

KENTUCKY PUBLIC SERVICE COMMISSION

Electric Distribution Utility Annual Reliability Report

SECTION 1: CONTACT INFORMATION

UTILITY NAME	South Kentucky RECC
REPORT PREPARED BY	Dakota Brown
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PHONE NUMBER OF PREPARER	606-875-3262

SECTION 2: REPORTING YEAR

CALENDAR YEAR OF REPORT	2024
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SECTION 3: MAJOR EVENT DAYS (MED)

T_{MED}	29.8524
FIRST DATE USED TO DETERMINE T_{MED}	1/1/2019
LAST DATE USED TO DETERMINE T_{MED}	12/31/2023
NUMBER OF MED IN REPORT YEAR	3

NOTE: Per IEEE 1366 T_{MED} should be calculated using the daily SAIDI values for the five prior years. If five years of data are not available, then utilities should use what is available until five years are accumulated.

SECTION 4: SYSTEM RELIABILITY INFORMATION AND RESULTS

System-wide Information

TOTAL CUSTOMERS	72517	TOTAL CIRCUITS	143
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Excluding MED

	5 YEAR AVERAGE		REPORTING YEAR
SAIDI	298.30	SAIDI	301.9
SAIFI	2.3626	SAIFI	2.1556

Including MED

	5 YEAR AVERAGE		REPORTING YEAR
SAIDI	940.7	SAIDI	728.9
SAIFI	2.976	SAIFI	2.7101

Notes:

- 1) All duration indices (SAIDI) are to be reported in units of minutes.
- 2) Reports are due on the first business day of May of each year
- 3) Reports cover the calendar year ending in the December before the reports are due.
- 4) IEEE 1366 (latest version) is used to define SAIDI, SAIFI, and T_{MED}

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SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #1:

1. SUBSTATION NAME AND NUMBER
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)
3. CIRCUIT NAME AND NUMBER
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)
5. TOTAL CIRCUIT LENGTH (MILES)
6. CUSTOMER COUNT FOR THIS CIRCUIT
- 7.. DATE OF LAST CIRCUIT TRIM (VM)
8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE N
NUMBERS REPRESENTED BY EACH CAUSE
9. CIRCUIT 5 YEAR AVERAGE (SAIDI)
10. REPORTING YEAR (SAIDI)
11. CIRCUIT 5 YEAR AVERAGE (SAIFI)
12. REPORTING YEAR (SAIFI)
13. CORRECTIVE ACTION PLAN

**REPEAT INFORMATION FOR EACH CIRCUIT EXCEEDING ITS 5 YEAR AVERAGE
FOR SAIDI AND/OR SAIFI**

**CIRCUIT REPORTING INFORMATION ATTACHED IN SPREADSHEET "PSC_ANNUAL_DISTRIBUTION_RELIABILITY_CKT INFO - 2024"

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SECTION 6: VEGETATION MANAGEMENT PLAN REVIEW

INCLUDE CURRENT VEGETATION MANAGEMENT PLAN

Additional page may be attached as needed.

Introduction to SKRECC's Vegetation Management Plan

Our number one goal as an electric cooperative is to provide safe, reliable and economical electrical service to our members. Achieving this goal includes a number of programs and procedures by SKRECC. Right of Way (ROW) programs and procedures are critical support functions to SKRECC's mission. Cutting new ROW for construction of new distribution lines and maintaining those ROWs are mission critical. We cut and clear ROWs for the safety of the public and SKRECC employees, to minimize the opportunity for trees falling into our power lines which are one of the most frequent cause for outages, for access to enable our crews to find and repair damaged areas more quickly, and to prevent trees from growing into the power lines which can create a hazardous energized tree or power blinks.

The Vegetation Management Plan is intended to be a guide to the policies and procedures that South Kentucky Rural Electric Cooperative Corporation (SKRECC) are putting in place to address the many Right of Way (ROW) issues that we encounter on an almost daily basis. Communication of this Plan to our Members, Management, and Employees is an important part of the open relationship we feel to be of the utmost importance.

The diversity of the terrain along with the diversity of the development and land use within our service territory requires SKRECC to use a variety of methods and practices to provide a ROW plan that meets the needs of the cooperative and its members. These methods include mechanical cutting, trimming, bush hogging, and both low volume and high volume spraying or a combination of methods.

SKRECC members understand and accept vegetation management as a necessary task to keep the lights on, but there are always cases where our responsibility to trim trees, remove vegetation or spray brush creates conflict with members that object for some reason. This is a very common issue with all electrical utilities and one the we have experienced from our founding in 1938.

The goals of this Vegetation Management Plan are to communicate our needs to control vegetation, communicate our policies and procedures on how we accomplish that task, and the importance of each members concerns.

****SKRECC'S CURRENT VEGETATION MANAGEMENT PLAN ATTACHED
"Vegetation Management Plan - Revised August 2024"**

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SECTION 7: UTILITY COMMENTS

South Kentucky RECC's priority is to provide its members with safe and reliable electric. The following report provides statistics to indicate outage causes and durations affecting SKRECC's reliability measures. Within the report, trees are calculated as the dominant source of outage causes in the SKRECC service territory. As with majority of Rural Electric Cooperatives, the result of long feeders and more exposure induces a significant impact on outage duration (SAIDI) and frequency (SAIFI).

Typically, our outage situations are caused by rural tree lined right of ways. Over the years, we've acknowledged these tree lined right of ways and have taken notion to attempt to move the line out of the tree line to a better location. In 2020, SKRECC decided it was time to investigate the use of ROW circuit bidding. Even with this addition, we plan to review our circuit trimming list for 2025/2026 and possibly even fixate on the circuits determined as worst performing in this report.

We should also note that many of the unknown indicated statistics were most likely due to the System Operator not receiving any details regarding the circumstance, or that the cause could not simply be located.

In April 2023, SKRECC implemented NISC's OMS software. Once experienced in this software, SKRECC will be able to utilize its capabilities, reports, & functions to better serve our members. We will recognize these measures and will determine steps for improvement and precautions regarding future outage concerns.

					alpha	-1.94227	T _{min 2023}	29.8524						NSC	T _{med}	29.8524			
					beta	2.16299	T _{med 2023}	31.983055											
date	System	cons min/day	SAIDI	Ln(SAIDI)												SAIDI	cons min	Nbr Served	Major Event Day
1/1/2022	70905	702088.0	9.901812	2.92718	RE-READ RUS BULLETIN											0.28856	1909.267		
1/10/2022	70905	5054.0	0.017128	-2.64116	Tmed IS MEANT TO BE CALCULATED (W/NATURAL LOG & STD DEV USING PREVIOUS 5 YEARS WORTH OF DATA). I											0.08007	6766.5333		FALSE
1/11/2022	70905	27933.0	0.36395	-0.93153	BELIEVE PREVIOUS REPORTS ONLY USED 1 YEAR WORTH OF DATA & AVERAGED THE Tmed FOR THE LAST FIVE DIFFERENT											0.32287	22262.787		FALSE
1/12/2022	70905	1608.0	0.02676	-3.78635	ANSWER B/C OF NATURAL LOG & EXPONENTIAL											0.0564	349.6667		FALSE
1/13/2022	70905	2345.0	0.033072	-3.40906	NSC'S Tmed = 29.34581											0.11047	7622.2		FALSE
1/14/2022	70905	2827.0	0.03987	-3.22212												0.09157	631.7333		FALSE
1/15/2022	70905	482.0	0.00789	-4.89115												0.2987	1829.733		FALSE
1/16/2022	70905	95809.0	13.5238	2.604451												0.74447	5184.733		FALSE
1/17/2022	70905	1326240.0	18.70446	2.928762												0.05373	307.3667		FALSE
1/18/2022	70905	412690.0	5.523233	1.761356												0.27042	1867.383		FALSE
1/19/2022	70905	65593.0	0.325083	-0.77787												0.71248	4917.43		FALSE
1/20/2022	70905	101444.0	1.430703	0.358166												0.26093	18055.2		FALSE
1/21/2022	70905	2325.0	0.03279	-3.41762												0.2801	1571.071		FALSE
1/22/2022	70905	1283.0	0.018086	-4.0214												0.0565	2603.25		FALSE
1/23/2022	70905	98112.0	1.383711	0.324769												0.09984	688.2667		FALSE
1/24/2022	70905	8816.0	0.124335	-2.08477												0.01515	1045.233		FALSE
1/25/2022	70905	4664.0	0.065778	-2.72147												0.0017	116.95		FALSE
1/26/2022	70905	479525.0	6.762922	1.91455												0.17839	4965.15		FALSE
1/27/2022	70905	32275.0	0.455167	-0.78705												0.00049	12.0745		FALSE
1/28/2022	70905	255.0	0.003596	-6.82753												0.08183	564.57		FALSE
1/29/2022	70905	160391	2.262055	0.816274												0.00412	284.11667		FALSE
1/30/2022	70905	159223	2.245582	0.88965												0.11122	920.1833		FALSE
1/31/2022	70905	486	0.006572	-5.0204												0.35095	2423.817		FALSE
2/1/2022	70905	4492	0.063362	-2.75904												0.00231	159.7		FALSE
2/2/2022	70905	12627	0.178063	-1.7255												1.4815	10005.13		FALSE
2/3/2022	70905	204189	2.979769	1.02201												0.3438	2268.58		FALSE
2/4/2022	70905	102	0.001439	-6.54412												0.0065	448.5667		FALSE
2/5/2022	70905	12188	0.171892	-1.76089												0.00842	580.85		FALSE
2/6/2022	70905	155692	2.195783	0.786539												0.42209	308.7		FALSE
2/7/2022	70905	7370	0.103842	-2.68302												0.02061	1421.7333		FALSE
2/8/2022	70905	5226	0.073704	-2.60789												0.00151	104.2		FALSE
2/9/2022	70905	2465	0.034765	-3.35915												0.0504	348.1667		FALSE
2/10/2022	70905	2153	0.030385	-3.416204												3.5891	2317.478		FALSE
2/11/2022	70905	88429	1.247148	0.220859												0.02922	20.16		FALSE
2/12/2022	70905	19076	0.260306	-1.31291												0.11005	752.9167		FALSE
2/13/2022	70905	1389	0.0189	-3.842204												0.0562	17.3833		FALSE
2/14/2022	70905	5382	0.075622	-2.582												0.03443	237.5		FALSE
2/15/2022	70905	1079	0.015218	-4.18531												1.76915	12006.2		FALSE
2/16/2022	70905	8218	0.115802	-2.15501												0.242	167.042		FALSE
2/17/2022	70905	3120	0.044003	-3.12351												0.04204	2900.5167		FALSE
2/18/2022	70905	12440	0.175446	-1.74042												0.67872	46528.37		FALSE
2/19/2022	70905	2499	0.035244	-3.34545												0.02219	16.3333		FALSE
2/20/2022	70905	19589	0.276271	1.26202												0.07116	1184.11667		FALSE
2/21/2022	70905	22865	0.322474	-1.13173												0.04856	3306.0		FALSE
2/22/2022	70905	1112	0.015863	-4.15518												2.40026	16570.307		FALSE
2/23/2022	70905	29745	0.419055	-0.839204												0.124	167.3333		FALSE
2/24/2022	70905	2943	0.041506	-3.18191												0.05121	352.9667		FALSE
2/25/2022	70905	3573	0.050391	-2.98794												0.17155	8086.4167		FALSE
2/26/2022	70905	9037	0.127452	-2.68001												0.448	320.8		FALSE
2/27/2022	70905	7009	0.088851	-2.11415												0.12057	8318.45		FALSE
2/28/2022	70905	1666	0.023496	-3.75092												0.11884	819.65		FALSE
2/29/2022	70905	6723	0.094817	-2.35581												0.00154	12.1546		FALSE
2/30/2022	70905	91390	1.288908	0.251204												0.73223	50520.017		FALSE
3/1/2022	70905	10596	0.149439	-1.90086												0.00305	20.165		FALSE
3/2/2022	70905	12960	0.18278	-1.69947												0.0101	94.6667		FALSE
3/3/2022	70905	2709	0.038206	-3.24204												0.00084	58		FALSE
3/4/2022	70905	1515	0.021367	-3.84593												0.00131	90.43333		FALSE
3/5/2022	70905	33560	0.473309	-0.74801												0.00231	159.6667		FALSE
3/6/2022	70905	12732	0.179584	-1.71722												0.3102	200.43		FALSE
3/7/2022	70905	2118	0.028971	-3.51087												0.00904	623.4667		FALSE
3/8/2022	70905	446951	6.303519	1.841108												2.223	15816.07		FALSE
3/9/2022	70905	31993	0.451209	-0.79582												0.0229	221.7		FALSE
3/10/2022	70905	39456	1.968801	0.676204												2.8334	19548.33		FALSE
3/11/2022	70905	17916	0.252676	-1.37565												0.124	167.333		FALSE
3/12/2022	70905	18823	0.265468	-1.32626												0.00902	63.15		FALSE
3/13/2022	70905	15438	0.271728	-1.52451												0.00776	535.3		FALSE
3/14/2022	70905	5194	0.073253	-2.61384												0.05209	589.65		FALSE
3/15/2022	70905	3868	0.054552	-2.9086												0.022	1530.1833		FALSE
3/16/2022	70905	1896	0.028279	-3.89151												0.10599	7038.25		FALSE
3/17/2022	70905	154	0.002172	-6.13214												0.15889	4006.183		FALSE
3/18/2022	70905	138005	1.94337	0.65949												0.00084	58		FALSE
3/19/2022	70905	2133	0.03008	-3.180204												0.00224	1546.9833		FALSE
3/20/2022	70905	5981	0.084352	-2.47275												0.19498	1345.24		FALSE
3/21/2022	70905	596	0.008406	-4.77886												0.03228	22925.483		FALSE
3/22/2022	70905	6046	0.085029	-2.4914												0.0302	200.5467		FALSE
3/23/2022	70905	3210	0.044003	-3.12351												0.05359	2455.6333		FALSE
3/24/2022	70905	8295	0.116988	-2.14589												0.01707	117.5667		FALSE
3/25/2022	70905	1245	0.017559	-4.024204												0.00143	143.8333		FALSE
3/26/2022	70905	15604	0.220099	-1.51381												0.26170	180650.33		FALSE
3/27/2022	70905	3217	0.045371	-3.09289												0.01031	71.21667		FALSE
3/28/2022	70905	1026754	14.4807	2.672817												0.0391	28.7		FALSE
3/29/2022	70905	13436	0.189403	-0.885744												0.0042	32.3333		FALSE
3/30/2022	70905	271623	3.833902	1.343074												0.53005	36572.867		FALSE
3/31/2022	70905	1617	0.022805	-3.78077												0.33228	22925.483		FALSE
4/1/2022	70905	401580	6.56775	1.794204												0.0302	200.5467		FALSE
4/2/2022	70905	8402	0.115497	-2.1387												0.05628	388.2		FALSE
4/3/2022	70905	586741	8.27503	2.13243												0.01638	1129.8		FALSE
4/4/2022	70905	2267	0.031072	-3.46288												0.00447	143.8333		FALSE
4/5/2022	70905	151536	2.137169	0.759482												0.20965	14465.1		FALSE
4/6/2022	70905	3071	0.043311	-3.13934												0.07196	6760.25		FALSE
4/7/2022	70905	3393	0.047833	-3.09363												0.09319	842.8		FALSE
4/8/2022	70905	140764	1.952418	0.685744												0.0302	162.333		FALSE
4/9/2022	70905	946	0.013342	-4.31685												33.76291	232947.1		TRUE
4/10/2022	70905	1046	0.014752	-4.21637												0.16526	114.35		FALSE
4/11/2022	70905	4442	0.062617	-2.770204												0.05844	40309.567		FALSE
4/12/2022	70905	2321	0.032734	-3.41934												0.32429	2237.517		FALSE
4/13/2022	70905	1164	0.016416	-4.10948												0.17139	320.52		FALSE
4/14/2022	70905	973	0.013723	-4.252024												0.12528	89.7		FALSE
4/15/2022	70905	5497	0.077526	-2.55714												0.00708	48.26667		FALSE
4/16/2022	70905	6205.000001	0.87511	-2.43599												0.0187	1200.333		FALSE
4/17/2022	70905	48262	6.86957	-0.3847												0.001	71.55		FALSE
4/18/2022	70905	13443	0.174409	-1.79204												0.01675	1150.35		FALSE
4/19/2022	70905	2048	0.028884	-3.54448												0.0286	192.9667		FALSE
4/20/2022	70905	168405	2.375079	1.865031												0.04489	3097.45		FALSE
4/21/2022	70905	124974	4.03917	1.20204												0.14964	10700.82		FALSE
4/22/2022	70905	113377	1.589999	0.460378												0.31351	2176.57		FALSE
4/23/2022	70905	12531	0.17533	-0.43481												0.10643	7343.017		FALSE
4/24/2022	70905	55076	0.776758	-0.242024												1.8784	1252.333		FALSE
4/25/2022	70905	8081	0.113989	-2.17183												0.02629	291.6667		FALSE
4/26/2022	70905	6401	0.019801	-3.92020												0.27033	1750.35		FALSE
4/27/2022	70905	64643	0.911685	-0.09206												0.32151	2182.517		FALSE
4/28/2022	70905	13843	0.195233	-1.63356												0.02306	1404.6		FALSE
4/29/2022	70905	2350	0.032772	-3.41977												0.03837	2684.083		FALSE
4/30/2022	70905	1984	0.027699	-3.590204												0.09629	6643.8667		FALSE
5/1/2022	70905	21679	0.304337	-1.18692												0.01821	111.667		FALSE

3/17/2022	70905	5599	0.078965	-2.53875	3/14/2024	72517	3905.85	0.0538612	6/16/2019 0.00	0.02101	1449.3333	68995	FALSE
3/18/2022	70905	30394	0.426658	-0.8471	3/15/2024	72517	55524.55	0.7656763	6/17/2019 0.00	1.8655	128710.03	68995	FALSE
3/19/2022	70905	20868	0.25912	-1.61334	7/25/17	6095.366667	0.0026284	0.019663	6/18/2019 0.00	0.91663	63246.3333	68995	FALSE
3/20/2022	70905	5402	0.076186	-2.57457	3/17/2024	72517	512.5166667	0.00706743	6/19/2019 0.00	3.96424	27312.43	68995	FALSE
3/20/2022	70905	2690	0.037958	-3.2718	3/18/2024	72517	8800.2	0.0937739	6/20/2019 0.00	8.02629	553981.1	68995	FALSE
3/21/2022	70905	12958	0.162752	-1.69203	3/19/2024	72517	11070.78334	0.14226471	6/21/2019 0.00	63.38109	6752876.1	68995	TRUE
3/22/2022	70905	12433	0.175347	-1.74099	3/20/2024	72517	1037.633333	0.01433084	6/22/2019 0.00	43.59898	3006104.1	68995	TRUE
3/23/2022	70905	122773	1.731514	0.548996	3/20/2024	72517	8072.433329	0.1113178	6/23/2019 0.00	6.01862	415254.55	68995	FALSE
3/24/2022	70905	6877.000001	0.096989	-3.21203	3/21/2024	72517	32480.21667	0.0173223	6/24/2019 0.00	0.91272	62973.4	68995	FALSE
3/25/2022	70905	12279	0.173175	-1.75345	3/22/2024	72517	2896.363333	0.0399407	6/25/2019 0.00	2.24615	16982.8	68995	FALSE
3/26/2022	70905	18573	0.261942	-1.33963	3/23/2024	72517	88011.9	1.2136727	6/26/2019 0.00	0.68005	46920.3	68995	FALSE
3/27/2022	70905	780	0.011001	-4.5098	3/24/2024	72517	3858.183333	0.0532308	6/27/2019 0.00	0.30158	20807.817	68995	FALSE
3/28/2022	70905	12913	0.182117	-1.50331	3/25/2024	72517	3070.35	0.0492249	6/28/2019 0.00	1.80996	6584.233	68995	FALSE
3/29/2022	70905	784.0000001	0.011057	-4.50469	3/26/2024	72517	61475.03332	0.8477327	6/29/2019 0.00	0.13777	9505.6333	68995	FALSE
3/30/2022	70905	2776	0.039151	-3.24033	3/27/2024	72517	1659.4	0.0683895	6/30/2019 0.00	0.02886	1853.25	68995	FALSE
3/30/2022	70905	1064905	15.30083	2.727607	3/28/2024	72517	10333.98333	0.14252043	7/1/2019 0.00	0.74854	61645.267	68995	FALSE
3/31/2022	70905	1003806	14.15706	2.650213	3/29/2024	72517	125670.5833	1.732981	7/2/2019 0.00	0.08138	5614.65	68995	FALSE
3/4/2022	70905	3774	0.053226	-2.93321	3/30/2024	72517	1141.533333	0.0157416	7/3/2019 0.00	0.31721	21885.8	68995	FALSE
3/5/2022	70905	36980	0.50985	-0.6759	3/31/2024	72517	6007.55	0.0929343	7/4/2019 0.00	0.32044	25253.97	68995	FALSE
3/6/2022	70905	3098	0.043592	-3.13059	3/31/2024	72517	4859.149997	0.067007	7/5/2019 0.00	0.21983	15166.85	68995	FALSE
3/7/2022	70905	47037	0.663381	-0.40141	3/4/2024	72517	38418.8	0.5297903	7/6/2019 0.00	0.34295	2361.967	68995	FALSE
3/8/2022	70905	1284	0.018109	-4.01136	3/5/2024	72517	2737.783333	0.0377537	7/7/2019 0.00	1.47358	10169.73	68995	FALSE
3/9/2022	70905	15729	0.221832	-1.50583	3/6/2024	72517	15212.65001	0.2097095	7/8/2019 0.00	0.09593	4107.4	68995	FALSE
4/1/2022	70905	5949	0.083901	-2.47812	3/7/2024	72517	8798.783334	0.1213341	7/9/2019 0.00	0.26184	18065.917	68995	FALSE
4/10/2022	70905	2806	0.039574	-3.22958	3/8/2024	72517	44218.15	0.6097625	7/10/2019 0.00	0.14857	10290.717	68995	FALSE
4/11/2022	70905	14202	0.202036	-1.60796	3/9/2024	72517	24798.48333	0.3419679	7/11/2019 0.00	4.25243	319131.37	68995	FALSE
4/12/2022	70905	38373.99999	0.541203	-0.61396	4/1/2024	72517	52291.06667	0.721087	7/12/2019 0.00	0.47923	33064.617	68995	FALSE
4/13/2022	70905	146429.2065144	0.7252		4/10/2024	72517	3385.1	0.0466801	7/15/2019 0.00	1.17671	81186.917	68995	FALSE
4/14/2022	70905	118495	1.07116	-0.11353	4/11/2024	72517	88201.21667	0.1162683	7/16/2019 0.00	0.7013	6095.9	68995	FALSE
4/15/2022	70905	97181	1.37058	0.315234	4/12/2024	72517	293061.78333	4.0412839	7/17/2019 0.00	0.01489	1027.55	68995	FALSE
4/16/2022	70905	111	0.001565	-6.49597	4/13/2024	72517	3325.866667	0.0458633	7/18/2019 0.00	0.35141	24245.8	68995	FALSE
4/17/2022	70905	172	0.002426	-6.10216	4/14/2024	72517	44404.05	0.6122367	7/19/2019 0.00	0.27942	19278.817	68995	FALSE
4/18/2022	70905	180025	2.539861	0.831205	4/15/2024	72517	15120.51	0.2280.2	7/20/2019 0.00	1.33077	8264.27	68995	FALSE
4/19/2022	70905	8816	0.124335	-2.08477	4/16/2024	72517	60378.88332	0.8328169	7/21/2019 0.00	0.25966	6461.8	68995	FALSE
4/20/2022	70905	7722	0.108906	-2.21727	4/17/2024	72517	178637.8167	2.4633923	7/22/2019 0.00	0.54207	17590.45	68995	FALSE
4/21/2022	70905	1537	0.016077	-3.83024	4/18/2024	72517	3371.066667	0.0866317	7/23/2019 0.00	1.89793	3305.18	68995	FALSE
4/21/2022	70905	1061	0.014964	-4.20213	4/19/2024	72517	2689.1	0.0370823	7/24/2019 0.00	0.10228	7056.9167	68995	FALSE
4/22/2022	70905	2044	0.0428827	-3.54643	4/22/2024	72517	90001.98333	1.253265	7/25/2019 0.00	0.17313	11944.917	68995	FALSE
4/23/2022	70905	39929	0.63134	-4.52024	4/23/2024	72517	192.85	0.0020564	7/26/2019 0.00	0.15213	10495.987	68995	FALSE
4/24/2022	70905	2997	0.042268	-3.16373	4/21/2024	72517	20426.45	0.2817195	7/27/2019 0.00	0.00475	327.95	68995	FALSE
4/25/2022	70905	11900	0.16783	-1.7848	4/22/2024	72517	2782.6	0.0383717	7/28/2019 0.00	0.1006	731.46667	68995	FALSE
4/26/2022	70905	113122	1.595402	0.467126	4/23/2024	72517	7318.5	0.1005212	7/29/2019 0.00	0.69366	4785.733	68995	FALSE
4/27/2022	70905	3773	0.053212	-1.29307	4/24/2024	72517	14059.75	0.1938521	7/30/2019 0.00	0.07793	13669.917	68995	FALSE
4/28/2022	70905	3399	0.047937	-3.03786	4/25/2024	72517	1433.816667	0.0197721	7/31/2019 0.00	1.6757	115614.73	68995	FALSE
4/29/2022	70905	655	0.009238	-4.88446	4/26/2024	72517	36340.43333	0.5011299	8/1/2019 0.00	1.10019	7900.78	68995	FALSE
4/30/2022	70905	38	0.000356	-7.57201	4/27/2024	72517	7880.03333	0.108631	8/2/2019 0.00	0.87229	6686.79	68995	FALSE
4/4/2022	70905	2835	0.039983	-3.2193	4/28/2024	72517	120440.4	1.6508575	8/3/2019 0.00	0.09154	106.18333	68995	FALSE
4/4/2022	70905	36334	0.512432	-0.66859	4/29/2024	72517	37912.4	0.5226071	8/4/2019 0.00	0.0134	924.33333	68995	FALSE
4/5/2022	70905	3901	0.055017	-3.82001	4/30/2024	72517	8583.466667	0.1163649	8/5/2019 0.00	0.1337	9224.5687	68995	FALSE
4/6/2022	70905	263812	4.002708	1.386971	4/30/2024	72517	23519	0.342324	8/6/2019 0.00	0.23699	16351.2	68995	FALSE
4/7/2022	70905	6084	0.085805	-2.45568	4/5/2024	72517	2765.733333	0.0381391	8/7/2019 0.00	0.08213	5666.8167	68995	FALSE
4/8/2022	70905	674.9999999	0.00952	-4.65438	4/4/2024	72517	1346.366667	0.0185862	8/8/2019 0.00	0.0218	503.8	68995	FALSE
4/9/2022	70905	266	0.003761	-5.5895	4/6/2024	72517	1074.216667	0.0146133	8/9/2019 0.00	0.13965	8335.0167	68995	FALSE
5/1/2022	70905	9843	0.13882	-1.97458	4/7/2024	72517	6248.183333	0.0881616	8/10/2019 0.00	0.01138	784.91667	68995	FALSE
5/10/2022	70905	4505	0.063536	-2.75615	4/8/2024	72517	9194.35	0.1267889	8/11/2019 0.00	0.07559	521.3333	68995	FALSE
5/11/2022	70905	8534	0.103058	-2.11728	4/9/2024	72517	11470.71667	0.1581797	8/12/2019 0.00	0.0755	8208	68995	FALSE
5/12/2022	70905	328790	4.63705	1.534078	5/1/2024	72517	10009.13333	0.1380246	8/13/2019 0.00	3.89153	268496.15	68995	FALSE
5/13/2022	70905	569	0.008025	-4.82522	5/10/2024	72517	13745.41667	0.1895475	8/14/2019 0.00	0.57958	39988.05	68995	FALSE
5/14/2022	70905	14653	0.206657	-1.5767	5/11/2024	72517	54791.96667	0.7555741	8/15/2019 0.00	0.01044	720.48333	68995	FALSE
5/15/2022	70905	64860	0.916165	-0.89757	5/12/2024	72517	11484.11667	0.1583293	8/16/2019 0.00	0.11540	768.2	68995	FALSE
5/16/2022	70905	17704	0.246986	-1.38755	5/17/2024	72517	12816.18333	0.1767335	8/17/2019 0.00	0.00417	278.05	68995	FALSE
5/17/2022	70905	1441	0.023233	-3.896	5/18/2024	72517	26866.2	0.395165	8/18/2019 0.00	0.03549	2484.4167	68995	FALSE
5/18/2022	70905	726907	10.23901	1.395205	5/19/2024	72517	121281.5333	1.6724666	8/19/2019 0.00	0.01793	270.6333	68995	FALSE
5/19/2022	70905	137154	1.934335	0.659763	5/16/2024	72517	16490.4	0.2274005	8/20/2019 0.00	0.34032	20965.27	68995	FALSE
5/20/2022	70905	4961	0.069967	-2.65973	5/17/2024	72517	2293.266667	0.0316238	8/21/2019 0.00	0.11024	7606.05	68995	FALSE
5/21/2022	70905	7522	0.074466	-2.42024	5/18/2024	72517	27532.73333	0.398949	8/22/2019 0.00	0.08945	4963	68995	FALSE
5/21/2022	70905	2286	0.03224	-3.43544	5/19/2024	72517	6131.05	0.0845464	8/23/2019 0.00	0.09595	4104.9667	68995	FALSE
5/23/2022	70905	4978	0.704859	-0.34976	5/20/2024	72517	3205.466667	0.044203	8/24/2019 0.00	0.58832	40591.3	68995	FALSE
5/23/2022	70905	8123	0.114562	-2.16694	5/22/2024	72517	30852.56667	0.254529	8/25/2019 0.00	0.1825	12591.283	68995	FALSE
5/24/2022	70905	9685	0.146822	-1.86027	5/21/2024	72517	33101.8	0.454695	8/26/2019 0.00	0.0969	6776.4333	68995	FALSE
5/25/2022	70905	40871	0.576419	-0.55092	5/22/2024	72517	681857.5167	9.4027265	8/27/2019 0.00	0.1624	11204.883		

8/26/2022	70905	3356	0.047331	-3.05059	8/22/2024	72517	14348.18333	0.1978596	11/28/2019 0.00	0.87256	60202.25	88995	FALSE
8/27/2022	70905	9885.000001	0.135412	-1.97032	8/23/2024	72517	43828.71667	0.6540461	11/29/2019 0.00	0.00745	513.86667	88995	FALSE
8/28/2022	70905	9207	0.12685	-2.04138	8/24/2024	72517	10099.83333	0.1392754	11/30/2019 0.00	1.98058	13521.75	88995	FALSE
8/29/2022	70905	130089	1.834694	6.06878	8/25/2024	72517	2165.85	0.0288668	12/1/2019 0.00	1.25023	86259.717	88995	FALSE
8/30/2022	70905	144383	2.036268	0.71129	8/26/2024	72517	10072.68333	0.138901	12/2/2019 0.00	0.40759	28121.983	88995	FALSE
8/30/2022	70905	48396	0.682406	-0.38133	8/27/2024	72517	23370.21667	0.3222722	12/3/2019 0.00	1.84071	1226.7667	88995	FALSE
8/31/2022	70905	473439	6.777089	1.898682	8/28/2024	72517	8784.533333	0.1211376	12/4/2019 0.00	0.00979	675.4	88995	FALSE
8/4/2022	70905	138976	1.960031	0.87296	8/29/2024	72517	11190.3	0.1543128	12/8/2019 0.00	0.04017	2771.45	88995	FALSE
8/5/2022	70905	176448	2.488513	0.911685	8/30/2024	72517	20814.38333	0.2807276	12/9/2019 0.00	0.05164	3873.4667	88995	FALSE
8/6/2022	70905	305528	4.308977	1.4607	8/30/2024	72517	31609.8	0.435895	12/7/2019 0.00	0.00728	500.91667	88995	FALSE
8/7/2022	70905	26043	0.367294	-1.00159	8/31/2024	72517	323613.0167	4.6258814	12/8/2019 0.00	0.05265	3632.6667	88995	FALSE
8/8/2022	70905	9001	0.126945	-2.06401	8/4/2024	72517	51874.75	0.7153461	12/9/2019 0.00	0.32121	22161.667	88995	FALSE
8/9/2022	70905	126947	1.777688	0.575314	8/5/2024	72517	94504.83333	1.3032107	12/10/2019 0.00	1.84071	128662.1	88995	FALSE
9/1/2022	70905	1881	0.026528	-3.62954	8/6/2024	72517	36966.25	0.5474061	12/11/2019 0.00	0.10106	6972.6667	88995	FALSE
9/10/2022	70905	637	0.008984	-4.71233	8/7/2024	72517	11675.03333	0.1609972	12/12/2019 0.00	0.01694	1168.5333	88995	FALSE
9/11/2022	70905	80560	1.141668	0.132491	8/8/2024	72517	82821.13333	1.1420927	12/13/2019 0.00	0.42613	28400.583	88995	FALSE
9/12/2022	70905	2703	0.038121	-3.26698	8/9/2024	72517	2175.683333	0.0300024	12/14/2019 0.00	0.16457	11354.8	88995	FALSE
9/13/2022	70905	97835	1.379804	0.321941	9/1/2024	72517	543905.95	7.5003923	12/15/2019 0.00	0.04234	2291.4833	88995	FALSE
9/14/2022	70905	7939.999999	0.11081	-2.18943	9/10/2024	72517	6163.16667	0.0949669	12/16/2019 0.00	7.42296	512147.17	88995	FALSE
9/15/2022	70905	46076	0.648827	-0.43105	9/11/2024	72517	95501.24999	3.159498	12/17/2019 0.00	0.01668	1140.5167	88995	FALSE
9/16/2022	70905	1548	0.021832	-3.82438	9/12/2024	72517	4295.533333	0.0592348	12/18/2019 0.00	0.12557	8663.7667	88995	FALSE
9/17/2022	70905	1029	0.014512	-4.23275	9/13/2024	72517	18568.6	0.2560586	12/19/2019 0.00	4.19598	28901.97	88995	FALSE
9/18/2022	70905	975	0.013751	-4.28866	9/14/2024	72517	20820.55	0.2811277	12/20/2019 0.00	0.24269	1674.267	88995	FALSE
9/19/2022	70905	61885	0.872788	-0.13606	9/15/2024	72517	5961.383333	0.0822067	12/21/2019 0.00	10.10475	697177.32	88995	FALSE
9/20/2022	70905	15981	0.225386	-1.48994	9/16/2024	72517	11336.16667	0.1563243	12/22/2019 0.00	0.04528	3123.75	88995	FALSE
9/20/2022	70905	8070	0.113814	-2.17319	9/17/2024	72517	53517.13333	0.7379643	12/23/2019 0.00	0.00748	516.18333	88995	FALSE
9/21/2022	70905	348896	4.920612	1.583433	9/18/2024	72517	4151.166667	0.057244	12/24/2019 0.00	0.58979	39312.633	88995	FALSE
9/22/2022	70905	42041.00001	0.59292	-0.5227	9/19/2024	72517	2479.383333	0.0341004	12/25/2019 0.00	0.0228	1573.2667	88995	FALSE
9/23/2022	70905	3291	0.046414	-0.207015	9/20/24	72517	32022.16667	0.4413515	12/26/2019 0.00	0.09422	6409	88995	FALSE
9/24/2022	70905	5683	0.90149	-2.52386	9/20/2024	72517	1878.15	0.0258994	12/27/2019 0.00	0.01569	1082.55	88995	FALSE
9/25/2022	70905	3827	0.053974	-2.91926	9/21/2024	72517	149789.7667	2.0653056	12/28/2019 0.00	0.00173	119.61667	88995	FALSE
9/26/2022	70905	8873	0.086933	-2.33374	9/22/2024	72517	17149.26667	0.2364862	12/29/2019 0.00	0.0295	2035.2167	88995	FALSE
9/27/2022	70905	148916	2.102119	0.742001	9/23/2024	72517	43086.78333	0.5941115	12/30/2019 0.00	1.86806	128750.3	88995	FALSE
9/28/2022	70905	88037	1.241619	0.216416	9/24/2024	72517	120696.2833	1.6643881	12/31/2019 0.00	0.00135	93.4	88995	FALSE
9/29/2022	70905	1604	0.022622	-3.78884	9/25/2024	72517	3358.7	0.0878686	1/1/2020 0.00	0.01006	699.2	90477	FALSE
9/30/2022	70905	3229	0.04564	-3.02017	9/26/2024	72517	39828.13333	0.5508038	1/2/2020 0.00	0.43221	8302.5667	90477	FALSE
9/30/2022	70905	5495	0.077498	-2.5575	9/27/2024	72517	3959537.03	54.061501	1/3/2020 0.00	0.0845	5870.75	90477	FALSE
10/2/2022	70905	72241	0.118842	0.018667	9/28/2024	72517	275431.5	3.7981646	1/4/2020 0.00	0.23654	16434.133	90477	FALSE
10/5/2022	70905	14723	0.207644	-1.571033	9/29/2024	72517	12279.91667	0.1693385	1/5/2020 0.00	0.00124	86.16667	90477	FALSE
9/6/2022	70905	47421	0.658796	-0.40228	9/30/2024	72517	7799.15	0.1075493	1/6/2020 0.00	0.0206	1431.5667	90477	FALSE
9/7/2022	70905	10398	0.146647	-1.91973	9/30/2024	72517	48360.3	0.6688822	1/7/2020 0.00	0.00182	126.13333	90477	FALSE
9/8/2022	70905	930.000001	0.015116	-4.33391	9/4/2024	72517	16002.73333	0.2206756	1/8/2020 0.00	0.1974	13715.067	90477	FALSE
9/9/2022	70905	8519	0.120147	-2.11904	9/5/2024	72517	6248.483333	0.081658	1/9/2020 0.00	0.14451	10226.867	90477	FALSE
1/1/2021	69477	13689.03333	0.19703	-1.6244	9/6/2024	72517	4784.25	0.0659742	1/10/2020 0.00	1.39621	97004.767	90477	FALSE
1/10/2021	69477	10646.13333	0.153232	-1.8758	9/7/2024	72517	7708.216667	0.1062953	1/11/2020 0.00	105.7118	7344537.5	90477	TRUE
1/11/2021	69477	654.516866	0.094197	-2.30327	9/8/2024	72517	2027.16667	0.0256867	1/12/2020 0.00	6.94022	462750.2	90477	FALSE
1/12/2021	69477	20.11666666	0.00029	-8.1472	9/9/2024	72517	18319.03333	0.08318	1/13/2020 0.00	0.08318	5779.0833	90477	FALSE
1/13/2021	69477	3612.183334	0.051991	-2.95668	1/14/2020	69477	11420.00	0.34625	1/14/2020 0.00	0.34625	24056.533	90477	FALSE
1/14/2021	69477	22326.96667	0.321358	-1.1352	1/15/2020	69477	11520.00	0.00371	1/15/2020 0.00	0.00371	257.86667	90477	FALSE
1/17/2021	69477	23560.98333	0.339119	-1.0814	1/16/2020	69477	11620.00	0.05808	1/16/2020 0.00	0.05808	4035.1167	90477	FALSE
1/18/2021	69477	15995.1	0.230222	-1.46871	1/17/2020	69477	11720.00	0.06193	1/17/2020 0.00	0.06193	4302.6	90477	FALSE
1/19/2021	69477	13485.58333	0.194101	-1.63937	1/18/2020	69477	11820.00	0.05415	1/18/2020 0.00	0.05415	3850.483	90477	FALSE
1/20/2021	69477	999.25	0.004307	-4.44747	1/19/2020	69477	11920.00	0.11169	1/19/2020 0.00	0.11169	5302.5667	90477	FALSE
1/20/2021	69477	1486	0.021388	-3.84491	1/20/2020	69477	12020.00	0.8507	1/20/2020 0.00	0.8507	59104.35	90477	FALSE
1/21/2021	69477	122.833333	0.001765	-6.33955	1/21/2020	69477	12120.00	0.00105	1/21/2020 0.00	0.00105	73.28333	90477	FALSE
1/22/2021	69477	130249.15	1.876146	0.62921	1/22/2020	69477	12220.00	0.19623	1/22/2020 0.00	0.19623	92748.767	90477	FALSE
1/23/2021	69477	10921.61667	0.157198	-1.85025	1/23/2020	69477	12320.00	0.05751	1/23/2020 0.00	0.05751	3995.8833	90477	FALSE
1/25/2021	69477	216773.65	3.120078	1.137858	1/24/2020	69477	12420.00	0.00407	1/24/2020 0.00	0.00407	282.66667	90477	FALSE
1/26/2021	69477	10250.53333	0.147539	-1.91367	1/25/2020	69477	12520.00	0.06284	1/25/2020 0.00	0.06284	4335.25	90477	FALSE
1/27/2021	69477	34630.98333	0.501533	-0.80449	1/26/2020	69477	12620.00	0.02337	1/26/2020 0.00	0.02337	1218.175	90477	FALSE
1/28/2021	69477	55484.03333	0.798596	-0.2249	1/27/2020	69477	12720.00	2.10813	1/27/2020 0.00	2.10813	14646.667	90477	FALSE
1/29/2021	69477	21482.0833	0.302996	1.12914	1/28/2020	69477	12820.00	0.42274	1/28/2020 0.00	0.42274	23370.987	90477	FALSE
1/30/2021	69477	60.43333334	0.00887	-7.04721	1/29/2020	69477	12920.00	0.00351	1/29/2020 0.00	0.00351	4044.03333	90477	FALSE
1/30/2021	69477	74012.26667	1.065277	0.063235	1/30/2020	69477	13020.00	0.0368	1/30/2020 0.00	0.0368	2265	90477	FALSE
1/31/2021	69477	16782.5	0.241555	-1.42066	1/31/2020	69477	13120.00	0.05351	1/31/2020 0.00	0.05351	3717.3833	90477	FALSE
1/4/2021	69477	40399.33333	0.581476	-0.54218	2/1/2020	69477	13220.00	0.00181	2/1/2020 0.00	0.00181	129	90477	FALSE
1/5/2021	69477	39.01666667	0.005062	-7.48476	2/2/2020	69477	13320.00	0.13329	2/2/2020 0.00	0.13329	9260.25	90477	FALSE
1/6/2021	69477	36.09999999	0.00052	-7.56246	2/3/2020	69477	13420.00	0.04088	2/3/2020 0.00	0.04088	2826.0167	90477	FALSE
1/7/2021	69477	6833.766667	0.09836	-2.31912	2/4/2020	69477	13520.00	0.19168	2/4/2020 0.00	0.19168	24290	90477	FALSE
1/8/2021	69477	18335.7	0.278304	-1.27904	2/5/2020	69477	13620.00	0.4451	2/5/2020 0.00	0.4451	30925.2	90477	FALSE
10/1/2021	69477	2108.283											

2/1/2021	69477	90.46666665	0.001302	-6.64377	5/11/2020 0.0	0.02768	1922.8833	69477	FALSE
2/10/2021	69477	8736.433333	0.125746	-2.07349	5/12/2020 0.0	0.25202	18204.533	69477	FALSE
2/11/2021	69477	3873.933333	0.055769	-2.88873	5/13/2020 0.0	0.02884	1884.6	69477	FALSE
2/13/2021	69477	10458.66667	0.150534	-1.88356	5/14/2020 0.0	0.00972	675.15	69477	FALSE
2/15/2021	69477	5002145.32	719.9814	6.579225	5/15/2020 0.0	0.00463	321.5	69477	FALSE
2/16/2021	69477	10856727.15	157.7028	5.060713	5/16/2020 0.0	0.23265	16164.117	69477	FALSE
2/17/2021	69477	652714.65	93.95073	4.54277	5/17/2020 0.0	0.09375	6513.3667	69477	FALSE
2/18/2021	69477	50090630.35	73.72073	4.294161	5/18/2020 0.0	0.56076	38960.033	69477	FALSE
2/19/2021	69477	1359166.25	19.36262	2.973631	5/19/2020 0.0	0.97141	67490.533	69477	FALSE
2/20/2021	69477	259.0666667	0.03729	-5.59167	5/20/2020 0.0	0.19803	13758.85	69477	FALSE
2/20/2021	69477	377827.5167	5.438167	1.693442	5/21/2020 0.0	0.21298	14796.933	69477	FALSE
2/21/2021	69477	375952.5333	5.405566	1.887429	5/22/2020 0.0	0.02992	2079.05	69477	FALSE
2/22/2021	69477	157613.25	2.288567	0.819148	5/23/2020 0.0	0.43779	30416.05	69477	FALSE
2/23/2021	69477	2960.416667	0.04261	-3.15567	5/24/2020 0.0	0.11564	8034.1	69477	FALSE
2/24/2021	69477	8579.216667	0.123468	-2.09177	5/25/2020 0.0	2.76829	192332.6	69477	FALSE
2/25/2021	69477	7019.5	0.100904	-2.23259	5/26/2020 0.0	0.11853	8234.9333	69477	FALSE
2/26/2021	69477	9661.516669	0.139061	-1.97285	5/27/2020 0.0	0.02532	1758.8167	69477	FALSE
2/27/2021	69477	118111.8167	1.609336	0.475821	5/28/2020 0.0	0.07082	4920.1667	69477	FALSE
2/28/2021	69477	544257.05	7.333929	2.059426	5/29/2020 0.0	8.78183	610135.2	69477	FALSE
2/3/2021	69477	14791.36667	0.212896	-1.54695	5/30/2020 0.0	0.02927	2033.5667	69477	FALSE
2/4/2021	69477	20353.48333	0.292953	-1.22774	5/31/2020 0.0	0.23271	16168.133	69477	FALSE
2/6/2021	69477	157.4	0.02285	-0.68996	6/1/2020 0.0	0.12039	8364.5667	69477	FALSE
2/7/2021	69477	42164.88333	0.06889	-0.49941	6/2/2020 0.0	1.87857	130617.08	69477	FALSE
2/8/2021	69477	69289.41668	0.9973	-0.0027	6/3/2020 0.0	0.06583	4573.8667	69477	FALSE
2/9/2021	69477	80.48333333	0.001158	-6.7607	6/4/2020 0.0	5.29644	367980.42	69477	FALSE
3/1/2021	69477	303942.6333	4.374723	1.475843	6/5/2020 0.0	0.1128	56470.85	69477	FALSE
3/10/2021	69477	5425.516666	0.078091	-2.54988	6/6/2020 0.0	0.17552	12194.65	69477	FALSE
3/11/2021	69477	467.75	0.006792	-5.00082	6/7/2020 0.0	0.10413	7234.6	69477	FALSE
3/12/2021	69477	202123.3333	2.909212	1.867882	6/8/2020 0.0	0.06741	4693.2	69477	FALSE
3/13/2021	69477	14680.35	0.211298	-1.55449	6/9/2020 0.0	0.16428	11413.85	69477	FALSE
3/14/2021	69477	71.53333333	0.00103	-8.87859	6/10/2020 0.0	21.81906	151923.1	69477	TRUE
3/15/2021	69477	16421.48333	0.236359	-1.44241	6/11/2020 0.0	1.53918	106937.65	69477	FALSE
3/16/2021	69477	535.0333334	0.012019	-4.42128	6/12/2020 0.0	0.12464	6361.5833	69477	FALSE
3/17/2021	69477	23495.8	0.338181	-1.08417	6/13/2020 0.0	0.08364	5810.8833	69477	FALSE
3/18/2021	69477	4996.8	0.021544	-3.83767	6/14/2020 0.0	0.20118	13977.433	69477	FALSE
3/19/2021	69477	545.9166666	0.007658	-8.46628	6/15/2020 0.0	0.03904	2712.25	69477	FALSE
3/2/2021	69477	4497.333333	0.064731	-2.73751	6/16/2020 0.0	0.34568	24016.967	69477	FALSE
3/20/2021	69477	39173.16667	0.053331	-2.87651	6/17/2020 0.0	0.03029	2104.4333	69477	FALSE
3/21/2021	69477	13218.96667	0.102034	-1.65934	6/18/2020 0.0	0.16542	10797.817	69477	FALSE
3/22/2021	69477	3587.266666	0.051632	-2.96361	6/19/2020 0.0	5.22227	362862.67	69477	FALSE
3/23/2021	69477	5724.65	0.082306	-2.49621	6/20/2020 0.0	3.58777	246267.4	69477	FALSE
3/24/2021	69477	494.0666666	0.007111	-4.84008	6/21/2020 0.0	1.89595	115300.57	69477	FALSE
3/25/2021	69477	563212.9167	8.109466	2.992662	6/22/2020 0.0	0.10222	7214.7833	69477	FALSE
3/26/2021	69477	16646.93333	0.239604	-1.42877	6/23/2020 0.0	0.07352	5107.9833	69477	FALSE
3/27/2021	69477	40029.41667	0.579153	-0.55138	6/24/2020 0.0	0.11886	8119.1333	69477	FALSE
3/28/2021	69477	91318.73333	1.314374	0.27336	6/25/2020 0.0	0.08258	4759.6167	69477	FALSE
3/29/2021	69477	3486.916667	0.051088	-2.99198	6/26/2020 0.0	0.28504	19803.833	69477	FALSE
3/30/2021	69477	38009.38333	0.547079	-0.60316	6/27/2020 0.0	0.16767	11649.117	69477	FALSE
3/30/2021	69477	123556.8667	1.776395	0.575706	6/28/2020 0.0	2.07209	243961.97	69477	FALSE
3/31/2021	69477	8507.65	0.122453	-2.10003	6/29/2020 0.0	0.56537	39280.5	69477	FALSE
3/4/2021	69477	28878.86667	0.415661	-0.87789	6/30/2020 0.0	0.76843	53388.167	69477	FALSE
3/5/2021	69477	59.38333333	0.000855	-7.06474	7/1/2020 0.0	0.52636	36708.983	69477	FALSE
3/7/2021	69477	736.7333333	0.001969	-4.23072	7/2/2020 0.0	0.07109	4638.05	69477	FALSE
3/8/2021	69477	63.05	0.009097	-7.00482	7/3/2020 0.0	0.0372	2584.7	69477	FALSE
3/9/2021	69477	13167.56667	0.189812	-1.86172	7/4/2020 0.0	0.0906	4209.9833	69477	FALSE
4/1/2021	69477	23770.9	0.342141	-0.17253	7/5/2020 0.0	1.07794	74891.983	69477	FALSE
4/10/2021	69477	4820.7	0.069386	-2.66808	7/6/2020 0.0	3.93083	273102.48	69477	FALSE
4/11/2021	69477	54965.46667	0.791132	-0.23429	7/7/2020 0.0	0.38586	2808.267	69477	FALSE
4/12/2021	69477	74.8	0.001077	-8.83393	7/8/2020 0.0	0.33677	26934.483	69477	FALSE
4/13/2021	69477	1039.933333	0.014925	-4.20473	7/9/2020 0.0	2.29674	17796.167	69477	FALSE
4/14/2021	69477	1676.966667	0.024137	-3.72401	7/10/2020 0.0	0.02044	1420	69477	FALSE
4/16/2021	69477	6494.400001	0.083476	-2.37006	7/11/2020 0.0	0.02173	1509.45	69477	FALSE
4/17/2021	69477	5689.216667	0.081588	-2.65594	7/12/2020 0.0	0.16872	12595.613	69477	FALSE
4/18/2021	69477	243.15	0.0035	-6.65507	7/13/2020 0.0	0.12572	8734.8333	69477	FALSE
4/19/2021	69477	682.2833333	0.00962	-4.82331	7/14/2020 0.0	0.00472	327.93333	69477	FALSE
4/20/2021	69477	1165.75	0.016779	-0.87683	7/15/2020 0.0	0.20434	14198.983	69477	FALSE
4/20/2021	69477	2589.4	0.03727	-3.28957	7/16/2020 0.0	0.28987	20139.533	69477	FALSE
4/21/2021	69477	1765.95	0.025418	-8.67231	7/17/2020 0.0	0.01185	823.35	69477	FALSE
4/22/2021	69477	385.066667	0.005462	-5.19533	7/18/2020 0.0	0.00466	323.5	69477	FALSE
4/23/2021	69477	346.25	0.004984	-5.30159	7/19/2020 0.0	0.4596	31951.35	69477	FALSE
4/24/2021	69477	13233.43333	0.190472	-1.65825	7/20/2020 0.0	0.11677	8113.0833	69477	FALSE
4/25/2021	69477	60.70333333	0.000864	-7.05385	7/21/2020 0.0	1.81769	112362.23	69477	FALSE
4/26/2021	69477	407.8933333	0.058709	-2.85116	7/22/2020 0.0	2.20528	153167.73	69477	FALSE
4/27/2021	69477	15476.35	0.222755	-1.50168	7/23/2020 0.0	0.14876	10335.317	69477	FALSE
4/28/2021	69477	1760.416667	0.025338	-3.87545	7/24/2020 0.0	0.23476	16310.567	69477	FALSE
4/29/2021	69477	1480	0.021302	-3.84895	7/25/2020 0.0	0.33886	27109.167	69477	FALSE
4/30/2021	69477	229.65	0.003305	-5.71219	7/26/2020 0.0	0.40462	28112.083	69477	FALSE
4/30/2021	69477	17943.93333	0.258272	-1.35374	7/27/2020 0.0	0.01974	1371.4167	69477	FALSE
4/5/2021	69477	11160.76667	0.16064	-1.82859	7/28/2020 0.0	0.1626	11296.967	69477	FALSE
4/6/2021	69477	33839.91667	0.485096	-0.7164	7/29/2020 0.0	0.20419	14183.467	69477	FALSE
4/7/2021	69477	34701.13333	0.498462	-0.68422	7/30/2020 0.0	2.90001	201483.88	69477	FALSE
4/8/2021	69477	45287.36667	0.681833	-0.42797	7/31/2020 0.0	0.87587	60852.867	69477	FALSE
4/9/2021	69477	33782.31666	0.48595	-0.71165	8/1/2020 0.0	0.33781	23470.083	69477	FALSE
5/1/2021	69477	469.2666667	0.006754	-4.99758	8/2/2020 0.0	0.06257	4347.1833	69477	FALSE
5/10/2021	69477	4398.866667	0.06317	-2.76192	8/3/2020 0.0	1.6734	116626.72	69477	FALSE
5/11/2021	69477	172903.3833	2.486642	0.917377	8/4/2020 0.0	0.0944	6558.4333	69477	FALSE
5/12/2021	69477	470.7333333	0.006775	-4.99446	8/5/2020 0.0	0.00372	258.4	69477	FALSE
5/13/2021	69477	2200.333333	0.03167	-3.45239	8/6/2020 0.0	3.79129	263407.25	69477	FALSE
5/14/2021	69477	24321.33333	0.350963	-1.04984	8/7/2020 0.0	0.00377	261.61667	69477	FALSE
5/15/2021	69477	269.15	0.003874	-6.55348	8/8/2020 0.0	0.18989	13109.817	69477	FALSE
5/16/2021	69477	20863.48333	0.300293	-1.203	8/9/2020 0.0	0.00426	295.75	69477	FALSE
5/17/2021	69477	409.8666667	0.055896	-5.13341	8/10/2020 0.0	1.95078	110522.73	69477	FALSE
5/18/2021	69477	6396.933333	0.092101	-2.39486	8/11/2020 0.0	0.00889	617.65	69477	FALSE
5/19/2021	69477	3359.533333	0.048355	-3.02919	8/12/2020 0.0	0.23827	16415.433	69477	FALSE
5/20/2021	69477	84079.16667	0.121043	-2.11161	8/13/2020 0.0	0.53816	37250.183	69477	FALSE
5/21/2021	69477	645664.6167	9.203214	2.226284	8/14/2020 0.0	0.06308	4195.3	69477	FALSE
5/21/2021	69477	7361.466667	0.105955	-2.24474	8/15/2020 0.0	0.00313	217.28333	69477	FALSE
5/22/2021	69477	2509.85	0.036125	-3.32077	8/16/2020 0.0				

7/26/2021	69477	320172.05	4.608317	1.527863	10/21/2020	0.00	0.03285	2282.0333	69477	FALSE
7/27/2021	69477	34406.46687	4.855221	-0.70275	10/22/2020	0.00	0.0092	639.15	69477	FALSE
7/28/2021	69477	50647	0.728975	-0.31612	10/23/2020	0.00	1.24278	8834.717	69477	FALSE
7/29/2021	69477	6131.516667	0.088252	-2.42755	10/24/2020	0.00	0.57056	39640.783	69477	FALSE
7/30/2021	69477	7585.283333	0.101977	-2.21479	10/25/2020	0.00	0.00074	51.31667	69477	FALSE
7/30/2021	69477	113698.1	18.35215	2.794359	10/26/2020	0.00	0.0268	1982	69477	FALSE
7/31/2021	69477	16159.95	0.232594	-1.45846	10/27/2020	0.00	0.05105	3546.5833	69477	FALSE
7/31/2021	69477	460.033333	0.006621	-0.01745	10/28/2020	0.00	0.80262	55763.867	69477	FALSE
7/5/2021	69477	15683.25	0.225733	-1.4684	10/29/2020	0.00	0.03506	44121.717	69477	FALSE
7/6/2021	69477	597.3333333	0.005958	-4.75628	10/30/2020	0.00	0.30573	21241.167	69477	FALSE
7/7/2021	69477	5304.76667	0.076353	-2.57239	10/31/2020	0.00	0.03733	2593.3333	69477	FALSE
7/8/2021	69477	14996.3	0.215846	-1.53310	11/1/2020	0.00	18.13040	1259651.9	69477	FALSE
7/9/2021	69477	7548.2	0.108643	-2.19689	11/2/2020	0.00	0.14266	9911.6833	69477	FALSE
8/1/2021	69477	3075.866667	0.044272	-3.11741	11/3/2020	0.00	0.00795	552.1	69477	FALSE
8/10/2021	69477	233174.0833	3.356133	1.21079	11/4/2020	0.00	0.02327	1616.45	69477	FALSE
8/11/2021	69477	4786.483333	0.068607	-2.67645	11/5/2020	0.00	0.01439	999.43333	69477	FALSE
8/12/2021	69477	254.15	0.003658	-5.61083	11/6/2020	0.00	0.30141	20941.1	69477	FALSE
8/13/2021	69477	8970.25	0.129111	-2.04708	11/7/2020	0.00	0.00111	76.56667	69477	FALSE
8/14/2021	69477	3667.11667	0.571141	-0.55994	11/8/2020	0.00	0.01023	745.66667	69477	FALSE
8/15/2021	69477	21424.48333	0.308358	-1.17646	11/9/2020	0.00	0.03663	2544.8	69477	FALSE
8/16/2021	69477	64207.85	0.92416	-0.07887	11/10/2020	0.00	0.104	7225.7833	69477	FALSE
8/17/2021	69477	32470.2167	4.670182	1.54198	11/11/2020	0.00	0.07829	5439.45	69477	FALSE
8/18/2021	69477	27417.15	0.384622	-0.82983	11/12/2020	0.00	1.11874	8110.86	69477	FALSE
8/19/2021	69477	48868.1	0.703371	-0.35187	11/13/2020	0.00	0.08295	5763.3	69477	FALSE
8/2/2021	69477	5652.51667	0.081358	-2.50889	11/14/2020	0.00	0.00279	193.56667	69477	FALSE
8/20/2021	69477	3141.558333	0.045216	-3.08627	11/15/2020	0.00	18.53407	1286996.6	69477	FALSE
8/21/2021	69477	301.2	0.004335	-5.44098	11/16/2020	0.00	0.02415	1677.6	69477	FALSE
8/22/2021	69477	21097.66667	0.303664	-1.19183	11/17/2020	0.00	0.04811	3342.3	69477	FALSE
8/23/2021	69477	8948.333334	0.128801	-2.04946	11/18/2020	0.00	0.00291	2101.455	69477	FALSE
8/24/2021	69477	27884.51667	0.402788	-0.09034	11/19/2020	0.00	0.02442	1696.9333	69477	FALSE
8/24/2021	69477	165.3166667	0.002379	-0.04089	11/20/2020	0.00	0.00065	45.43333	69477	FALSE
8/25/2021	69477	5195.883333	0.074787	-2.59311	11/21/2020	0.00	0.70178	48757.433	69477	FALSE
8/27/2021	69477	26126.54096	0.376046	-0.87804	11/22/2020	0.00	1.86268	289783.87	69477	FALSE
8/28/2021	69477	31821.63333	0.458017	-0.78085	11/23/2020	0.00	0.11715	8139.3	69477	FALSE
8/29/2021	69477	16784.23333	0.241292	-1.42175	11/24/2020	0.00	0.11391	8288.9833	69477	FALSE
8/30/2021	69477	7770.66667	0.111837	-2.18072	11/25/2020	0.00	0.07238	6228.5333	69477	FALSE
8/30/2021	69477	85243.81667	1.226936	0.20452	11/26/2020	0.00	0.0642	4460.4167	69477	FALSE
8/31/2021	69477	624635.8	8.990541	2.166173	11/27/2020	0.00	0.05079	3528.8833	69477	FALSE
8/4/2021	69477	27097.23333	0.306017	-0.84156	11/28/2020	0.00	3.49576	242874.85	69477	FALSE
8/5/2021	69477	18468.66667	0.285824	-1.32492	11/29/2020	0.00	0.01109	770.25	69477	FALSE
8/6/2021	69477	13254.88333	0.190781	-1.65663	11/30/2020	0.00	1.50782	111012.03	69477	FALSE
8/7/2021	69477	790.7	0.01151	-4.44541	12/1/2020	0.00	0.02934	2038.15	69477	FALSE
8/8/2021	69477	4230.533334	0.063691	-2.79867	12/2/2020	0.00	0.12619	18713.3	69477	FALSE
8/9/2021	69477	308932.45	4.446543	1.492127	12/3/2020	0.00	0.00823	571.83333	69477	FALSE
9/1/2021	69477	28841.45	0.415122	-0.87918	12/4/2020	0.00	0.0923	6412.75	69477	FALSE
9/10/2021	69477	13667.13333	0.196715	-1.826	12/5/2020	0.00	0.00173	124.15667	69477	FALSE
9/11/2021	69477	16145.15	0.232381	-1.45938	12/6/2020	0.00	0.37264	25890.15	69477	FALSE
9/12/2021	69477	113520.6167	1.633931	0.490989	12/7/2020	0.00	0.01571	1091.1667	69477	FALSE
9/13/2021	69477	812.15	0.011689	-4.44907	12/8/2020	0.00	0.01721	1192.56667	69477	FALSE
9/14/2021	69477	33.83333333	0.000487	-7.6273	12/9/2020	0.00	0.11464	7964.75	69477	FALSE
9/15/2021	69477	20619.23333	0.296778	-1.21477	12/10/2020	0.00	0.08555	5943.6667	69477	FALSE
9/16/2021	69477	4791.55	0.085866	-2.67414	12/12/2020	0.00	0.00069	48.23333	69477	FALSE
9/17/2021	69477	7382.66667	0.106259	-2.24187	12/13/2020	0.00	0.43463	3016.467	69477	FALSE
9/18/2021	69477	17998.68333	0.25906	-1.3507	12/14/2020	0.00	0.36833	25590.167	69477	FALSE
9/19/2021	69477	993.65	0.014302	-2.24737	12/15/2020	0.00	0.37109	25782.483	69477	FALSE
9/20/2021	69477	5736.95	0.082956	-2.04422	12/16/2020	0.00	0.0393	44416.3	69477	FALSE
9/20/2021	69477	59541.58333	0.856997	-0.15432	12/17/2020	0.00	0.00825	573.48333	69477	FALSE
9/21/2021	69477	5932.15	0.085383	-2.46061	12/18/2020	0.00	0.043	2987.7333	69477	FALSE
9/22/2021	69477	126447.4667	1.81989	0.589831	12/19/2020	0.00	0.15923	11062.8	69477	FALSE
9/23/2021	69477	10257.06667	0.147633	-1.91303	12/20/2020	0.00	0.00134	82.23333	69477	FALSE
9/24/2021	69477	23953.5	0.344769	-1.06488	12/21/2020	0.00	0.00292	203	69477	FALSE
9/25/2021	69477	47582.23333	0.684863	-0.37854	12/22/2020	0.00	0.07059	4904.3333	69477	FALSE
9/26/2021	69477	1226.616667	0.017655	-0.83714	12/23/2020	0.00	0.00199	1687.25	69477	FALSE
9/27/2021	69477	1397.983333	0.020122	-3.90597	12/24/2020	0.00	0.37722	26207.9	69477	FALSE
9/28/2021	69477	5476.266667	0.078821	-2.54057	12/25/2020	0.00	0.02797	1942.9833	69477	FALSE
9/29/2021	69477	8139.8	0.117158	-2.14423	12/26/2020	0.00	0.00000	15176.883	69477	FALSE
9/30/2021	69477	15599.01667	0.224521	-1.49379	12/27/2020	0.00	0.00421	292.8	69477	FALSE
9/30/2021	69477	672.35	0.009677	-6.3797	12/28/2020	0.00	0.02917	2028.8333	69477	FALSE
9/4/2021	69477	2697.96667	0.038833	-3.2485	12/29/2020	0.00	0.06703	4656.9667	69477	FALSE
9/5/2021	69477	7965.2	0.114645	-1.6589	12/30/2020	0.00	0.2056	14284.35	69477	FALSE
9/6/2021	69477	51894.76667	0.746934	-0.29178	12/31/2020	0.00	0.16308	11330.333	69477	FALSE
9/7/2021	69477	8316.75	0.119705	-2.12272	1/1/2021	0.00	0.19703	13689.033	69477	FALSE
9/8/2021	69477	62.76666667	0.002063	-7.00933	1/2/2021	0.00	0.00431	299.25	69477	FALSE
9/9/2021	69477	536.55	0.007723	-8.48359	1/3/2021	0.00	0.00087	60.43333	69477	FALSE
1/1/2020	69477	699.2	0.010064	-4.59881	1/4/2021	0.00	0.58148	40399.333	69477	FALSE
1/10/2020	69477	97004.76667	3.96214	0.333764	1/5/2021	0.00	0.00056	39.01667	69477	FALSE
1/11/2020	69477	7344537.517	105.718	4.660716	1/6/2021	0.00	0.00052	36.1	69477	FALSE
1/12/2020	69477	482813.7	8.949259	1.938635	1/7/2021	0.00	0.09836	6833.7667	69477	FALSE
1/13/2020	69477	5776.883333	0.08318	-2.48675	1/8/2021	0.00	0.2783	19335.7	69477	FALSE
1/14/2020	69477	24056.53333	0.346252	-1.06059	1/10/2021	0.00	0.15323	3016.467	69477	FALSE
1/15/2020	69477	257.8666666	0.003712	-5.59631	1/11/2021	0.00	0.0942	6544.5167	69477	FALSE
1/16/2020	69477	4035.116667	0.058078	-2.84986	1/12/2021	0.00	0.00029	20.11667	69477	FALSE
1/17/2020	69477	4302.6	0.061928	-2.78178	1/13/2021	0.00	0.05199	3615.1833	69477	FALSE
1/18/2020	69477	38500.48333	0.554147	-0.59032	1/14/2021	0.00	0.32136	22326.967	69477	FALSE
1/19/2020	69477	8302.566666	0.119501	-2.12443	1/17/2021	0.00	0.33912	23560.983	69477	FALSE
1/20/2020	69477	30035.66667	0.432311	-1.83861	1/18/2021	0.00	0.23022	15995.1	69477	FALSE
1/20/2020	69477	59104.35	0.850704	-0.16189	1/19/2021	0.00	0.1941	13485.583	69477	FALSE
1/21/2020	69477	73.28333333	0.001055	-8.58442	1/20/2021	0.00	0.02139	1486	69477	FALSE
1/22/2020	69477	52748.76667	0.759226	-0.27546	1/21/2021	0.00	0.00177	122.63333	69477	FALSE
1/23/2020	69477	3966.883333	0.057514	-2.85573	1/22/2021	0.00	1.87615	150349.15	69477	FALSE
1/24/2020	69477	282.966667	0.004073	-5.50342	1/23/2021	0.00	0.1572	10921.617	69477	FALSE
1/25/2020	69477	4335.25	0.062398	-2.77422	1/25/2021	0.00	3.12008	216773.66	69477	FALSE
1/26/2020	69477	2318.75	0.033374	-3.39997	1/26/2021	0.00	0.14754	10289.533	69477	FALSE
1/27/2020	69477	146466.8667	2.108135	0.745803	1/27/2021	0.00	0.50133	34830.883	69477	FALSE

11/7/2020	69477	76.56666667	0.001102	-8.81059	4/12/2021 0.0	0.00108	74.8	69477	FALSE
11/8/2020	69477	745.6666667	0.010753	-4.54447	4/13/2021 0.0	0.01492	1036.9333	69477	FALSE
11/9/2020	69477	2544.8	0.036668	-3.38984	4/14/2021 0.0	0.02414	1676.9667	69477	FALSE
12/1/2020	69477	2038.15	0.029336	-3.52895	4/16/2021 0.0	0.09348	6494.4	69477	FALSE
12/10/2020	69477	5943.666666	0.085549	-2.58667	4/17/2021 0.0	0.0816	5669.2167	69477	FALSE
12/12/2020	69477	48.23333333	0.006964	-7.2727	4/18/2021 0.0	0.00305	243.15	69477	FALSE
12/13/2020	69477	30196.46667	0.434625	-0.83327	4/19/2021 0.0	0.00982	682.28333	69477	FALSE
12/14/2020	69477	25890.16667	0.368326	-0.90879	4/20/2021 0.0	0.03727	2589.4	69477	FALSE
12/15/2020	69477	25782.48333	0.371004	-0.90113	4/21/2021 0.0	0.02542	1765.96	69477	FALSE
12/16/2020	69477	44416.3	0.639295	-0.44739	4/22/2021 0.0	0.00954	385.06667	69477	FALSE
12/17/2020	69477	573.4833333	0.008254	-4.79702	4/24/2021 0.0	0.19047	13233.433	69477	FALSE
12/18/2020	69477	2967.733333	0.043003	-3.14648	4/25/2021 0.0	0.00086	60.03333	69477	FALSE
12/18/2020	69477	1175.533333	0.160862	-1.82727	4/26/2021 0.0	0.08871	678.93333	69477	FALSE
12/22/2020	69477	18713.5	0.269346	-1.31176	4/27/2021 0.0	0.22276	15476.35	69477	FALSE
12/20/2020	69477	93.23333333	0.001342	-6.61365	4/28/2021 0.0	0.02354	1760.4167	69477	FALSE
12/21/2020	69477	203	0.002922	-5.83555	4/29/2021 0.0	0.0213	2480	69477	FALSE
12/22/2020	69477	4904.333333	0.070589	-2.65088	4/30/2021 0.0	0.24075	16726.767	69477	FALSE
12/23/2020	69477	7997.25	0.115106	-2.1619	5/1/2021 0.0	0.00675	469.26667	69477	FALSE
12/24/2020	69477	26207.9	0.372117	-0.97493	5/2/2021 0.0	0.21204	9499.7167	69477	FALSE
12/25/2020	69477	1942.983333	0.027566	-3.57677	5/3/2021 0.0	0.13399	9309.5	69477	FALSE
12/26/2020	69477	15176.68333	0.218442	-1.52124	5/4/2021 0.0	3.1577	219387.68	69477	FALSE
12/27/2020	69477	292.8	0.004214	-5.46926	5/5/2021 0.0	0.00789	548.1	69477	FALSE
12/28/2020	69477	2028.833333	0.029113	-3.53452	5/6/2021 0.0	0.17443	1218.767	69477	FALSE
12/29/2020	69477	4656.966667	0.067029	-2.70263	5/7/2021 0.0	0.0031	215.13333	69477	FALSE
12/3/2020	69477	571.8333333	0.006231	-4.7999	5/8/2021 0.0	0.04724	3281.7667	69477	FALSE
12/30/2020	69477	14284.35	0.205598	-1.58183	5/9/2021 0.0	1.32354	91955.333	69477	FALSE
12/31/2020	69477	11330.33333	0.16308	-1.81351	5/10/2021 0.0	0.06317	4388.8667	69477	FALSE
12/4/2020	69477	6412.75	0.0923	-2.38271	5/11/2021 0.0	2.48864	172903.38	69477	FALSE
12/5/2020	69477	124.6166667	0.001794	-4.32351	5/12/2021 0.0	0.00678	70.73333	69477	FALSE
12/6/2020	69477	25890.15	0.372643	-0.98713	5/13/2021 0.0	0.03167	2200.3333	69477	FALSE
12/7/2020	69477	1091.166667	0.015705	-1.45375	5/14/2021 0.0	0.35006	24321.333	69477	FALSE
12/8/2020	69477	1195.666667	0.01721	-4.06229	5/15/2021 0.0	0.00387	269.15	69477	FALSE
12/9/2020	69477	7964.75	0.114639	-2.16507	5/16/2021 0.0	0.38929	2085.4483	69477	FALSE
2/1/2020	69477	129.7	0.001867	-6.28353	5/17/2021 0.0	0.0059	409.66667	69477	FALSE
2/10/2020	69477	268.8333333	0.003869	-5.55466	5/18/2021 0.0	0.0921	6398.9333	69477	FALSE
2/11/2020	69477	37847.06667	0.541864	-0.12714	5/19/2021 0.0	0.04835	3359.5333	69477	FALSE
2/12/2020	69477	72099.88334	1.037752	0.037057	5/20/2021 0.0	9.29321	645664.62	69477	FALSE
2/14/2020	69477	28645.81667	0.412306	-0.88599	5/21/2021 0.0	0.10996	7361.4667	69477	FALSE
2/15/2020	69477	296.05	0.004261	-5.45922	5/22/2021 0.0	0.03812	2509.895	69477	FALSE
2/16/2020	69477	7440.833334	0.107095	-2.23404	5/23/2021 0.0	0.0029	201.16667	69477	FALSE
2/17/2020	69477	2064.566667	0.029716	-3.51608	5/24/2021 0.0	0.03243	2252.9667	69477	FALSE
2/18/2020	69477	9750.3	0.062766	-2.49174	5/25/2021 0.0	0.50118	34820.233	69477	FALSE
2/19/2020	69477	25698.08333	0.374167	-0.89297	5/26/2021 0.0	6.67718	3944.33	69477	FALSE
2/20/2020	69477	9260.25	0.133285	-2.01526	5/27/2021 0.0	0.34114	23701.45	69477	FALSE
2/20/2020	69477	62939.1	0.905898	-0.90883	5/28/2021 0.0	1.34857	93694.683	69477	FALSE
2/21/2020	69477	35.83333333	0.000513	-5.75447	5/29/2021 0.0	0.83113	5714.617	69477	FALSE
2/22/2020	69477	25825.8	0.371717	-0.98962	5/30/2021 0.0	0.14728	10232.617	69477	FALSE
2/23/2020	69477	399.6	0.005762	-5.15829	5/31/2021 0.0	0.08439	5863.25	69477	FALSE
2/24/2020	69477	2062.183333	0.029969	-3.50758	6/1/2021 0.0	0.08069	5605.1167	69477	FALSE
2/25/2020	69477	3419.783333	0.049222	-3.01142	6/2/2021 0.0	0.24854	17267.583	69477	FALSE
2/26/2020	69477	106.966667	0.00154	-6.47623	6/3/2021 0.0	1.13096	78575.717	69477	FALSE
2/27/2020	69477	163.866667	0.002359	-6.0497	6/4/2021 0.0	0.04928	3424.15	69477	FALSE
2/28/2020	69477	861.4999999	0.0124	-4.39008	6/5/2021 0.0	0.10775	7486.25	69477	FALSE
2/29/2020	69477	88425.31666	1.272728	0.241163	6/6/2021 0.0	0.02863	1989.0833	69477	FALSE
2/3/2020	69477	2826.016667	0.040676	-3.20213	6/7/2021 0.0	0.16221	11269.9	69477	FALSE
2/4/2020	69477	24260	0.34916	-1.05217	6/8/2021 0.0	0.72919	5061.1667	69477	FALSE
2/5/2020	69477	30925.2	0.445114	-0.80942	6/9/2021 0.0	0.64114	44544.483	69477	FALSE
2/6/2020	69477	857.15	0.012337	-4.39514	6/10/2021 0.0	2.80475	194865.48	69477	FALSE
2/7/2020	69477	78093.05	1.124013	0.116905	6/11/2021 0.0	4.35995	302916.3	69477	FALSE
2/8/2020	69477	3072.25	0.0442	-3.11859	6/12/2021 0.0	56.78875	377630.85	69477	TRUE
2/9/2020	69477	230.766667	0.003321	-5.70734	6/13/2021 0.0	1.75097	121652.02	69477	FALSE
3/1/2020	69477	5281.05	0.076011	-2.57687	6/14/2021 0.0	1.71967	50000.683	69477	FALSE
3/10/2020	69477	2294.2	0.033302	-3.41981	6/15/2021 0.0	2.37729	165164.25	69477	FALSE
3/11/2020	69477	14802.75	0.21306	-1.54618	6/16/2021 0.0	0.21964	15259.6	69477	FALSE
3/12/2020	69477	49650.82833	1.733732	1.964834	6/17/2021 0.0	0.07727	5368.4	69477	FALSE
3/13/2020	69477	36844.18333	0.574749	-0.63974	6/18/2021 0.0	0.13954	994.9667	69477	FALSE
3/14/2020	69477	965.4333334	0.013896	-4.27617	6/19/2021 0.0	0.00603	418.95	69477	FALSE
3/15/2020	69477	4838.15	0.069637	-2.66446	6/20/2021 0.0	0.01023	710.73333	69477	FALSE
3/16/2020	69477	17788.28333	0.256031	-1.36246	6/21/2021 0.0	17.36943	1206775.9	69477	FALSE
3/17/2020	69477	2019.266666	0.029064	-3.53829	6/22/2021 0.0	0.86514	67055.15	69477	FALSE
3/18/2020	69477	2804.2	0.040362	-3.20988	6/23/2021 0.0	0.01837	1276.6167	69477	FALSE
3/19/2020	69477	10798.21666	0.155421	-1.86161	6/24/2021 0.0	0.11133	7734.8167	69477	FALSE
3/20/2020	69477	14463.61667	0.209178	-1.56936	6/25/2021 0.0	0.22384	15563.017	69477	FALSE
3/20/2020	69477	7996.2	0.115091	-2.16203	6/26/2021 0.0	0.02839	1972.5833	69477	FALSE
3/21/2020	69477	669.216667	0.009632	-4.84264	6/27/2021 0.0	2.07589	144226.7	69477	FALSE
3/23/2020	69477	23251.23333	0.334661	-1.04944	6/28/2021 0.0	0.39448	27407.167	69477	FALSE
3/24/2020	69477	1969	0.02834	-3.56347	6/29/2021 0.0	0.40218	27942.583	69477	FALSE
3/25/2020	69477	13767.18333	0.198155	-1.61871	6/30/2021 0.0	0.07843	5448.8667	69477	FALSE
3/26/2020	69477	37699.36666	0.542617	-0.61135	7/1/2021 0.0	1.40358	97516.767	69477	FALSE
3/27/2020	69477	16475.06667	0.23714	-1.43915	7/2/2021 0.0	4.99838	27472.27	69477	FALSE
3/28/2020	69477	209.55	0.003016	-5.80379	7/3/2021 0.0	0.10918	7585.2833	69477	FALSE
3/29/2020	69477	68279.8	0.982768	-0.01738	7/4/2021 0.0	0.00662	460.03333	69477	FALSE
3/30/2020	69477	229294.2667	3.309385	1.196764	7/5/2021 0.0	0.22373	15683.25	69477	FALSE
3/30/2020	69477	11503.98333	0.16558	-1.7983	7/6/2021 0.0	0.0086	597.33333	69477	FALSE
3/4/2020	69477	466.4833333	0.006714	-5.00353	7/7/2021 0.0	0.07635	5304.7667	69477	FALSE
3/5/2020	69477	1842.066667	0.026513	-3.83011	7/8/2021 0.0	0.21585	14696.3	69477	FALSE
3/6/2020	69477	8278.433333	0.119154	-2.12734	7/9/2021 0.0	0.10884	7548.2	69477	FALSE
3/7/2020	69477	4199.383334	0.060443	-2.80606	7/10/2021 0.0	9.39445	652698.55	69477	FALSE
3/8/2020	69477	5791	0.083351	-2.84689	7/11/2021 0.0	3.13499	217809.42	69477	FALSE
3/9/2020	69477	1236.6	0.017712	-0.43349	7/12/2021 0.0	1.11492	7746.1333	69477	FALSE
4/1/2020	69477	13023.7	0.187453	-1.67422	7/13/2021 0.0	0.10345	7187.7	69477	FALSE
4/10/2020	69477	2650.183333	0.038145	-3.26937	7/14/2021 0.0	0.89128	61923.167	69477	FALSE
4/11/2020	69477	5271.05	0.075868	-2.87877	7/15/2021 0.0	0.39208	27400.8167	69477	FALSE
4/12/2020	69477	1729522.55	24.89345	3.214605	7/16/2021 0.0	1.36208	94633	69477	FALSE
4/13/2020	69477	722359.9833	0.103971	-1.341528	7/17/2021 0.0	0.74027	51432	69477	FALSE
4/14/2020	69477	3162.883333	0.045617	-3.09667	7/18/2021 0.0	0.17291	96565.667	69477	FALSE
4/15/2020	69477	7129.066667	0.10261	-2.27682	7/19/2021 0.0	0.02146	1491.1833	69477	FALSE
4/16/2020	69477	7100.533333							

6/2/2020	69477	130517.0833	1.878565	0.630508	9/23/2021 0.00	0.14763	10257.067	69477	FALSE
6/20/2020	69477	248395.7333	3.589616	1.278045	9/24/2021 0.00	0.34442	23929.25	69477	FALSE
6/21/2020	69477	115300.5667	1.65955	0.530547	9/25/2021 0.00	0.68498	47582.233	69477	FALSE
6/22/2020	69477	7418.983333	0.106783	-2.26965	9/26/2021 0.00	0.01766	1226.6167	69477	FALSE
6/23/2020	69477	5107.983333	0.07352	-2.61019	9/27/2021 0.00	0.02012	1397.9833	69477	FALSE
6/24/2020	69477	8119.133333	0.116861	-2.14677	9/28/2021 0.00	0.07862	5476.2667	69477	FALSE
6/25/2020	69477	4739.616667	0.068218	-2.68504	9/29/2021 0.00	0.11716	8139.8	69477	FALSE
6/26/2020	69477	19803.83333	0.285042	-1.25512	9/30/2021 0.00	0.00068	672.35	69477	FALSE
6/27/2020	69477	11649.11667	0.167669	-1.78577	10/1/2021 0.00	0.03035	2108.2633	69477	FALSE
6/28/2020	69477	143961.9667	2.072081	0.728553	10/2/2021 0.00	0.66367	46109.817	69477	FALSE
6/29/2020	69477	43068.58333	0.619897	-0.4782	10/3/2021 0.00	0.38717	26899.233	69477	FALSE
6/30/2020	69477	4573.866667	0.065833	-2.72064	10/4/2021 0.00	0.06928	4813.3167	69477	FALSE
6/30/2020	69477	53388.16667	0.768429	-0.26341	10/5/2021 0.00	0.01564	1086.7533	69477	FALSE
6/4/2020	69477	367980.4167	5.296435	1.667034	10/6/2021 0.00	1.37778	95724.267	69477	FALSE
6/5/2020	69477	56470.85	0.812799	-0.20727	10/7/2021 0.00	0.327	22718.817	69477	FALSE
6/6/2020	69477	12238.3	0.176163	-1.73634	10/8/2021 0.00	0.06263	6434.8	69477	FALSE
6/7/2020	69477	7234.6	0.104129	-2.26212	10/9/2021 0.00	0.1022	7100.8833	69477	FALSE
6/8/2020	69477	4683.2	0.067406	-2.69701	10/10/2021 0.00	0.05941	4127.4	69477	FALSE
6/9/2020	69477	1413.35	0.164292	-1.80617	10/11/2021 0.00	0.02745	1907.45	69477	FALSE
7/1/2020	69477	36708.98333	0.528362	-0.63797	10/12/2021 0.00	0.09662	6712.6	69477	FALSE
7/10/2020	69477	1420	0.020438	-3.89034	10/13/2021 0.00	0.07386	5131.4833	69477	FALSE
7/11/2020	69477	1509.45	0.021726	-3.82925	10/14/2021 0.00	0.01585	1100.9333	69477	FALSE
7/12/2020	69477	45832.13333	0.656973	-0.41601	10/15/2021 0.00	1.3374	9222.1	69477	FALSE
7/13/2020	69477	8736.383334	0.125745	-2.0735	10/16/2021 0.00	1.1043	76723.333	69477	FALSE
7/14/2020	69477	327.9333333	0.00472	-3.35594	10/17/2021 0.00	0.01183	821.95	69477	FALSE
7/15/2020	69477	14196.98333	0.204341	-1.58797	10/18/2021 0.00	0.1133	7871.9333	69477	FALSE
7/16/2020	69477	20139.53333	0.289873	-1.23831	10/19/2021 0.00	0.68599	46270.767	69477	FALSE
7/17/2020	69477	823.35	0.011881	-4.35337	10/20/2021 0.00	0.27942	19413.467	69477	FALSE
7/18/2020	69477	323.5	0.004956	-5.36955	10/21/2021 0.00	0.29612	23573.7	69477	FALSE
7/19/2020	69477	31931.35	0.459596	-0.77741	10/22/2021 0.00	0.13	9031.85	69477	FALSE
7/2/2020	69477	4936.05	0.071046	-2.64443	10/23/2021 0.00	0.01143	794.3	69477	FALSE
7/20/2020	69477	8115.033333	0.116774	-2.14752	10/24/2021 0.00	0.06876	4568.7167	69477	FALSE
7/21/2020	69477	15470.9	1.662002	0.589023	10/25/2021 0.00	2.68743	188714.35	69477	FALSE
7/22/2020	69477	153167.7333	2.204582	0.790538	10/26/2021 0.00	0.08684	6033.3	69477	FALSE
7/23/2020	69477	11417.16666	0.16433	-1.80588	10/27/2021 0.00	0.03063	2128.1333	69477	FALSE
7/24/2020	69477	16310.56667	0.234762	-1.44918	10/28/2021 0.00	3.25901	226425.65	69477	FALSE
7/25/2020	69477	22709.16667	0.326859	-1.11823	10/29/2021 0.00	0.18186	11245.3	69477	FALSE
7/26/2020	69477	29445.25	0.423813	-0.85846	10/30/2021 0.00	0.30476	2173.567	69477	FALSE
7/27/2020	69477	1423.233333	0.020485	-3.88906	10/31/2021 0.00	0.14259	9907	69477	FALSE
7/28/2020	69477	11296.96667	0.1626	-1.81646	11/1/2021 0.00	0.00096	66.36667	69477	FALSE
7/29/2020	69477	14409.21667	0.207395	-1.57313	11/2/2021 0.00	0.02764	1920.2	69477	FALSE
7/30/2020	69477	2584.7	0.037202	-3.29139	11/3/2021 0.00	0.06783	4712.8	69477	FALSE
7/30/2020	69477	201483.8833	2.900081	1.84714	11/4/2021 0.00	1.22059	8494.263	69477	FALSE
7/31/2020	69477	60852.86667	0.875871	-0.13254	11/5/2021 0.00	0.01424	989.46667	69477	FALSE
7/4/2020	69477	4209.983333	0.060595	-2.80354	11/6/2021 0.00	0.15737	10933.717	69477	FALSE
7/5/2020	69477	74891.88333	1.077938	0.75055	11/7/2021 0.00	0.01272	683.51667	69477	FALSE
7/6/2020	69477	273102.4833	3.930833	1.368851	11/8/2021 0.00	0.0377	2619.25	69477	FALSE
7/7/2020	69477	26808.26667	0.385868	-0.95229	11/9/2021 0.00	0.02181	1515.0167	69477	FALSE
7/8/2020	69477	27027.25	0.39801	-0.84415	11/10/2021 0.00	0.3044	11148.983	69477	FALSE
7/9/2020	69477	17796.16667	0.256145	-1.36201	11/11/2021 0.00	4.31365	299699.25	69477	FALSE
8/1/2020	69477	23812.38333	0.342738	-1.07079	11/12/2021 0.00	0.13142	9130.65	69477	FALSE
8/10/2020	69477	110322.7333	1.50782	0.464225	11/13/2021 0.00	0.50549	35119.9	69477	FALSE
8/11/2020	69477	617.66	0.00869	-4.72863	11/14/2021 0.00	0.19139	7044.0333	69477	FALSE
8/12/2020	69477	16415.43333	0.236271	-1.44277	11/15/2021 0.00	0.59353	41236.817	69477	FALSE
8/13/2020	69477	37250.18333	0.536161	-0.62334	11/16/2021 0.00	0.14212	9874.0833	69477	FALSE
8/14/2020	69477	4196.3	0.060384	-2.80703	11/17/2021 0.00	0.1671	11699.393	69477	FALSE
8/15/2020	69477	217.2833333	0.003127	-5.76755	11/18/2021 0.00	0.54639	37961.45	69477	FALSE
8/16/2020	69477	2673.166667	0.038476	-3.25773	11/19/2021 0.00	0.01019	707.71667	69477	FALSE
8/17/2020	69477	935.2	0.013461	-3.0799	11/20/2021 0.00	0.06824	4185.6167	69477	FALSE
8/18/2020	69477	50138.15	0.721651	-0.38261	11/21/2021 0.00	0.02275	951.01667	69477	FALSE
8/19/2020	69477	65905.11667	0.948589	-0.05278	11/22/2021 0.00	0.07251	5037.6667	69477	FALSE
8/20/2020	69477	3447.183333	0.06267	-2.77147	11/23/2021 0.00	0.02883	1864.1167	69477	FALSE
8/20/2020	69477	34031.16667	0.049882	-3.0163	11/24/2021 0.00	0.49268	17900.5	69477	FALSE
8/21/2020	69477	3128.35	0.045027	-3.10049	11/25/2021 0.00	0.12886	8813.5667	69477	FALSE
8/22/2020	69477	28843.23333	0.41063	-0.88986	11/26/2021 0.00	0.03747	2602.9833	69477	FALSE
8/23/2020	69477	2246.666667	0.032337	-3.2605	11/27/2021 0.00	0.32662	6504.45	69477	FALSE
8/24/2020	69477	518.85	0.007468	-4.89714	11/28/2021 0.00	0.05771	4009.2	69477	FALSE
8/25/2020	69477	7859.8	0.113128	-2.17923	11/29/2021 0.00	0.13129	9121.8333	69477	FALSE
8/26/2020	69477	28592.6	0.41154	-0.8785	11/30/2021 0.00	0.18376	12766.767	69477	FALSE
8/27/2020	69477	11018.25	0.158588	-1.84144	12/1/2021 0.00	0.07764	4394.3167	69477	FALSE
8/28/2020	69477	35024.66667	0.504119	-0.68494	12/2/2021 0.00	0.13036	9057.3667	69477	FALSE
8/29/2020	69477	99201.06667	1.427626	0.356153	12/3/2021 0.00	0.71254	49504.9	69477	FALSE
8/30/2020	69477	116158.3167	1.677078	0.517053	12/4/2021 0.00	0.01121	14678.363	69477	FALSE
8/30/2020	69477	55406.23334	0.797476	-0.2263	12/5/2021 0.00	0.56895	39389.933	69477	FALSE
8/31/2020	69477	7369.616667	0.106073	-2.24383	12/6/2021 0.00	4.5113	313431.75	69477	FALSE
8/4/2020	69477	6556.433333	0.084907	-2.36024	12/7/2021 0.00	0.17289	12011.383	69477	FALSE
8/5/2020	69477	258.4	0.003719	-5.59424	12/8/2021 0.00	0.55131	38303.667	69477	FALSE
8/6/2020	69477	263407.25	3.791287	1.332706	12/9/2021 0.00	0.36817	25579.617	69477	FALSE
8/7/2020	69477	261.616667	0.003766	-5.56187	12/10/2021 0.00	0.41355	28732.3	69477	FALSE
8/8/2020	69477	13129.61667	0.189862	-1.6661	12/11/2021 0.00	38.20199	204439.4	69477	FALSE
8/9/2020	69477	295.75	0.004257	-5.45924	12/12/2021 0.00	2.91233	20239.65	69477	FALSE
9/1/2020	69477	5268.383333	0.075685	-2.58117	12/13/2021 0.00	0.11368	7988.0833	69477	FALSE
9/10/2020	69477	8104.616667	0.116682	-2.14886	12/14/2021 0.00	0.09514	4425.5667	69477	FALSE
9/11/2020	69477	131.766667	0.001897	-6.26772	12/15/2021 0.00	0.10767	10192.067	69477	FALSE
9/12/2020	69477	38059.76667	0.547804	-0.60184	12/16/2021 0.00	4.83953	335610.5	69477	FALSE
9/13/2020	69477	111466.55	3.043691	-1.13071	12/17/2021 0.00	0.41804	29944.4	69477	FALSE
9/14/2020	69477	666.066667	0.009587	-4.64736	12/18/2021 0.00	0.01577	1095.8667	69477	FALSE
9/15/2020	69477	3581.533334	0.05155	-2.9652	12/19/2021 0.00	0.16184	11244.483	69477	FALSE
9/16/2020	69477	1370.85	0.019731	-3.82556	12/20/2021 0.00	0.29222	20302.433	69477	FALSE
9/17/2020	69477	41833.8	0.622124	-0.50729	12/21/2021 0.00	0.07514	5220.45	69477	FALSE
9/18/2020	69477	34468.05	0.496107	-0.70096	12/22/2021 0.00	0.04032	2801.5	69477	FALSE
9/19/2020	69477	17503.7	0.251935	-1.37858	12/23/2021 0.00	1.32133	91802	69477	FALSE
9/20/2020	69477	352347.8833	5.071432	1.628623	12/24/2021 0.00	3.49268	8930.3667	69477	FALSE
9/20/2020	69477	1066.266667	0.015347	-1.17683	12/25/2021 0.00	0.09442	6560.1833	69477	FALSE
9/21/2020	69477	1662.266667	0.023925	-3.73281	12/26/2021 0.00	0.16217	11267.317	69477	FALSE
9/22/2020	69477	81537.06667	1.173584	0.160062	12/27/2021 0.00	0.12387	3742.75	69	

10/3/2019	68950	338.7	0.004912	-5.31602		3/4/2022	0.00	0.05297	3756	70905	FALSE
10/3/2019	68950	13611.21667	0.197407	-1.62249		3/5/2022	0.00	0.50885	36080	70905	FALSE
10/30/2019	68950	3355.1	0.04866	-3.0229		3/6/2022	0.00	0.04369	3098	70905	FALSE
10/31/2019	68950	74773.8	0.04461	-0.09108		3/7/2022	0.00	0.56335	47028	70905	FALSE
10/4/2019	68950	4302.916666	0.063712	-2.75339		3/8/2022	0.00	0.01811	1284	70905	FALSE
10/5/2019	68950	14284.36667	0.20717	-1.57422		3/9/2022	0.00	0.22183	15729	70905	FALSE
10/6/2019	68950	4834.083333	0.07071	-2.6769		3/10/2022	0.00	0.01674	1187	70905	FALSE
10/7/2019	68950	24603.9667	0.220375	-1.39726		3/11/2022	0.00	0.14746	10456	70905	FALSE
10/9/2019	68950	45691.81667	0.66268	-0.41146		3/12/2022	0.00	2.16583	153568	70905	FALSE
11/1/2019	68950	4930.9	0.071514	-2.63786		3/13/2022	0.00	0.00613	435	70905	FALSE
11/10/2019	68950	50.86666667	0.000738	-7.21193		3/14/2022	0.00	0.03335	2365	70905	FALSE
11/11/2019	68950	8252.2	0.119684	-2.1229		3/15/2022	0.00	0.1139	8076	70905	FALSE
11/12/2019	68950	6827.366666	0.090019	-2.31244		3/16/2022	0.00	0.03921	2780	70905	FALSE
11/13/2019	68950	386.65	0.005603	-1.5362		3/17/2022	0.00	0.07696	5599	70905	FALSE
11/14/2019	68950	3656.966667	0.053038	-2.93675		3/18/2022	0.00	0.42866	30394	70905	FALSE
11/15/2019	68950	7414.166667	0.10753	-2.22999		3/19/2022	0.00	0.29572	20968	70905	FALSE
11/16/2019	68950	888	0.012879	-4.35217		3/20/2022	0.00	0.03794	2690	70905	FALSE
11/17/2019	68950	75.93333333	0.001101	-6.81128		3/21/2022	0.00	0.18277	12658	70905	FALSE
11/18/2019	68950	439.6833333	0.00637	-5.05508		3/22/2022	0.00	0.17532	12431	70905	FALSE
11/19/2019	68950	5341.916667	0.077475	-2.5578		3/23/2022	0.00	1.73151	122773	70905	FALSE
11/20/2019	68950	127.066667	0.010087	-4.01258		3/24/2022	0.00	0.09669	6877	70905	FALSE
11/20/2019	68950	15309.65	0.22204	-1.5049		3/25/2022	0.00	0.19654	12021	70905	FALSE
11/21/2019	68950	71669.11667	1.039436	0.038678		3/26/2022	0.00	0.25997	18433	70905	FALSE
11/22/2019	68950	8235.8	0.075933	-1.9779		3/27/2022	0.00	0.1077	764	70905	FALSE
11/23/2019	68950	4888.38333	0.079019	-0.38711		3/28/2022	0.00	0.18212	12913	70905	FALSE
11/24/2019	68950	2747.1	0.039842	-3.22284		3/29/2022	0.00	0.01106	784	70905	FALSE
11/25/2019	68950	53129.68333	0.770554	-2.0608		3/30/2022	0.00	15.30074	1084899	70905	FALSE
11/26/2019	68950	8271.366665	0.119961	-2.12058		3/31/2022	0.00	0.03657	2658	70905	FALSE
11/27/2019	68950	295596.3333	3.287111	1.455613		4/1/2022	0.00	0.0839	5949	70905	FALSE
11/28/2019	68950	60156.06666	0.872459	-0.13844		4/2/2022	0.00	0.10891	7722	70905	FALSE
11/29/2019	68950	513.8666667	0.007453	-4.89917		4/3/2022	0.00	0.00594	38	70905	FALSE
11/30/2019	68950	1578.95	0.0229	-3.77662		4/4/2022	0.00	0.15243	36334	70905	FALSE
11/30/2019	68950	135270.0333	1.96187	0.673891		4/5/2022	0.00	0.05502	3901	70905	FALSE
11/4/2019	68950	5128.766667	0.074384	-2.9852		4/6/2022	0.00	3.99089	262690	70905	FALSE
11/5/2019	68950	2281.916667	0.033095	-3.40837		4/7/2022	0.00	0.0858	6084	70905	FALSE
11/6/2019	68950	12359.46667	0.179253	-1.71896		4/8/2022	0.00	0.00952	675	70905	FALSE
11/7/2019	68950	7579.800000	1.036932	-2.20789		4/9/2022	0.00	0.00375	266	70905	FALSE
11/8/2019	68950	1612.833333	0.023391	-3.75836		4/10/2022	0.00	0.03657	2658	70905	FALSE
11/9/2019	68950	926.0499999	0.013431	-4.31021		4/11/2022	0.00	0.2003	14202	70905	FALSE
12/1/2019	68950	85829.81667	1.244812	0.218985		4/12/2022	0.00	0.5412	38374	70905	FALSE
12/10/2019	68950	12624.4833	1.840819	0.610211		4/13/2022	0.00	2.08514	148429	70905	FALSE
12/11/2019	68950	7362.816667	0.106785	-2.23694		4/14/2022	0.00	0.18711	118494	70905	FALSE
12/12/2019	68950	1132.45	0.016424	-4.109		4/15/2022	0.00	1.3705	97175	70905	FALSE
12/13/2019	68950	29371.45	0.425983	-0.3336		4/16/2022	0.00	0.00515	369	70905	FALSE
12/14/2019	68950	11354.8	0.164682	-1.80374		4/17/2022	0.00	0.00128	91	70905	FALSE
12/15/2019	68950	2921.483333	0.042371	-3.16129		4/18/2022	0.00	2.53896	180025	70905	FALSE
12/16/2019	68950	512147.1667	4.770554	2.00523		4/19/2022	0.00	0.12384	8781	70905	FALSE
12/17/2019	68950	146.516667	0.019872	-4.4904		4/20/2022	0.00	0.02168	1537	70905	FALSE
12/18/2019	68950	8663.766667	0.125653	-2.07423		4/21/2022	0.00	0.01496	1061	70905	FALSE
12/19/2019	68950	289398.2333	3.197045	1.434381		4/22/2022	0.00	0.02883	2044	70905	FALSE
12/20/2019	68950	28121.88333	0.407861	-0.89863		4/23/2022	0.00	0.6313	39929	70905	FALSE
12/20/2019	68950	16744.26667	0.242847	-1.41533		4/24/2022	0.00	0.04227	2997	70905	FALSE
12/21/2019	68950	697177.3167	10.11139	2.313658		4/25/2022	0.00	0.16783	11900	70905	FALSE
12/22/2019	68950	3089.416667	0.044511	-3.11189		4/26/2022	0.00	1.1996	11312	70905	FALSE
12/23/2019	68950	516.183333	0.007486	-4.89467		4/27/2022	0.00	0.05321	3773	70905	FALSE
12/24/2019	68950	39312.63333	0.570161	-0.56184		4/28/2022	0.00	0.04794	3399	70905	FALSE
12/25/2019	68950	1573.266667	0.022818	-3.78023		4/29/2022	0.00	0.00824	655	70905	FALSE
12/26/2019	68950	6420.383333	0.051117	-2.739		4/30/2022	0.00	0.03914	2775	70905	FALSE
12/27/2019	68950	1082.55	0.015701	-4.15406		5/1/2022	0.00	0.13879	9841	70905	FALSE
12/28/2019	68950	119.6166667	0.001735	-6.35684		5/2/2022	0.00	0.09697	4961	70905	FALSE
12/29/2019	68950	2035.216667	0.029517	-5.22278		5/3/2022	0.00	0.19889	55936	70905	FALSE
12/30/2019	68950	7226.766667	0.104812	-2.25559		5/4/2022	0.00	0.01223	867	70905	FALSE
12/31/2019	68950	128750.3	1.867299	0.624493		5/5/2022	0.00	0.52324	37100	70905	FALSE
1/3/20/2019	68950	93.4	0.001359	-6.60425		5/6/2022	0.00	7.44417	527829	70905	FALSE
1/3/20/2019	68950	875.4	0.009789	-4.62583		5/7/2022	0.00	0.18174	34148	70905	FALSE
1/3/20/2019	68950	2871.45	0.040195	-3.21401		5/8/2022	0.00	0.01733	943	70905	FALSE
1/3/20/2019	68950	3773.466667	0.054178	-2.87923		5/9/2022	0.00	0.11278	83156	70905	FALSE
1/3/20/2019	68950	500.9166667	0.07201	-4.5247		5/10/2022	0.00	0.00816	4351	70905	FALSE
1/3/20/2019	68950	3632.666667	0.052686	-2.94341		5/11/2022	0.00	0.11876	8421	70905	FALSE
1/3/20/2019	68950	22134.66667	0.321025	-1.13624		5/12/2022	0.00	0.483705	328790	70905	FALSE
21/10/2019	68950	1421.733333	0.02063	-3.8185		5/13/2022	0.00	0.00802	569	70905	FALSE
21/10/2019	68950	392	0.005685	-5.16988		5/14/2022	0.00	0.20666	14653	70905	FALSE
21/11/2019	68950	2375.4	0.034451	-3.36822		5/15/2022	0.00	0.091616	64960	70905	FALSE
21/12/2019	68950	122062.2	1.7703	0.571149		5/16/2022	0.00	0.24989	17704	70905	FALSE
21/12/2019	68950	16358.46667	0.237251	-1.43964		5/17/2022	0.00	0.02033	1441	70905	FALSE
21/4/2019	68950	2900.516666	0.042067	-3.16849		5/18/2022	0.00	0.102901	725997	70905	FALSE
21/5/2019	68950	46828.31667	0.675163	-0.38689		5/19/2022	0.00	1.83433	137154	70905	FALSE
21/6/2019	68950	176.3	0.002551	-6.96985		5/20/2022	0.00	0.10175	7622	70905	FALSE
21/8/2019	68950	1184.166667	0.017174	-4.06434		5/21/2022	0.00	0.03224	2286	70905	FALSE
21/9/2019	68950	3350.6	0.048956	-3.02424		5/22/2022	0.00	0.07486	49978	70905	FALSE
22/3/2019	68950	16579.9167	2.40461	0.8774		5/23/2022	0.00	0.14445	8115	70905	FALSE
22/1/2019	68950	8513.733331	0.123477	-2.0917		5/24/2022	0.00	0.14082	9985	70905	FALSE
22/2/2019	68950	3532.966667	0.05124	-2.97124		5/25/2022	0.00	0.57642	40871	70905	FALSE
22/3/2019	68950	6096.416667	0.117424	-2.14196		5/26/2022	0.00	2.09991	148894	70905	FALSE
22/4/2019	68950	447492.8667	6.490108	1.870279		5/27/2022	0.00	0.22091	15664	70905	FALSE
22/5/2019	68950	8318.449999	0.120845	-2.11491		5/28/2022	0.00	0.14528	10301	70905	FALSE
22/6/2019	68950	8168.266666	0.115847	-2.13312		5/29/2022	0.00	0.01052	5000	70905	FALSE
22/7/2019	68950	22338.86667	0.320389	-1.57305		5/30/2022	0.00	0.07379	5651	70905	FALSE
22/8/2019	68950	50520.01667	0.732705	-0.31101		5/31/2022	0.00	0.12669	8983	70905	FALSE
26/2/2019	68950	104.2	0.001511	-6.49482		6/1/2022	0.00	0.02461	1518	70905	FALSE
26/2/2019	68950	3480.633333	0.050481	-2.98617		6/2/2022	0.00	0.07272	6015	70905	FALSE
27/2/2019	68950	231696.3167	3.360353	1.210246		6/3/2022	0.00	0.19003	13474	70905	FALSE
28/2/2019	68950	2016	0.002929	-3.53227		6/4/2022	0.00	0.47001	33326	70905	FALSE
28/2/2019	68950	7592.916667	0.110122	-2.20617		6/5/2022	0.00	0.02			

5/20/2019	68950	157419.1	2.263091	0.82553	8/13/2022 0:00	0.00732	519	70905	FALSE
5/21/2019	68950	28814.93333	0.419361	-0.88902	8/14/2022 0:00	0.08228	5834	70905	FALSE
5/22/2019	68950	1414.633333	0.020518	-3.88448	8/15/2022 0:00	0.33821	23839	70905	FALSE
5/23/2019	68950	10356.61667	0.150205	-1.88576	8/16/2022 0:00	0.14415	10221	70905	FALSE
5/24/2019	68950	3361.983333	0.04876	-3.02085	8/17/2022 0:00	0.10903	7731	70905	FALSE
5/25/2019	68950	4550.9	0.060003	-2.11806	8/18/2022 0:00	0.08917	4942	70905	FALSE
5/26/2019	68950	170923.4	2.478947	0.907834	8/19/2022 0:00	0.0242	1716	70905	FALSE
5/27/2019	68950	24461.73333	0.364775	-1.03627	8/20/2022 0:00	0.0131	929	70905	FALSE
5/28/2019	68950	2609.96667	0.037844	-3.42727	8/21/2022 0:00	0.15234	10832	70905	FALSE
5/29/2019	68950	125542.7833	1.82078	0.594265	8/22/2022 0:00	0.29297	20773	70905	FALSE
5/30/2019	68950	95824.11666	1.389762	0.329133	8/24/2022 0:00	0.11599	8224	70905	FALSE
5/30/2019	68950	36097.6	0.532235	-0.63067	8/25/2022 0:00	0.10741	7616	70905	FALSE
5/31/2019	68950	24128.11667	0.349936	-1.05	8/26/2022 0:00	0.04395	3116	70905	FALSE
5/4/2019	68950	1362.433333	0.01976	-0.92411	8/27/2022 0:00	0.13811	9793	70905	FALSE
5/6/2019	68950	26703.4	0.387266	-0.94859	8/28/2022 0:00	0.12985	9207	70905	FALSE
5/6/2019	68950	9240.550001	0.134016	-2.00978	8/29/2022 0:00	0.183499	130086	70905	FALSE
5/7/2019	68950	6609.3	0.095866	-2.3449	8/30/2022 0:00	0.68205	48361	70905	FALSE
5/8/2019	68950	896.95	0.013009	-4.34214	8/31/2022 0:00	6.67709	473439	70905	FALSE
5/9/2019	68950	2916.66667	0.022268	-3.16301	9/1/2022 0:00	0.02653	1881	70905	FALSE
6/1/2019	68950	920.283333	0.013347	-3.16466	9/2/2022 0:00	0.22539	15981	70905	FALSE
6/10/2019	68950	9696.516667	0.140631	-1.96161	9/3/2022 0:00	0.04554	3229	70905	FALSE
6/11/2019	68950	6362.2	0.052273	-2.38301	9/4/2022 0:00	1.01884	7241	70905	FALSE
6/12/2019	68950	17430.86667	0.252604	-1.37514	9/5/2022 0:00	0.20764	14723	70905	FALSE
6/13/2019	68950	23120.86667	0.335328	-1.09265	9/6/2022 0:00	0.65754	46623	70905	FALSE
6/14/2019	68950	103775.05	1.505077	0.408844	9/7/2022 0:00	0.14665	10398	70905	FALSE
6/15/2019	68950	5654.85	0.082014	-2.50087	9/8/2022 0:00	0.01312	930	70905	FALSE
6/16/2019	68950	1410.4	0.020455	-3.88951	9/9/2022 0:00	0.12015	8519	70905	FALSE
6/17/2019	68950	128710.0333	1.866715	0.62418	9/10/2022 0:00	0.00898	637	70905	FALSE
6/18/2019	68950	63148.78334	0.915963	-0.88789	9/11/2022 0:00	1.14161	86959	70905	FALSE
6/19/2019	68950	273512.4333	3.966823	1.377965	9/12/2022 0:00	0.03812	2703	70905	FALSE
6/20/2019	68950	2518.7	0.036529	-3.30964	9/13/2022 0:00	1.37935	97803	70905	FALSE
6/20/2019	68950	553887.9	0.531382	2.083581	9/14/2022 0:00	0.10967	7776	70905	FALSE
6/21/2019	68950	5753724.7	83.44778	4.424221	9/15/2022 0:00	0.64616	45816	70905	FALSE
6/22/2019	68950	3002281.467	43.54259	3.77374	9/16/2022 0:00	0.02053	1456	70905	FALSE
6/23/2019	68950	41454.6667	5.981939	1.788745	9/17/2022 0:00	0.01441	1022	70905	FALSE
6/24/2019	68950	62529.63333	0.906864	-0.09774	9/18/2022 0:00	0.01375	975	70905	FALSE
6/25/2019	68950	16982.8	0.246306	-1.40118	9/17/2022 0:00	0.87279	61885	70905	FALSE
6/26/2019	68950	46749.73333	0.678024	-0.38857	9/20/2022 0:00	0.11381	8070	70905	FALSE
6/27/2019	68950	20807.81667	0.301761	-1.19805	9/21/2022 0:00	4.92023	344879	70905	FALSE
6/28/2019	68950	55796.0833	0.809225	-0.21168	9/22/2022 0:00	0.59292	42041	70905	FALSE
6/29/2019	68950	9505.633333	0.137863	-1.9815	9/23/2022 0:00	0.04641	3291	70905	FALSE
6/30/2019	68950	40682.18333	0.592635	-0.52318	9/24/2022 0:00	0.08008	5678	70905	FALSE
6/30/2019	68950	1653.25	0.028978	-3.61464	9/25/2022 0:00	0.02529	3827	70905	FALSE
6/4/2019	68950	6311.083334	0.091531	-2.39107	9/26/2022 0:00	0.09693	6873	70905	FALSE
6/6/2019	68950	7535.15	0.109284	-2.2138	9/27/2022 0:00	2.10022	148916	70905	FALSE
6/6/2019	68950	105802.65	1.534404	0.428194	9/28/2022 0:00	1.24162	88037	70905	FALSE
6/7/2019	68950	65202.5333	0.944565	-0.05588	9/29/2022 0:00	0.01726	1224	70905	FALSE
6/8/2019	68950	91993.01667	1.329389	0.283973	9/30/2022 0:00	0.0775	5495	70905	FALSE
6/9/2019	68950	3248.166667	0.047109	-3.05529	10/1/2022 0:00	0.0737	5226	70905	FALSE
7/1/2019	68950	51845.26667	0.749025	-0.28898	10/2/2022 0:00	0.03524	2499	70905	FALSE
7/10/2019	68950	10250.71667	0.148669	-1.90603	10/3/2022 0:00	1.28891	91390	70905	FALSE
7/11/2019	68950	318767.1333	4.823164	1.531705	10/4/2022 0:00	0.03673	2604	70905	FALSE
7/12/2019	68950	33064.61667	0.470545	-0.73402	10/5/2022 0:00	0.02137	1515	70905	FALSE
7/15/2019	68950	81118.3	1.17648	0.162527	10/6/2022 0:00	0.47331	33560	70905	FALSE
7/16/2019	68950	54419.48333	0.78926	-0.23666	10/7/2022 0:00	0.17956	12732	70905	FALSE
7/17/2019	68950	883.85	0.014266	-2.4987	10/8/2022 0:00	0.02897	2118	70905	FALSE
7/18/2019	68950	24245.8	0.351643	-1.04514	10/9/2022 0:00	6.30304	446917	70905	FALSE
7/19/2019	68950	19278.81667	0.279606	-1.27437	10/10/2022 0:00	0.03476	2485	70905	FALSE
7/20/2019	68950	5410.516667	0.07847	-2.54504	10/11/2022 0:00	0.02094	1485	70905	FALSE
7/20/2019	68950	22868.4833	3.316874	1.199023	10/12/2022 0:00	1.23898	87850	70905	FALSE
7/21/2019	68950	6405.166666	0.052896	-2.37628	10/13/2022 0:00	0.26904	19076	70905	FALSE
7/22/2019	68950	175390.45	2.543734	0.833633	10/14/2022 0:00	0.01959	1389	70905	FALSE
7/23/2019	68950	134664.1	1.953069	0.660402	10/15/2022 0:00	0.01763	5382	70905	FALSE
7/24/2019	68950	7056.916667	0.102348	-2.27937	10/16/2022 0:00	0.01522	1079	70905	FALSE
7/25/2019	68950	11944.91667	0.17324	-1.75308	10/17/2022 0:00	0.1159	8218	70905	FALSE
7/26/2019	68950	10495.96667	0.152226	-1.88239	10/18/2022 0:00	0.0445	3120	70905	FALSE
7/27/2019	68950	327.95	0.004756	-5.34828	10/19/2022 0:00	0.17545	12440	70905	FALSE
7/28/2019	68950	731.466667	0.010609	-4.54609	10/20/2022 0:00	0.27627	19589	70905	FALSE
7/29/2019	68950	47858.73334	0.694108	-0.36513	10/21/2022 0:00	0.33241	22965	70905	FALSE
7/30/2019	68950	21816.58333	0.316412	-1.15071	10/22/2022 0:00	0.01568	8102	70905	FALSE
7/30/2019	68950	136567.9167	1.98088	0.68344	10/23/2022 0:00	0.4195	29745	70905	FALSE
7/31/2019	68950	154118.35	1.673943	0.515182	10/24/2022 0:00	0.03987	2827	70905	FALSE
7/4/2019	68950	22522.91667	0.326955	-1.11885	10/25/2022 0:00	0.05028	3654	70905	FALSE
7/5/2019	68950	15166.85	0.219969	-1.51427	10/26/2022 0:00	0.12693	9000	70905	FALSE
7/6/2019	68950	23661.96667	0.343176	-1.06951	10/27/2022 0:00	0.09583	6795	70905	FALSE
7/7/2019	68950	101669.7333	1.474543	0.383348	10/28/2022 0:00	0.02395	1646	70905	FALSE
7/8/2019	68950	4107.4	0.059571	-2.82059	10/29/2022 0:00	0.08737	6195	70905	FALSE
7/9/2019	68950	18015.11667	0.261278	-1.34217	10/30/2022 0:00	0.14883	10553	70905	FALSE
8/1/2019	68950	75907.8	1.100911	0.098138	10/31/2022 0:00	0.18278	12960	70905	FALSE
8/10/2019	68950	784.9166668	0.011384	-4.47566	11/1/2022 0:00	0.45171	31963	70905	FALSE
8/11/2019	68950	5215.333333	0.075639	-2.58178	11/2/2022 0:00	0.08253	5852	70905	FALSE
8/12/2019	68950	5209.1	0.075549	-2.58297	11/3/2022 0:00	0.02281	1617	70905	FALSE
8/13/2019	68950	268403.1667	3.892722	1.391019	11/4/2022 0:00	0.11427	8102	70905	FALSE
8/14/2019	68950	40044.15	0.580771	-0.5434	11/5/2022 0:00	8.27503	586741	70905	FALSE
8/15/2019	68950	720.483332	0.010449	-5.46121	11/6/2022 0:00	0.03197	2267	70905	FALSE
8/16/2019	68950	8194.816667	0.118852	-2.12988	11/7/2022 0:00	2.13717	151536	70905	FALSE
8/17/2019	68950	184.1	0.00267	-5.92566	11/8/2022 0:00	0.04331	3071	70905	FALSE
8/19/2019	68950	2404.766667	0.034877	-3.35593	11/9/2022 0:00	0.04785	3393	70905	FALSE
8/19/2019	68950	5376.833334	0.077992	-2.55126	11/10/2022 0:00	1.96876	138453	70905	FALSE
8/20/2019	68950	60571.6	0.878486	0.12686	11/11/2022 0:00	0.25268	17916	70905	FALSE
8/20/2019	68950	209920.9833	3.044539	1.11335	11/12/2022 0:00	0.26547	18823	70905	FALSE
8/21/2019	68950	7606.05	0.110313	-2.20444	11/13/2022 0:00	0.21186	15022	70905	FALSE
8/22/2019	68950	6863.4	0.089542	-2.30718	11/14/2022 0:00	0.07198	5104	70905	FALSE
8/23/2019	68950	4034.516667	0.058514	-2.8385	11/15/2022 0:00	0.05455	3868	70905	FALSE
8/24/2019	68950	40550.16667	0.58811	-0.53084	11/16/2022 0:00	0.08287	1863	70905	FALSE
8/25/2019	68950	12991.28333	0.163815	-1.70038	11/17/2022 0:00	0.05217	1554	70905	FALSE
8/26/2019	68950	6640.95	0.096315	-2.34013	11/18/2022 0:00	1.94634	138005	70905	FALSE
8/27/2019	68950	11131.45	0.161442	-1.82361	11/19/2022 0:00	0.03008	2133	70905	FALSE
8/28/2019	68950	11552.51667	0.167549	-1.6846	11/20/2022 0:00	0.05056	380	70905	FALSE
8/28/2019	68950	8486.533334	0.123082	-2.08409	11/21/2022 0:00	0.085			

1/31/2023	71499	3508	0.049064	-3.01464		12/5/2023 0:00	0.2883	20435	70882	FALSE
14/2/2023	71499	120	0.001678	-6.38995		12/6/2023 0:00	0.05918	4195	70882	FALSE
15/2/2023	71499	1341	0.018756	-3.87627		12/9/2023 0:00	0.08284	6581	70882	FALSE
1/6/2023	71499	259	0.003622	-5.62061		13/30/2023 0:00	0.23172	16425	70882	FALSE
17/7/2023	71499	49.00000002	0.005085	-7.28562		13/1/2023 0:00	0.04049	3508	70882	FALSE
1/8/2023	71499	88090	0.812459	-0.20769		2/1/2023 0:00	0.05442	3856	70882	FALSE
1/9/2023	71499	3444	0.048169	-0.03305		2/2/2023 0:00	0.07498	5313	70882	FALSE
10/1/2023	71499	185.4	0.002593	-5.95492		2/3/2023 0:00	0.10731	7604	70882	FALSE
10/10/2023	71499	9220.383333	0.128958	-2.04827		2/4/2023 0:00	0.00113	78	70882	FALSE
10/11/2023	71499	1578.633333	0.022079	-3.81312		2/5/2023 0:00	0.01108	785	70882	FALSE
10/12/2023	71499	14827.6	0.207382	-1.57319		2/6/2023 0:00	0.00501	355	70882	FALSE
10/13/2023	71499	8783.100001	0.122842	-2.90685		2/7/2023 0:00	0.29563	20948	70882	FALSE
10/14/2023	71499	176384.6	2.484902	0.914258		2/8/2023 0:00	0.02331	1652	70882	FALSE
10/15/2023	71499	93710.98333	1.310661	0.270532		2/9/2023 0:00	18.16446	1287097	70882	FALSE
10/16/2023	71499	2006.016667	0.028057	-3.57353		2/10/2023 0:00	0.10486	7430	70882	FALSE
10/17/2023	71499	45457.8	0.076334	-2.57264		2/11/2023 0:00	0.01414	1092	70882	FALSE
10/18/2023	71499	6023.683333	0.084248	-2.47398		2/12/2023 0:00	0.0037	262	70882	FALSE
10/19/2023	71499	30312.83334	0.423962	-0.85811		2/13/2023 0:00	0.08668	6071	70882	FALSE
10/2/2023	71499	6523.833334	0.09124	-2.39426		2/14/2023 0:00	1.55664	113054	70882	FALSE
10/20/2023	71499	88464.3	1.23728	0.212916		2/15/2023 0:00	0.37661	26586	70882	FALSE
10/21/2023	71499	2582.916667	0.036125	-3.2076		2/16/2023 0:00	3.42561	242732	70882	FALSE
10/22/2023	71499	1157.25	0.016186	-4.12364		2/17/2023 0:00	0.29235	20715	70882	FALSE
10/23/2023	71499	11884.95	0.167624	-1.78603		2/18/2023 0:00	0.27897	19787	70882	FALSE
10/24/2023	71499	25756.43333	0.360235	-1.021		2/19/2023 0:00	0.00237	168	70882	FALSE
10/25/2023	71499	7456.066667	0.104282	-2.28066		2/20/2023 0:00	0.00555	393	70882	FALSE
10/26/2023	71499	11013.83333	0.154042	-1.87053		2/21/2023 0:00	0.01497	1091	70882	FALSE
10/27/2023	71499	10436.18333	0.145963	-1.9244		2/22/2023 0:00	0.69164	49008	70882	FALSE
10/28/2023	71499	1292.583333	0.018078	-4.01304		2/23/2023 0:00	0.02385	1690	70882	FALSE
10/29/2023	71499	16984.08333	0.237663	-1.43682		2/24/2023 0:00	0.00195	106	70882	FALSE
10/3/2023	71499	8144.116666	0.113905	-2.17239		2/25/2023 0:00	0.00215	152	70882	FALSE
10/30/2023	71499	3688.233334	0.051584	-2.96454		2/26/2023 0:00	0.67027	47494	70882	FALSE
10/31/2023	71499	216741.8167	3.031396	1.109023		2/27/2023 0:00	33.48942	2371576	70882	TRUE
10/4/2023	71499	3887.383333	0.054517	-2.81185		2/28/2023 0:00	0.15882	11254	70882	FALSE
10/5/2023	71499	68953.43333	0.964397	-0.03625		3/1/2023 0:00	1.77028	126003	71177	FALSE
10/6/2023	71499	4959.8	0.069356	-2.6685		3/2/2023 0:00	0.13202	9397	71177	FALSE
10/7/2023	71499	8789.35	0.12293	-2.09814		3/3/2023 0:00	816.8161	58124284	71177	TRUE
10/8/2023	71499	4388.716664	0.061382	-2.79065		3/4/2023 0:00	287.9965	20498723	71177	TRUE
10/9/2023	71499	6239.016667	0.08726	-2.43886		3/5/2023 0:00	51.8299	3689907	71177	TRUE
11/1/2023	71499	43424.7	0.503747	-0.49986		3/6/2023 0:00	0.91664	220554	71177	TRUE
11/10/2023	71499	7424.733334	0.103844	-2.26487		3/7/2023 0:00	13.40471	954107	71177	FALSE
11/11/2023	71499	167.6	0.002344	-6.05586		3/8/2023 0:00	2.55029	181522	71177	FALSE
11/12/2023	71499	80529.09999	1.26297	0.118935		3/9/2023 0:00	15.7292	111956	71177	FALSE
11/13/2023	71499	4763.083333	0.066617	-2.70879		3/10/2023 0:00	2.06224	147217	71177	FALSE
11/14/2023	71499	11642.61667	0.162836	-1.81501		3/11/2023 0:00	0.94302	67121	71177	FALSE
11/15/2023	71499	9921.3	0.138761	-1.975		3/12/2023 0:00	1.33407	94955	71177	FALSE
11/16/2023	71499	11542.8	0.659363	0.95434		3/13/2023 0:00	2.8621	169465	71177	FALSE
11/17/2023	71499	20564.78333	0.287623	-1.2461		3/14/2023 0:00	0.03872	2756	71177	FALSE
11/18/2023	71499	6809.066667	0.095233	-2.35143		3/15/2023 0:00	0.1242	8840	71177	FALSE
11/19/2023	71499	3157.166667	0.041457	-3.12001		3/16/2023 0:00	0.96168	47082	71177	FALSE
11/2/2023	71499	15268.15	0.213544	-1.54391		3/17/2023 0:00	0.07543	5369	71177	FALSE
11/20/2023	71499	5365.033333	0.075036	-2.58978		3/18/2023 0:00	0.07639	5437	71177	FALSE
11/21/2023	71499	133967.1	1.873682	0.627911		3/19/2023 0:00	0.01477	1051	71177	FALSE
11/22/2023	71499	954.5833333	0.011351	-4.31616		3/20/2023 0:00	0.3413	24293	71177	FALSE
11/23/2023	71499	3655.133333	0.051121	-2.97355		3/21/2023 0:00	0.04676	3328	71177	FALSE
11/24/2023	71499	3832.916667	0.053608	-2.92606		3/22/2023 0:00	0.08891	6186	71177	FALSE
11/25/2023	71499	10049.98333	0.140561	-1.86211		3/23/2023 0:00	0.61231	43587	71177	FALSE
11/26/2023	71499	41129.66667	0.575248	-0.55295		3/24/2023 0:00	0.55007	39152	71177	FALSE
11/27/2023	71499	17942.85	0.249551	-1.38809		3/25/2023 0:00	1.93525	137745	71177	FALSE
11/28/2023	71499	3387.733333	0.047298	-3.0513		3/26/2023 0:00	0.08803	6266	71177	FALSE
11/29/2023	71499	20220.9	0.252817	-1.26287		3/27/2023 0:00	0.00274	195	71177	FALSE
11/3/2023	71499	6816.733333	0.09534	-2.3503		3/28/2023 0:00	8.37428	596056	71177	FALSE
11/30/2023	71499	9927.316666	0.13846	-1.97439		3/29/2023 0:00	0.00424	302	71177	FALSE
11/4/2023	71499	52585.5667	0.358712	1.981527		3/30/2023 0:00	0.01461	1046	71177	FALSE
11/5/2023	71499	18491.51667	0.258626	-1.35237		3/31/2023 0:00	0.14746	10496	71177	FALSE
11/6/2023	71499	40779.98333	0.570357	-0.56149		4/1/2023 0:00	102.2391	7268376	71268	TRUE
11/7/2023	71499	3911.833333	0.054713	-2.80565		4/2/2023 0:00	3.70393	2203974	71268	FALSE
11/8/2023	71499	5964.133333	0.083416	-2.48392		4/3/2023 0:00	0.68084	48522	71268	FALSE
11/9/2023	71499	12821.51667	0.176527	-1.73428		4/4/2023 0:00	0.10821	7712	71268	FALSE
12/1/2023	71499	69338.36667	0.569781	-0.03509		4/5/2023 0:00	7.59966	549971	71268	FALSE
12/10/2023	71499	8945.5	0.055183	-2.89711		4/6/2023 0:00	16.2224	115614	71268	FALSE
12/11/2023	71499	36146.18333	0.505548	-0.68211		4/7/2023 0:00	0.75529	53828	71268	FALSE
12/12/2023	71499	17846.8167	0.501389	0.918846		4/8/2023 0:00	0.75487	53798	71268	FALSE
12/13/2023	71499	36890.25	0.432038	-0.83924		4/9/2023 0:00	1.16335	13067	71268	FALSE
12/14/2023	71499	8877.4	0.124161	-2.08617		4/10/2023 0:00	0.10608	7580	71268	FALSE
12/15/2023	71499	3540.2	0.049514	-3.0055		4/11/2023 0:00	0.11862	8454	71268	FALSE
12/16/2023	71499	244.5166667	0.003042	-6.87816		4/12/2023 0:00	0.03756	2677	71268	FALSE
12/17/2023	71499	2455.066667	0.034337	-3.37153		4/13/2023 0:00	0.88817	63298	71268	FALSE
12/18/2023	71499	115431.9167	1.614455	0.478997		4/14/2023 0:00	0.25937	18485	71268	FALSE
12/19/2023	71499	10313.35	0.144245	-1.89624		4/15/2023 0:00	0.0077	549	71268	FALSE
12/2/2023	71499	72797.16667	1.018158	0.017984		4/16/2023 0:00	0.04705	3354	71268	FALSE
12/20/2023	71499	2729.266667	0.038172	-3.26555		4/17/2023 0:00	0.51782	36904.3	71268	FALSE
12/21/2023	71499	804.2833333	0.011249	-4.48749		4/18/2023 0:00	1.13569	80938.017	71268	FALSE
12/22/2023	71499	582.8166667	0.008151	-4.80657		4/19/2023 0:00	0.41840	29852.133	71268	FALSE
12/23/2023	71499	907.1333334	0.013568	-4.30001		4/20/2023 0:00	0.43045	30677.15	71268	FALSE
12/24/2023	71499	902.9833333	0.012629	-3.37173		4/21/2023 0:00	0.24626	17764.283	71268	FALSE
12/25/2023	71499	11013.78333	0.154041	-1.87054		4/22/2023 0:00	0.41113	29302.217	71268	FALSE
12/26/2023	71499	3004.45	0.042021	-3.16959		4/23/2023 0:00	0.01926	1372.7167	71268	FALSE
12/27/2023	71499	3622.333333	0.005063	-2.98257		4/24/2023 0:00	0.27742	19771	71268	FALSE
12/28/2023	71499	727.4666667	0.010715	-5.9787		4/25/2023 0:00	0.09991	1720.2833	71268	FALSE
12/29/2023	71499	24688.13333	0.345205	-1.06336		4/26/2023 0:00	0.0748	5330.6333	71268	FALSE
12/3/2023	71499	6438.516667	0.09005	-2.40739		4/27/2023 0:00	1.6933	120677.97	71268	FALSE
12/30/2023	71499	448.75	0.011885	-4.4325		4/28/2023 0:00	0.06993	4698.9833	71268	FALSE
12/31/2023	71499	1194.833333	0.018708	-4.09184		4/29/2023 0:00	0.01126	802.31667	71268	FALSE
12/4/2023	71499	1071.933333	0.014992	-4.20022		4/30/2023 0:00	0.92222	65724.833	71268	FALSE
12/5/2023	71499	189190.55	2.646059	0.973071		5/1/2023 0:00	1.44886	103549.18	71420	FALSE

4/13/2023	71499	63298.00001	0.885299	-0.12183		7/9/2023	0.00	0.28698	20563.8	71656	FALSE
4/14/2023	71499	20200	0.282521	-1.264		7/10/2023	0.00	0.18901	12110.283	71656	FALSE
4/15/2023	71499	540	0.007678	4.88934		7/11/2023	0.00	0.48542	34763.433	71656	FALSE
4/16/2023	71499	3354	0.04681	-0.05953		7/12/2023	0.00	0.15033	10771.767	71656	FALSE
4/17/2023	71499	41919.15	0.58629	-0.53394		7/13/2023	0.00	0.04621	3311.2667	71656	FALSE
4/18/2023	71499	81598.31666	1.141251	0.131215		7/14/2023	0.00	0.10871	7646.05	71656	FALSE
4/19/2023	71499	29825.13333	0.417141	-0.87433		7/15/2023	0.00	0.18704	13402.25	71656	FALSE
4/20/2023	71499	264083	3.69352	1.30658		7/16/2023	0.00	0.01794	1285.8	71656	FALSE
4/20/2023	71499	31053.63333	0.434323	-0.83397		7/17/2023	0.00	0.62491	44771.333	71656	FALSE
4/21/2023	71499	19449.55	0.272025	-1.30186		7/18/2023	0.00	1.75961	126086.47	71656	FALSE
4/22/2023	71499	29300.21667	0.409799	-0.89209		7/19/2023	0.00	0.04505	3228.3667	71656	FALSE
4/23/2023	71499	12902.31667	0.180455	-1.71228		7/20/2023	0.00	0.15815	11332.4	71656	FALSE
4/24/2023	71499	19711	0.279521	-1.28547		7/21/2023	0.00	0.01434	1170.5167	71656	FALSE
4/25/2023	71499	7120.283334	0.095866	-2.30674		7/22/2023	0.00	0.18306	13117.117	71656	FALSE
4/26/2023	71499	5514.133333	0.077122	-2.56237		7/23/2023	0.00	0.13609	9751.9667	71656	FALSE
4/27/2023	71499	139183.15	1.946645	0.656107		7/24/2023	0.00	0.40657	28132.967	71656	FALSE
4/28/2023	71499	4698.983333	0.065721	-2.72234		7/25/2023	0.00	0.10464	7497.8	71656	FALSE
4/29/2023	71499	802.3166667	0.011221	-4.48994		7/26/2023	0.00	0.47082	33737.283	71656	FALSE
4/30/2023	71499	48522	0.79639	-0.39767		7/27/2023	0.00	1.0411	74601.283	71656	FALSE
4/30/2023	71499	117466.6333	1.642913	0.496471		7/28/2023	0.00	0.02078	1489.1667	71656	FALSE
4/4/2023	71499	7712	0.107862	-2.22691		7/29/2023	0.00	5.23671	375241.43	71656	FALSE
4/5/2023	71499	540979	1.562466	2.023697		7/30/2023	0.00	0.13123	9403.0667	71656	FALSE
4/6/2023	71499	115968	1.621953	0.483631		7/31/2023	0.00	0.03723	2667.5	71656	FALSE
4/7/2023	71499	53828	0.75285	-0.28389		8/1/2023	0.00	0.18392	13199.55	71768	FALSE
4/8/2023	71499	53798	0.75243	-0.28445		8/2/2023	0.00	0.12302	8829.0833	71768	FALSE
4/9/2023	71499	13067	0.162758	-1.69959		8/3/2023	0.00	0.27237	19547.783	71768	FALSE
5/1/2023	71499	121957.3167	1.705721	0.533988		8/4/2023	0.00	0.40937	29380	71768	FALSE
5/10/2023	71499	5598.45	0.078301	-2.54719		8/5/2023	0.00	0.11913	8549.9	71768	FALSE
5/11/2023	71499	4218.00001	0.058994	-2.83032		8/6/2023	0.00	0.09028	6478.1	71768	FALSE
5/12/2023	71499	971.2333333	0.013584	-4.29887		8/7/2023	0.00	1.39343	100003.7	71768	FALSE
5/13/2023	71499	22477.73333	0.314378	-1.15716		8/8/2023	0.00	0.09823	7049.9667	71768	FALSE
5/14/2023	71499	920	0.012867	-4.35307		8/9/2023	0.00	0.32603	23398.75	71768	FALSE
5/15/2023	71499	7967.866671	0.11144	-2.19427		8/10/2023	0.00	6.63985	404701.9	71768	FALSE
5/16/2023	71499	55884.95	0.781619	-0.24639		8/11/2023	0.00	0.09709	6967.9	71768	FALSE
5/17/2023	71499	6844.833334	0.065733	-2.34619		8/12/2023	0.00	1.14367	82079.983	71768	FALSE
5/18/2023	71499	79669.95	1.116337	0.111842		8/13/2023	0.00	0.01237	867.41667	71768	FALSE
5/19/2023	71499	11357.31667	0.158846	-1.83982		8/14/2023	0.00	0.61101	43851.317	71768	FALSE
5/20/2023	71499	502.85	0.007033	-4.85715		8/15/2023	0.00	0.03628	2603.5167	71768	FALSE
5/20/2023	71499	70634.18333	0.907621	0.012235		8/16/2023	0.00	0.08532	6123.35	71768	FALSE
5/21/2023	71499	7841.066667	0.109667	-2.21031		8/17/2023	0.00	0.35587	25540.3	71768	FALSE
5/22/2023	71499	11859.95	0.165876	-1.79652		8/18/2023	0.00	0.02156	1547.65	71768	FALSE
5/23/2023	71499	7482.883334	0.104687	-2.25707		8/19/2023	0.00	0.08082	5800.3	71768	FALSE
5/24/2023	71499	476.466667	0.086665	-2.78068		8/20/2023	0.00	3.56042	25127.1	71768	FALSE
5/25/2023	71499	9290.783333	0.129943	-2.04066		8/21/2023	0.00	0.0466	3344.4667	71768	FALSE
5/26/2023	71499	5635.850002	0.078824	-2.54054		8/22/2023	0.00	0.07354	5278.0167	71768	FALSE
5/27/2023	71499	16867.61667	0.235914	-1.44429		8/23/2023	0.00	0.0823	590.01667	71768	FALSE
5/28/2023	71499	5684.200002	0.0795	-2.53199		8/24/2023	0.00	0.38476	27613.333	71768	FALSE
5/29/2023	71499	6762.066666	0.094576	-2.35835		8/25/2023	0.00	25.46972	1827910.7	71768	FALSE
5/30/2023	71499	13416.41667	0.167455	-1.67332		8/26/2023	0.00	1.35127	9697.4	71768	FALSE
5/30/2023	71499	13386.05	0.18722	-1.67547		8/27/2023	0.00	0.2486	17841.817	71768	FALSE
5/31/2023	71499	23437.93333	0.327808	-1.11533		8/28/2023	0.00	0.58891	42121.05	71768	FALSE
5/4/2023	71499	6879.733334	0.062621	-2.3411		8/29/2023	0.00	0.41545	29815.75	71768	FALSE
5/5/2023	71499	16806.93334	0.235085	-1.44789		8/30/2023	0.00	0.01365	978.46667	71768	FALSE
5/6/2023	71499	4590.583333	0.064205	-2.74568		8/31/2023	0.00	0.11001	7894.9833	71768	FALSE
5/7/2023	71499	98019.36666	1.370919	0.315482		9/1/2023	0.00	0.761	54561.45	71697	FALSE
5/8/2023	71499	73125.05	1.022742	0.022488		9/2/2023	0.00	0.05979	6288.4383	71697	FALSE
5/9/2023	71499	37866.35	0.529607	-0.63562		9/3/2023	0.00	0.00441	316.25	71697	FALSE
6/1/2023	71499	45319.08333	0.633842	-0.45596		9/4/2023	0.00	1.11512	79950.633	71697	FALSE
6/10/2023	71499	5122.483333	0.071658	-2.35855		9/5/2023	0.00	0.11203	8632.0167	71697	FALSE
6/11/2023	71499	904037	12.64405	-2.83787		9/6/2023	0.00	0.04607	3302.9333	71697	FALSE
6/12/2023	71499	76026.28333	1.06332	0.061396		9/7/2023	0.00	0.02992	2145.2167	71697	FALSE
6/13/2023	71499	23389.35	0.327128	-1.1174		9/8/2023	0.00	0.1446	10367.3	71697	FALSE
6/14/2023	71499	51547.50001	0.720564	0.32718		9/9/2023	0.00	0.08259	5921.55	71697	FALSE
6/15/2023	71499	42216.61667	0.59045	-0.52687		9/10/2023	0.00	0.01098	787.33333	71697	FALSE
6/16/2023	71499	7878.483334	0.11019	-2.20555		9/11/2023	0.00	0.25862	18613.633	71697	FALSE
6/17/2023	71499	2922.066667	0.040869	-3.19739		9/12/2023	0.00	0.38937	2976.65	71697	FALSE
6/18/2023	71499	14383.43333	0.20117	-1.60381		9/13/2023	0.00	0.24876	17835.3	71697	FALSE
6/19/2023	71499	181302.8167	2.535739	0.930485		9/14/2023	0.00	0.09552	6848.3333	71697	FALSE
6/22/2023	71499	40462.1	0.560037	-0.57975		9/15/2023	0.00	0.02266	4264.3	71697	FALSE
6/23/2023	71499	155413.8333	2.1739	0.776409		9/16/2023	0.00	0.01669	1195.95	71697	FALSE
6/22/2023	71499	8804.866667	0.123147	-2.09438		9/17/2023	0.00	0.07043	5049.4833	71697	FALSE
6/22/2023	71499	44886.73333	0.627795	-0.40554		9/18/2023	0.00	0.40948	29358.217	71697	FALSE
6/23/2023	71499	2854.31667	0.333352	-1.08956		9/19/2023	0.00	0.28999	16791.3	71697	FALSE
6/24/2023	71499	44553.28333	0.623312	-0.473		9/20/2023	0.00	0.0383	2745.7	71697	FALSE
6/25/2023	71499	189510.12	2.635059	0.974759		9/21/2023	0.00	0.35291	25302.5	71697	FALSE
6/26/2023	71499	1469142.48	205.4454	5.32518		9/22/2023	0.00	0.0524	3756	71697	FALSE
6/27/2023	71499	951615.9	13.3095	2.588478		9/23/2023	0.00	0.02932	2102.2667	71697	FALSE
6/28/2023	71499	228476.7833	3.195524	1.16715		9/24/2023	0.00	0.16508	11835.567	71697	FALSE
6/29/2023	71499	344870.5667	4.823432	1.573486		9/25/2023	0.00	0.24586	17627.133	71697	FALSE
6/30/2023	71499	3766.416667	0.08005	-2.11763		9/26/2023	0.00	0.19006	976.9883	71697	FALSE
6/30/2023	71499	3760.10.5167	0.258962	1.659934		9/27/2023	0.00	0.16118	11556.367	71697	FALSE
6/4/2023	71499	1808	0.025287	-3.67746		9/28/2023	0.00	0.10018	7182.4833	71697	FALSE
6/5/2023	71499	54423.41667	0.761177	-0.27289		9/29/2023	0.00	0.86953	6784.667	71697	FALSE
6/6/2023	71499	29347.13333	0.410455	-0.89049		9/30/2023	0.00	0.0027	193.81667	71697	FALSE
6/7/2023	71499	19510.68333	0.272881	-1.28872		10/1/2023	0.00	0.00258	185.4	71803	FALSE
6/8/2023	71499	167499.35	2.362681	0.851296		10/2/2023	0.00	0.08749	6443.75	71803	FALSE
6/9/2023	71499	236.9333334	0.003314	-5.70966		10/3/2023	0.00	0.11288	8105.1833	71803	FALSE
7/1/2023	71499	35010.38333	0.489663	-0.71404		10/4/2023	0.00	0.05414	3887.3833	71803	FALSE
7/10/2023	71499	39143.15	0.547464	-0.80246		10/5/2023	0.00	0.13758	9678.7167	71803	FALSE
7/11/2023	71499	37843.43333	0.484688	-0.70255		10/6/2023	0.00	0.06814	4892.4	71803	FALSE
7/12/2023	71499	12288.7	0.171872	-1.761		10/7/2023	0.00	0.12241	8789.35	71803	FALSE
7/13/2023	71499	3311.266667	0.046312	-3.07235		10/8/2023	0.00	0.00			

9/21/2023	71499	25370.46667	0.354837	-1.0361	12/18/2023 0:00	1.23767	89081.15	71975	FALSE
9/22/2023	71499	3756.8	0.052543	-2.94612	12/19/2023 0:00	0.14329	10313.35	71975	FALSE
9/23/2023	71499	8122.43333	0.113602	-2.17505	12/20/2023 0:00	0.03792	2725.2657	71975	FALSE
9/24/2023	71499	11835.56667	0.165535	-1.78657	12/21/2023 0:00	0.01117	804.28333	71975	FALSE
9/25/2023	71499	17660.53333	0.247004	-1.39835	12/22/2023 0:00	0.0081	582.81667	71975	FALSE
9/26/2023	71499	106328.9833	1.487159	0.398654	12/23/2023 0:00	0.01348	870.13333	71975	FALSE
9/27/2023	71499	11568.88333	0.161805	-1.82136	12/24/2023 0:00	0.01253	901.95	71975	FALSE
9/28/2023	71499	7182.483333	0.100456	-2.29804	12/25/2023 0:00	0.15302	11013.783	71975	FALSE
9/29/2023	71499	57854.66667	0.809167	-0.21175	12/26/2023 0:00	0.04174	3094.45	71975	FALSE
9/3/2023	71499	316.25	0.004423	-6.42091	12/27/2023 0:00	0.04627	3330.25	71975	FALSE
9/30/2023	71499	193.8166667	0.002711	-5.91053	12/28/2023 0:00	0.01011	727.46667	71975	FALSE
9/4/2023	71499	79950.63333	1.116206	0.111726	12/29/2023 0:00	0.10045	7229.8	71975	FALSE
9/5/2023	71499	8108.116667	0.113402	-2.17682	12/30/2023 0:00	0.01181	840.75	71975	FALSE
9/6/2023	71499	3352.983333	0.046896	-3.05983	12/31/2023 0:00	0.0166	1194.6333	71975	FALSE
9/7/2023	71499	2145.216667	0.030003	-3.50644	1/1/2024 0:00	0.02391	1722.3	72026	FALSE
9/8/2023	71499	10367.3	0.144959	-1.93103	1/2/2024 0:00	0.03932	2532.2833	72026	FALSE
9/9/2023	71499	5921.55	0.08282	-2.49109	1/3/2024 0:00	0.19585	14106.583	72026	FALSE
					1/4/2024 0:00	0.03873	2789.5833	72026	FALSE
					1/5/2024 0:00	0.21091	15191.35	72026	FALSE
					1/6/2024 0:00	0.6341	45671.383	72026	FALSE
					1/7/2024 0:00	0.00674	485.6	72026	FALSE
					1/8/2024 0:00	0.42541	30640.517	72026	FALSE
					1/9/2024 0:00	10.25887	738605.23	72026	FALSE
					1/10/2024 0:00	1.40564	101242.9	72026	FALSE
					1/11/2024 0:00	0.59974	43196.533	72026	FALSE
					1/12/2024 0:00	6.8369	478229.33	72026	FALSE
					1/13/2024 0:00	21.45028	1544977.6	72026	FALSE
					1/14/2024 0:00	0.07922	5705.9833	72026	FALSE
					1/15/2024 0:00	0.50542	36403.183	72026	FALSE
					1/16/2024 0:00	0.14857	10700.633	72026	FALSE
					1/17/2024 0:00	4.80569	346134.98	72026	FALSE
					1/18/2024 0:00	0.46707	33640.9	72026	FALSE
					1/19/2024 0:00	0.78254	46363.083	72026	FALSE
					1/20/2024 0:00	1.97163	142008.65	72026	FALSE
					1/21/2024 0:00	1.67365	120546.03	72026	FALSE
					1/22/2024 0:00	0.50228	36117.517	72026	FALSE
					1/23/2024 0:00	0.01405	1011.7833	72026	FALSE
					1/24/2024 0:00	0.63989	46088.6	72026	FALSE
					1/25/2024 0:00	0.50965	36707.9	72026	FALSE
					1/26/2024 0:00	0.3172	22846.483	72026	FALSE
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					1/30/2024 0:00	0.00479	344.81667	72026	FALSE
					1/31/2024 0:00	0.06715	4836.2833	72026	FALSE
					2/1/2024 0:00	0.11586	6359.8667	72152	FALSE
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					2/3/2024 0:00	0.3187	22994.717	72152	FALSE
					2/4/2024 0:00	0.00433	312.6	72152	FALSE
					2/5/2024 0:00	0.04517	3259.2833	72152	FALSE
					2/6/2024 0:00	0.05424	3913.85	72152	FALSE
					2/7/2024 0:00	0.15675	11309.717	72152	FALSE
					2/8/2024 0:00	0.29453	21250.683	72152	FALSE
					2/9/2024 0:00	0.02631	1898.2667	72152	FALSE
					2/10/2024 0:00	1.88936	121890.37	72152	FALSE
					2/11/2024 0:00	0.23617	18485.387	72152	FALSE
					2/12/2024 0:00	1.6688	120407	72152	FALSE
					2/13/2024 0:00	0.23581	17014	72152	FALSE
					2/14/2024 0:00	0.38846	28029.917	72152	FALSE
					2/15/2024 0:00	0.05009	3614.25	72152	FALSE
					2/16/2024 0:00	0.32369	23354.65	72152	FALSE
					2/17/2024 0:00	1.00985	72653.25	72152	FALSE
					2/18/2024 0:00	0.00317	228.81667	72152	FALSE
					2/19/2024 0:00	0.41797	30157.55	72152	FALSE
					2/20/2024 0:00	0.04	2886.4	72152	FALSE
					2/21/2024 0:00	0.09245	6670.4667	72152	FALSE
					2/22/2024 0:00	0.1271	9170.4833	72152	FALSE
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					2/28/2024 0:00	6.15542	444125.75	72152	FALSE
					2/29/2024 0:00	0.50571	36487.717	72152	FALSE
					3/1/2024 0:00	0.02622	892.4	72179	FALSE
					3/2/2024 0:00	0.01438	1037.6333	72179	FALSE
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					3/4/2024 0:00	0.53137	38353.967	72179	FALSE
					3/5/2024 0:00	0.03776	2725.4833	72179	FALSE
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					3/9/2024 0:00	0.34357	24788.483	72179	FALSE
					3/10/2024 0:00	1.38627	100059.4	72179	FALSE
					3/11/2024 0:00	0.02769	1998.75	72179	FALSE
					3/12/2024 0:00	0.06128	4422.95	72179	FALSE
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					3/15/2024 0:00	0.64051	46231.333	72179	FALSE
					3/16/2024 0:00	0.08329	6006.3667	72179	FALSE
					3/17/2024 0:00	0.0071	512.51667	72179	FALSE
					3/18/2024 0:00	0.09421	6800.2	72179	FALSE
					3/19/2024 0:00	0.14727	10629.783	72179	FALSE
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					3/23/2024 0:00	0.63158	45586.7	72179	FALSE
					3/24/2024 0:00	0.05345	3858.1833	72179	FALSE
					3/25/2024 0:00	0.04912	3545.7833	72179	FALSE
					3/26/2024 0:00	0.76134	54952.883	72179	FALSE
					3/27/2024 0:00	0.06871	4959.4	72179	FALSE
					3/28/2024 0:00	0.14317	10333.983	72179	FALSE
					3/29/2024 0:00	1.73874	125556.25	72179	FALSE
					3/30/2024 0:00	0.08306	5995.4	72179	FALSE
					3/31/2024 0:00	0.05445	3930.25	72179	FALSE
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					4/2/2024 0:00	1.25319	90611.583	72305	FALSE
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					4/6/2024 0:00	0.01486	1074.2167	72305	FALSE
					4/7/2024 0:00	0.08641	6246.1833	72305	FALSE
					4/8/2024 0:00	0.12716	9184.35	72305	FALSE
					4/9/2024 0:00	0.13692	9899.7	72305	FALSE
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					4/11/2024 0:00	0.48361	35660.517	72305	FALSE
					4/12/2024 0:00	3.99371	288765.55	72305	FALSE
					4/13/2024 0:00	0.046	3325.8667	72305	FALSE
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					4/15/2024 0:00	0.09886	6280.2	72305	FALSE
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					4/25/2024 0:00	0.01983	1433.8167	72305	FALSE
					4/26/2024 0:00	0.4981	36014.967	72305	FALSE
					4/27/2024 0:00	0.10912	7890.0833	72305	FALSE
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					4/30/2024 0:00	0.3243	23448.75	72305	FALSE
					5/1/2024 0:00	0.1378	9979.95	72426	FALSE
					5/2/2024 0:00	0.04403	3189.15	72426	FALSE

5/28/2024 0:00	26.59925	1926477.1	72426	FALSE
5/29/2024 0:00	5.1832	375398.4	72426	FALSE
5/30/2024 0:00	2.26748	164624.43	72426	FALSE
5/31/2024 0:00	0.44805	32450.417	72426	FALSE
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6/2/2024 0:00	1.45804	105751.8	72530	FALSE
6/3/2024 0:00	0.5255	38114.417	72530	FALSE
6/4/2024 0:00	1.20856	87696.583	72530	FALSE
6/5/2024 0:00	0.41664	30216.817	72530	FALSE
6/6/2024 0:00	0.26933	19534.45	72530	FALSE
6/7/2024 0:00	0.41304	29957.55	72530	FALSE
6/8/2024 0:00	1.16265	84327.1	72530	FALSE
6/9/2024 0:00	1.10522	80161.55	72530	FALSE
6/10/2024 0:00	0.45885	33280.467	72530	FALSE
6/11/2024 0:00	0.46421	33669.383	72530	FALSE
6/12/2024 0:00	0.22483	16306.7	72530	FALSE
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6/14/2024 0:00	0.21208	15381.95	72530	FALSE
6/15/2024 0:00	0.13499	9790.55	72530	FALSE
6/16/2024 0:00	0.12316	8932.9167	72530	FALSE
6/17/2024 0:00	0.31469	22824.45	72530	FALSE
6/18/2024 0:00	0.10899	7905	72530	FALSE
6/19/2024 0:00	0.9817	71202.817	72530	FALSE
6/20/2024 0:00	0.32767	23765.75	72530	FALSE
6/21/2024 0:00	0.12819	9297.6	72530	FALSE
6/22/2024 0:00	0.31807	23069.767	72530	FALSE
6/23/2024 0:00	0.96174	69755.267	72530	FALSE
6/24/2024 0:00	0.64656	46894.867	72530	FALSE
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6/26/2024 0:00	0.40419	29315.75	72530	FALSE
6/27/2024 0:00	0.40306	29233.95	72530	FALSE
6/28/2024 0:00	0.13426	9738.0833	72530	FALSE
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7/3/2024 0:00	1.49662	108771.13	72678	FALSE
7/4/2024 0:00	0.08393	6099.95	72678	FALSE
7/5/2024 0:00	0.44017	35624.85	72678	FALSE
7/6/2024 0:00	0.28897	21001.467	72678	FALSE
7/7/2024 0:00	0.05724	4160.0167	72678	FALSE
7/8/2024 0:00	0.06229	4526.9333	72678	FALSE
7/9/2024 0:00	0.4402	31992.75	72678	FALSE
7/10/2024 0:00	0.2033	14775.567	72678	FALSE
7/11/2024 0:00	1.41817	103069.8	72678	FALSE
7/12/2024 0:00	0.04689	3498.1	72678	FALSE
7/13/2024 0:00	0.15945	11588.3	72678	FALSE
7/14/2024 0:00	0.31656	23007.133	72678	FALSE
7/15/2024 0:00	0.10759	7819.6667	72678	FALSE
7/16/2024 0:00	0.04738	3443.6333	72678	FALSE
7/17/2024 0:00	0.04941	3590.9667	72678	FALSE
7/18/2024 0:00	1.48228	107720.22	72678	FALSE
7/19/2024 0:00	0.03331	2420.96	72678	FALSE
7/20/2024 0:00	1.03345	75109.033	72678	FALSE
7/21/2024 0:00	0.21054	15301.3	72678	FALSE
7/22/2024 0:00	1.79125	130184.25	72678	FALSE
7/23/2024 0:00	0.15444	11224.417	72678	FALSE
7/24/2024 0:00	0.07283	5293.0667	72678	FALSE
7/25/2024 0:00	0.20646	15004.8	72678	FALSE
7/26/2024 0:00	0.2065	15007.767	72678	FALSE
7/27/2024 0:00	0.01225	890.03333	72678	FALSE
7/28/2024 0:00	0.39245	28522.8	72678	FALSE
7/29/2024 0:00	1.03314	75986.317	72678	FALSE
7/30/2024 0:00	23.91136	1737830.1	72678	FALSE
7/31/2024 0:00	7.61733	553612.53	72678	FALSE
8/1/2024 0:00	3.40081	247296.97	72717	FALSE
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8/5/2024 0:00	1.21269	88163.267	72717	FALSE
8/6/2024 0:00	0.53892	39188.35	72717	FALSE
8/7/2024 0:00	0.16001	11635.333	72717	FALSE
8/8/2024 0:00	0.85263	60660.55	72717	FALSE
8/9/2024 0:00	0.02992	2175.6833	72717	FALSE
8/10/2024 0:00	0.06974	5071.2167	72717	FALSE
8/11/2024 0:00	0.15191	11046.583	72717	FALSE
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8/27/2024 0:00	0.30742	22354.883	72717	FALSE
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8/29/2024 0:00	0.15158	11022.7	72717	FALSE
8/30/2024 0:00	0.43447	31609.8	72717	FALSE
8/31/2024 0:00	4.27065	310548.85	72717	FALSE
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9/3/2024 0:00	0.10718	7799.15	72766	FALSE
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9/6/2024 0:00	0.06509	4736.4667	72766	FALSE
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9/11/2024 0:00	1.28535	93529.833	72766	FALSE
9/12/2024 0:00	0.05885	4282	72766	FALSE
9/13/2024 0:00	0.23516	16568.6	72766	FALSE
9/14/2024 0:00	0.28679	20795.65	72766	FALSE
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9/16/2024 0:00	0.15569	11329.267	72766	FALSE
9/17/2024 0:00	0.73547	63517.133	72766	FALSE
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9/19/2024 0:00	0.03407	2479.3833	72766	FALSE
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9/21/2024 0:00	0.29515	149545.3	72766	FALSE
9/22/2024 0:00	0.23568	17149.267	72766	FALSE
9/23/2024 0:00	0.59213	43086.783	72766	FALSE
9/24/2024 0:00	1.65736	120599.42	72766	FALSE
9/25/2024 0:00	0.08718	6343.5333	72766	FALSE
9/26/2024 0:00	0.54863	39921.683	72766	FALSE
9/27/2024 0:00	40.67442	2959714.7	72766	TRUE
9/28/2024 0:00	3.77463	274664.48	72766	FALSE
9/29/2024 0:00	0.16876	12279.917	72766	FALSE
9/30/2024 0:00	0.66377	48300.25	72766	FALSE
10/1/2024 0:00	0.44934	32700.9	72776	FALSE
10/2/2024 0:00	0.74579	54275.3	72776	FALSE
10/3/2024 0:00	0.15839	11526.8	72776	FALSE
10/4/2024 0:00	0.26915	19587.533	72776	FALSE
10/5/2024 0:00	0.10959	7975.2167	72776	FALSE
10/6/2024 0:00	0.00644	468.36667	72776	FALSE
10/7/2024 0:00	0.07594	6526.8833	72776	FALSE
10/8/2024 0:00	0.01771	1288.5833	72776	FALSE
10/9/2024 0:00	0.31821	23158.333	72776	FALSE
10/10/2024 0:00	0.09926	7224.0333	72776	FALSE
10/11/2024 0:00	0.02407	1751.8667	72776	FALSE
10/12/2024 0:00	0.01665	1211.5833	72776	FALSE
10/13/2024 0:00	0.04984	3626.8667	72776	FALSE
10/14/2024 0:00	0.01902	1383.85	72776	FALSE
10/15/2024 0:00	0.04291	3122.7167	72776	FALSE
10/16/2024 0:00	0.41972	30545.733	72776	FALSE
10/17/2024 0:00	0.04682	3407.65	72776	FALSE
10/18/2024 0:00	0.15524	11297.8	72776	FALSE
10/19/2024 0:00	0.13974	10169.417	72776	FALSE
10/20/2024 0:00	0.07596	6526.2667	72776	FALSE
10/21/2024 0:00	0.10091	7343.5667	72776	FALSE
10/22/2024 0:00	0.03251	2365.7	72776	FALSE
10/23/2024 0:00	0.18058	13141.55	72776	FALSE
10/24/2024 0:00	0.05047	3673.1	72776	FALSE
10/25/2024 0:00	0.03553	2585.9667	72776	FALSE
10/26/2024 0:00	0.00716	521.36667	72776	FALSE
10/27/2024 0:00	0.13240	9639.35	72776	FALSE
10/28/2024 0:00	0.01408	1024.3333	72776	FALSE
10/29/2024 0:00	0.37604	27367.05	72776	FALSE
10/30/2024 0:00	0.20974	15264.25	72776	FALSE
10/31/2024 0:00	6.85203	484108.27	72776	FALSE
11/1/2024 0:00	2.37847	173171.88	72808	FALSE
11/2/2024 0:00	0.00522	380.38333	72808	FALSE
11/3/2024 0:00	0.01817	1322.65	72808	FALSE
11/4/2024 0:00	0.05129	3734.3333	72808	FALSE
11/5/2024 0:00	0.10374	7553.1	72808	FALSE

11/6/2024 0:00	0.27303	19878.833	72808	FALSE
11/7/2024 0:00	0.43886	31952.533	72808	FALSE
11/8/2024 0:00	0.05775	4207.1167	72808	FALSE
11/9/2024 0:00	0.05919	4309.75	72808	FALSE
11/10/2024 0:00	0.06564	4779.4667	72808	FALSE
11/11/2024 0:00	0.0234	1703.8333	72808	FALSE
11/12/2024 0:00	0.1217	8860.4167	72808	FALSE
11/13/2024 0:00	0.10105	7357.4	72808	FALSE
11/14/2024 0:00	0.04285	46804.283	72808	FALSE
11/15/2024 0:00	0.02391	1740.9667	72808	FALSE
11/16/2024 0:00	0.00091	66.35	72808	FALSE
11/17/2024 0:00	1.08944	77863.783	72808	FALSE
11/18/2024 0:00	0.08215	5983.35	72808	FALSE
11/19/2024 0:00	0.13802	10048.617	72808	FALSE
11/20/2024 0:00	0.1721	12530.533	72808	FALSE
11/21/2024 0:00	0.41492	30209.383	72808	FALSE
11/22/2024 0:00	1.14446	83325.533	72808	FALSE
11/23/2024 0:00	0.00198	144.43333	72808	FALSE
11/24/2024 0:00	0.10456	7613.05	72808	FALSE
11/25/2024 0:00	0.02971	2163.2	72808	FALSE
11/26/2024 0:00	0.61219	44572.483	72808	FALSE
11/27/2024 0:00	0.12578	9157.5333	72808	FALSE
11/28/2024 0:00	0.01015	739.25	72808	FALSE
11/29/2024 0:00	0.20501	14926.267	72808	FALSE
11/30/2024 0:00	0.11057	8050.6333	72808	FALSE
12/1/2024 0:00	0.0057	415.45	72848	FALSE
12/2/2024 0:00	0.12338	8987.9	72848	FALSE
12/3/2024 0:00	0.02991	2178.5667	72848	FALSE
12/4/2024 0:00	2.11837	154319.18	72848	FALSE
12/5/2024 0:00	0.49008	35701.567	72848	FALSE
12/6/2024 0:00	0.0751	5470.7167	72848	FALSE
12/7/2024 0:00	0.11674	8504.0667	72848	FALSE
12/8/2024 0:00	0.05981	4356.7567	72848	FALSE
12/9/2024 0:00	0.18156	13226.35	72848	FALSE
12/10/2024 0:00	0.05715	4163.0333	72848	FALSE
12/11/2024 0:00	0.01853	1350.0333	72848	FALSE
12/12/2024 0:00	0.01108	806.85	72848	FALSE
12/13/2024 0:00	0.03086	2247.8	72848	FALSE
12/14/2024 0:00	0.01645	1198.1333	72848	FALSE
12/15/2024 0:00	0.17721	12909.333	72848	FALSE
12/16/2024 0:00	1.38933	101210.15	72848	FALSE
12/17/2024 0:00	0.14603	10637.933	72848	FALSE
12/18/2024 0:00	1.89453	131456.45	72848	FALSE
12/19/2024 0:00	0.05529	4027.4167	72848	FALSE
12/20/2024 0:00	0.22897	16680.2	72848	FALSE
12/21/2024 0:00	0.05074	3699.55	72848	FALSE
12/22/2024 0:00	0.00323	235.11667	72848	FALSE
12/23/2024 0:00	0.0665	4844.1667	72848	FALSE
12/25/2024 0:00	0.00076	56.73333	72848	FALSE
12/26/2024 0:00	0.00824	600.06667	72848	FALSE
12/27/2024 0:00	0.09546	6954.2167	72848	FALSE
12/28/2024 0:00	0.01731	1261.25	72848	FALSE
12/29/2024 0:00	7.84423	571436.78	72848	FALSE
12/30/2024 0:00	0.12312	8969.0833	72848	FALSE

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #0101:

1. SUBSTATION NAME AND NUMBER

01/RUSSELL SPRINGS #1

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

64 Old Sano Road, Russell Springs, Ky 42642

3. CIRCUIT NAME AND NUMBER

NORTH HWY 127 / #0101

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS NORTH ON HWY 127

5. TOTAL CIRCUIT LENGTH (MILES)

7.43

6. CUSTOMER COUNT FOR THIS CIRCUIT

160

7.. DATE OF LAST CIRCUIT TRIM (VM)

2024

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	9.09%
Customer Side	4.55%
Equipment Failure	9.09%
Lightning	4.55%
Trees	13.64%
Trees - Contractor	9.09%
Unknown	4.55%
Unknown Blink	31.82%
Vehicle	4.55%
Wind - No Trees	9.09%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

0.181811103

10. REPORTING YEAR (SAIDI)

0.753600949

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.001344317

12. REPORTING YEAR (SAIFI)

0.00428865

13. CORRECTIVE ACTION PLAN

CIRCUIT WILL BE CONSIDERED FOR FUTURE SECTIONALIZING STUDY

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #0102:

1. SUBSTATION NAME AND NUMBER

01/RUSSELL SPRINGS #1

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

64 Old Sano Road, Russell Springs, Ky 42642

3. CIRCUIT NAME AND NUMBER

BERNARD RIDGE / #0102

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS TOWARD BERNARD RIDGE

5. TOTAL CIRCUIT LENGTH (MILES)

30.96

6. CUSTOMER COUNT FOR THIS CIRCUIT

489

7.. DATE OF LAST CIRCUIT TRIM (VM)

2024

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Large	1.85%
Animal - Small	27.78%
Customer Side	7.41%
Equipment Failure	1.85%
Lightning	5.56%
Other	1.85%
Planned	5.56%
Trees	22.22%
Unknown	9.26%
Unknown Blink	14.81%
Vehicle	1.85%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

0.650918264

10. REPORTING YEAR (SAIDI)

1.547172111

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.007478508

12. REPORTING YEAR (SAIFI)

0.016065199

13. CORRECTIVE ACTION PLAN

CIRCUIT WILL BE CONSIDERED FOR FUTURE SECTIONALIZING STUDY

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #0103:

1. SUBSTATION NAME AND NUMBER

01/RUSSELL SPRINGS #1

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

64 Old Sano Road, Russell Springs, Ky 42642

3. CIRCUIT NAME AND NUMBER

FRENCH VALLEY IND. PARK / #0103

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS SOUTH ON HAILS HIGHWAY

5. TOTAL CIRCUIT LENGTH (MILES)

14.57

6. CUSTOMER COUNT FOR THIS CIRCUIT

150

7.. DATE OF LAST CIRCUIT TRIM (VM)

2024

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	7.69%
Equipment Failure	15.38%
Lightning	15.38%
Other	15.38%
Planned	30.77%
Trees	15.38%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

0.361568022

10. REPORTING YEAR (SAIDI)

0.515000621

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.005146306

12. REPORTING YEAR (SAIFI)

0.002951032

13. CORRECTIVE ACTION PLAN

CIRCUIT WILL BE CONSIDERED FOR FUTURE SECTIONALIZING STUDY

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #0105:

1. SUBSTATION NAME AND NUMBER

01/RUSSELL SPRINGS #2

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

64 Old Sano Road, Russell Springs, Ky 42642

3. CIRCUIT NAME AND NUMBER

WEST HWY 80 / #0105

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS WEST ON HWY 80 HIGHWAY

5. TOTAL CIRCUIT LENGTH (MILES)

46.93

6. CUSTOMER COUNT FOR THIS CIRCUIT

729

7.. DATE OF LAST CIRCUIT TRIM (VM)

2024

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	20.25%
Customer Side	1.27%
Equipment Failure	6.33%
Fire	1.27%
Lightning	5.06%
Other	3.80%
Planned	5.06%
Trees	27.85%
Trees - w/ Ice	2.53%
Unknown	13.92%
Unknown Blink	12.66%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

1.859332555

10. REPORTING YEAR (SAIDI)

1.376107671

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.011702986

12. REPORTING YEAR (SAIFI)

0.012948688

13. CORRECTIVE ACTION PLAN

CIRCUIT WILL BE CONSIDERED FOR FUTURE SECTIONALIZING STUDY

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #0106:

1. SUBSTATION NAME AND NUMBER

01/RUSSELL SPRINGS #2

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

64 Old Sano Road, Russell Springs, Ky 42642

3. CIRCUIT NAME AND NUMBER

SANO / #0106

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS NORTH ON OLD SANO RD

5. TOTAL CIRCUIT LENGTH (MILES)

60.91

6. CUSTOMER COUNT FOR THIS CIRCUIT

668

7.. DATE OF LAST CIRCUIT TRIM (VM)

2021; SPRAY 2022

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	29.23%
Customer Side	3.08%
Fire	1.54%
Lightning	7.69%
Other	6.15%
Planned	1.54%
Trees	30.77%
Trees - w/ Ice	1.54%
Unknown	6.15%
Unknown Blink	7.69%
Vehicle	1.54%
Wind - No Trees	3.08%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

1.876527055

10. REPORTING YEAR (SAIDI)

4.575639919

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.017963964

12. REPORTING YEAR (SAIFI)

0.047092406

13. CORRECTIVE ACTION PLAN

CIRCUIT WILL BE CONSIDERED FOR FUTURE SECTIONALIZING STUDY

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #0203:

1. SUBSTATION NAME AND NUMBER

02/WINDSOR

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

1905 Highway 80, Windsor, KY 42565

3. CIRCUIT NAME AND NUMBER

GOSSE RIDGE / #0203

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS SOUTH ON HIGHWAY 910

5. TOTAL CIRCUIT LENGTH (MILES)

64.92

6. CUSTOMER COUNT FOR THIS CIRCUIT

533

7.. DATE OF LAST CIRCUIT TRIM (VM)

2020; SPRAY 2021

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	40.35%
Customer Side	5.26%
Equipment Failure	3.51%
Lightning	8.77%
Other	10.53%
Power Supply	1.75%
Trees	19.30%
Unknown	3.51%
Unknown Blink	3.51%
Wind - No Trees	3.51%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

1.455015212

10. REPORTING YEAR (SAIDI)

2.67488644

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.012013753

12. REPORTING YEAR (SAIFI)

0.021457038

13. CORRECTIVE ACTION PLAN

CIRCUIT WILL BE CONSIDERED FOR FUTURE SECTIONALIZING STUDY

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #0204:

1. SUBSTATION NAME AND NUMBER

02/WINDSOR

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

1905 Highway 80, Windsor, KY 42565

3. CIRCUIT NAME AND NUMBER

WINDSOR POST OFFICE / #0204

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS TOWARDS WEBBS

5. TOTAL CIRCUIT LENGTH (MILES)

18.06

6. CUSTOMER COUNT FOR THIS CIRCUIT

181

7.. DATE OF LAST CIRCUIT TRIM (VM)

2019

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	30.43%
Customer Side	4.35%
Equipment Failure	13.04%
Fire	4.35%
Lightning	8.70%
Other	8.70%
Trees	17.39%
Unknown	8.70%
Wind - No Trees	4.35%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

0.447592799

10. REPORTING YEAR (SAIDI)

1.07144066

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.00437835

12. REPORTING YEAR (SAIFI)

0.007399228

13. CORRECTIVE ACTION PLAN

SHORT CKT; CIRCUIT WILL BE CONSIDERED FOR FUTURE SECTIONALIZING STUDY

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #0301:

1. SUBSTATION NAME AND NUMBER

03/NANCY

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

995 HWY 196, Nancy, KY 42544

3. CIRCUIT NAME AND NUMBER

NAOMI / #0301

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS SOUTH SIEVERS RD

5. TOTAL CIRCUIT LENGTH (MILES)

66.55

6. CUSTOMER COUNT FOR THIS CIRCUIT

903

7.. DATE OF LAST CIRCUIT TRIM (VM)

2020

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	30.69%
Customer Side	2.97%
Equipment Failure	2.97%
Fire	0.99%
Ice/Snow - No Trees	1.98%
Lightning	3.96%
Load	4.95%
Other	12.87%
Planned	9.90%
Trees	13.86%
Trees - w/ Ice	0.99%
Unknown	8.91%
Unknown Blink	0.99%
Vehicle	0.99%
Wind - No Trees	2.97%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

4.867095575

10. REPORTING YEAR (SAIDI)

5.66900837

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.036243065

12. REPORTING YEAR (SAIFI)

0.065474303

13. CORRECTIVE ACTION PLAN

CIRCUIT ALMOST COMPLETE W/ WIRE UPGRADE, REGULATOR RELOCATION, & CONTROLS UPGRADE

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #0302:

1. SUBSTATION NAME AND NUMBER

03/NANCY

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

995 HWY 196, Nancy, KY 42544

3. CIRCUIT NAME AND NUMBER

FAUBUSH / #0302

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS WEST ON HWY 196

5. TOTAL CIRCUIT LENGTH (MILES)

26.27

6. CUSTOMER COUNT FOR THIS CIRCUIT

217

7.. DATE OF LAST CIRCUIT TRIM (VM)

2010

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	13.64%
Equipment Failure	4.55%
Ice/Snow - No Trees	4.55%
Lightning	9.09%
Load	4.55%
Other	9.09%
Trees	22.73%
Unknown	9.09%
Vehicle	13.64%
Wind - No Trees	9.09%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

0.762618271

10. REPORTING YEAR (SAIDI)

1.310330957

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.004089096

12. REPORTING YEAR (SAIFI)

0.005998593

13. CORRECTIVE ACTION PLAN

CIRCUIT WILL BE CONSIDERED FOR FUTURE SECTIONALIZING STUDY; WILL DISCUSS ABOUT ROW INSPECTION

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #0303:

1. SUBSTATION NAME AND NUMBER
03/NANCY
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)
995 HWY 196, Nancy, KY 42544
3. CIRCUIT NAME AND NUMBER
HICKORY NUT / #0303
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)
FEEDS WEST ON HWY 80
5. TOTAL CIRCUIT LENGTH (MILES)
55.85
6. CUSTOMER COUNT FOR THIS CIRCUIT
540
- 7.. DATE OF LAST CIRCUIT TRIM (VM)
2016
8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	30.00%
Customer Side	8.33%
Equipment Failure	5.00%
Lightning	8.33%
Other	3.33%
Planned	6.67%
Trees	21.67%
Trees - Contractor	1.67%
Unknown	8.33%
Unknown Blink	3.33%
Vehicle	1.67%
Wind - No Trees	1.67%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)
1.396630103
10. REPORTING YEAR (SAIDI)
1.874767296
11. CIRCUIT 5 YEAR AVERAGE (SAIFI)
0.014197552
12. REPORTING YEAR (SAIFI)
0.0106182
13. CORRECTIVE ACTION PLAN
CIRCUIT WILL BE CONSIDERED FOR FUTURE SECTIONALIZING STUDY; CONTROLS UPGRADED, REGULATOR FAILURES STILL TO BE COMPLETED

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #0401:

1. SUBSTATION NAME AND NUMBER

04/MT OLIVE

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

4968 Calvary Ridge Road, Yosemite, KY 42566

3. CIRCUIT NAME AND NUMBER

CALVERY RIDGE / #0401

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS CALVERY RIDGE RD

5. TOTAL CIRCUIT LENGTH (MILES)

49.97

6. CUSTOMER COUNT FOR THIS CIRCUIT

446

7.. DATE OF LAST CIRCUIT TRIM (VM)

2020

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	28.00%
Customer Side	6.00%
Equipment Failure	6.00%
Ice/Snow - No Trees	2.00%
Lightning	4.00%
Load	2.00%
Other	6.00%
Planned	2.00%
Trees	20.00%
Unknown	10.00%
Unknown Blink	4.00%
Vehicle	2.00%
Wind - No Trees	8.00%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

3.971733231

10. REPORTING YEAR (SAIDI)

3.54324255

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.032616141

12. REPORTING YEAR (SAIFI)

0.044141374

13. CORRECTIVE ACTION PLAN

CIRCUIT WILL BE CONSIDERED FOR FUTURE SECTIONALIZING STUDY

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #0402:

1. SUBSTATION NAME AND NUMBER
04/MT OLIVE
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)
4968 Calvary Ridge Road, Yosemite, KY 42566
3. CIRCUIT NAME AND NUMBER
WALLTOWN / #0402
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)
FEEDS WALLTOWN
5. TOTAL CIRCUIT LENGTH (MILES)
67.3
6. CUSTOMER COUNT FOR THIS CIRCUIT
556
- 7.. DATE OF LAST CIRCUIT TRIM (VM)
2021
8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	22.00%
Customer Side	6.00%
Lightning	6.00%
Other	8.00%
Planned	14.00%
Trees	14.00%
Unknown	10.00%
Unknown Blink	8.00%
Vehicle	2.00%
Wind - No Trees	10.00%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)
1.401895347
10. REPORTING YEAR (SAIDI)
1.53940083
11. CIRCUIT 5 YEAR AVERAGE (SAIFI)
0.011130561
12. REPORTING YEAR (SAIFI)
0.003902533
13. CORRECTIVE ACTION PLAN
CIRCUIT WILL BE CONSIDERED FOR FUTURE SECTIONALIZING STUDY

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #0501:

1. SUBSTATION NAME AND NUMBER

05/SOMERSET

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

105 Jared Lane, Somerset, KY 42501

3. CIRCUIT NAME AND NUMBER

INDUSTRIAL PARK / #0501

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS TOWARD CABIN HOLLOW IND PARK

5. TOTAL CIRCUIT LENGTH (MILES)

3.63

6. CUSTOMER COUNT FOR THIS CIRCUIT

25

7.. DATE OF LAST CIRCUIT TRIM (VM)

2024

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	20.00%
Lightning	40.00%
Planned	20.00%
Unknown	20.00%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

0.007814185

10. REPORTING YEAR (SAIDI)

0.01255154

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.000119362

12. REPORTING YEAR (SAIFI)

0.000372326

13. CORRECTIVE ACTION PLAN

ADDRESSED CONCERN WITH "UNKNOWN" CAUSES. VERY SMALL CIRCUIT. NEED TO INSPECT ROW.

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #0505:

1. SUBSTATION NAME AND NUMBER

05/SOMERSET

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

105 Jared Lane, Somerset, KY 42501

3. CIRCUIT NAME AND NUMBER

OAK HILL RD / #0505

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS TOWARD HWY 27, ENDS AT KROGER

5. TOTAL CIRCUIT LENGTH (MILES)

5.97

6. CUSTOMER COUNT FOR THIS CIRCUIT

237

7.. DATE OF LAST CIRCUIT TRIM (VM)

2024

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	37.50%
Customer Side	6.25%
Other	18.75%
Trees	6.25%
Unknown	12.50%
Unknown Blink	12.50%
Wind - No Trees	6.25%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

0.143246287

10. REPORTING YEAR (SAIDI)

0.180966118

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.001985469

12. REPORTING YEAR (SAIFI)

0.004398969

13. CORRECTIVE ACTION PLAN

THIS CIRCUIT NEEDS TO BE ANALYZED IN NEXT CWP ABOUT POSSIBLY SECTIONALIZING AND DIFFERENT/OPTIONAL FEED WITH GOLDEN HTS.

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #0605:

1. SUBSTATION NAME AND NUMBER
06/EAST SOMERSET
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)
126 Garner School Road, Somerset, KY 42503
3. CIRCUIT NAME AND NUMBER
GOFFTOWN / #0605
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)
FEEDS GRUNDY RD AREA
5. TOTAL CIRCUIT LENGTH (MILES)
41.7
6. CUSTOMER COUNT FOR THIS CIRCUIT
529
- 7.. DATE OF LAST CIRCUIT TRIM (VM)
2015
8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Large	1.33%
Animal - Small	22.67%
Customer Side	2.67%
Lightning	8.00%
Other	10.67%
Planned	2.67%
Trees	30.67%
Trees - w/ Ice	2.67%
Unknown	10.67%
Unknown Blink	2.67%
Vehicle	1.33%
Wind - No Trees	4.00%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)
5.353621654
10. REPORTING YEAR (SAIDI)
5.814853207
11. CIRCUIT 5 YEAR AVERAGE (SAIFI)
0.026490494
12. REPORTING YEAR (SAIFI)
0.02229822
13. CORRECTIVE ACTION PLAN
CIRCUIT RELOCATED AT BEGINNING (Development); NEEDS ROW INSPECTED

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #0701:

1. SUBSTATION NAME AND NUMBER

07/SHOPVILLE

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

130 Dahl Road, Somerset, KY 42501

3. CIRCUIT NAME AND NUMBER

STAB / #0701

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS EAST HWY 80

5. TOTAL CIRCUIT LENGTH (MILES)

117.77

6. CUSTOMER COUNT FOR THIS CIRCUIT

833

7.. DATE OF LAST CIRCUIT TRIM (VM)

2019

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	15.09%
Customer Side	4.72%
Equipment Failure	0.94%
Lightning	4.72%
Load	0.94%
Other	5.66%
Planned	8.49%
Power Supply	0.94%
Trees	43.40%
Trees - w/ Ice	1.89%
Unknown	7.55%
Unknown Blink	0.94%
Vehicle	0.94%
Wind - No Trees	3.77%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

10.08861037

10. REPORTING YEAR (SAIDI)

19.25687797

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.050565876

12. REPORTING YEAR (SAIFI)

0.088861922

13. CORRECTIVE ACTION PLAN

VERY LARGE CIRCUIT. NEEDS ROW INSPECTED AGAIN BUT ALSO NEEDS COORDINATION PERFORMED AND POSSIBLY SECTIONALIZING RECONFIGURED.

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #0703:

1. SUBSTATION NAME AND NUMBER
07/SHOPVILLE
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)
130 Dahl Road, Somerset, KY 42501
3. CIRCUIT NAME AND NUMBER
BARNESBURG / #0703
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)
FEEDS WEST ON HIGHWAY 80 TOWARD SUGAR HILL
5. TOTAL CIRCUIT LENGTH (MILES)
41.57
6. CUSTOMER COUNT FOR THIS CIRCUIT
439
- 7.. DATE OF LAST CIRCUIT TRIM (VM)
2019
8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	17.86%
Equipment Failure	3.57%
Other	10.71%
Planned	1.79%
Power Supply	1.79%
Trees	17.86%
Unknown	7.14%
Wind - No Trees	39.29%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)
1.679200998
10. REPORTING YEAR (SAIDI)
2.306382641
11. CIRCUIT 5 YEAR AVERAGE (SAIFI)
0.017800799
12. REPORTING YEAR (SAIFI)
0.036570735
13. CORRECTIVE ACTION PLAN
CIRCUIT WILL BE CONSIDERED FOR FUTURE SECTIONALIZING STUDY; ALSO CIRCUIT MAY UNDERGO MAJOR CHANGES DUE TO BARNESBURG POTENTIAL DEVELOPMENTS

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #0803:

1. SUBSTATION NAME AND NUMBER

08/NORWOOD

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

279 West Racetrak Road, Somerset, KY 42501

3. CIRCUIT NAME AND NUMBER

PARKWAY MANOR / #0803

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS TOWARD CLIFTY

5. TOTAL CIRCUIT LENGTH (MILES)

26.87

6. CUSTOMER COUNT FOR THIS CIRCUIT

625

7.. DATE OF LAST CIRCUIT TRIM (VM)

2014

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	28.57%
Customer Side	8.93%
Equipment Failure	5.36%
Ice/Snow - No Trees	1.79%
Lightning	7.14%
Other	17.86%
Planned	14.29%
Trees	7.14%
Unknown	5.36%
Wind - No Trees	3.57%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

0.888901955

10. REPORTING YEAR (SAIDI)

1.378708165

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.011916556

12. REPORTING YEAR (SAIFI)

0.023870265

13. CORRECTIVE ACTION PLAN

CIRCUIT WILL BE CONSIDERED FOR INSPECTION.

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #0804:

1. SUBSTATION NAME AND NUMBER

08/NORWOOD

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

279 West Racetrak Road, Somerset, KY 42501

3. CIRCUIT NAME AND NUMBER

BREEZY HILLS / #0804

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS CLIFTY RD.

5. TOTAL CIRCUIT LENGTH (MILES)

22.88

6. CUSTOMER COUNT FOR THIS CIRCUIT

449

7.. DATE OF LAST CIRCUIT TRIM (VM)

2014

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	16.00%
Customer Side	6.00%
Equipment Failt	6.00%
Lightning	4.00%
Other	18.00%
Planned	6.00%
Trees	20.00%
Trees - w/ Ice	2.00%
Unknown	14.00%
Unknown Blink	2.00%
Wind - No Tree:	6.00%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

1.675263069

10. REPORTING YEAR (SAIDI)

3.015390874

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.011877477

12. REPORTING YEAR (SAIFI)

0.01373471

13. CORRECTIVE ACTION PLAN

CIRCUIT WILL BE CONSIDERED FOR ROW INSPECTION AND/OR CONSIDERED FOR FUTURE SECTIONALIZING STUDY

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #0901:

1. SUBSTATION NAME AND NUMBER

09/FLOYD

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

859 Old Somerset Standford Road, Somerset, KY

3. CIRCUIT NAME AND NUMBER

ESTESBURG / #0901

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS BACK TOWARD WOODSTOCK CHARLES ELGIN

5. TOTAL CIRCUIT LENGTH (MILES)

15.6

6. CUSTOMER COUNT FOR THIS CIRCUIT

181

7.. DATE OF LAST CIRCUIT TRIM (VM)

2016

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	36.36%
Customer Side	27.27%
Lightning	9.09%
Planned	18.18%
Unknown Blink	9.09%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

0.085058412

10. REPORTING YEAR (SAIDI)

0.118070383

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.001118167

12. REPORTING YEAR (SAIFI)

0.000730863

13. CORRECTIVE ACTION PLAN

CIRCUIT SEEMS TO FACE SEVERAL SMALL ANIMAL OUTAGES. NEED TO TALK TO SERVICE MAN IN AREA TO DISCUSS.

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #0904:

1. SUBSTATION NAME AND NUMBER

09/FLOYD

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

859 Old Somerset Standford Road, Somerset, KY

3. CIRCUIT NAME AND NUMBER

SOUTH HWY 27 / #0904

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS SOUTH ON HWY 27

5. TOTAL CIRCUIT LENGTH (MILES)

6.7

6. CUSTOMER COUNT FOR THIS CIRCUIT

124

7.. DATE OF LAST CIRCUIT TRIM (VM)

2015

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	57.14%
Planned	14.29%
Unknown	14.29%
Wind - No Trees	14.29%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

0.09883652

10. REPORTING YEAR (SAIDI)

0.123932044

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.000788148

12. REPORTING YEAR (SAIFI)

0.001116979

13. CORRECTIVE ACTION PLAN

CIRCUIT WILL BE CONSIDERED FOR FUTURE SECTIONALIZING STUDY

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #0905:

1. SUBSTATION NAME AND NUMBER

09/FLOYD

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

859 Old Somerset Standford Road, Somerset, KY

3. CIRCUIT NAME AND NUMBER

NORTH HWY 27 / #0905

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS NORTH ON HWY 27

5. TOTAL CIRCUIT LENGTH (MILES)

49.29

6. CUSTOMER COUNT FOR THIS CIRCUIT

515

7.. DATE OF LAST CIRCUIT TRIM (VM)

2016

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	32.00%
Customer Side	4.00%
Equipment Failure	6.00%
Lightning	4.00%
Load	2.00%
Other	4.00%
Planned	4.00%
Power Supply	2.00%
Trees	22.00%
Unknown	12.00%
Unknown Blink	2.00%
Vehicle	2.00%
Wind - No Trees	4.00%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

1.430593304

10. REPORTING YEAR (SAIDI)

3.761415944

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.008759566

12. REPORTING YEAR (SAIFI)

0.013845029

13. CORRECTIVE ACTION PLAN

CIRCUIT WILL BE CONSIDERED FOR FUTURE SECTIONALIZING STUDY

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #1001:

1. SUBSTATION NAME AND NUMBER
10/NORTH ALBANY
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)
1028 Third Street, Albany, KY 42602
3. CIRCUIT NAME AND NUMBER
HIGHWAY 350 / #1001
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)
FEEDS TOWARD SOUTH ALBANY
5. TOTAL CIRCUIT LENGTH (MILES)
12.52
6. CUSTOMER COUNT FOR THIS CIRCUIT
661
- 7.. DATE OF LAST CIRCUIT TRIM (VM)
2022; SPRAY 2023
8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	23.81%
Customer Side	7.94%
Equipment Failure	4.76%
Lightning	11.11%
Other	9.52%
Power Supply	1.59%
Trees	25.40%
Trees - Contractor	1.59%
Unknown	6.35%
Unknown Blink	3.17%
Vehicle	1.59%
Wind - No Trees	3.17%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)
1.818367998
10. REPORTING YEAR (SAIDI)
3.46890343
11. CIRCUIT 5 YEAR AVERAGE (SAIFI)
0.020139998
12. REPORTING YEAR (SAIFI)
0.045285933
13. CORRECTIVE ACTION PLAN
CIRCUIT WILL BE CONSIDERED FOR FUTURE SECTIONALIZING STUDY; MAY CONSIDER ROW INSPECTION DUE TO CAUSES AFTER CIRCUIT BID CUT.

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #1003:

1. SUBSTATION NAME AND NUMBER

10/NORTH ALBANY

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

1028 Third Street, Albany, KY 42602

3. CIRCUIT NAME AND NUMBER

DUVALL VALLEY / #1003

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS TOWARD DUVALL VALLEY EAST

5. TOTAL CIRCUIT LENGTH (MILES)

52.53

6. CUSTOMER COUNT FOR THIS CIRCUIT

626

7.. DATE OF LAST CIRCUIT TRIM (VM)

2022; SPRAY 2023

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	7.69%
Customer Side	14.10%
Equipment Failure	3.85%
Lightning	10.26%
Load	1.28%
Other	14.10%
Planned	1.28%
Power Supply	1.28%
Trees	28.21%
Unknown	6.41%
Unknown Blink	8.97%
Vehicle	1.28%
Wind - No Trees	1.28%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

1.586284233

10. REPORTING YEAR (SAIDI)

6.877519754

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.011313854

12. REPORTING YEAR (SAIFI)

0.035619234

13. CORRECTIVE ACTION PLAN

CIRCUIT WILL BE CONSIDERED FOR FUTURE SECTIONALIZING STUDY; MAY CONSIDER ROW INSPECTION DUE TO CAUSES AFTER CIRCUIT BID CUT.

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #1004:

1. SUBSTATION NAME AND NUMBER

10/NORTH ALBANY

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

1028 Third Street, Albany, KY 42602

3. CIRCUIT NAME AND NUMBER

BURKESVILLE / #1004

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS WEST BURKESVILLE

5. TOTAL CIRCUIT LENGTH (MILES)

20.89

6. CUSTOMER COUNT FOR THIS CIRCUIT

308

7.. DATE OF LAST CIRCUIT TRIM (VM)

2022; SPRAY 2023

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	20.00%
Equipment Failure	4.00%
Lightning	12.00%
Other	20.00%
Power Supply	4.00%
Trees	24.00%
Unknown Blink	8.00%
Wind - No Trees	8.00%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

0.394688964

10. REPORTING YEAR (SAIDI)

1.969265965

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.003927744

12. REPORTING YEAR (SAIFI)

0.019540246

13. CORRECTIVE ACTION PLAN

CIRCUIT WILL BE CONSIDERED FOR FUTURE SECTIONALIZING STUDY; MAY CONSIDER ROW INSPECTION DUE TO CAUSES AFTER CIRCUIT BID CUT.

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #1101:

1. SUBSTATION NAME AND NUMBER

11/SOUTH ALBANY

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

235 West Harper Lane, Albany, KY 42602

3. CIRCUIT NAME AND NUMBER

ADAMS DOCK / #1101

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS ADAMS DOCK

5. TOTAL CIRCUIT LENGTH (MILES)

50.68

6. CUSTOMER COUNT FOR THIS CIRCUIT

882

7.. DATE OF LAST CIRCUIT TRIM (VM)

2022; SPRAY 2023

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	25.49%
Customer Side	3.92%
Equipment Failure	0.98%
Ice/Snow - No Trees	1.96%
Lightning	2.94%
Load	1.96%
Other	20.59%
Planned	2.94%
Power Supply	0.98%
Trees	20.59%
Trees - w/ Ice	0.98%
Unknown	11.76%
Unknown Blink	1.96%
Vehicle	0.98%
Wind - No Trees	1.96%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

9.962818048

10. REPORTING YEAR (SAIDI)

14.43961609

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.039768855

12. REPORTING YEAR (SAIFI)

0.05087083

13. CORRECTIVE ACTION PLAN

CIRCUIT WILL BE CONSIDERED FOR FUTURE SECTIONALIZING STUDY; MAY CONSIDER ROW INSPECTION DUE TO CAUSES AFTER CIRCUIT BID CUT.

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #1102:

1. SUBSTATION NAME AND NUMBER

11/SOUTH ALBANY

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

235 West Harper Lane, Albany, KY 42602

3. CIRCUIT NAME AND NUMBER

WISDOM DOCK / #1102

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS WISDOM DOCK

5. TOTAL CIRCUIT LENGTH (MILES)

59.41

6. CUSTOMER COUNT FOR THIS CIRCUIT

709

7.. DATE OF LAST CIRCUIT TRIM (VM)

2021; SPRAY 2022

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	21.21%
Customer Side	6.06%
Equipment Failure	5.05%
Lightning	1.01%
Other	14.14%
Planned	7.07%
Power Supply	1.01%
Tornado/Hurricane	3.03%
Trees	23.23%
Trees - Contractor	1.01%
Unknown	10.10%
Unknown Blink	6.06%
Wind - No Trees	1.01%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

4.791171065

10. REPORTING YEAR (SAIDI)

12.89504006

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.030726228

12. REPORTING YEAR (SAIFI)

0.049478053

13. CORRECTIVE ACTION PLAN

CIRCUIT WILL BE CONSIDERED FOR FUTURE SECTIONALIZING STUDY; MAY CONSIDER ROW INSPECTION DUE TO CAUSES AFTER CIRCUIT BID CUT.

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #1201:

1. SUBSTATION NAME AND NUMBER

12/SEWELLTON

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

44 Highway 55, Jamestown, KY 42629

3. CIRCUIT NAME AND NUMBER

STORY LANE / #1201

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS NORTH ON HWY 127

5. TOTAL CIRCUIT LENGTH (MILES)

20.89

6. CUSTOMER COUNT FOR THIS CIRCUIT

187

7.. DATE OF LAST CIRCUIT TRIM (VM)

2016; SPRAY 2018

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	8.00%
Customer Side	4.00%
Equipment Failure	4.00%
Lightning	4.00%
Other	8.00%
Planned	4.00%
Trees	24.00%
Unknown	16.00%
Unknown Blink	4.00%
Vehicle	4.00%
Wind - No Trees	20.00%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

0.307037419

10. REPORTING YEAR (SAIDI)

0.245469476

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.003121472

12. REPORTING YEAR (SAIFI)

0.00317167

13. CORRECTIVE ACTION PLAN

NEED TO CONSIDER ROW INSPECTION.

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #1303:

1. SUBSTATION NAME AND NUMBER

13/ZULA

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

191 HWY 1009 N, Monticello, KY 42653

3. CIRCUIT NAME AND NUMBER

POWERSBURG / #1303

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS SOUTH FROM ZULA

5. TOTAL CIRCUIT LENGTH (MILES)

87.68

6. CUSTOMER COUNT FOR THIS CIRCUIT

677

7.. DATE OF LAST CIRCUIT TRIM (VM)

2020; SPRAY 2022

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	9.09%
Customer Side	3.41%
Equipment Failure	4.55%
Lightning	7.95%
Other	12.50%
Planned	1.14%
Power Supply	1.14%
Trees	29.55%
Trees - w/ Ice	4.55%
Unknown	11.36%
Unknown Blink	6.82%
Wind - No Trees	7.95%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

2.055624514

10. REPORTING YEAR (SAIDI)

4.118678379

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.015804495

12. REPORTING YEAR (SAIFI)

0.034378146

13. CORRECTIVE ACTION PLAN

CIRCUIT ROW NEEDS VISUALLY INSPECTED

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #1402:

1. SUBSTATION NAME AND NUMBER

14/MONTICELLO

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

422 Hardwood Drive, Monticello, KY 42633

3. CIRCUIT NAME AND NUMBER

KELLEY LANE / #1402

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS NORTH ON HWY 833

5. TOTAL CIRCUIT LENGTH (MILES)

32.04

6. CUSTOMER COUNT FOR THIS CIRCUIT

400

7.. DATE OF LAST CIRCUIT TRIM (VM)

2020; SPRAY 2019

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	31.15%
Equipment Failure	3.28%
Lightning	3.28%
Other	4.92%
Planned	3.28%
Trees	29.51%
Unknown	13.11%
Vehicle	4.92%
Wind - No Trees	6.56%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

1.968279311

10. REPORTING YEAR (SAIDI)

3.772033454

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.017038726

12. REPORTING YEAR (SAIFI)

0.024656287

13. CORRECTIVE ACTION PLAN

CIRCUIT WILL BE CONSIDERED FOR ROW INSPECTION AND/OR CONSIDERED FOR FUTURE SECTIONALIZING STUDY

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #1403:

1. SUBSTATION NAME AND NUMBER

14/MONTICELLO

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

422 Hardwood Drive, Monticello, KY 42633

3. CIRCUIT NAME AND NUMBER

COLONIAL ESTATES / #1403

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS COLONIAL EST 7.2KV

5. TOTAL CIRCUIT LENGTH (MILES)

5.65

6. CUSTOMER COUNT FOR THIS CIRCUIT

123

7.. DATE OF LAST CIRCUIT TRIM (VM)

2022

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	20.00%
Customer Side	20.00%
Other	30.00%
Trees	20.00%
Unknown	10.00%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

0.022575464

10. REPORTING YEAR (SAIDI)

0.029533764

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.000241058

12. REPORTING YEAR (SAIFI)

0.000289587

13. CORRECTIVE ACTION PLAN

SURPRISED BY TREE CAUSES HERE, BEING SO CLOSE TO TOWN; CKT NEEDS VISUALLY INSPECTED

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #1504:

1. SUBSTATION NAME AND NUMBER

15/BRONSTON #1

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

2373 HWY 790, Somerset, KY 42501

3. CIRCUIT NAME AND NUMBER

TATEVILLE / #1504

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS SOUTH OF TOWARD TATEVILLE

5. TOTAL CIRCUIT LENGTH (MILES)

51.53

6. CUSTOMER COUNT FOR THIS CIRCUIT

954

7.. DATE OF LAST CIRCUIT TRIM (VM)

2021

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	16.13%
Customer Side	4.30%
Equipment Failure	1.08%
Ice/Snow - No Trees	1.08%
Lightning	2.15%
Load	3.23%
Other	8.60%
Planned	7.53%
Power Supply	3.23%
Trees	27.96%
Trees - Contractor	1.08%
Unknown	10.75%
Unknown Blink	9.68%
Vehicle	1.08%
Wind - No Trees	2.15%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

7.500423079

10. REPORTING YEAR (SAIDI)

8.075206779

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.050456255

12. REPORTING YEAR (SAIFI)

0.041190342

13. CORRECTIVE ACTION PLAN

PORTION OF SECTIONALIZING COMPLETE; TRUE PHASING COMPLETE TO ASSIST.

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #1505:

1. SUBSTATION NAME AND NUMBER

15/BRONSTON #2

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

2373 HWY 790, Somerset, KY 42501

3. CIRCUIT NAME AND NUMBER

WOODSON BEND / #1505

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS WOODSON BEND RESORT

5. TOTAL CIRCUIT LENGTH (MILES)

10.71

6. CUSTOMER COUNT FOR THIS CIRCUIT

640

7.. DATE OF LAST CIRCUIT TRIM (VM)

2024

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	29.17%
Other	8.33%
Trees	20.83%
Unknown	20.83%
Unknown Blink	16.67%
Wind - No Tree:	4.17%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

2.344077115

10. REPORTING YEAR (SAIDI)

6.550325717

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.013461739

12. REPORTING YEAR (SAIFI)

0.018588745

13. CORRECTIVE ACTION PLAN

CIRCUIT WILL BE CONSIDERED FOR ROW INSPECTION AND/OR CONSIDERED FOR FUTURE SECTIONALIZING STUDY

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #1805:

1. SUBSTATION NAME AND NUMBER

18/PINE KNOT

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

245 Pine Tree Road, Pine Knot, KY 42635

3. CIRCUIT NAME AND NUMBER

WHITLEY CITY / #1805

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS TOWARD WHITLEY CITY

5. TOTAL CIRCUIT LENGTH (MILES)

10.27

6. CUSTOMER COUNT FOR THIS CIRCUIT

193

7.. DATE OF LAST CIRCUIT TRIM (VM)

2018

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	12.50%
Customer Side	12.50%
Other	12.50%
Planned	12.50%
Trees	43.75%
Unknown Blink	6.25%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

0.589411396

10. REPORTING YEAR (SAIDI)

0.30662093

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.004063939

12. REPORTING YEAR (SAIFI)

0.005129832

13. CORRECTIVE ACTION PLAN

CIRCUIT WILL BE CONSIDERED FOR ROW INSPECTION AND/OR CONSIDERED FOR FUTURE SECTIONALIZING STUDY

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #1902:

1. SUBSTATION NAME AND NUMBER

19/OAKHILL

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

230 North Nomans Lane, Somerset, KY 42501

3. CIRCUIT NAME AND NUMBER

GREEN MEADOWS / #1902

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS GREEN MEADOWS SUBDIVISION

5. TOTAL CIRCUIT LENGTH (MILES)

14.74

6. CUSTOMER COUNT FOR THIS CIRCUIT

762

7.. DATE OF LAST CIRCUIT TRIM (VM)

2021

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	16.91%
Customer Side	2.94%
Equipment Failure	3.68%
Fire	0.74%
Lightning	1.47%
Other	2.94%
Planned	6.62%
Trees	7.35%
Unknown	5.15%
Unknown Blink	52.21%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

0.923175585

10. REPORTING YEAR (SAIDI)

1.457009529

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.008321098

12. REPORTING YEAR (SAIFI)

0.007846436

13. CORRECTIVE ACTION PLAN

LIKELY BETTER AFTER EKPC RECLOSER PROGRAMMING ERROR. NEED TO INVESTIGATE BLINKS & CONSIDER SECTIONALIZING STUDY.

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #2003:

1. SUBSTATION NAME AND NUMBER
20/ASAHI
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)
1272 HWY 461, Somerset, KY 42503
3. CIRCUIT NAME AND NUMBER
TECHNICAL PARK / #2003
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)
FEEDS INDUSTRIAL PARK AREA HWY 461
5. TOTAL CIRCUIT LENGTH (MILES)
6.49
6. CUSTOMER COUNT FOR THIS CIRCUIT
90
- 7.. DATE OF LAST CIRCUIT TRIM (VM)
2018 SPRAY
8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	14.29%
Equipment Failure	14.29%
Lightning	14.29%
Planned	14.29%
Unknown	14.29%
Unknown Blink	28.57%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)
0.037300827
10. REPORTING YEAR (SAIDI)
0.104489292
11. CIRCUIT 5 YEAR AVERAGE (SAIFI)
0.000213767
12. REPORTING YEAR (SAIFI)
0.000303377
13. CORRECTIVE ACTION PLAN
NEEDS SECTIONALIZING STUDY.

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #2004:

1. SUBSTATION NAME AND NUMBER
20/ASAHI
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)
1272 HWY 461, Somerset, KY 42503
3. CIRCUIT NAME AND NUMBER
TO DAHL RD / #2004
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)
FEEDS INDUSTRIAL PARK AREA HWY 461
5. TOTAL CIRCUIT LENGTH (MILES)
0.82
6. CUSTOMER COUNT FOR THIS CIRCUIT
10
- 7.. DATE OF LAST CIRCUIT TRIM (VM)
2018 SPRAY
8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	33.33%
Equipment Failure	33.33%
Other	33.33%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)
0.003723565
10. REPORTING YEAR (SAIDI)
0.005008067
11. CIRCUIT 5 YEAR AVERAGE (SAIFI)
0.000016611
12. REPORTING YEAR (SAIFI)
0.000068949
13. CORRECTIVE ACTION PLAN
CONTINUE REVIEW & NEEDS ROW INSPECTION; SHORT FEED TO HENDRICKSON

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #2102:

1. SUBSTATION NAME AND NUMBER
21/WEST SOMERSET
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)
160 Patterson Branch Road, Somerset, KY 42501
3. CIRCUIT NAME AND NUMBER
WOODRIDGE / #2102
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)
FEEDS EAST ON HWY 80
5. TOTAL CIRCUIT LENGTH (MILES)
27.19
6. CUSTOMER COUNT FOR THIS CIRCUIT
835
- 7.. DATE OF LAST CIRCUIT TRIM (VM)
2024
8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	16.13%
Customer Side	4.84%
Equipment Failure	3.23%
Fire	1.61%
Lightning	4.84%
Load	1.61%
Other	1.61%
Planned	25.81%
Trees	16.13%
Unknown	11.29%
Unknown Blink	11.29%
Wind - No Trees	1.61%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)
1.531812822
10. REPORTING YEAR (SAIDI)
2.218238068
11. CIRCUIT 5 YEAR AVERAGE (SAIFI)
0.021488044
12. REPORTING YEAR (SAIFI)
0.016203097
13. CORRECTIVE ACTION PLAN
SEVERAL PLANNED OUTAGES MAY BE DUE TO POLE REPLACEMENTS IN THE AREA. NEED TO INVESTIGATE FRAMING OF SERVICE XFMRs IN AREA.

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #2104:

1. SUBSTATION NAME AND NUMBER

21/WEST SOMERSET

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

160 Patterson Branch Road, Somerset, KY 42501

3. CIRCUIT NAME AND NUMBER

LEES FORD / #2104

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS TOWARD LEES FORD MARINA

5. TOTAL CIRCUIT LENGTH (MILES)

14.3

6. CUSTOMER COUNT FOR THIS CIRCUIT

395

7.. DATE OF LAST CIRCUIT TRIM (VM)

2024

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	24.39%
Customer Side	2.44%
Equipment Failure	4.88%
Ice/Snow - No Trees	2.44%
Lightning	9.76%
Other	9.76%
Planned	17.07%
Trees	9.76%
Trees - Contractor	2.44%
Unknown	2.44%
Unknown Blink	7.32%
Wind - No Trees	7.32%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

0.248563629

10. REPORTING YEAR (SAIDI)

0.69012535

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.002583145

12. REPORTING YEAR (SAIFI)

0.009294372

13. CORRECTIVE ACTION PLAN

POSSIBLY PLANNED OUTAGES DUE TO POLE REPLACEMENTS; NEEDS CONSIDERED FOR SECTIONALIZING STUDY.

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #2202:

1. SUBSTATION NAME AND NUMBER

22/SALEM

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

1313 S. Highway 76, Russell Springs, Ky 42642

3. CIRCUIT NAME AND NUMBER

TO ONO / #2202

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS SOUTH ON HWY 76

5. TOTAL CIRCUIT LENGTH (MILES)

53.53

6. CUSTOMER COUNT FOR THIS CIRCUIT

652

7.. DATE OF LAST CIRCUIT TRIM (VM)

2010

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	14.29%
Customer Side	6.35%
Equipment Failure	7.94%
Lightning	1.59%
Other	15.87%
Planned	12.70%
Power Supply	4.76%
Trees	22.22%
Trees - w/ Ice	1.59%
Unknown	6.35%
Unknown Blink	3.17%
Vehicle	1.59%
Wind - No Trees	1.59%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

1.096746798

10. REPORTING YEAR (SAIDI)

1.226286798

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.015705057

12. REPORTING YEAR (SAIFI)

0.019747094

13. CORRECTIVE ACTION PLAN

CIRCUIT WILL NEED TO BE INSPECTED FOR ROW

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #2203:

1. SUBSTATION NAME AND NUMBER

22/SALEM

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

1313 S. Highway 76, Russell Springs, Ky 42642

3. CIRCUIT NAME AND NUMBER

ALLIGATOR DOCK / #2203

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS SOUTH TOWARD ELI/ALLIGATOR DOCK

5. TOTAL CIRCUIT LENGTH (MILES)

43.71

6. CUSTOMER COUNT FOR THIS CIRCUIT

1061

7.. DATE OF LAST CIRCUIT TRIM (VM)

2020 (SPRAY)

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Large	1.32%
Animal - Small	11.84%
Customer Side	9.21%
Equipment Failure	6.58%
Lightning	6.58%
Load	14.47%
Other	14.47%
Planned	6.58%
Power Supply	1.32%
Trees	11.84%
Trees - w/ Ice	1.32%
Unknown	6.58%
Unknown Blink	3.95%
Vehicle	2.63%
Wind - No Trees	1.32%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

3.550069652

10. REPORTING YEAR (SAIDI)

5.106703945

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.03676464

12. REPORTING YEAR (SAIFI)

0.056621206

13. CORRECTIVE ACTION PLAN

CIRCUIT WILL NEED TO BE INSPECTED FOR ROW. SPOKE WITH EKPC ABOUT LOAD CONCERNS AND POSSIBLE STATION ADDITION.

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #2204:

1. SUBSTATION NAME AND NUMBER

22/SALEM

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

1313 S. Highway 76, Russell Springs, Ky 42642

3. CIRCUIT NAME AND NUMBER

SUPERIOR BATTER / #2204

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS SEVERAL SUPERIOR BATTERY SERVICES

5. TOTAL CIRCUIT LENGTH (MILES)

3.37

6. CUSTOMER COUNT FOR THIS CIRCUIT

36

7.. DATE OF LAST CIRCUIT TRIM (VM)

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Other	50.00%
Power Supply	50.00%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

0.034183185

10. REPORTING YEAR (SAIDI)

0.039706552

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.000472266

12. REPORTING YEAR (SAIFI)

0.000496435

13. CORRECTIVE ACTION PLAN

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #2205:

1. SUBSTATION NAME AND NUMBER

22/SALEM

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

1313 S. Highway 76, Russell Springs, Ky 42642

3. CIRCUIT NAME AND NUMBER

TO HIGHWAY 80 / #2205

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS BACK TOWARD OLD HIGHWAY 80

5. TOTAL CIRCUIT LENGTH (MILES)

25.97

6. CUSTOMER COUNT FOR THIS CIRCUIT

434

7.. DATE OF LAST CIRCUIT TRIM (VM)

2020

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	44.00%
Customer Side	4.00%
Equipment Failure	4.00%
Lightning	4.00%
Other	24.00%
Power Supply	4.00%
Unknown	8.00%
Unknown Blink	4.00%
Vehicle	4.00%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

0.472736235

10. REPORTING YEAR (SAIDI)

0.579804322

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.006620431

12. REPORTING YEAR (SAIFI)

0.007832646

13. CORRECTIVE ACTION PLAN

CIRCUIT NEEDS TO BE INSPECTED, PARTICULARLY FOR POSSIBLE FRAMING STYLES ON INDIVIDUAL SERVICES.

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #2301:

1. SUBSTATION NAME AND NUMBER

23/CABIN HOLLOW

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

50 Commerce Lane, Somerset, KY 42501

3. CIRCUIT NAME AND NUMBER

EAST HIGHWAY 914 / #2301

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS EAST ON HWY 914

5. TOTAL CIRCUIT LENGTH (MILES)

16.44

6. CUSTOMER COUNT FOR THIS CIRCUIT

348

7.. DATE OF LAST CIRCUIT TRIM (VM)

2024

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	40.00%
Customer Side	8.00%
Equipment Failure	4.00%
Lightning	4.00%
Other	12.00%
Trees	20.00%
Unknown	12.00%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

1.084718471

10. REPORTING YEAR (SAIDI)

1.389677593

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.007836244

12. REPORTING YEAR (SAIFI)

0.013293435

13. CORRECTIVE ACTION PLAN

CIRCUIT NEEDS TO BE REVIEW REGARDING SECTIONALIZING (POSSIBLE FRAMING CONCERNS ON SERVICES);

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #2304:

1. SUBSTATION NAME AND NUMBER

23/CABIN HOLLOW

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

50 Commerce Lane, Somerset, KY 42501

3. CIRCUIT NAME AND NUMBER

HARTCO / #2304

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS OLD HARTCO; ARMSTRONG

5. TOTAL CIRCUIT LENGTH (MILES)

0.92

6. CUSTOMER COUNT FOR THIS CIRCUIT

4

7.. DATE OF LAST CIRCUIT TRIM (VM)

2024

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Planned	50.00%
Trees	50.00%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

0.001750426

10. REPORTING YEAR (SAIDI)

0.002075651

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

2.27426E-05

12. REPORTING YEAR (SAIFI)

1.37899E-05

13. CORRECTIVE ACTION PLAN

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #2403:

1. SUBSTATION NAME AND NUMBER

24/SOUTH FLOYD

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

355 West Todd Road, Somerset, KY 42501

3. CIRCUIT NAME AND NUMBER

TO CIRCLEVILLE / #2403

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS EAST ON HWY 635

5. TOTAL CIRCUIT LENGTH (MILES)

30.42

6. CUSTOMER COUNT FOR THIS CIRCUIT

557

7.. DATE OF LAST CIRCUIT TRIM (VM)

2024

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	15.09%
Customer Side	3.77%
Equipment Failure	13.21%
Lightning	3.77%
Load	5.66%
Other	11.32%
Planned	3.77%
Trees	22.64%
Unknown	16.98%
Vehicle	1.89%
Wind - No Trees	1.89%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

0.994964675

10. REPORTING YEAR (SAIDI)

2.731938304

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.006951817

12. REPORTING YEAR (SAIFI)

0.020519327

13. CORRECTIVE ACTION PLAN

CIRCUIT SPLITS ODDLY AT BEGINNING OF FEEDER. ON LIST TO LOOK AT POSSIBLE FEEDER BAY ADDITION.

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #2404:

1. SUBSTATION NAME AND NUMBER

24/SOUTH FLOYD

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

355 West Todd Road, Somerset, KY 42501

3. CIRCUIT NAME AND NUMBER

MT ZION / #2404

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS TOWARD MT ZION

5. TOTAL CIRCUIT LENGTH (MILES)

46.64

6. CUSTOMER COUNT FOR THIS CIRCUIT

653

7.. DATE OF LAST CIRCUIT TRIM (VM)

2024

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	26.47%
Customer Side	7.35%
Equipment Failure	4.41%
Lightning	5.88%
Other	8.82%
Planned	17.65%
Trees	16.18%
Trees - Contractor	2.94%
Unknown	5.88%
Vehicle	1.47%
Wind - No Trees	2.94%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

1.285331688

10. REPORTING YEAR (SAIDI)

2.046326379

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.010951969

12. REPORTING YEAR (SAIFI)

0.013927769

13. CORRECTIVE ACTION PLAN

CIRCUIT SERVICE FRAMING NEEDS EVALUATED, ALSO FUTURE SECTIONALIZING STUDY.

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #2405:

1. SUBSTATION NAME AND NUMBER

24/SOUTH FLOYD

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

355 West Todd Road, Somerset, KY 42501

3. CIRCUIT NAME AND NUMBER

BUNCOMBE / #2405

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS TOWARD BUNCOMBE

5. TOTAL CIRCUIT LENGTH (MILES)

46.78

6. CUSTOMER COUNT FOR THIS CIRCUIT

532

7.. DATE OF LAST CIRCUIT TRIM (VM)

2024

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Large	1.54%
Animal - Small	30.77%
Customer Side	7.69%
Equipment Failure	3.08%
Lightning	3.08%
Other	12.31%
Planned	6.15%
Trees	13.85%
Trees - Contractor	3.08%
Trees - w/ Ice	1.54%
Unknown	10.77%
Unknown Blink	1.54%
Wind - No Trees	4.62%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

1.238868228

10. REPORTING YEAR (SAIDI)

2.107387923

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.014550328

12. REPORTING YEAR (SAIFI)

0.017306287

13. CORRECTIVE ACTION PLAN

CIRCUIT WILL BE CONSIDERED FOR FUTURE SECTIONALIZING STUDY & INVESTIGATE FRAMING.

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #2602:

1. SUBSTATION NAME AND NUMBER
26/SNOW
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)
2694 KY HWY 90 W, Albany, KY 42602
3. CIRCUIT NAME AND NUMBER
CAGLE PLANT / #2602
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)
FEEDS CAGLE PLANT
5. TOTAL CIRCUIT LENGTH (MILES)
1.21
6. CUSTOMER COUNT FOR THIS CIRCUIT
3
- 7.. DATE OF LAST CIRCUIT TRIM (VM)
2014
8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Equipment Failure	16.67%
Power Supply	33.33%
Trees	16.67%
Unknown Blink	33.33%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)
0.002774234
10. REPORTING YEAR (SAIDI)
0.011061958
11. CIRCUIT 5 YEAR AVERAGE (SAIFI)
2.83665E-05
12. REPORTING YEAR (SAIFI)
4.13696E-05
13. CORRECTIVE ACTION PLAN
I BELIEVE MOST WERE POWER SUPPLY BLINKS, OUTAGES, ETC.

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #2603:

1. SUBSTATION NAME AND NUMBER

26/SNOW

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

2694 KY HWY 90 W, Albany, KY 42602

3. CIRCUIT NAME AND NUMBER

EAST HWY 90 / #2603

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS EAST ON HWY 90

5. TOTAL CIRCUIT LENGTH (MILES)

4.97

6. CUSTOMER COUNT FOR THIS CIRCUIT

18

7.. DATE OF LAST CIRCUIT TRIM (VM)

2014

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Other	20.00%
Trees	20.00%
Unknown	10.00%
Unknown Blink	40.00%
Vehicle	10.00%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

0.00730098

10. REPORTING YEAR (SAIDI)

0.016366783

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.00022601

12. REPORTING YEAR (SAIFI)

0.000482645

13. CORRECTIVE ACTION PLAN

CIRCUIT WILL BE CONSIDERED FOR ROW INSPECTION AND/OR CONSIDERED FOR FUTURE SECTIONALIZING STUDY

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #2604:

1. SUBSTATION NAME AND NUMBER
26/SNOW
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)
2694 KY HWY 90 W, Albany, KY 42602
3. CIRCUIT NAME AND NUMBER
HWY 1590 / #2604
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)
FEEDS HWY 1590
5. TOTAL CIRCUIT LENGTH (MILES)
53.59
6. CUSTOMER COUNT FOR THIS CIRCUIT
521
- 7.. DATE OF LAST CIRCUIT TRIM (VM)
2014
8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	28.95%
Customer Side	6.58%
Equipment Failure	1.32%
Lightning	1.32%
Other	7.89%
Planned	2.63%
Trees	28.95%
Trees - w/ Ice	1.32%
Unknown	9.21%
Unknown Blink	9.21%
Wind - No Trees	2.63%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)
0.99867387
10. REPORTING YEAR (SAIDI)
1.119647531
11. CIRCUIT 5 YEAR AVERAGE (SAIFI)
0.009569005
12. REPORTING YEAR (SAIFI)
0.012286774
13. CORRECTIVE ACTION PLAN

CIRCUIT NEEDS TO BE INSPECTED FOR FRAMING ON INDIVIDUALS (SMALL ANIMALS). ALSO NEED TO ROW INSPECT.

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #2704:

1. SUBSTATION NAME AND NUMBER

27/SLAT

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

101 Whispering Pines, Monticello, KY 42633

3. CIRCUIT NAME AND NUMBER

INDUSTRIAL PARK / #2704

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS WEST ON HIGHWAY 90

5. TOTAL CIRCUIT LENGTH (MILES)

53.55

6. CUSTOMER COUNT FOR THIS CIRCUIT

541

7.. DATE OF LAST CIRCUIT TRIM (VM)

2021

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	23.08%
Customer Side	7.69%
Equipment Failure	1.54%
Lightning	9.23%
Other	4.62%
Planned	4.62%
Power Supply	1.54%
Trees	18.46%
Unknown	15.38%
Unknown Blink	12.31%
Wind - No Trees	1.54%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

1.3058241

10. REPORTING YEAR (SAIDI)

1.713252065

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.013590378

12. REPORTING YEAR (SAIFI)

0.022946344

13. CORRECTIVE ACTION PLAN

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #2804:

1. SUBSTATION NAME AND NUMBER

28/EAST PINE KNOT

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

142 North Clearcreek Road, Whitley City, KY 42653

3. CIRCUIT NAME AND NUMBER

DAVIS HILL / #2804

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS WEST ON BETHEL RIDGE RD

5. TOTAL CIRCUIT LENGTH (MILES)

28.86

6. CUSTOMER COUNT FOR THIS CIRCUIT

509

7.. DATE OF LAST CIRCUIT TRIM (VM)

2017

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	27.69%
Customer Side	3.08%
Equipment Failure	4.62%
Fire	1.54%
Ice/Snow - No Trees	1.54%
Lightning	6.15%
Load	1.54%
Other	7.69%
Planned	9.23%
Trees	18.46%
Unknown	10.77%
Unknown Blink	7.69%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

2.193285289

10. REPORTING YEAR (SAIDI)

1.449508391

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.017179132

12. REPORTING YEAR (SAIFI)

0.018409476

13. CORRECTIVE ACTION PLAN

CIRCUIT WILL BE CONSIDERED FOR ROW INSPECTION AND/OR CONSIDERED FOR FUTURE SECTIONALIZING STUDY

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #2901:

1. SUBSTATION NAME AND NUMBER

29/CEMETERY ROAD

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

43 Parson Road,Waynesburg, KY 40489

3. CIRCUIT NAME AND NUMBER

PARLOR GROVE / #2901

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS PARLOR GROVE ROAD

5. TOTAL CIRCUIT LENGTH (MILES)

61.19

6. CUSTOMER COUNT FOR THIS CIRCUIT

510

7.. DATE OF LAST CIRCUIT TRIM (VM)

2017; SPRAY 2018

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	16.11%
Customer Side	2.68%
Equipment Failure	2.01%
Load	0.67%
Other	3.36%
Planned	12.08%
Trees	12.75%
Trees - Contractor	0.67%
Trees - w/ Ice	0.67%
Unknown	46.31%
Unknown Blink	1.34%
Vehicle	0.67%
Wind - No Trees	0.67%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

2.388451799

10. REPORTING YEAR (SAIDI)

2.452929658

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.014221604

12. REPORTING YEAR (SAIFI)

0.01585835

13. CORRECTIVE ACTION PLAN

CIRCUIT WILL BE CONSIDERED FOR ROW INSPECTION AND/OR CONSIDERED FOR FUTURE SECTIONALIZING

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #3003:

1. SUBSTATION NAME AND NUMBER
30/JAMESTOWN
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)
764 S. Main Street, Jamestown, KY 42629
3. CIRCUIT NAME AND NUMBER
PLEASANT HILL / #3003
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)
FEEDS TOWARDS PLEASANT HILL RD
5. TOTAL CIRCUIT LENGTH (MILES)
54.49
6. CUSTOMER COUNT FOR THIS CIRCUIT
841
- 7.. DATE OF LAST CIRCUIT TRIM (VM)
2017; SPRAY 2018
8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	20.00%
Customer Side	8.00%
Equipment Failure	2.67%
Fire	1.33%
Lightning	1.33%
Other	12.00%
Planned	4.00%
Trees	34.67%
Unknown	5.33%
Unknown Blink	6.67%
Wind - No Trees	4.00%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)
2.395505949
10. REPORTING YEAR (SAIDI)
2.384719445
11. CIRCUIT 5 YEAR AVERAGE (SAIFI)
0.024238713
12. REPORTING YEAR (SAIFI)
0.041135182
13. CORRECTIVE ACTION PLAN
ROW INSPECTION NEEDED; ALSO CONSIDER FOR FUTURE SECTIONALIZING STUDY

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #3205:

1. SUBSTATION NAME AND NUMBER
32/NELSON VALLEY
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)
134 Stilesville Road, Somerset, KY 42501
3. CIRCUIT NAME AND NUMBER
RAINBOW TERRACE / #3205
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)
FEEDS SOUTH ON HWY 39
5. TOTAL CIRCUIT LENGTH (MILES)
14.85
6. CUSTOMER COUNT FOR THIS CIRCUIT
327
- 7.. DATE OF LAST CIRCUIT TRIM (VM)
2023; SPRAY 2024
8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	25.64%
Customer Side	2.56%
Lightning	7.69%
Planned	12.82%
Trees	5.13%
Unknown	5.13%
Unknown Blink	2.56%
Wind - No Trees	38.46%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)
0.498980631
10. REPORTING YEAR (SAIDI)
0.55129804
11. CIRCUIT 5 YEAR AVERAGE (SAIFI)
0.007217768
12. REPORTING YEAR (SAIFI)
0.005509986
13. CORRECTIVE ACTION PLAN
WIND EVENTS

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #3303:

1. SUBSTATION NAME AND NUMBER
33/ZOLLIFFER
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)
2675 HWY 235, Nancy, KY 42544
3. CIRCUIT NAME AND NUMBER
NORTH TO NANCY / #3303
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)
FEEDS NORTH ON 235 BACK TO NANCY
5. TOTAL CIRCUIT LENGTH (MILES)
36.82
6. CUSTOMER COUNT FOR THIS CIRCUIT
535
- 7.. DATE OF LAST CIRCUIT TRIM (VM)
2020
8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	25.40%
Customer Side	6.35%
Equipment Failure	3.17%
Lightning	11.11%
Other	9.52%
Planned	6.35%
Trees	19.05%
Unknown	4.76%
Unknown Blink	12.70%
Vehicle	1.59%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)
0.639138331
10. REPORTING YEAR (SAIDI)
1.529174676
11. CIRCUIT 5 YEAR AVERAGE (SAIFI)
0.007059486
12. REPORTING YEAR (SAIFI)
0.01271426
13. CORRECTIVE ACTION PLAN
CIRCUIT NEEDS ROW INSPECTED & SECTIONALIZING STUDY

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #3304:

1. SUBSTATION NAME AND NUMBER
33/ZOLLIFFER
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)
2675 HWY 235, Nancy, KY 42544
3. CIRCUIT NAME AND NUMBER
JOHN ANDY MEECE / #3304
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)
FEEDS SOUTH ON HWY 235
5. TOTAL CIRCUIT LENGTH (MILES)
47.99
6. CUSTOMER COUNT FOR THIS CIRCUIT
635
- 7.. DATE OF LAST CIRCUIT TRIM (VM)
2019; SPRAY 2020
8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	19.75%
Customer Side	1.23%
Lightning	9.88%
Other	9.88%
Planned	4.94%
Power Supply	1.23%
Trees	30.86%
Unknown	4.94%
Unknown Blink	17.28%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)
2.666405752
10. REPORTING YEAR (SAIDI)
4.587885875
11. CIRCUIT 5 YEAR AVERAGE (SAIFI)
0.01397758
12. REPORTING YEAR (SAIFI)
0.018119889
13. CORRECTIVE ACTION PLAN
CIRCUIT NEEDS ROW INSPECTED.

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #3502:

1. SUBSTATION NAME AND NUMBER

35/UPCHURCH

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

594 Wray Ridge Road, Albany, KY 42602

3. CIRCUIT NAME AND NUMBER

CLINTON CO INDUSTRIAL PARK / #3502

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS EAST ON HWY 90

5. TOTAL CIRCUIT LENGTH (MILES)

77.83

6. CUSTOMER COUNT FOR THIS CIRCUIT

810

7.. DATE OF LAST CIRCUIT TRIM (VM)

2015

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	25.23%
Customer Side	3.74%
Equipment Failure	3.74%
Lightning	3.74%
Other	10.28%
Planned	2.80%
Power Supply	0.93%
Trees	27.10%
Trees - w/ Ice	2.80%
Unknown	5.61%
Unknown Blink	5.61%
Wind - No Trees	8.41%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

3.462008237

10. REPORTING YEAR (SAIDI)

7.013722713

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.032704338

12. REPORTING YEAR (SAIFI)

0.054456196

13. CORRECTIVE ACTION PLAN

CIRCUIT WILL BE CONSIDERED FOR ROW INSPECTION AND/OR CONSIDERED FOR FUTURE SECTIONALIZING STUDY

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #3503:

1. SUBSTATION NAME AND NUMBER
35/UPCHURCH
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)
594 Wray Ridge Road, Albany, KY 42602
3. CIRCUIT NAME AND NUMBER
MT. VIEW PARK / #3503
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)
FEEDS OUT OF SUBSTATION, TOWARD ALBANY
5. TOTAL CIRCUIT LENGTH (MILES)
27.83
6. CUSTOMER COUNT FOR THIS CIRCUIT
329
- 7.. DATE OF LAST CIRCUIT TRIM (VM)
2015
8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	13.95%
Customer Side	9.30%
Equipment Failure	2.33%
Other	11.63%
Planned	6.98%
Power Supply	2.33%
Trees	30.23%
Trees - w/ Ice	2.33%
Unknown Blink	18.60%
Wind - No Trees	2.33%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)
0.619828344
10. REPORTING YEAR (SAIDI)
0.900798709
11. CIRCUIT 5 YEAR AVERAGE (SAIFI)
0.008107444
12. REPORTING YEAR (SAIFI)
0.015113697
13. CORRECTIVE ACTION PLAN

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #3601:

1. SUBSTATION NAME AND NUMBER

36/WEBBS CROSSROADS

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

2925 N. Highway 127, Russell Springs, KY 42642

3. CIRCUIT NAME AND NUMBER

DECATUR / #3601

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS NORTH HWY 127

5. TOTAL CIRCUIT LENGTH (MILES)

29.25

6. CUSTOMER COUNT FOR THIS CIRCUIT

269

7.. DATE OF LAST CIRCUIT TRIM (VM)

2025

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	40.74%
Customer Side	7.41%
Equipment Failure	7.41%
Other	11.11%
Trees	25.93%
Unknown Blink	7.41%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

0.426763745

10. REPORTING YEAR (SAIDI)

0.475995973

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.005289439

12. REPORTING YEAR (SAIFI)

0.003433678

13. CORRECTIVE ACTION PLAN

TO BE CIRCUIT BID 2025

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #3602:

1. SUBSTATION NAME AND NUMBER

36/WEBBS CROSSROADS

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

2925 N. Highway 127, Russell Springs, KY 42642

3. CIRCUIT NAME AND NUMBER

EAST HIGHWAY 76 / #3602

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS N 127 THEN EAST ON 76

5. TOTAL CIRCUIT LENGTH (MILES)

18.64

6. CUSTOMER COUNT FOR THIS CIRCUIT

255

7.. DATE OF LAST CIRCUIT TRIM (VM)

2024

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Large	4.76%
Animal - Small	33.33%
Customer Side	4.76%
Equipment Failure	4.76%
Lightning	4.76%
Trees	9.52%
Trees - Contractor	9.52%
Unknown	4.76%
Unknown Blink	23.81%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

0.411472243

10. REPORTING YEAR (SAIDI)

0.444905608

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.006534843

12. REPORTING YEAR (SAIFI)

0.007887806

13. CORRECTIVE ACTION PLAN

NEED TO INVESTIGATE SMALL ANIMAL OUTAGES, CONSIDER FRAMING ISSUES

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #3802:

1. SUBSTATION NAME AND NUMBER

38/HOMESTEAD

2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)

93 Rankin Street, Monticello, KY 42633

3. CIRCUIT NAME AND NUMBER

MICHIGAN AVENUE / #3802

4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)

FEEDS MICHIGAN AVE.

5. TOTAL CIRCUIT LENGTH (MILES)

16.4

6. CUSTOMER COUNT FOR THIS CIRCUIT

834

7.. DATE OF LAST CIRCUIT TRIM (VM)

2024

8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	43.75%
Customer Side	3.13%
Equipment Failure	3.13%
Other	12.50%
Planned	12.50%
Trees	12.50%
Unknown	3.13%
Unknown Blink	3.13%
Wind - No Trees	6.25%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)

0.645541335

10. REPORTING YEAR (SAIDI)

1.812589462

11. CIRCUIT 5 YEAR AVERAGE (SAIFI)

0.007029914

12. REPORTING YEAR (SAIFI)

0.011528331

13. CORRECTIVE ACTION PLAN

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #3803:

1. SUBSTATION NAME AND NUMBER
38/HOMESTEAD
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)
93 Rankin Street, Monticello, KY 42633
3. CIRCUIT NAME AND NUMBER
OLD NORTH HWY 90 / #3803
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)
FEEDS NORTH EAST ON OLD HWY 90
5. TOTAL CIRCUIT LENGTH (MILES)
9.78
6. CUSTOMER COUNT FOR THIS CIRCUIT
441
- 7.. DATE OF LAST CIRCUIT TRIM (VM)
2024
8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	8.33%
Equipment Failure	2.78%
Lightning	2.78%
Other	2.78%
Planned	61.11%
Trees	8.33%
Unknown	8.33%
Unknown Blink	5.56%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)
0.488461679
10. REPORTING YEAR (SAIDI)
0.977737358
11. CIRCUIT 5 YEAR AVERAGE (SAIFI)
0.005978654
12. REPORTING YEAR (SAIFI)
0.008853097
13. CORRECTIVE ACTION PLAN
SEVERAL PLANNED OUTAGES

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #3902:

1. SUBSTATION NAME AND NUMBER
39/JABEZ
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)
57 Red Oak Drive, Nancy, KY 42544
3. CIRCUIT NAME AND NUMBER
4H CAMP / #3902
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)
FEEDS TOWARDS THE 4H CAMP ON SOUTH HWY 196
5. TOTAL CIRCUIT LENGTH (MILES)
31.19
6. CUSTOMER COUNT FOR THIS CIRCUIT
341
- 7.. DATE OF LAST CIRCUIT TRIM (VM)
2018; SPRAY 2020
8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	4.62%
Equipment Failure	1.54%
Lightning	3.08%
Other	15.38%
Planned	23.08%
Trees	35.38%
Trees - w/ Ice	4.62%
Unknown	3.08%
Unknown Blink	6.15%
Wind - No Trees	3.08%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)
2.231081393
10. REPORTING YEAR (SAIDI)
1.901846188
11. CIRCUIT 5 YEAR AVERAGE (SAIFI)
0.011764826
12. REPORTING YEAR (SAIFI)
0.013927769
13. CORRECTIVE ACTION PLAN
CIRCUIT NEEDS TO BE CONSIDERED FOR ROW INSPECTION.

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #3903:

1. SUBSTATION NAME AND NUMBER
39/JABEZ
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)
57 Red Oak Drive, Nancy, KY 42544
3. CIRCUIT NAME AND NUMBER
CHEROKEE / #3903
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)
FEEDS NORTH EAST ON HWY 196
5. TOTAL CIRCUIT LENGTH (MILES)
35.99
6. CUSTOMER COUNT FOR THIS CIRCUIT
721
- 7.. DATE OF LAST CIRCUIT TRIM (VM)
2018; SPRAY 2020
8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	16.47%
Customer Side	1.18%
Equipment Failure	2.35%
Flood	1.18%
Lightning	2.35%
Other	12.94%
Planned	4.71%
Power Supply	1.18%
Trees	34.12%
Trees - w/ Ice	1.18%
Unknown	17.65%
Vehicle	1.18%
Wind - No Trees	3.53%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)
9.877653046
10. REPORTING YEAR (SAIDI)
20.50231035
11. CIRCUIT 5 YEAR AVERAGE (SAIFI)
0.036015221
12. REPORTING YEAR (SAIFI)
0.037632555
13. CORRECTIVE ACTION PLAN

CIRCUIT WILL BE CONSIDERED FOR ROW INSPECTION AND/OR SECTIONALIZING UPDATE

SECTION 5: CIRCUIT REPORTING

(CIRCUITS WITH SAIDI AND/OR SAIFI EXCEEDING 5 YEAR AVERAGE)

(CIRCUIT NUMBERS SHOULD BE REPORTED EXCLUDING MED)

CIRCUIT #3904:

1. SUBSTATION NAME AND NUMBER
39/JABEZ
2. SUBSTATION LOCATION (COUNTY-ROAD-TOWN)
57 Red Oak Drive, Nancy, KY 42544
3. CIRCUIT NAME AND NUMBER
COOKS CHAPEL / #3904
4. CIRCUIT LOCATION (TOWN-ROAD-GENERAL AREA)
FEEDS EAST HWY 196
5. TOTAL CIRCUIT LENGTH (MILES)
43.39
6. CUSTOMER COUNT FOR THIS CIRCUIT
705
- 7.. DATE OF LAST CIRCUIT TRIM (VM)
2019; SPRAY 2020
8. LIST OUTAGE CAUSES FOR CIRCUIT ALONG WITH PERCENTAGE OF TOTAL OUTAGE NUMBERS
NUMBERS REPRESENTED BY EACH CAUSE

Animal - Small	19.51%
Customer Side	3.66%
Equipment Failure	3.66%
Fire	1.22%
Lightning	8.54%
Other	4.88%
Planned	14.63%
Trees	13.41%
Unknown	7.32%
Unknown Blink	18.29%
Vehicle	1.22%
Wind - No Trees	3.66%

9. CIRCUIT 5 YEAR AVERAGE (SAIDI)
4.312999615
10. REPORTING YEAR (SAIDI)
7.218274611
11. CIRCUIT 5 YEAR AVERAGE (SAIFI)
0.026183901
12. REPORTING YEAR (SAIFI)
0.031675331
13. CORRECTIVE ACTION PLAN
CIRCUIT WILL BE CONSIDERED FOR ROW & FRAMING INSPECTION.

Vegetation Management Plan 2023-2024



As an electric distribution cooperative, South Kentucky Rural Electric Cooperative Corporation (“SKRECC” or “Cooperative”) is owned by the members it serves. An essential component of that relationship is the provision of safe, reliable, and economical electrical service to those members. A mission critical function to ensuring safe and reliable service is a robust and closely managed Right of Way (“ROW”) program. The program includes first-time cutting of ROW for construction of new distribution lines as well as periodically maintaining existing ROW throughout the service territory. SKRECC cuts and clears ROWs for the safety of the public and SKRECC employees, for access to enable our crews to find and repair damaged areas more quickly, and to minimize the opportunity for vegetation such as trees, brush, and vines from contacting our power lines thereby creating hazardous energized vegetation, power blinks and outages and other unwanted events. A robust ROW program is required by virtue of accepted and customary rules within the electric utility industry, such as the National Electric Safety Code, and is further mandated by SKRECC’s regulator, the Kentucky Public Service Commission.

This Vegetation Management Plan is intended to be a general guide of important policies and procedures necessary to address the many ROW issues that are encountered on an almost daily basis. Communication of this Plan to SKRECC’s members, management and employees is essential to promote an open relationship between all stakeholders on this very important subject.

The diversity of terrain, development, and land use within our service territory requires SKRECC to employ a variety of methods and practices to provide a ROW plan that meets the needs of the Cooperative and its members. These methods include, but are not necessarily limited to, hand cutting, mechanical cutting, trimming, bush hogging and both low-volume and high-volume herbicide spraying, or a combination of some or all of these methods.

SKRECC members should understand and accept vegetation management as a necessary task to keep the lights on, but sometimes there are cases where our responsibility to trim or cut trees, remove vegetation, or spray brush within a member’s property creates tension and conflict. This situation is not unique to SKRECC, and in fact is a very common issue for a majority of electrical utilities.

The primary goals of this Vegetation Management Plan are: (1) to communicate our needs to control vegetation growth, (2) communicate our policies and procedures on how best to accomplish that task, and, (3) to balance our need of promoting system reliability with the concerns of our members that vegetation management activities be reasonable and as non-intrusive as possible.

Access to Member Owned Property to Conduct Vegetation Management Activities

In order to efficiently carry out any Vegetation Management Plan an electric utility such as SKRECC must have reasonable access to the location of the vegetation to be trimmed. The vast majority of this vegetation is located under or very near SKRECC’s power lines on property which is owned by our members who, by virtue of their receiving electric service, have granted SKRECC permission to enter upon their property to complete any needed vegetation management work. This permission is given by each member when he/she enters into the original application for electric service and is also part of SKRECC’s

corporate bylaws and its tariff on file with the Kentucky Public Service Commission. The extent of vegetation management work undertaken by SKRECC at a particular location will depend upon many factors such as the extent of vegetation growth, its proximity to SKRECC's power lines, the ability of equipment and personnel to access the location, the degree such vegetation poses a risk to SKRECC's power lines, and the continued reliability of its system. SKRECC and any contractors it has engaged to assist with this work shall exercise the absolute discretion on a case-by-case basis to determine the type and extent of vegetation management practices needed at a particular location in order to mitigate the risk of unnecessary service outages.

ROW Cutting and Maintenance

Many power outages are caused by vegetation growing into the power lines. Providing quality power to our members requires that we maintain our powerline ROWs. Tree removal, trimming, and cutting brush and vines is a very expensive process for SKRECC. In order to reduce costs and decrease outages thereby improving the Cooperative's reliability measures, we have implemented significant procedures in our Right of Way program. It is also our policy to not utilize the expensive procedure of grinding stumps.

South Ky RECC has committed to a six-year rotation on the vegetation management of our individual ROW circuits. Under this commitment, our entire 7,000 miles of power lines will be cut and maintained on a rotational basis, every six years, resulting in cleaner right of ways giving fewer total outages and blinks and increased accessibility in the event of need. We are also introducing modern power line trimming techniques such as directional trimming, which have been developed resulting in healthier, safer trees. However, these new techniques may make the tree look much different than if traditional techniques were employed.

ROW Cutting - Overhead Primary Distribution Lines

Overhead primary distribution lines are the uncoated wires that bring high voltage power from the substation to the transformers where it is reduced to normal voltages for use in homes, businesses, barns, etc. This voltage is very dangerous and deadly. For safety and line integrity, cutouts and breakers sectionalize the circuit to localize any line integrity issues that may arise. The sensitivity of these interrupters is such that voltages can escape through vegetation and become a safety hazard to people and animals if there is contact with the vegetation. Dead and dying trees and limbs, along with trees blown over by winds, touching the lines and causing outages are also primary distribution line events. Adequate ROW cutting and trimming is essential in order to supply safe and reliable power.

New primary distribution line ROWs are cut according to the line type, and clean-up of this vegetation cut for these new lines is the responsibility of the property owner. A single-phase line (1 conductor on top, 1 underneath) is cut and maintained with a minimum distance of 15' on each side of the centerline, 30' total. Two or three phase lines (2 or 3 conductors on top, one underneath) are cut with a minimum distance of 22.5' on each side of the centerline with a minimum of 45' total. Double circuit lines (2 sets of 3 conductors on top, 1 underneath) are cut with the same specs as a three-phase line. Any trees, saplings,

etc., growing within these distances will need to be cleared to provide present and future line clearance and proper ground access to the lines and equipment.

As in cutting new ROW, periodic maintenance is equally important for the identical reasons. Trees fronting each side of the ROW shall be trimmed symmetrically, earth to sky, unless otherwise specified. Dead trees beyond the ROW that would strike the line in falling or could cause other trees to strike the line, shall be removed, leaning trees beyond the ROW which would strike the line in falling shall either be topped beyond the line striking level, or in appropriate cases, removed.

ROW Cutting - Overhead Service and Secondary Lines

Overhead service lines are the coated conductors that run between the transformer pole and an outdoor light or the weather head on a structure or meter pole. These coated lines are energized at lower nominal service voltages and are less sensitive to contact from vegetation than the uncoated high voltage primary conductors. Due to this coating, limbs occasionally “bumping” these lines will not result in power quality issues, but if the limb lays on the line it may rub the protective cover leading to exposure of the conductor, and over time cause power quality issues. These service lines typically run through yards and spaces near the member being served.

Secondary lines are typically uncoated conductors that run for longer distances than service lines but, like service lines are energized at nominal service voltages. The service and secondary conductor ROW is trimmed generously during initial installation, but over time the open lines are affected by tree or brush growth that must be addressed by trimming and/or spraying.

New ROW for service lines or secondary lines are cut with a minimum of 5 ft. clearance on each side, which includes trimming or cutting down trees.

In maintaining service conductors, it is the policy of SKRECC to trim or cut the tree only if there is immediate danger to the service or secondary conductors and attachment points, or if there is significant contact with limbs and the service or secondary conductors. The disposition of any tree, cut or trimmed branches, and brush are the responsibility of the member.

If the tree is not an immediate danger to the line or attachment points, SKRECC will aid any tree cutter in the felling of the tree by disconnecting the service conductor to allow the tree to be cut without affecting the conductor, replacing that conductor when the tree is on the ground and it is safe for the conductor connection to be restored.

Any tree or vegetation that presents a hazard to any SKRECC service pole will be cut by SKRECC or its contractor representative and left for member clean up.

ROW Maintenance - Directional Trimming

Directional trimming is an alternative that could be utilized on previously trimmed trees, leaving the tree healthier and will result in reduced line trimming costs. In directional trimming, only branches that grow towards the lines are trimmed. Branches that are growing out and away from the lines are left alone to

continue growth. Also, no stubs are left to foster regrowth as the trimming is at another branch or crotch. These cuts heal well and minimize sprouting and decay when properly made.

Trees that are pruned with this method do not have the familiar shape. These trees will have a “V” shape if the lines are directly overhead or an “L” shape if the lines are to one side. Though this may appear to create an unbalanced look or weak looking crown, the healthy tree will grow to correct any lack of balance compared to topping the tree. Trees cut with this method have many advantages over topping. It leaves the tree nearly as healthy as before it was trimmed and the tree will not need to be trimmed as often as there are less sprouts growing towards the lines. This method also saves the Co-op expense by reducing trimming times and reducing the number of “wounds” to the tree that heal much better. This method also works well on young trees, allowing the crown to grow while removing just those branches growing towards the lines.

Spreading crown trees benefit the most from this technique of pruning, Conifers and other strong central leader trees are more difficult to trim with this method. Directional tree trimming does not solve all of the line clearance problems, it does not work well on older trees that have had many trimmings or have central leaders like conifers and Lombardy poplars. In these situations, continued “flat topping” and tree growth regulator treatment may be used. However, tree removal and replacement, at a location that would eliminate any further issues, are preferable to the Co-op and may be very acceptable to the owner.

ROW Maintenance - Flat Topping

Topping is a traditional method of trimming that has been used to clear tree branches from the lines. It involves “flat topping” the tree at a certain level below the power lines, usually below the designated communication space reserved on the pole for telephone, cable, etc. This is a method that can be fairly quick; however, it leaves many stubs that can have a quick regrowth of the sprouts back into the lines. If this topping method is used, a growth regulator should be used to slow down that regrowth so that the tree would not require another trimming until the next circuit trimming cycle.

ROW Maintenance - Tree Growth Regulators

In order to maintain different species of trees on a circuit within a specified ROW maintenance cycle, a tree growth regulator or inhibitor may be used. Typically, these trees are yard trees that have been planted so that their growth intrudes on the ROW distances of the power lines. Tree Growth Regulator or TGR is not an herbicide. In fact, it’s use is actually beneficial for trees by decreasing the amount of woody growth. TGR also promotes an increased root density, improved drought and heat resistance, and higher tolerance to insects and diseases. The TGR is injected into the soil around the base of the tree where it is readily absorbed by the roots, and it has a low mobility in the soil to maintain the integrity of ground water.

ROW Maintenance - Bush Hogging and Mowing

Although heavy vegetation growth in our right of ways sometimes requires bush hogging or manual cutting of the growths, this is an expensive and time-consuming solution in keeping ROWs clear. However, herbicide usage in the Daniel Boone National Forrest is banned, so all right of way brush clearing and

maintenance must be completed by hand or mechanical means in those areas. Right of way mechanical or manual cutting and brush clearing has several undesirable maintenance results. Rapid regrowth often results in greater stem numbers, desirable vegetation being cut, and mechanical or hand maintenance is expensive versus herbicide use.

ROW Maintenance - Herbicides

SKRECC may utilize herbicides in maintenance of its right of ways. Applying herbicides within correct time periods after cutting can decrease or even eliminate future mechanical or manual cutting. We do not use Glyphosate (Roundup) herbicide. The herbicide mixtures used are effective, versatile, and pose minimal risks to non-target species. The mixture targets undesirable species, leaving grasses and desirable plant growth while affecting woody brush and saplings. The mixture is approved for spray right up to the water's edge.

There are two methods that may be used to apply the herbicide mixture, high volume, and low volume. Time and volume of application of herbicides is important to minimize relocation of herbicides onto unintended areas.

High volume application utilizes a vehicle with a mixture tank and pump to blanket spray the complete ROW area. This method is not selective and larger volumes of mixture are used.

Low volume utilizes a smaller vehicle and tank or backpack sprayers. The smaller vehicle allows the applicator to be somewhat more selective, resulting in greater accuracy and lower spray volumes.

Backpack spraying utilizes a number of individuals with small volume backpack sprayers that travel the right of ways, spot spraying as they go. This is the most efficient method in select ability and reduced spray volumes. This method provides greatest operator control and least danger of spray being misdirected, over-sprayed, or of unwanted relocation of herbicide.

Power Restoration Events and Vegetation

During unanticipated power outages SKRECC's sole focus is to restore service to its members as quickly as possible. Many of these outages are caused by vegetation either contacting or destroying the distribution lines that provide the power.

SKRECC's linemen are highly trained and experienced professionals that work very hard to restore power during these outages and it is very hard and dangerous work. Often times they find it necessary to trim or completely cut vegetation in order to complete power restoration safely and quickly.

Due to these circumstances any limbs, brush, whole or partial trees, and other vegetation trimmed or cut in SKRECC's ROW during restoration events will be left where they fell and not removed by the Cooperative.

Vegetation Management Plan 2023-2024

