COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF NORTHERN KENTUCKY WATER DISTRICT FOR APPROVAL OF DEPRECIATION STUDY	))))	CASE NO. 2006-00398

PETITION

Northern Kentucky Water District (NKWD), by counsel, petitions the Commission for an order approving the depreciation study mandated by the Commission in the Order dated April 30, 2003, in Case No. 2002-00105. The following information is filed in accordance with the Commission's regulations:

1. NKWD'S office address is 2835 Crescent Spring Rd., Erlanger, KY 41018-0640. Its principal officers are listed in its current Annual Report on page 6, which is filed with the Commission as are its prior years Reports;

2. NKWD is a non-profit water district organized under Chapter 74 and has no separate articles of incorporation. It has no affiliates and no accounts charged to or allocated to an affiliate;

3. A description of NKWD's water system and its property stated at original cost by accounts is contained in its Annual Report, which is on file with the Commission and incorporated by reference.

4. NKWD serves retail customers in Kenton and Campbell Counties and sells water at wholesale to non-affiliated water distribution systems in Pendleton County.

5. Northern proposes to modify its current depreciation rates and classifications for ratemaking and accounting purposes based on the proposed depreciation study, attached as Exhibit 1, to more accurately reflect the actual plant and plant lives in service.

6. There is no construction involved in the request for approval of the depreciation

study.

7. No annual revenue increase is being proposed in this application.

8. NKWD intends to use the proposed depreciation rates and plant classifications to adjust its annual depreciation expense in its next general rate filing, which is expected to be April, 2007.

9. The testimony of Larry W. Loos is attached as Exhibit 2 in support of the proposed depreciation study.

10. NKWD requests that it be granted a deviation under 807 KAR 5:004(14), if necessary to accommodate any situation where compliance with a regulation would hinder the timely review of this application.

For these reasons, NKWD requests that it be granted an order authorizing the use of the proposed Depreciation Accrual Rates reflected in Exhibit 1 for accounting and ratemaking purposes on and after January 1, 2007.

SUBMITTED BY:

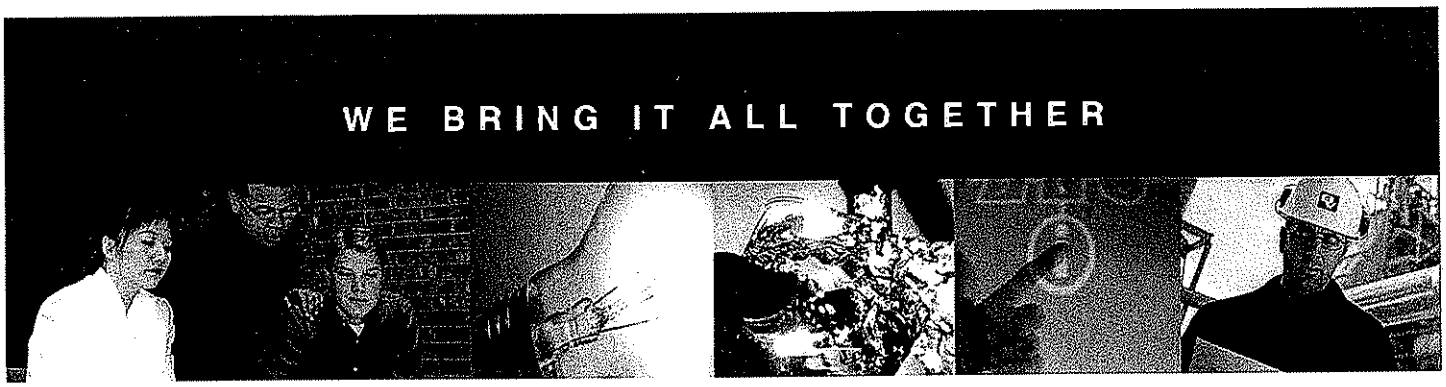
John N. Hughes
124 W. Todd St.
Frankfort, KY 40601

Attorney for Northern
Kentucky Water District

Certificate:

I certify that a copy of this application was delivered to the Attorney General, 1024 Capital Center Dr., Frankfort, KY 40601, the 30th day of August, 2006.

John N. Hughes



Report on

Depreciation Accrual Rates

Water Utility Property

Of

Northern Kentucky Water District

August 2006

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Original

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ENERGY WATER INFORMATION GOVERNMENT

August 30, 2006

Mr. Jack Bragg
Vice President, Finance
NKWD
100 Aqua Drive
Cold Spring, KY 41076

Dear Mr. Bragg:

We are enclosing our Report on Depreciation Accrual Rates applicable to Northern Kentucky Water District's (NKWD) water properties. The findings, conclusions, and recommendations that we present in the report are representative of plant activity as of December 2004. In the report, we have provided discussions relative to depreciation accounting, the processes utilized and historical information relied upon, the determination of appropriate depreciation expense rates, as well as a review of the adequacy of current depreciation reserves.

The results of our analyses demonstrate that overall NKWD's existing depreciation expense rates are low. Ultimately the appropriate level of depreciation expense rates is a management decision taking into account various factors. However, based on our studies, in order to better assure recovery of plant investment over the useful life of plant in service, we recommend implementation of the rates set forth in Section 6 of this report.

Implementation of the recommended rates will result in an aggregate annual increase of approximately $2,191,000 in depreciation expense. Depending upon account, the depreciation accrual rates we recommend are both higher and in some cases lower than those rates currently utilized by NKWD. However, we are recommending relatively large increases for Account 304 - Structures and Improvements ($1,273,000) and Account 331 - Transmission and Distribution Mains ($1,088,000). This is offset by a decrease in depreciation expense for NKWD's general plant accounts of $467,500. We further recommend that the depreciation rates implemented by NKWD be reevaluated after a period of no more than five years to better ensure the continued appropriateness and reflect more updated and complete historical information.

We appreciate the opportunity to be of service in this matter and wish to thank NKWD and its staff for the cooperation and assistance provided in completion of the report. .

Very truly yours,

BLACK & VEATCH CORPORATION

Larry W. Loos
Director

KHW
Enclosure

Contents

Tables

Appendix

1.0 Executive Summary

This report presents the results of our analysis of the depreciation expense requirements of the water properties owned and maintained by Northern Kentucky Water District (NKWD). The results presented herein are representative of activity through December 2004. Implications of certain events that have occurred or are anticipated to occur subsequent to December 2004 are incorporated in the analyses. We consider the rates developed and recommended herein to be reasonable and appropriate for prospective use. We strongly recommend, however, that depreciation rates be reviewed at a minimum of once every five years.

Following the merger of the Kenton and Campbell County Water Districts, NKWD serves about 79,000 customers including residential, commercial, and industrial accounts. In addition, NKWD provides wholesale service to six neighboring communities. NKWD's water system consists of three treatment facilities: Fort Thomas (44 mgd), Taylor Mill (10 mgd), and Memorial Parkway (10 mgd). NKWD's system is comprised of approximately 1,000 miles of transmission, distribution, and service pipes.

Benchmarking of the depreciation rates for other regional utilities forms the basis for our analyses of depreciation rates applicable for mass property accounts. A sufficient retirement history does not exist to perform survivor curve analyses on NKWD's mass property accounts. Further, NKWD does not have the history of plant additions and balances by account required to use the simulated plant balance approach to measure average service lives. We therefore relied upon data from other regional utilities in our analyses for mass property accounts. We surveyed 17 utilities in Indiana, Kentucky, Ohio, and Missouri. The rates recommended in this report for mass property accounts are reflective of the aforementioned regional utility survey. The rates for unit property, Account 304-Structures and Improvements and Account 320-Water Treatment Equipment, are based on a remaining life depreciation approach.

In Section 2.0 of this report, we briefly discuss the practice of depreciation accounting. In Section 3.0 we discuss, in general, the type of information we relied on. The results of the analyses performed are discussed in Sections 4.0 through 6.0. These discussions include a determination of remaining life depreciation accrual rates for unit property accounts (Section 4.0), for mass property accounts (Section 5.0), and our analysis of the adequacy of current depreciation reserve amounts and recommended rates (Section 6.0). We recommend that depreciation rates be reviewed at least every five years.

Depending upon account, the depreciation accrual rates we recommend are both higher and in some cases less than, those rates currently utilized by NKWD. In the following table, we summarize the change in annual depreciation expense resulting from our recommended rates by primary account:

Primary Account	Total
Source of Supply	$1,245,006
Water treatment plant	153,559
Transmission and distribution plant	1,259,881
General plant	(467,460)
Total	$2,190,986

As shown in the table above, the depreciation rates we recommend in this report result in an overall increase in annual depreciation expense of approximately $2,191,000. The principal factors contributing to this recommended increase are related to:

- The existing composite depreciation expense rate for Account 320 - Water Treatment Plant is 2.19 percent. This would indicate an average service life of 46 years (zero salvage). Based on our unit property analysis, including consideration of future additions and retirements, we find that a composite rate of 3.50 percent is more appropriate (indicated 29 year average service life). We base our recommendation of estimated remaining life of NKWD's water treatment plants on the findings and recommendations in Black & Veatch's report titled "Asset Management Program" (May 2004). The Asset Management Program (AMP) assessed the current condition of NKWD's facilities and prioritized recommended improvements. We further discuss the condition of NKWD's water treatment plants in Section 4.0 Unit Property. After redistribution of reserve deficiency, the indicated 3.50 percent rate is adjusted to 3.84 percent. Our recommended rate of 3.84 percent results in an increase in annual depreciation expense of $153,559 for water treatment plant.

- The existing composite depreciation expense rate for Account 304 - Structures and Improvements is 1.69 percent. This indicates an average service life of 60 years (zero salvage), whereas our unit property analyses indicates that a composite rate of 3.22 percent is more appropriate (indicated 31 year average service life). Since over half of this account is categorized as Water Treatment Plant, we analyzed this account as unit property. We then compared our calculated 3.22 percent depreciation expense rate for Account 304 with the regional median (2.50 percent), first quartile (2.00 percent), and third quartile (2.90 percent) from our regional survey. We determined that the 3.22 percent rate is more indicative of NKWD's recommended near term capital improvement investment discussed in NKWD's AMP. After redistribution of reserve deficiency, the indicated 3.22 percent rate is adjusted to 3.63 percent. Our recommended rate of 3.63 percent results in an increase in annual depreciation expense of $1,273,304 for structures and improvements.

- The existing composite depreciation expense rate for Account 331 - Transmission and Distribution Mains is 1.07 percent. This indicates an average service life of 94 years (zero salvage). Our regional utility analyses indicate that a composite rate of 1.99 percent is more appropriate (indicated 50 year average service life). Although the most common materials in NKWD's water system are cast and ductile iron, almost half of the plant balance has been added within the last six years under NKWD's rehabilitation and replacement (R/R) program. Thus, the weighted age of the account is only 9 years. However, based on our experience, an indicated average service life of 100 years is too high and we recommend a rate from the third quartile of the survey that will allow NKWD to recover its investment in a more reasonable time period. After redistribution of reserve deficiency, the indicated 1.99 percent rate is adjusted to 2.09 percent. Our recommended rate of 2.09 percent results in an increase in annual depreciation expense of $1,087,546 for transmission and distribution mains.

- The existing composite depreciation expense rate for Account 340 - Office Furniture and Equipment is 14.91 percent. This would indicate an average service life of 7 years (zero salvage). We recommend one account for Office Furniture and Equipment, with a subaccount for Computer Equipment and Software. Our study indicates a rate of 8.84 percent is appropriate for Office Furniture and Equipment (indicated 13.5 year average service life), while a rate of 20.00 percent is appropriate for Computer Equipment and Software (indicated 5 year service life). After redistribution of reserve deficiency, the recommended rates result in an overall decrease in annual depreciation expense of $43,552 for Office Furniture and Equipment and $41,850 for Computer Equipment and Software.

- The existing composite depreciation expense rate for Account 341 - Transportation Equipment is 20.09 percent. This would indicate an average service life of 5 years (zero salvage), whereas our study of the types of vehicles that comprise the account (large trucks and equipment, small trucks, and cars) indicates that a composite rate of 11.35 percent is more appropriate (indicated 9 year average service life). Our recommended 11.35 percent rate and redistribution of reserve deficiency result in a decrease in annual depreciation expense of $219,117 for transportation equipment.

We also recommend that NKWD redistribute the accumulated reserve deficiency balances of Accounts 304 and 331 to other accounts so that the net redistribution is zero. Based on our recommended rates and analysis of depreciation reserve balances, we find that Accounts 304 and 331 have accumulated reserve deficiencies of $7.4 million and $5.8 million, respectively based on our recommended rates. We propose to redistribute these deficiencies to other accounts so that the resulting reserve ratio is more reasonable.

1.1 Conclusions and Recommendations

- NKWD currently assigns an average service life to individual property units within an account. It depreciates each individual property unit by applying the reciprocal of the average service life. We recommend that NKWD accrue depreciation at the account level with no further separation within account with the exception of Account 340 - Office Furniture and Equipment. We recommend creating a subaccount for Computer/Electronics/Software within Account 340 since the life characteristics of this property are typically much shorter than that of general office furniture.

- We recommend that, at a minimum, NKWD continue to maintain plant additions and end of year plant balances by activity year so that simulated plant balance analysis can be attempted to estimate average service lives based on historical activity. We understand that NKWD currently maintains a history of additions and end of year plant balances by account since 1999. A history of 30 years is preferred to perform simulated plant balance analysis.

- We recommend that if NKWD management concludes to change depreciation rates at this time, the rates set forth in Section 6.0, Table 6-1 be implemented.

- We recommend NKWD again review the adequacy of its depreciation rates in four to five years.

In conducting our analyses, and developing the recommendations set forth in this report, we relied on certain information not within our control. During the course of our studies, we have not made an analysis, verified, or rendered an independent judgment as to validity of the information provided by others, including NKWD. Further, implicit in recommending depreciation rates for prospective application, requires we make various assumptions with respect to conditions, events, and circumstances that will occur in the future. The methodologies we utilize follow generally accepted practices and reflects our experience and judgment, industry practice, and NKWD historical experience. While we believe the assumptions are reasonable and the projections valid, actual results may differ materially from those projected, as influenced by the conditions, events, and circumstances that actually occur. While we believe that the information, data, and opinions contained herein will be reliable under the conditions and subject to the limitations set forth, we cannot guarantee their accuracy.

2.0 Depreciation Accounting

"Depreciation, as applied to depreciable utility plant, means the loss in service value[1] not restored by current maintenance, incurred in connection with the consumption or prospective retirement of utility plant in the course of providing service from causes which are known to be in current operation and against which the utility is not protected by insurance. Among the causes to be given consideration are wear and tear, decay, action of the elements, inadequacy, obsolescence, changes in the art, changes in demand and requirements of public authorities."[2]

Depreciation accounting provides a method whereby charges for the loss in service value are made against current income derived from operation of the system. By properly charging depreciation, the total cost of utility property is appropriately distributed over the useful life in such a way as to equitably allocate cost to the period during which service is provided through the use and consumption of such property. It should be noted that for the purposes delineated herein, total cost represents gross plant investment less salvage value (if any) plus cost of removal (if any).

2.1 Annual Depreciation Expense

Annual depreciation expense represents the annual charge against income associated with the loss of service value of utility property. Historically, utilities have relied on a number of different methods to identify the appropriate level of depreciation expense. Some of these methods include:

- A direct apportionment by management;
- A percentage of revenues;
- An amount equal to the original cost investment retired during the year;
- A charge per unit of delivery (gallons); and
- A percentage of the investment in depreciable property.

Currently, NKWD (as do most utilities) calculates depreciation expense based on the application of a straight-line depreciation rate to the respective balance in each plant account. This rate, which represents a fixed percentage of plant investment, yields an annual depreciation expense that is intended to amortize the total cost (original investment plus cost of removal less salvage)[3] over the life of the property in generally equal amounts.

[1] For the purposes of this report, we use the term "loss in service value" in the accounting sense where value represents the original cost of facilities.
[2] Uniform System of Accounts for Class A Water Utilities, National Association of Regulatory Utility Commissioners.
[3] We understand the NKWD does not currently recover cost of removal and salvage through depreciation.

2.2 Depreciation Reserve

Depreciation reserve is a balance sheet item that reflects the accumulation of annual depreciation activities and associated retirement accounting. Under the NARUC Uniform System of Accounts, depreciation reserve is shown on the balance sheet as "Accumulated Depreciation."

The depreciation expense charged against income is credited to (accumulated in) depreciation reserve. For utility properties, NARUC provides that upon retirement of an asset, the utility depreciation reserve is reduced by the original cost of the asset retired, is increased by any benefits derived from the sale of assets removed (salvage), and reduced by the costs attributable to removal.[4] As such, the use of appropriate depreciation rates corresponding to the service life of utility properties will result in accruals to the depreciation reserve which equal the total investment ultimately retired, adjusted for salvage and cost of removal.[5]

For the purposes of the report, as directed by NKWD, we have not included consideration for net salvage (salvage less cost of removal) in mass property accounts directly. However, a reasonable net salvage allowance is included in depreciation rates recommended for unit property accounts. In addition, we have included a net salvage allowance in our recommended depreciation expense rates applicable to mass property to the extent such allowance is included by the utilities included in our benchmark group.

[4] Net salvage represents proceeds from sale of retired assets less cost of removal.
[5] As noted previously, NKWD does not currently follow this practice.

3.0 Historical Information and Procedures

Depreciation expense rates are intended to recover the net investment (total cost) in utility property over its useful life. In this regard, depreciation rates typically consist of three components. The components, which are further defined below, include the following: (i) service life of the property; (ii) total cost to be recovered; and (iii) reserve requirements.

Normally, the determination of average service life is largely dependent on analyses of detailed utility records. Ideally detailed records provide information regarding additions and retirements by transaction year (year added or retired) and vintage (year originally installed) for each account and for unit property (water treatment plant for the purposes of the report). Based on analysis of this information, we can determine the average service life of the property historically retired. We adjust this average service life to reflect expectations over the remaining service life based on our experience, judgment, and those conditions anticipated to occur.

We normally develop average service lives by account. We first separate accounts into two groups: mass property and unit property. Mass property represents relatively homogeneous property units that tend to be retired individually. Meters, mains, services, and hydrants are examples of mass property. Conversely, unit property represents a more heterogeneous property group, which by the nature of their interconnected or integrated operations, tends to be retired simultaneously, or as a group. We normally consider water treatment plants for water utilities as unit property. Generally, utilities maintain detailed unit property data by physical location. Utilities typically maintain mass property data on an aggregate level.

For unit property accounts, we typically define service life based on planned retirement dates.[6] For unit property, we normally develop a history of investment activity by account for each location or site. This life history reflects gross additions, retirements, surviving property and account balances. Based on the estimated life (planned retirement date) for each unit property (water treatment plant), we typically forecast plant investment activity (interim additions, retirements and account balances) at the account level for each year the plant is forecast to remain in service. We then calculate a whole life, straight line depreciation accrual rate by dividing the gross additions (original investment plus interim additions) by the sum of the annual depreciable plant balances over the life of the unit property. Gross additions include both historical and forecast additions. Depreciable plant balances include additions and retirements to unit properties throughout the entire lifespan of such properties. In the alternative, we calculate a remaining life, straight line depreciation accrual rate by dividing the gross additions less net salvage less depreciation reserve balance by the sum of the annual depreciable plant balances over the remaining life of the property.

[6] More often than not, specific planned dates for retirement are not available. When specific dates are not available, we determine retirement date based on typical life spans for the property being evaluated and other available information.

For mass property, we typically define service lives by account based on actuarial analyses (retirement or survivor curve analysis) or semi-actuarial analysis (simulated plant balance). These analyses, which are based on historical plant activity (retirements), utilize survivor curves to predict the percent of original additions surviving by age. More specifically, using a least squares technique, actual retirements (specific to the utility property under investigation) are compared against retirements predicted by general survivor curve types to identify the best fitting curves and lives. We use average service lives developed by this method as a principal method to determine a reasonable average service life applicable to each account.

In addition to our analysis of historical experience, we consider our experience in the industry, practices of other utilities, and basic information regarding expected life characteristics of the property. Results derived from the application of these methodologies are then evaluated in connection with other available information such as: (i) past, present and anticipated economic conditions; (ii) recent industry trends; and (iii) engineering experience and judgment. To develop whole life depreciation expense rates, we divide one minus the expected net salvage ratio by the average service life. To develop remaining life depreciation rates, we divide one minus the expected salvage ratio minus the reserve ratio by the average remaining life. Reserve ratio represents the ratio of depreciation reserve divided by plant investment. Average remaining life approximately equals average service life minus average age.

Each of these techniques, including a summary of the information required and the information provided by NKWD, are further discussed below.

3.1 NKWD Data

Currently NKWD's books and records do not provide sufficient detailed data upon which to develop depreciation expense rates as outlined above. NKWD's Annual Report, which is filed with the Kentucky Public Service Commission, details additions and retirements by account. We understand that this detail of information is only available since 1999.

NKWD maintains a report titled "Tax Asset Detail". The Tax Asset Detail Report includes account number, property description, date in service (vintage year), original cost, and average service life. NKWD applies a unique average service life to each property within an account. Depreciation expense is calculated by dividing original cost by the average service life. NKWD only maintains account balances by vintage year and it does not have retirement history by asset. NKWD is by no means unique in this regard.

With limited exception, publicly owned (municipal) utility systems do not maintain a comprehensive record of additions and retirements. Even though required by state and federal regulations to maintain detailed records in conformance with the Uniform System of Accounts, we have encountered investor-owned utility accounting records which do not have the required detail for one reason or another. We do not believe that simply because NKWD does not have a complete detailed record, NKWD has been remiss or has failed to maintain sufficient records. NKWD, as have other publicly owned systems we

have worked with, did not preserve detail of somewhat limited value when changing accounting systems. Instead, in order to simplify changing systems, the utilities have "rolled-up" historical detailed data.

Where we have encountered investor-owned systems without a complete history of detailed data, we usually have been able to rely on less detailed data. As a result of federal and state regulatory requirements, investor-owned electric, gas, and water systems must file reports annually. These annual reports contain data regarding annual plant additions and plant balances by account. Usually investor-owned utilities have available most, if not all, of these reports for 50 or more years. We can rely on this data to perform semi-actuarial simulated plant balance studies, which provide some insight into historical retirement experience. As mentioned earlier, NKWD has similar reports that were filed with the Kentucky Public Service Commission since 1999, however, five years of historical data is not enough to perform simulated plant balance analysis.

We do not make the foregoing observations as an indictment of publicly owned utility accounting practices. We make these observations solely to demonstrate that any lack of detailed records that NKWD has is by no means unique. We find the lack of detail consistent with our experience with other publicly owned utility systems. In fact, if regulations did not require investor owned systems to maintain and report such detailed data, investor-owned systems would probably not maintain or report it.

Further, even if NKWD had exceptionally detailed records, the reliability of their use would be compromised due to the various mergers and consolidations NKWD has undergone.

We rely upon NKWD's Tax Asset Report for 2004 plant balances by account for our analyses.

3.2 Planned Retirements (Unit Property Accounts)

For NKWD's treatment plant unit property (generally Accounts 304 and 320), data are limited upon which to develop an investment history. Ideally, a complete life history reflects gross additions, retirements, surviving property, and account balances by year since the unit property initially went into service. Based on limited historical experiences and other available data from NKWD, we use a remaining life deprecation analysis. We forecast plant investment activity (interim additions, retirements, and balances) for each year that we expect the property to remain in service. In the event that other (less routine) reasonably anticipated planned additions and retirements are required in order for the property to reach the retirement date, we consider implications of such additions and retirements as well as improvements Black & Veatch recommend in the AMP report.

NKWD does not have any planned retirement dates for its treatment plants. In the absence of planned retirement dates, we developed reasonable life spans for NKWD's water treatment facilities based on the findings and recommendations in Black &

Veatch's report "Asset Management Program" (May 2004) and our experience with similar utility property. The Asset Management Program (AMP) assessed the current condition of NKWD's facilities and prioritized recommended improvements.

Based on the data described above, we calculate a remaining life, straight line depreciation accrual rate by dividing the gross additions (original investment plus interim additions) by the sum of the annual depreciable balances over the remaining life of the unit property accounts. Gross additions include both historical and forecast additions to plant in-service. Annual depreciable balances are based on actual balances reported[7] plus forecast balances, considering forecast additions and retirements. Our recommended rates for unit property accounts are discussed in Section 4.0.

As described above, we relied on NKWD's plant balances by account and by vintage (year of initial installation) for our analyses as of December 2004. While this information was effectively used to identify plant additions, we lacked information to identify plant retirements. We simulated (forecast) the beginning balance, additions, retirements, transfers, and ending balance activity by account and vintage for a 50 year period ending in 2055 for NKWD's water treatment plants.

3.3 Retirement Analysis (Mass Property Accounts)

In general, the level of effort required for any depreciation rate study is highly dependent upon the availability of CPR[8] and fixed asset data and the available format and "condition" of this data. If CPR data is sufficiently complete, we use "retirement analysis" or survivor curve analysis as the primary measure of the historically experienced average service life for mass property accounts. In performing retirement analyses, we rely on computerized statistical routines and other tools to determine the average service life which best fits historical data using individual generalized survivor curves, typically referred to as "Iowa Curves." A comparison of the statistical fits of the various Iowa Curves (using the "best fitting" average service life) provides an indication of the average service life of mass properties based on historical retirement experience.

Because sufficient data does not exist for retirement analysis purposes, we consider use of the simulated plant balance approach to estimate average service lives.

3.4 Simulated Plant Balance (Mass Property Accounts)

As an alternative to retirement analysis, we normally rely on a method referred to as the simulated plant balance approach. We use the simulated plant balance method when aged retirement data is unavailable or insufficient. In order to estimate average service

[7] Historical plant balances are not available nor are historical additions. For the purpose of this report, we assume no historical retirements and that historical additions equal plant balances as of December 31, 2004 by vintage. Since we rely on a remaining life technique, this lack of historical information does not affect our results.

[8] CPR – Continuing Property Records represents the systems relied on by utilities to maintain a complete history of property accounting transactions.

lives using the simulated plant balance approach, we require a history (preferably at least 30 years) of annual additions and end of year plant balances by account. In the simulated plant balance approach, each of a number of combinations of survivor curves and average service lives is used to compute a series of plant balances at the end of a number of chosen time periods. We test each combination to determine which calculated plant balance most closely simulates the actual book balances.

As discussed earlier, NKWD has a history of annual additions and end of year plant balances by account from 1999 which is not enough history to perform a simulated plant balance analyses. Therefore, we can not use simulated plant balance analyses to estimate average service lives.

3.5 Regional Utility Analysis (Mass Property Accounts)

Because reliable data does not exist to use survivor curve analysis or the simulated plant balance method for the mass property accounts, we relied on benchmarking as the primary approach to determine average service lives (depreciation rates). Appendix A provides depreciation expense rates that we summarized for regional water utilities. Using this data, we determine the median depreciation rates for each mass property account. We consider these median values to be a preliminary indicator of the appropriate depreciation rate. The results derived from the aforementioned survey activities are summarized below.

3.6 Regional Water Utilities

We surveyed depreciation expense rates reported by 17 regional water utilities using data from annual reports, contacting utility representatives, and contacting commission staffs. We focused our survey on states Kentucky and nearby states, including Ohio, Indiana, and Missouri. Table 3-1 lists the utilities we surveyed and the state where the utility's primary service area is located. The water utilities surveyed include both publicly owned and investor-owned and both regulated and non-regulated.

In Table 3-2 we summarize the regional median, first quartile (25th percentile), and third quartile (75th percentile) depreciation expense rates from our water utility survey and compare those to NKWD's existing depreciation expense rates for mass property accounts. We rely on a median value as opposed to an average depreciation expense rate in order to dampen the effect of outliers. In addition, we show quartiles to demonstrate a more reasonable measure of range rather than simple minimum and maximum values. We also show the number of data points included for each account. In Appendix A, we present additional detail.

Table 3-1
Regional Water Utilities Surveyed

Utility	Utility	Number of Customers Served
South Bend Water Works	IN	83,324
Fort Wayne Water Utility	IN	69,881
City of Bloomington Water Utility	IN	24,220
Indianapolis Water	IN	270,000
Indiana-American Water Company	IN	273,286
Kentucky-American Water Company	KY	107,699
Hardin County Water District #2	KY	14,026
Ohio-American Water Company	OH	51,647
Aqua Ohio, Inc.	OH	90,344
City of Columbus	OH	264,341
Citizens Utilities Company of Ohio	OH	9,370
Public Utilities Bureau, City of Akron	OH	80,000
City Utilities of Springfield	MO	75,366
Empire District Electric Company	MO	4,526
Missouri American Water Company	MO	449,519
Raytown Water Company	MO	6,751
US Water Company	MO	2,197
NKWD	KY	79,000

Table 3-2
Depreciation Results of Regional Water Utility Survey

Acct.	Description	Regional Median	1st Quart.	3rd Quart.	Data Pts.	NKWD
304	Structures and Improvements	2.50%	2.00%	2.90%	17	1.69%
306	Lakes, Rivers, and Other Intakes	2.10%	1.75%	2.73%	8	4.63%
309	Supply Mains	1.39%	1.20%	2.21%	11	1.01%
311	Pumping Equipment	3.47%	2.60%	4.02%	14	3.48%
320	Water Treatment Equipment	3.42%	2.94%	3.97%	15	2.19%
330	Distribution Reservoirs and Standpipes	2.18%	2.00%	2.50%	16	1.77%
331	Transmission and Distribution Mains	1.44%	1.30%	1.99%	16	1.07%
333	Services	2.25%	2.10%	3.56%	14	2.04%
334	Meters and Meter Installations	3.92%	2.59%	5.05%	16	2.35%
335	Hydrants	2.45%	2.09%	2.50%	16	1.99%
339	Other Plant and Miscellaneous Equip.	9.06%	7.16%	10.00%	6	11.45%
340	Office Furniture and Equipment	8.73%	5.00%	10.00%	17	14.91%
341	Transportation Equipment	12.75%	10.12%	14.62%	16	20.09%
342	Stores Equipment	4.00%	3.27%	5.00%	11	22.07%
343	Tools, Shop, and Garage Equipment	5.78%	4.69%	7.43%	16	28.90%
345	Power Operated Equipment	7.36%	6.68%	9.84%	14	18.94%
346	Communication Equipment	6.70%	5.37%	10.00%	15	9.07%
347	Miscellaneous Equipment	6.38%	5.00%	6.92%	14	13.26%

Examination of the above shows that NKWD depreciation rates applicable to property directly used to serve customers, generally fall below those of utilities included in the regional survey. Conversely, rates applicable to property not used directly (general plant) are above the other utilities.

4.0 Unit Property

In Table 4-1, we summarize remaining life depreciation accrual rates for the unit properties (NKWD's water treatment plants) by NARUC account numbers, as applicable. The remaining life accrual rate is defined as the rate which, when applied to annual depreciable plant balances over the remaining life of a property, will result in recovery of the unrecovered original cost of gross additions, including net salvage. The depreciation accrual rates applicable to unit property developed in this report are based on application of the remaining life method. We incorporate this adjustment in our recommended rates, as discussed in Section 6.0.

Table 4-1
Unit Property Depreciation Rate Analysis – Water Treatment Plant

NARUC Account		Depreciation Rate	
No.	Description	Existing	Indicated
304	Structures and Improvements	1.69%	3.22%
320	Water Treatment Equipment	2.19%	3.50%

Since over half of Account 304 – Structures and Improvements is categorized as Water Treatment Plant, we analyzed this account as unit property. Our unit property analysis indicates that a 3.22 percent rate is appropriate for this property. We then tested the reasonableness of the result of our unit property analysis (3.22 percent) with the regional median (2.50 percent), first quartile (2.00 percent), and third quartile (2.90 percent) depreciation rates from our regional utility survey. We concluded that the 3.22 percent rate is more indicative of NKWD's recommended near term capital improvement investment requirements discussed in NKWD's AMP.

The estimated retirement dates and remaining life (50 years) used in our analyses of NKWD's water treatment plants are based on our experience and general guidelines regarding the lifespan of utility properties comparable to NKWD's, and contingent upon major investment in these facilities, as discussed in the AMP, to achieve the remaining life estimate.

A description of NKWD's water treatment plants is shown in Table 4-2. The physical condition of NKWD's water treatment plants are based on the findings in the AMP.

Table 4-2
NKWD Water Treatment Plant Characteristics

Plant Name	Capacity (mgd)	Original In Service Date	Age in 2005 (years)	Estimated Retirement Year	Estimated Remaining Life (years)	Physical Condition
Fort Thomas	44	1891	114	2055	50	Good
Taylor Mill	10	1953	52	2055	50	Good
Memorial Parkway	10	1961	44	2055	50	Poor

The annual accrual rates we develop will, if applied to annual unit property account balances over the remaining life of the various properties to the year of retirement, recover NKWD's investment, including consideration for the impact of net salvage. The principal forecasts, for which assumptions are made, that we rely on in the analyses include:

- The retirement date (life span) of the individual facilities.
- The level of interim additions and retirements.
- The level of major plant additions, upgrades, and improvements required for the individual units to reach the planned retirement date.
- The net salvage values associated with interim and final retirements.

With regard to major plant additions, upgrades, and improvements, we have included those items identified in the AMP Moderate Capital Improvement Program. Our unit property analysis is included in Appendix B.

5.0 Mass Property

For mass property accounts (transmission, distribution, general plant, etc.), we develop base (indicated) depreciation rates based on the depreciation rates reported by regional utilities, as previously discussed in Section 3.0.

In this section, we summarize NKWD's existing and indicated base accrual rates and the annual change in depreciation expense which results if these indicated rates are applied to the depreciable plant balance. Unless otherwise noted, we rely on median values from the survey described in Section 3.0 to determine the indicated rate.

There are two fundamental approaches (methods) used to develop depreciation rates. These are the whole life approach and the remaining life approach. The basic equation used to determine a whole life depreciation rate is as follows:

$$\text{Whole Life Rate} = \frac{1 - \text{Salvage Ratio}}{\text{Estimated Average Life}}$$

As evident from the above, this equation consists of two elements. The first element reflects recovery of the initial investment. The second element reflects recovery of net salvage. As we previously indicated, the purpose of considering net salvage in determining the accrual rate is to credit expected salvage and recover cost of removal over the life of the property.

An underlying assumption of the whole life method is that for mass property accounts, as property is retired and new property is installed, the average service life of the group does not change significantly. The whole life method is predicated on homogeneity of the property units included in this group. For mass property accounts that have significant retirement history, where vintage retirement history is available, and where we consider life characteristics in the future to be similar to those observed in the past, we use an actuarial analysis as the principal basis to estimate average service life. NKWD does not currently maintain the detailed data required for this type of analysis.

Conversely, the basic equation used to determine a remaining life depreciation rate is as follows:

$$\text{Remaining Life Rate} = \frac{1 - \text{Salvage Ratio} - \text{Reserve Ratio}}{\text{Estimated Average Remaining Life}}$$

As demonstrated above, the whole life and remaining life equations are comparable. The only difference is, as the names imply, that under the whole life approach, investment is recovered equally over the entire life. With the remaining life method, undepreciated

investment is recovered over the remaining life. So long as no change in life or other characteristics occur during the life of property, the whole life and remaining life depreciation rates will be the same provided depreciation rates have been properly developed.[9]

As discussed previously, because sufficient information does not exist to conduct retirement analyses for the mass property accounts, we base our recommendation of indicated accrual rates on the median value observed from the results of our regional utility survey, with exception of the accounts listed below.

- Account 304 – Structures and Improvements. Our indicated rate of 3.22 percent for Account 304 is based on our unit property analysis for Water Treatment Plant assets. While Account 304 includes structures categorized as Source of Supply, Treatment Plant, Transmission and Distribution, and General Plant, the majority of current and future investment is related to Water Treatment Plant. Our indicated rate of 3.22 percent incorporates data from NKWD's Asset Management Program.

- Account 320 – Water Treatment Equipment. Similar to Account 304, our indicated accrual rate for Water Treatment Equipment is based on our unit property analysis, incorporating additional information from NKWD's Asset Management Program. Our unit property analysis results in an accrual rate of 3.50 percent for Account 320 – Water Treatment Equipment.

- Account 330 – Distribution Reservoirs and Standpipes. Our indicated rate of 2.50 percent (indicated 40 year average service life) for Account 330 is based on the third quartile value from our regional utility survey. We also performed a unit property analysis for Account 330 which resulted in a rate of 3.00 percent (indicated 33 year average service life). Based on our experience with similar utilities and the regional survey, we conclude that the 3.00 percent depreciation rate was too high for Account 330. Therefore, we rely upon the 2.50 percent accrual rate.

- Account 331 – Transmission and Distribution Mains. Our indicated accrual rate of 1.99 percent for Account 331 is based on the third quartile value from our regional utility survey. We rely upon the higher rate based on our understanding of NKWD's aggressive rehabilitation and replacement program, as demonstrated by their Asset Management Program.

- Account 340 – Office Furniture and Equipment and Account 340.1 – Computer Equipment. Our indicated accrual rates for Account 340 are based on a weighting study, which is included in Appendix C. We reviewed the assets that comprise Account 340, which include Office Furniture, Office Equipment, and

[9] Typically, an adjustment to whole life depreciation rates to reflect the amortization of reserve deficiency converts the whole life rate to a remaining life rate.

Computer Equipment (including software). We then grouped Furniture and Office Equipment as one account and weighted our recommended depreciation rate based on the respective plant balances and estimated average service life (30 years for Furniture and 10 years for Office Equipment). The resulting indicated accrual rate is 8.84 percent. We recommend that NKWD classify Computer Equipment and Software, which inherently has a significantly lower average service life than office furniture, as a separate subaccount (340.1) with an indicated accrual rate of 20.00 percent (indicated average service life of 5 years).

- Account 341 – Transportation Equipment. Our indicated accrual rate of 11.35 percent is based on a weighting study, which is included in Appendix C. We reviewed the assets that comprised Account 341, which include Large Trucks and Equipment, Small Trucks, and Cars. Large Trucks and Equipment includes items such as dump trucks, cranes, and associated large equipment. Small trucks generally include pickup trucks and vans. Although NKWD has indicated that it believes it experiences an average service life of five years for trucks and eight years for cars, we find in our study that the average age of small truck and cars is 4.4 years and 6.4 years, respectively. Therefore, we conclude that an average service life of five years is on the low side. Based on our experience with similar utilities, we estimate the average service lives of large trucks to be 12 years and 8 years for small trucks and cars. This results in a weighted average rate of 11.35 percent for Account 341, which is in line with the median value of Account 341 from our regional survey.

Our indicated accrual rates and basis of indicated rate are presented in Table 5-1.

Table 5-1
NKWD Summary of Existing and Indicated Rates

Line No.	[A] Account	[B] Description	[C] Depreciable Plant at 12/31/2004	[D] Existing Accrual Rate	[E] Indicated Accrual Rate	[F] Basis of Indicated Rate
			$			
1	303	Land and Land Rights	605,416	0.00%	0.00%	
2	304	Structures and Improvements	65,516,439	1.69%	3.22%	Unit Property Analysis
3	306	Lakes, Rivers, and Other Intakes	1,524,592	4.63%	2.10%	Regional Median
4	309	Supply Mains	2,307,853	1.01%	1.39%	Regional Median
5	311	Pumping Equipment	8,661,832	3.48%	3.47%	Regional Median
6	320	Water Treatment Equipment	9,285,428	2.19%	3.50%	Unit Property Analysis
7	330	Distribution Reservoirs and Standpipes	7,500,741	1.77%	2.50%	Regional 3rd Quartile
8	331	Transmission and Distribution Mains	106,184,511	1.07%	1.99%	Regional 3rd Quartile
9	333	Services	18,787,274	2.04%	2.25%	Regional Median
10	334	Meters and Meter Installations	6,537,668	2.35%	3.92%	Regional Median
11	335	Hydrants	4,550,842	1.99%	2.45%	Regional Median
12	339	Other Plant and Misc Equipment	3,374,076	11.45%	9.06%	Regional Median
13	340	Office Furniture and Equipment	1,433,584	11.88%	8.84%	Appendix C Weighting Study
14	340.1	Computer Equipment	918,944	24.58%	20.00%	Appendix C Weighting Study
15	341	Transportation Equipment	2,512,074	20.09%	11.35%	Appendix C Weighting Study
16	342	Stores Equipment	284,376	22.07%	4.00%	Regional Median
17	343	Tools, Shop, and Garage Equipment	13,051	28.90%	5.78%	Regional Median
18	345	Power Operated Equipment	529,499	18.94%	7.36%	Regional Median
19	346	Communication Equipment	297,716	9.07%	6.70%	Regional Median
20	347	Miscellaneous Equipment	593,361	13.26%	6.38%	Regional Median
21		Total	241,419,275	2.14%	2.86%	

6.0 Recommended Rates

In Sections 4.0 and 5.0, we develop indicated depreciation expense rates for unit and mass property accounts, respectively. As the final step in developing recommended depreciation rates, we consider our experience, the adequacy of NKWD's depreciation reserve levels, and other appropriate factors. In Table 6-1, we summarize the development of our recommended rates.

Our recommended depreciation rates are set forth in Column R of Table 6-1. In developing the recommended rates, we attempted to evaluate their reasonableness on several levels.

With regard to mass property, due to the lack of detailed data, we are unable to develop our final recommended depreciation rates as we normally prefer. In developing the recommended rates shown in Column R, we are guided by several considerations. These considerations include the reasonableness of the reserve ratio and based on the recommended rate, the number of years to fully depreciate investment.

As we describe in Section 5.0, we rely on the depreciation rates charged by regional utilities for mass property. We use the experience of other utilities in the expectation that the service lives and other considerations which should go into the development of NKWD's depreciation rates, are similar to those of these other utilities. While we do not have a great deal of detailed data for NKWD, based on analysis of existing depreciation reserve balances, we can draw some conclusions.

In order to correct any imbalances in the depreciation reserve accounts, we first determine a theoretical level of where depreciation reserve should be. We calculate this based on the estimated weighted age of the assets in each account, relative to our recommended service lives. Without adjustment, to the extent that calculated reserve, Column K, is greater than or less than the book reserve, Column E, NKWD will under- or over-recover, respectively, its depreciable plant investment. Differences between the calculated theoretical reserve and the book reserve can be attributed primarily to changes in life characteristics or historical rates which have not properly reflected life characteristics. These changing life characteristics and the degree to which these changes are recognized and reflected in the depreciation rates directly affect the book reserves.

By subtracting the actual deprecation reserve from calculated depreciation reserve, we determine the reserve deficiency, Column L. Any amounts that have been over- or under-recovered should be amortized over the remaining life of the asset group. To limit the impact on accrual rates, we recommend a redistribution reserve for those accounts that have a large reserve deficiency. Reserve deficiencies exist in Accounts 304 ($7.4 million), 309 ($167,000), 320 ($712,000), 330 ($710,000), 331 ($5.8 million), 340.1 ($51,000), and 335 ($371,000). Since there are some accounts with very large reserve deficiencies, we recommend redistributing 20 percent of the accounts' reserve deficiencies to those accounts with excess reserves so that the net distribution is zero

(Column M). We recommend redistributing all of Account 340.1's reserve deficiency to minimize the impact in the change in accrual rate. Once the reserve has been redistributed, restated reserve deficiency (Column N) is then divided by the remaining life of the asset group (Column O) to determine the adjustment that will be amortized annually (Column P). By dividing the annual adjustment by existing plant balance, we determine the percentage adjustment (Column Q). The adjustment is then added to or subtracted from our indicated depreciation rate to determine our recommended accrual rate (Column R). The maximum adjustment for any account is 0.40 percent, Account 304, Structures and Improvements.

Table 6-1
Recommended Depreciation Rates

Line No.	[A] NARUC Account	[B] Description	[C] Existing Annual Accrual Rate	[D] At December 31, 2004 Plant in Service	[E] At December 31, 2004 Accum. Reserve	[F] At December 31, 2004 Reserve Ratio	[G] Indicated Accrual Rate	[H] Equiv. Service Life	[I] Existing Weighted Age	[J] Calculated Res. Ratio based on Weighted Age	[K] Calculated Accum. Reserve	[L] Reserve Deficiency /(Excess)	[M] Redist. of Major Reserve Deficiency	[N] Restated Reserve Deficiency	[O] Average Remaining Life	[P] Annual $ to amortize over Rem. Life	[Q] Change in Accrual Rate	[R] Recomm. Accrual Rate	[S] Increase/ (Decr) in Depr. Expense
			%	$	$	%	%	years	years	%	$	$	$	$	years	$	%	%	$
			(a)	(b)	(b)	[E] / [D]		1 / [G]	(a), (c)	[I] / [H]	[D] * [J]	[K] - [E]		[L] + [M]	[H] - [I]	[N] / [O]	[P] / [D]	[G] + [Q]	([R]-[C])*[D]
		Source of Supply																	
1	303	Land and Land Rights	0.00%	605,416	0		0.00%		25.97		-	-	-	-			0.00%	0.00%	-
2	304	Structures and Improvements	1.69%	65,516,439	11,350,180	17.32%	3.22%	31.06	8.90	28.67%	18,782,363	7,432,183	(1,473,000)	5,959,183	22.15	269,004	0.41%	3.63%	1,273,304
3	306	Lakes, Rivers, & Other Intakes	4.63%	1,524,592	601,663	39.46%	2.10%	47.62	9.87	20.73%	316,030	(285,632)	290,000	4,368	37.75	116	0.01%	2.11%	(38,421)
4	309	Supply Mains	1.01%	2,307,853	339,413	14.71%	1.39%	71.94	15.80	21.96%	506,816	167,403	(33,000)	134,403	56.14	2,394	0.10%	1.49%	11,161
5	311	Pumping Equipment	3.48%	8,661,832	3,408,410	39.35%	3.47%	28.86	9.43	32.68%	2,830,941	(577,469)	580,000	2,531	19.43	130	0.00%	3.47%	(1,039)
		Total Source of Supply	1.91%	78,616,131	15,699,665	19.97%	3.15%	31.78	9.31	29.31%	22,436,150	6,736,485	(636,000)	6,100,485	22.46	271,644	0.35%	3.49%	1,245,006
		Treatment Plant																	
6	320	Water Treatment Equipment	2.19%	9,285,428	2,717,678	29.27%	3.50%	28.57	10.55	36.94%	3,429,881	712,203	(142,000)	570,203	18.02	31,647	0.34%	3.84%	153,559
		Transmission and Distribution																	
7	330	Distr. Reservoirs & Standpipes	1.77%	7,500,741	2,542,408	33.90%	2.50%	40.00	17.35	43.36%	3,252,595	710,187	(142,000)	568,187	22.65	25,081	0.33%	2.83%	79,850
8	331	Trans. and Distribution Mains	1.07%	106,184,511	12,557,965	11.83%	1.99%	50.35	8.72	17.31%	18,382,781	5,824,816	(1,165,000)	4,659,816	41.64	111,915	0.11%	2.09%	1,087,546
9	333	Services	2.04%	18,787,274	5,832,870	31.05%	2.25%	44.52	11.47	25.77%	4,841,753	(991,118)	995,000	3,882	33.05	117	0.00%	2.25%	38,602
10	334	Meters and Meter Installations	2.35%	6,537,668	1,490,420	22.80%	3.92%	25.51	5.82	22.83%	1,492,238	1,818	-	1,818	19.69	92	0.00%	3.92%	102,665
11	335	Hydrants	1.99%	4,550,842	1,193,249	26.22%	2.45%	40.90	14.06	34.37%	1,564,114	370,865	(74,000)	296,865	26.84	11,059	0.24%	2.69%	31,982
12	339	*Other Plant and Misc Equip.*	*11.45%*	3,374,076	1,143,635	*33.89%*	*9.06%*	*11.04*	*3.29*	*29.79%*	1,005,057	(138,578)	*140,000*	*1,422*	*7.75*	*183*	*0.01%*	*9.06%*	(80,765)
		Total T&D	1.55%	146,935,111	24,760,547	16.85%	2.31%	43.33	9.42	21.75%	30,538,538	5,777,990	(246,000)	5,531,990	33.90	148,448	0.10%	2.41%	1,259,881
		General Plant																	
13	340	Office Furniture and Equip.	11.88%	1,433,584	1,065,870	74.35%	8.84%	11.31	5.81	51.35%	736,087	(329,782)	330,000	218	5.50	40	0.00%	8.84%	(43,552)
14	340.1	Computer Equipment	24.58%	918,944	690,381	75.13%	20.00%	5.00	4.04	80.70%	741,610	51,229	(51,000)	229	0.96	237	0.03%	20.03%	(41,850)
15	341	Transportation Equipment	20.09%	2,512,074	1,833,191	72.98%	11.35%	8.81	5.69	64.59%	1,622,599	(210,592)	212,000	1,408	3.12	451	0.02%	11.37%	(219,117)
16	342	*Stores Equipment*	*22.07%*	*284,376*	*273,713*	*96.25%*	*4.00%*	*25.00*	9.91	*39.65%*	*112,748*	*(160,964)*	*162,000*	*1,036*	*15.09*	*69*	*0.02%*	*4.02%*	*(51,314)*
17	343	Tools, Shop, & Garage Equip.	28.90%	13,051	2,503	19.18%	5.78%	17.29	0.63	3.65%	477	(2,027)	2,000	(27)	16.66	(2)	-0.01%	5.77%	(3,019)
18	345	Power Operated Equipment	18.94%	529,499	395,978	74.78%	7.36%	13.60	8.58	63.13%	334,253	(61,725)	62,000	275	5.01	55	0.01%	7.37%	(61,312)
19	346	Communication Equipment	9.07%	297,716	257,541	86.51%	6.70%	14.93	6.92	46.36%	138,018	(119,523)	121,000	1,477	8.01	184	0.06%	6.76%	(6,862)
20	347	Miscellaneous Equipment	13.26%	593,361	591,642	99.71%	6.38%	15.67	10.76	68.68%	407,502	(184,139)	186,000	1,861	4.91	379	0.06%	6.45%	(40,434)
		Total General Plant	17.83%	6,582,604	5,110,819	77.64%	10.70%	9.34	6.40	68.53%	4,093,295	(1,017,524)	1,024,000	6,476	2.94	1,414	0.02%	10.72%	(467,460)
21		Total	2.14%	241,419,275	48,288,709	20.00%	2.86%	35.01	9.35	26.70%	60,497,864	12,209,155	0	12,209,155	25.67	453,153	0.19%	3.04%	2,190,986

Notes:
(a) 1 / weighted average service lives within accounts listed in the Tax Asset Detail Report.
(b) Source: Tax Asset Detail 12/31/2004
(c) Date in service of property within an account is weighted based on plant balance.

Appendix A

Results of Regional Utility Survey

Northern Kentucky Water District
Depreciation Rate Survey

NARUC Acct. No.	Alternative Account Numbers	Account Name	South Bend Water Works - IN	Fort Wayne Water Utility - IN	City of Bloomington Water Utility - IN	Indianapolis Water - IN	Indiana-American Water Company - IN	Kentucky-American Water Company - KY	Hardin County Water District #2 - KY	Ohio-American Water Company - OH	Aqua Ohio Inc. - OH	City of Columbus - OH	Citizens Utilities Company of Ohio - OH	Public Utilities Bureau, City of Akron - OH	City Utilities Springfield - MO	Empire District Electric Company - MO	Missouri American Water Company - MO	Raytown Water Company - MO	U.S. Water Company - MO	Range	Median	NKWD Existing Weighted Average Rate	NARUC Acct No.	1st Quartile	3rd Quartile	Count
301		Organization																					301			
302		Franchises																					302			
303		Land and Land Rights																				0.00%	303			
304	21, 331, 341, 3	Structure and Improvements	1.60%	2.25%	1.67%	3.21%	2.57%	2.07%	2.13%	3.24%	2.67%	2.50%	2.84%	2.00%	3.05%	1.62%	4.11%	2.90%	1.75%	1.6% - 4.11%	2.50%	1.69%	304	2.00%	2.90%	17
305	312	Collecting and Impounding Reservoirs			1.00%	1.61%	1.36%	2.20%		2.70%	1.18%		2.70%	2.00%	1.70%		1.85%			1% - 2.7%	1.78%		305	1.42%	2.15%	10
306	313	Lake, River and Other Intakes			1.33%	1.79%	2.60%	2.15%		2.05%	1.64%				3.10%		3.13%			1.33% - 3.13%	2.10%	4.63%	306	1.75%	2.73%	8
307	314	Wells and Springs	2.00%	2.00%		3.75%	3.41%			4.00%	5.48%		2.44%	2.00%	2.20%	2.17%	2.28%			2% - 5.48%	2.28%		307	2.09%	3.58%	11
308		Infiltration Galleries and Tunnels		5.00%			2.07%			2.50%			2.50%							2.07% - 5%	2.50%		308	2.39%	3.13%	4
309	316	Supply Mains		1.50%	1.00%	1.39%	2.43%	1.11%	2.50%	1.29%	1.33%			2.00%	1.00%		2.51%			1% - 2.51%	1.39%	1.01%	309	1.20%	2.21%	11
310		Power Generation Equipment					6.11%	3.29%		3.67%	3.03%	4.00%	3.03%				2.12%			2.12% - 6.11%	3.29%		310	3.03%	3.84%	7
311	324-328	Pumping Equipment	2.50%	2.25%	6.67%	3.00%	4.28%	3.65%		3.78%	3.28%		3.67%	2.00%	4.10%	6.18%	2.90%		2.50%	2% - 6.67%	3.47%	3.48%	311	2.60%	4.02%	14
312		Collecting Reservoirs															1.85%			1.85% - 1.85%	1.85%		312	1.85%	1.85%	1
313		Lake or River Intake															3.13%			3.13% - 3.13%	3.13%		313	3.13%	3.13%	1
320	332	Water Treatment Equipment	2.50%	4.00%	6.67%	3.12%	3.74%	3.94%		3.42%	3.00%	2.50%	2.88%	10.00%	3.60%	4.00%	3.15%		1.50%	1.5% - 10%	3.42%	2.19%	320	2.94%	3.97%	15
330	342	Distribution Reservoirs and Standpipes	1.60%	2.00%	2.00%	3.28%	5.10%	2.21%	2.50%	2.61%	2.06%		2.17%	2.00%	2.20%	2.16%	2.18%	2.50%	1.77%	1.6% - 5.1%	2.18%	1.77%	330	2.00%	2.50%	16
331	343	Transmission and Distribution Mains	1.00%	1.50%	1.33%	1.99%	1.45%	1.14%	1.98%	1.42%	1.69%		1.43%	2.00%	1.20%	1.33%	2.01%	2.00%	1.22%	1% - 2.01%	1.44%	1.07%	331	1.30%	1.99%	16
333	345	Services		1.50%	2.50%	5.11%	3.00%	4.00%	2.32%	4.58%	3.75%		2.17%	2.00%	2.10%	2.08%	2.13%		2.10%	1.5% - 5.11%	2.25%	2.04%	333	2.10%	3.56%	14
334	346	Meters and Meter Installations	2.50%	5.00%	3.33%	3.13%	7.08%	2.57%		5.18%	4.72%	4.00%	3.84%	10.00%	2.60%	2.56%	4.50%	10.00%	2.50%	2.5% - 10%	3.92%	2.35%	334	2.59%	5.05%	16
335	348	Hydrants	1.20%	5.00%	2.00%	2.48%	2.76%	2.46%	3.04%	2.22%	2.44%	2.50%	1.92%		2.30%	2.06%	2.45%	2.50%	2.10%	1.2% - 5%	2.45%	1.99%	335	2.09%	2.50%	16
336		Backflow Prevention Devices																					336			
337	347	Meter Installations				3.87%				2.50%	2.75%				2.60%		3.24%	2.90%	1.80%	1.8% - 3.87%	2.75%		337	2.55%	3.07%	7
339		Other Plant / Miscellaneous Equipment		14.29%	10.00%		4.87%	8.11%						10.00%			6.84%			4.87% - 14.29%	9.06%	11.45%	339	7.16%	10.00%	6
340	391	Office Furniture and Equipment	5.00%	8.00%	10.00%	10.49%	6.07%	10.57%	8.73%	10.18%	4.15%	10.00%	5.00%	10.00%	12.97%	4.00%	7.82%	9.15%	4.50%	4% - 12.97%	8.73%	14.89%	340	5.00%	10.00%	17
341	392	Transportation Equipment	10.00%	15.00%	20.00%	6.07%	7.39%	14.49%	10.16%	16.43%	14.29%	12.50%	20.00%	10.00%	11.20%		10.94%	13.00%	13.33%	6.07% - 20%	12.75%	20.97%	341	10.12%	14.62%	16
342	393	Stores Equipment			6.67%	2.70%	4.11%	3.88%		3.02%	5.00%		5.00%	10.00%	4.00%	3.45%	3.09%			2.7% - 10%	4.00%	22.07%	342	3.27%	5.00%	11
343	394	Tools, Shop and Garage Equipment	10.00%	10.00%	6.67%	4.39%	5.63%	7.10%	8.43%	3.64%	5.94%		5.94%	10.00%	5.00%	2.44%	4.75%	5.00%	4.50%	2.44% - 10%	5.78%	28.90%	343	4.69%	7.43%	16
344	395	Laboratory Equipment		5.00%	6.67%	6.24%	9.95%	10.94%		5.37%	5.88%		6.67%	10.00%	4.80%	2.13%	4.75%	5.00%	6.67%	2.13% - 10.94%	6.06%		344	5.00%	6.67%	14
345		Power Operated Equipment	10.00%	10.00%	10.00%	6.00%	6.80%	8.95%	9.34%	6.46%	7.00%		3.33%	10.00%			7.71%	6.70%	6.67%	3.33% - 10%	7.36%	18.94%	345	6.68%	9.84%	14
346	397	Communication Equipment	5.00%	10.00%	10.00%	5.73%	11.93%	4.68%	2.23%	7.82%	10.00%		5.00%	10.00%	6.70%		6.28%	6.70%	8.33%	2.23% - 11.93%	6.70%	9.07%	346	5.37%	10.00%	15
347		Miscellaneous Equipment	5.00%	7.00%	10.00%	6.10%	5.98%	4.34%	14.79%	3.90%	6.67%		5.00%	10.00%		6.67%	4.17%		6.67%	3.9% - 14.79%	6.38%	13.26%	347	5.00%	6.92%	14
348	399	Other Tangible Plant			10.00%			26.27%	20.01%	25.00%			25.00%				3.81%			3.81% - 26.27%	22.51%		348	12.50%	25.00%	6

Appendix B

Unit Property Analysis

Account 304 - Structures and Improvements

Fiscal Year	Forecast Interim Activity Additions	Retirements	Major Addition	Final Retirements	End of Year Balance
	$	$	$	$	$
			Note 1		
Interim Activity as a percent of Beginning of Year Plant Balance					
	2.0%	0.2%			
Final Retirement Percent Net Salvage				20%	-5.0%
2004					36,092,640
2005	721,853	72,185	3,018,000	603,600	39,156,708
2006	783,134	78,313	610,000	122,000	40,349,528
2007	806,991	80,699			41,075,820
2008	821,516	82,152			41,815,185
2009	836,304	83,630	5,250,000	1,050,000	46,767,858
2010	935,357	93,536	5,725,000	1,145,000	52,189,679
2011	1,043,794	104,379			53,129,094
2012	1,062,582	106,258			54,085,417
2013	1,081,708	108,171	490,000	98,000	55,450,955
2014	1,109,019	110,902	210,000	42,000	56,617,072
2015	1,132,341	113,234	750,000	150,000	58,236,179
2016	1,164,724	116,472	3,050,000	610,000	61,724,430
2017	1,234,489	123,449			62,835,470
2018	1,256,709	125,671			63,966,509
2019	1,279,330	127,933			65,117,906
2020	1,302,358	130,236			66,290,028
2021	1,325,801	132,580			67,483,249
2022	1,349,665	134,966			68,697,947
2023	1,373,959	137,396			69,934,510
2024	1,398,690	139,869			71,193,331
2025	1,423,867	142,387			72,474,811
2026	1,449,496	144,950			73,779,358
2027	1,475,587	147,559			75,107,386
2028	1,502,148	150,215			76,459,319
2029	1,529,186	152,919			77,835,587
2030	1,556,712	155,671			79,236,628
2031	1,584,733	158,473			80,662,887
2032	1,613,258	161,326			82,114,819
2033	1,642,296	164,230			83,592,886
2034	1,671,858	167,186			85,097,557
2035	1,701,951	170,195			86,629,314
2036	1,732,586	173,259			88,188,641
2037	1,763,773	176,377			89,776,037
2038	1,795,521	179,552			91,392,005
2039	1,827,840	182,784			93,037,061
2040	1,860,741	186,074			94,711,729
2041	1,894,235	189,423			96,416,540
2042	1,928,331	192,833			98,152,037
2043	1,963,041	196,304			99,918,774
2044	1,998,375	199,838			101,717,312
2045	2,034,346	203,435			103,548,224
2046	2,070,964	207,096			105,412,092
2047	2,108,242	210,824			107,309,509
2048	2,146,190	214,619			109,241,080
2049	2,184,822	218,482			111,207,420
2050	2,224,148	222,415			113,209,153
2051	2,264,183	226,418			115,246,918
2052	2,304,938	230,494			117,321,363
2053	2,346,427	234,643			119,433,147
2054	2,388,663	238,866			121,582,944
2055	-	243,166			121,339,778
Total	78,008,782	8,044,044	19,103,000	125,160,378	4,143,361,830

Remaining Life Depreciation Rate Calculation:

Initial Balance	36,092,640
Interim Additions	97,111,782
Less Final Retirement Net Salvage	(6,258,019)
Total to be Recovered	139,462,441
Accumulated Depreciation (2004 EOY)	(6,252,751)
Remaining Life Balance	133,209,690
Forecast Plant Balances	4,143,361,830
Annual Accrual Rate	3.22%
Depreciable Service Life	31.1

Note 1: NKWD Moderate Capital Improvement Program
Split 50/50 between Accts 304 and 320

Account 320 - Water Treatment Equipment

Fiscal Year	Forecast Interim Activity Additions	Retirements	Major Addition	Final Retirements	End of Year Balance
	$	$	$ Note 1	$	$
Interim Activity as a percent of Beginning of Year Plant Balance	2.0%	0.5%			
Final Retirement Percent Net Salvage				20%	-5.0%
2004					9,285,428
2005	185,709	46,427	3,017,000	603,400	11,838,309
2006	236,766	59,192	600,000	120,000	12,495,884
2007	249,918	62,479			12,683,322
2008	253,666	63,417			12,873,572
2009	257,471	64,368	5,250,000	1,050,000	17,266,676
2010	345,334	86,333	5,725,000	1,145,000	22,105,676
2011	442,114	110,528			22,437,261
2012	448,745	112,186			22,773,820
2013	455,476	113,869	490,000	98,000	23,507,427
2014	470,149	117,537	210,000	42,000	24,028,039
2015	480,561	120,140	750,000	150,000	24,988,459
2016	499,769	124,942	3,050,000		28,413,286
2017	568,266	142,066			28,839,485
2018	576,790	144,197			29,272,078
2019	585,442	146,360			29,711,159
2020	594,223	148,556			30,156,826
2021	603,137	150,784			30,609,179
2022	612,184	153,046			31,068,316
2023	621,366	155,342			31,534,341
2024	630,687	157,672			32,007,356
2025	640,147	160,037			32,487,466
2026	649,749	162,437			32,974,778
2027	659,496	164,874			33,469,400
2028	669,388	167,347			33,971,441
2029	679,429	169,857			34,481,013
2030	689,620	172,405			34,998,228
2031	699,965	174,991			35,523,201
2032	710,464	177,616			36,056,049
2033	721,121	180,280			36,596,890
2034	731,938	182,984			37,145,844
2035	742,917	185,729			37,703,031
2036	754,061	188,515			38,268,577
2037	765,372	191,343			38,842,605
2038	776,852	194,213			39,425,244
2039	788,505	197,126			40,016,623
2040	800,332	200,083			40,616,872
2041	812,337	203,084			41,226,125
2042	824,523	206,131			41,844,517
2043	836,890	209,223			42,472,185
2044	849,444	212,361			43,109,268
2045	862,185	215,546			43,755,907
2046	875,118	218,780			44,412,246
2047	888,245	222,061			45,078,429
2048	901,569	225,392			45,754,606
2049	915,092	228,773			46,440,925
2050	928,818	232,205			47,137,539
2051	942,751	235,688			47,844,602
2052	956,892	239,223			48,562,271
2053	971,245	242,811			49,290,705
2054	985,814	246,454			50,030,065
2055	0	250,150			49,779,915
Total	33,148,050	8,537,163	19,092,000	52,988,315	1,757,212,468

Remaining Life Depreciation Rate Calculation:

Initial Balance	9,285,428
Interim Additions	52,240,050
Less Final Retirement Net Salvage	(2,649,416)
Total to be Recovered	64,174,894
Accumulated Depreciation (2004 EOY)	(2,717,678)
Remaining Life Balance	61,457,216
Forecast Plant Balances	1,757,212,468
Annual Accrual Rate	3.50%
Depreciable Service Life	28.6

Note 1: NKWD Moderate Capital Improvement Program
Split 50/50 between Accts 304 and 320

Appendix C
Weighting Study for Accounts 340 and 341

Northern Kentucky Water District
Calculation of Whole Life Rates for Account 340

Line No.	[A] Description	[B] Average Age at 12/31/2004	[C] Depreciable Plant 12/31/2004	[D] Percent of Total	[E] Average Service Life	[F] Whole Life Rate
1	Account 340 Subcategories					
2	Furniture	5.14	249,598	10.61%	30.00	3.33%
3	Office Equipment	5.95	1,183,986	50.33%	10.00	10.00%
4	Total	5.81	1,433,584	60.94%	13.48	8.84%
5	Weighted Average Rate for Office Furniture and Equipment					8.84%
6	Computers and Software	4.04	918,944	39.06%	5.00	20.00%
7	Total Account 340	5.12	2,352,529	100.00%	10.17	13.20%

Northern Kentucky Water District
Calculation of Whole Life Rate for Account 341

Line No.	[A] Description	[B] Average Age at 12/31/2004	[C] Depreciable Plant 12/31/2004	[D] Percent of Total	[E] Average Service Life	[F] Whole Life Rate
1	Account 341 Subcategories					
2	Large Trucks & Equipment	8.70	722,822	27.57%	12.00	8.33%
3	Small Trucks	4.41	1,203,433	45.89%	8.00	12.50%
4	Cars	6.38	695,942	26.54%	8.00	12.50%
5	Subtotal	6.12	2,622,197	100.00%	9.10	11.35%
6	(Less unidentified retirements)		(110,123)			
7	Total	6.12	2,512,074		9.10	11.35%

CONTACT INFORMATION:

For more information, please contact:
Peggy Howe
Black & Veatch
11401 Lamar Avenue
Overland Park, KS 66211
Tel: 913-458-3809
Fax: 913-458-3817
Email:

BLACK & VEATCH
building a **world** of difference™

ENERGY WATER INFORMATION GOVERNMENT

COMMONWEALTH OF KENTUCKY
BEFORE THE PUBLIC SERVICE COMMISSION

In the Matter of:

APPLICATION OF NORTHERN	)	
KENTUCKY WATER DISTRICT	)	CASE NO. 2006- 00398
FOR APPROVAL OF DEPRECIATION	)	
STUDY	)	

TESTIMONY OF

Larry W. Loos

Q. Please state your name and business address.

A. Larry W. Loos, 11401 Lamar, Overland Park, KS 66211.

Q. What is your occupation?

A. I am employed by Black & Veatch Corporation (Black & Veatch). I am currently assigned to the Company's Enterprise Management Solutions Division, where I serve as a Director.

Q. How long have you been with Black & Veatch?

A. I have been employed by the firm continuously since 1971.

Q. What is your educational background?

A. I am a graduate of the University of Missouri at Columbia, with a Bachelor of Science Degree in Mechanical Engineering and a Masters Degree in Business Administration.

Q. Are you a registered professional engineer?

A. Yes, I am a registered Professional Engineer in the states of Colorado, Indiana, Iowa, Kansas, Louisiana, Missouri, Nebraska, and Utah.

Q. To what professional organizations do you belong?

A. I am a member of the American Society of Mechanical Engineers, the National Society of Professional Engineers, the Missouri Society of Professional Engineers, the Society of Depreciation Professionals, and the Company's representative to the American Gas Association.

Q. What is your professional experience?

A. I have been responsible for numerous engagements involving electric, gas, and other utility services. Clients served include both investor-owned and publicly

owned utilities; customers of such utilities; and regulatory agencies. During the course of these engagements, I have been responsible for the preparation and presentation of studies involving weather normalization, normal degree days, valuation, depreciation, cost of service, allocation, rate design, pricing, financial feasibility, cost of capital, and other engineering, economic and management matters.

Q. Please describe the firm of Black & Veatch.

A. Black & Veatch Corporation has provided comprehensive engineering, consulting, and management services to utility, industrial, and governmental clients since 1915. The Company specializes in engineering and construction associated with utility services including water, wastewater, electric, gas, telecommunications, and waste disposal. Service engagements consist principally of investigations and reports, design and construction, feasibility analyses, rate and financial reports, appraisals, reports on operations, management studies, and general consulting services. Present engagements include work throughout the United States and numerous foreign countries. Including personnel assigned to affiliated companies, Black & Veatch has a staff of about 6,000 people.

Q. Have you previously appeared as an expert witness?

A. Yes, I have. I have presented expert witness testimony before the Federal Energy Regulatory Commission as well as before regulatory bodies in the states of Colorado, Illinois, Indiana, Iowa, Kansas, Minnesota, Missouri, New York, Pennsylvania, North Carolina, South Carolina, Texas, Utah, and Vermont. I have also presented expert witness testimony before District Courts in Colorado, Iowa,

Kansas, Missouri, and Nebraska; and before the Courts of Condemnation in Iowa and Nebraska. I have also served as a special advisor to the Connecticut Department of Public Utility Control.

Q. For whom are you testifying in this matter?

A. I am testifying on behalf of Northern Kentucky Water District ("NKWD" or "District").

Q. Has your company been retained by the District to perform a review of its depreciation rates?

A. Yes.

Q. Is the report of your review of those rates attached to the Application as Exhibit 1?

A. Yes, it is. Exhibit 1 was prepared under my direction and supervision.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to briefly explain the methodology I relied on in preparing the study and report and the impact on the District if the depreciation rates I recommend are implemented.

Q. Why did NKWD initiate this study?

A. In Case No. 2002-00105, the Public Service Commission ordered the District to prepare a depreciation study prior to the filing of its next general rate case.

Q. When did the study begin and what was involved in the review process?

A. In Case Nos. 2003-00224 and 2005-00148, NKWD requested extensions of time to file a depreciation study in conjunction with its rate proceedings. Subsequent to the Order in Case No. 2002-00105, NKWD began the process of developing a

comprehensive Asset Management Study, which was estimated to take up to approximately two years to complete. I understand that NKWD believed that the Asset Management Study would provide an analysis of NKWD's facilities, including their age, condition, and expected useful life. The Commission granted NKWD's motions for extensions of time to file its depreciation study.

The Asset Management Study was completed in May 2004. In January 2005, I began my depreciation study by visiting NKWD's facilities, interviewing key NKWD personnel, and reviewing available data. At that time, I discussed with NKWD the data requirements for a depreciation study, specific depreciation methodologies, and if there were any operating and financial metrics that should be considered in the study. We discussed major capital expenditures for NKWD's water treatment plants, capitalization policies, accounting treatments, and capital improvement plans. I also toured NKWD's system.

Q. What information did you review in making the study?

A. I requested NKWD's continuing property record (CPR); plant in service, accrual rates and reserve by account; and detail regarding major capital additions or retirements for its water treatment plants.

Q. Did NKWD provide the information you requested?

A. No. NKWD does not maintain a CPR. The most detailed plant data I identified is a report titled "Tax Asset Detail". NKWD did supply most of the other information I requested. The Tax Asset Detail report includes the account number, property description, date in service (vintage year), original cost, current year's depreciation expense, accumulated depreciation reserve, and a life over

which NKWD depreciates the property. I reviewed the Tax Asset Detail report for 12 months ended December 2004, NKWD's Annual Reports from 1999-2004 that it submits to the Commission, and NKWD's Asset Management Program Study (May 2004).

Q. Are there any limitations on the scope or applicability of the study?

A. Yes, there are. Because NKWD does not maintain a CPR, there is no comprehensive record of historical additions and retirements. Therefore I could not perform an actuarial analysis on the mass property which would have allowed me to estimate average service lives specific to NKWD's retired property.

In addition, historical additions and plant balance data are not available for an extended period. Without this data, I cannot use the semi-actuarial simulated plant balance method, which again does not allow me to estimate average service lives specific to NKWD's retired property. NKWD's Annual Reports contain data regarding annual plant additions and plant balances by account needed to perform simulated plant balance analyses, however I found these reports for the periods subsequent to 1999. Typically, I prefer to use a history of at least 30 years to perform simulated plant balance. In addition, the District merged with the Campbell County Water District in December 1996, therefore there is an additional challenge of having complete historical data from the merger of systems in two counties.

Because of the lack of detailed data specific to the District, I relied upon data from other regional utilities in my analyses. To obtain this data, I surveyed 17 utilities in Indiana, Kentucky, Ohio, and Missouri. Using data from other

regional utilities as a proxy for NKWD's depreciation rates is an accepted practice absent specific utility data. In those cases where I rely on detailed data, I test the results against my experience with other utilities. As a result, I do not believe that the absence of detailed retirement data affects the reasonableness or accuracy of my results.

Q. Do you consider NKWD remiss in not maintaining complete property records?

A. By no means. With limited exception, in my experience, I have found that publicly owned (municipal) utility systems do not maintain a comprehensive record of additions and retirements. I have also encountered investor-owned utility accounting records which do not have the required detail for one reason or another even though they are required by state and federal regulations to maintain detailed records in conformance with the Uniform System of Accounts. Further, as I mentioned earlier, even if NKWD had exceptionally detailed records, the reliability of the results would be compromised due to the various mergers and consolidations NKWD has undergone.

Q. What are the principal recommendations set forth in Exhibit 1?

A. I recommend changes in depreciation expense rates that if implemented will result in an aggregate annual increase of approximately $2,191,000 (42%) in annual depreciation expense. Depending upon account, the depreciation accrual rates I recommend are higher, and in some cases less than, those rates currently utilized by NKWD. The most significant change I recommend relates to Account 304 - Structures and Improvements ($1,273,000) and Account 331 - Transmission and

Distribution Mains ($1,088,000). These relatively large increases are offset by a decrease in depreciation expense for NKWD's general plant accounts of $467,500.

Q. Why are these recommendations important to the District?

A. Based on my studies, I conclude that under existing depreciation expense rates, the District does not have a reasonable expectation of recovering the total cost of its investment over the service life of the property being depreciated. My recommended depreciation expense rates will provide the District a better chance to recover its net investment (total cost) of its utility property over its useful life. By properly charging depreciation, the total cost of utility property is appropriately distributed over the useful life in such a way as to equitably allocate cost to the period during which service is provided through the use and consumption of such property. The use of depreciation expense rates that are too low ultimately results in future customers subsidizing existing customers.

Q. In your opinion, are the depreciation rates you recommend more reliable and accurate than the rates currently being used?

A. Yes, they are.

Q. When does the District intend to implement these recommendations?

A. The District informs me that it plans to file a general rate case application with the Commission in April or May, 2007 and that the District intends to use depreciation rates approved by the Commission in this case for purposes of determining its annual depreciation expense in its rate filing as well as for accounting purposes. In order for that to occur, the Commission would need to

approve the depreciation rates (study) sometime in late January or early February, 2007.

Q. What impact does the implementation of this study have for ratemaking purposes?

A. The District has been significantly under-recovering its depreciation expense due to inadequate depreciation rates. By implementing the rates I recommend in the depreciation study, the District will more likely recover its investment over the life of the property.

Q. Does this conclude your testimony?

A. Yes, it does.

AFFIDAVIT

STATE OF KANSAS

COUNTY OF JOHNSON

Affiant, Larry W. Loos, after being first sworn, deposes and says that the foregoing prepared testimony is true and correct to the best of his knowledge and belief except as to those matters that are based on information provided to him and as to those he believes to be true and correct.

Larry W. Loos

Larry W. Loos

This instrument was produced, signed and declared by Larry W. Loos to be his act and deed the 30th day of August, 2006.

Deborah A. Butler

Notary Public

My Commission expires: 8/10/08

DEBORAH A. BUTLER
Notary Public – State of Kansas
Appointed in Johnson County
My Expires 8/10/08