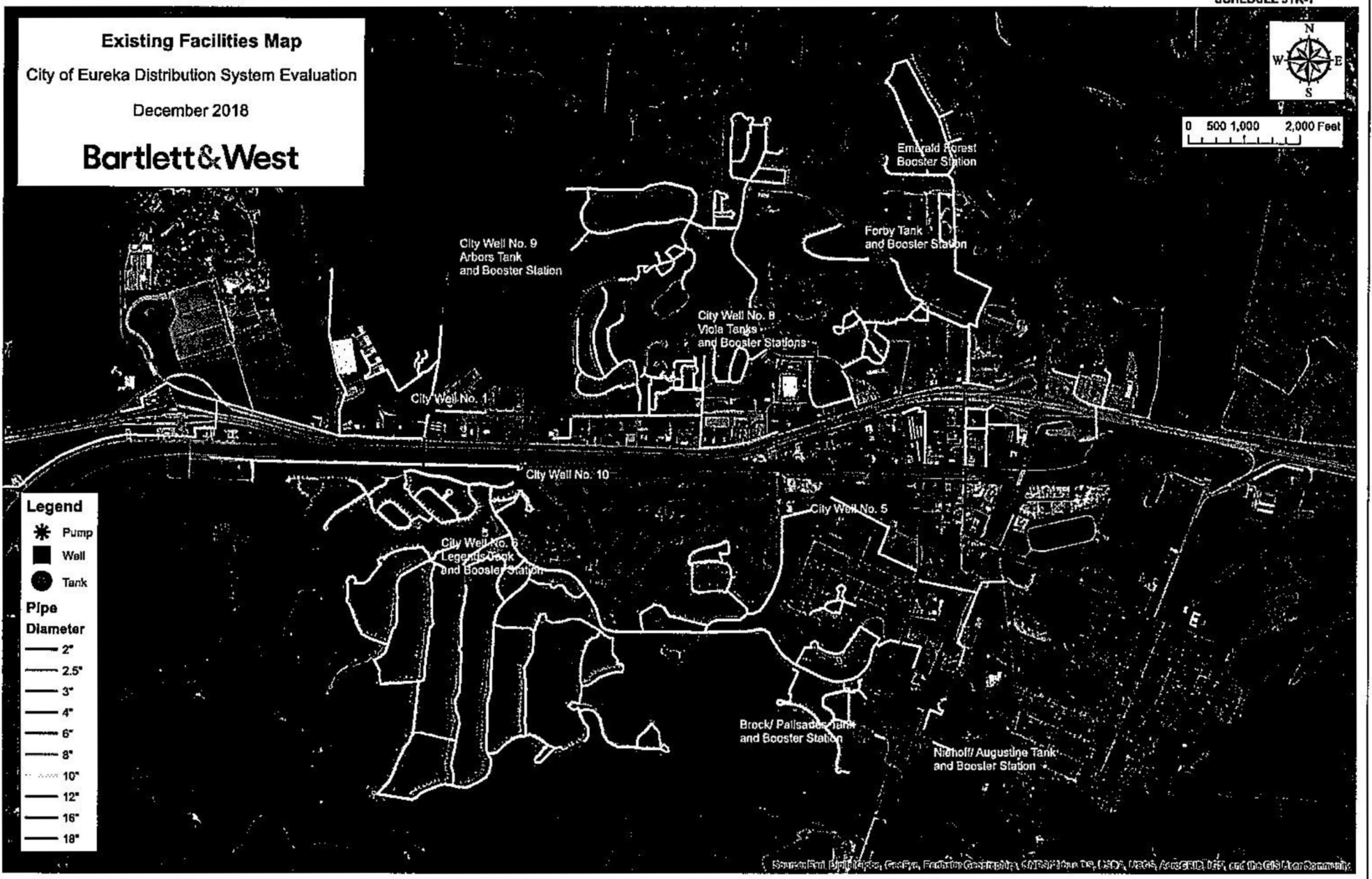
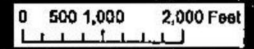


Existing Facilities Map
 City of Eureka Distribution System Evaluation
 December 2018
Bartlett & West

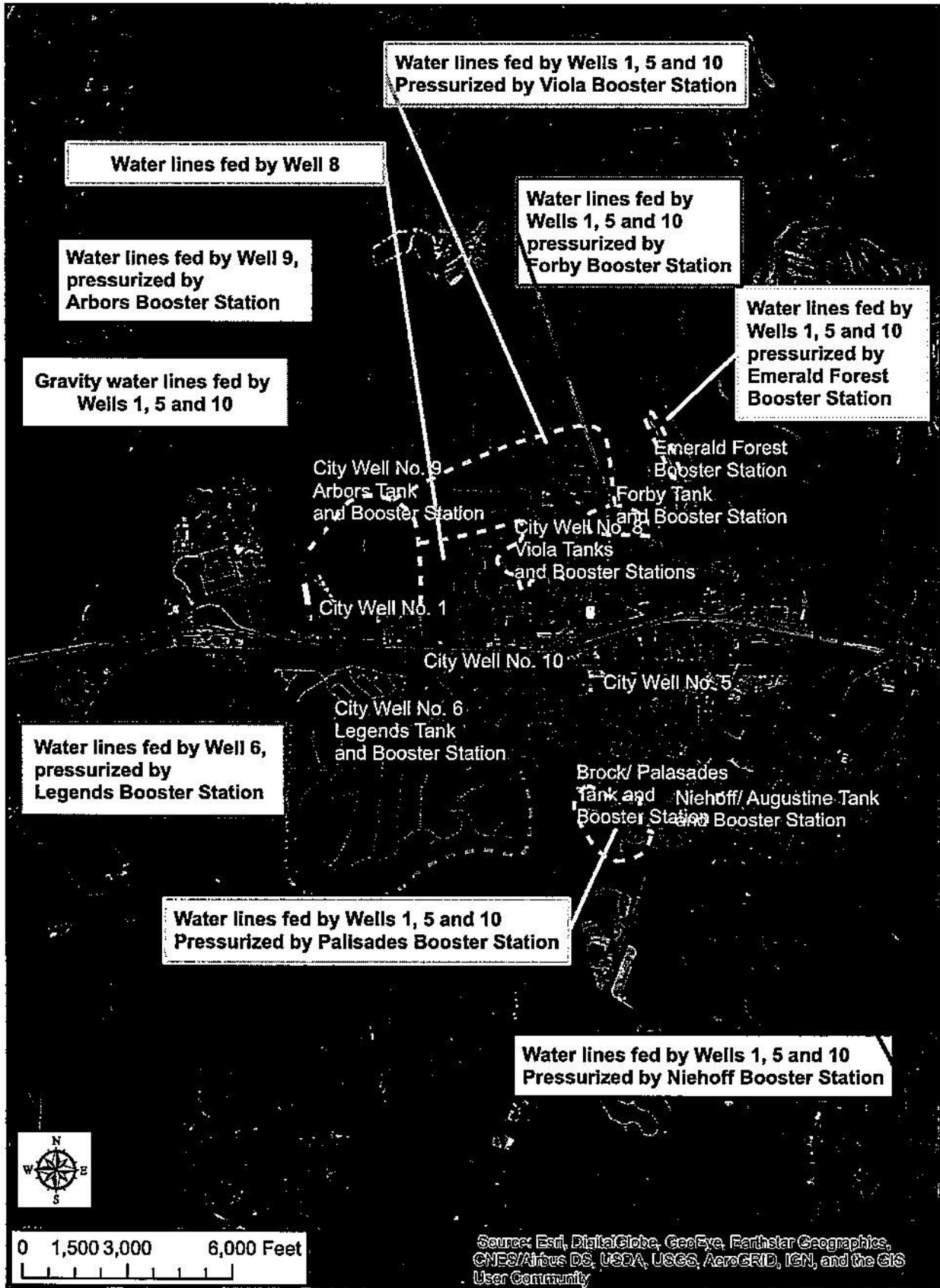


Source: Paul B. Johnson, Geospatial, Frederick County, VA; USGS, USGS, Aerial, DFR, and the GIS User Community.

APPENDIX B

EXISTING WATER DISTRIBUTION ZONES MAP

Distribution Zones City of Eureka, Missouri

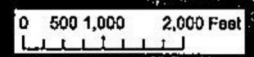


Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

APPENDIX C

EXISTING SYSTEM PRESSURES MAP

Existing Facilities Map
 City of Eureka Distribution System Evaluation
 December 2018
Bartlett & West



Legend

- Pump
- Well
- Tank

Pipe

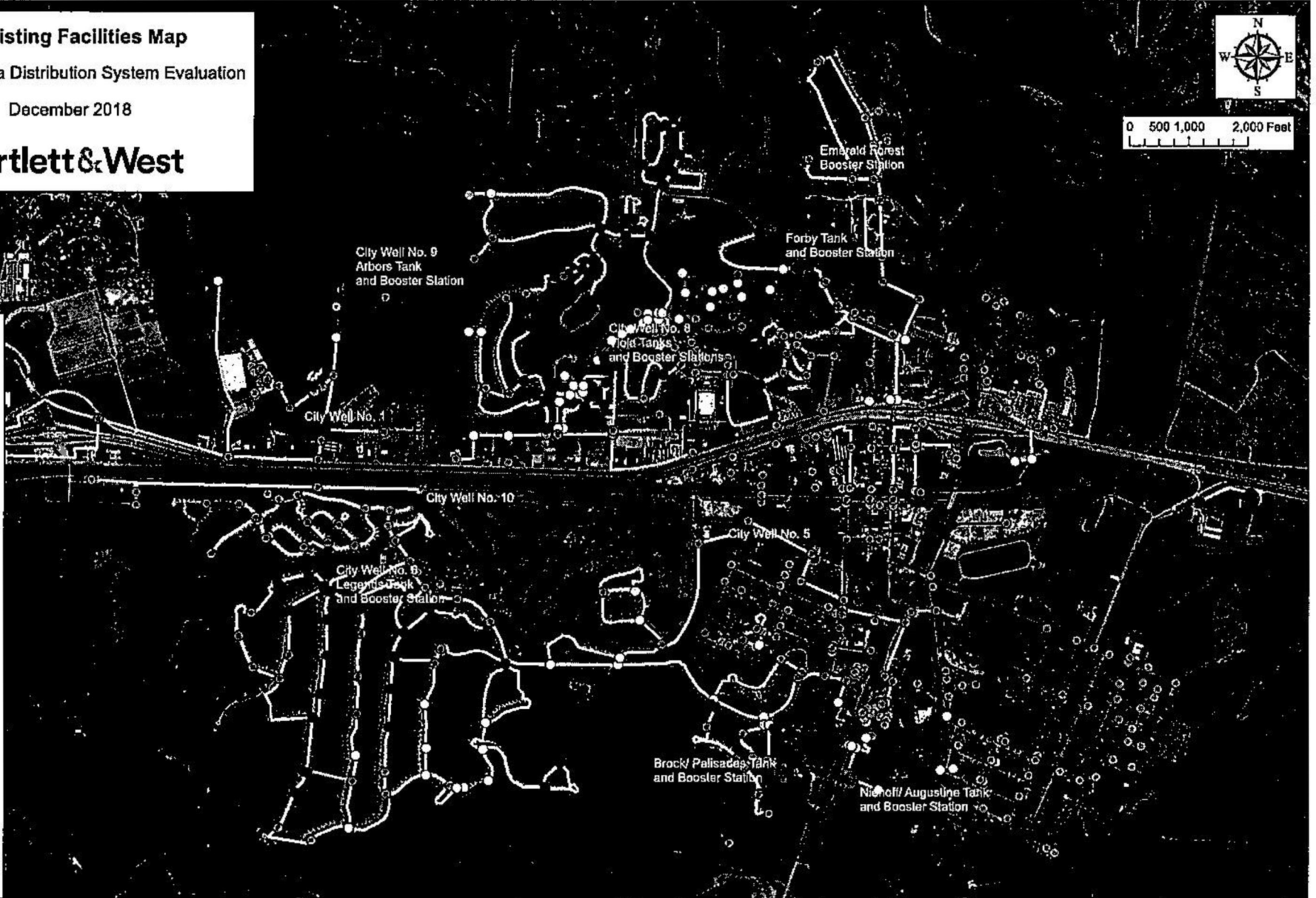
Diameter

- 2"
- 2.5"
- 3"
- 4"
- 6"
- 8"
- 10"
- 12"
- 16"
- 18"

Junction

Pressure

- <20 psi
- 20-35 psi
- 35-60 psi
- 60-100 psi
- 100-150 psi
- 150-200 psi
- >200 psi



Source: City of Eureka, Geomatics, GIS, and Mapping Department, 2018. All rights reserved.

APPENDIX D

SCENARIO 1 MAP

APPENDIX E

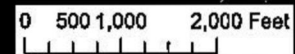
SCENARIO 2 MAP

Scenario 2 Map

City of Eureka, Missouri Water Distribution Analysis

December 2018

Bartlett & West



Bore under I-44 with new 12" line

Replace existing 6" line with 12"

Replace existing 8" line with 12"

New 12" line tied into 16" trunk line and existing lines

Delivery Point at new 16" trunk line

Legend

- * Pump
- Tank

Pipe Diameter

- 2"
- 2.5"
- 3"
- 4"
- 6"
- 8"
- 10"
- 12"
- 16"
- 18"

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

APPENDIX F

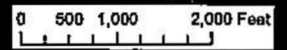
SCENARIO 3 MAP

Scenario 3 Map

City of Eureka Distribution System Evaluation

December 2018

Bartlett & West



Well 9 Site and Yard Pumping Modifications

City Well No. 9
Arbors Tank
and Booster Station

Emerald Forest
Booster Station

Forby Tank
and Booster Station

City Well No. 8
Viola Tanks
and Booster Stations

City Well No. 1

City Well No. 10

City Well No. 5

City Well No. 6
Legends Tank
and Booster Station

Brock/Palissades Tank
and Booster Station

Niehoff/Augustine Tank
and Booster Station

Legend

- * Pump
- Well
- Tank

Pipe

Diameter

- 2"
- 2.5"
- 3"
- 4"
- 6"
- 8"
- 10"
- 12"
- 16"
- 18"

Source: Bartlett & West, GeoEye Earthstar Imagery, 2018; City of Eureka, 2018; USGS, ArcGIS, 2017; and the City of Eureka.

APPENDIX G

RECOMMENDED IMPROVEMENTS COST OPINIONS

City of Eureka, Missouri
Recommended Improvements Cost Opinions - December 2018
Project No. 19500.004

PROJECT/DESCRIPTION	UNIT	QUANTITY	UNIT COST	EXTENSION
Scenario #1 - Missouri American Source Water feeding in from the East				
16" C900 PVC Water Line	LF	2,400	\$110.00	\$264,000.00
12" PR200 PVC Water Line	LF	10,700	\$80.00	\$856,000.00
16" Highway Crossings (Bore)	LF	750	\$525.00	\$393,750.00
12" Highway Crossings (Bore)	LF	300	\$375.00	\$112,500.00
12" Railroad Crossings (Bore)	LF	300	\$395.00	\$118,500.00
Valves, Appurtenances and Misc.	LS	1	\$560,000.00	\$560,000.00
Total Estimated Construction Cost:				\$2,304,750.00
Construction Contingency:				\$230,500.00
Non-Construction Contingency:				\$464,750.00
TOTAL ESTIMATED COST OF RECOMMENDED IMPROVEMENTS (Scenario #1):				\$3,000,000.00
Scenario #2 - Jefferson County Source Water feeding in from the South				
16" C900 PVC Water Line	LF	2,000	\$110.00	\$220,000.00
12" PR200 PVC Water Line	LF	5,450	\$80.00	\$436,000.00
12" Highway Crossings (Bore)	LF	325	\$375.00	\$121,875.00
12" Railroad Crossings (Bore)	LF	325	\$395.00	\$128,375.00
Valves, Appurtenances and Misc.	LS	1	\$328,000.00	\$328,000.00
Total Estimated Construction Cost:				\$1,234,250.00
Construction Contingency:				\$123,400.00
Non-Construction Contingency:				\$312,350.00
TOTAL ESTIMATED COST OF RECOMMENDED IMPROVEMENTS (Scenario #2):				\$1,670,000.00
Scenario #3 - Upgrading Existing System*				
Well 9 Site Modifications	LS	1	\$100,000.00	\$100,000.00
Valves, Appurtenances and Misc.	LS	1	\$50,000.00	\$50,000.00
Total Estimated Construction Cost:				\$150,000.00
Construction Contingency:				\$15,000.00
Non-Construction Contingency:				\$45,000.00
TOTAL ESTIMATED COST OF RECOMMENDED IMPROVEMENTS (Scenario #3):*				\$210,000.00

*This represents only the upgrades to the existing distribution system, and the estimated cost does not include supply or treatment improvements recommended in other sections of the report.