# Reservoir Inputs for the Midterm Model

Inputs for specific reservoirs beyond standard input data.

*Version 1*: **22 September 2010**, Cameron Bracken and Alan Butler

## Powell

### General

* Forecasted Inflows
* Previous Release tiers
* To forecast Meads release, Powell sums all the demands in the lower basin and so cannot run without them
* A value is input for the initial projection of the OND release, this may need to be tweaked for a special model run

\* NOTE: Powell and Navajo need forecasted inflow which is currently not set up

## Flaming Gorge

### June – July

* Previous months proportions (i.e. breakdown of flow into compoinents)
* Previous and Remaining days at power plant capacity (in FlamingGorgeData)

### April – July

* FlamingGorgeData.AprJulyVolSpringFlow since the model only calcualtes this in March

### June – Feb

* FlamingGorgeData.AprJulyVolBaseFlow since the model only calcualtes this in May

### General

* The start and end year used for calcualtion of the FG and Yampa hydrologic classification (in FlamingGorgeData)
* Requires Yampa inflows

## Navajo

### Jan-Feb, Aug-Dec

* No additional input is necessary

### March

* If you know that there will be an extended spring peak release that extends through March, then set the following slots:
  + NavajoResults.TotalSpringPeakExtensionDays[@March]
  + NavajoResults.ExtendedSpringFlow
  + NavajoResults.ExtendedSpringFlowIndex
  + NavajoResults.PeakReleaseLevel = 4
* Otherwise no additional information is necessary

### April

* If you know that there will be an extended spring peak release that extends through March, then set the following slots:
  + NavajoResults.TotalSpringPeakExtensionDays[@March]
  + NavajoResults.ExtendedSpringFlow
  + NavajoResults.ExtendedSpringFlowIndex
  + NavajoResults.PeakReleaseLevel = 4
* Or if it is known that it will be a maximum spring peak release set
  + NavajoResults.PeakReleaseLevel = 4
* Otherwise no additional information is necessary

### May

* If you know there is an extended spring peak then set
  + NavajoResults.TotalSpringPeakExtensionDays[@March]
  + NavajoResults.ExtendedSpringFlow
  + NavajoResults.ExtendedSpringFlowIndex
  + NavajoResults.PeakReleaseLevel = 4
* If you know which spring peak release level is desired then set\*
  + NavajoResults.PeakReleaseLevel
* Otherwise no additional information is necessary

### June

* Set NavajoResults.PeakReleaseLevel to the peak release level that was determined in May\*
* If you know that there will be additional days at 5000 cfs to help meet the EOWY PE, then set
  + NavajoResults.TotalSpringPeakExtensionDays[@June]
  + NavajoResults.ExtendedSpringFlow[@June] = 5000 cfs
  + NavajoResults.ExtendedSpringFlowIndex[@June] = 6

### July

* If the additional days at 5000 cfs carries over into July then set
  + NavajoResults.TotalSpringPeakExtensionDays[@June]
  + NavajoResults.ExtendedSpringFlow[@June] = 5000 cfs
  + NavajoResults.ExtendedSpringFlowIndex[@June] = 6
* Otherwise no additional information is necsary

\*The standard peak release levels do not shift the ramp up and ramp down periods to avoid weekends and holidays. If the standard release patterns are shifted, then the only way to reflect that in the model would be to set a new slot which is user input to the total release for the month and have a new rule which uses the information in that slot.

### Additional considerations:

* All of the rules are not expecting the above slots to be input
* Shortage sharing: most of the rules for shortage sharing don’t really work without demand objects, but elevation 5,990’ still needs to be protected

## Fontenelle

**No Special Inputs required**