



**Complexity of queries:** Our database will likely require an average of between 1 and 2 queries to retrieve a particular item or to make a certain calculation. A lot of the requests will likely just be to retrieve data from the database, which would only require 1 query. However, if a calculation needs to be made, such as finding the average or finding the min/max, 2 queries may need to be made.

**Estimate database size calculations:**

**Municipality:**  
Mun\_name --> 35 bytes max  
County --> 10 bytes max  
565 \* (35 +10) = 25425 bytes

**EV\_Datum:**  
Mun\_name --> 35 bytes max  
County --> 10 bytes max  
Year --> 4 bytes max  
Num\_EV --> 4 bytes max  
Num\_vehicles --> 8 bytes max  
565 \* (35+10+4+4+8) = 34465 bytes

**Generalized\_GHG\_Datum:**  
Mun\_name --> 35 bytes max  
County --> 10 bytes max  
Year --> 4 bytes max  
Em\_vehicles --> 8 bytes max  
Em\_total --> 8 bytes max  
565 \* (35+10+4+8+8) = 36725 bytes

**Total: 25425 + 34465+36725+54805+38985 = 190405 bytes**

**Vehicle\_GHG\_Datum:**  
Mun\_name --> 35 bytes max  
County --> 10 bytes max  
Year --> 4 bytes max  
Em\_total --> 8 bytes max  
MPO --> 8 bytes max  
School\_bus --> 8 bytes max  
Passenger car --> 8 bytes max  
Light\_comm\_truck --> 8 bytes max  
Motorcycle --> 8 bytes max  
565 \* (35+10+4+8+8+8+8+8+8) = 54805 bytes

**General\_emissions:**  
Em\_type --> 4 bytes  
Em\_elec --> 8 bytes  
Em\_NG --> 8 bytes  
Datum\_mun --> 35 bytes max  
Datum\_cty --> 10 bytes max  
Datum\_yr --> 4 bytes  
565 \* (4+8+8+35+10+4) = 38985 bytes