# KENTUCKY-AMERICAN WATER COMPANY CASE NO. 2004-00103

# PUBLIC SERVICE COMMISSION DATA REQUEST NO. 1 ITEM 1. a.

# Witness Responsible:

M. Miller/S. Valentine/J. Salser/C. Bush/L. Bridwell

- 1. a. Provide a copy of the workpapers and calculations that Kentucky-American used to develop its forecasted test-period financial information.
  - b. State all assumptions that Kentucky-American used to develop its forecasted test-period financial information.

## Supplemental Response:

a. Supplemental workpapers are attached. The electronic version of the supplemental workpapers have the following name: KAW\_SR\_PSCDR1#1a\_WP1-5\_RATE BASE\_060204.pdf.

3 SE KY Strategic Capital Expenditure Plan

STRATEGIC CAPITAL EXPENDITURE PLAN

Units = \$

State Kentucky Revision Date Jan 9, 2004 Status Draft

Project	Total 222 394		3) S	3		8	302,160	96.30	661438	4,461,882	903,500	478,600	9	983 400	1534.250	200	0	0000		57.771 804		1,500,000	659,000	1,500,000	2,120,431	700,000	450.000	990,000	2,700,000	1,310,000	1,190,593	3,130,000	700,000	000'006'	1,900,000	000'529'1	250,000	325,000	350,000	250,010	2,000,000	200,000	1,300,000	7,800,000	200,000	,800,000	350,000	50,000,000	000,005,1	0	_	Ţ	•
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Business Plan 5-year	21,232,394	3.465.000	1,522,100	132,540	1,561,066	2 738 500	8,730,056	0,020,000	4,250,638	3,734,312	006,926	053 500	200,000	1 365,000	351 500	000	) C	300,000	1996	49,077,804		5 6	45.0		<del>,</del>	0	6	135,170	1,600,000	300,000	0	2,730,000	640,000	1,900,000	1,900,000	000'070'	200,000	325,000	350,000	200,000	2,000,000	200,000	1,300,000	000,000,	9,00	000,000,	350,000	9,000,000	1,500,000	5	1	22 450 770	R
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Bief Description of Ponovead Evnanditurae	Mains, Hydrants, Valves, Meters - Deposit/Contribution	Network - Replacement Renewal	xtension	Replacement September 1	view	eplacement	****	1	pacement	TS Foultment & Statement	Offices and Operations Content		inipment.	Process Plant - Replacement	Process Plant - Additions	Treatment Media Replacement and Process Rehabilitation (canitalized)	Tank Rehabilitation / Painting (capitalized)	Comprehensive Planning Studies		TOTAL RECURRING PROJECTS	Clavs Mill Ground Storage Tank - 3 0 MG	Westernie Control of the Control of	Russell Cave Road Tank - 1 0 MG	us Project	see continue rioject	dad Main improvements	Replace Travelling Screen Housing	Source of Supply Project Development	Elevated Storage Tank - 2.0 MG	Electrical Reliability upgrades /System Reliability	Business Process Efficiency Project & Orcom Budget	Major Highway Relocations	Owen County Main Extensions	North Description Main Boulesses	Ground Storage Teath - 3 0 MG	Replace Trac-Vac System at RRS	Replace Trach Bake @ KDS	Malva House Horozoles at KDS	KRS Filter Media Berkacament - Hvd 3 & 4	Stude Handling Improvements - BBS	Main	North Upper Orner Mein Doubsesman Design	Note: Opper Super main replacement project	Apstown Road Main Improvements	Russell Cave Road Main - 34 000" of 12"	Rockwell Village Wasternian Binding	age wastewater Pipeline	appy maject	Sys Creatwell improvements			TOTAL INVESTMENT DRO INC.	CIMENI COSESS
		T		Hydrants - Replacement	_					_			_				_			TOTAL REC			_	_						_				North Droots	Parity Prince	Replace Trac	Rentace Trace	Valve House	KRS Filter Me	Studge Hand	Yarnallon Road Main	North I brose	IV Installation	I Pestown Ros	Russall Cave	Pocional Villa	Course of Sur	Source of Supply Project	SWEED CLO			TOTAL INC.	O AL INVE
Project Code	<del> </del>	18-49	24-82	24 83	8	8	848	78.82	2 2	2 2	2 2	8	8	26	8	8	8, 8	04-97		1	01-02	6	9	5 5	5	2 2	50-70	\$ 8 8 8	5 8	20.50	\$ 8 8 8	20.40	3 5																		1		
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040109 SE KY Strategic Capital Expenditure Plan

	State Revision Date Status	Kentucky Jan 9, 2004 Draft																		
Units = \$		Business Plan 5-year total	2004 Period 1	2	3	4	2	9	7	8	9	=	12	Total 2004	Plan 2005	Plan 2006	Plan 2007	Plan 2008	Plan 2009	Γ
Line 1 Line 2	Recuring Project Total Investment Project Total	49,077,804	589,812	407,000	480,000 617, 578,624 960,	7,000 727,000 0,530 434,930	319	,000 897,000 530 360,909	00 822,000 09 444,059	0 942,000 9 619,059	757,000 679,059	797,000	803,800	8,693,800	9,272,300	9,437,800		"  "	2 4	ाकः=
Line 3		82,234,574	1,176,812	945,624 1,	758,624 1,57	7,530 1,161,	930 1,176,5	30 1,257,90	1,266,059	3 1,561,059	1,436,059	1,490,589	1,490,249	15,598,973						<del></del>
Line 5		21,232,394	150,000	50,000	200,000 25	250,000 350,0	000 450,00	91,66	91,66 10 400,000	500,000	350,000	91,667	400,000	1,200,004						<u> </u>
Line 7	COMPANY FUNDED PROJECT EXPENDITURE (3 minus 6) TOTAL REFUNDS	54,917,180	935,145	803,957	766,957 1,238 184,667 121	1,235,863 720,263	263 634,863	63 666,242 28 195,820	774,392	2 969,392	994 392	491,667 998,922	898,582	10,398,969	8,844,070	8,701,200	9,522,700	5,664,700 8,225,500	5,616,294	<b>41</b> ~1
Line 9		65,440,396	1,027,425	.013,971	951,624 1,356,159	6,159 833,603	603 789,090	90 862,063	3 945,492	1,145,599	1,191,114	189,813	1,072,830	12,378,783			1			<u>ਹ –</u>
	Acquisitions Owenton Water and Sewer System Acquisition	20,000	10,000	10,000	10,000	10,000 10,0	10,000 2,800,000	00 20,000	20,000	20,000	20.000	20.000	ī	2 950 000	20 000					
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Line 10 Line 11 Line 12 Line 13	TOTAL ACQUISITIONS TOTAL COMPANY FUNDED EXPENDITURE (9 plus10) TOTAL INVESTMENT IN ASSETS (3 plus 10) TOTAL GROSS CAPITAL EXPENDITURE (6 plus 11)		10,000 1,037,425 1,186,812 1,279,092	10,000 10,000 1,023,971 961,624 955,624 1,068,624 1,165,638 1,253,281	10,000 10 61,624 1,366 68,624 1,587 53,291 1,707	10,000 10,000 2 11,366,159 843,603 3 11,587,530 1,171,930 3	200 2.800,000 803 3.589,090 830 3.976,530 270 4,130,757	20,000 30 20,000 30 1,277,906 37 1,473,730	20,000   20,000   20,000   20,000   20,000   882,063   965,482   1,165,589   1,211,141   1,208,813   1,072,899   1,278,599   1,286,089   1,816,089	20,000 1,165,599 1,581,059 1,757,266	20,000 1,211,114 1,456,059 1,652,781	20,000 1,209,813 1,510,589 1,701,480		2,950,000 15,328,783 18,548,973 20,528,787	50,000 10,913,480 14,124,070 16,143,480	10,760,998 14,062,800	0 11,623,694 14,967,500 17,068,494	0 10,368,514 13,890,200 16,033,214	21,823,710 25,240,004 27,440,004	
	Additional Items for Hyperion Reconciliation only	Business Plan 5-year total												Total	Plan				Plan	
	AFUDC (IAS Adjustment) Removal Costs (not included in IP projects)	2,282,325			ACTION OF STREET	ales industria	(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)	報 (報報の報告) 表 (報報の報告)		Security Sec	3.46克里斯山北 3.46克里斯	45000	1 1	300,000	1,092,642	300,000	419,534	504,883	5003	·,
	Asset Type	Business Plan					10000000000000000000000000000000000000							Total	Plan	li			Plan	. –
	Drinking Water - Source of Supply Dinking Water - Treatment Drinking Water - Treatment Drinking Water - Treatment Drinking Water - Networks (includes services and hydrants) Drinking Water - Networks (includes services and hydrants) Drinking Water - Networks (includes services and hydrants) Drinking Water - Network Drinking Water - Operating Assets (Buildings, Equipment, Vehicles) Wastewater - Pemping Wastewater - Readuring Devices Wastewater - Residuals Disposal Wastewater - Residuals Disposal Wastewater - Residuals Disposal Wastewater - Residuals Systems Wastewater - Residuals Systems Wastewater - Departing Assets	2755,170 2775,170 3721,500 3721,500 46,030,556 8,005,148 8,005,148 8,005,148 9,000 4,117,100 350,000 0 0 0											VIII.	2004 241,730 1,525,250 2,716,860 7,886,000 1,508,150 1,336,593 2,51,40 0 0	2005 1.35,170 1.200,000 2.126,600 1.538,300 76,500 350,000 350,000 0	"	1 5	1 - 8-	2009 2,620,000 12,071,500 8,419,356 1,665,048 102,000 362,100 0	
	Total	82,234,574												15,598,973	14,074,070	1 ' 1	14,967,50	13,890,200	25,240,004	
	Asset Investment Strategy	Business Plan 5-year total												Total	Plan	Plan	Plan 2007	Plan	Plan	
	regulatory Compilance and Goals Capacity - Growth Griffinh - Acquisitions, Regionalization & Develop Led	13,418,100 19,148,634 21,232,394												2,719,700	3,173,500	750,000 3,452,100 4,161,600	1,000,000 3,346,400 4,244,800	225,000 2,961,700 4,329,700	9,316,500 6,214,934 4,416,294	
	Reliability & Quality of Service Renewal of Network Assets Renewal of Supply and Treatment Assets Renewal of Operating Assets Security & Risk Refurtion	500,000 2,625,170 16,984,676 5,930,000 1,760,450 1,08,650									er Profit	THE STATE OF		1,526,730 2,524,450 699,250 238,900	835,170 2,342,300 1,100,000 326,250	25,000 50,000 3,414,100 1,750,000 345,000	100,000 150,000 4,076,300 1,450,000 412,500	375,000 0 4,168,800 1,375,000 335,000	1,590,000 2,983,176 255,000 341,700	
	Information Systems Non Regulated Business Development	528,500		0.00									ieta av 3 igit	12,500 1,265,593 0	13,750 76,500	15,000 100,000 0	37,500 150,000 0	100,000	20,400	
	Total	82,234,574												15,598,973	14,074,070	14,062,800	14,967,500	13,890,200	25,240,004	

STRATEGIC CAPITAL EXPENDITURE PLAN

Kentucky Amarican Waler 2004 Strategic Ceptel Expenditure Plan Recurring Item Detail

Mathematical Content	Business				,																						
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Martine   Mart			Central	New	Plan Actual		<b>维持</b>	145,000 18,164							395,000 395,000		345,000 345,000	395,000 390,000	395,000 293,454	3,940,000 3,940,000	4,080,000	4,181,600	4,244,800	4,329,700	4,416,294	Mark.	1
14   15   15   15   15   15   15   15	12300080	Mains, Hydrants, Valves, Melers - Deposit Contr	Northern	New		1		5,000 D	5,000 0				6,000	5,000 5,000		5,000											60,000
Martine   Mart	12020081	Network - Replacement Renaval	Central	New	Plan			48,000 1,600	28,000 36,021	23,000 23,000	33,000 33,000	43,000			48,000		43,000	43,000	48,000	601,000	600,000	660,000	700,000	750,000	785,000		3,988,000
Section   Sect	12300081	Network - Reptacement Renewal	Nonhern	New				2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	24,000							24,000
The state   The	12020062	Network - Extension	Central	New					5,000 65,166	6,000 6,000	10,000 10,000	20,000 20,000	20,000	20,000 20,000	30,000 30,000	40,000 40,000	30 000		30,000	250,000	256,000	260,100	300,000	350,000	367,000	183	1,772,100
Part	12300082	Network - Extension	Northern	New					0	0	0	0	0	0	0	0	0	0	0				İ	1	ļ		
1906   1906	12020063	Hydrania - Replacement	Central	New							2,000 2,000	2,000 2,000	2,000 2,000	2,000	2,000 2,000	2,000 2,000	2,000	2,000			25,500	26,000	28,600	27,000	27,540	1	157,540
1.00   1.00	12300083	Hydranis - Replacement	Northern	New				0		0	0	0	0	0	0	0			. 0	0				l	ĺ		
Part	12020084	Hydrants - New	Central	New	Plan			20,000		10,000		20,000	20,000	20,000	20,000	30,000	30,000	30,000	30,000	260,000	300,000	306,000	312,100	318,300	324,686		1,821,068
100   100	12300084	Hydrants - New	Nonhern	New				0			0	0				0			0,480	200,000							
1988   1988	12020085	Services - Replacement	Central	New	Plan		7	19,000									39,000	39,000	44,850	453,650	500,000	525,000	550,000	675,000	586,500	ing the	3,190,150
March   Marc	12300085	Services - Replacement	Northern	New						1,000	1,000	1,000	1,000	1,000		1,000	1,000		1,000	12,000				Ì			12,000
2000   2000	12020086	Services - New	Central	New	Plan			87,000	57,000 53,045	57,000	72,000	97,000	122,000	122,000		122,000	97,000		58,350	1,098,350	1,167,000	1,180,100	1,203,700	1,227,600	1,252,358	1.3	7,119,308
	12300088	Services - New	Nonhern	New						3,000	3,000	3,000	3,000	4,000	4,000		3,000	2,950		36,000							38,000
1995    1995	12020087	Meters - Replacement	Central	New	Pian Actual			50,000	20,000	60,000	60,000	80,000	80,000	80.000	80.000		70,000	70 000		794,500	818,800	833,100	649,800	888,800	884,138	<b>₽</b> ₩.35	5,045,438
Second Companies	12300087	Melers - Replacement	Northern	New	Plan	L.						250	1,400	250	250	250	250	250	200	8,000							6,000
120000   120000   120000   120000   120000   120000   12000   1200000   1200000   1200000   1200000   1200000   1200000   1200000   1200000   12000000000   1200000	12020088	Molecs - New	Central	New	Plan					20,000		60,000	80,000	60,000	75,000	76,000	75,000	76,000	66.360	696.350	721,500	735,900	760,800	765,500	760,912	量包含	4,449,682
Second   Process   Proce	12300068	Motors - New	Northern	New	Plan Action			500	500	2,000	500	500	2,000	600	600	2,000	500	500	2,000	12,000			i				12,000
Part	12020089	ITS Equipment & Systems	Central	New	Plan				5.669	5,000 6,000		5,000	6,000		5,000	5,000	5,000	10,000	15,000	75,000	78,500	100,000	150,000	80,000	81,800	y and a	563,100
Part	12300089	ITS Equipment & Systems	Northern	New	Plan														0	0							
Part	12020090	Offices & Operations Centers	Central	New	Plan			0	40,000	20,000	20,000		0	0	0	0	5,000	5,000	0		55,000	60,000	160,000	80,000	B1,600		476,600
200000  Vehicles	12300090	Offices & Operations Centers	Northern	New				0	0	0									٥	0			ĺ			整弦	. 0
220000  Varieties   Notice	12020091	Vehicles	Central	New	Plan				30,000 24,396	30,000	35,000 35,000	35,905	0	0	0	0	0				200,000	200,000	200,000	175,000	178,600		1,078,500
2000000  Total & Equipment   Central   New Pain   Family   Section   Secti	12300091	Vehicles	Northern	New	Plan Actual			0	0	0	0	0	0	0	0	0	0	0	0	0							
Securing	12020092	Tools & Equipment	Central	New	Plan						25.000		5,000	5,000	5,000	5,000	6,000	10,000	8,400		86,000	100,000	100,000	100,000	102,000		558,400
2000000000000000000000000000000000000	12300092	Tools & Equipment	Northern	New				0	0	0	0		0		•				6,000	5,000							6,000
2200000   Process Plears - Rejebborance   Northware   Plear   Admitted   Plear   Ple	12020083	Process Plant - Replacement	Central	New	Pten				50,000 3.368		10,000		. 0	<u> </u>		0		0	9,250	179,250	350,000	260,000	250,000	250,000	266,000		1,634,250
2000000   Process Plant - Additions	12300063	Process Plant - Rapiacement	Northern	New					0	0	0	0	0		9	-	-	,	0,00	0							0
2000000   Testiment Media Replacement & Process   Post   Additions   Northern   New Pan   Northern   New Pan   Additions   Northern   New Pan   Northern   Northern   New Pan   Northern   New Pan   Northern   New Pan   Northern   Norther	12020094	Process Plant - Additions	Central	New	Plan			0 5389	5,000 1,272	5,000 5,000	5,000	5,000 1350			0	0			- 0	20,000	50,000	50,000	100,000	75,000	78,500		371,500
20000000   Treatment Media Replacement & Process   Figure   Figu	12300094	Process Plant - Additions	Northern	New				0	0		0								٥	20,000							0
2000000   Tank Rehabi-Pairting (Capitalized)	12020095	Treatment Media Replacement & Process	Control	Now	Plan			0	:	0	0	0	0	0	0	0	0	0	•								
Carcinal   New   Pan   Actual	12300006	Trealment Media Replacement & Process	Northern	New			a standarday.	0	0	0	0	0	a	0	0	a	0	D	0	0							0
2000007   Tam RehabsPainting (Capitalized)	12020066	Tank Rehab/Painting (Capitalized)	Central	New				0	0	0	0	0	٥	0	0	0		0	0	٥						13.00	0
Comprehensive Penning Studies	12300098	Tank Reheb/Painting (Capitalized)	Northern	New	Plan			0	0	0	0	۰	0	0	0	D	0	0	٥	0							0
Comprehensive Planning Studies   Northern New Plan   S75,000   389,000   489,000   589,000   549,000   5	12020097	Comprehensive Planning Studies	Central	New	Plan			0	0	0	0	0	0	0	0	0	0	0	0	ě							
Recurring Nem Totals   Central   Pan	12300087	Comprehensive Planning Studies	Northern	New	Plen			٥	0	0	0	0	0		0	0	•	0	0	٥							0
Recurring Num Totals Northern Plan 10,160 12,000 13,500 11,750 11,750 11,750 12,750 12,750 12,750 12,750 13,250 15,500 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		Recurring Item Totals	Central		Pten									888,000 849,250	811,000 769,250	931,000 877,750	748,000 845,260				9,272,300	9,437,800	9,887,500	9,970,200 n	10,169,604		57,278,204
Recurring Rem Totals Total Plan 556,160 406,000 482,500 617,750 727,750 560,400 688,750 623,750 645,250 787,750 787,700 788,050 8,883,000 9,272,300 6,437,800 9,887,500 1,939,00		Recurring Nem Totals	Northern					10,150	12,000	13,500	11,750	11,760	14,400	12,750	12,750	14,250	11,760	11,700	18,250	155,000	å	0	0	0 0			155,000
		Recurring item Totals	Total		Plan Actual												767,750	797,700	768,060 E		9,272,300	9,437,800	9,887,500	8,970,200	10,189,604	0 6	57,431,204

AW/CMF3.40 ISSUE 1.0

Project 12020080/12300080: Developer/Governmental Contributions

Project Manager : Fred White

Project Status : PROJECT IMPLEMENTATION PROPOSAL

#### 1.0 SUMMARY

### 1.1 Project Objectives

Installation of new mains, valves, hydrants and other utility plant funded entirely by non-company funds. This can include both developer and governmental agencies funding.

#### 1.2 Recommended Solution

It is recommended that signed main extension agreements with developers, customers, or governmental agencies will be utilized prior to the installation of any mains in accordance with Kentucky American Water's Rules and Regulations as approved by the Kentucky Public Service Commission. Additional agreements that arise from time to time for fully reimbursed expenditures shall also be executed prior to initiation of any material construction.

# 1.3 Cost and Program

- \$4,000,000
- Annual Recurring Project.

## 1.4 Project Issues and Risks

There are no project issues or significant risk associated with this recurring annual expenditure.

### 1.5 Changes Since Previous Approval

No changes since the previous approval stage.

#### 2.0 BACKGROUND

This is a routine program that is implemented annually. The Kentucky Public Service Commission limits by regulation the amount of investment made on new main extensions, and under Kentucky American Water's Rules and Regulations developers must pay for expenses related to all new main extensions to be refunded as new customers tap on. This has varied for \$2.5 million to \$4.5 million each year. Further, developers are required to pay for all relocations of facilities in state or local right-of-ways. Government agencies are required to pay for relocations of pipe that are solely in private easements. Kentucky American generally adds 2,500 new customers annually that come from developer main extensions.

With the purchase of Tri-Village Water District in Owen County in 2001, there have been a few main extension in the created Northern District. The funds requested will cover both the Central and Northern Districts.

# 3.0 PROJECT JUSTIFICATION AND PRIORITISATION

The primary purpose for this project is customer growth and improvement of utility plant, paid for with non-company funds.

AW/CMF3.40 ISSUE 1.0

Purpose Code	Description	%	Measure	Units	Target
GD DF01	Water – Developer Funded	95%			
NA RR02	Water – Required Relocations	5%			

There is not a critical date associated with this recurring project. The budget represents a continual process of installation throughout the year.

#### 4.0 PROJECT OUTPUT AND BENEFITS

The additional customers attributed to developer paid extensions play a critical role in the company's annual growth rate. Approximately 2500 new customers associated with these extensions are added to the company's network annually. It is estimated that \$3,940,000 will be utilized on main extensions or non-company funded relocations in the Central District (Lexington area) and \$60,000 in the Northern District (Owen County).

## 5.0 SCOPE AND OPTIONS

Projects are typically designed by the company personnel or the company's consultant in cooperation with the developer's or governmental agency's consultant. All work is installed with the oversight of Kentucky American's engineering department after the outside party has delivered the required funds. The projects are usually routine in nature and simply involve the installation of pipelines 12" diameter and less along with associates valves, fittings and hydrants.

In all cases, the company is the sole source of water for the developer projects, and there is ample treatment capacity to serve the new customer base. Refusal to provide service to these developments is not an available option under Kentucky Public Service Commission Regulations.

## 6.0 FINANCIAL STATEMENT

The estimated expenditure attributed to projects funded by others is listed below:

Component \$ million	Total	Year 0	Year 1	Year 2	Year 3
Development Costs					
Design & Construction Cost			4.0		
Project Total			4.0		<del></del>
Advances & Contributions		-	4.0		

The majority of projects do not have an appreciable impact on operating expense other than additional meter reading expenses once the new customers have been added to the system.

AW/CMF3.40 ISSUE 1.0

#### 7.0 PROCUREMENT

The new assets are a collection of 200 to 350 separate projects. These projects are procured inhouse with approval by the company engineering department. A main extension agreement is signed and a deposit is received from the developer based on the estimated cost of the project. Kentucky American then initiates construction, providing all inspection. Kentucky American has begun a pilot program to allow developer installed mains with Kentucky American taking ownership upon engineering certification that all specifications have been met and bacteriological testing has been successful.

#### 8.0 PROGRAM

Project Implementation Approval (PIA)	02/04
Main Contract Let (if applicable)	N/A
Start on Site	on going
Substantial Completion	on going
Take Over	on going
Post Project Review	on going

#### 9.0 ISSUES AND RISKS

No significant risk involved other than those routinely dealt with in all underground utility construction. The new developments pose less risk than in developed areas because there is no public traffic, very few other utilities installed, and no surface landscaping to damage.

#### 10.0 RECOMMENDATION

It is recommended that the Capital Investment Management Committee grant approval for the continued participation in projects funded by third party contributions and advances. The anticipated value of this work in 2004 is estimated at \$4,000,000.

Linda C. Bridwell, PE February 10, 2004 Version 1.0

AW/CMF3.40 ISSUE 1.0

PROJECT REVIEW		
	Signature:	Date:
Asset Owner or nominated Asset Manager / Capital Program Manager		
Operations Manager		
Project Manager (Deliverer)		
Finance Representative		
RECOMMENDED FOR APPRO	OVAL - PNI Only	
VP Technical Services		
Others (as nominated by VP Technical Services)		

# **APPENDICES**

## A1 Schedule/Forecast

# **Revision History:**

Version	Date	Summary of Changes	- · · · · · · · · · · · · · · · · · · ·
1.0	11/10/03	Issue	

20,000 180,000 50,000 3,940,000 3,665,000 Total 2,000 11,000 2,000 380,000 395,000 12 380,000 2,000 395,000 11,000 2,000 £ 2,000 24,000 345,000 4,000 315,000 9 495,000 440,000 4,000 2,000 45,000 4,000 6 370,000 2,000 7,000 13,000 3,000 395,000 œ 440,000 2,000 40,000 3,000 10,000 495,000 445,000 2,000 12,000 14,000 2,000 415,000 9 Developer/Government Contributions 325,000 2,000 5,000 3,000 10,000 345,000 2 235,000 2,000 5,000 2,000 1,000 245,000 2,000 185,000 1,000 5,000 2,000 195,000 က 40,000 4,500 0 500 0 45,000 2 140,000 500 4,500 145,000 Fred White 12020080 Previous Year Hydrant Replacement - reimbursible Developer Deposits - Fire Services Developer Deposits - Hydrants Developer Deposits - Mains Kentucky American Water Recurring Item # Period Reimbursible Relocations 2004 Item Business Unit Total Project Manager: Business Unit Central District

Business Unit	12300080													
Northern District Period	Previous		2	က	4	ນ	9	7	<b>∞</b>	თ	10	=	12	Total
Item	Year					-							!	
Developer Deposits - Mains		5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	60,000
Developer Deposits - Hydrants		0	0	0	0	0	0	0	0	0	0	0	0	0
Developer Deposits - Fire Services		0	0	0	0	0	0	0	0	0	0	0	0	0
Reimbursible Relocations		0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrant Replacement - reimbursible		0	0	0	0	0	0	0	0	0	-			0
Business Unit Total	0	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	000'09

Recurring Item Total	#80					7								
Period	Previous	-	2	ю	4	5	9	7	ω	თ	5	Ξ	12	Total
ltem	Year													
Developer Deposits - Mains		145,000	45,000	190,000	240,000	330,000	420,000	445,000	375,000	445,000	320,000	385,000	385,000	385,000 3,725,000
Developer Deposits - Hydrants		200	200	1,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	20,000
Developer Deposits - Fire Services		4,500	4,500	5,000	5,000	5,000	12,000	40,000	13,000	45,000	24,000	11,000	11,000	180,000
Reimbursible Relocations		0	0	2,000	2,000	3,000	14,000	10,000	7,000	4,000	4,000	2,000	2,000	50,000
Hydrant Replacement - reimbursible		0	. 0	2,000	1,000	10,000	2,000	3,000	3,000	4,000	0	0	0	25,000
Recurring Item Total	0	0 150,000		50,000 200,000	250,000	250,000 350,000	450,000	500,000	400,000	500,000	350,000	400,000	400,000 4,000,000	4,000,000

AW/CMF3.40 ISSUE 1.0

Project 12020081/12300081: Recurring Item #81, Network - Replacement/Renewal

Project Manager :

Fred White

Project Status :

**PROJECT IMPLEMENTATION PROPOSAL** 

#### 1.0 SUMMARY

# 1.1 Project Objectives

The replacement, renewal or improvement of water mains, including valves and appurtenances, is necessary for the reliable and efficient operation of the network. Network components routinely fail creating the need for emergency replacement and specific network areas are identified for renewal due to their history of failure.

#### 1.2 Recommended Solution

The expenditure of capital throughout 2004 to accomplish the replacement and renewal of water mains, valves and appurtenances throughout the Kentucky American distribution network is prudent and necessary to meet customer service objectives.

### 1.3 Cost and Program

- The amount of expenditure requested: \$525,000
- The project program completion date: December 31, 2004

### 1.4 Project Issues and Risks

The failure to allocate capital for the necessary replacement and renewal of network components may result in service interruptions and customer dissatisfaction.

#### 1.5 Changes Since Previous Approval

There is no change in this recurring project since the previous approval

#### 2.0 BACKGROUND

Kentucky American Water serves more than 108,000 customers throughout two distribution system networks. Replacement, renewal and improvement of network components are a recurring requirement for efficient operation of these systems and continued reliable water service delivery. This includes capitalized emergency repairs as well as planned replacements, renewals and improvements. From time to time, this work is required as a component of urban renewal where Kentucky American facilities are in the right-of-way.

### 3.0 PROJECT JUSTIFICATION AND PRIORITISATION

The company maintains water mains of cast iron, ductile iron, plastic, copper, asbestos-cement, galvanized iron, etc. of sizes ranging from ¾" to 36" throughout its distribution networks. The age of these water mains, their installation environment, the prevalent climate and environmental conditions acting upon them and the nature of the materials themselves creates a useful life limitation in many situations. A routine, unanticipated number of failures does and will continue to occur. For these reasons failures must continue to be addressed through capitalized replacement of mains. It is also critical to perform planned replacements in areas with a history of repeated failures or where the potential for significant damage due to failure exists.

AW/CMF3.40 ISSUE 1.0

During the course of the year, it may become necessary to shift priorities and make expenditures for replacement or renewal in unforeseen locations. Priority and justification exists to make expenditures at proposed levels to address the continuing need for main replacement, renewal and improvement.

Currently, Kentucky American is working to develop a prioritization system on projects for replacement and improvement.

Purpose Code	Description	%	Measure	Units	Target
NA-PF01	Performance Failure	25			
NA-PP01	Water – Poor Physical Condition	25			
NA-RR01	Required Relocations	50			

#### 4.0 PROJECT OUTPUT AND BENEFITS

Planned network replacements and renewals constitute prudent network asset management, and will minimize future service interruptions as well as provide continued customer service. It is anticipated that \$501,000 will be utilized in the Central District (Lexington area) and \$24,000 will be utilized in the Northern District (Owen County area).

#### 5.0 SCOPE AND OPTIONS

The replacement, renewal and improvement of the networks will be initiated by in-house personnel and implemented with the utilization of company labor and by contractor forces. Emergency repairs, which typically result in a capitalized replacement, are routinely performed with company labor. Planned renewal of network mains is routinely contracted due to equipment and labor requirements.

No practical option but to make necessary repairs to failed network components exists. Negative consequences such as compromised water quality, loss of fire fighting capability and low or no pressure to customers would result if no action were taken. The failure to execute planned replacements in areas of known problems would also result in an undesirable level of service to customers and would allow operating and maintenance costs to escalate.

## 6.0 FINANCIAL STATEMENT

Expenditures proposed for this recurring item constitute necessary repairs of emergency failures, the planned renewal of existing small diameter mains, and the installation of improvement mains in identified areas of the system where flow/capacity deficiencies exist. A requirement to address these issues will perpetually exist given the nature of the network. Overall improvement, which has had a direct effect on the reduction in the number of water main breaks and the cost thereof, has occurred in recent years as a result of the replacement of small diameter mains. Expenditures in this recurring item category should continue in order to maintain and improve the integrity of the network.

AW/CMF3.40 ISSUE 1.0

Component \$ million	Total	Year 0	Year 1	Year 2	Year 3
Development Costs					
Design & Construction Cost	0.525		\$0.525		
Project Total	0.525		\$0.525		
Advances & Contributions					

# 7.0 PROCUREMENT

As discussed in Section 5.0, network replacement, renewal and improvement is accomplished by both Contractor forces and Company personnel. The nature and extent of work required determines which group is utilized. Contractor forces are experienced, and qualified to perform necessary replacement and renewal projects. Company personnel are capable of responding quicker to minor network replacement and renewal requirements. Materials utilized for projects are provided through the system of competitive national contract selection.

#### 8.0 PROGRAM

Project Implementation Approval (PIA)	02/04
Start on Site	on going
Substantial Completion	on going
Take Over	on going
Post Project Review	01/05

## 9.0 ISSUES AND RISKS

There are no issues or inherent risks associated with this project other than those associated with normal construction operations.

Company employees and contractors are required to conform to all federal, state and local safety regulations as well as those more specifically detailed by the Company. All necessary insurance coverage by contractors has been documented through receipt of a Certificate of Insurance.

# 10.0 RECOMMENDATION

It is recommended that the \$525,000 in capital expenditures be approved and authorized for Kentucky American Water during 2004. These expenditures will enable both emergency and planned network replacements, renewals and improvements to be made.

Linda C. Bridwell, PE	
February 10, 2004	
Version 1.0	

AW/CMF3.40 ISSUE 1.0

PROJECT REVIEW		
	Signature:	Date:
Asset Owner or nominated Asset Manager / Capital Program Manager		
Operations Manager		
Project Manager (Deliverer)		
Finance Representative		
RECOMMENDED FOR APPRO	VAL - PNI Only	
VP Technical Services		
Others (as nominated by VP Technical Services)		

# **APPENDICES**

## A1 Schedule / Forecast

# **Revision History:**

Version	Date	Summary of Changes
1.0	11/10/03	Issue

Recurring Item Total

Kentucky American Water Recurring Item # 2004 Project Manager:	81 Fred White			Network - Replace/Renew	Replace/Rer	ю								
Business Unit Central District Period Item	12020081 Previous Year	<del></del>	2	3	4	5	9	2	80	6	10	=	12	Total
Capitalized Repair of Mains		2,000	2,000	2,000	2,000	5,000	5,000	5,000	5,000	5,000	3,000	2,000	2,000	40,000
Relocations at Company expense		46,000	26,000	21,000	31,000	38,000	43,000	43,000	43,000	43,000	40,000	41,000	46,000	461,000
Business Unit Total	0	48,000	28,000	23,000	33,000	43,000	48,000	48,000	48,000	48,000	43,000	43,000	48,000	501,000
Business Unit Northern District	12300081													
Period	Previous	_	2	က	4	2	9	7	8	6	10	<del>-</del>	12	Total
Item	מ								•			-		
Capitalized Repair of Mains		0	0	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	10,000
Relocations at Company expense		2,000	2,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	14,000
Business Unit Total	0	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	24,000
Recurring Item Total	#81													
Period	Previous Year	-	8	ო	4	ro	9	۲	ω	6	10	7	12	Total
Irem														
Capitalized Repair of Mains		2,000	2,000	3,000	3,000	000'9	000'9	000'9	000'9	000'9	4,000	3,000	3,000	50,000
Relocations at Company expense		48,000	28,000	22,000	32,000	39,000	44,000	44,000	44,000	44,000	41,000	42,000	47,000	475,000

AW/CMF3.40 ISSUE 1.0

Project 12020082/12300082: Recurring Item #82, Network - Extensions

Project Manager :

Fred White

**Project Status** 

PROJECT IMPLEMENTATION PROPOSAL

#### 1.0 SUMMARY

#### 1.1 Project Objectives

New water mains funded by the company, including valves and other appurtenances, associated with the extension of water service. These conditions would include:

- Upsizing a developer initiated extension to achieve network enhancement.
- Company initiated and funded new mains related to network enhancement within the guidance of Kentucky American's Rules and Regulations as approved by the Public Service Commission or by special agreement.

## 1.2 Recommended Solution

It is recommended that necessary extensions by the company be undertaken in compliance with tariff regulations, and extensions and upsizing of mains be provided under circumstances where it will be beneficial to the overall network planning objectives of the Kentucky American.

### 1.3 Cost and Program

Capital Expenditure Requested - \$250,000

Project Completion Date
 December 31, 2004

#### 1.4 Project Issues and Risks

The failure to allocate capital for the installation of water mains on developer initiated projects and for Company funded projects will diminish the opportunity for maximum network efficiency and increase long-term costs to the customer.

#### 2.0 BACKGROUND

Kentucky American Water maintains extensive water networks in two general areas, serving over 108,000 customers through 1,600 miles of main. Normal business practices and prudent network planning and engineering have dictated the installation of new network facilities. Generally, all of the company funded network extensions as part of this recurring item are anticipated in the Central District (Lexington area).

#### 3.0 PROJECT JUSTIFICATION AND PRIORITISATION

Contained within this recurring item is an allowance for the upsizing of mains funded by others in order to address known or anticipated growth, or to improve existing network conditions coincident with developer extensions. Performing upsizing of mains in conjunction with developer initiated projects provides an excellent opportunity for the Company to achieve desired network improvements in a very cost effective manor, often only at small incremental costs.

The funding for network extensions is necessary throughout 2004, as dictated by developer

AW/CMF3.40 ISSUE 1.0

needs and company planning.

Purpose Code	Description	%	Measure	Units	Target
GC-LC01	Local Capacity 0 – 3 years	75%			
GC-LC02	Local Capacity 3+ years	25%			

# 4.0 PROJECT OUTPUT AND BENEFITS

Network extensions result from compliance with tariff regulations and from Company decisions to provide service reliability and network enhancement. This recurring item may impact 50 to 75 projects per year.

#### 5.0 SCOPE AND OPTIONS

The extension of networks will be accomplished through the utilization generally of contractor forces. Current company forces are utilized strictly for maintenance and minor facility upgrades.

As new customer initiated extensions are made in accordance with tariffs, there are no alternatives or options other than to perform this work. The failure to upsize mains utilizing company funds would prove shortsighted and could result in future service delivery problems and greater costs. A decision to not commit company funds for upsizing certain developer extensions should not be considered a viable option. It is recommended that the company proceed with the planned expenditures as they arise. The planned expenditure is based generally on what is thought to be historical levels, however, those expenditures have not been closely tracked and adjustments may be necessary as developments occur.

## 6.0 FINANCIAL STATEMENT

Component \$ million	Total	Year 0	Year 1	Year 2	Year 3
Development Costs					
Design & Construction Cost	\$0.25		\$0.25		<u> </u>
Project Total	\$0.25		\$0.25		
Advances & Contributions					<del></del>

The extension of the network enables the company to generate additional revenues through the provision of service to new customers. Reinforcement and upsizing initiatives benefit the network and the ability of the company to provide service to future customers desiring water service at fringe areas of the system.

AW/CMF3.40

# CAPITAL INVESTMENT MANAGEMENT COMMITTEE - FEBRUARY 2004

ISSUE 1.0

# 7.0 PROCUREMENT

Each network extension requirement is evaluated on its own merit based on engineering analysis and/or based upon tariff regulations. Materials utilized for projects are provided through the company's system of competitive national contract procurement.

#### 8.0 PROGRAM

Project Implementation Approval (PIA)	02/04
Main Contract Let (if applicable)	N/A
Start on Site	N/A
Substantial Completion	On going
Take Over	On going
Post Project Review	12/04

#### 9.0 ISSUES AND RISKS

There are no issues or inherent risks associated with this project other than those associated with normal construction operations.

Company employees and contractors are required to conform to all federal, state and local safety regulations as well as those more specifically detailed by the Company. All necessary insurance coverage by contractors has been documented through receipt of a Certificate of Insurance.

#### 10.0 RECOMMENDATION

It is recommended that the \$250,000 in capital expenditures be authorized for Kentucky American during 2004. These expenditures will allow for efficient network enhancement with growth and development of the network.

Linda C. Bridwell, PE Date February 10, 2004 Version 1.0

AW/CMF3.40 ISSUE 1.0

PROJECT REVIEW		
	Signature:	Date:
Asset Owner or nominated Asset Manager / Capital Program Manager		
Operations Manager		
Project Manager (Deliverer)		
Finance Representative		
RECOMMENDED FOR APPRO	OVAL - PNI Only	
VP Technical Services		
Others (as nominated by VP Technical Services)		

## **APPENDICES**

# A1 Schedule/Forecast

# **Revision History:**

Version	Date	Summary of Changes
1.0	11/10/03	Issue

Kentucky American Water Recurring Item # 2004 Project Manager:	82 Fred White			Network - Extension	xtension									
Business Unit Central District Period Item	12020082 Previous Year	-	2	3	4	Ŋ	9	7	80	<b>о</b>	10	=======================================	12	Total
Network Installation @ Co. Expense		10,000	5,000	5,000	10,000	10,000	10,000	10,000	10,000	20,000	15,000	15,000	20,000	140,000
Network Upsizing @ Co. Expense		0	0	0	0	10,000	10,000	10,000	20,000	20,000	15,000	15,000	10,000	110,000
Business Unit Total	0	10,000	5,000	5,000	10,000	20,000	20,000	20,000	30,000	40,000	30,000	30,000	30,000	250,000
Business Unit Northern District	12300082													
Period	Previous	-	2	က	4	2	9		8	6	10	7	12	Total
Item	Year													
Network Installation @ Co. Expense		0	0	0	0	0	0	0	0	0	0	0	0	0
Network Upsizing @ Co. Expense		0	0	0	0	0	0	0	0	0	0	0	0	0
Business Unit Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recurring Item Total	#82	-												
Period	Previous	-	2	က	4	ı,	9	7	80	<b>o</b>	10	7	12	Total
ltem	i ear										•			
Network Installation @ Co. Expense		10,000	5,000	5,000	10,000	10,000	10,000	10,000	10,000	20,000	15,000	15,000	20,000	140,000
Network Upsizing @ Co. Expense		0	0	0	0	10,000	10,000	10,000	20,000	20,000	15,000	15,000	10,000	110,000
Recurring Item Total	0	10,000	5,000	5,000	10,000	20,000	20,000	20,000	30,000	40,000	30,000	30,000	30,000	250,000

AW/CMF3.40 ISSUE 1.0

Project 12020083/12300083: Recurring Item #83, Hydrants - Replacement/Renewal

Project Manager : Fred White

Project Status : PROJECT IMPLEMENTATION PROPOSAL

#### 1.0 SUMMARY

# 1.1 Project Objectives

The replacement, renewal or improvement of leaking, failed or obsolete hydrants is necessary for the reliable and efficient operation of the network including providing appropriate fire protection for customers.

#### 1.2 Recommended Solution

It is recommended that the expenditure of capital throughout 2004 to accomplish the replacement and renewal of hydrants be undertaken for the Central District (Lexington area) as needed.

### 1.3 Cost and Program

- The amount of expenditure requested: \$25,000
- The project program completion date: December 31, 2004

### 1.4 Project Issues and Risks

The failure to allocate capital for the necessary replacement and renewal of network components may result in unaccounted for water, service interruptions, customer dissatisfaction, and inadequate fire protection.

#### 2.0 BACKGROUND

Kentucky American serves more than 108,000 customers with two distribution network systems. The Central District (Lexington area) has over 6,000 public hydrants and nearly 500 private hydrants maintained by Kentucky American. The Northern District (Owen County area) has fewer than 100 hydrants. Replacement, renewal and improvement of network components is a recurring requirement for efficient operation of these systems and continued reliable water service delivery. This recurring item addresses hydrants specifically.

#### 3.0 PROJECT JUSTIFICATION AND PRIORITISATION

The company maintains numerous hydrant types of various ages. The hydrants are used for system wide flushing annually, and are flow tested for maintenance purposes annually. Kentucky American is obligated to provide fire protection to varying degrees throughout its system, and there is a customer expectation that fire protection is adequate. The age of these hydrants, their installation environment, the prevalent climate and environmental conditions acting upon them creates a useful life limitation in some situations. A routine, unanticipated number of failures will continue to occur. For these reasons failures must continue to be addressed through capitalized replacement of hydrants. It is also critical to perform planned hydrant replacement where relocations of mains at company expense are made.

AW/CMF3.40 ISSUE 1.0

Purpose Code	Description	%	Measure	Units	Target
NA-PF01	Performance Failure	50			
NA-RR01	Required Relocations	50			

## 4.0 PROJECT OUTPUT AND BENEFITS

Planned hydrant replacements and renewals constitute prudent asset management, and will minimize service interruptions, water quality problems, or failure to provide sufficient fire protection.

#### 5.0 SCOPE AND OPTIONS

The replacement, renewal and improvement of the hydrants will be accomplished through the utilization of company labor and by contractor forces. Emergency repairs, which typically result in a capitalized replacement, are routinely performed with company labor. Planned renewals of hydrants are routinely contracted as part of network renewal projects.

No practical option but to make necessary repairs to failed network components exists. Negative consequences such as compromised water quality, loss of fire fighting capability and low or no pressure to customers would result if no action were taken. The failure to execute planned replacements in areas of known problems would also result in an undesirable level of service to customers and would allow operating and maintenance costs to escalate.

# 6.0 FINANCIAL STATEMENT

Expenditures proposed for recurring item #83 constitute necessary repairs of emergency failures, and the planned renewal of existing hydrants involved in company funded main relocations. A requirement to address these issues will perpetually exist. Expenditures in this recurring item category should continue in order to maintain and improve the integrity of the network.

Component \$ million	Total	Year 0	Year 1	Year 2	Year 3
Development Costs					· ·
Design & Construction Cost	0.025		0.025		
Project Total	0.025		0.025		
Advances & Contributions					

#### 7.0 PROCUREMENT

As discussed in Section 5.0, hydrant replacement, renewal and improvement is accomplished by both Contractor forces and Company personnel. The nature and extent of work required determines which group is utilized. All materials are procured through the system of competitive national contract selection.

AW/CMF3.40 ISSUE 1.0

#### 8.0 PROGRAM

Project Implementation Approval (PIA)	02/04
Start on Site	on going
Substantial Completion	on going
Take Over	on going
Post Project Review	01/05

#### 9.0 ISSUES AND RISKS

There are no issues or inherent risks associated with this project other than those associated with normal construction operations.

Company employees and contractors are required to conform to all federal, state and local safety regulations as well as those more specifically detailed by the Company. All necessary insurance coverage by contractors has been documented through receipt of a Certificate of Insurance.

#### 10.0 RECOMMENDATION

It is recommended that the \$25,000 in capital expenditures be authorized for Kentucky American during 2004. These expenditures will enable both emergency and planned hydrant replacements, renewals and improvement to be made.

Linda C. Bridwell, PE
February 10, 2004
Version 1.0

PROJECT REVIEW		
	Signature:	Date:
Asset Owner or nominated Asset Manager / Capital Program Manager		
Operations Manager		
Project Manager (Deliverer)		
Finance Representative		
RECOMMENDED FOR APPR	OVAL - PNI Only	
VP Technical Services		
Others (as nominated by VP Technical Services)		

AMERICAN WATER – Kentucky American Water
CAPITAL INVESTMENT MANAGEMENT COMMITTEE - February 2004

AW/CMF3.40 ISSUE 1.0

# **APPENDICES**

# A1 Schedule/Forecast

# **Revision History:**

Version	Date	Summary of Changes	
1.0	11/10/03	Issue	

Kentucky American Water Recurring Item # 2004 Project Manager:	83 Fred White		i	Hydrants - I	Hydrants - Replacement	±								
Business Unit Central District Period Item	12020083 Previous Year	-	2	ဧ	4	Ŋ	9	7	8	6	10	<del>-</del>	12	Total
Hydrants - Replacement		2,000	2,000	0	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	5,000	25,000
Business Unit Total	0	2,000	2,000	0	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	5,000	25,000
Business Unit Northern District Period Item	12300083 Previous Year	-	2	ဇ	4	52	9	2	8	б	10	-	27	Total
Hydrants - Replacement		0	0	0	0	0	0	0	0	0	0	0	0	0
Business Unit Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recurring Item Total Period Item	#83 Previous Year	-	8	က	4	r.	ဖ		ω	o	10	<u> </u>	12	Total
Hydrants - Replacement		2,000	2,000	0	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	25,000
Recurring Item Total	0	2,000	2,000	0	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	5,000	25,000

**CAPITAL INVESTMENT MANAGEMENT COMMITTEE - FEBRUARY 2004** 

AW/CMF3.40 ISSUE 1.0

Project 12020084/12300084: Recurring Item #84, Hydrants - New

Project Manager :

Fred White

Project Status

PROJECT IMPLEMENTATION PROPOSAL

#### 1.0 SUMMARY

## 1.1 Project Objectives

New water hydrants associated with new water mains funded by the company, or as requested by local jurisdictions in accordance with Kentucky American Water's Rules and Regulations as approved by the Kentucky Public Service Commission.

#### 1.2 Recommended Solution

It is recommended that necessary hydrants requested be installed in compliance with tariff regulations.

## 1.3 Cost and Program

Capital Expenditure Requested

\$260,000

Project Completion Date

December 31, 2004

#### 1.4 Project Issues and Risks

The failure to allocate capital for the installation of hydrants associated with new water network extensions or as requested by local jurisdictions is in violation of Kentucky American Water's published tariff.

#### 2.0 BACKGROUND

Kentucky American Water maintains an extensive water networks in two general areas, serving over 108,000 customers through 1,600 miles of main. The Central District (Lexington area) includes over 6,000 public hydrants and 500 private hydrants. The Northern District (Owen County area) serves generally a rural area and includes fewer than 100 hydrants. Kentucky American is required under its published tariff to provide public hydrants at no additional charge when requested by the local jurisdiction in conjunction with new development or in existing service areas.

### 3.0 PROJECT JUSTIFICATION AND PRIORITISATION

Contained within this recurring item is an allowance for the installation of new hydrants in conjunction with network extensions funded by others.

The funding for new hydrants is necessary throughout 2004, as dictated by developer needs and company planning, and requests by local jurisdictions.

AW/CMF3.40

#### CAPITAL INVESTMENT MANAGEMENT COMMITTEE - FEBRUARY 2004

ISSUE 1.0

Purpose Code	Description	%	Measure	Units	Target
GC- LC01	Local Capacity 0 – 3 years	100%			

#### 4.0 PROJECT OUTPUT AND BENEFITS

Hydrant installations result from compliance with tariff regulations. This recurring item may impact 300 to 400 projects per year.

#### 5.0 SCOPE AND OPTIONS

The installation of new hydrants will be accomplished through the utilization generally of contractor forces. Current company forces are utilized strictly for maintenance and minor facility upgrades.

A decision to not commit company funds for installation of new hydrants is not a viable option. It is recommended that the company proceed with the planned expenditures as they arise. The planned expenditure is based generally on what is thought to be historical levels, however, those expenditures have not been closely tracked and adjustments may be necessary as developments occur.

It is currently anticipated that all of the planned expenditures will be utilized in the Central District.

#### 6.0 FINANCIAL STATEMENT

Component	Total	Year 0	Year 1	Year 2	Year 3
\$ million					
Development Costs					
Design & Construction Cost	\$0.26		\$0.26		
Project Total	\$0.26		\$0.26	-	
Advances & Contributions					

The installation of new hydrants enables the company to generate additional revenues new hydrant maintenance fees.

#### 7.0 PROCUREMENT

Materials utilized for projects are provided through the company's system of competitive national contract procurement.

#### 8.0 PROGRAM

Project Implementation Approval (PIA)	02/04
Main Contract Let (if applicable)	N/A
Start on Site	N/A

AW/CMF3.40

#### CAPITAL INVESTMENT MANAGEMENT COMMITTEE - FEBRUARY 2004

ISSUE 1.0

Substantial Completion	On going
Take Over	On going
Post Project Review	12/04

### 9.0 ISSUES AND RISKS

There are no issues or inherent risks associated with this project other than those associated with normal construction operations.

Company employees and contractors are required to conform to all federal, state and local safety regulations as well as those more specifically detailed by the Company. All necessary insurance coverage by contractors has been documented through receipt of a Certificate of Insurance.

#### 10.0 RECOMMENDATION

It is recommended that the \$260,000 in capital expenditures be authorized for Kentucky American during 2004. These expenditures will allow for efficient installation of new hydrants for fire protection and water quality within the network.

Linda C. Bridwell, PE Date February 10, 2004 Version 1.0

PROJECT REVIEW		
	Signature:	Date:
Asset Owner or nominated Asset Manager / Capital Program Manager		
Operations Manager		
Project Manager (Deliverer)		
Finance Representative		
RECOMMENDED FOR APPRO	DVAL - PNI Only	
VP Technical Services		
Others (as nominated by VP Technical Services)		

AW/CMF3.40 ISSUE 1.0

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# A1 Schedule/Forecast

Revision History:

Version	Date	Summary of Changes	
1.0	11/10/03	Issue	

Kentucky American Water	2				-									
2004	<b>,</b>			nydrants - New	vew									
Project Manager:	Fred White													
Business Unit Central District	12020084	!												
Period	Previous	-	7	က	4	Ω.	9	7	8	6	10	11	12	Total
Item	<u>a</u>					·								
Hydrants - New		20,000	10,000	10,000	20,000	20,000	20,000	20,000	20,000	30,000	30,000	30,000	30,000	260,000
Business Unit Total	0	20.000	10.000	10.000	20 000	000 02	20 000	000 02	20 000	30 000	30 000	30 000	900	000
												20,00	80.60	200,000
Business Unit Northern District	12300084													
Period	Previous	_	2	ო	4	5	9	7	80	6	10	1	12	Total
ltem	Year													
Hydrants - New		0	0	0	0	0	0	0	0	0	0	0	0	0
Business Unit Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
				·										
Recurring Item Total	#84						-							
Period	Previous	-	2	က	4	S	9	7	80	o,	10	=	12	Total
ltem	rear													
Hydrants - New		20,000	10,000	10,000	20,000	20,000	20,000	20,000	20,000	30,000	30,000	30,000	30,000	260,000
Recurring Item Total	0	20,000	10,000	10,000	20,000	20,000	20,000	20,000	20.000	30.000	30.000	30 000	30 000	260 000

AW/CMF3.40

ISSUE 1.0

Project 12020085/12300085: Recurring Item #85, Services - Replacement/Renewal

Project Manager : Elizabeth (Bambi) Floyd

**Project Status** PROJECT IMPLEMENTATION PROPOSAL

#### 1.0 SUMMARY

#### 1.1 **Project Objectives**

The replacement, renewal or improvement of water services including corporation stops, is necessary for the reliable and efficient operation of the network. Components routinely fail creating the need for emergency replacement while specific services are identified for renewal due to company funded main relocations.

#### 1.2 **Recommended Solution**

It is recommended that the expenditure of capital throughout 2004 to accomplish the replacement and renewal of services throughout the Kentucky American Central and Northern District distribution networks is prudent and necessary to meet customer service objectives.

#### 1.3 **Cost and Program**

- The amount of expenditure requested: \$465,650
- The project program completion date: December 31, 2004

#### 1.4 **Project Issues and Risks**

The failure to allocate capital for the necessary replacement and renewal of water service components may result in service interruptions and customer dissatisfaction.

#### 2.0 **BACKGROUND**

Kentucky American Water serves more than 108,000 customers throughout Central and Northern Districts. Replacement, renewal and improvement of water service components are a recurring requirement for efficient operation of the network system and continued reliable water service delivery. This includes capitalized emergency repairs as well as planned replacements, renewals and improvements. From time to time, this work is required as a component of urban renewal where Kentucky American facilities are in the right-of-way.

#### 3.0 PROJECT JUSTIFICATION AND PRIORITISATION

The company maintains services of copper, plastic, galvanized iron, cast iron, and ductile iron of sizes ranging from 3/4" to 8" throughout its distribution networks. The age of services, their installation environment, the prevalent climate and environmental conditions acting upon them and the nature of the materials themselves creates a useful life limitation in many situations. A routine, unanticipated number of failures does and will continue to occur. For these reasons failures must continue to be addressed through capitalized replacement of services. It is also critical to perform planned replacements in areas with a history of where company funded main replacements occur.

AW/CMF3.40 ISSUE 1.0

During the course of the year, it may become necessary to shift priorities and make expenditures for replacement or renewal in unforeseen locations. Priority and justification exists to make expenditures at proposed levels to address the continuing need for main replacement, renewal and improvement.

Purpose Code	Description	%	Measure	Units	Target
NA-PF01	Performance Failure	75			
NA-RR01	Required Relocations	25			

# 4.0 PROJECT OUTPUT AND BENEFITS

Planned network replacements and renewals constitute prudent network asset management, will minimize future service interruptions, and provide continued customer service. These planned replacements also require service replacements for efficient network operations and costs. It is anticipated that \$453,650 will be utilized in the Central District (Lexington area) and \$12,000 will be utilized in the Northern District (Owen County area) for both emergency replacements and planned service replacements.

#### 5.0 SCOPE AND OPTIONS

The replacement, renewal and improvement of the services will be initiated by in-house personnel and implemented with the utilization of company labor and by contractor forces. Emergency repairs, which typically result in a capitalized replacement, are routinely performed with company labor.

No practical option but to make necessary repairs to failed service components exists. Negative consequences such as compromised water quality, compromised network pressure, and customer dissatisfaction would result if no action were taken. The failure to execute planned replacements in areas of network replacements or known problems would also result in an undesirable level of service to customers and would allow operating and maintenance costs to escalate.

#### 6.0 FINANCIAL STATEMENT

Expenditures proposed for this recurring item constitute necessary repairs of emergency failures, and the planned renewal of existing services where flow/capacity deficiencies exist. A requirement to address these issues will perpetually exist given the nature of the network. Overall improvement, which has had a direct effect on the reduction unnacounted for water losses and the cost thereof, has occurred in recent years as a result of the replacement of services that are leaking rather than simply repairing the service. Expenditures in this recurring item category should continue in order to maintain and improve the integrity of the entire network.

AW/CMF3.40 ISSUE 1.0

Component \$ million	Total	Year 0	Year 1	Year 2	Year 3
Development Costs					
Design & Construction Cost	0.466		\$0.466		
Project Total	0.466		\$0.466		
Advances & Contributions					

#### 7.0 PROCUREMENT

As discussed in Section 5.0, service replacement, renewal and improvement is accomplished by both Contractor forces and Company personnel. The nature and extent of work required determines which group is utilized. Contractor forces are experienced, and qualified to perform necessary replacement and renewal projects. A non-exclusive contract for the replacement of services is bid annually to qualified contractors. Company personnel are capable of responding quicker to immediate and minor replacement and renewal requirements. Materials utilized for projects are provided through the system of competitive national contract selection.

#### 8.0 PROGRAM

Project Implementation Approval (PIA)	02/04
Start on Site	on going
Substantial Completion	on going
Take Over	on going
Post Project Review	01/05

#### 9.0 ISSUES AND RISKS

There are no issues or inherent risks associated with this project other than those associated with normal construction operations.

Company employees and contractors are required to conform to all federal, state and local safety regulations as well as those more specifically detailed by the Company. All necessary insurance coverage by contractors has been documented through receipt of a Certificate of Insurance.

#### 10.0 RECOMMENDATION

It is recommended that the \$465,650 in capital expenditures be approved and authorized for Kentucky American Water Central and Northern Districts during 2004. These expenditures will enable both emergency and planned service replacements, renewals and improvements to be made.

Linda C. Bridwell, PE February 10, 2004 Version 1.0

AW/CMF3.40 ISSUE 1.0

PROJECT REVIEW		
	Signature:	Date:
Asset Owner or nominated Asset Manager / Capital Program Manager		
Operations Manager		
Project Manager (Deliverer)		
Finance Representative		
RECOMMENDED FOR APPRO	VAL - PNI Only	
VP Technical Services		
Others (as nominated by VP Technical Services)		

# **APPENDICES**

# A1 Schedule/Forecast

# **Revision History:**

Version	Date	Summary of Changes
1.0	11/10/03	Issue

Kentucky American Water Recurring Item # 2004	: :			Services - Replacement	Replacemen	+								
Project Manager.	Bambi Floyd													
Business Unit Central District	12020085													
Period	Previous	-	2	ო	4	S	9	7	8	თ	10	7	12	Total
ltem	rear													
Renew 3/4 " Services (110 @ \$1,000 ea)		5,000	5,000	5,000	10,000	10,000	15,000	10,000	10,000	10,000	10,000	10,000	10,000	110,000
Renew 1" Services (235 @ \$1,300 ea)		13,000	42,000	39,385	34,385	25,385	20,385	15,385	15,385	15,385	25,385	25,385	31,035	302,500
Renew 2" Services (10 @ \$2,615 ea)		0	0	2,615	2,615	2,615	2,615	2,615	2,615	2,615	2,615	2,615	2,615	26,150
Renew Domestic Services larger than 2"	- <del></del>	1,000	2,000	2,000	2,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	15,000
Business Unit Total	0	19,000	49,000	49,000	49,000	39,000	39,000	29,000	29,000	29,000	39,000	39,000	44,650	453,650

Business Unit Northern District	12300085				,,									
Period	Previous Year	-	7	က	4	ις.	9	7	ω	on .	0	7	12	Total
Item														
Renew 3/4 " Services (5 @ \$700 ea)		1,000	1,000	0	0	0	0	0	0	0	200	200	200	3,500
Renew 1" Services (10 @ \$1,000 ea)		0	0	1,000	1,000	1,000	1,000	1,000	1,000	1,000	200	200	200	8,500
Renew 2" Services	<del>-</del>	0	0	0	0	0	0	0	0	0	0	0	0	0
Renew Domestic Services larger than 2"		0	0	0	0	0	0	0	0	0	0	0	0	0
Business Unit Total	0	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	12,000

Recurring Item Total	# 82													
Period	Previous Year	-	7	m	4	S.	ဖ	2	ω	o o	10	=======================================	12	Total
ltem														
Renew 3/4 " Services		6,000	6,000	5,000	10,000	10,000	15,000	10,000	10,000	10,000	10,500	10,500	10,500	113,500
Renew 1" Services		13,000	42,000	40,385	35,385	26,385	21,385	16,385	16,385	16,385	25,885	25,885	31,535	311,000
Renew 2" Services		0	0	2,615	2,615	2,615	2,615	2,615	2,615	2,615	2,615	2,615	2,615	26,150
Renew Domestic Services larger than 2"		1,000	2,000	2,000	2,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	15,000
Recurring Item Total	0	20,000	20.000	20.000	20.000	40.000	40.000	30.000	30 000	30 000	40 000	40.000	45.650	465 650

# AMERICAN WATER - Kentucky American Water CAPITAL INVESTMENT MANAGEMENT COMMITTEE - FEBRUARY 2004

AW/CMF3.40 ISSUE 1.0

Project 12020086/12300086: Recurring Item #86, Services - New

Project Manager :

Elizabeth (Bambi) Floyd

Project Status

PROJECT IMPLEMENTATION PROPOSAL

#### 1.0 SUMMARY

# 1.1 Project Objectives

New water services are funded by the company as required by its published tariff as approved by the Public Service Commission.

#### 1.2 Recommended Solution

It is recommended that new service installations by the company be undertaken in compliance with tariff regulations.

#### 1.3 Cost and Program

Capital Expenditure Requested

\$1,134,350

Project Completion Date

December 31, 2004

#### 1.4 Project Issues and Risks

The failure to allocate capital for the installation of water services will eliminate the potential for new growth.

### 2.0 BACKGROUND

Kentucky American Water serves over 108,000 customers in its Central and Northern Districts. The company annually installs 2,500 new services, generating additional revenues. This growth has been steady for over a decade and is expected to continue for at least the next 15 years.

#### 3.0 PROJECT JUSTIFICATION AND PRIORITISATION

Funds for the installation of all new services and appurtenances are contained within this recurring item.

The funding for new services is necessary throughout 2004, as dictated by developer needs.

Purpose Code	Description	%	Measure	Units	Target
GC-LC01	Local Capacity 0 – 3 years	100%			

#### 4.0 PROJECT OUTPUT AND BENEFITS

New service installations result from compliance Kentucky Public Service Commission regulations and with tariff regulations. Installations are performed under blanket projects throughout the year.

AW/CMF3.40 ISSUE 1.0

#### 5.0 SCOPE AND OPTIONS

The extension of new services will be accomplished through the utilization of contractor forces coordinated by company personnel. Current company forces are utilized strictly for maintenance and minor facility upgrades.

As new customers apply for service, there are no alternatives or options other than to perform this work as long as network system and process plant capacity exists. The failure to install new services is not a viable option. It is recommended that the company proceed with the planned expenditures as they arise. The planned expenditure are based on historical levels, and adjustments may be necessary as developments occur.

#### 6.0 FINANCIAL STATEMENT

Component \$ million	Total	Year 0	Year 1	Year 2	Year 3
Development Costs					
Design & Construction Cost	\$1.134		\$1.134		
Project Total	\$1.134		\$1.134		
Advances & Contributions					

The installation of new services provides growth and immediate additional revenues.

#### 7.0 PROCUREMENT

New services are initiated by request from customers. They are installed by contractor forces, selected on a non-exclusive, competitively bid blanket contract. When cost effective, new services are installed as part of new main extension work by contractor forces. Materials utilized for projects are provided through the company's system of competitive national contract procurement.

#### 8.0 PROGRAM

Project Implementation Approval (PIA)	02/04
Main Contract Let (if applicable)	N/A
Start on Site	N/A
Substantial Completion	On going
Take Over	On going
Post Project Review	12/04

#### 9.0 ISSUES AND RISKS

There are no issues or inherent risks associated with this project other than those associated with normal construction operations.

AW/CMF3.40 ISSUE 1.0

Company employees and contractors are required to conform to all federal, state and local safety regulations as well as those more specifically detailed by the Company. All necessary insurance coverage by contractors has been documented through receipt of a Certificate of Insurance.

### 10.0 RECOMMENDATION

It is recommended that the \$1,134,350 in capital expenditures be authorized for Kentucky American for this recurring item during 2004.

Linda C. Bridwell, PE Date February 10, 2004 Version 1.0

PROJECT REVIEW		
	Signature:	Date:
Asset Owner or nominated Asset Manager / Capital Program Manager		
Operations Manager		
Project Manager (Deliverer)		
Finance Representative		
RECOMMENDED FOR APPRO	VAL - PNI Only	
VP Technical Services		
Others (as nominated by VP Technical Services)		
·		

#### **APPENDICES**

# A1 Schedule/Forecast

# **Revision History:**

Version	Date	Summary of Changes
1.0	11/10/03	Issue

Project Manager:	Bambi Floyd	<b>T</b>												
Business Unit Central District	12020086													
Period	Previous	-	2	က	4	2	9	7	80	o o	9	7	12	Total
ltem	Year						•				<u>.</u>			
Install 3/4 " Services (100 @ \$620 ea)		000'9	3,000	3,000	9,000	6,000	000'9	000'9	000'9	000'9	5,000	5,000	5,000	62,000
Install 1" Services (1500 @ \$600 ea)		77,900	46,475	46,475	53,950	77,950	102,950	102,950	102,950	102,950	78,950	64,475	44,475	902,450
Install 2" Services (20 @ \$5,525 ea)		11,050	5,525	5,525	11,050	11,050	11,050	11,050	11,050	11,050	11,050	5,525	5,525	110,500
Install Domestic Services larger than 2"		2,050	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	1,350	23,400
Business Unit Total	0	97,000	57,000	57,000	72,000	97,000	122,000	97,000 122,000 122,000 122,000 122,000	122,000	122,000	97,000	77,000	- 1	56,350 1,098,350

Services - New

98

Kentucky American Water Recurring Item #

2004

Business Unit Northern District	12300086													
Period	Previous Year	-	2	က	4	ις	9	7	∞	თ	9	=	12	Total
Item														
Install 3/4 " Services (20 @ \$500 ea)		0	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	920	200	10,450
Install 1" Services (50 @ \$511 ea)		0	2,000	2,000	2,000	2,000	2,000	3,000	3,000	3,000	2,000	2,000	2,550	25,550
Install 2" Services		0	0	0	0	0	0	0	0	0	0	0	0	0
Install Domestic Services larger than 2"		0	0	0	0	0	0	0	0	0	0	0	0	0
Business Unit Total	0	0	3,000	3,000	3,000	3,000	3,000	4,000	4,000	4,000	3,000	2,950	3,050	36,000

Recurring Item Total	98#													
Period	Previous	-	7	ო	4	5	9	7	80	თ	10	-	12	Total
ltem	ğ													. =
Install 3/4 " Services		6,000	4,000	4,000	6,000	7,000	7,000	2,000	2,000	2,000	000'9	5,950	5,500	72,450
Install 1" Services		77,900	48,475	48,475	55,950	79,950	104,950	105,950	105,950	105,950	80,950	66,475	47,025	928,000
Install 2" Services		11,050	5,525	5,525	11,050	11,050	11,050	11,050	11,050	11,050	11,050	5,525	5,525	110,500
Install Domestic Services larger than 2"		2,050	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	2,000	1,350	23,400
Recurring Item Total	0	97.000	00000	60.000	75.000	100.000	125.000	126.000	126.000	126.000	100.000	60.000 75.000 100.000 125.000 126.000 126.000 126.000 126.000 126.000 126.000	59 400	1 134 350

AW/CMF3.40 ISSUE 1.0

Project 120200087/123000087:

Recurring Item #87, Meter - Replacements

Project Manager :

Elizabeth (Bambi) Floyd

Project Status

PROJECT IMPLEMENTATION PROPOSAL

### 1.0 SUMMARY

Replace approximately 2,300 meters and 3,350 settings in Central and Northern Districts of Kentucky American Water.

# 1.1 Project Objectives

Kentucky American Water currently serves 108,000 customers in the Central (Lexington area) and Northern (Owen County area) Districts of distribution networks. Approximately 1,000 meters will need to be replaced during 2004 for failure, or for age or usage requirements. Approximately 3,350 meter settings will need to be replaced due to relocations of service lines or for leak repairs. These estimates are based on historical averages.

### 1.2 Recommended Solution

It is recommended that the meters and settings be replaced as needed.

# 1.3 Cost and Program

- \$800,800
- Completion date -December 31<sup>st</sup>, 2004

### 1.4 Project Issues and Risks

The Kentucky Public Service Commission currently requires meter replacements due to age and tested usage. Kentucky American is currently in a process to extend the age of meters through a selective testing process approved by the Public Service Commission.

Kentucky American Water is utilizing the opportunity to install AMR in cost effective areas where meter reading costs are extremely high per meter, such as remote, rural areas or in dense apartment housing. Additionally, Kentucky American continues to replace gallon meters in the Owen County area.

Meter settings are required to be moved if they conflict with new construction on State and local relocation projects. Failure to move the settings is not a viable option.

#### 2.0 BACKGROUND

State regulations require that all meters be tested at the following intervals and be replaced if they fall outside required accuracy guidelines:

5/8" - 3 /4" 10 Years
1" 10 Years
1 1/2" - 2" 4 Years
3" 2 Years
4" and above Yearly

Kentucky American is currently working to extend this effort to 20 year testing intervals on 5/8" – 3/4" meters.

AW/CMF3.40 ISSUE 1.0

#### 3.0 PROJECT JUSTIFICATION AND PRIORITISATION

Investment Strategies - Regulatory and Compliance Goals Network Assets

Sub Strategy - Other Regulations

Purpose Code	Description	%	Measure	Units	Target
NA-PF01	Water – Performance Failure	75			
NA-RR01	Water – Required Relocations	25			

## 3.2 Completion date - December 31st, 2004

#### 4.0 PROJECT OUTPUT AND BENEFITS

New meters will replace older meters, which will improve accurate customer usage billing and revenues. Installation of AMR where feasible will further reduce labor costs and increase accuracy of billing.

Replaced meter settings will help reduce unaccounted for water losses and avoid conflicts with road relocations.

# 5.0 SCOPE AND OPTIONS

Meters will be purchased in block increments throughout the year and installed as needed. Services will be replaced as needed throughout the year.

#### 6.0 FINANCIAL STATEMENT

Component	Total	Year 0	Year 1	Year 2	Year 3
\$ million					
Development Costs					
Design & Construction Cost	0.801		0.801		
Project Total	0.801		0.801		
Advances & Contributions					

#### 7.0 PROCUREMENT

Meters and setters are purchased through national contracts. Installation is performed generally on a non-exclusive blanket contract by outside forces. This contract is bid annually. Emergency

AW/CMF3.40 ISSUE 1.0

installations are done by company forces for maintenance.

	8.0	PROGRAM
--	-----	---------

Project Implementation Approval (PIA) 01/04

Start02/04Substantial Completion12/04Post Project Review12/04

# 9.0 ISSUES AND RISKS

Risks associated with changing meters are minimal but can include damage to service or property associated with poor condition of facilities.

# 10.0 RECOMMENDATION

**PROJECT REVIEW** 

It is recommended that \$800,800 be authorized for the purchase and installation of replacement meters and service settings. It is estimated that \$794,800 will be needed for the Central District and that \$6,000 will be needed for the Northern District.

Linda Bridwell, PE		
February 16, 2004		
Version 1.0		

	Signature:	Date:
Asset Owner or nominated Asset Manager / Capital Program Manager		
Operations Manager		
Project Manager (Deliverer)		
Finance Representative		
RECOMMENDED FOR APPRO	VAL - PNI Only	
VP Technical Services		
Others (as nominated by VP Technical Services)		

AW/CMF3.40

ISSUE 1.0

**APPENDICES** 

# A1 Schedule/Forecast

Version	Date	Summary of Changes
1.0	01/22/04	Issue

10,000 25,000 70,000 25,000 10,000 5,000 5,000 5 35,000 10,000 10,000 10,000 80,000 o 35,000 10,000 10,000 20,000 80,000 æ 10,000 10,000 10,000 80,000 7 10,000 35,000 15,000 10,000 10,000 80,000 9 Meters & Meter Settings - Replacement 5,000 35,000 10,000 10,000 20,000 80,000 10 10,000 25,000 0 60,000 25,000 30,000 5,000 50,000 က 0 0 0 0 20,000 20,000 50,000 25,000 25,000 Bambi Floyd 12020087 Previous Year 87 Replace 5/8"x3/4" Meters (100 @ \$115 ea) Renew meter settings larger than 2" Renew 3/4" Meter Settings มา Water Period 2004 Renew 1" Meter Settings Renew 2" Meter Settings Business Unit Total Project Manager: Business Unit Central District Replace 1" Meters Replace 2" Meters Kentuc Recurrii.,

15,000 360,000 95,000 65,000 84,800 794,800

15,000

35,000 5,000

35,000

10,000 5,000 4,800 74,800

> 5,000 5,000

70,000

Total

12

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Business Unit Northern District	12300087													
Period	Previous	Υ-	2	ю	4	ις	9	7	<b>®</b>	o	10		12	Total
Item	rear													
Replace 5/8"x3/4" Meters (20 @ \$115 ea)		1,150					1,150	122.						2,300
Replace 1" Meters				•	-									0
Replace 2" Meters									•		•		_	0
Renew 3/4" Meter Settings		200	200	200	250	250	250	250	250	250	250	250	200	3,700
Renew 1" Meter Settings			-					•				-		0
Renew 2" Meter Settings														0
Renew meter settings larger than 2"														0
Business Unit Total	0	1,650	200	200	250	250	1,400	250	250	250	250	250	200	6,000

		Ì												
Recurring Item Total	# 87													
Period	Previous	-	8	ო	4	ιΩ	9		80	6	10	7	12	Total
item	Year													
Replace 5/8"x3/4" Meters (20 @ \$115 ea)		26,150	0	0	25,000	0	1,150	25,000	0	0	25,000	0	15,000	117,300
Replace 1" Meters		0	0	15,000	0	0	15,000	0	0	15,000	0	15,000	0	000'09
Replace 2" Meters		0	0	0	0	5,000	0	0	2,000	0	0	0	5,000	15,000
Renew 3/4" Meter Settings		25,500	20,500	30,500	25,250	35,250	35,250	25,250	35,250	35,250	25,250	35,250	35,200	363,700
Renew 1" Meter Settings		0	0	5,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	10,000	95,000
Renew 2" Meter Settings		0	0	0	0	10,000	10,000	10,000	10,000	10,000	5,000	5,000	5,000	65,000
Renew meter settings larger than 2"		0	0	0	0	20,000	10,000	10,000	20,000	10,000	5,000	5,000	4,800	84,800
Recurring Item Total	0	51,650	20,500	50,500	60,250	80,250	81,400	80,250	80,250	80,250	70,250	70,250	75,000	800,800

# AMERICAN WATER – Kentucky American Water

AW/CMF3.40 ISSUE 1.0

CAPITAL INVESTMENT MANAGEMENT COMMITTEE - FEBRUARY 2004

Project 12020088: Recurring Item #88, Meters and Settings - New

Project Manager : E

Elizabeth (Bambi) Floyd

Project Status

PROJECT IMPLEMENTATION PROPOSAL

### 1.0 SUMMARY

# 1.1 Project Objectives

The installation of new meters and meter settings are funded by the company as required by its published tariff as approved by the Public Service Commission.

### 1.2 Recommended Solution

It is recommended that new meters and meter setting installations by the company be undertaken in compliance with tariff regulations.

# 1.3 Cost and Program

Capital Expenditure Requested

\$707,350

Project Completion Date

December 31, 2004

# 1.4 Project Issues and Risks

The failure to allocate capital for the installation of water meters and settings will eliminate the potential for new growth and is not a viable alternative.

#### 2.0 BACKGROUND

Kentucky American Water serves over 108,000 customers in its Central and Northern Districts. The company annually installs 2,500 new services, generating additional revenues. This growth has been steady for over a decade and is expected to continue for at least the next 15 years. The meter settings and meters for these new services must be installed at the time the service is requested.

# 3.0 PROJECT JUSTIFICATION AND PRIORITISATION

Funds for the installation of all new services and appurtenances are contained within this recurring item.

The funding for new services is necessary throughout 2004, as dictated by new customer application needs.

Purpose Code	Description	%	Measure	Units	Target
GC-LC01	Local Capacity 0 – 3 years	100%			

AW/CMF3.40 ISSUE 1.0

### 4.0 PROJECT OUTPUT AND BENEFITS

New meter installations result from compliance Kentucky Public Service Commission regulations and with tariff regulations. Installations are performed under blanket projects throughout the year.

#### 5.0 SCOPE AND OPTIONS

The installation of new meters and meter settings will be accomplished generally through the utilization of contractor forces coordinated by company personnel. Current company forces are utilized strictly for maintenance and minor facility upgrades.

As new customers apply for service, there are no alternatives or options other than to perform this work as long as network system and process plant capacity exists. The failure to install new services is not a viable option. It is recommended that the company proceed with the planned expenditures as they arise. The planned expenditures are based on historical levels, and adjustments may be necessary as developments occur.

#### 6.0 FINANCIAL STATEMENT

Component \$ million	Total	Year 0	Year 1	Year 2	Year 3
Development Costs			-		
Design & Construction Cost	\$0.707		\$0.707		<del></del>
Project Total	\$0.707		\$0.707		
Advances & Contributions					

The installation of new services provides growth and immediate additional revenues.

# 7.0 PROCUREMENT

New meters are set as initiated by request from customers. They are generally installed by contractor forces, selected on a non-exclusive, competitively bid blanket contract. When cost effective, new services are installed as part of new main extension work by contractor forces and the meter settings and meters are installed by contractor or company forces at a later date. Materials utilized for projects are provided through the company's system of competitive national contract procurement.

### 8.0 PROGRAM

Project Implementation Approval (PIA)	02/04
Main Contract Let (if applicable)	N/A
Start on Site	N/A
Substantial Completion	On going
Take Over	On going

AW/CMF3.40 ISSUE 1.0

Post	Pro	ject	Re۱	/iew
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12/04

## 9.0 ISSUES AND RISKS

There are no issues or inherent risks associated with this project other than those associated with normal construction operations.

Company employees and contractors are required to conform to all federal, state and local safety regulations as well as those more specifically detailed by the Company. All necessary insurance coverage by contractors has been documented through receipt of a Certificate of Insurance.

# 10.0 RECOMMENDATION

It is recommended that the \$707,350 in capital expenditures be authorized for Kentucky American for this recurring item during 2004. \$695,350 is estimated in capital expenditures for the Central District (Lexington area) while \$12,000 is estimated in capital expenditures for the Northern District (Owen County area).

Linda C. Bridwell, PE Date February 17, 2004 Version 1.0

PROJECT REVIEW		
	Signature:	Date:
Asset Owner or nominated Asset Manager / Capital Program Manager		
Operations Manager		
Project Manager (Deliverer)		
Finance Representative		
RECOMMENDED FOR APPRO	VAL - PNI Only	
VP Technical Services		
Others (as nominated by VP Technical Services)		

AW/CMF3.40 ISSUE 1.0

**APPENDICES** 

# A1 Schedule/Forecast

# **Revision History:**

Version	Date	Summary of Changes	
1.0	11/10/03	Issue	

Business Unit							İ							
Central District Period	12020088		r			u		1		ď		;	,	
tem (tem	Year	-	7	n	4	n	٥	_	<b>x</b> 0	D)	9	÷	5	Total
Purchase 5/8"x3/4" Meters (2500 @ \$115 ea)	ea)	50,000	0	0	55,000	0	20,000	35,000	0	20,000	40,000	25,000	42,500	287,500
Purchase 1" Meters (50 @ \$150 ea)		0	0	15,000	0	0	15,000	0	15,000	15,000	0	15,000	0	75,000
Purchase 2" Meters (150 @ \$250 ea)		0	0	0	0	15,000	0	0	15,000	0	0	7,500	7,500	45,000
Purchase 4" Meters			450				450			450				1,350
Purchase 6" Meters									3,000					3,000
install 3/4" Meter Settings		10,000	19,550	2,500	5,000	25,000	10,000	5,000	20,000	15,000	15,000	13,500	2,000	142,550
Install 1" Meter Settings				2,500	0	5,000	4,550	5,000	5,000	5,000	10,000	4,000	1,000	42,050
nstall 2" Meter Settings						5,000	2,000	5,000	7,000	9,550	5,000	5,000	0	41,550
nstall meter settings larger than 2"		0	0	0	0	10,000	5,000	10,000	10,000	10,000	5,000	5,000	2,350	57,350
Business Unit Total	0	60,000	20,000	20,000	60,000	000,09	60,000	90,000	75,000	75,000	75,000	75,000	55,350	695,350
Business Unit Northem District Period	12300088 Previous	-	2	м	4	ď	9		8	6	01	Ξ	12	Total
Item	JE ST													
Purchase 5/8"x3/4" Meters				1,500			1,500			1,500			1,500	6,000
Purchase 1" Meters			•								-			0
Purchase 2" Meters					-									0
Purchase 4" Meters										-				
Purchase 6" Meters		•	-							_				
install 3/4" Meter Settings		200	200	200	200	200	200	200	200	200	200	200	200	6,000
Install 1" Meter Settings														0
install 2" Meter Settings						_								0
install meter settings larger than 2"														0
Business Unit Total	0	500	200	2,000	200	200	2,000	200	200	2.000	200	200	2.000	12.000

Meters & Meter Settings - New

Water 2004

fait fait	4000000								ĺ					
orthem District	12300000				_		-							
Period	Previous	-	7	ю 	4	9	9	_	60	6	10	Ξ	12	Total
ltem	Year													
irchase 5/8"x3/4" Meters				1,500			1,500			1,500			1,500	6,000
irchase 1" Meters														0
irchase 2" Meters														0
rchase 4" Meters										-				
irchase 6" Meters														
stall 3/4" Meter Settings		20	200	200	200	200	200	200	200	200	200	200	200	6,000
stall 1" Meter Settings														0
itall 2" Meter Settings	•									•				0
tall meter settings larger than 2"														0
siness Unit Total	0		500 500	2,000	500	500	2,000	500	500	2,000	200	200	2,000	12,000

Recuming Item Total	# 88													
Period	Previous	-	7	က	4	£.	9	7	60	6	9	Ξ	12	Total
Item	rear									•				-
Purchase 5/8"x3/4" Meters (2500 @ \$115 ea)	_ (g	50,000	0	1,500	55,000	0	21,500	35,000	0	21,500	40,000	25,000	44,000	293,500
Purchase 1" Meters (50 @ \$150 ea)		0	0	15,000	0	0	15,000	0	15,000	15,000	0	15,000	0	75,000
Purchase 2" Meters (150 @ \$250 ea)		0	0	0	0	15,000	0	0	15,000	0	0	7,500	7,500	45,000
Purchase 4" Meters		0	450	0	0	0	450	0	0	450	0	0	0	1,350
Purchase 6" Meters		0	0	0	0	0	0	0	3,000	0	0	0	0	3,000
Install 3/4" Meter Settings		10,500	20,050	3,000	5,500	25,500	10,500	5,500	20,500	15,500	15,500	14,000	2,500	148,550
Install 1" Meter Settings		0	0	2,500	0	2,000	4,550	5,000	2,000	5,000	10,000	4,000	1,000	42,050
Install 2" Meter Settings	-	0	0	0	0	5,000	5,000	5,000	2,000	9,550	5,000	5,000	0	41,550
install meter settings larger than 2"		0	0	0	0	10,000	5,000	10,000	10,000	10,000	5,000	5,000	2,350	57,350
Recurring Item Total	0	60,500	20,500	22,000	60,500	60,500	62,000	60,500	75,500	77,000	75,500	75,500	57,350	707,350

AW/CMF3.40 ISSUE 1.0

Project 12020089/12300089: Recurring Item #89, ITS Equipment & Systems

Project Manager : Linda Bridwell

Project Status : PROJECT IMPLEMENTATION PROPOSAL

#### 1.0 SUMMARY

Purchase IT equipment in accordance as necessary and in accordance with American Water ITS equipment life cycle policy.

# 1.1 Project Objectives

To purchase personal computers, network equipment, printers, and servers as necessary and to adhere to American Water ITS equipment life cycle policy. American Water standard operation procedure is that all servers and personal computers are to be replaced every three years.

#### 1.2 Recommended Solution

It is recommended that IT equipment be purchased as necessary throughout 2004 and efforts be made to maintain compliance of American Water ITS policy. Priority will be given to the replacement of outdated, unreliable equipment thus reducing the risk of lost productivity, lost data (specifically with regard to maintaining water quality compliance) and security breaches.

# 1.3 Cost and Program

- \$75,000
- 12/31/2004

### 1.4 Project Issues and Risks

Risks associated with this project include interruption of automated processes while new equipment is installed, and potential security breaches during the installation process. Risks for not proceeding, however, include the loss of productivity on outdated equipment, lost data on unreliable equipment, and the loss of water quality compliance when specific data is lost or automated monitoring is lost. The risks of not proceeding far outweigh risk associated with the project.

# 2.0 BACKGROUND

Kentucky American Water's information technology replacements and purchases have been reduced in priority in recent years. These reductions have led to a compounded need for equipment replacement. Some equipment has recently been upgraded associated with the new SCADA project at both treatment plants, and the conversion to the ORCOM customer service software. However, individual computers, as well as server equipment is needed in 2004.

#### 3.0 PROJECT JUSTIFICATION AND PRIORITIZATION

3.1 The investment driver under which the project is to be undertaken utilizing Purpose Codes is as follows:

Purpose Code	Description	%	Measure	Units	Target
IS - PC01	Water - PCs & Peripherals	50			
IS - OS01	Water Operating Systems	50			

AW/CMF3.40 ISSUE 1.0

Current productivity is diminished by intolerable processor speeds and limited data storage space. Many personal computers in the office use outdated software but are too limited on capacity to be upgraded. This allows vulnerability to security breaches.

Server equipment is also slow and in some cases uses outdated technology. Network printers are currently in good shape but should be replaced in the near future.

#### 4.0 PROJECT OUTPUT AND BENEFITS

- 4.1 Project output and benefits include, but are not limited to:
  - Greater reliability.
  - Greater efficiency in personal computer, server, and network processing.
  - Maintaining supported operating systems.
  - Additional file storage.
  - The space for installation of new software and upgrades.
  - Security compliance.
  - Reduced risk of lost data.
  - Less maintenance and repair expenses.
  - Compliance with American Water IT equipment standards.
  - Up-to-date IT equipment.

# 5.0 SCOPE AND OPTIONS

The scope of this project is to purchase, configure, and install IT equipment necessary in order to reduce the risks of lost productivity and security breaches.

The only option to this project is to not replace or upgrade equipment, which depending on the equipment will at the least reduce productivity and at worst allow for security breaches or failure of water deliver. Current system network operations rely increasingly on information technology, from customer service response, field operations, monitoring of water quality and pressure, and maintaining accurate data. Clearly, equipment must be replaced at a minimum to prevent operational failures. The recommendation is to proceed with this IT equipment purchasing project as soon as possible due to the reasons outlined in the previous sections.

#### 6.0 FINANCIAL STATEMENT

Component	Total	Year 0	Year 1	Year 2	Year 3
\$ million					
Design & Construction Cost			0.075		
Project Total			0.075		

# 7.0 PROCUREMENT

The personal computers will be purchased under a national contract with Dell. Other equipment will be purchased through national vendors as available.

AW/CMF3.40 ISSUE 1.0

8.0 PROGRAM
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Project Implementation Approval (PIA)	02/04
Substantial Completion	12/04
Post Project Review	12/04

# 9.0 ISSUES AND RISKS

Recent reductions in replacement of equipment have left Kentucky American vulnerable to operational failures and security breaches. Equipment will be upgraded and replaced as needed.

# 10.0 RECOMMENDATION

It is recommended that \$75,000 be authorized in 2004 for ongoing IT equipment replacements and upgrades. It is projected that all of these capital expenditures will be made in the Central District.

02/17/2004	
Version 1.0	

PROJECT REVIEW		
	Signature:	Date:
Asset Owner or nominated Asset Manager / Capital Program Manager		
Operations Manager		
Project Manager (Deliverer)		
Finance Representative		
RECOMMENDED FOR APPRO	DVAL - PNI Only	
VP Technical Services		
Others (as nominated by VP Technical Services)		

AMERICAN N	WATER – Ken	tucky American Water	AW/CMF3.40
CAPITAL IN	ESTMENT MA	ANAGEMENT COMMITTEE – February 2004	ISSUE 1.0
APPENDICE	S		
A1 Sche	dule/Forecast		
Revision His	tory:		
Version	Date	Summary of Changes	

Kentucky American Water Recurring Item # 2004	89			ITS Equipr	ITS Equipment & Systems	SILLIS								
Project Manager:	Linda Bridwell	Ee												
Business Unit Central District	12020089													
Period	Previous	-	2	ო	4	5	9	7	80	6	10	1	12	Total
ltem	1 0 0													
Install network Switches			0	2,100										2,100
Replace/Upgrade 10 PCs		10,000		2,900							2,500	1,500	5,000	21,900
Replace IT Equipment -printers/network					2,000	5,000	5,000	2,000	2,000	2,500		2,500	10,000	40,000
Replace Engineering/drafting printer			•									6,000		6,000
Field IT Equipment purchase/upgrade							·			2,500	2,500			5,000
Business Unit Total	0	10,000	0	5,000	5,000	5,000	5,000	5,000	5,000	5,000	5,000	10,000	15,000	75,000

Business Unit Northern District Period Item	12300089 Previous Year	-	2	ю	4	ဟ	9	2	80	တ	10	=	. 12	Total
IT Equipment - Purchase		0	0	0	0	0	0	0	0	0	0	0	0	0
Business Unit Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Recurring Item Total	68#													
Period	Previous Year	~	2	ო	4	5	9		80	6	10	=	12	Total
ltem						-					-			
Recurring Item Total	0	10,000	0	5,000	5,000	5,000	5,000	5.000	2.000	5.000	5.000	5.000 5.000 10.000 15.000 75.000	15,000	75,000

AW/CMF3.40 **ISSUE 1.0** 

Project 12020090/12300090

Recurring Item #90, Office & Operations Centers

**Project Manager** 

Linda Bridwell

**Project Status** 

PROJECT IMPLEMENTATION PROPOSAL

#### 1.0 **SUMMARY**

#### 1.1 **Project Objectives**

Replacement and upgrade of building systems, equipment, or furnishings for offices and operations centers as needed.

#### 1.2 **Recommended Solution**

It is recommended that \$50,000 be authorized to replace and upgrade building systems. equipment or furnishings for offices and operations centers as needed to maintain security, provide safe, efficient, and attractive workplaces, and to enhance productivity.

#### 1.3 **Cost and Program**

- \$50,000
- Throughout 2004 as needed.

#### 1.4 **Project Issues and Risks**

Anytime work is being done in an office environment, there is a risk for the safety of employees in the office as well as a risk for security. However, the risks for failure to upgrade systems and equipment as needed far outweigh the risks involved with the project.

#### 2.0 **BACKGROUND**

Kentucky American Water has two office buildings – one in the Central District (Lexington area) and one in the Northern District (Owen County area). These offices and operations centers have an extensive array of building systems and office equipment. From time to time, this equipment fails and replacements are needed to maintain operations.

Additionally, some equipment becomes obsolete and while still functioning, enhanced productivity can be achieved through replacement.

In 2004, it is proposed that \$50,000 be authorized for building systems and equipment upgrades in the Central District. It is estimated that most of these expenditures will be utilized to replace security system equipment at the office building that failed in late 2003. Although mostly repaired and functioning, the contractor has indicated that the system is obsolete and no longer supported by the manufacturer. Additional failures are likely to occur with increasing frequency.

The balance of the expenditures will be used to construct a guard house at the Central District office at the main gate, and to replace minor office equipment that may fail during the year.

#### 3.0 PROJECT JUSTIFICATION AND PRIORITISATION

Maintenance of office systems is critical to security and productivity, as well as safety for the employees. Proposed expenditures are for equipment that has already become unreliable and is critical to maintaining security of the entire Lexington facility.

AW/CMF3.40 ISSUE 1.0

Purpose Code	Description	%	Measure	Units	Target
OA-OF01	Water – Offices, Supplies,Furniture , etc.	75			
RL-XS01	Water - Security	25			

## 4.0 PROJECT OUTPUT AND BENEFITS

Replacement and upgrades of obsolete equipment constitute prudent asset management and will enhance productivity, safety, and efficiency.

# 5.0 SCOPE AND OPTIONS

The replacement, renewal and improvement of the offices and operations systems will be accomplished through the contractor forces. Planned upgrades are routinely contracted as part of ongoing security efforts and facility improvements.

No practical option but to make necessary repairs to failed components exists. Negative consequences such as vulnerability to security breaches and safety concerns. The failure to execute planned replacements would also result potential unreliability of security and safety systems.

### 6.0 FINANCIAL STATEMENT

Expenditures proposed constitute ongoing repairs. A requirement to address these issues will perpetually exist. The cost of this recurring project is shown below.

Component \$ million	Total	Year 0	Year 1	Year 2	Year 3
Development Costs	0				
Design & Construction Cost	0				-
Project Total	0.05		0.05		
Advances & Contributions	0				

#### 7.0 PROCUREMENT

Procurement of contractors will be made on competitive bidding. Equipment will be purchased under national procurement contracts when possible.

AW/CMF3.40 ISSUE 1.0

8.0	PROGRAM	
	Project Implementation Approval (PIA)	02/04
	Start on-site	ongoing
	Substantial Completion	٠. ٥

ongoing Substantial Completion Take Over ongoing

Post Project Review 12/04

#### 9.0 **ISSUES AND RISKS**

There are no significant issues or inherent risks associated with this project other than those associated with normal construction operations.

Company employees and contractors are required to conform to all federal, state and local safety regulations as well as those more specifically detailed by the Company. All necessary insurance coverage by contractors has been documented through receipt of a Certificate of Insurance.

#### 10.0 RECOMMENDATION

10.1 It is recommended that the proposed \$50,000 in capital expenditures by authorized for Kentucky American during 2004.

Linda Bridwell, PE	 	 	
February 19, 2004			
Version 1.0			

PROJECT REVIEW		
	Signature:	Date:
Asset Owner or nominated Asset Manager / Capital Program Manager		
Operations Manager		
Project Manager (Deliverer)		
Finance Representative		
RECOMMENDED FOR APPR	OVAL - PNI Only	
VP Technical Services		
Others (as nominated by VP Technical Services)		

		entucky American Water MANAGEMENT COMMITTEE – February 2004	AW/CMF3.40 ISSUE 1.0
APPENDIC	EES		
A1 Sc	hedule/Forec	ast	
Revision H	listory:		
Version	Date	Summary of Changes	

Kentucky American Water Recurring Item # 2004	06		-	Offices & O	Offices & Operations Centers	enters								
Project Manager:	Linda Bridwell	vell												
	12020090	,				I		ı		,		·		
Period	Previous	<del>-</del>	N	m	4	c)	ဖ	<u> </u>	жο	ത	10	-	2	Total
Replace Card Reader Equipment			20,000								2,000	5,000		30,000
Install New Guard Building @ RRS			20,000											20,000
Business Unit Total	0	0	40,000	0	0	0	0	0	0	0	5,000	5,000	0	50,000
Business Unit Northern District	12300090													
Period	Previous	-	2	ო	4	2	9	7	8	6	10	7	12	Total
Item	Year													·
IT Equipment - Purchase		0	0	0	0	0	0	0	0	0	0	0	0	0
		,					•	<u> </u>						
Business Unit Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recurring Item Total	06#									-				
Period	Previous	<b>-</b>	7	ო	4	2	9	7	80	6	10	7	12	Total
ltem	rear													
						,				<del></del>				
Recurring Item Total	0	0	40,000	0	0	0	0	0	0	0	5,000	5,000	0	50,000

AW/CMF3.40 ISSUE 1.0

Project 12020091/12300091

Recurring Item #91, Vehicles

Project Manager

Linda Bridwell

Project Status :

PROJECT IMPLEMENTATION PROPOSAL

### 1.0 SUMMARY

# 1.1 Project Objectives

The replacement of vehicles in the fleet that have reached the end of their economic useful life is necessary for the reliable and efficient operation of the network. Many are experiencing maintenance reliability issues which reduces productivity and customer response time.

### 1.2 Recommended Solution

It is recommended that the expenditure of \$125,000 of capital throughout 2004 be approved to accomplish the replacement of vehicles in the Kentucky American Central District. The most critical vehicles will be replaced based on high mileage, age, and mechanical reliability or excessive maintenance.

# 1.3 Cost and Program

- \$125,000
- The purchases will be made in summer 2004

### 1.4 Project Issues and Risks

The failure to allocate capital necessary for the replacement of vehicles reduces productivity and could ultimately lead to customer dissatisfaction. Further, vehicles with low mechanical reliability become a safety concern for the workforce operators.

### 2.0 BACKGROUND

Kentucky American has 92 vehicles currently in its fleet. Twelve ove those vehicles have over 100,000 and it is anticipated that another fifteen will exceed 100,000 miles by the end of 2004. Many vehicles are now in excess of 10 years olda nd are beginning to require extensive maintenance. Having dependable vehicles available is critical to responding to customers and achieving operational excellence. Unreliable vehicles needing frequent maintenance severely hamper productivity, increasing costs far beyond maintenance expenses for the vehicle. Repeated need of maintenance on the vehicles also becomes a demoralizing factor and a safety concern.

# 3.0 PROJECT JUSTIFICATION AND PRIORITISATION

3.1 The need for this recurring capital expenditure is recognized within the company's Asset Investment Strategies, as demonstrated by a specific Purpose Code for this investment driver.

Purpose Code	Description	%	Measure	Units	Target
OA-VE01	Water - Vehicles	100			· · · · · · · · · · · · · · · · · · ·

AW/CMF3.40 ISSUE 1.0

# 4.0 PROJECT OUTPUT AND BENEFITS

Planned replacements constitute prudent asset management and will enhance productibity and continued customer service. Field productivity is lost while vehicles are being delivered and picked up for service. Meters aren't being read when vehicles are being serviced. It is estimated that four vehicles can be purchased in 2004 for the recommended capital expenditures, with increasing purchases in 2005.

Additionally, vehicles are a visible factor of our business that provides a promotes a professional image to the community.

#### 5.0 SCOPE AND OPTIONS

The replacement of vehicles will be accomplished through the utilization of company labor to coordinate purchases.

No practical option but to make regular replacements exists. While vehicle purchases can be deferred for a few years, the size of the fleet requires that a regular number of vehicles be replaced routinely. Recent deferrals of vehicle purchases have left the fleet with high age and mileage, and consequently high maintenance costs. The continued loss of productivity is also a negative impact on employee moral. Kentucky American needs to get back into the cycle of routinely replacing the high priority vehicles.

### 6.0 FINANCIAL STATEMENT

The cost of this recurring project is shown below.

Component \$ million	Total	Year 0	Year 1	Year 2	Year 3
Development Costs	0	-			<u> </u>
Design & Construction Cost	0				
Project Total	0.125		0.405		
	0.125		0.125		
Advances & Contributions	0				

There will be a savings in vehicle maintenance costs, however, this number has not been projected.

### 7.0 PROCUREMENT

The vehicles will be purchased by in-house personnel utilizing the American/ARI vehicle procurement process.

AW/CMF3.40 ISSUE 1.0

8.0	PROGRAM	
-----	---------	--

Project Implementation Approval (PIA) 02/04
Initiate Vehicle Orders ongoing
Take Over ongoing
Post Project Review 12/04

### 9.0 ISSUES AND RISKS

There are no issues or inherent risks associated with this project other than those associated with normal purchases.

Company employees and contractors are required to conform to all federal, state and local safety regulations as well as those more specifically detailed by the Company. All necessary insurance coverage by contractors has been documented through receipt of a Certificate of Insurance.

#### 10.0 RECOMMENDATION

10.1 It is recommended that \$125,000 in capital expenditures be approved and authorized for Kentucky American Water Central District in 2004. These expenditures will enable planned vehicle replacements.

Linda C. Bridwell, PE February 19, 2004 Version 1.0

PROJECT REVIEW		
	Signature:	Date:
Asset Owner or nominated Asset Manager / Capital Program Manager		
Operations Manager		
Project Manager (Deliverer)		
Finance Representative		
RECOMMENDED FOR APPR	OVAL - PNI Only	
VP Technical Services		
Others (as nominated by VP Technical Services)		

AMERICAN	WATER - K	entucky American Water	AW/CMF3.40
CAPITAL II	NVESTMENT	MANAGEMENT COMMITTEE – February 2004	ISSUE 1.0
APPENDIC	ES		
A1 Sch	redule/Forec	ast	
Revision H	istory:		
Version	Date	Summary of Changes	

Kentucky American Water Recurring Item # 2004 Project Manager:	91 Linda Bridwell	veli		Vehichles	İ									
Business Unit Central District Period Item	12020091 Previous Year	_	2	3	4	. 2	9	7	80	თ	10	7	12	Total
Replace Unit 61 - 1996 Ford Ranger			0		15,000							İ		15,000
Purchase New Backhoe				30,000										30,000
Purchase New Pool Vehicle		16,000				·								16,000
Replace Unit 67 - 1997 Chevy Astro Van														0
Install Autocrane on Unit 46		9,400	<u> </u>								,,,			9,400
Replace Unit 70 - 1997 Chevrolet Utilitiy		4,600	30,000									-		34,600
Replace Unit 46 - 1995 Chevrolet 3/4 Ton					20,000									20,000
Business Unit Total	0	30,000	30,000	30,000	35,000	0	0	0	0	0	0	0	0	125,000
Rusinass Ilnit	49900004										ļ			
Northern District	12300091													
Period Item	Previous Year	-	7	ო	4	S	9	7	80	თ	0	<b>=</b>	12	Total
Purchase - Vehicles		0	0	0	0	0	0	0	0	0	0	0	0	0
Business Unit Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recurring Item Total	#01										}			
)														
Period	Previous Year	-	7	ო	4	τυ	9	7	∞	<b>б</b>	10	<del></del>	12	Total
ILOUI														
Recurring Item Total	0	30,000	30,000	30,000	35,000	0	0	0	0	0	0	0	0	125,000

AW/CMF3.40 ISSUE 1.0

Project 12020092/12300092

Recurring Item #92, Tools & Equipment

**Project Manager** 

Linda Bridwell

Project Status

PROJECT IMPLEMENTATION PROPOSAL

#### 1.0 SUMMARY

# 1.1 Project Objectives

The replacement of existing tools and equipment due to failure or obsolescence, and the procurement of new tools and equipment to address requirements for continued performance of company functions.

## 1.2 Recommended Solution

It is recommended that \$76,400 in expenditures of capital throughout 2004 to facilitate the procurement of tools and equipment throughout Kentucky American be approved. These expenditures are prudent and necessary to facilitate maintenance and network repairs. Requested levels are based on general historical needs and may be reprioritized during the year based on emergency equipment failures.

# 1.3 Cost and Program

The amount of expenditure requested -

\$76,400

The project program - completion date -

December 31, 2004

# 1.4 Project Issues and Risks

The failure to allocate capital for the necessary replacement of existing tools and equipment and for the procurement of new tools and equipment will result in decreased productivity of personnel, increased costs and diminished customer satisfaction.

#### 2.0 BACKGROUND

Kentucky American Water serves more than 108,000 customers throughout its Central (Lexington area) and Northern (Owen County area) districts. The Replacement of tools and equipment is vital to the productivity of operations personnel in achieving operational performance. This leads to reliable water service delivery, good water quality, and customer satisfaction. Further, lack of replacement of tools can lead to demoralization of personnel who feel they aren't provided adequate resources to do their job, or can lead to serious injury of field personnel in extreme cases. Kentucky American Water performs various construction, maintenance, operations, meter reading, shop, garage, and laboratory functions throughout its areas of operation.

## 3.0 PROJECT JUSTIFICATION AND PRIORITISATION

The procurement of new and replacement tools and equipment is necessary for the continued efficient performance of operational requirements throughout Kentucky American:

Purpose Code	Description	%	Measure	Units	Target
OA-OE01	Water-Other Operating Equipment	100%			
					-

AW/CMF3.40 ISSUE 1.0

The majority of the tool and equipment items to be purchased are utilized in the performance of network operation, maintenance and construction functions throughout the State. There is a great variety of tools and equipment presently in use for these functions, which must be routinely replaced due to failure or obsolescence. New tools and equipment, representing new, improved or enhanced technology, also must be procured to maintain and increase the efficiency of operations. The procurement of these items should be given a high priority as failure to do so would result in decreased efficiency of operations. Currently, only high priority items are considered for replacement.

The speed and efficiency in which company personnel perform maintenance, operation and construction tasks within their areas of operation is one of several ways we are able to demonstrate an advantage over other water service providers which promotes the Company's key strategic goals and vision.

# 4.0 PROJECT OUTPUT AND BENEFITS

The procurement of tools and equipment to replace existing items and the procurement of new tools and equipment will enable operations to continue to perform required tasks safely and efficiently. The use of proper tools and equipment expedites performance of all work functions and facilitates efficient service to customers.

#### 5.0 SCOPE AND OPTIONS

The procurement of tools and equipment items will be made at the most competitive cost available and in conjunction with any system wide procurement initiative available. Procurement will be initiated by in-house personnel. The failure to maintain an adequate, well distributed stock of tools and equipment should not be considered an option, as an undesirable level of service to customers would result from decreased efficiency throughout company operations.

## 6.0 FINANCIAL STATEMENT

Detailed breakdowns of costs are included as an appendix.

Component \$ million	Total	Year 0	Year 1	Year 2	Year 3
Development Costs					
Design & Construction Cost	0.076		0.076		
Project Total	0.076		0.076		
Advances & Contributions				<del>-</del>	

Possible financial implications to the company could result from the failure to provide the capital for procurement of replacement and new tools and equipment. Increased labor costs would be incurred to both O&M and construction if proper tools and equipment are not provided for company employees performing operational tasks.

The useful life of many tool and equipment items, due to their rugged field application and conditions of use, is relatively short. The known replacement cycle for these items has been observed for many years in the company's areas of operation across the State.

AW/CMF3.40 ISSUE 1.0

# 7.0 PROCUREMENT

The procurement of the necessary replacement and new tools and equipment will be made by competitive pricing from available suppliers and manufacturers. Wherever possible, the utilization of established procurement initiative sources will be utilized.

### 8.0 PROGRAM

Project Implementation Approval (PIA)	02/04
Procurement	on going
Substantial Completion	N/Ă
Take Over	N/A
Post Project Review	01/05

### 9.0 ISSUES AND RISKS

There are no issues or inherent risks associated with this project. The project consists of the procurement of tools and equipment. Company training and manufacturer design should result in the safe and efficient use of the tools and equipment to be procured.

#### 10.0 RECOMMENDATION

It is recommended that the \$76,400 in capital expenditures detailed on the attached sheet be approved and authorized for Kentucky during 2004. These expenditures will facilitate the continued efficient performance of operations, maintenance and construction tasks throughout the company's service areas in the State.

Linda C. Bridwell, PE February 19, 2004 Version 1.0

AW/CMF3.40 ISSUE 1.0

PROJECT REVIEW						
	Signature:	Date:				
Asset Owner or nominated Asset Manager / Capital Program Manager						
Operations Manager						
Project Manager (Deliverer)						
Finance Representative						
RECOMMENDED FOR APPRO	OVAL - PNI Only	•				
VP Technical Services						
Others (as nominated by VP Technical Services)						

# **APPENDICES**

A1 Schedule / Forecast

AW/CMF3.40 ISSUE 1.0

# **Revision History:**

Version	Date	Summary of Changes	
1.0	11/10/03	Issue	

rican Water 1# 2004 Ier:	92 Linda Bridwell	ell ell		Tools & Equipment	uipment									
Business Unit Central District Period Item	12020092 Previous Year	<del>-</del>	2	ю	4	rC	9	7	8	o	10	<del>-</del>	12	Total
Distribution Replace Hydraulic Pump Unit 124 Purchase/replace wo Trash Pumps Purchase/replace three electric pumps Purchase/replace cutoff saw Purchase/replace 6 pocket readers Purchase/replace 8 gas monitors Purchase Coesk Radios for CRS Purchase Leak Detection Equipment Purchase Line Stop Equipment Water Quality Replace Field pH Meter - RRS Replace Field pH Meter - RRS Replace Lab Turbidmeter - RRS Replace Lab Turbidmeter - RRS Replace Lab Turbidmeter Replace DR4000		2,500	2000 0 0 500 2,600 1,300 8,000 7,500 3,100				9,000	3,000	5,000	1,400	1,600	6,400	6,400	2,500 2,500 2,500 2,600 3,000 8,000 1,300 1,300 3,100 7,500 7,500 7,500
Business Unit Total	0	5,000	23,000	0	0	0	5,000	5,000	5,000	5,000	5,000	10,000	6,400	69,400

Business Unit Northern District	12300092													
Period	Previous	-	7	ო	4	rS.	9	7	ω	6	10	11	12	Total
ltem	- 0													
Replace Network Equipment		0	0	0	0	0	0	0	0	0	0	0	5,000	5,000
Business Unit Total	0	0	0	0	0	0	0	0	0	0	0	0	2,000	5,000
Recurring Item Total	# 92													

	76#													
Period	Previous	-	2	т	4	Ŋ	9	7	∞	ത	10	£	12	Total
ltem	rear								-					
Recurring Item Total	0	5,000	23,000	0	0	0	5,000	5.000	5.000	5.000	5.000 5.000 10.000 11.400 74.400	10.000	11,400	74 400

AW/CMF3.40 ISSUE 1.0

Project 12020093/12300093: Recurring Item #93, Process Plant - Replacements

Project Manager :

Linda Bridwell

Project Status :

PROJECT IMPLEMENTATION PROPOSAL

#### 1.0 SUMMARY

# 1.1 Project Objectives

Replacement of various equipment items associated with treatment facilities, booster stations, pressure reducing stations, storage tanks and telemetry control systems that fail throughout the year and are not economical to repair. Funds are also allocated to replace equipment identified by predictive maintenance methods as subject to imminent failure, which could cause major damage.

# 1.2 Recommended Solution

It is recommended that funds be allocated to replace failed equipment, and equipment that has been identified for imminent failure.

### 1.3 Cost and Program

- Expenditure requested \$179,250
- Completion date 12/31/04.

### 1.4 Project Issues and Risks

The failure to allocate capital for the necessary replacement and renewal of process components may result in service interruptions and customer dissatisfaction.

### 2.0 BACKGROUND

Kentucky American Water serves more than 108,000 customers throughout two network service areas. Replacement, renewal and improvement of process equipment is an ongoing requirement for efficient operation and continued reliable water service delivery. There are two treatment plants in the Central District, where all of the currently proposed expenditures will be utilized.

# 3.0 PROJECT JUSTIFICATION AND PRIORITISATION

The company maintains process equipment in order to provide continued service delivery. The age of this equipment, their installation environment, and environmental conditions acting upon them creates a useful life limitation in many situations. A routine and unanticipated number of failures will continue to occur. For these reasons, failures must continue to be addressed through capitalized replacement of equipment. It is also critical to perform planned replacements in areas with a history of repeated failures or where the potential for significant damage due to failure exists.

Priority and justification exists to make the expenditures shown on the attached schedule. However, during the course of the year, it may become necessary to shift priorities and make expenditures for replacement or renewal in unforeseen locations.

The asset investment strategies and investment drivers which describes the need for this project are as follows:

Page 1 of 5 02/23/04

AW/CMF3.40 ISSUE 1.0

Purpose Code	Description	%	Measure	Units	Target
ST-P001	Poor Condition/ Obsolescence	50%			
ST-AF01	Actual or imminent failure possible	50%			

### 4.0 PROJECT OUTPUT AND BENEFITS

The replacement of the physical assets will allow continuous reliable water service to customers.

#### 5.0 SCOPE AND OPTIONS

The replacement of assets is considered a sole option project in that without this project, water service will be interrupted to our customers. The failure to execute planned replacements in areas of known problems will result in an undesirable level of service to customers, and will cause operating and maintenance costs to escalate. Expenditures in this recurring item category should continue in order to maintain and improve the integrity of the company's facilities.

#### 6.0 FINANCIAL STATEMENT

Expenditures proposed for this recurring budget item constitute necessary repairs of emergency failures and planned renewal of existing process plant equipment. The overall project cost is shown below, and the attached schedule provides a detailed listing of anticipated expenditures.

	Total	Year 0	Year 1	Year 2	Year 3
Component \$ million					
Development Costs	·				
Design & Construction Cost	0.179		0.179		
Project Total	0.179		0.179		
Advances & Contributions					

#### 7.0 PROCUREMENT

Process equipment replacement, renewal and improvement is accomplished by both contractor forces and company personnel. The nature and extent of work required determines which group is utilized. Company personnel are generally utilized for emergency or minor work. Contractors are selected through a competitive bid process for planned replacements. Equipment will be procured in a competitive selection process using national procurement initiatives when possible.

AW/CMF3.40 ISSUE 1.0

#### 8.0 PROGRAM

Project Implementation Approval (PIA) 02/04
Start on Site on going
Substantial Completion on going
Take Over on going
Post Project Review 01/05

### 9.0 ISSUES AND RISKS

There are no issues or inherent risks associated with this project other than those associated with normal construction operations.

Company employees and contractors are required to conform to all federal, state and local safety regulations as well as those more specifically detailed by the Company. All necessary insurance coverage by contractors is documented through receipt of a Certificate of Insurance.

### 10.0 RECOMMENDATION

It is recommended that \$179,250 be authorized to replace process plant equipment. Equipment replacement is prioritized based on critical nature, emergency failures, and obsolescence. This project will be complete 12/31/04.

Linda Bridwell, PE	· · · · · · · · · · · · · · · · · · ·		
February 20, 2004			
Version 1.0			
		·	

PROJECT REVIEW		· · · · · · · · · · · · · · · · · · ·
	Signature:	Date:
Asset Owner or nominated Asset Manager / Capital Program Manager		
Operations Manager		
Project Manager (Deliverer)		
Finance Representative		
RECOMMENDED FOR APPRO	VAL - PNI Only	
VP Technical Services		
Others (as nominated by VP Technical Services)		

Page 3 of 5 02/23/04

AW/CMF3.40 ISSUE 1.0

**APPENDICES** 

A1 Schedule / Forecast

AW/CMF3.40 ISSUE 1.0

# **Revision History:**

Version	Date	Summary of Changes
1.0	11/10/03	Issue

179,250

9,250

0

0

10,000

20,000

60,000

80,000

Item

Recurring Item Total

Kentucky American Water Recurring Item # 2004	93	_		Process Pla	Process Plant - Replacement	∍ment								
Business Unit Central District Period	12020093 Previous Year		7	е	4	2	Q	2	ω	o	10		12	Total
Maintenance/Production Upgrade Intake Pump Ball Valves Replace Sludge Pit Pumps Replace Washwater Holding Pumps RRS Replace Hydrotreator Eff. Valves		15,000 40,000 5,000 35,000	60,000	20,000	10,000								4,750	40,000 65,000 69,750
Water Quality Replace Online Flouride Analyzer - RRS Replace Online Flouride Analyzer													4,500	4,500
Business Unit Total	0	80,000	60,000	20,000	10,000	0	0	0	0	0	0	0	9,250	179,250
Business Unit Northern District Period	12300093 Previous	-	2	3	4	5	9	2	8	<b>o</b>	10	1	12	Total
ltem	- da													
		0	0	0	0	0	0	0	0	0	0	0	0	0
Business Unit Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recurring Item Total	# 63													
Period	Previous	-	7	က	4	5	9		80	6	10	7	12	Total
wo!	Year										-			

AW/CMF3.40 ISSUE 1.0

Project 12020094/12300094

Recurring Item #94, Process Plant - Additions

Project Manager

Linda Bridwell

Project Status

PROJECT IMPLEMENTATION PROPOSAL

#### 1.0 SUMMARY

#### 1.1 Project Objectives

Purchase and installation of new equipment items associated with treatment facilities, booster stations, pressure reducing stations, storage tanks and telemetry control systems.

### 1.2 Recommended Solution

It is recommended that funds be allocated to purchase new equipment to improve treatment processes or improved operations.

## 1.3 Cost and Program

- Expenditure requested \$20,000
- Completion date 12/31/04.

# 1.4 Project Issues and Risks

The failure to allocate capital for new process components may result in reduced productivity or service interruptions. New equipment is prioritized to enhance water quality compliance and improve customer service.

#### 2.0 BACKGROUND

Kentucky American Water serves more than 108,000 customers throughout two network service areas. Purchase of new process and monitoring equipment is an ongoing requirement for efficient operation and continued reliable water service delivery. There are two treatment plants in the Central District, where all of the currently proposed expenditures will be utilized.

# 3.0 PROJECT JUSTIFICATION AND PRIORITISATION

The company maintains process equipment in order to provide continued service delivery. New equipment is purchased to enhance productivity and water quality compliance, as well as increase security at the facilities. .

Priority and justification exists to make the expenditures shown on the attached schedule. However, during the course of the year, it may become necessary to shift priorities and make expenditures for replacement or renewal in unforeseen locations.

The asset investment strategies and investment drivers which describes the need for this project are as follows:

AW/CMF3.40 ISSUE 1.0

Purpose Code	Description	%	Measure	Units	Target
RC-CG01	Water – Company Goals; Partnership, Secondary Standards	100%			

#### 4.0 PROJECT OUTPUT AND BENEFITS

The installation of new process or monitoring equipment will enhance water quality compliance and enhance productivity. It is essential to continuous reliable water service delivery to customers.

### 5.0 SCOPE AND OPTIONS

The installation of new process components and monitoring equipment is core to maintaining the appropriate level of water quality and part of prudent asset management. Failure to install new components inhibits achieving operational excellence. Expenditures in this recurring item category should continue in order to improve the integrity of the company's product and facilities.

### 6.0 FINANCIAL STATEMENT

Expenditures proposed for this recurring budget item constitute necessary equipment at a minimum to address changing water quality regulations and demands. The overall project cost is shown below, and the attached schedule provides a detailed listing of anticipated expenditures.

	Total	Year 0	Year 1	Year 2	Year 3
Component					
\$ million					
Development Costs					
Design & Construction Cost	0.020		0.020		
Project Total	0.020	~	0.020		
Advances & Contributions					

# 7.0 PROCUREMENT

Process equipment purchase and installation is accomplished by both contractor forces and by company personnel. Contractor forces are solicited based on competitive bids for larger projects, while company personnel handle minor equipment changes. Equipment will be procured through national procurement initiatives where possible and cost effective.

AW/CMF3.40 ISSUE 1.0

#### 8.0 PROGRAM

Project Implementation Approval (PIA) 02/04
Start on Site on going
Substantial Completion on going
Take Over on going
Post Project Review 01/05

## 9.0 ISSUES AND RISKS

There are no issues or inherent risks associated with this project other than those associated with normal construction operations.

Company employees and contractors are required to conform to all federal, state and local safety regulations as well as those more specifically detailed by the Company. All necessary insurance coverage by contractors is documented through receipt of a Certificate of Insurance.

### 10.0 RECOMMENDATION

It is recommended that \$20,000 be approved for this project to provide reliable service to customers. This project will be complete 12/31/04.

Linda Bridwell, PE	
February 20, 2004	
Version 1.0	

PROJECT REVIEW		
	Signature:	Date:
Asset Owner or nominated Asset Manager / Capital Program Manager		
Operations Manager		
Project Manager (Deliverer)		
Finance Representative		
RECOMMENDED FOR APPRO	OVAL - PNI Only	
VP Technical Services		
Others (as nominated by VP Technical Services)		

AW/CMF3.40 ISSUE 1.0

**APPENDICES** 

A1 Schedule / Forecast

AW/CMF3.40 ISSUE 1.0

# **Revision History:**

Version	Date	Summary of Changes	
1.0	11/10/03	Issue	

Kentucky American Water Recurring Item # 2004	94 Linda Bridwell	<del>-</del>		Process Pla	Process Plant - Additions	v								
Business Unit Central District Period Item	12020094 Previous Year	-	2	က	4	S	9	7	80	6	10	-	12	Total
Water Quality Purchase Online Ammonia Analyzer - RRS Purchase Online Raw Water pH meter -KRS Purchse Online Hardness Monitor	o		5,000	4,850	5,000	5,000								9,850 5,150 5,000
Business Unit Total	0	0	5,000	5,000	5,000	5,000	0	0	0	0	0	0	0	20,000
Business Unit Northern District Period Item	12300094 Previous Year	-	5	က	4	5	9	7	8	O	10	1	12	Total
		0	0	0	0	0	0	0	0	0	0	0	0	0
Business Unit Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Recurring Item Total Period Item	# 94 Previous Year	-	2	ю	4	ω	9	2	80	Ø	10	7-	12	Total
Recurring Item Total	0	0	5,000	5,000	5,000	5,000	0	0	0	0	0	0	0	20,000