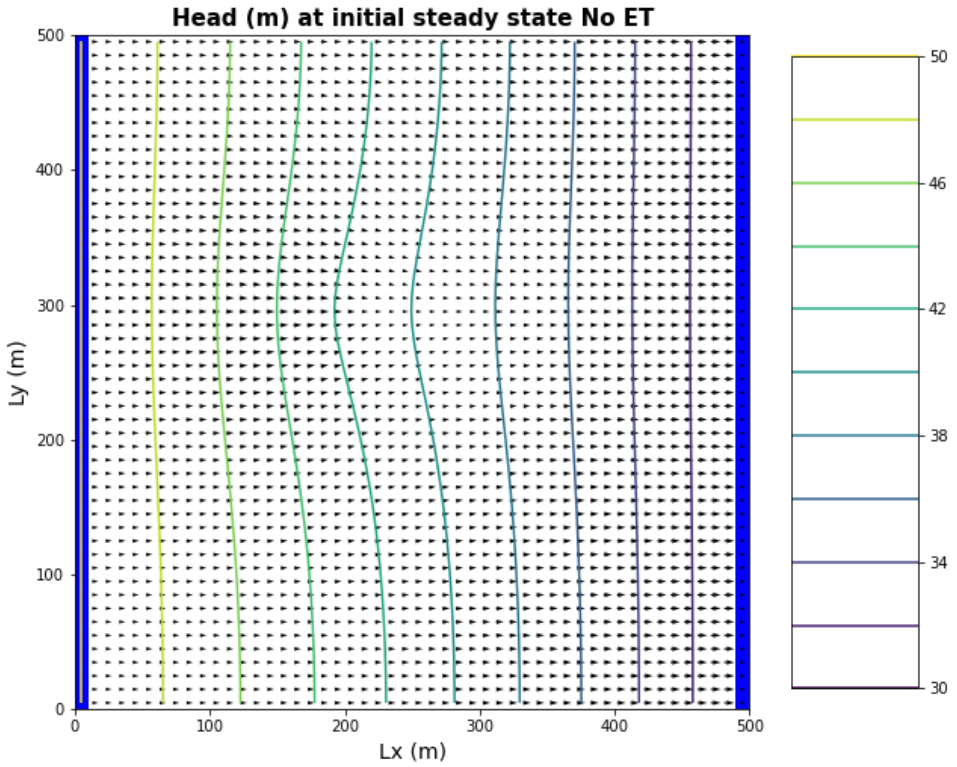
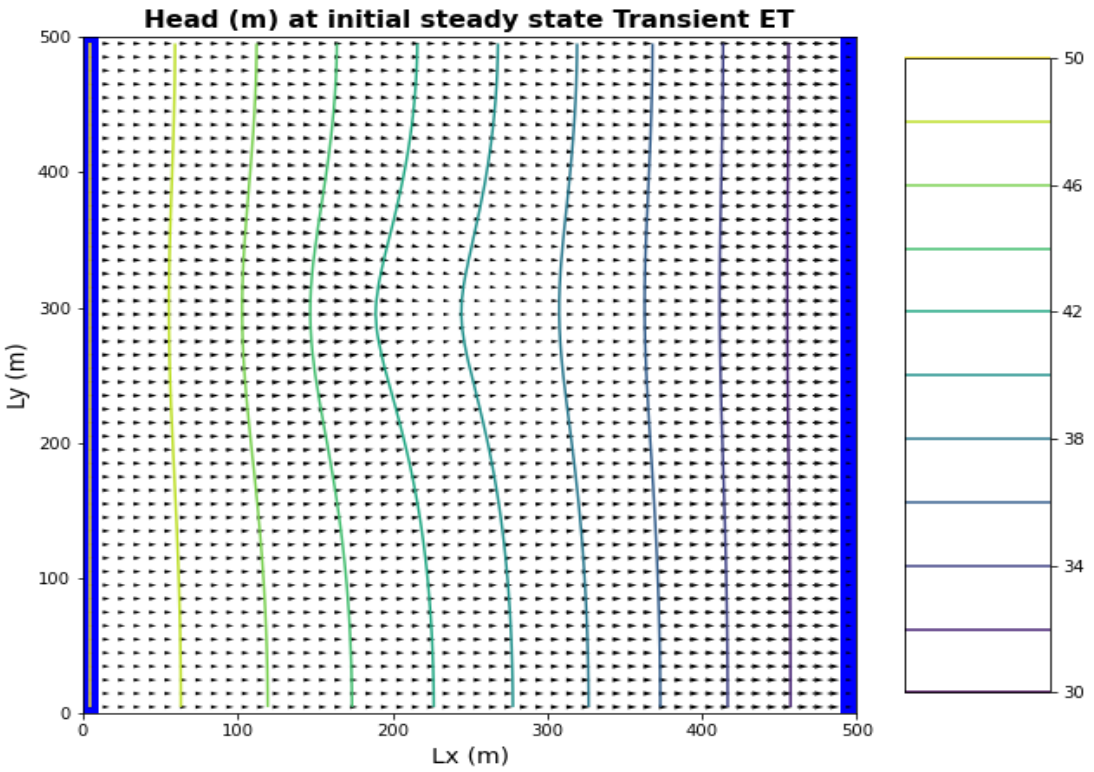
Challenge 1: Compare your results for the case with no ET to the modified ET case and explain how your results differ.




```
Left Flux = 788.2169  Right_flux= 842.16095  Difference = 53.94403
```

Fig. 1 Head contours for period with no ET




```
Left Flux = 793.723  Right_flux= 836.1856  Difference = 42.462585
```

Fig. 2 Head contours for period with transient ET

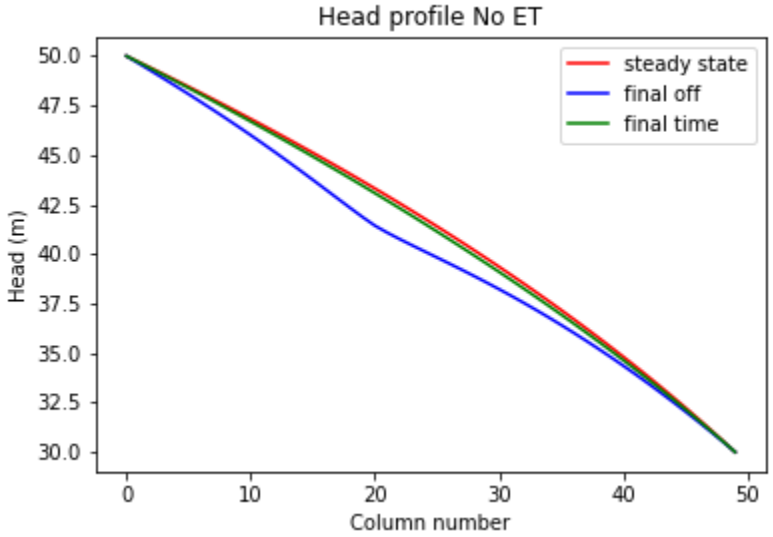


Fig. 3 Head profile for period with no ET

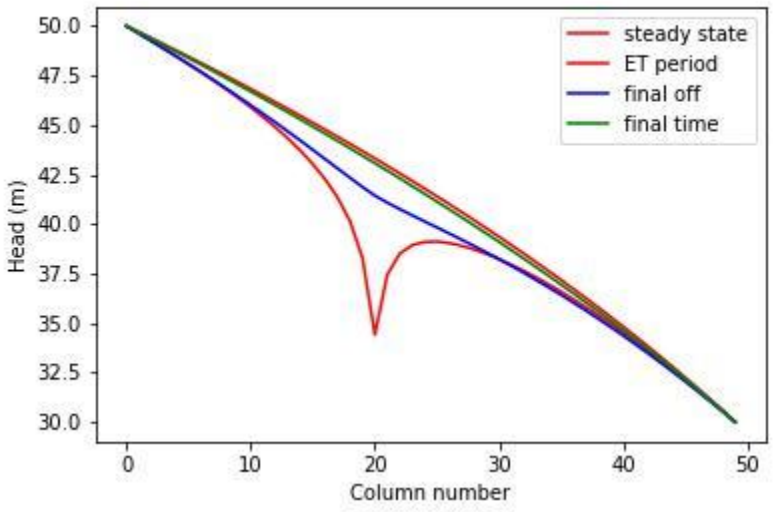


Fig. 4 Head profile for period with ET

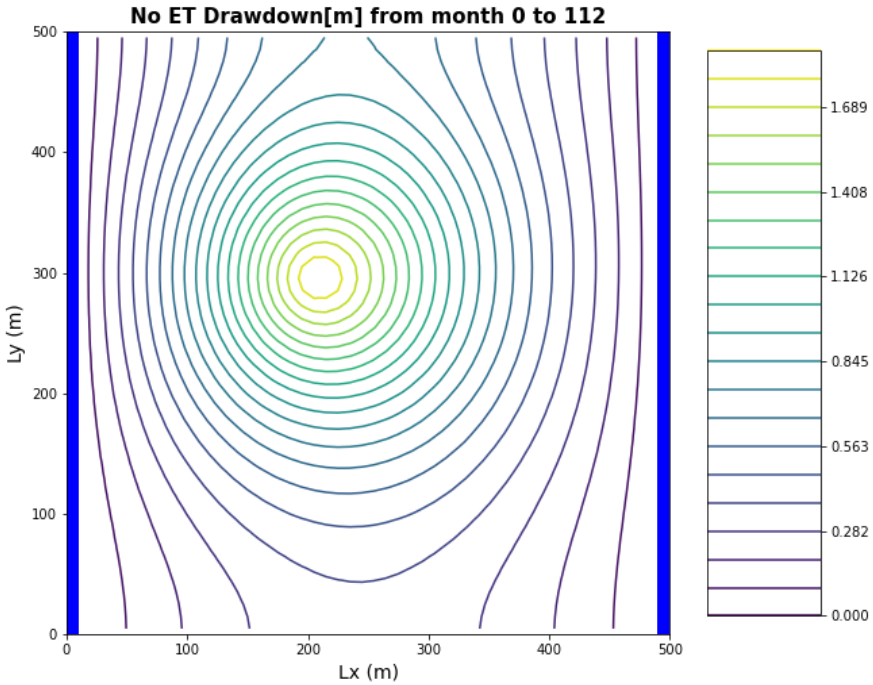


Fig. 5 Drawdown with no ET

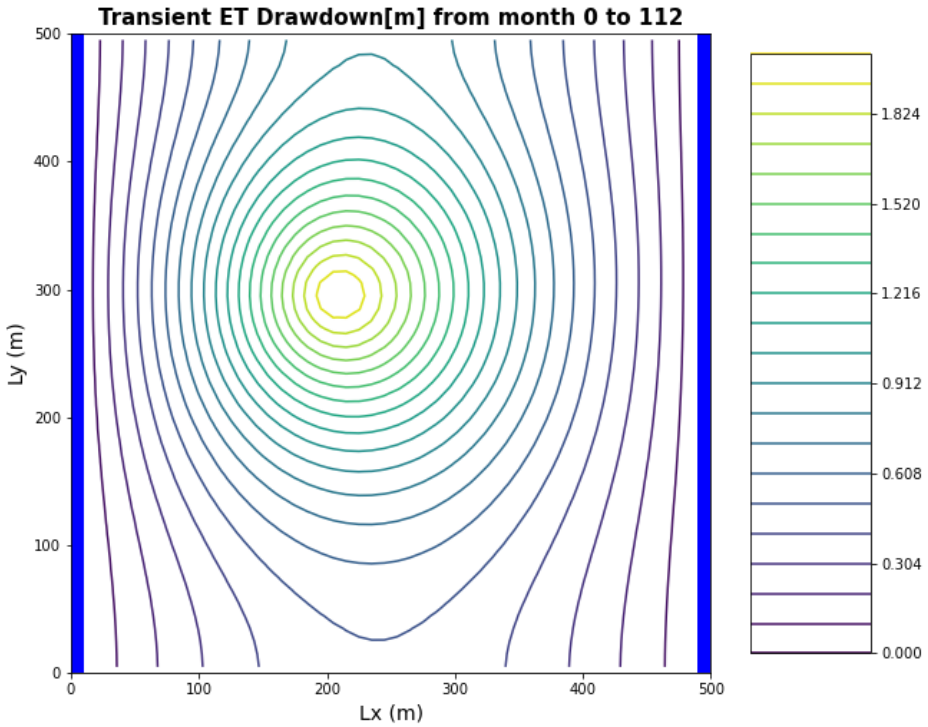


Fig. 6 Drawdown with ET

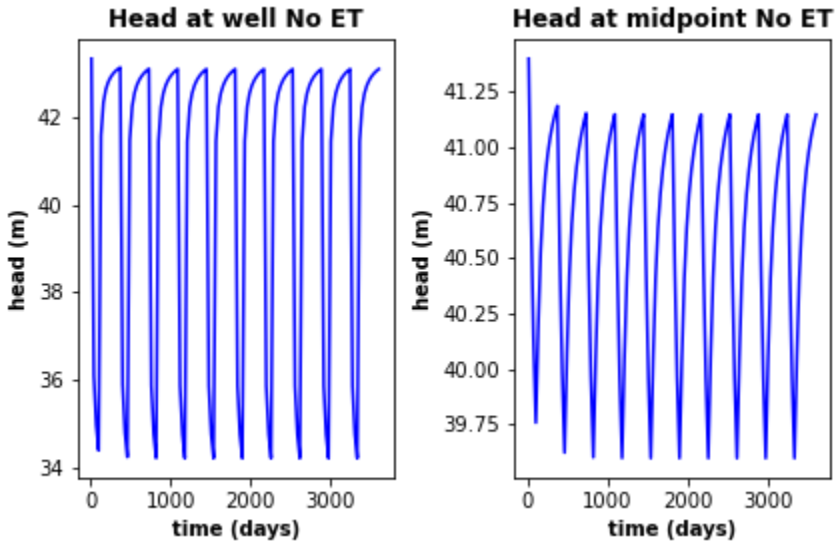


Fig. 7 Heads with no ET

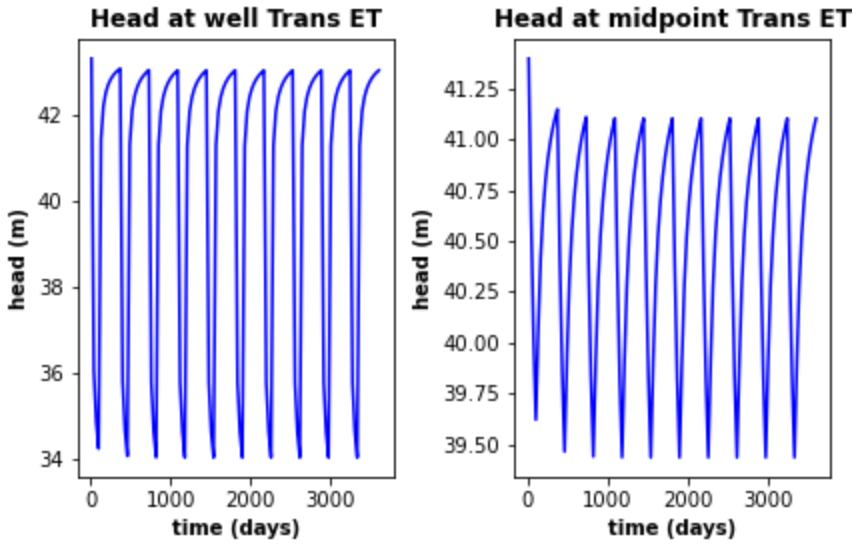


Fig. 8 Heads with transient ET

Challenge 2: Modify the model so that the ET only occurs in a square area around the well that is 200m by 200m. Discuss how this changes your results using plots and water balance calculations.

```
Left Flux = 788.2183  Right_flux= 842.1594  Difference = 53.9411
```

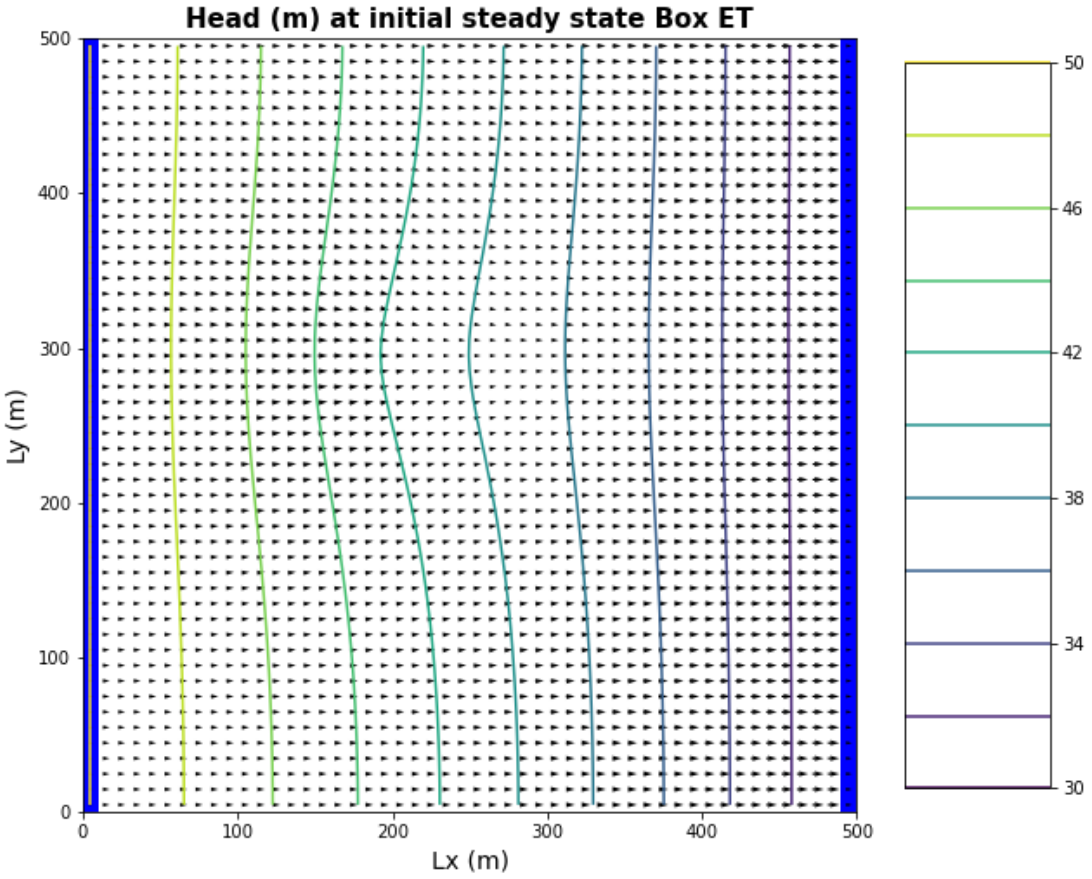


Fig. 9 Box ET

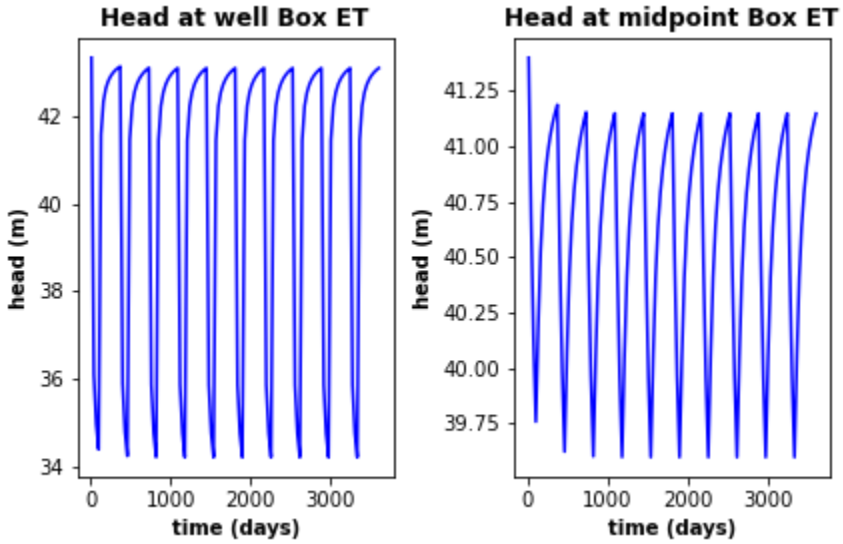


Fig. 10 Box ET

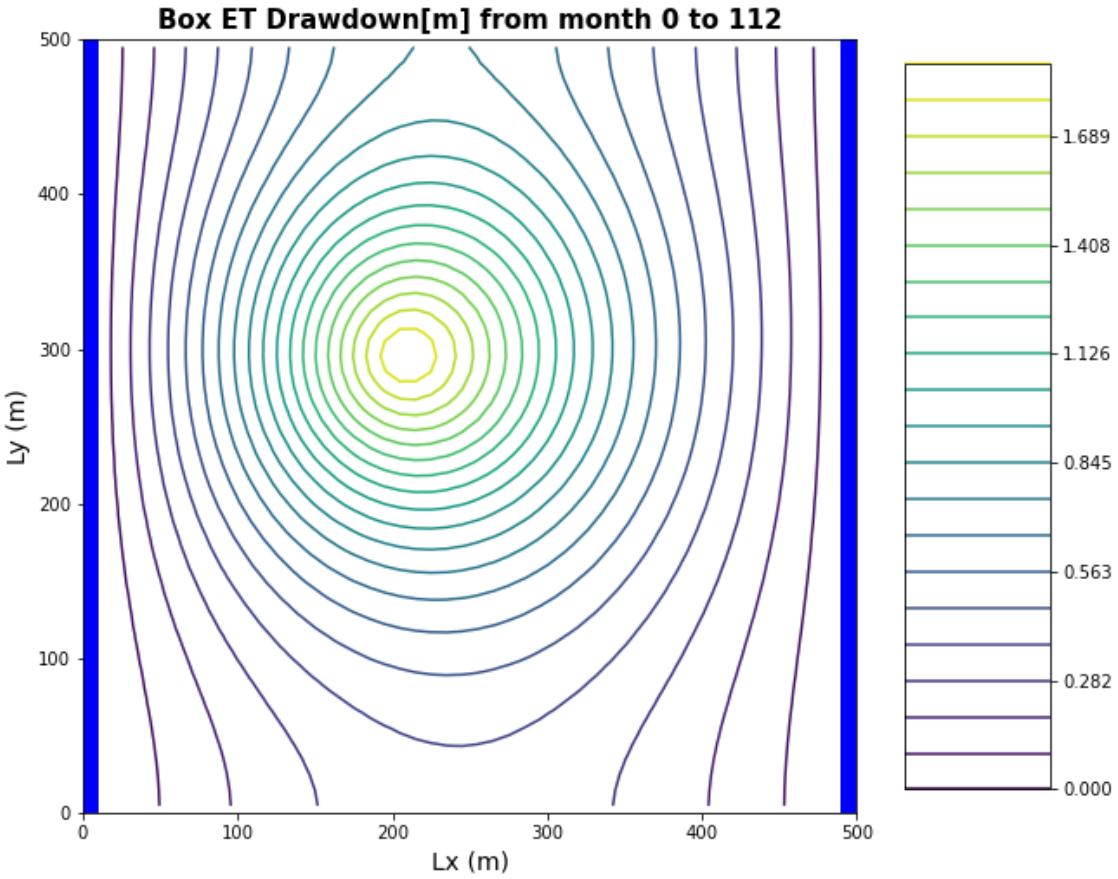


Fig. 11 Box ET

Challenge 3: Modify the recharge in the model so that it is also transient. Its up to you how you want to modify it. Provide an explanation for the scenario you ran and explain how it impacts your results.

```
total ET -0.7082099393464887
total recharge 3600.000321865082
Left Flux = 843.20557  Right_flux= 787.80054  Difference = -55.40503
```

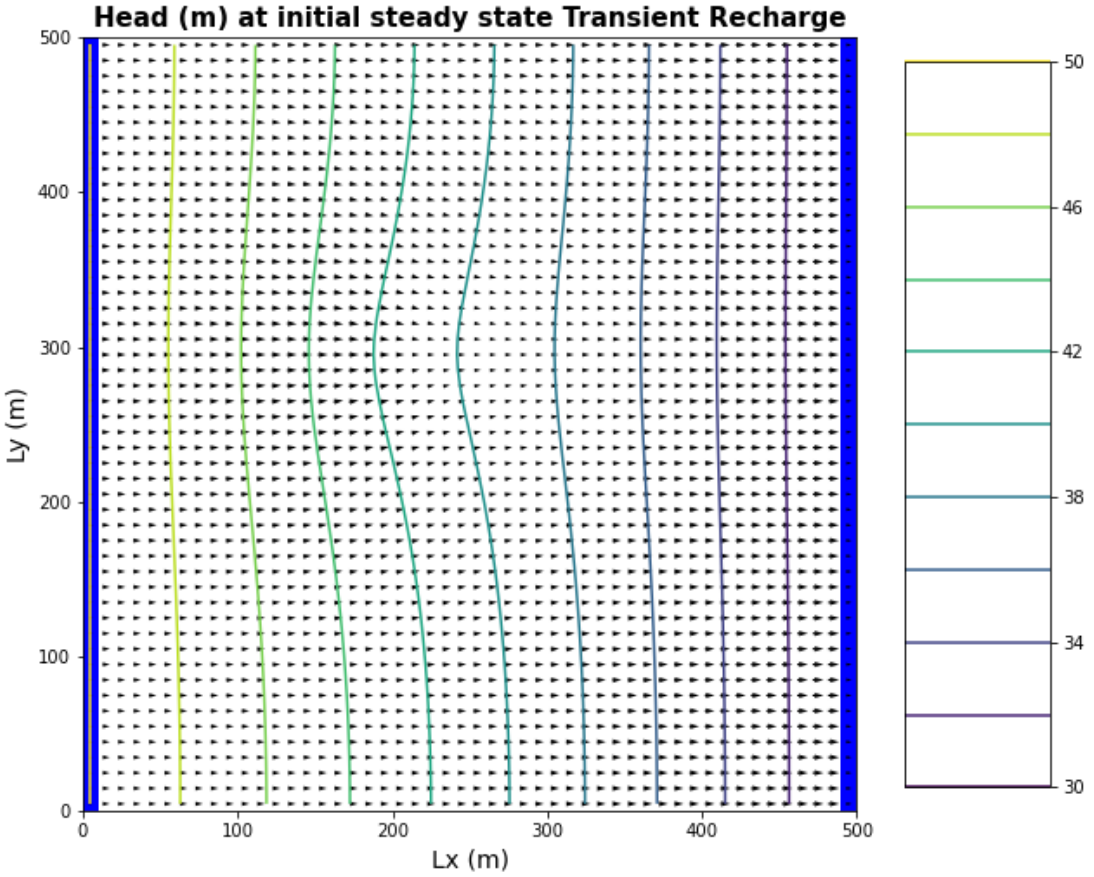


Fig. 12 Transient recharge (5e-4) and 20x20 box ET

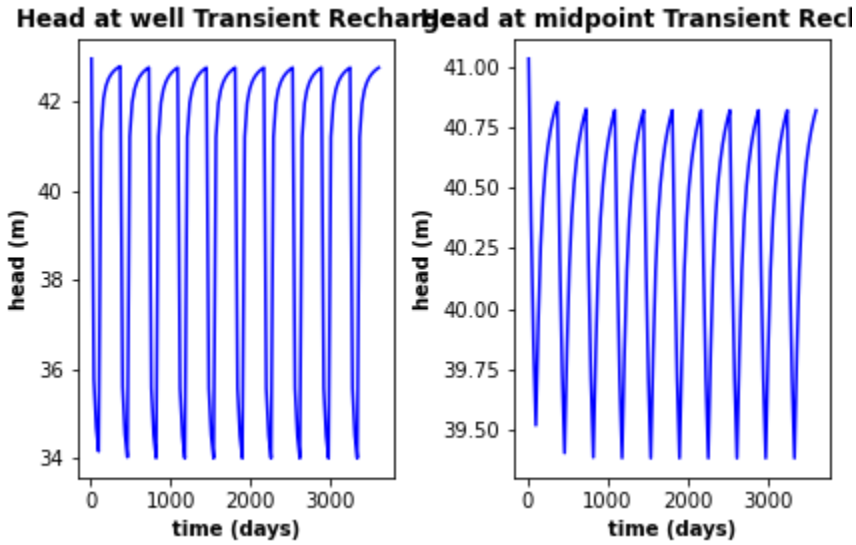


Fig. 13 Transient recharge and 20x20 box ET

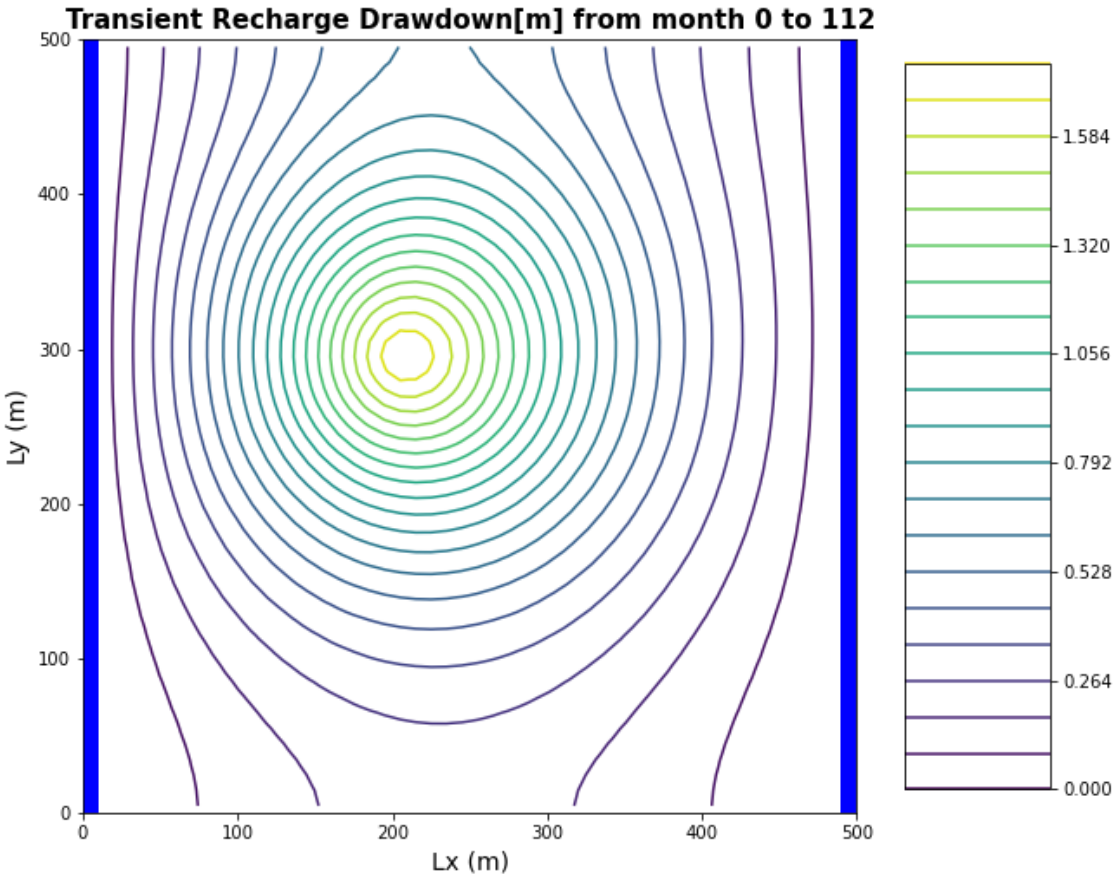


Fig. 14 Transient recharge and 20x20 box ET