

3.14 Cumulative Impacts

This section describes the cumulative impacts of the Proposed Acquisition and other past, present, and reasonably foreseeable future projects and actions. The sections that follow describe the approach, affected environment, and environmental consequences for the cumulative impacts analysis. OEA considered the contribution of the Proposed Acquisition to cumulative impacts for each resource area. In its consideration, OEA analyzed the potential cumulative impacts of increased rail traffic that the Applicants predict would occur if the Board authorizes the Proposed Acquisition, the projected increase in activity at rail yards and intermodal facilities, and 25 planned capital improvements that the Applicants intend to add to support the projected increase in rail traffic.

3.14.1 Approach

CEQ developed the handbook, *Considering Cumulative Effects under the National Environmental Policy Act (1997)*, to assist federal agencies in assessing cumulative impacts. OEA has followed these guidelines in its evaluation of whether cumulative impacts could result from impacts of the Proposed Acquisition and impacts of past, present, and reasonably foreseeable future projects and actions in the study area. Using publicly available geographic information systems data and other publicly available sources, OEA researched past, present, and reasonably foreseeable future projects and actions that could result in impacts that would coincide in time and space with impacts from the Proposed Acquisition.

3.14.1.1 Cumulative Impacts Study Area

OEA defined the study area and analysis period for cumulative impacts to include reasonably foreseeable projects and actions that could affect the same resource areas as the Proposed Acquisition. The cumulative impacts study area is defined for each impact topic that the Proposed Acquisition and planned capital improvements would affect. For the cumulative impact analysis, OEA considered reasonably foreseeable projects and actions that could occur by 2027, which is the analysis year that OEA used in this Draft EIS. For impacts related to the 25 planned capital improvements, OEA also considered the conceptual timeline discussed in the Applicants' application for adding those improvements. Although the Applicants intend to add the planned capital improvements as needed based on increasing traffic, the operations projections presented in the application indicate that the Applicants could build the improvements in years one, two, and three following the Board's authorization of the Proposed Acquisition and that each capital improvement would take between half a day and three days to build.

3.14.2 Past, Present, and Reasonably Foreseeable Future Projects and Actions

OEA researched past, present, and reasonably foreseeable future projects and actions that could result in impacts that would coincide in time and space with impacts from the

Proposed Acquisition and the planned capital improvements. OEA identified and screened a number of projects for possible inclusion in the cumulative impacts analysis, including the following:

3.14.2.1 Expanded Amtrak Service

OEA is aware new Amtrak service is planned between Chicago and Rockford, Illinois by the Illinois Department of Transportation (IDOT).¹ The route would use the existing Metra Milwaukee District West (MD-W) line between Chicago and Elgin-Big Timber and would operate two daily roundtrips (four trips total) during weekday peak periods and on the weekend. OEA included this proposed planned IDOT intercity rail service in the cumulative impact analysis because it meets the criteria of being reasonably foreseeable, as it is in an advanced planning stage. The 2020 Illinois Statewide Transportation Improvement Program includes \$275 million in implementation funds for the project, which differentiates it from the other potential future passenger rail projects in the study area.

On February 2, 2022, Amtrak provided the Board with a copy of an executed settlement agreement between Amtrak and CP that describes Amtrak's plans for increasing passenger service on certain rail lines within the combined CPKC system. Because Amtrak planned these increases in passenger rail service independent of the Proposed Acquisition, impacts associated with those plans are not direct or indirect impacts of the Proposed Acquisition. However, if Amtrak passenger service were to increase on the same rail lines where the Proposed Acquisition would result in increased freight rail traffic, then cumulative impacts could occur.

Based on the settlement agreement between Amtrak and CP, OEA understands that Amtrak intends to add up to three additional daily round-trip trains on the *Hiawatha* route between Chicago, Illinois, and Milwaukee, Wisconsin; introduce up to two daily new round-trip passenger trains on the Twin Cities-Milwaukee-Chicago (TCMC) route along portions of the existing long-distance Empire Builder route; introduce up to two daily round-trip passenger trains between New Orleans and Baton Rouge; and introduce up to two daily round trip passenger trains between Detroit, Michigan and Windsor, Ontario via the Detroit River Tunnel. OEA also understands that Amtrak intends to conduct a study including CP, NSR, UP, and relevant governmental agencies, with the goal of introducing a daily round-trip passenger service between Meridian, Mississippi and Dallas, Texas with the potential for a second daily round trip; however, planning for this potential increase in passenger rail service between Meridian and Dallas has not advanced to the point that the action is reasonably foreseeable.

Because the planned additional Amtrak service on the TCMC route would operate on a rail line between River Junction and St. Paul, Minnesota that would also experience an increase in the number of daily freight trains as a result of the Proposed Acquisition, OEA analyzed the cumulative impacts that could result from this increased traffic. OEA did not include potential planned passenger rail services in the other corridors in the cumulative impacts analysis because they would not result in increased passenger rail service on rail line

¹ Illinois Department of Transportation, Statewide Transportation Improvement Program, Fiscal Year 2021-2024.

segments where the number of freight trains per day would increase as a result of the Proposed Acquisition.

3.14.2.2 Metra Commuter Rail

Based on a review of the operating agreement between Metra and CP, OEA does not anticipate reasonably foreseeable changes to the Metra service in the study area by 2027. The current operating agreement between CP and Metra establishes windows of operation for respective services. While Metra has implemented pilot programs in recent years to increase off-peak commuter service on certain rail lines that are outside of the study area, because of the operating agreement between CP and Metra, an off-peak pilot program in their shared corridors has not been implemented and is not anticipated by 2027.

3.14.2.3 Dallas Area Rapid Transit (DART) Silver Line

The DART Silver Line is anticipated to begin operations in 2024 along the 26-mile “Cotton Belt Corridor,” which extends between Dallas Fort Worth Airport and Shiloh Road in Plano, Texas. The alignment traverses seven cities: Grapevine, Coppell, Dallas, Carrollton, Addison, Richardson, and Plano. Operations would overlap with KCS freight trains on a small portion of its alignment near its western terminus. Silver Line trains would operate every 30 minutes during peak periods and hourly in the off-peak and on weekends. OEA did not include the DART Silver Line in the cumulative impacts analysis because it would not operate on a segment where the number of freight trains per day would increase as a result of the Proposed Acquisition.

3.14.2.4 Chicago O’Hare International Airport Development

O’Hare International Airport (O’Hare or the Airport) is located in Chicago, Illinois, and operated by the Chicago Department of Aviation (CDA). The Airport provides service to destinations in North and South America, Europe, Africa, Asia, and Oceania. O’Hare served approximately 54 million passengers in 2021 and was ranked as the world’s fourth-busiest airport. O’Hare is completing an airport development project known as the O’Hare Modernization Program (OMP). The OMP began in 2005 and involved the reconfiguration of the airfield into a more efficient runway, terminal, and roadway system to reduce delay and increase runway capacity. The OMP included the construction of four new runways (Runway 9L-27R in 2008, 10C-28C in 2013, 10R-28L in 2015, and 9C-27C in 2020), the extension of two existing runways (9R-27L in 2021 and 10L-28R in 2008), the decommissioning of existing crosswind runways (14R-32L, 14L-32R, and 18-36), along with associated airport development. The extension of Runway 9R-27L in 2021 marked the completion of the runway development associated with the OMP. Full completion (“build out”) of the OMP is anticipated at the end of 2022 when the extension of Runway 9R-27L is fully operational.

The CDA is also undertaking a capital development program known as O’Hare 21, which is a multi-dimensional, multi-phased umbrella for the long-term, 21st century vision of O’Hare. O’Hare 21 includes completion of the final phase of the OMP, aircraft gate improvement projects, the O’Hare Terminal Area Plan (TAP), and capital improvement projects outlined

in a 15-year O’Hare Capital Improvement Plan. Collectively, these projects will expand travel options by increasing gate availability, reducing security wait times, improving the baggage screening process, and reducing airfield congestion and delays. OEA included the OMP and O’Hare 21 projects in the cumulative impact analysis because these are ongoing projects that have the potential to result in cumulative impacts when considered along with the Proposed Acquisition.

3.14.2.5 SOO Green Renewable Rail (SGRR) Electric Transmission Line Project

The SGRR project is a proposed buried electric transmission line that would extend from Mason City, Iowa to Plano, Illinois. The project is designed to bring high-capacity wind energy from Iowa into load centers outside of Chicago with the ability to deliver power across markets and feed into the eastern market of the PJM Regional Transmission Organization. The proposed project would run along existing CP tracks within the rail ROW from Mason City, Iowa to Davis Junction, Illinois. The project has the potential to intersect with two of the 25 planned capital improvements: the planned new siding at MP 24 near Bellevue, Iowa, and the planned new siding at MP 71 near Turkey River, Iowa. The exact siting of the SGRR project is yet to be determined, meaning that the electric transmission line could run along the same side of the CP track as the planned capital improvements or along the opposite side. The siting decision would have an effect on the level of cumulative disturbance anticipated during construction. OEA included the proposed SGRR electric transmission line project in the cumulative impact analysis because it is in an advanced planning stage and therefore meets the criteria of being reasonably foreseeable.

3.14.2.6 Cardinal – Hickory Creek (CHC) Electric Transmission Line Project

Independent Transmission Company and American Transmission Company propose to construct an approximately 100-mile, 345 kilo-Volt (kV) electric transmission line that would run between Dane County, Wisconsin and Dubuque County, Iowa. The CHC electric transmission line would cross the Mississippi River in the vicinity of the planned new siding at MP 71 near Turkey River. It is possible that the transmission line would span the CP rail line and would not involve any ground disturbance adjacent to the CP ROW. OEA included the proposed CHC electric transmission line project in the cumulative impact analysis because it is in an advanced planning stage and therefore meets the criteria of being reasonably foreseeable.

3.14.3 Resource Consideration

Pursuant to the CEQ Guidance document, *Considering Cumulative Effects Under the National Environmental Policy Act*, and its guidance to “count what counts,” OEA analyzed only the topics for which other projects had geographic overlap. These topics included:

- Passenger Rail Safety;
- Grade Crossing Safety and Delay;
- Air Quality;
- Noise;

- Environmental Justice;
- Biological systems, specifically threatened and endangered species; and
- Water, specifically wetlands.

OEA did not consider the following topics further because there were no impacts from the Proposed Acquisition that could combine with adverse impacts from other past, present, and reasonably foreseeable future projects.

Truck-to-Rail Diversion: The Applicants forecast that the Proposed Acquisition would cause truck-to-rail diversions, thereby removing trucks from roadways. This diversion would not result in any adverse impacts on roadways and, therefore, no additional analysis of cumulative impacts is warranted.

Intermodal Facility Traffic: There are no other reasonably foreseeable traffic and roadway projects with geographic overlap with the intermodal facilities where truck traffic resulting from the Proposed Acquisition would exceed environmental analysis thresholds. Therefore, no additional analysis of cumulative impacts is warranted.

Energy: OEA determined that the Proposed Acquisition would not adversely affect the transportation of energy commodities or overall energy efficiency. Therefore, no additional analysis of cumulative impacts on energy is warranted.

Cultural Resources: OEA determined that the Proposed Acquisition would have No Adverse Effect on cultural resources (historic and archaeological) listed in or eligible for listing in the National Register within the project APE. Therefore, no additional analysis of cumulative impacts on cultural resources is warranted.

3.14.4 Cumulative Impacts from Increased Rail Traffic

Cumulative impacts could potentially result from the Proposed Acquisition, reasonably foreseeable rail projects, and the build out of the OMP because the Proposed Acquisition would result in increased train operations on certain segments along the combined CPKC rail network. OEA identified six topics with potential operational cumulative impacts. These are described below.

3.14.4.1 Passenger Rail Safety

As discussed in *Section 3.1, Freight and Passenger Rail Safety*, the probability of an incident occurring on any particular rail line depends, in part, on the volume of rail traffic on that rail line. Therefore, OEA expects that the projected increase in rail traffic resulting from the Proposed Acquisition would increase the probability of an incident occurring on some rail lines compared to the No-Action Alternative. Other reasonably foreseeable future projects that could result in increased rail traffic could, along with the Proposed Acquisition, contribute to cumulative rail safety impacts.

The Proposed Acquisition would result in a projected increase of eight freight trains per day along the Metra MD-W line between Chicago and Elgin-Big Timber, which is part of the route between Chicago and Rockford on which IDOT plans new intercity passenger rail

service. As discussed in *Section 3.1, Freight and Passenger Rail Safety*, however, the probability of rail collisions involving passenger and freight trains is very low. OEA expects that the projected addition of eight freight trains and the reasonably foreseeable addition of two new round-trip passenger trains would still result in a very low probability of rail collisions. **Table 3.14-1** shows the “Proposed Acquisition with Cumulative Impacts (Amtrak trains)” for C-ELGI-01 and C-ELGI-02, the two segments where the new Amtrak Chicago-Rockford service would run.

The Proposed Acquisition could also result in a projected increase of between 3.6 and 6.0 freight trains per day on all or portions of five rail segments between River Junction, Minnesota and St. Paul, which is part of the TCMC route between Chicago and the Twin Cities via Milwaukee on which Amtrak plans additional passenger rail service (see **Figure 3.1-2**). The Proposed Acquisition would not result in an increase in daily freight trains on the remainder of the TCMC route between Chicago and River Junction. As discussed in *Section 3.1, Freight and Passenger Rail Safety*, the probability of rail collisions involving passenger and freight trains is very low on the five segments between River Junction and St. Paul which overlap with part of Amtrak’s planned TCMC service. OEA expects that the projected addition of 3.6 to 6.0 freight trains and the reasonably foreseeable addition of up to two new round-trip passenger trains would still result in a very low probability of rail collisions. **Table 3.14-1** shows the “Proposed Acquisition with Cumulative Impacts (Amtrak trains)” for B-TWIN-01, C-MEPA-01, C-RIVE-01, C-RIVE-02 and C-MARQ-01, the five segments where part of the additional Amtrak TCMC service would run.

Table 3.14-1. Cumulative Rail Safety Impacts

Rail Line Segment			Incidents per 100 Years			Years Between Incidents		
Between	And	Segment Code	No-Action Alternative	Proposed Acquisition	Proposed Acquisition, with Cumulative Impacts (Amtrak trains)	No-Action Alternative Predicted Interval between Collisions (years)	Proposed Acquisition Predicted Interval between Collisions (years)	Proposed Acquisition, with Cumulative Impacts (Amtrak trains)
Bensenville Metra Station, IL	Randall Road, IL	C-ELGI-01	0.202	0.272	0.310	495	368	322
Tower B12, IL	Bensenville Metra Station, IL	C-ELGI-02	0.063	0.074	0.082	1,576	1,345	1,226
St. Paul Yard, MN	Northtown, MN	B-TWIN-01	0.038	0.055	0.056	2,660	1,828	1,794
Hoffman St Paul, MN	Fordson Jct, MN	C-MEPA-01	0.003	0.012	0.032	39,003	8,083	3,130
Newport, MN	Minneapolis, MN	C-RIVE-01	0.041	0.067	0.084	2,433	1,489	1,189
River Jct, MN	Newport, MN	C-RIVE-02	0.400	0.691	0.929	250	145	108
Marquette, IA	River Jct, MN	C-MARQ-01	0.005	0.017	0.028	20,022	6,017	3,554

3.14.4.2 Grade Crossing Safety

As discussed in *Section 3.2, Grade Crossing Safety*, the Proposed Acquisition could affect safety at roadway/rail crossings at-grade crossings (grade crossings) on rail lines where increased rail traffic resulting from the Proposed Acquisition would meet or exceed the threshold for environmental review of eight or more additional trains per day.

Among the rail line segments where the projected increase in rail traffic resulting from the Proposed Acquisition would meet the thresholds for environmental review, the only segments where reasonably foreseeable future projects and actions could increase rail traffic are passenger trains on segments C-ELGI-01 and C-ELGI-02, which extend from Elgin, Illinois to Franklin Park, Illinois and comprise Metra's MD-W line. The grade crossing safety analysis included the projected passenger train volumes in estimating the predicted crashes for both the No-Action Alternative and the Proposed Acquisition. The Proposed Acquisition would result in a projected increase of eight freight trains per day on these two segments and they would also be part of the route between Chicago and Rockford on which IDOT proposes new Amtrak service. Therefore, cumulative impacts on grade crossing safety could occur at grade crossings along those rail lines. **Table 3.14-2** summarizes all crossings and the predicted cumulative grade crossing safety impacts of the Proposed Acquisition and the reasonably foreseeable addition of Amtrak service (four additional passenger trains per day) on segments C-ELGI-01 and C-ELGI-02. All sites show a predicted increase in crashes, ranging from an increase of 0.004 to 0.0017 crashes per year. These changes in predicted crashes equate to an increase in one additional crash every 2,500 years (for increase of 0.0004) and one additional crash every approximately 600 years (for increase of 0.0017).

Table 3.14-2. Grade Crossing Safety

City	Street	Crossing ID	AADT	No-Action Alternative		Proposed Acquisition		Cumulative Impacts	
				Predicted Total Crashes (crashes/year)	Years Between Predicted Crashes (years)	Predicted Total Crashes (crashes/year)	Years Between Predicted Crashes (years)	Predicted Total Crashes (crashes/year)	Years Between Predicted Crashes (years)
Bartlett	Gifford Road	372214T	4921	0.0353	28.3	0.0367	27.3	0.0373	26.8
Bartlett	Naperville Road	372210R	15539	0.0432	23.1	0.0446	22.4	0.0453	22.1
Bartlett	Oak Avenue	372206B	10677	0.0925	10.8	0.0950	10.5	0.0961	10.4
Bartlett	Prospect Avenue	371997M	3896	0.0338	29.6	0.0351	28.5	0.0357	28.0
Bartlett	Spaulding Road	372212E	1933	0.0294	34.0	0.0306	32.6	0.0312	32.0
Bartlett	Western Avenue	372207H	791	0.0243	41.1	0.0254	39.4	0.0259	38.6
Bensenville	Addison Street	372172J	1608	0.0283	35.3	0.0295	33.9	0.0301	33.3
Bensenville	Center Street	372171C	459	0.0215	46.4	0.0225	44.4	0.0230	43.5
Bensenville	Church Road	372174X	7696	0.0417	24.0	0.0431	23.2	0.0437	22.9
Bensenville	York Road	372170V	18696	0.0514	19.5	0.0528	18.9	0.0534	18.7
Elgin	Chicago Street	372240H	16755	0.1525	6.6	0.1562	6.4	0.1579	6.3
Elgin	Elgin Av	372231J	208	0.0309	32.3	0.0324	30.8	0.0331	30.2
Elgin	Highland Avenue	372241P	6957	0.0872	11.5	0.0896	11.2	0.0907	11.0
Elgin	Illinois Route 25	372217N	19450	0.0448	22.3	0.0462	21.6	0.0469	21.3
Elgin	Kimball Street	372242W	23433	0.0530	18.9	0.0544	18.4	0.0550	18.2
Elgin	McLean Boulevard	372246Y	21559	0.1198	8.3	0.1223	8.2	0.1234	8.1
Elgin	National Street	372239N	7997	0.0386	25.9	0.0400	25.0	0.0406	24.6
Elgin	Raymond Street	372235L	3427	0.0330	30.3	0.0343	29.2	0.0349	28.7
Itasca	Catalpa Avenue	372182P	1608	0.0283	35.3	0.0295	33.9	0.0301	33.3
Itasca	Prospect Avenue	372179G	9075	0.0395	25.3	0.0408	24.5	0.0415	24.1

Table 3.14-2. Grade Crossing Safety

City	Street	Crossing ID	AADT	No-Action Alternative		Proposed Acquisition		Cumulative Impacts	
				Predicted Total Crashes (crashes/year)	Years Between Predicted Crashes (years)	Predicted Total Crashes (crashes/year)	Years Between Predicted Crashes (years)	Predicted Total Crashes (crashes/year)	Years Between Predicted Crashes (years)
Itasca	Rohlwing Road	372184D	22379	0.0458	21.8	0.0472	21.2	0.0479	20.9
Itasca	Walnut Street	372180B	1723	0.0317	31.6	0.0329	30.4	0.0335	29.8
Medinah	Medinah Road	372191N	7064	0.0445	22.5	0.0459	21.8	0.0465	21.5
Roselle	Park Street	372194J	689	0.0236	42.4	0.0247	40.6	0.0252	39.8
Roselle	Prospect Street	372195R	373	0.0563	17.8	0.0581	17.2	0.0589	17.0
Roselle	Roselle Road	372196X	12521	0.1068	9.4	0.1093	9.1	0.1105	9.1
Schaumburg	Rodenburg Road	372202Y	13240	0.0421	23.8	0.0435	23.0	0.0441	22.7
Wood Dale	Ash Avenue	372176L	230	0.0183	54.6	0.0192	52.1	0.0196	51.0
Wood Dale	Irving Park Road	372177T	29174	0.0477	21.0	0.0491	20.4	0.0498	20.1
Wood Dale	Wooddale Road	372178A	8612	0.0527	19.0	0.0541	18.5	0.0548	18.3

Although OEA concludes that the Proposed Acquisition and other reasonably foreseeable future actions and projects would result in an increase in the number of crashes at certain grade crossings, OEA expects that the number of crashes at grade crossings on other railroads in the United States and on roadways could decrease as the result of the diversion of truck to rail and the diversion of rail traffic from other railroads to the combined CPKC network.

3.14.4.3 Grade Crossing Delay

As discussed in *Section 3.3, Grade Crossing Delay*, the Proposed Acquisition could affect vehicular delay at grade crossings on rail lines where increased rail traffic resulting from the Proposed Acquisition would meet or exceed the threshold for environmental review. Other reasonably foreseeable actions and projects that would increase rail traffic on those rail lines could, along with the Proposed Acquisition, contribute to cumulative impacts on grade crossing delay. As noted above, however, the only rail line segments where cumulative impacts are possible are segments C-ELGI-01 and C-ELGI-02 on Metra's MD-W line. **Table 3.14-3** summarizes crossings with an AADT of 2,500 or more and the predicted cumulative grade crossing delay impacts of the Proposed Acquisition and the reasonably foreseeable addition of Amtrak service on segments C-ELGI-01 and C-ELGI-02 in terms of the average daily delay per vehicle at each affected crossing and the LOS of each affected crossing. As the table shows, all of the grade crossings on segments C-ELGI-01 and C-ELGI-02 would continue to operate at LOS A under the Proposed Acquisition, and the addition of four daily Amtrak trains would not change the LOS for those grade crossings.

Table 3.14-3. Grade Crossing Delay

City	Street	Crossing ID	AADT	No-Action Alternative		Proposed Acquisition		Cumulative Impacts	
				Average Delay per Vehicle in 24-hour Period (seconds)	LOS	Average Delay per Vehicle in 24-hour Period (seconds)	LOS	Average Delay per Vehicle in 24-hour Period (seconds)	LOS
Bartlett	Gifford Road	372214T	4921	1.5	A	2.2	A	2.3	A
Bartlett	Naperville Road	372210R	15539	2.3	A	3.5	A	3.6	A
Bartlett	Oak Avenue	372206B	10677	1.5	A	2.3	A	2.3	A
Bartlett	Prospect Avenue	371997M	3896	1.4	A	2.1	A	2.2	A
Bensenville	Church Road	372174X	7696	1.4	A	2.2	A	2.2	A
Bensenville	York Road	372170V	18696	1.5	A	2.2	A	2.3	A
Elgin	Chicago Street	372240H	16755	1.7	A	2.5	A	2.6	A
Elgin	Highland Avenue	372241P	6957	1.4	A	2.1	A	2.2	A
Elgin	Illinois Route 25	372217N	19450	1.8	A	2.7	A	2.8	A
Elgin	Kimball Street	372242W	23433	1.5	A	2.3	A	2.4	A
Elgin	McLean Boulevard	372246Y	21559	1.6	A	2.4	A	2.5	A
Elgin	National Street	372239N	7997	1.6	A	2.5	A	2.5	A
Elgin	Raymond Street	372235L	3427	1.5	A	2.4	A	2.4	A
Franklin Park	25th Avenue	372138C	14441	5.5	A	5.2	A	5.2	A
Franklin Park	Edgington Street	372137V	3398	5.4	A	5.1	A	5.2	A
Itasca	Prospect Avenue	372179G	9075	1.5	A	2.2	A	2.3	A
Itasca	Rohlwing Road	372184D	22379	1.9	A	2.9	A	2.9	A
Medinah	Medinah Road	372191N	7064	1.3	A	2.0	A	2.1	A
Roselle	Roselle Road	372196X	12521	1.4	A	2.1	A	2.2	A
Schaumburg	Rodenburg Road	372202Y	13240	2.1	A	3.1	A	3.2	A
Wood Dale	Irving Park Road	372177T	29174	2.2	A	3.4	A	3.5	A
Wood Dale	Wooddale Road	372178A	8612	1.3	A	2.0	A	2.1	A

Although OEA concludes that the Proposed Acquisition and other reasonably foreseeable future actions and projects would result in a slight increase in grade crossing delay at certain grade crossings, OEA also expects that the amount of delay at crossings on other railroads in the United States and on roadways could decrease as the result of the diversion of trucks to rail and the diversion of rail traffic from other railroads to the combined CPKC network.

3.14.4.4 Air Quality and Climate Change

As discussed in *Section 3.7, Air Quality and Climate Change*, OEA estimated emissions for NO_x, VOCs, PM₁₀, PM_{2.5}, SO₂, CO, CO_{2e}, CH₄, N₂O, and HAPs. Although OEA expects that the Proposed Acquisition might result in a net decrease in air emissions if considered on a system-wide basis, the Proposed Acquisition would change the distribution of emissions at the local level because freight would be diverted from trucks and other rail lines onto the CPKC rail lines in the study area. Under the Proposed Acquisition, county-level emissions of criteria pollutants, HAPs, and GHGs would increase due to the projected changes in rail traffic and activity at rail yards and intermodal facilities. NO_x is the air pollutant of greatest concern from locomotive emissions. The annual NO_x emissions associated with the Proposed Acquisition would exceed EPA's *de minimis* thresholds within the Chicago Ozone Nonattainment Area, the Houston-Galveston-Brazoria Ozone Nonattainment Area, and the Beaumont-Port Arthur Ozone Maintenance Area. Emissions of other criteria pollutants would be well below the applicable *de minimis* thresholds.

As part of the cumulative impacts analysis, OEA evaluated the additional locomotive emissions that would occur from increased Amtrak service on Metra's MD-W line between Chicago and Elgin-Big Timber. OEA assumed that the four additional Amtrak trains on this route would use the Siemens Charger locomotives with Tier 4 emissions certification. **Table 3.14-4** presents the estimated locomotive emissions from the additional Amtrak trains. As the table shows, OEA expects that the additional Amtrak trains would not be a major source of emissions. Within the Chicago Ozone Nonattainment Area, the additional Amtrak trains would add only approximately one ton of NO_x per year to the NO_x emissions that would result from the Proposed Acquisition.

Table 3.14-4. Summary of Cumulative Emissions Estimates in Chicago Nonattainment Areas

Nonattainment Area	State	Pollutant	Acquisition-related Emissions (tons/yr)		Amtrak Emissions (tons/yr)		Total Emissions (tons/yr) ¹		Local MPO Emissions Budget (tons/yr) ¹	
			NO _x	VOC	NO _x	VOC	NO _x	VOC	NO _x	VOC
Chicago Ozone Nonattainment Area	Illinois	O ₃ : Serious	112.8	4.9	1.2	0.1	114.0	5.0	54,850	21,950

Source: CMAP 2018

Notes:

¹ Annual budget of NO_x and VOC extrapolated from tons per day budget in respective Long Range Transportation Plans assuming 365 days per year.

NO_x = Nitrogen oxides; VOC = Volatile organic compounds; O₃ = Ozone.

For the purposes of a cumulative impacts analysis, OEA looked at the emissions inventories of State Implementation Plans to capture the cumulative nature of potential emissions impacts from multiple sources. Guided by these emissions inventories, states develop emission budgets for various sources to determine the cumulative volume of pollutants. OEA projects that Acquisition-related NO_x emissions, coupled with the Amtrak emissions, would be less than one percent of the emissions budget for the Chicago Ozone Nonattainment Area. Therefore, OEA concludes that the cumulative impacts on air quality and increase Amtrak service would be minimal.

For the purposes of climate change, OEA followed the CEQ guidance by considering GHG emissions as a proxy for assessing the Proposed Acquisition’s impact on climate change. OEA expects that the Proposed Acquisition would result in an overall decrease in GHG emissions of approximately 127,113 tons of CO_{2e} per year by removing approximately 64,000 trucks from roadways to rail each year—a beneficial cumulative impact. OEA expects that climate change would affect the 25 planned capital improvements, but that the Applicants would incorporate climate change resiliency into final engineering and design of the capital improvements consistent with the Applicants’ proposed voluntary mitigation measure (VM), VM-21 (see *Chapter 4, Mitigation*).

3.14.4.5 Noise

As discussed in *Section 3.6, Noise and Vibration*, the Proposed Acquisition could result in increased noise along rail lines where increased rail traffic resulting from the Proposed Acquisition would meet or exceed the threshold for environmental review of eight or more additional trains per day or a doubling of traffic measured in GTM, as set forth at 49 C.F.R. § 1105.7(e). OEA concluded that there were no adverse vibration impacts on receptors for the study area; therefore, OEA did not analyze vibration in the study of cumulative impacts.

Reasonably foreseeable projects and actions that could result in increased noise in the study area could, along with the Proposed Acquisition, contribute to cumulative noise impacts that could potentially adversely affect noise-sensitive receptors (receptors), such as residences, schools, hospitals, nursing homes, and places of worship. The Proposed Acquisition would result in a projected increase of eight freight trains per day on rail line segments CELGI-01

and C-ELGI-02 along the Metra MD-W line between Elgin and Franklin Park. This is part of the route between Chicago and Rockford on which IDOT proposes new Amtrak service (**Table 3.14-5**). IDOT proposes four passenger trains as part of its expansion of Amtrak service between Chicago and Rockford. As shown in **Table 3.14-5**, there would be 561 receptors within the 65 Ldn noise contour with the Proposed Acquisition and 564 receptors within the 65 Ldn noise contour including the additional Amtrak passenger trains in the cumulative condition. There would be no cumulative noise impacts as there would be no increase in the number of receptors within the 65 Ldn noise contour with a 3 dBA noise increase.

Table 3.14-5. Potential Cumulative Noise Receptors between Chicago and Elgin

Rail Line Segments	Receptors within the 65 Ldn Noise Contour			
	Existing Conditions	No-Action	Proposed Acquisition	Cumulative
Bensenville, IL to Elgin, IL	189	237	561	564

Based on the Draft Environmental Assessment (EA) for the TAP, the noise contours for the OMP and O’Hare 21 projects overlap with the noise contours for the Proposed Acquisition (Draft TAP EA 2022). CDA established the O’Hare Residential Sound Insulation Program (RSIP) under the OMP wherein more than 85 percent of the receptors within the OMP airport noise contour have been sound insulated (CDA 2022). The remaining receptors have not been sound insulated but are potentially eligible for sound insulation as part of the CDA’s ongoing RSIP. The Draft TAP EA identifies 227 residential housing units that would be exposed to adverse noise impacts with the airport project; 224 have been previously sound insulated by the CDA, and the other three are included in the CDA’s ongoing RSIP for the OMP. Since these receptors are already insulated for aircraft noise or are eligible for insulation as part of the CDA’s ongoing RSIP, no cumulative noise impacts are anticipated.

The Applicants have proposed voluntary mitigation to minimize the potential noise impacts. Applicants’ voluntary mitigation, if imposed by the Board, would require the Applicants to fund the improvements necessary to allow any potentially affected community with an existing Quiet Zone to maintain that designation should the increase in Acquisition-related train traffic cause that community to fall out of compliance with Federal Railroad Administration regulations (VM-17).

3.14.4.6 Environmental Justice

One rail line segment (Bensenville to Elgin) that would experience increases in rail traffic resulting from the Proposed Acquisition is located near O’Hare Airport. Adverse noise impacts would occur under the Proposed Acquisition in a portion of three census block groups that OEA identified as potential EJ populations along this rail line segment. Portions of these three EJ block groups also fall within the 65 dBA Ldn noise contour of the OMP and the O’Hare 21 projects (Draft TAP EA 2022). The noise contours of these two projects overlap with noise contours for the Proposed Acquisition. Receptors located in the EJ block groups are included in the CDA’s O’Hare RSIP under the OMP. Since these receptors located in EJ block groups are already insulated for aircraft noise or are eligible for

insulation as part of the CDA's ongoing RSIP, no cumulative noise impacts are anticipated for EJ populations.

3.14.5 Cumulative Impacts from the Planned Capital Improvements

The proposed SGGR and CHC electrical transmission line projects could overlap geographically with the planned new sidings at MP 24 near Bellevue, Iowa and MP 71 near the Turkey River in Iowa. Therefore, cumulative impacts could potentially result from those planned capital improvements and the construction of the SGGR and CHC electric transmission line projects.

The Applicants' planned capital improvements would involve clearing, grubbing, and grading, and to a lesser extent some excavating, as well as placing fill material for additional track within the footprint of each capital improvement. The extent of such impacts would vary based on the affected environment, and the extent of clearing, grubbing, and earthmoving required for construction. OEA identified two topics with potential cumulative impacts. These are described below.

3.14.5.1 Biological Resources

Two proposed electrical transmission line projects could potentially overlap geographically with one or more of the planned capital improvements within the rail ROW. If this were to occur, then cumulative impacts on biological resources could result, but OEA expects that these cumulative impacts would be minor and would be minimized by the Applicants' voluntary mitigation measures and OEA's additional recommended mitigation measures set forth in *Chapter 4, Mitigation*. OEA identified suitable bat habitat for the Indiana bat (*Myotis sodalis*) and northern long-eared bat (*Myotis septentrionalis*) at the planned capital improvements where the two proposed electrical transmission lines projects could potentially overlap. OEA concluded the Proposed Acquisition *may affect but is not likely to adversely affect* the Indiana and northern long-eared bat; therefore, OEA anticipates no cumulative impacts to the federally protected bats.

3.14.5.2 Water Resources

The planned capital improvements, in addition to the two reasonably foreseeable energy projects, could affect wetlands, particularly at the planned capital improvements at MP 71 near Turkey River in Iowa. Both the SGRR and CHC electric transmission line projects would be constructed in the same location or vicinity as the planned new siding. The capital improvement at this location has the potential to impact the largest acreage of wetlands. The large wetland system is immediately east of the track that runs for almost the entire length of the planned capital improvement footprint. Cumulative impacts to wetlands could occur depending on the siting of the SGRR and CHC projects. However, the CHC project, as currently designed, would not impact wetland resources in this location and the SGGR project is a buried electric cable, which would only result in temporary wetland impacts; therefore, cumulatively, impacts to wetlands would be minor.

3.14.6 Conclusion

Along with other reasonably foreseeable actions and projects in the study area, the Proposed Acquisition would contribute to cumulative impacts on passenger rail safety, grade crossing safety, grade crossing delay, noise, air quality, biological resources, and water resources.

Cumulative impacts on rail safety, grade crossing safety, grade crossing delay, noise, and air quality would occur due to the combination of increased freight rail traffic resulting from the Proposed Acquisition and increased passenger rail traffic resulting from expanded Amtrak service on rail line segments C-ELGI-01 and C-ELGI-02 between Elgin and Franklin Park in Illinois. The Proposed Acquisition could also result in cumulative impacts to segments between River Junction, Minnesota and St. Paul, which is part of the TCMC route between Chicago and the Twin Cities via Milwaukee on which Amtrak plans additional passenger rail service. These cumulative impacts would be low and would be minimized by the Applicants' proposed voluntary mitigation measures and OEA's additional recommended mitigation measures, as set forth in *Chapter 4, Mitigation*.

Cumulative impacts could also occur as a result of the Proposed Acquisition and the reasonably foreseeable SGRR and CHC electric transmission line projects because those transmission line projects could overlap geographically with the planned new sidings at MP 24 in Bellevue and at MP 71 near the Turkey River. To the extent that both the planned new sidings and the SGRR and CHC projects could impact wildlife habitat, wetlands, or other water resources, cumulative impacts would occur. These cumulative impacts would be minimal and would be minimized by the Applicants' proposed voluntary mitigation measures and OEA's additional recommended mitigation measures, as set forth in *Chapter 4, Mitigation*.