

Appendix P: Agriculture and Prime Farmland Impacts

Table P-1: Agricultural Land Cover Impacts

Section	Length (mi)	Acres in ROW	Number of Poles ¹	Number of Spans ²	Total Temporary Construction (acres) ²	Number of Spooling Locations (every 2 miles) ³	Temp Spooling Impacts (ft ²) ³	Temp Spooling Impacts (acres) ³	Number Staging Areas ³	Temp Staging Impacts (acres) ³	Total Temporary Impacts (acres) ⁴	Total Cropland in ROW (acres) ⁵	% of ROW in Cropland	Number of Poles in Cropland	Permanent Impacts in Agriculture (ft ²) ⁶	Number of Poles in Non-Agriculture Lands	Permanent Impacts in Non-Agriculture Lands (ft ²) ⁶	Total Permanent Impacts (ft ²) ⁶	Total Permanent Impacts (Acres) ⁶
End-to-End Preferred Route	80.86	1469.54	426	425	425	40	64000	1.47	4	20	446.47	871.16	59.3%	253	253000	173	9515	262515	6.03
End-to-End Alternative Route	90.54	1645.91	478	477	477	45	72000	1.65	4	20	498.65	1209.10	73.5%	353	353000	125	6875	359875.00	8.26
Hampton to North Rochester (Preferred)	36.11	656.52	190	189	189	18	28800	0.66	2	10	199.66	376.37	57.3%	109	109000	81	4455	113455	2.60
Hampton to North Rochester (Alternative)	48.53	882.59	256	254	254	24	38400	0.88	3	15	269.88	759.87	86.1%	221	221000	35	1925	222925	5.12
North Rochester to Mississippi River Crossing (Preferred)	44.8	813.42	236	235	235	22	35200	0.81	2	10	245.81	494.88	60.8%	143	143000	93	5115	148115	3.40
North Rochester to Mississippi River Crossing (Alternative)	42.02	763.88	221	220	220	21	33600	0.77	2	10	230.77	449.89	58.9%	131	131000	90	4950	135950	3.12
Zumbro Dam Route Option	10.08	183.49	53	52	52	5	8000	0.18	1	5	57.18	103.98	56.7%	29	29000	24	1320	30320	0.70
McCarthy Lake Route	4.77	87.07	25	24	24	2	3200	0.07	1	5	29.07	33.6	38.6%	9	9000	16	880	9880	0.23
North Rochester to Northern Hills (161 kV Preferred)	15.39	149.21	135	134	134	8	12800	0.29	1	5	139.29	114.65	76.8%	104	104000	31	1727.00	105727.46	2.43
North Rochester to Northern Hills (161 kV Alternative)	17.93	173.86	158	157	156	9	14400	0.33	1	5	161.33	124.56	71.60%	112	112000	46	2516	114516.34	2.63

1. Number of poles was determined by dividing the length of each route section by the average span between poles. Average span for 345 kV poles is 1,000 feet. This number is approximate since the final number of poles is dependent on the final engineering design.
 2. Temporary construction impacts were determined using 1 acre per span. A span is defined as the distance from a pole to a pole. Number of spans for the route is defined as total number of poles minus one.
 3. Spooling impacts were determined as a 1,600 square feet stringing location every 2 miles, while Staging Area impact was determined as a 5 acre staging area every 25 miles.
 4. Total temporary impacts were calculated by summing the impacts from the temporary construction impact, the spooling impacts, and staging impacts.
 5. Crop land area was based upon GAP landcover.
 6. Permanent impacts were calculated assuming 1,000 square feet (in agricultural land) and 55 square feet (in non-agricultural land) per structure. Total permanent impacts were determined by summing agricultural and non-agricultural impacts.

Table P-2: Prime Farmland Impacts

Section	Right-of-Way (ROW) Acres ^{1 & 2}	Prime Farmland within the ROW (Acres) ³	Percent of ROW crossing Prime Farmland	Prime Farmland if Drained within ROW (Acres) ³	Percent of ROW crossing Prime Farmland if Drained	Farmland of State Importance within ROW (Acres) ³	Percent of ROW crossing Farmland of State Importance	ROW Prime Farmland, Prime Farmland if Drained, Farmland of Statewide Importance (Acres)	ROW Prime Farmland, Prime Farmland if Drained, Farmland of Statewide Importance (Percent)
End-to-End Preferred Route	1469.54	676.76	46.1%	70.32	4.8%	362.15	22.2%	107.23	73.0%
End-to-End Alternative Route	1645.91	792.79	48.2%	131.4	8.0%	369.26	22.4%	1293.45	78.6%
Hampton to North Rochester (Preferred)	656.02	362.58	55.30%	53.27	8.10%	103.62	15.80%	519.47	79.20%
Hampton to North Rochester (Alternative)	882.59	554.79	62.85%	129.14	14.63%	116.2	13.17%	800.13	90.65%
North Rochester to Mississippi River Crossing (Preferred)	813.42	316.46	38.90%	17.22	2.41%	227.58	28.00%	561.26	69.00%
North Rochester to Mississippi River Crossing (Alternative)	763.88	238.71	31.20%	2.25	0.30%	253.01	33.10%	493.97	64.70%
Zumbro Dam Route Option	183.49	54.55	29.70%	1.45	0.80%	60.9	33.20%	116.9	63.70%
McCarthy Lake Route Option	87.07	25.89	29.70%	0	0.00%	17.04	19.60%	42.93	49.30%
North Rochester to Northern Hills (161 kV Preferred)	149.21	95.61	64.10%	5.13	3.40%	27.19	18.20%	127.93	85.70%
North Rochester to Northern Hills (161 kV Alternative)	173.86	117.63	67.70%	11.79	6.80%	26.56	15.30%	155.98	89.70%

1. The Applicants are requesting a 150-foot-wide right-of-way (ROW); 75 feet on either side of pole. Additional ROW may be required in special situations.
2. ROW acres were calculated based on a width of 150 feet multiplied by the length of the route centerline.
3. Prime Farmland numbers were compiled using the USDA County Soil Survey Geographic (SSURGO) Data for all counties.