

705 West Fir Avenue
Mailing Address:
P.O. Box 176
Fergus Falls, MN 56538-0176
(218) 736-6935

May 31, 2019

Mr. Daniel P. Wolf
Executive Secretary
Minnesota Public Utilities Commission
121 Seventh Place East, Suite 350
St. Paul, MN 55101-2147

RE: Annual Depreciation Study
Docket No. G004/D-19-____

Dear Mr. Wolf:

Great Plains Natural Gas Co. (Great Plains), a Division of Montana-Dakota Utilities Co., herewith electronically files its Annual Depreciation Study pursuant to Minnesota Rules parts 7825.0500 to 7825.0700.

Attachment A is the Annual Depreciation Study that updates Great Plains' five-year study from Docket No. G004/D-17-450 to reflect plant in service and book depreciation reserve balances as of December 31, 2018. Overall, the application of the proposed depreciation rates results in an increase of \$136,821 from current rates established in Docket No. G004/D-18-369. The composite annual depreciation rate under present rates is 4.31 percent, while the proposed composite depreciation rate is 4.32 percent.

Pursuant to the Commission's Order issued on February 22, 2019 in Docket No. G004/D-18-369, Great Plains provides the following information:

- A summary of the additions, retirements, adjustments, and transfers for plant-in-service accounts and their associated accumulated depreciation accounts, as required by the Minnesota Rule 7825.0700, has been included in Section 5 beginning on page 5-31.
- Great Plains began reflecting the Minnesota-jurisdictional amounts in the gas plant-in-service accounts in its 2018 Jurisdictional Annual Report (JAR) filing and will continue to present the jurisdictional information in future filings.
- As discussed in the Docket, Great Plains will provide information regarding building retirements. The Company did have a large building retirement and now provides an analysis of the building retirements included in Account 390 – General Structures and Improvements as Attachment B.

Great Plains requests that the depreciation rates in this annual study be certified effective as of January 1, 2019.

If you have any questions regarding this study, please contact me at (701) 222-7856, or Brian M. Meloy, at (612) 335-1451.

Sincerely,

/s/ Tamie A. Aberle

Tamie A. Aberle
Director of Regulatory Affairs

cc: Brian M. Meloy

Attachment A

Attachment A



**2019 TECHNICAL DEPRECIATION UPDATE
Great Plains Natural Gas Co.**

**TECHNICAL UPDATE
Calculated Annual Depreciation Accrual Rates Applicable
to Plant in Service as of December 31, 2018**

Prepared May 2019

*Concentric Advisors, ULC
200 Rivercrest Drive SE, Ste 277
Calgary, AB Canada T2C 2X5
403.257.5946*

*Washington, D.C. Office
1300 19th St NW, Ste 620
Washington, DC 20036
202.587.4470*

*Headquarters
293 Boston Post Rd West, Ste 500
Marlborough, MA 01752
508.263.6200*

*Chicago, IL Office
350 West Hubbard Street, Ste 600
Chicago, IL 60654
224.999.7372*



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SECTION 1

1 STUDY HIGHLIGHTS

Pursuant to request of the Great Plains Natural Gas Co. (“GPNG” or the “Company”), Concentric Energy Advisors (“Concentric”) completed an annual Technical Update (“the Update”) to the results of the annual depreciation update filed by GPNG (as revised) in October 2018. The results of the Update contained herein relate to the natural gas transmission, distribution and General Plant assets as of December 31, 2018. The purpose of the update is to determine the annual depreciation accrual rates and amounts for ratemaking purposes applicable to the original cost of plant as of December 31, 2018.

The depreciation rates in this update have been calculated using the same depreciation methods, procedures and techniques

employed in the last GPNG depreciation study. Additionally, the depreciation rate calculations are based on the average service life, retirement dispersion and net salvage estimates developed in the last full depreciation study.

Concentric notes that in the calculation of depreciation rates, the significant level of capital expenditures in 2018 have resulted in an increase in the annual depreciation rates for accounts 367.0 – Transmission Mains and 396.2 – Power Operated Equipment. Also, of note, in seven accounts minor adjustments to historic vintage balances were required to appropriately deal with the 2018 retirement transactions.

The Update results are summarized at an aggregate functional group level as follows:

Summary of Original Cost, Currently Approved Accrual Percentages and Amounts, and Updated Accrual Percentage and Amounts

Plant Group / Accounts	Original Cost	Annual Accrual 2018	Annual Accrual Updated
Transmission Plant	\$7,148,697	1.24%	\$88,644
Distribution Plant	\$47,269,936	4.55%	\$2,150,782
General Plant	\$6,680,528	3.94%	\$263,213
TOTAL	\$61,099,161	4.31%	\$2,502,639



SECTION 2

2 BASIS OF THE UPDATE

2.1 Scope

Concentric has been retained to develop an annual technical Update to the annual technical update completed in 2018 for GPNG. The purpose of the Update was to determine the annual depreciation accrual rates and amounts for ratemaking purposes applicable to the actual surviving original cost as of December 31, 2018. The depreciation accrual rates presented herein are based on generally-accepted methods and procedures for calculating depreciation.

The annual depreciation accrual rates and amounts are based on the broad group straight line method of depreciation using the Average Life Group (“ALG”) procedure and were applied using the remaining life technique. The calculations were based on the actual plant accounting ledger values as at December 31, 2018. Inherent in the application of the depreciation parameters with the remaining life technique, the accumulated depreciation accounts are trued up of any variances between the actual book accumulated depreciation reserve and calculated accrued depreciation requirement are amortized over the composite remaining life of each group of assets.

2.1.1 Purpose of a technical update

Concentric notes that the depreciation rates should be reviewed periodically as plant and accumulated depreciation account activity may result in materially different depreciation rates. The survivor curves, net salvage percentages, and amortization periods determined in the Company’s most recent full depreciation study should be the basis for the periodic recalculations. Complete depreciation studies, which re-evaluate these parameters, should be performed every three to five years.

When depreciation rates are calculated utilizing a remaining life technique, the depreciation rate is established by dividing the undepreciated value of each group of assets (after consideration to the net salvage requirements) by the composite remaining life of the group of assets. This calculation is made for each vintage surviving investment as of the date of the study (or Update), and then composited into a calculation for the account or group as a whole. As follows, this calculation requires two estimates:

- The actual booked accumulated depreciation for each vintage within each account. GPNG does not track the booked accumulated depreciation reserve by vintage within each account. The depreciation expense is calculated at an account level and booked to accumulated depreciation at the same account level. Concentric notes that this is the practice employed by virtually all regulated utilities. As such, the accumulated depreciation by account, is allocated within the account, to each vintage on the basis of the calculated accumulated by vintage. The calculated accumulated depreciation is a function of the estimated survivor curve, the average service life estimate, the net salvage estimates and the achieved age of each vintage.



- The estimated remaining life of each vintage with each account. The estimated remaining life of each account is a direct function of the achieved age of each vintage, the estimated survivor curve and the average service life estimate.

Once the above two estimates are determined (the allocated booked reserve by vintage and the average remaining life of each vintage) an annual accrual requirement for each vintage is determined by dividing the net book value for each vintage (considering the estimated future salvage requirements) by the average remaining life of the vintage. The annual requirement for each vintage is summed at the account level and divided into the sum of the accounts original cost surviving as of the study date to determine a required remaining life depreciation accrual rate for the account.

The calculations as described above are dependent upon the actual total account book depreciation and the estimated remaining life of each vintage. The depreciation rate can vary year over year due to plant addition and retirement activity. Additionally, the age of retirements in any given year can cause a required adjustment to the depreciation rate going forward. Therefore, annual technical updates are often required by regulators.

2.2 Information Provided by GPNG

GPNG has provided Concentric with the required information as of December 31, 2018 for all accounts being studied in this Update. The information includes the following:

- current balances by vintage year for each account (aged balances). The balances provide the amount of investment sorted by installation year currently in operation. The actual 2018 transaction plant accounting data was forwarded directly from GPNG to Concentric so that the 2017 files could be updated through December 31, 2018;
- the actual booked accumulated depreciation amounts by account as of December 31, 2018 were forwarded directly from GPNG to Concentric;
- the last full depreciation study was provided to Concentric to use in the determination of prior depreciation practices and approved depreciation parameters; and
- additions related to Transmission Structures were capitalized into Account 366.00. This account had not previously been used at the time of the last full depreciation study or as of the 2018 annual technical update. The total capitalized cost into Account 366.00 in 2018 was \$16,683.

2.3 Data Reconciliation

The above data was reviewed and reconciled to Company control schedules to ensure accuracy and reasonableness in use of the calculations developed in this Update. These checks include:

- that the surviving investment by account equals (or can be reconciled to) the Company's gross plant in service and accumulated depreciation ledger balances;



- that the surviving investment in each vintage is not negative. In other words, this check confirms that the sum of retirements from any given vintage have not exceeded the amount of plant additions to the vintage; and
- that this report reflects the consolidation of the “Mains” and “Services” plant accounts consistent with the 2018 technical update.



SECTION 3

3 DEVELOPMENT OF THE REQUIRED DEPRECIATION RATES

3.1 Depreciation

The development of the depreciation calculations requires the input of an Average Service Life, Iowa curve and Net Salvage recommendations (the “depreciation parameters”). Additionally, to complete the depreciation calculations, the calculation methods must be established. Specifically, the selection of the depreciation method must establish three types of additional input:

- the choice of a depreciation method;
- a basis upon which to apply the method, and
- in the case of group assets, a procedure to use in grouping the assets.

In this Update, the depreciation rates for GPNG have been calculated in accordance with the Straight-Line method, the Average Life Group procedure and applied using the Remaining Life technique.

Depreciation in public utility regulation, is the loss in service value not restored by current maintenance, incurred with the consumption or prospective retirement of utility plant in service from causes which are known to be in current operation and against which the utility is not protected by insurance. Among causes to be given consideration are: wear and tear; deterioration; action of the elements; inadequacy; obsolescence; changes in the art; changes in demand; and the requirements of public authorities. When considering the action of the elements, the average service life calculations have considered large catastrophic events that have occurred and impacted the life estimates of utilities across North America. The average service life of utilities has been influenced by events including forest fires, earthquakes, tornadoes, ice storms, wind storms, large scale flooding, fires, intentional actions of third parties and other natural forces of nature.

Depreciation, as used in accounting, is a method of distributing fixed capital costs less net salvage over a time period, by allocating annual amounts to expense. Each annual amount of such depreciation expense is part of that year's total cost of providing natural gas utility service. Normally, the time over which the fixed capital cost is allocated to the cost of service, is equal to the time over which an item renders service, that is the item's service life. The most prevalent method of allocation is to distribute an equal amount of cost to each year of service life. This method is known as the Straight-Line method of depreciation.

The calculation of annual and accrued depreciation based on the Straight-Line method requires the estimation of survivor curves and is described in the following sections of this Update. The development of the proposed depreciation rates also requires the selection of group depreciation procedures, as discussed below.

This Update uses the estimates as approved in the last full GPNG depreciation study and as used in the 2018 technical update. Imbedded in the remaining life calculations, the variances between the calculated accrued depreciation and the book accumulated depreciation are amortized over the composite remaining life of each account.



In seven accounts, minor adjustments to historic vintage balances were required to appropriately deal with the 2018 retirement transactions to avoid negative vintage balances. This was done for the following accounts:

- 367.0 – Transmission Mains
- 369.0 – Meas & Reg Station Equipment
- 376.0 – Mains (Distribution)
- 379.0 – Meas & Reg Station Equipment – City Gate
- 380.0 – Services
- 392.1 – Transportation Equipment - Trailers
- 392.2 – Transportation Equipment

The 2018 investment in Account 366.00 – Transmission structures has not yet been included in a full depreciation study review, and as such the account does not have currently approved depreciation rates. In discussion with GPNG, Concentric has determined that the structures as installed on the transmission system are similar to the structures installed in the distribution system Account 375.00 – Distribution System Measuring and Regulating Station Structures. Given the similar nature of these assets to the assets installed in Account 375.00, Concentric has used the average service life and net salvage parameters as currently approved for Account 375.00 for the 2018 investment in account 366.00 in the calculations included with this technical update.

3.2 Update on PVC Program

Great Plains continues its mains and services PVC replacement program and at the end of 2018, approximately 45% of total mains and 55% of total services planned to be replaced has been completed. The remaining life of Account 378 is largely dependent on the life of the PVC replacement program and has only changed marginally from 31.9 years as calculated in the 2018 update to 32.2 years in this technical update. Also as noted in the detailed depreciation calculations related to account 376.00 – Distribution Mains at page 5-11 of this report, the level of capital additions have remained relatively consistent over the period since the last full depreciation study. As such, the depreciation rates for Accounts 381 and 383, Meters and House Regulators, respectively, presented in the current technical update are unchanged from the previous study. During 2018, 50,706 feet of mains and 439 services were replaced. Great Plains will continue to monitor the status of the PVC replacement and will provide updates in future technical updates.



SECTION 4

4 RESULTS OF UPDATE

4.1 Qualification of Results

The calculated annual and accrued depreciation are the principal results of the update. Continued surveillance and periodic revisions are normally required to maintain continued use of appropriate annual depreciation accrual rates. An assumption that accrual rates can remain unchanged over a long period of time implies a disregard for the inherent variability in service lives and salvage, and for the change of the composition of property in service. The annual accrual rates and the accrued depreciation were calculated in accordance with the Straight-line method, using the ALG procedure based on estimates which reflect considerations of current historical evidence and expected future conditions.

4.2 Description of Detailed Tabulations

The following tables provide summaries by account of the original cost of investment, calculated and booked accumulated depreciation amounts, the required amount of annual depreciation expense, the required depreciation rate to be applied against the original cost of the account and the estimated composite remaining life of the surviving plant in service.

The detailed calculations of annual depreciation applicable to depreciable assets, as of December 31, 2018, are presented in account sequence starting in Section 5. The tables indicate the estimated average survivor curves used in the calculations. The tables set forth (for each installation year) the original cost, calculated accrued depreciation and the calculated annual accrual.

GREAT PLAINS NATURAL GAS CO.

TABLE 1. REVISED SUMMARY OF SERVICE LIFE AND NET SALVAGE ESTIMATES AND CALCULATED ANNUAL AND ACCRUED DEPRECIATION RELATED TO THE RECOVERY OF AVERAGE ORIGINAL COST IN GAS PLANT AS OF DECEMBER 31, 2018

- TOTAL -

ACCOUNT	DESCRIPTION	ESTIMATED SURVIVOR CURVE	NET SALVAGE PERCENT	SURVIVING ORIGINAL COST AS OF 12/31/2018	CALCULATED ACCRUED DEPRECIATION	BOOK RESERVE	ANNUAL ACCRUAL AMOUNT	RATE	REMAINING LIFE
TRANSMISSION PLANT									
365.2	RIGHTS OF WAY	50-R2.5	0	158,152	101,961	125,291	1,199	0.76	17.8
366.0	TRANSMISSION STRUCTURES	85-S1	-5	16,683	309	39	600	3.60	29.1
367.0	TRANSMISSION MAINS	50-R3	-20	6,097,192	1,238,506	1,448,992	125,012	2.05	41.5
369.0	MEAS & REG STATION EQUIPMENT	40-R0.5	-10	876,671	169,310	222,360	21,831	2.49	33.0
TOTAL TRANSMISSION PLANT				7,148,697	1,510,086	1,796,682	148,642	2.08	
DISTRIBUTION PLANT									
374.2	RIGHTS OF WAY	50-R2.5	0	17,654	9,420	9,164	367	2.08	23.3
375.0	DISTR. MEAS & REG STATION STRUCTURES	N/A	-5	34,860	N/A	28,001	990 ¹	2.84	N/A
376.0	MAINS	46-R3	-55	20,844,261	9,725,081	10,215,541	663,973	3.19	32.2
378.0	MEAS & REG STATION EQUIP-GENERAL	N/A	-25	515,539	N/A	401,406	64,700 ²	12.55	N/A
379.0	MEAS & REG STATION EQUIP-CITY GATE	28-R3	-5	489,650	149,186	132,883	20,089	4.10	19.9
380.0	SERVICES	39-R3	-75	16,990,592	8,662,388	9,676,121	669,027	3.94	27.6
381.0	METERS & METER INSTALLATIONS	N/A	-25	7,228,434	N/A	4,575,990	716,338 ³	9.91	N/A
383.0	HOUSE REGULATORS	N/A	-5	965,429	N/A	443,088	63,911 ³	6.62	N/A
385.0	INDUSTRIAL MEAS. & REG. STATION EQUIPMENT	40-S4	0	162,784	18,270	17,890	4,087	2.51	35.5
387.1	CATHODIC PROTECTION EQUIPMENT	25-R3	0	9,235	3,962	3,659	401	4.34	14.3
387.2	OTHER EQUIPMENT	30-R3	0	11,498	9,738	11,498	-	-	4.6
TOTAL DISTRIBUTION PLANT				47,269,936	18,578,045	25,515,241	2,203,883	4.66	
GENERAL PLANT									
390.0	GENERAL STRUCTURES & IMPROVEMENTS	45-R4	0	2,504,707	663,003	812,380	48,189	1.92	33.1
391.1	OFFICE FURNITURE & EQUIPMENT	16-SQ	0	89,305	57,385	56,978	5,446	6.10	5.7
391.3	COMPUTER & ELECTRONIC EQUIPMENT	4-SQ	0	105,067	95,378	88,199	15,622	14.87	0.4
392.1	TRANSPORTATION EQUIPMENT - TRAILERS	12-R1	10	22,349	12,533	23,335	-	-	4.5
392.2	TRANSPORTATION EQUIPMENT	7-L2	20	1,468,028	500,274	639,362	122,821	8.37	4.0
394.0	TOOLS, SHOP, & GARAGE EQUIPMENT	20-SQ	0	757,796	262,445	258,887	38,801	5.12	13.1
396.1	POWER OPERATED EQUIPMENT - TRAILERS	6-L0	65	158,027	17,575	35,215	4,217	2.67	4.1
396.2	POWER OPERATED EQUIPMENT	6-L0	65	1,163,907	101,201	243,640	30,164	2.59	4.5
397.0	COMMUNICATION EQUIPMENT	18-SQ	0	357,683	214,610	215,486	19,404	5.42	7.2
398.0	MISCELLANEOUS EQUIPMENT	25-SQ	0	53,659	22,275	20,516	2,271	4.23	14.6
TOTAL GENERAL PLANT				6,680,528	1,946,679	2,393,999	286,935	4.30	
TOTAL GAS PLANT STUDIED				61,099,161	22,034,810	29,705,922	2,639,460	4.32	
PLANT NOT STUDIED									
301.0	ORGANIZATION COSTS			5,006					
302.0	FRANCHISE COSTS			73,680					
303.0	INTANGIBLE ASSETS			2,784,752					
365.0	LAND			5,585					
374.0	LAND			2,978					
389.0	LAND & LAND RIGHTS GENERAL			48,659					
TOTAL PLANT				64,019,822					

Notes:

- ¹ Interim Retirement Rate. Service lives vary.
- ² Based upon anticipated district regulator change out / eliminations.
- ³ Based upon 20 ERT battery life and remaining PVC program term 2016 - 2026.

All currently approved rates include salvage portion.

GREAT PLAINS NATURAL GAS CO.

TABLE 1A. REVISED SUMMARY OF SERVICE LIFE AND NET SALVAGE ESTIMATES AND CALCULATED ANNUAL AND ACCRUED DEPRECIATION RELATED TO THE RECOVERY OF AVERAGE ORIGINAL COST IN GAS PLANT AS OF DECEMBER 31, 2018

- LIFE -

ACCOUNT	DESCRIPTION	ESTIMATED SURVIVOR CURVE	NET SALVAGE PERCENT	SURVIVING ORIGINAL COST AS OF 12/31/2018	CALCULATED ACCRUED DEPRECIATION	BOOK RESERVE	ANNUAL ACCRUAL AMOUNT	RATE	REMAINING LIFE
TRANSMISSION PLANT									
365.2	RIGHTS OF WAY	50-R2.5	-	158,152	101,961	125,291	1,199	0.76	17.8
366.0	TRANSMISSION STRUCTURES	85-S1	-	16,683	294	37	572	3.43	29.1
367.0	TRANSMISSION MAINS	50-R3	-	6,097,192	1,032,088	1,184,361	106,520	1.75	41.5
369.0	MEAS & REG STATION EQUIPMENT	40-R0.5	-	876,671	153,918	227,732	18,825	2.15	33.0
TOTAL TRANSMISSION PLANT				7,148,697	1,288,261	1,537,421	127,116	1.78	
DISTRIBUTION PLANT									
374.2	RIGHTS OF WAY	50-R2.5	-	17,654	9,420	9,164	367	2.08	23.3
375.0	DISTR. MEAS & REG STATION STRUCTURES	N/A	-	34,860	N/A	26,687	893 ¹	2.69	N/A
376.0	MAINS	46-R3	-	20,844,261	6,274,246	6,971,595	398,555	1.91	32.2
378.0	MEAS & REG STATION EQUIP-GENERAL	N/A	-	515,539	N/A	348,057	36,253 ²	8.79	N/A
379.0	MEAS & REG STATION EQUIP-CITY GATE	28-R3	-	489,650	142,082	152,786	16,356	3.34	19.9
380.0	SERVICES	39-R3	-	16,990,592	4,949,936	5,387,348	394,107	2.32	27.6
381.0	METERS & METER INSTALLATIONS	N/A	-	7,228,434	N/A	3,966,594	406,527 ³	7.03	N/A
383.0	HOUSE REGULATORS	N/A	-	965,429	N/A	443,088	54,340 ³	5.91	N/A
385.0	INDUSTRIAL MEAS. & REG. STATION EQUIPMENT	40-S4	-	162,784	18,270	17,890	4,087	2.51	35.5
387.1	CATHODIC PROTECTION EQUIPMENT	25-R3	-	9,235	3,962	3,659	401	4.34	14.3
387.2	OTHER EQUIPMENT	30-R3	-	11,498	9,738	11,498	-	-	4.6
TOTAL DISTRIBUTION PLANT				47,269,936	11,407,654	17,338,367	1,311,886	2.78	
GENERAL PLANT									
390.0	GENERAL STRUCTURES & IMPROVEMENTS	45-R4	-	2,504,707	663,003	812,380	48,189	1.92	33.1
391.1	OFFICE FURNITURE & EQUIPMENT	16-SQ	-	89,305	57,385	56,978	5,446	6.10	5.7
391.3	COMPUTER & ELECTRONIC EQUIPMENT	4-SQ	-	105,067	95,378	88,199	15,622	14.87	0.4
392.1	TRANSPORTATION EQUIPMENT - TRAILERS	12-R1	-	22,349	13,925	23,335	-	-	4.5
392.2	TRANSPORTATION EQUIPMENT	7-L2	-	1,468,028	625,342	639,362	204,718	13.95	4.0
394.0	TOOLS, SHOP, & GARAGE EQUIPMENT	20-SQ	-	757,796	262,445	258,887	38,801	5.12	13.1
396.1	POWER OPERATED EQUIPMENT - TRAILERS	6-L0	-	158,027	50,214	35,215	32,300	20.44	4.1
396.2	POWER OPERATED EQUIPMENT	6-L0	-	1,163,907	289,146	243,640	213,186	18.32	4.5
397.0	COMMUNICATION EQUIPMENT	18-SQ	-	357,683	214,610	215,486	19,404	5.42	7.2
398.0	MISCELLANEOUS EQUIPMENT	25-SQ	-	53,659	22,275	20,516	2,271	4.23	14.6
TOTAL GENERAL PLANT				6,680,528	2,293,723	2,393,999	579,937	8.68	
TOTAL GAS PLANT STUDIED				61,099,161	14,989,638	21,269,788	2,018,939	3.30	
PLANT NOT STUDIED									
301.0	ORGANIZATION COSTS			5,006					
302.0	FRANCHISE COSTS			73,680					
303.0	INTANGIBLE ASSETS			2,784,752					
365.0	LAND			5,585					
374.0	LAND			2,978					
389.0	LAND & LAND RIGHTS GENERAL			48,659					
TOTAL PLANT				64,019,822					

Notes:

- ¹ Interim Retirement Rate. Service lives vary.
- ² Based upon anticipated district regulator change out / eliminations.
- ³ Based upon 20 ERT battery life and remaining PVC program term 2016 - 2026.

All currently approved rates include salvage portion.

GREAT PLAINS NATURAL GAS CO.

TABLE 1B. REVISED SUMMARY OF SERVICE LIFE AND NET SALVAGE ESTIMATES AND CALCULATED ANNUAL AND ACCRUED DEPRECIATION RELATED TO THE RECOVERY OF AVERAGE ORIGINAL COST IN GAS PLANT AS OF DECEMBER 31, 2018

- NET SALVAGE -

ACCOUNT	DESCRIPTION	ESTIMATED SURVIVOR CURVE	NET SALVAGE PERCENT	SURVIVING ORIGINAL COST AS OF 12/31/2018	CALCULATED ACCURED DEPRECIATION	BOOK RESERVE	ANNUAL ACCRUAL AMOUNT	RATE
TRANSMISSION PLANT								
365.2	RIGHTS OF WAY	50-R2.5	0	158,152.03	-	-	-	0.00
366.0	TRANSMISSION STRUCTURES	85-S1	-5	16,682.51	15	2	29	0.17
367.0	TRANSMISSION MAINS	50-R3	-20	6,097,192.23	206,418	264,631	18,492	0.30
369.0	MEAS & REG STATION EQUIPMENT	40-R0.5	-10	876,670.63	15,392	(5,372)	3,005	0.34
TOTAL TRANSMISSION PLANT				7,148,697	221,825	259,261	21,526	0.30
DISTRIBUTION PLANT								
374.2	RIGHTS OF WAY	50-R2.5	0	17,653.59	-	-	-	0.00
375.0	DISTR. MEAS & REG STATION STRUCTURES	N/A	-5	34,859.83	N/A	1,313	97	0.15
376.0	MAINS	46-R3	-55	20,844,261.33	3,450,835	3,243,946	265,418	1.28
378.0	MEAS & REG STATION EQUIP-GENERAL	N/A	-25	515,538.77	N/A	53,349	28,447	3.76
379.0	MEAS & REG STATION EQUIP-CITY GATE	28-R3	-5	489,649.61	7,104	(19,903)	3,732	0.76
380.0	SERVICES	39-R3	-75	16,990,591.80	3,712,452	4,288,773	274,920	1.62
381.0	METERS & METER INSTALLATIONS	N/A	-25	7,228,433.62	N/A	609,395	309,811	2.88
383.0	HOUSE REGULATORS	N/A	-5	965,429.41	N/A	-	9,572	0.71
385.0	INDUSTRIAL MEAS. & REG. STATION EQUIPMENT	40-S4	0	162,784.41	-	-	-	0.00
387.1	CATHODIC PROTECTION EQUIPMENT	25-R3	0	9,235.11	-	-	-	0.00
387.2	OTHER EQUIPMENT	30-R3	0	11,498.48	-	-	-	0.00
TOTAL DISTRIBUTION PLANT				47,269,936	7,170,391	8,176,873	891,997	1.88
GENERAL PLANT								
390.0	GENERAL STRUCTURES & IMPROVEMENTS	45-R4	0	2,504,706.59	-	-	-	0.00
391.1	OFFICE FURNITURE & EQUIPMENT	16-SQ	0	89,305.15	-	-	-	0.00
391.3	COMPUTER & ELECTRONIC EQUIPMENT	4-SQ	0	105,066.97	-	-	-	0.00
392.1	TRANSPORTATION EQUIPMENT - TRAILERS	12-R1	10	22,348.86	(1,392)	-	-	0.00
392.2	TRANSPORTATION EQUIPMENT	7-L2	20	1,468,028.31	(125,068)	-	(81,897)	(5.58)
394.0	TOOLS, SHOP, & GARAGE EQUIPMENT	20-SQ	0	757,796.26	-	-	-	0.00
396.1	POWER OPERATED EQUIPMENT - TRAILERS	6-L0	65	158,027.01	(32,639)	-	(28,083)	(17.77)
396.2	POWER OPERATED EQUIPMENT	6-L0	65	1,163,906.63	(187,945)	-	(183,022)	(15.73)
397.0	COMMUNICATION EQUIPMENT	18-SQ	0	357,682.64	-	-	-	0.00
398.0	MISCELLANEOUS EQUIPMENT	25-SQ	0	53,659.43	-	-	-	0.00
TOTAL GENERAL PLANT				6,680,528	(347,044)	-	(293,002)	(4.38)
TOTAL GAS PLANT STUDIED				61,099,161	7,045,172	8,436,134	620,521	1.02
PLANT NOT STUDIED								
301.0	ORGANIZATION COSTS			5,006				
302.0	FRANCHISE COSTS			73,680				
303.0	INTANGIBLE ASSETS			2,784,752				
365.0	LAND			5,585				
374.0	LAND			2,978				
389.0	LAND & LAND RIGHTS GENERAL			48,659				
TOTAL PLANT				64,019,822				



SECTION 5

5 DETAILED DEPRECIATION CALCULATIONS

Great Plains Natural Gas Co.

Account #: 365.2 - Transmission - Rights of Way

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF DECEMBER 31, 2018

ALG - Remaining Life

Survivor Curve: R2.5

ASL: 50

Net Salvage: 0%

Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
1965	4,066.02	3,216	3,952	0.9720	114	10.45	11	53.5
1966	107,419.75	84,093	103,335	0.9620	4,085	10.86	376	52.5
1967	2,490.06	1,928	2,369	0.9516	121	11.28	11	51.5
1976	3.00	2	3	0.8388	0	15.87	0	42.5
1981	297.10	184	227	0.7626	71	18.97	4	37.5
1985	61.73	35	43	0.6959	19	21.68	1	33.5
2000	2,732.55	911	1,119	0.4097	1,613	33.33	48	18.5
2003	41,081.82	11,591	14,243	0.3467	26,839	35.89	748	15.5
TOTAL	158,152.03	101,961	125,291		32,861		1,199	

COMPOSITE ANNUAL ACCRUAL RATE 0.76%

THEORETICAL ACCUMULATED DEPRECIATION FACTOR 0.79

COMPOSITE AVERAGE AGE (YEARS) 42.28

DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS) 17.76

Great Plains Natural Gas Co.

Account #: 366.0 - Transmission - Structures

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION
BASED ON ORIGINAL COST AS OF DECEMBER 31, 2018

ALG - Remaining Life
Survivor Curve: S1
ASL: 85
Net Salvage: -5%
Truncation Year: 2048

				Accumulated		ALG			
Year	Original Cost	Calculated Depreciation	Accumulated Depreciation	Allocated Actual Booked Amount	Factor	Net Book Value	Remaining Life	Annual Accrual	Average Age
2018	16,682.51	309		39	0.0023	17,478	29.11	600	0.5
TOTAL	16,682.51	309		39		17,478		600	

COMPOSITE ANNUAL ACCRUAL RATE	3.60%
THEORETICAL ACCUMULATED DEPRECIATION FACTOR	0.00
COMPOSITE AVERAGE AGE (YEARS)	0.50
DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS)	29.11

Great Plains Natural Gas Co.

Account #: 367.0 - Transmission - Mains

ALG - Remaining Life

Survivor Curve: R3

ASL: 50

Net Salvage: -20%

Truncation Year:

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF DECEMBER 31, 2018

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
1966	1,086,391.15	1,069,627	1,251,412	1.1519	52,257	8.98	5,822	52.5
1970	8,044.40	7,565	8,851	1.1002	803	10.82	74	48.5
1971	18,005.73	16,713	19,554	1.0860	2,053	11.32	181	47.5
1972	4,225.53	3,869	4,526	1.0712	544	11.85	46	46.5
1976	1,809.24	1,557	1,822	1.0069	349	14.14	25	42.5
1977	2,658.13	2,248	2,631	0.9896	559	14.76	38	41.5
1978	122.93	102	119	0.9719	28	15.39	2	40.5
1981	7.50	6	7	0.9160	2	17.38	0	37.5
1986	3,413.47	2,379	2,783	0.8152	1,313	20.97	63	32.5
1987	84.97	58	67	0.7940	34	21.72	2	31.5
1988	15,177.96	10,022	11,725	0.7725	6,488	22.49	289	30.5
1990	7,026.13	4,375	5,119	0.7285	3,313	24.05	138	28.5
1991	805.75	486	569	0.7061	398	24.85	16	27.5
1993	510.97	288	337	0.6603	276	26.48	10	25.5
1994	4,189.75	2,281	2,669	0.6370	2,359	27.31	86	24.5
1996	654.99	330	386	0.5896	400	29.00	14	22.5
1997	34.74	17	20	0.5655	22	29.86	1	21.5
1998	627.93	290	340	0.5412	414	30.73	13	20.5
2003	73,092.92	25,980	30,395	0.4158	57,316	35.19	1,629	15.5
2013	227,018.27	29,294	34,273	0.1510	238,149	44.62	5,337	5.5
2015	87,276.30	7,189	8,411	0.0964	96,320	46.57	2,068	3.5
2018	4,556,013.47	53,828	62,976	0.0138	5,404,240	49.51	109,160	0.5

Great Plains Natural Gas Co.

Account #: 367.0 - Transmission - Mains

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION
BASED ON ORIGINAL COST AS OF DECEMBER 31, 2018

ALG - Remaining Life

Survivor Curve: R3

ASL: 50

Net Salvage: -20%

Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
TOTAL	6,097,192.23	1,238,506	1,448,992		5,867,638		125,012	
COMPOSITE ANNUAL ACCRUAL RATE				2.05%				
THEORETICAL ACCUMULATED DEPRECIATION FACTOR				0.24				
COMPOSITE AVERAGE AGE (YEARS)				10.59				
DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS)				41.54				

Great Plains Natural Gas Co.

Account #: 369.0 - Transmission - Meas. & Reg. Station Equip

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF DECEMBER 31, 2018

ALG - Remaining Life

Survivor Curve: R0.5

ASL: 40

Net Salvage: -10%

Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
1966	31,450.57	24,478	32,148	1.0222	2,448	11.70	209	52.5
1967	2,421.95	1,857	2,439	1.0071	225	12.12	19	51.5
1970	3,945.54	2,886	3,791	0.9608	549	13.40	41	48.5
1972	1,939.04	1,372	1,802	0.9291	331	14.28	23	46.5
1975	467.11	313	411	0.8802	103	15.63	7	43.5
1976	1,565.23	1,029	1,352	0.8635	370	16.09	23	42.5
1978	3,150.24	1,990	2,613	0.8294	852	17.03	50	40.5
1982	913.24	528	693	0.7589	311	18.99	16	36.5
1983	451.82	255	335	0.7408	162	19.49	8	35.5
1984	233.70	129	169	0.7224	88	20.00	4	34.5
1987	602.12	305	401	0.6661	261	21.56	12	31.5
1988	3,731.27	1,838	2,414	0.6469	1,691	22.09	77	30.5
1991	26,085.44	11,682	15,343	0.5882	13,351	23.71	563	27.5
1992	3,977.45	1,721	2,260	0.5682	2,115	24.27	87	26.5
1993	9,293.25	3,879	5,094	0.5481	5,129	24.82	207	25.5
1994	46,177.86	18,560	24,376	0.5279	26,420	25.38	1,041	24.5
1995	771.37	298	391	0.5074	457	25.95	18	23.5
1996	40,220.96	14,910	19,582	0.4869	24,661	26.52	930	22.5
1997	5,766.13	2,047	2,688	0.4661	3,655	27.09	135	21.5
1998	1,757.64	596	783	0.4453	1,151	27.67	42	20.5
1999	237.00	77	101	0.4243	160	28.25	6	19.5
2003	18,967.71	4,902	6,438	0.3394	14,427	30.60	471	15.5
2010	352,403.98	50,465	66,278	0.1881	321,367	34.79	9,237	8.5
2012	121,221.49	13,317	17,490	0.1443	115,854	36.01	3,218	6.5
2013	13,188.03	1,228	1,613	0.1223	12,894	36.61	352	5.5
2014	23,250.17	1,774	2,330	0.1002	23,245	37.23	624	4.5
2015	95,971.70	5,705	7,492	0.0781	98,077	37.84	2,592	3.5
2017	35,526.76	907	1,192	0.0335	37,888	39.07	970	1.5

Great Plains Natural Gas Co.

Account #: 369.0 - Transmission - Meas. & Reg. Station Equip

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION
BASED ON ORIGINAL COST AS OF DECEMBER 31, 2018

ALG - Remaining Life
Survivor Curve: R0.5
ASL: 40
Net Salvage: -10%
Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
2018	30,981.86	263	346	0.0112	33,734	39.69	850	0.5
TOTAL	876,670.63	169,310	222,360		741,978		21,831	

COMPOSITE ANNUAL ACCRUAL RATE	2.49%
THEORETICAL ACCUMULATED DEPRECIATION FACTOR	0.25
COMPOSITE AVERAGE AGE (YEARS)	11.86
DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS)	32.98

Great Plains Natural Gas Co.

Account #: 374.2 - Distribution - Rights of Way

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF DECEMBER 31, 2018

ALG - Remaining Life

Survivor Curve: R2.5

ASL: 50

Net Salvage: 0%

Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
1969	2,371.92	1,794	1,745	0.7358	627	12.18	51	49.5
1970	24.30	18	18	0.7266	7	12.66	1	48.5
1974	385.40	272	264	0.6862	121	14.73	8	44.5
1975	160.20	111	108	0.6753	52	15.29	3	43.5
1978	2,137.36	1,408	1,370	0.6407	768	17.07	45	40.5
1979	10.00	6	6	0.6287	4	17.69	0	39.5
1980	23.00	15	14	0.6163	9	18.32	0	38.5
1981	1,005.00	624	607	0.6037	398	18.97	21	37.5
1982	25.00	15	15	0.5909	10	19.63	1	36.5
1983	4.00	2	2	0.5778	2	20.30	0	35.5
1984	2.00	1	1	0.5645	1	20.99	0	34.5
1985	5,449.84	3,086	3,003	0.5509	2,447	21.68	113	33.5
1986	3.00	2	2	0.5372	1	22.39	0	32.5
1987	11.00	6	6	0.5232	5	23.11	0	31.5
1988	10.00	5	5	0.5090	5	23.84	0	30.5
1990	12.00	6	6	0.4800	6	25.33	0	28.5
1991	437.00	209	203	0.4653	234	26.09	9	27.5
1992	712.30	330	321	0.4503	392	26.86	15	26.5
1994	42.00	18	18	0.4198	24	28.42	1	24.5
1995	1,474.25	613	596	0.4043	878	29.22	30	23.5
1996	19.50	8	8	0.3886	12	30.02	0	22.5
1997	226.50	87	84	0.3728	142	30.84	5	21.5
1998	60.00	22	21	0.3568	39	31.66	1	20.5
1999	821.72	288	280	0.3406	542	32.49	17	19.5
2000	19.50	7	6	0.3243	13	33.33	0	18.5
2007	2,206.80	468	455	0.2061	1,752	39.41	44	11.5

Great Plains Natural Gas Co.

Account #: 374.2 - Distribution - Rights of Way

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION
BASED ON ORIGINAL COST AS OF DECEMBER 31, 2018

ALG - Remaining Life
Survivor Curve: R2.5
ASL: 50
Net Salvage: 0%
Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
TOTAL	17,653.59	9,420		9,164	8,490		367	
COMPOSITE ANNUAL ACCRUAL RATE				2.08%				
THEORETICAL ACCUMULATED DEPRECIATION FACTOR				0.52				
COMPOSITE AVERAGE AGE (YEARS)				32.17				
DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS)				23.32				

Great Plains Natural Gas Co.

Account #: 376.0 - Distribution - Mains

ALG - Remaining Life

Survivor Curve: R3

ASL: 46

Net Salvage: -55%

Truncation Year:

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF DECEMBER 31, 2018

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
1960	45,803.96	63,522	66,726	1.4568	4,270	4.84	882	58.5
1966	697,534.02	924,707	971,342	1.3925	109,836	6.66	16,499	52.5
1967	1,444,112.87	1,897,287	1,992,972	1.3801	245,403	7.01	35,010	51.5
1968	51,903.66	67,544	70,951	1.3670	9,500	7.38	1,287	50.5
1969	90,216.31	116,220	122,082	1.3532	17,754	7.77	2,285	49.5
1970	52,379.30	66,757	70,123	1.3388	11,064	8.18	1,353	48.5
1971	23,383.75	29,465	30,951	1.3236	5,294	8.60	615	47.5
1972	39,320.22	48,952	51,420	1.3077	9,526	9.05	1,052	46.5
1973	51,155.81	62,877	66,048	1.2911	13,243	9.52	1,391	45.5
1974	23,853.32	28,925	30,383	1.2738	6,589	10.01	658	44.5
1975	191,246.91	228,615	240,144	1.2557	56,289	10.52	5,349	43.5
1976	49,770.53	58,604	61,560	1.2369	15,585	11.06	1,410	42.5
1977	16,775.42	19,441	20,422	1.2174	5,580	11.61	481	41.5
1978	57,222.86	65,215	68,504	1.1971	20,191	12.18	1,658	40.5
1979	64,184.26	71,871	75,496	1.1762	23,990	12.77	1,879	39.5
1980	43,224.25	47,513	49,909	1.1547	17,088	13.38	1,277	38.5
1981	83,851.41	90,400	94,959	1.1325	35,011	14.00	2,500	37.5
1982	35,946.91	37,974	39,889	1.1097	15,829	14.65	1,081	36.5
1983	109,575.77	113,314	119,028	1.0863	50,814	15.31	3,319	35.5
1984	109,651.40	110,891	116,484	1.0623	53,476	15.99	3,345	34.5
1985	995,540.48	983,562	1,033,166	1.0378	509,922	16.68	30,571	33.5
1986	217,049.82	209,266	219,820	1.0128	116,607	17.39	6,707	32.5
1987	174,683.41	164,174	172,454	0.9872	98,306	18.11	5,429	31.5
1988	110,089.22	100,741	105,821	0.9612	64,817	18.84	3,440	30.5
1989	61,216.79	54,476	57,224	0.9348	37,662	19.59	1,922	29.5
1990	88,993.70	76,915	80,794	0.9079	57,147	20.35	2,808	28.5
1991	219,197.68	183,736	193,002	0.8805	146,754	21.12	6,947	27.5
1992	200,426.18	162,701	170,906	0.8527	139,755	21.91	6,379	26.5

Great Plains Natural Gas Co.

Account #: 376.0 - Distribution - Mains

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF DECEMBER 31, 2018

ALG - Remaining Life

Survivor Curve: R3

ASL: 46

Net Salvage: -55%

Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
1993	206,649.07	162,206	170,387	0.8245	149,919	22.71	6,603	25.5
1994	137,414.33	104,122	109,373	0.7959	103,619	23.51	4,407	24.5
1995	312,311.27	228,029	239,529	0.7670	244,553	24.33	10,051	23.5
1996	105,672.15	74,200	77,942	0.7376	85,849	25.16	3,412	22.5
1997	592,004.58	398,925	419,044	0.7078	498,563	26.00	19,174	21.5
1998	197,992.88	127,743	134,185	0.6777	172,704	26.85	6,432	20.5
1999	10,521.83	6,483	6,810	0.6473	9,498	27.71	343	19.5
2001	194,688.38	108,484	113,955	0.5853	187,812	29.46	6,374	17.5
2002	35,769.30	18,860	19,811	0.5539	35,632	30.35	1,174	16.5
2003	269,764.47	134,074	140,836	0.5221	277,299	31.25	8,874	15.5
2004	582,937.82	271,920	285,633	0.4900	617,920	32.16	19,216	14.5
2005	330,803.91	144,117	151,385	0.4576	361,361	33.07	10,927	13.5
2006	221,927.99	89,790	94,318	0.4250	249,670	33.99	7,345	12.5
2007	297,448.53	111,032	116,631	0.3921	344,414	34.92	9,862	11.5
2008	656,301.92	224,278	235,589	0.3590	781,679	35.86	21,799	10.5
2009	249,071.36	77,203	81,097	0.3256	304,964	36.80	8,287	9.5
2010	685,233.85	190,493	200,100	0.2920	862,012	37.75	22,835	8.5
2011	744,447.40	183,016	192,246	0.2582	961,647	38.70	24,846	7.5
2012	945,383.54	201,851	212,031	0.2243	1,253,314	39.66	31,599	6.5
2013	910,468.07	164,813	173,125	0.1901	1,238,101	40.63	30,474	5.5
2014	1,495,913.71	221,958	233,152	0.1559	2,085,515	41.60	50,137	4.5
2015	1,419,715.35	164,117	172,394	0.1214	2,028,165	42.57	47,644	3.5
2016	1,317,923.65	108,992	114,489	0.0869	1,928,293	43.55	44,282	2.5
2017	1,915,234.04	95,172	99,971	0.0522	2,868,641	44.53	64,427	1.5
2018	1,660,351.71	27,538	28,927	0.0174	2,544,618	45.51	55,916	0.5

Great Plains Natural Gas Co.

Account #: 376.0 - Distribution - Mains

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION
BASED ON ORIGINAL COST AS OF DECEMBER 31, 2018

ALG - Remaining Life

Survivor Curve: R3

ASL: 46

Net Salvage: -55%

Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
TOTAL	20,844,261.33	9,725,081	10,215,541		22,093,064		663,973	
COMPOSITE ANNUAL ACCRUAL RATE				3.19%				
THEORETICAL ACCUMULATED DEPRECIATION FACTOR				0.49				
COMPOSITE AVERAGE AGE (YEARS)				16.19				
DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS)				32.15				

Great Plains Natural Gas Co.

Account #: 379.0 - Distribution - Meas & Reg Station Equip - City Gate

ALG - Remaining Life

Survivor Curve: R3

ASL: 28

Net Salvage: -5%

Truncation Year:

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF DECEMBER 31, 2018

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
1977	260.06	259	231	0.8867	42	1.45	29	41.5
1985	30,649.26	28,088	25,018	0.8163	7,164	3.56	2,011	33.5
1995	285.91	213	190	0.6645	110	8.10	14	23.5
1997	31,122.11	21,715	19,342	0.6215	13,337	9.39	1,420	21.5
1998	59.59	40	36	0.5986	27	10.08	3	20.5
1999	18,075.06	11,667	10,392	0.5749	8,587	10.79	796	19.5
2004	32,490.96	16,265	14,488	0.4459	19,628	14.65	1,340	14.5
2009	6,781.83	2,298	2,047	0.3018	5,074	18.96	268	9.5
2011	24,489.78	6,619	5,896	0.2408	19,818	20.79	953	7.5
2012	200,929.99	47,282	42,115	0.2096	168,861	21.72	7,773	6.5
2015	92,705.87	11,879	10,581	0.1141	86,761	24.58	3,529	3.5
2017	51,799.19	2,861	2,548	0.0492	51,841	26.53	1,954	1.5
TOTAL	489,649.61	149,186	132,883		381,249		20,089	

COMPOSITE ANNUAL ACCRUAL RATE 4.10%

THEORETICAL ACCUMULATED DEPRECIATION FACTOR 0.27

COMPOSITE AVERAGE AGE (YEARS) 9.18

DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS) 19.88

Great Plains Natural Gas Co.

Account #: 380.0 - Distribution - Services

ALG - Remaining Life

Survivor Curve: R3

ASL: 39

Net Salvage: -75%

Truncation Year:

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF DECEMBER 31, 2018

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
1966	138,135.89	220,989	241,738	1.7500	0	3.35	0	52.5
1967	347,586.73	552,019	608,277	1.7500	0	3.61	0	51.5
1968	43,351.96	68,342	75,866	1.7500	0	3.87	0	50.5
1969	49,268.53	77,075	86,220	1.7500	0	4.14	0	49.5
1970	73,241.60	113,673	127,179	1.7364	994	4.41	225	48.5
1971	54,978.22	84,619	94,672	1.7220	1,540	4.70	328	47.5
1972	69,506.35	106,042	118,641	1.7069	2,995	5.00	599	46.5
1973	64,525.59	97,527	109,114	1.6910	3,805	5.32	716	45.5
1974	43,650.05	65,320	73,081	1.6742	3,307	5.65	585	44.5
1975	37,037.14	54,836	61,351	1.6565	3,464	6.00	577	43.5
1976	34,445.09	50,419	56,409	1.6376	3,870	6.38	607	42.5
1977	18,007.46	26,037	29,131	1.6177	2,382	6.78	351	41.5
1978	71,259.46	101,689	113,771	1.5966	10,933	7.20	1,519	40.5
1979	140,813.28	198,133	221,674	1.5742	24,750	7.64	3,238	39.5
1980	144,575.60	200,383	224,191	1.5507	28,816	8.11	3,552	38.5
1981	148,862.32	203,028	227,150	1.5259	33,360	8.61	3,877	37.5
1982	97,025.32	130,073	145,527	1.4999	24,268	9.12	2,660	36.5
1983	91,559.83	120,520	134,839	1.4727	25,391	9.67	2,627	35.5
1984	108,587.43	140,175	156,829	1.4443	33,199	10.23	3,245	34.5
1985	328,371.77	415,227	464,560	1.4147	110,090	10.82	10,175	33.5
1986	194,613.17	240,755	269,360	1.3841	71,213	11.43	6,230	32.5
1987	182,639.41	220,768	246,997	1.3524	72,622	12.06	6,021	31.5
1988	178,115.71	210,091	235,052	1.3197	76,650	12.71	6,029	30.5
1989	181,975.84	209,165	234,016	1.2860	84,442	13.38	6,309	29.5
1990	193,042.90	215,918	241,572	1.2514	96,253	14.07	6,839	28.5
1991	208,220.14	226,289	253,175	1.2159	111,211	14.78	7,524	27.5
1992	209,227.82	220,598	246,807	1.1796	119,341	15.50	7,698	26.5
1993	236,889.30	241,903	270,643	1.1425	143,913	16.24	8,860	25.5

Great Plains Natural Gas Co.

Account #: 380.0 - Distribution - Services

ALG - Remaining Life

Survivor Curve: R3

ASL: 39

Net Salvage: -75%

Truncation Year:

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF DECEMBER 31, 2018

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
1994	230,568.46	227,645	254,692	1.1046	148,803	17.00	8,755	24.5
1995	220,806.22	210,387	235,383	1.0660	151,028	17.77	8,501	23.5
1996	228,073.50	209,295	234,161	1.0267	164,967	18.55	8,893	22.5
1997	288,056.50	254,040	284,222	0.9867	219,877	19.35	11,365	21.5
1998	352,436.88	297,999	333,404	0.9460	283,360	20.16	14,058	20.5
1999	95,410.35	77,150	86,316	0.9047	80,652	20.98	3,844	19.5
2001	184,559.24	135,287	151,360	0.8201	171,618	22.66	7,572	17.5
2002	201,742.18	140,095	156,740	0.7769	196,309	23.52	8,345	16.5
2003	189,367.94	124,096	138,839	0.7332	192,554	24.40	7,893	15.5
2004	181,134.37	111,526	124,776	0.6889	192,209	25.28	7,604	14.5
2005	206,441.65	118,832	132,950	0.6440	228,323	26.17	8,724	13.5
2006	172,419.77	92,259	103,221	0.5987	198,514	27.08	7,332	12.5
2007	165,174.01	81,613	91,310	0.5528	197,745	27.99	7,065	11.5
2008	261,506.93	118,392	132,458	0.5065	325,179	28.91	11,248	10.5
2009	173,960.70	71,491	79,985	0.4598	224,447	29.84	7,521	9.5
2010	343,711.20	126,775	141,837	0.4127	459,658	30.78	14,934	8.5
2011	370,713.33	120,996	135,371	0.3652	513,377	31.73	16,181	7.5
2012	1,034,990.04	293,551	328,428	0.3173	1,482,805	32.68	45,375	6.5
2013	967,574.55	232,791	260,449	0.2692	1,432,807	33.64	42,595	5.5
2014	1,389,654.78	274,175	306,750	0.2207	2,125,146	34.60	61,415	4.5
2015	1,390,604.71	213,849	239,257	0.1721	2,194,302	35.57	61,685	3.5
2016	1,607,638.04	176,926	197,946	0.1231	2,615,420	36.55	71,562	2.5
2017	1,687,763.83	111,644	124,909	0.0740	2,828,678	37.53	75,380	1.5
2018	1,356,768.71	29,961	33,520	0.0247	2,340,825	38.51	60,788	0.5

Great Plains Natural Gas Co.

Account #: 380.0 - Distribution - Services

ALG - Remaining Life

Survivor Curve: R3

ASL: 39

Net Salvage: -75%

Truncation Year:

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION
BASED ON ORIGINAL COST AS OF DECEMBER 31, 2018

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
TOTAL	16,990,591.80	8,662,388	9,676,121		20,057,414		669,027	
COMPOSITE ANNUAL ACCRUAL RATE				3.94%				
THEORETICAL ACCUMULATED DEPRECIATION FACTOR				0.57				
COMPOSITE AVERAGE AGE (YEARS)				13.27				
DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS)				27.64				

Great Plains Natural Gas Co.

Account #: 385.0 - Distribution - Industrial Meas. & Reg. Station Equipment

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF DECEMBER 31, 2018

ALG - Remaining Life

Survivor Curve: S4

ASL: 40

Net Salvage: 0%

Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
1985	4,977.47	3,892	3,811	0.7656	1,167	8.72	134	33.5
2000	110.66	51	50	0.4526	61	21.51	3	18.5
2014	21,162.64	2,381	2,331	0.1102	18,831	35.50	530	4.5
2015	136,533.64	11,947	11,698	0.0857	124,836	36.50	3,420	3.5
TOTAL	162,784.41	18,270	17,890		144,895		4,087	

COMPOSITE ANNUAL ACCRUAL RATE2.51%

THEORETICAL ACCUMULATED DEPRECIATION FACTOR0.11

COMPOSITE AVERAGE AGE (YEARS)4.56

DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS)35.51

Great Plains Natural Gas Co.

Account #: 387.1 - Cathodic Protection Equipment

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION
BASED ON ORIGINAL COST AS OF DECEMBER 31, 2018

ALG - Remaining Life
Survivor Curve: R3
ASL: 25
Net Salvage: 0%
Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
2000	5,307.90	3,426	3,164	0.5962	2,144	8.86	242	18.5
2015	3,927.21	536	495	0.1261	3,432	21.59	159	3.5
TOTAL	9,235.11	3,962	3,659		5,576		401	

COMPOSITE ANNUAL ACCRUAL RATE	4.34%
THEORETICAL ACCUMULATED DEPRECIATION FACTOR	0.40
COMPOSITE AVERAGE AGE (YEARS)	12.12
DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS)	14.27

Great Plains Natural Gas Co.

Account #: 387.2 - Other Equipment

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION
BASED ON ORIGINAL COST AS OF DECEMBER 31, 2018

ALG - Remaining Life
Survivor Curve: R3
ASL: 30
Net Salvage: 0%
Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
1972	51.96	50	52	1.0000	0	1.07	0	46.5
1985	11,446.52	9,688	11,447	1.0000	0	4.61	0	33.5
TOTAL	11,498.48	9,738	11,498		0		0	

COMPOSITE ANNUAL ACCRUAL RATE	0.00%
THEORETICAL ACCUMULATED DEPRECIATION FACTOR	1.00
COMPOSITE AVERAGE AGE (YEARS)	33.56
DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS)	4.59

Great Plains Natural Gas Co.

Account #: 390.0 - General Structures & Improvements

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF DECEMBER 31, 2018

ALG - Remaining Life

Survivor Curve: R4

ASL: 45

Net Salvage: 0%

Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
1966	162.04	148	162	1.0000	0	3.89	0	52.5
1967	63,684.77	57,764	63,685	1.0000	0	4.18	0	51.5
1971	1,043.27	915	1,043	1.0000	0	5.54	0	47.5
1972	3,961.15	3,439	3,961	1.0000	0	5.93	0	46.5
1973	5,277.90	4,531	5,278	1.0000	0	6.36	0	45.5
1974	15,038.59	12,756	15,039	1.0000	0	6.83	0	44.5
1975	1,406.22	1,177	1,406	1.0000	0	7.33	0	43.5
1978	450.00	360	446	0.9905	4	9.04	0	40.5
1980	394.59	304	377	0.9549	18	10.34	2	38.5
1982	3,395.31	2,512	3,114	0.9173	281	11.70	24	36.5
1983	1,470.36	1,065	1,320	0.8979	150	12.41	12	35.5
1985	71,695.66	49,603	61,489	0.8576	10,206	13.87	736	33.5
1989	71,935.28	44,783	55,515	0.7717	16,421	16.99	967	29.5
1990	97,496.83	58,918	73,036	0.7491	24,461	17.81	1,374	28.5
1991	5,549.42	3,250	4,029	0.7261	1,520	18.64	82	27.5
1993	3,055.00	1,673	2,073	0.6787	982	20.36	48	25.5
1995	2,965.78	1,507	1,868	0.6298	1,098	22.14	50	23.5
1996	8,137.66	3,971	4,923	0.6049	3,215	23.04	140	22.5
2000	124,502.78	50,444	62,532	0.5023	61,971	26.77	2,315	18.5
2001	17,578.74	6,750	8,367	0.4760	9,211	27.72	332	17.5
2002	9,172.24	3,326	4,123	0.4495	5,049	28.68	176	16.5
2003	1,099.87	375	465	0.4229	635	29.65	21	15.5
2004	6,757.20	2,159	2,677	0.3962	4,080	30.62	133	14.5
2006	236,333.38	65,252	80,888	0.3423	155,445	32.58	4,772	12.5
2008	954,062.70	221,634	274,745	0.2880	679,318	34.55	19,664	10.5
2010	76,867.95	14,473	17,942	0.2334	58,926	36.53	1,613	8.5
2012	218,292.29	31,459	38,997	0.1786	179,295	38.51	4,655	6.5
2014	38,164.50	3,810	4,723	0.1238	33,441	40.51	826	4.5

Great Plains Natural Gas Co.

Account #: 390.0 - General Structures & Improvements

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION
BASED ON ORIGINAL COST AS OF DECEMBER 31, 2018

ALG - Remaining Life
Survivor Curve: R4
ASL: 45
Net Salvage: 0%
Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
2015	18,348.29	1,425	1,767	0.0963	16,582	41.50	400	3.5
2016	4,336.44	241	298	0.0688	4,038	42.50	95	2.5
2017	363,738.11	12,111	15,013	0.0413	348,725	43.50	8,016	1.5
2018	78,332.27	869	1,078	0.0138	77,255	44.50	1,736	0.5
TOTAL	2,504,706.59	663,003	812,380		1,692,327		48,189	

COMPOSITE ANNUAL ACCRUAL RATE	1.92%
THEORETICAL ACCUMULATED DEPRECIATION FACTOR	0.32
COMPOSITE AVERAGE AGE (YEARS)	12.47
DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS)	33.09

Great Plains Natural Gas Co.

Account #: 391.1 - Office Furniture & Equipment

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF DECEMBER 31, 2018

ALG - Remaining Life

Survivor Curve: SQ

ASL: 16

Net Salvage: 0%

Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
2003	8,738.97	8,466	8,406	0.9619	333	0.50	333	15.5
2004	548.36	497	493	0.8998	55	1.50	37	14.5
2005	8,405.76	7,092	7,042	0.8378	1,364	2.50	546	13.5
2006	1,020.83	798	792	0.7757	229	3.50	65	12.5
2007	29,164.21	20,962	20,813	0.7137	8,351	4.50	1,856	11.5
2008	15,785.78	10,359	10,286	0.6516	5,500	5.50	1,000	10.5
2009	1,449.56	861	855	0.5895	595	6.50	92	9.5
2010	2,389.63	1,269	1,260	0.5275	1,129	7.50	151	8.5
2011	5,149.75	2,414	2,397	0.4654	2,753	8.50	324	7.5
2012	5,179.29	2,104	2,089	0.4034	3,090	9.50	325	6.5
2014	8,457.23	2,379	2,362	0.2793	6,095	11.50	530	4.5
2017	1,440.54	135	134	0.0931	1,306	14.50	90	1.5
2018	1,575.24	49	49	0.0310	1,526	15.50	98	0.5
TOTAL	89,305.15	57,385	56,978		32,327		5,446	

COMPOSITE ANNUAL ACCRUAL RATE 6.10%

THEORETICAL ACCUMULATED DEPRECIATION FACTOR 0.64

COMPOSITE AVERAGE AGE (YEARS) 10.28

DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS) 5.72

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
2013	0.00	0	0	0.9247	0	0.00	0	6.5
2014	40,270.58	40,271	37,240	0.9247	3,031	0.00	3,031	5.5
2015	61,616.92	53,915	49,857	0.8091	11,760	0.50	11,760	3.5
2017	3,179.47	1,192	1,103	0.3468	2,077	2.50	831	1.5
TOTAL	105,066.97	95,378	88,199		16,868		15,622	

COMPOSITE ANNUAL ACCRUAL RATE	14.87%
THEORETICAL ACCUMULATED DEPRECIATION FACTOR	0.84
COMPOSITE AVERAGE AGE (YEARS)	4.21
DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS)	0.37

Great Plains Natural Gas Co.

Account #: 392.1 - Transportation Equipment - Trailers

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION
BASED ON ORIGINAL COST AS OF DECEMBER 31, 2018

ALG - Remaining Life

Survivor Curve: R1

ASL: 12

Net Salvage: 10%

Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
1992	700.00	630	630	0.9000	0	0.00	0	27.5
1999	6,925.30	5,455	6,233	0.9000	0	1.50	0	19.5
2008	6,263.88	3,206	5,637	0.9000	0	5.18	0	10.5
2011	8,459.68	3,242	7,614	0.9000	0	6.89	0	7.5
TOTAL	22,348.86	12,533	20,114		0		0	

** Actual Booked Reserve Exceeds Original Cost Adjusted for Net Salvage **

COMPOSITE ANNUAL ACCRUAL RATE	0.00%
THEORETICAL ACCUMULATED DEPRECIATION FACTOR	1.04
COMPOSITE AVERAGE AGE (YEARS)	12.69
DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS)	4.52

Great Plains Natural Gas Co.

Account #: 392.2 - Transportation Equipment

ALG - Remaining Life

Survivor Curve: L2

ASL: 7

Net Salvage: 20%

Truncation Year:

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF DECEMBER 31, 2018

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
2001	4,102.12	3,006	3,282	0.8000	0	0.59	0	17.5
2002	4,633.79	3,325	3,707	0.8000	0	0.72	0	16.5
2006	2,792.17	1,773	2,234	0.8000	0	1.44	0	12.5
2008	6,139.41	3,583	4,587	0.7472	324	1.89	171	10.5
2009	55,523.57	30,850	39,498	0.7114	4,921	2.14	2,301	9.5
2010	113,646.46	59,919	76,716	0.6750	14,201	2.39	5,950	8.5
2011	80,684.95	40,308	51,608	0.6396	12,940	2.63	4,923	7.5
2012	168,795.26	79,717	102,064	0.6047	32,972	2.87	11,498	6.5
2013	160,107.38	70,756	90,591	0.5658	37,495	3.13	11,967	5.5
2014	40,184.30	16,148	20,675	0.5145	11,472	3.48	3,293	4.5
2015	343,742.27	118,100	151,207	0.4399	123,787	3.99	30,995	3.5
2016	183,547.73	48,102	61,586	0.3355	85,252	4.71	18,112	2.5
2017	68,665.13	11,312	14,483	0.2109	40,449	5.56	7,277	1.5
2018	235,463.77	13,375	17,124	0.0727	171,247	6.50	26,334	0.5
TOTAL	1,468,028.31	500,274	639,362		535,060		122,821	

COMPOSITE ANNUAL ACCRUAL RATE 8.37%

THEORETICAL ACCUMULATED DEPRECIATION FACTOR 0.44

COMPOSITE AVERAGE AGE (YEARS) 4.35

DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS) 4.02

Great Plains Natural Gas Co.

Account #: 394.0 - Tools, Shop, & Garage Equipment

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF DECEMBER 31, 2018

ALG - Remaining Life

Survivor Curve: SQ

ASL: 20

Net Salvage: 0%

Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
2000	53,370.43	49,368	48,698	0.9125	4,672	1.50	3,115	18.5
2001	19,329.73	16,914	16,684	0.8631	2,646	2.50	1,058	17.5
2002	22,549.99	18,604	18,352	0.8138	4,198	3.50	1,199	16.5
2003	43,960.29	34,069	33,607	0.7645	10,353	4.50	2,301	15.5
2004	16,735.02	12,133	11,968	0.7152	4,767	5.50	867	14.5
2005	33,532.87	22,635	22,328	0.6658	11,205	6.50	1,724	13.5
2006	17,480.80	10,926	10,777	0.6165	6,703	7.50	894	12.5
2007	13,031.67	7,493	7,392	0.5672	5,640	8.50	664	11.5
2008	13,260.15	6,962	6,867	0.5179	6,393	9.50	673	10.5
2009	10,100.22	4,798	4,733	0.4686	5,368	10.50	511	9.5
2010	17,250.11	7,331	7,232	0.4192	10,018	11.50	871	8.5
2011	33,124.55	12,422	12,253	0.3699	20,871	12.50	1,670	7.5
2012	61,302.98	19,923	19,653	0.3206	41,650	13.50	3,085	6.5
2013	12,834.35	3,529	3,482	0.2713	9,353	14.50	645	5.5
2014	51,798.37	11,655	11,497	0.2219	40,302	15.50	2,600	4.5
2015	20,004.03	3,501	3,453	0.1726	16,551	16.50	1,003	3.5
2016	56,019.22	7,002	6,907	0.1233	49,112	17.50	2,806	2.5
2017	132,584.87	9,944	9,809	0.0740	122,776	18.50	6,637	1.5
2018	129,526.61	3,238	3,194	0.0247	126,332	19.50	6,479	0.5
TOTAL	757,796.26	262,445	258,887		498,909		38,801	

COMPOSITE ANNUAL ACCRUAL RATE 5.12%

THEORETICAL ACCUMULATED DEPRECIATION FACTOR 0.34

COMPOSITE AVERAGE AGE (YEARS) 6.93

DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS) 13.07

Great Plains Natural Gas Co.

Account #: 396.1 - Power Operated Equipment - Trailers

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF DECEMBER 31, 2018

ALG - Remaining Life

Survivor Curve: L0

ASL: 6

Net Salvage: 65%

Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
2000	7,412.60	2,145	2,594	0.3500	0	1.04	0	18.5
2004	9,301.37	2,381	3,255	0.3500	0	1.61	0	14.5
2007	7,804.77	1,755	2,732	0.3500	0	2.14	0	11.5
2014	37,278.87	4,497	10,604	0.2845	2,443	3.93	621	4.5
2015	34,284.94	3,441	8,114	0.2367	3,885	4.28	908	3.5
2016	19,241.60	1,505	3,550	0.1845	3,184	4.66	683	2.5
2017	29,786.93	1,577	3,719	0.1248	6,707	5.09	1,317	1.5
2018	12,915.93	274	646	0.0500	3,875	5.64	687	0.5
TOTAL	158,027.01	17,575	35,215		20,095		4,217	

COMPOSITE ANNUAL ACCRUAL RATE 2.67%

THEORETICAL ACCUMULATED DEPRECIATION FACTOR 0.22

COMPOSITE AVERAGE AGE (YEARS) 4.74

DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS) 4.09

Great Plains Natural Gas Co.

Account #: 396.2 - Power Operated Equipment

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF DECEMBER 31, 2018

ALG - Remaining Life

Survivor Curve: L0

ASL: 6

Net Salvage: 65%

Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
2000	21,036.03	6,086	7,363	0.3500	0	1.04	0	18.5
2002	63,703.74	17,432	22,296	0.3500	0	1.31	0	16.5
2003	31,682.86	8,398	11,089	0.3500	0	1.46	0	15.5
2008	1,288.66	275	451	0.3500	0	2.35	0	10.5
2010	94,653.37	17,688	33,129	0.3500	0	2.80	0	8.5
2013	40,246.50	5,604	14,086	0.3500	0	3.61	0	5.5
2014	116,998.71	14,113	40,950	0.3500	0	3.93	0	4.5
2015	5,530.18	555	1,936	0.3500	0	4.28	0	3.5
2016	82,156.30	6,428	23,258	0.2831	5,497	4.66	1,180	2.5
2017	303,700.32	16,079	58,176	0.1916	48,119	5.09	9,449	1.5
2018	402,909.96	8,542	30,908	0.0767	110,111	5.64	19,535	0.5
TOTAL	1,163,906.63	101,201	243,640		163,727		30,164	

COMPOSITE ANNUAL ACCRUAL RATE 2.59%

THEORETICAL ACCUMULATED DEPRECIATION FACTOR 0.21

COMPOSITE AVERAGE AGE (YEARS) 3.76

DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS) 4.51

Great Plains Natural Gas Co.

Account #: 397.0 - Communications Equipment

ALG - Remaining Life

Survivor Curve: SQ

ASL: 18

Net Salvage: 0%

Truncation Year:

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION

BASED ON ORIGINAL COST AS OF DECEMBER 31, 2018

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
2000	0.00	0	0	1.0000	0	0.00	0	19.5
2001	7,624.07	7,412	7,443	0.9762	182	0.50	182	17.5
2002	11,369.56	10,422	10,465	0.9204	905	1.50	603	16.5
2003	5,701.24	4,909	4,929	0.8646	772	2.50	309	15.5
2004	183,273.60	147,637	148,240	0.8088	35,034	3.50	10,010	14.5
2008	15,081.38	8,797	8,833	0.5857	6,248	7.50	833	10.5
2010	9,894.78	4,673	4,692	0.4742	5,203	9.50	548	8.5
2012	65,462.99	23,639	23,736	0.3626	41,727	11.50	3,628	6.5
2015	25,684.88	4,994	5,015	0.1952	20,670	14.50	1,426	3.5
2016	10,732.81	1,491	1,497	0.1395	9,236	15.50	596	2.5
2018	22,857.33	635	638	0.0279	22,220	17.50	1,270	0.5
TOTAL	357,682.64	214,610	215,486		142,196		19,404	

COMPOSITE ANNUAL ACCRUAL RATE 5.42%

THEORETICAL ACCUMULATED DEPRECIATION FACTOR 0.60

COMPOSITE AVERAGE AGE (YEARS) 10.80

DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS) 7.20

Great Plains Natural Gas Co.

Account #: 398.0 - Miscellaneous Equipment

CALCULATED ANNUAL ACCRUAL AND ACCRUED DEPRECIATION
BASED ON ORIGINAL COST AS OF DECEMBER 31, 2018

ALG - Remaining Life
Survivor Curve: SQ
ASL: 25
Net Salvage: 0%
Truncation Year:

Year	Original Cost	Calculated Accumulated Depreciation	Allocated Actual Booked Amount	Accumulated Depreciation Factor	Net Book Value	ALG Remaining Life	Annual Accrual	Average Age
2006	8,332.68	4,166	3,837	0.4605	4,495	12.50	360	12.5
2008	43,005.89	18,062	16,636	0.3868	26,370	14.50	1,819	10.5
2018	2,320.86	46	43	0.0184	2,278	24.50	93	0.5
TOTAL	53,659.43	22,275	20,516		33,143		2,271	

COMPOSITE ANNUAL ACCRUAL RATE	4.23%
THEORETICAL ACCUMULATED DEPRECIATION FACTOR	0.38
COMPOSITE AVERAGE AGE (YEARS)	10.38
DIRECTED WEIGHTED ALG COMPOSITE REMAINING LIFE (YEARS)	14.62



5.1 GPNG Supplemental Tables

Table 2 - 2018 Gas Plant in Service Activity

Row Labels	Sum of beginning_balance	Sum of additions	Sum of retirements	Sum of total transfers	Sum of ending_balance
Gas Distribution					
374-G-Land	2,978.43	-	-	-	2,978.43
374-G-Land Rights	17,653.59	-	-	-	17,653.59
375-G-Structures & Improvements	32,251.03	2,608.80	-	-	34,859.83
376-G-Mains	19,426,616.47	1,589,215.57	(171,570.69)	-	20,844,261.35
378-G-Measure/Regulation Distributi	511,305.30	5,508.18	(12,082.28)	10,807.57	515,538.77
379-G-Measure/Regulation City Gate	484,883.13	4,766.48	-	-	489,649.61
380-G-Services	15,937,760.04	1,305,372.77	(252,541.01)	-	16,990,591.80
381-G-Meters	6,438,021.48	331,131.19	(65,745.27)	525,026.22	7,228,433.62
382-G-Meter Set Installation	-	-	-	-	-
383-G-Service Regulators	774,938.60	91,919.80	(68,558.25)	167,129.26	965,429.41
385-G-Industrial Meas. & Reg Stn Eq	162,784.41	-	-	-	162,784.41
387-G-Cathodic Protection Equipment	9,235.11	-	-	-	9,235.11
387-G-Other Distribution Equipment	11,498.48	-	-	-	11,498.48
Gas Distribution Total	43,809,926.07	3,330,522.79	(570,497.50)	702,963.05	47,272,914.41
Gas General					
389-G-Land & Land Rights	48,658.66	-	-	-	48,658.66
390-G-Structures & Improvements	2,528,697.41	78,332.27	(102,323.09)	-	2,504,706.59
391-G-Comp Equip-Server & Workstati	61,616.92	3,179.47	(18,589.28)	58,859.86	105,066.97
391-G-Comp. Equip-Mainframe & Other	-	-	-	-	-
391-G-Office Furn & Equip	95,317.30	1,629.39	(7,641.54)	-	89,305.15
392-G-Trailers	31,167.46	-	(8,818.60)	-	22,348.86
392-G-Transportation Equipment	1,380,893.11	238,713.78	(151,578.58)	-	1,468,028.31
393-G-Stores Equipment	-	-	-	-	-
394-G-Tools,Shop,Garage Equip	628,269.65	129,526.61	-	-	757,796.26
395-G-Laboratory Equipment	-	-	-	-	-
396-G-Power Operated Equipment	1,101,925.10	376,049.68	(314,068.15)	-	1,163,906.63
396-G-Trailers-Work Equipment	151,442.09	12,915.93	(6,331.01)	-	158,027.01
397-G-Network Equipment	100,500.50	-	-	-	100,500.50
397-G-Radio Comm Equip-Fixed	116,257.41	22,857.33	(3,457.13)	-	135,657.61
397-G-Radio Comm Equip-Mobile	59,341.35	-	-	10,732.81	70,074.16
397-G-Scada System	-	-	-	-	-
397-G-Telephone & Telex Equip	27,483.58	-	(1,718.09)	25,684.88	51,450.37
398-G-Miscellaneous Equipment	51,338.57	-	-	2,320.86	53,659.43
Gas General Total	6,382,909.11	863,204.46	(614,525.47)	97,598.41	6,729,186.51
Gas Intangible					
301-G-Organization	5,006.20	-	-	-	5,006.20
302-G-Franchises	73,680.11	-	-	-	73,680.11
303-G-Misc. Intangible Plant	2,783,783.00	969.48	-	-	2,784,752.48
Gas Intangible Total	2,862,469.31	969.48	-	-	2,863,438.79
Gas Manuf. Production					
304-G-Gas-Land and Land Rights	-	-	-	-	-
305-G-Structures And Improvements	-	-	-	-	-
311-G-Liquified Petro. Propane	-	-	-	-	-
320-G-Other Gas Production	-	-	-	-	-
Gas Manuf. Production Total	-	-	-	-	-
Gas Transmission					
365-G-Land	5,584.70	-	-	-	5,584.70
365-G-Land Rights	158,152.03	-	-	-	158,152.03
366-G-Structures	-	16,682.51	-	-	16,682.51
367-G-Mains	1,541,178.78	4,556,013.47	-	-	6,097,192.25
369-G-Measuring/Regulating Equipmen	855,907.98	31,570.22	-	(10,807.57)	876,670.63
Gas Transmission Total	2,560,823.49	4,604,266.20	-	(10,807.57)	7,154,282.12
Non-Utility					
394-N-Tools,Shop,Garage Equip	-	-	-	-	-
Non-Utility Total	-	-	-	-	-
Grand Total	55,616,127.98	8,798,962.93	(1,185,022.97)	789,753.89	64,019,821.83

GPNG
ACCOUNT #1082 & 1112-Base Reserve Only*
TABLE 3 - SCHEDULE OF ACCUMULATED PROVISION FOR DEPRECIATION
FOR THE 12 MONTH PERIOD ENDED DECEMBER 31, 2018

FERC Account	Account Description	Balance 01-01-18	Reclass/ Transfers	Original Cost of Retirements	Removal Cost	Salvage	Deprec. Provision	Reimb.	ARO Depr Reg Asset	Gain/ Loss	Adis.	GPNG 12/31/2018
301	Organization Intangible Plant	(5,006.20)	-	-	-	-	-	-	-	-	-	(5,006.20)
302	Franchises and Consents Intangible Plant	(73,680.11)	-	-	-	-	-	-	-	-	-	(73,680.11)
303	Miscellaneous Intangible Plant	(528,285.78)	-	-	-	-	(175,684.58)	-	-	-	-	(703,970.36)
	TOTAL GAS INTANGIBLE PLANT	(606,972.09)	-	-	-	-	(175,684.58)	-	-	-	-	(782,656.67)
305	Structures & Improvements	(0.00)	-	-	-	-	-	-	-	-	-	(0.00)
3111	Liquidified Petro. Propane	(0.00)	-	-	-	-	-	-	-	-	-	(0.00)
320	Other Gas Production	0.00	-	-	-	-	-	-	-	-	-	0.00
	TOTAL GAS PRODUCTION PLANT	(0.00)	-	-	-	-	-	-	-	-	-	(0.00)
3652	Land Rights	(124,000.90)	-	-	-	-	(1,290.27)	-	-	-	-	(125,291.17)
366	Structures & Improvements	-	-	-	-	-	(36.50)	-	-	-	-	(36.50)
3671	Mains	(1,164,039.48)	-	-	-	-	(20,321.79)	-	-	-	-	(1,184,361.27)
3681	Meas. & Reg. Station Equip.	(215,507.28)	6,475.15	-	-	-	(18,699.97)	-	-	-	-	(227,732.10)
	TOTAL GAS TRANSMISSION PLANT	(1,503,547.66)	6,475.15	-	-	-	(40,348.53)	-	-	-	-	(1,537,421.04)
3742	Land Rights	(8,791.07)	-	-	-	-	(372.48)	-	-	-	-	(9,163.55)
375	Structures & Improvements	(25,819.79)	-	-	-	-	(867.60)	-	-	-	-	(26,687.39)
376	Mains	(6,778,294.00)	-	171,570.69	-	-	(364,872.18)	-	-	-	-	(6,971,595.49)
378	Meas. & Reg. Station Equip.-General	(308,691.99)	(6,475.15)	12,082.28	-	-	(44,972.40)	-	-	-	-	(348,057.26)
379	Meas. & Reg. Station Equip.-City Gate	(136,558.97)	-	-	-	-	(16,226.92)	-	-	-	-	(152,785.89)
380	Services	(5,280,475.77)	-	252,541.01	-	-	(359,413.60)	-	-	-	-	(5,387,348.36)
381	Meters	(3,460,968.37)	(90,096.57)	65,745.27	-	-	(481,274.57)	-	-	-	-	(3,966,594.24)
383	Service Regulators	(439,509.10)	(15,691.34)	68,558.25	3,294.50	-	(59,740.22)	-	-	-	-	(443,087.91)
385	Industrial Meas. & Reg. Station Equipment	(13,803.94)	-	-	-	-	(4,085.88)	-	-	-	-	(17,889.82)
3871	Cathodic Protection Equipment	(3,249.35)	-	-	-	-	(410.04)	-	-	-	-	(3,659.39)
3872	Other Distribution Equipment	(11,498.48)	-	-	-	-	-	-	-	-	-	(11,498.48)
	TOTAL GAS DISTRIBUTION PLANT	(16,467,660.83)	(112,263.06)	570,497.50	3,294.50	-	(1,332,235.89)	-	-	-	-	(17,338,367.78)
390	Structures & Improvements	(973,231.71)	-	102,323.09	100,052.40	-	(41,523.48)	-	-	-	-	(812,379.70)
3911	Office Furniture & Equipment	(58,979.23)	-	7,641.54	-	-	(5,640.79)	-	-	-	-	(56,978.48)
3913	Computer Equipment-PC	(25,653.35)	(45,376.93)	18,589.28	-	-	(35,758.41)	-	-	-	-	(88,199.41)
3915	Other Computer Equipment	(0.26)	-	-	-	-	-	-	-	-	-	(0.26)
3921	Transportation Equipment-Trailers	(25,946.76)	-	8,818.60	-	(5,999.00)	(207.73)	-	-	-	-	(23,334.89)
3922	Transportation Equipment-Vehicles	(648,859.61)	-	151,578.58	-	(34,879.50)	(107,201.62)	-	-	-	-	(639,362.15)
3941	Miscellaneous Tools	(222,311.88)	-	-	-	-	(36,575.27)	-	-	-	-	(258,887.15)
3961	Work Equipment Trailers	(33,224.14)	-	6,331.01	-	(4,400.00)	(3,921.59)	-	-	-	-	(35,214.72)
3962	Power Operated Equipment	(300,744.96)	-	314,068.15	-	(245,164.92)	(11,798.49)	-	-	-	-	(243,640.22)
3971	Communications Equipment-Fixed Radios	(77,389.29)	-	3,457.13	-	-	(6,599.42)	-	-	-	-	(80,391.58)
3972	Communications Equipment-Mobile Radios	(18,050.68)	(1,350.90)	-	-	-	(3,599.12)	-	-	-	-	(23,000.70)
3973	General Telephone Communication Equipment	(25,205.97)	(6,832.34)	1,718.09	-	-	(2,370.86)	-	-	-	-	(32,691.08)
3977	SCADA System	-	-	-	-	-	-	-	-	-	-	-
3978	Network Equipment	(73,734.75)	-	-	-	-	(5,668.20)	-	-	-	-	(79,402.95)
398	Miscellaneous Equipment	(18,341.01)	32.48	-	-	-	(2,207.69)	-	-	-	-	(20,516.22)
	TOTAL GAS GENERAL PLANT	(2,501,673.60)	(53,527.69)	614,525.47	100,052.40	(290,443.42)	(262,932.67)	-	-	-	-	(2,393,999.51)
	TOTAL GAS PLANT IN SERVICE	(21,079,854.18)	(159,315.60)	1,185,022.97	103,346.90	(290,443.42)	(1,811,201.67)	-	-	-	-	(22,052,445.00)
	BASE + COR + SALV	(29,034,558.51)	(158,832.04)	1,185,022.97	351,102.94	(290,443.42)	(2,540,871.17)	-	-	-	-	(30,488,579.23)
	TIE-OUT TO TOTAL RESERVE	(29,034,558.51)	(158,832.04)	1,185,022.97	351,102.94	(290,443.42)	(2,540,871.17)	-	-	-	-	(30,488,579.23)
	DIFFERENCE	-	-	-	-	-	-	-	-	-	-	-

* Base Reserve includes COR and Salvage for accounts in which separate COR and Salvage depreciation rates are not maintained

GPNG
ACCOUNT #1082 SALVAGE*
TABLE 3 - SCHEDULE OF ACCUMULATED PROVISION FOR DEPRECIATION
FOR THE 12 MONTH PERIOD ENDED DECEMBER 31, 2018

FERC Account	Account Description	Balance 01-01-18	Reclass/ Transfers	Original Cost of Retirements	Removal Cost	Salvage	Deprec. Provision	Reimb.	Gain/ Loss	Adjs.	GPNG 12/31/2018
301	Organization Intangible Plant	-	-	-	-	-	-	-	-	-	-
302	Franchises and Consents Intangible Plant	-	-	-	-	-	-	-	-	-	-
303	Miscellaneous Intangible Plant	-	-	-	-	-	-	-	-	-	-
	TOTAL GAS INTANGIBLE PLANT	-	-	-	-	-	-	-	-	-	-
305	Structures & Improvements	-	-	-	-	-	-	-	-	-	-
3111	Liquified Petro. Propane	-	-	-	-	-	-	-	-	-	-
320	Other Gas Production	-	-	-	-	-	-	-	-	-	-
	TOTAL GAS PRODUCTION PLANT	-	-	-	-	-	-	-	-	-	-
3652	Land Rights	-	-	-	-	-	-	-	-	-	-
366	Structures & Improvements	-	-	-	-	-	-	-	-	-	-
3671	Mains	(8,446.18)	-	-	-	-	803.48	-	-	-	(7,642.70)
3691	Meas. & Reg. Station Equip.	-	-	-	-	-	-	-	-	-	-
	TOTAL GAS TRANSMISSION PLANT	(8,446.18)	-	-	-	-	803.48	-	-	-	(7,642.70)
3742	Land Rights	-	-	-	-	-	-	-	-	-	-
375	Structures & Improvements	-	-	-	-	-	-	-	-	-	-
376	Mains	(2,388.67)	-	-	-	-	-	-	-	-	(2,388.67)
378	Meas. & Reg. Station Equip.-General	-	-	-	-	-	-	-	-	-	-
379	Meas. & Reg. Station Equip.-City Gate	-	-	-	-	-	-	-	-	-	-
380	Services	(41.87)	-	-	-	-	-	-	-	-	(41.87)
381	Meters	4,940.56	-	-	-	-	(1,369.14)	-	-	-	3,571.42
383	Service Regulators	-	-	-	-	-	-	-	-	-	-
385	Industrial Meas. & Reg. Station Equipment	-	-	-	-	-	-	-	-	-	-
3871	Cathodic Protection Equipment	-	-	-	-	-	-	-	-	-	-
3872	Other Distribution Equipment	-	-	-	-	-	-	-	-	-	-
	TOTAL GAS DISTRIBUTION PLANT	2,510.02	-	-	-	-	(1,369.14)	-	-	-	1,140.88
390	Structures & Improvements	-	-	-	-	-	-	-	-	-	-
3911	Office Furniture & Equipment	-	-	-	-	-	-	-	-	-	-
3913	Computer Equipment-PC	-	-	-	-	-	-	-	-	-	-
3915	Other Computer Equipment	-	-	-	-	-	-	-	-	-	-
3921	Transportation Equipment- Trailers	-	-	-	-	-	-	-	-	-	-
3922	Transportation Equipment- Vehicles	-	-	-	-	-	-	-	-	-	-
393	Stores Equipment	-	-	-	-	-	-	-	-	-	-
3941	Miscellaneous Tools	-	-	-	-	-	-	-	-	-	-
395	Laboratory Equipment	-	-	-	-	-	-	-	-	-	-
3961	Work Equipment Trailers	-	-	-	-	-	-	-	-	-	-
3962	Power Operated Equipment	-	-	-	-	-	-	-	-	-	-
3971	Communications Equipment-Fixed Radios	-	-	-	-	-	-	-	-	-	-
3972	Communications Equipment-Mobile Radios	-	-	-	-	-	-	-	-	-	-
3973	General Telephone Communication Equipment	-	-	-	-	-	-	-	-	-	-
3978	Network Equipment	-	-	-	-	-	-	-	-	-	-
398	Miscellaneous Equipment	-	-	-	-	-	-	-	-	-	-
	TOTAL GAS GENERAL PLANT	-	-	-	-	-	-	-	-	-	-
	TOTAL GAS PLANT IN SERVICE	(5,936.16)	-	-	-	-	(565.66)	-	-	-	(6,501.82)

* In May 2014 all salvage was reclassified from the 1087 account to the 1082 account

GPNG
ACCOUNT #1087 COST OF REMOVAL
TABLE 3 - SCHEDULE OF ACCUMULATED PROVISION FOR DEPRECIATION
FOR THE 12 MONTH PERIOD ENDED DECEMBER 31, 2018

FERC Account	Account Description	Balance 01-01-18	Reclass/ Transfers	Original Cost of Retirements	Removal Cost	Salvage	Deprec. Provision	Reimb.	Gain/ Loss	Adjs.	GPNG 12/31/2018
301	Organization Intangible Plant	-	-	-	-	-	-	-	-	-	-
302	Franchises and Consents Intangible Plant	-	-	-	-	-	-	-	-	-	-
303	Miscellaneous Intangible Plant	-	-	-	-	-	-	-	-	-	-
	TOTAL GAS INTANGIBLE PLANT	-	-	-	-	-	-	-	-	-	-
305	Structures & Improvements	-	-	-	-	-	-	-	-	-	-
3111	Liquified Petro. Propane	-	-	-	-	-	-	-	-	-	-
320	Other Gas Production	-	-	-	-	-	-	-	-	-	-
	TOTAL GAS PRODUCTION PLANT	-	-	-	-	-	-	-	-	-	-
3652	Land Rights	-	-	-	-	-	-	-	-	-	-
366	Structures & Improvements	-	-	-	-	-	(2.04)	-	-	-	(2.04)
3671	Mains	(289,105.81)	-	-	28,854.14	-	3,263.38	-	-	-	(256,988.29)
3691	Meas. & Reg. Station Equip.	9,373.50	(894.43)	-	-	-	(3,107.06)	-	-	-	5,372.01
	TOTAL GAS TRANSMISSION PLANT	(279,732.31)	(894.43)	-	28,854.14	-	154.28	-	-	-	(251,618.32)
3742	Land Rights	-	-	-	-	-	-	-	-	-	-
375	Structures & Improvements	(1,265.05)	-	-	-	-	(48.36)	-	-	-	(1,313.41)
376	Mains	(3,086,787.88)	-	-	97,071.96	-	(251,841.12)	-	-	-	(3,241,557.04)
378	Meas. & Reg. Station Equip.-General	(42,587.17)	894.43	-	7,581.00	-	(19,237.39)	-	-	-	(53,349.13)
379	Meas. & Reg. Station Equip.-City Gate	22,580.37	-	-	792.94	-	(3,470.18)	-	-	-	19,903.13
380	Services	(4,111,926.88)	-	-	82,061.08	-	(258,865.13)	-	-	-	(4,288,730.93)
381	Meters	(449,049.25)	483.56	-	31,394.92	-	(195,795.94)	-	-	-	(612,966.71)
383	Service Regulators	-	-	-	-	-	-	-	-	-	-
385	Industrial Meas. & Reg. Station Equipment	-	-	-	-	-	-	-	-	-	-
3871	Cathodic Protection Equipment	-	-	-	-	-	-	-	-	-	-
3872	Other Distribution Equipment	-	-	-	-	-	-	-	-	-	-
	TOTAL GAS DISTRIBUTION PLANT	(7,669,035.86)	1,377.99	-	218,901.90	-	(729,258.12)	-	-	-	(8,178,014.09)
390	Structures & Improvements	-	-	-	-	-	-	-	-	-	-
3911	Office Furniture & Equipment	-	-	-	-	-	-	-	-	-	-
3913	Computer Equipment-PC	-	-	-	-	-	-	-	-	-	-
3915	Other Computer Equipment	-	-	-	-	-	-	-	-	-	-
3921	Transportation Equipment- Trailers	-	-	-	-	-	-	-	-	-	-
3922	Transportation Equipment- Vehicles	-	-	-	-	-	-	-	-	-	-
393	Stores Equipment	-	-	-	-	-	-	-	-	-	-
3941	Miscellaneous Tools	-	-	-	-	-	-	-	-	-	-
395	Laboratory Equipment	-	-	-	-	-	-	-	-	-	-
3961	Work Equipment Trailers	-	-	-	-	-	-	-	-	-	-
3962	Power Operated Equipment	-	-	-	-	-	-	-	-	-	-
3971	Communications Equipment-Fixed Radios	-	-	-	-	-	-	-	-	-	-
3972	Communications Equipment-Mobile Radios	-	-	-	-	-	-	-	-	-	-
3973	General Telephone Communication Equipment	-	-	-	-	-	-	-	-	-	-
3978	Network Equipment	-	-	-	-	-	-	-	-	-	-
398	Miscellaneous Equipment	-	-	-	-	-	-	-	-	-	-
	TOTAL GAS GENERAL PLANT	-	-	-	-	-	-	-	-	-	-
	TOTAL GAS PLANT IN SERVICE	(7,948,768.17)	483.56	-	247,756.04	-	(729,103.84)	-	-	-	(8,429,632.41)

GREAT PLAINS NATURAL GAS
TABLE 3 - SCHEDULE OF ACCUMULATED PROVISION FOR DEPRECIATION-GAS
FOR THE 12 MONTH PERIOD ENDED DECEMBER 31, 2018

FERC Account	Account Description	Beg Reserve Balance	Reclass/ Transfers	Original Cost of Retirements	Cost of Removal Cap Ex	Salvage Cap Ex	Cost of Removal Closes	Salvage Closes	Deprec. Provision	Gain/ Loss	Transf. to Reg. Asset/Liab.	Ending Reserve Balance
305	Structures & Improvements	-										-
3111	Liquefied Petro. Propane	-										-
320	Other Gas Production	-										-
	TOTAL GAS PRODUCTION	-	-	-	-	-	-	-	-	-	-	-
3652	Land Rights	(124,000.90)	-	-			-	-	(1,290.27)	-	-	(125,291.17)
366	Structures & Improvements	-							(38.54)	-	-	(38.54)
3671	Mains	(1,461,591.47)	-	-			28,854.14	-	(16,254.93)	-	-	(1,448,992.26)
3691	Meas. & Reg. Station Equip.	(206,133.78)	5,580.72	-			-	-	(21,807.03)	-	-	(222,360.09)
	TOTAL GAS TRANSMISSION	(1,791,726.15)	5,580.72	-	-	-	28,854.14	-	(39,390.77)	-	-	(1,796,682.06)
3742	Land Rights	(8,791.07)	-	-			-	-	(372.48)	-	-	(9,163.55)
375	Structures & Improvements	(27,084.84)	-						(915.96)	-	-	(28,000.80)
376	Mains	(9,867,470.55)	-	171,570.69			97,071.96	-	(616,713.30)	-	-	(10,215,541.20)
378	Meas. & Reg. Station Equip.-General	(351,279.16)	(5,580.72)	12,082.28			7,581.00	-	(64,209.79)	-	-	(401,406.39)
379	Meas. & Reg. Station Equip.-City Gate	(113,978.60)	-	-			792.94	-	(19,697.10)	-	-	(132,882.76)
380	Services	(9,392,444.52)	-	252,541.01			82,061.08	-	(618,278.73)	-	-	(9,676,121.16)
381	Meters	(3,905,077.06)	(89,613.01)	65,745.27			31,394.92	-	(678,439.65)	-	-	(4,575,989.53)
383	Service Regulators	(439,509.10)	(15,691.34)	68,558.25			3,294.50	-	(59,740.22)	-	-	(443,087.91)
385	Industrial Meas. & Reg. Station Equipment	(13,803.94)	-	-			-	-	(4,085.88)	-	-	(17,889.82)
3871	Cathodic Protection Equipment	(3,249.35)	-	-			-	-	(410.04)	-	-	(3,659.39)
3872	Other Distribution Equipment	(11,498.48)	-	-			-	-	-	-	-	(11,498.48)
	TOTAL GAS DISTRIBUTION	(24,134,186.67)	(110,885.07)	570,497.50	-	-	222,196.40	-	(2,062,863.15)	-	-	(25,515,240.99)
390	Structures & Improvements	(973,231.71)	-	102,323.09			100,052.40	-	(41,523.48)	-	-	(812,379.70)
3911	Office Furniture & Equipment	(58,979.23)	-	7,641.54			-	-	(5,640.79)	-	-	(56,978.48)
3913	Computer Equipment-PC	(25,653.35)	(45,376.93)	18,589.28			-	-	(35,758.41)	-	-	(88,199.41)
3915	Other Computer Equipment	(0.26)	-	-			-	-	-	-	-	(0.26)
3921	Transportation Equipment- Trailers	(25,946.76)	-	8,818.60			-	(5,999.00)	(207.73)	-	-	(23,334.89)
3922	Transportation Equipment- Vehicles	(648,859.61)	-	151,578.58			-	(34,879.50)	(107,201.62)	-	-	(639,362.15)
3941	Miscellaneous Tools	(222,311.88)	-	-			-	-	(36,575.27)	-	-	(258,887.15)
3961	Work Equipment Trailers	(33,224.14)	-	6,331.01			-	(4,400.00)	(3,921.59)	-	-	(35,214.72)
3962	Power Operated Equipment	(300,744.96)	-	314,068.15			-	(245,164.92)	(11,798.49)	-	-	(243,640.22)
3971	Communications Equipment-Fixed Radios	(77,389.29)	-	3,457.13			-	-	(6,459.42)	-	-	(80,391.58)
3972	Communications Equipment-Mobile Radios	(18,050.68)	(1,350.90)	-			-	-	(3,599.12)	-	-	(23,000.70)
3973	General Telephone Communication Equipment	(25,205.97)	(6,832.34)	1,718.09			-	-	(2,370.86)	-	-	(32,691.08)
3977	Scada System	-	-	-			-	-	-	-	-	-
3978	Network Equipment	(73,734.75)	-	-			-	-	(5,668.20)	-	-	(79,402.95)
398	Miscellaneous Equipment	(18,341.01)	32.48	-			-	-	(2,207.69)	-	-	(20,516.22)
	TOTAL GAS GENERAL	(2,501,673.60)	(53,527.69)	614,525.47	-	-	100,052.40	(290,443.42)	(262,932.67)	-	-	(2,393,999.51)
	SUBTOTAL (1082, 1087 & 1088)	(28,427,586.42)	(158,832.04)	1,185,022.97	-	-	351,102.94	(290,443.42)	(2,365,186.59)	-	-	(29,705,922.56)
301	Organization Intangible Plant	(5,006.20)										(5,006.20)
302	Franchises and Consents Intangible Plant	(73,680.11)										(73,680.11)
303	Miscellaneous Intangible Plant	(528,285.78)							(175,684.58)			(703,970.36)
	TOTAL GAS INTANGIBLE	(606,972.09)	-	-	-	-	-	-	(175,684.58)	-	-	(782,656.67)
	SUBTOTAL (1082, 1087, 1088 & 1112)	(29,034,558.51)	(158,832.04)	1,185,022.97	-	-	351,102.94	(290,443.42)	(2,540,871.17)	-	-	(30,488,579.23)
	RWIP-Production	-										-
	RWIP-Transmission	12,149.31			16,704.83		(28,854.14)	-				-
	RWIP-Distribution	74,567.95			165,614.88	(123.50)	(222,196.40)	-				17,862.93
	RWIP-General	(133,631.33)			92.44	(282,712.19)	(100,052.40)	290,443.42				(225,860.06)
	RWIP-Intangible	-										-
	TOTAL RWIP	(46,914.07)	-	-	182,412.15	(282,835.69)	(351,102.94)	290,443.42	-	-	-	(207,997.13)
	TOTAL GAS RESERVE INCL RWIP	(29,081,472.58)	(158,832.04)	1,185,022.97	182,412.15	(282,835.69)	-	-	(2,540,871.17)	-	-	(30,696,576.36)
Total Reserve Including RWIP By Function												
	Production	-										-
	Transmission	(1,779,576.84)	5,580.72		16,704.83		-	-	(39,390.77)	-	-	(1,796,682.06)
	Distribution Excluding ARO	(24,059,618.72)	(110,885.07)	570,497.50	165,614.88	(123.50)	-	-	(2,062,863.15)	-	-	(25,497,378.06)
	General	(2,635,304.93)	(53,527.69)	614,525.47	92.44	(282,712.19)	-	-	(262,532.67)	-	-	(2,619,859.57)
	Intangible	(606,972.09)	-	-			-	-	(175,684.58)	-	-	(782,656.67)
	TOTAL GAS RESERVE INCL RWIP	(29,081,472.58)	(158,832.04)	1,185,022.97	182,412.15	(282,835.69)	-	-	(2,540,871.17)	-	-	(30,696,576.36)

**Great Plains Natural Gas Co.
Annual Depreciation Study Update - 2018
Analysis of Account 390 Retirements**

Great Plains had \$102,323.09 of retirements in Account 390 - General Structures and Improvements during 2018. The retirements consisted of the following:

- Marshall Warehouse Replacement
 - Retirement of \$101,934.20.
 - Remaining NBV of \$0.
 - The existing warehouse, formerly the peak shaving plant building, was retired and repurposed to become the welding shop.
 - A new warehouse/shop was constructed and placed into service in 2018.
 - The plant balance for the Marshall Warehouse was included in the 2000 vintage year on page 5-20 of the 2018 Depreciation Study. At the time of the acquisition of Great Plains by Montana-Dakota, Great Plain's plant balances were added to the electronic general ledger as a beginning balance asset with a vintage year of 2000. The actual vintage data of plant prior to 2000 can be found in paper based general ledgers. In reviewing the property retirement report for this asset, the majority of the structural components were placed into service in 1971 and 1972.
- Marshall Office Door Replacement
 - Retirement of \$388.89.
 - Remaining NBV of \$287.88.
 - The existing front door of the Marshall office was retired and replaced with a steel door.