**Fires**

**Low Risk  
(MSE)**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | **Handling of Region and Dept Size** | |
| **Model** | **Including** | **Separate Models** | **Dummies** |
| Constant |  |  | |
| Random Forest |  | **2.3859** | |
| M.100111 | time, base, house, personal, fuel | 2.6046 | 2.6176 |
| M.111110 | time, base, race, age, house, personal | 2.6635 | 2.6130 |

**Medium Risk  
(MSE)**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | **Handling Region and Dept Size** | |
| **Model** | **Including** | **Separate Models** | **Dummies** |
| Constant |  | 4.2898 | |
| Random Forest |  | **2.9066** | |
| M.000011 | house, personal | 3.4203 | 5.0597 |
| M.100011 | time, house, personal | 3.4223 | 5.0871 |
| M.000100 | age | 3.5807 | 3.6102 |
| M.100100 | time, age | 3.5794 | 3.6134 |

**Injuries**

**Low Risk  
(MSE)**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | **Handling Region and Dept Size** | |
| **Model** | **Including** | **Separate Models** | **Dummies** |
| Constant |  | 0.6442 | |
| Lasso.min |  | 0.6327 | |
| M.110011 | time, base, race, personal, fuel | 0.6313 | 0.6275 |
| M.111110 | time, base, race, age, house, personal | 0.6475 | **0.6254** |
| M.111111 | time, base, race, age, house, personal, fuel | 0.6448 | 0.6263 |

**Medium Risk  
(MSE)**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | **Handling Region and Dept Size** | |
| **Model** | **Including** | **Separate Models** | **Dummies** |
| Constant |  | 0.3786 | |
| Lasso.1se |  | 0.3791 | |
| M.000101 | age, personal | 0.3754 | 0.3820 |
| M.100101 | time, age, personal | **0.3755** | 0.3820 |
| M.000001 | personal | 0.3784 | 0.3761 |
| M.100001 | time, personal | 0.3790 | 0.3761 |

**Deaths**

**Low Risk  
(MSE)**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | **Handling Region and Dept Size** | |
| **Model** | **Including** | **Separate Models** | **Dummies** |
| Constant |  | 0.1772 | |
| Lasso.min |  | 0.1768 | |
| Lasso.1se |  | 0.1770 | |
| M.111010 | time, base, race, age, personal | 0.1780 | 0.1769 |

**Medium Risk  
(MSE)**

|  |  |  |  |
| --- | --- | --- | --- |
|  |  | **Handling Region and Dept Size** | |
| **Model** | **Including** | **Separate Models** | **Dummies** |
| Constant |  | 0.0831 | |
| Lasso.1se |  | 0.0831 | |
| M.100000 | time | 0.0832 | 0.0832 |
| M.110000 | time, base | 0.0832 | 0.0832 |
| M.110010 | time, base, house | 0.0836 | 0.0832 |
| M.000011 | house, personal | 0.0837 | **0.0832** |
| M.111001 | time, base, race, personal | 0.0838 | 0.0832 |