The railroad industry consumes 4 billion gallons of diesel fuel annually. This results in a considerable amount of air emissions. Many parts of the US served by railroads have air quality issues. Because many railroads follow rivers to take advantage of lower grades, there can be impacts to the streams from maintenance and construction activities.

Maintenance and fueling of locomotives has resulted in impacts to groundwater and streams. Releases of hazardous materials from accidents can cause severe local impacts to air, soil, groundwater and surface water. Releases even of non-hazardous materials such as grain can create problems such as attracting grizzly bears to the track-side or depleting oxygen in streams. Noise especially from train horns at grade crossings can be disruptive.