**PROCEDURES TO BUILD NONROAD FUEL SUPPLY AND FORMULATIONS**

MOVES2014a default fuel supply and fuel formulation tables were modified to represent the fuel changes that were expected for each year and county for the RFG OPT-OUT modeling analysis. Except for the gasoline blended fuels, all MOVES2014a fuel defaults were used for the modeling runs. All of Maine’s gasoline supply contains 10% ethanol. Both the Reformulated Gasoline (RFG) and Conventional Gasoline (CG) are represented in the MOVES defaults as Gasohol (E10). The formulations are found in fuelSubtypeID = 12. The Reid Vapor Pressure (RVP) is used to identify each type of gasoline. Reformulated blends typically have a much lower RVP. Maine selected a MOVES default fuel supply formulation that best represented local conditions. The best available RVP limits for Gasohol (E10) blends with the proper sulfur and benzene contents was 7 psi for RFG and 8.8 psi for CG.

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| **County** | **County ID** | **2015** | **2017** | | **2019** | **2019** | | **2023** | |
| Androscoggin | 23001 | RFG | RFG | | RFG | *CG* | | *CG* | |
| Cumberland | 23005 | RFG | RFG | | RFG | *CG* | | *CG* | |
| *Hancock* | *23009* | *CG* | *CG* | | *CG* | *CG* | | *CG* | |
| Kennebec | 23011 | RFG | RFG | | RFG | *CG* | | *CG* | |
| Knox | 23013 | RFG | RFG | | RFG | *CG* | | *CG* | |
| Lincoln | 23015 | RFG | RFG | | RFG | *CG* | | *CG* | |
| Sagadahoc | 23023 | RFG | RFG | | RFG | *CG* | | *CG* | |
| *Waldo* | *23027* | *CG* | *CG* | | *CG* | *CG* | | *CG* | |
| York | 23031 | RFG | RFG | | RFG | *CG* | | *CG* | |
| RFG = Reformulated Gasoline | | | | CG = Conventional Gasoline | | |  | |  | |

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| **County** | **County ID** | **2015 RFG RVP Sulfur**  **(30 ppm)** | **2017 RFG RVP Sulfur**  **(10 ppm)** | **2019 RFG RVP Sulfur**  **(10 ppm)** | **2019 CG RVP Sulfur**  **(10 ppm)** | **2023 CG RVP Sulfur**  **(10 ppm)** |
| Androscoggin | 23001 | 7 | 7 | 7 | 8.8 | 8.8 |
| Cumberland | 23005 | 7 | 7 | 7 | 8.8 | 8.8 |
| *Hancock* | *23009* | *8.8* | *8.8* | *8.8* | *8.8* | *8.8* |
| Kennebec | 23011 | 7 | 7 | 7 | 8.8 | 8.8 |
| Knox | 23013 | 7 | 7 | 7 | 8.8 | 8.8 |
| Lincoln | 23015 | 7 | 7 | 7 | 8.8 | 8.8 |
| Sagadahoc | 23023 | 7 | 7 | 7 | 8.8 | 8.8 |
| *Waldo* | *23027* | *8.8* | *8.8* | *8.8* | *8.8* | *8.8* |
| York | 23031 | 7 | 7 | 7 | 8.8 | 8.8 |

The following steps were used to generate the input tables for the fuel supply and formulations.

1. MOVES2014a 2019 default fuel supply and formulation tables were exported for two counties (Cumberland, Waldo). Cumberland contained the defaults to represents all the southern counties (Androscoggin, Cumberland, Kennebec, Knox, Lincoln, Sagadahoc, and York) required to use RFG blends in the modeling demonstration. Waldo represents all the northern counties (Hancock, Waldo) using CG blends.
2. The defaults were reviewed. The Gasohol (E10) formulations for each county group represented were incorrect. New formulations were selected representing local conditions. Maine collects fuel data from terminals throughout the state on a quarterly basis. The weighted averages for various fuel parameters were calculated to determine what is used locally. Two fuel supply formulations were selected from the default formulations based upon fuel parameters best representing the weighted averages for local supplies. One representing the formulations for RFG and a second representing the formulation for CG.
3. The MOVES2014a (movesdb20161117) default database fuel supply table was exported to check the remaining years (2015, 2017, 2023) to determine what applied. A single fuel formulation table was constructed to represent all formulations for all years with the formulations chosen for local RFG and CG blends.
4. Two separate fuel supply tables were constructed. One for the RFG formulations for all years represented that applied and one for the CG formulations with all years represented that applied. The formulations for the gasohol blends also agreed with the gasohol blends used for the Onroad modeling analysis.
5. The fuel supply and formulations were compiled using MOVES templates.