

#### Corona Virus Science

This blog explains some of the science related to the corona virus (COVID-19) € perspective. Most posts contain links to the underlying research.

#### **COVID-19 Model Projections**

This page contains graphs with the latest COVID-19 projections for the US from the "Data Trend Model". Previous predictions can be downloaded from Github.

Please note that this model does not try to predict the effect of "re-opening". Since the model is based on extrapolation of trends in the last 2-3 weeks, any increases in COVID-19 cases from relaxed restrictions can take up to a month to be reflected in the predictions.

#### Last model run

May 20, 2020 with Johns Hopkins Data from 5/19/2020.

- Total deaths predicted by 7/18/2020: 154,641 (yesterday:150,313 until 7/17)
- Excluding New York & New Jersey: 108,751 (yesterday: 104,891until 7/17)
- Predicted daily cases on 7/18/2020: 13,467 (yesterday: 12,500)
- Predicted daily death on 7/18/2020: 781 (yesterday: 714; ~ 47,000 per 2 months)

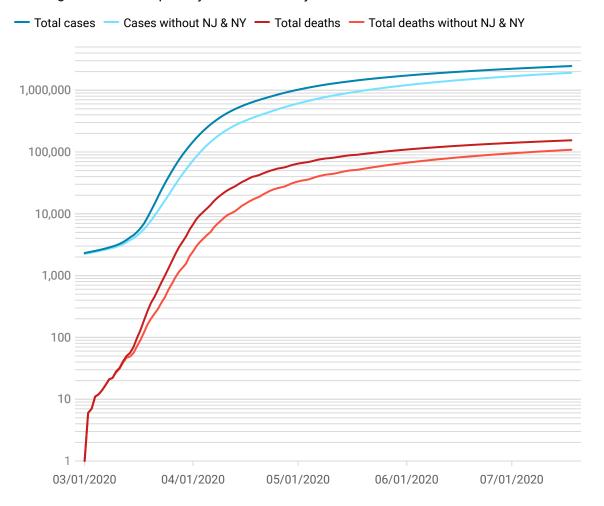
#### **Summary**

Today's numbers are significantly higher than yesterday, with about 8% more daily cases and 9% more daily deaths at the end of the forecast period. This is the third time in a row that we have seen an increase. It is very likely that the observed increases are caused re-opening in many states.

Looking at the model results carefully, there are additional signs of trouble. For 37 states, the 7-day trend line indicates more future cases than the 15-day trend line. In such cases, the model uses the 15-day trend line, since the 7-day trend line is more susceptible to short-term "bubbles", for example from prison or meat plant testing. The downside, however, is that the model will pick up changes more slowly. If the model would use only 7-day trends, the number of daily deaths at the end of the forecast period would be 57% higher: 1,230 instead of 781, corresponding to about 74,000 deaths per 2 months.

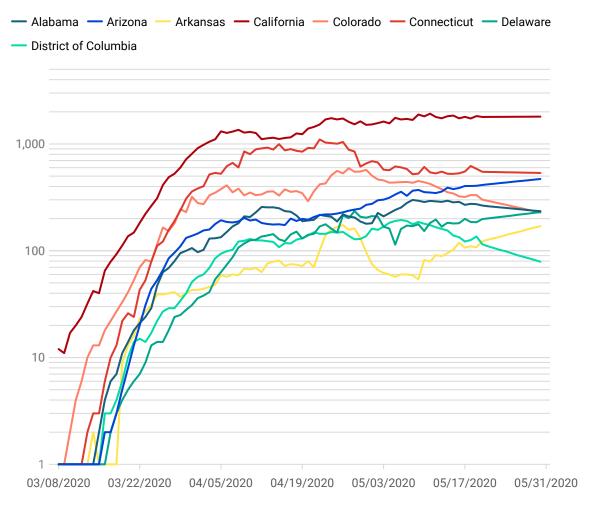
#### Total projected COVID-19 cases and deaths

Future growth in cases per day limited to 14 days.



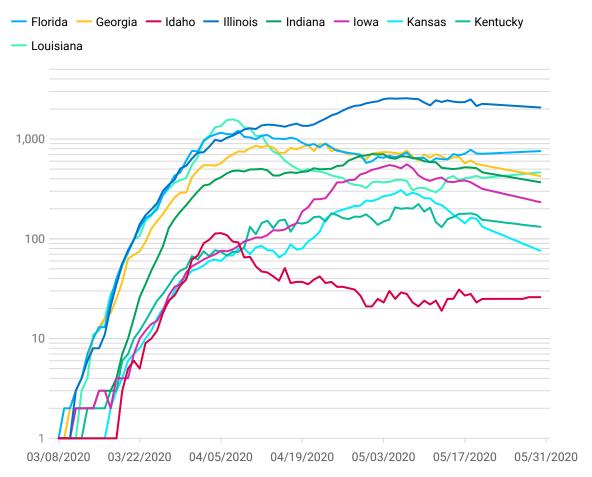
 $\label{logspot} \textit{Daily model projections at https://covid19science.blogspot.com/p/covid-19-model-projections.html} \\ \textit{Chart: covid19science.blogspot.com} \bullet \textit{Get the data} \bullet \textit{Created with Datawrapper} \\ \\$ 

# Actual and projected daily COVID-19 cases by state (AL-DC)



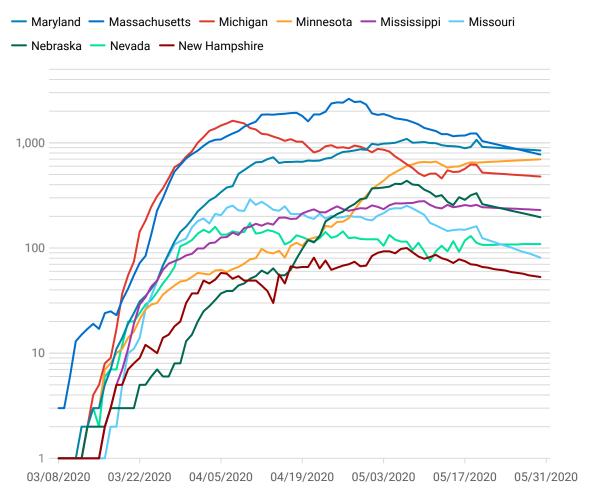
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# Actual and projected daily COVID-19 cases by state (FL-LA)



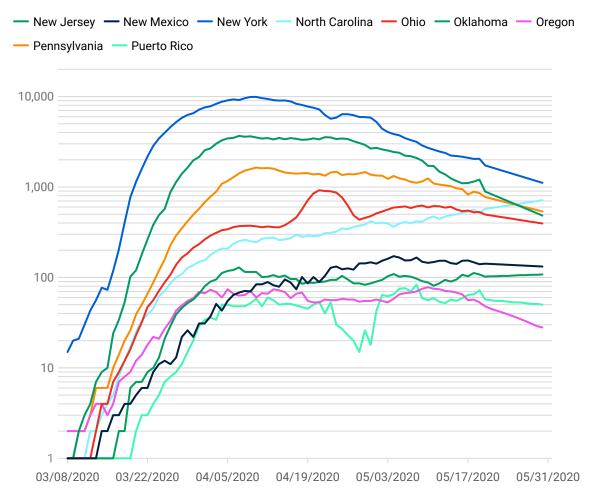
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# Actual and projected daily COVID-19 cases by state (MD-NH)



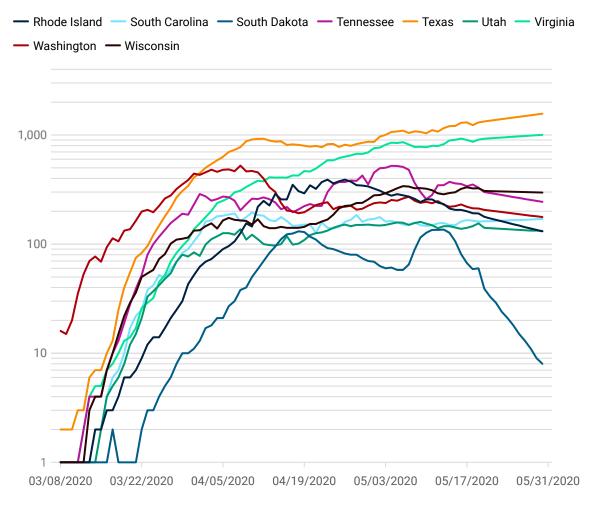
Daily model projections at https://covid19science.blogspot.com/p/covid-19-model-projections.html Chart: covid19science.blogspot.com • Get the data • Created with Datawrapper

# Actual and projected daily COVID-19 cases by state (NM-PR)



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# Actual and projected daily COVID-19 cases by state (RI-WI)



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