

1. What is your replacement schedule for buses?

The rotation plan which we have developed, based on the size and current status of our fleet, is for us to replace 5-6 buses each year moving forward.

2. Why do we need 5 buses a year?

Based on the current size and age of our fleet, it's imperative that we prioritize the replacement of our aging buses. With 25 buses dating back to 2010-2004, we must initiate the replacement process immediately, starting with the oldest units. Additionally, there's a pressing need to address our fleet of Propane buses from 2017, totaling 20 buses, with 12 being propane-powered. This requires strategic planning to ensure a smooth transition, especially considering that 20 buses will reach the end of their service life around the same time.

To maintain a sustainable fleet, we must adhere to a 15-year rotation plan, necessitating the replacement of 5 buses annually. Following this plan rigorously over 15 years will rectify our rotation schedule by 2040. However, it's crucial to adjust this plan according to fluctuations in student enrollment to ensure optimal resource allocation and operational efficiency. Notably, if we only replace 5 buses per year, the challenge of an aging fleet will persist until 2040, underscoring the urgency of a proactive approach.

The Propane buses, while serving a vital role, have been subjected to excessive usage to compensate for the unreliability of older vehicles, particularly for long routes or trips. This heightened utilization has inflated yearly mileage to an unsustainable level of 20,000 miles per year, far exceeding the typical parameters of a 15-year rotation plan. Considering that even the most durable units have only managed around 260,000 miles, the current usage pattern risks premature wear and tear, necessitating a more balanced distribution of workload and prompt replacement to maintain fleet integrity and safety standards.

3. Cite the VDOE's "recommended" age/mileage to retire a bus.

In Virginia, there's no explicit state code dictating the useful lifespan or disposal requirements for school buses, but a common standard is emerging, with many districts adhering to a 15-year lifespan or around 250,000-300,000 miles. The Virginia Department of Education (VDOE) stipulates a maximum usable lifespan of 15 years or 300,000 miles for school buses, emphasizing cost-effectiveness as the primary criterion, which considers factors such as purchase price, yearly maintenance expenses, and resale value. For instance, comparing the total cost of ownership between two hypothetical buses—a 12-year-old bus sold at 180,000 miles and a 15-year-old bus sold at 225,000 miles—reveals nuances in cost-effectiveness, with maintenance costs escalating by approximately 6% annually after ten years of ownership.

In the Isle of Wight County Schools (IWCS) fleet, there are currently 19 buses aged 15 years or older, all manufactured in 2009 or earlier, along with 6 more approaching this threshold having been manufactured in 2010. Among these, 3 buses have exceeded 300,000 miles, 10 have surpassed 250,000 miles, and 22 have traveled over 200,000 miles, underscoring the challenges

posed by aging equipment. Notably, maintaining these older buses becomes increasingly difficult, with some facing major mechanical defects and sourcing replacement parts becoming a daunting task, often requiring resorting to vintage programs or specialized component manufacturing. While the propane buses, introduced after 2017, offer a newer alternative, the longevity expectations are lower compared to diesel counterparts, highlighting the importance of strategic fleet management and replacement planning tailored to different bus types and usage patterns.

4. Approximate number of miles per year per bus (I'm sure this varies)

Please see excel sheet that is attached.

5. Any plan to use older buses (beyond VDOE's recommendations) as back-ups

The safety and functionality of the school bus fleet are paramount considerations for districts, prompting many to prioritize the replacement of aging vehicles. Kerry Miller, the Director of Pupil Transportation at the Virginia Department of Education (VDOE), observes a common trend among school divisions in the state, with most opting to replace buses around the 15-year mark or when they reach approximately 250,000 to 300,000 miles. This proactive approach aligns with the broader goal of ensuring the reliability and effectiveness of transportation services for students.

While recognizing the importance of maintaining a safe and efficient fleet, Isle of Wight County Schools (IWCS) faces challenges in implementing an ideal replacement strategy. The current plan involves maximizing the utilization of every operational vehicle, irrespective of age or mileage. Ideally, older buses could serve as emergency spares, as commonly practiced in other counties, but IWCS lacks the necessary resources to execute this approach effectively. Despite the intention to prioritize safety and functionality, practical constraints hinder the district's ability to fully leverage its existing fleet for emergency contingencies.

6. Any extended uses of buses due to major overhauls or engine replacements. (How much road time is recouped with an engine overhaul?)

At Isle of Wight County Schools, most vehicles undergoing engine replacements are doing so at the halfway point of their lifespan. While this proactive maintenance strategy aims to address engine issues and extend the operational lifespan of the buses, it's not anticipated to significantly prolong their overall longevity beyond the typical lifespan. Despite these efforts, the district remains realistic about the limitations of engine replacements in substantially altering the expected lifespan of the vehicles.