

Runoff Attenuation Features

The Evidence

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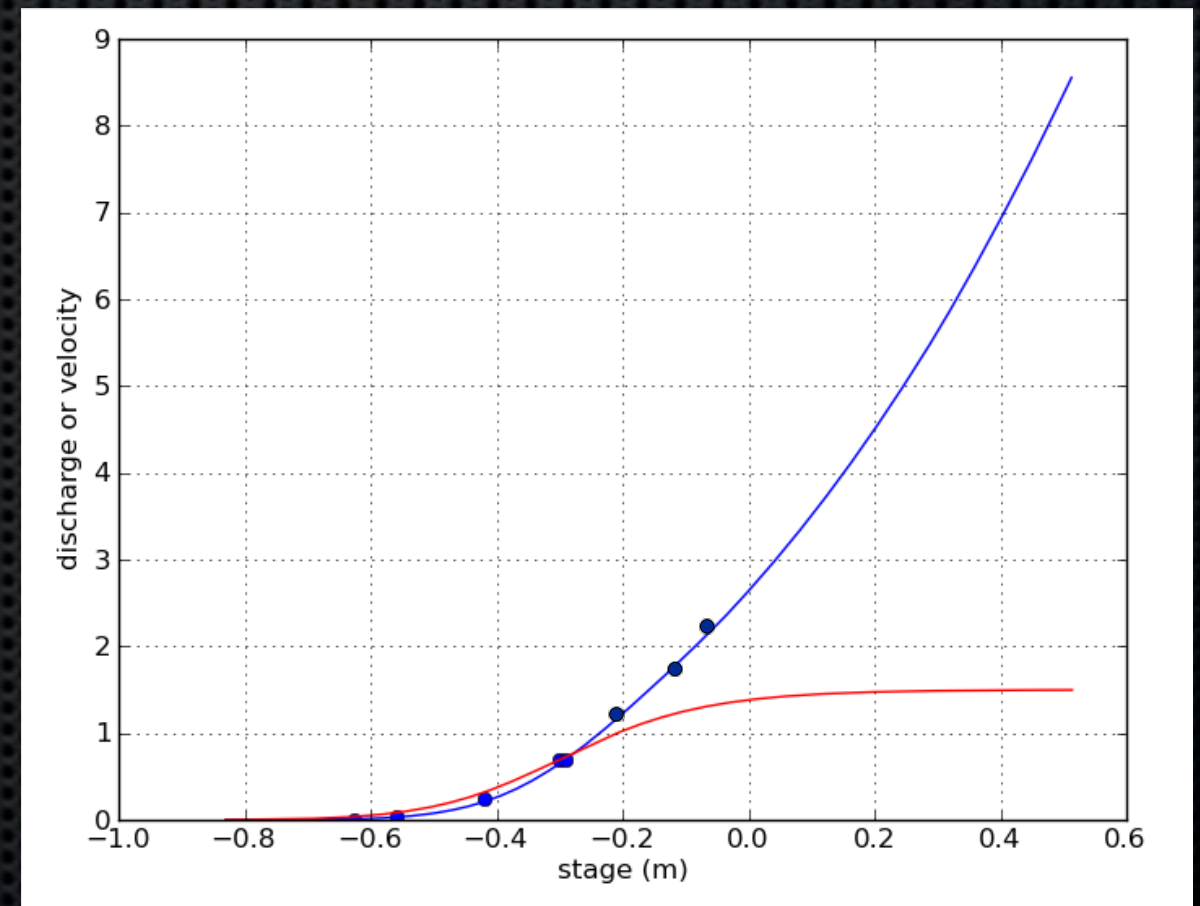
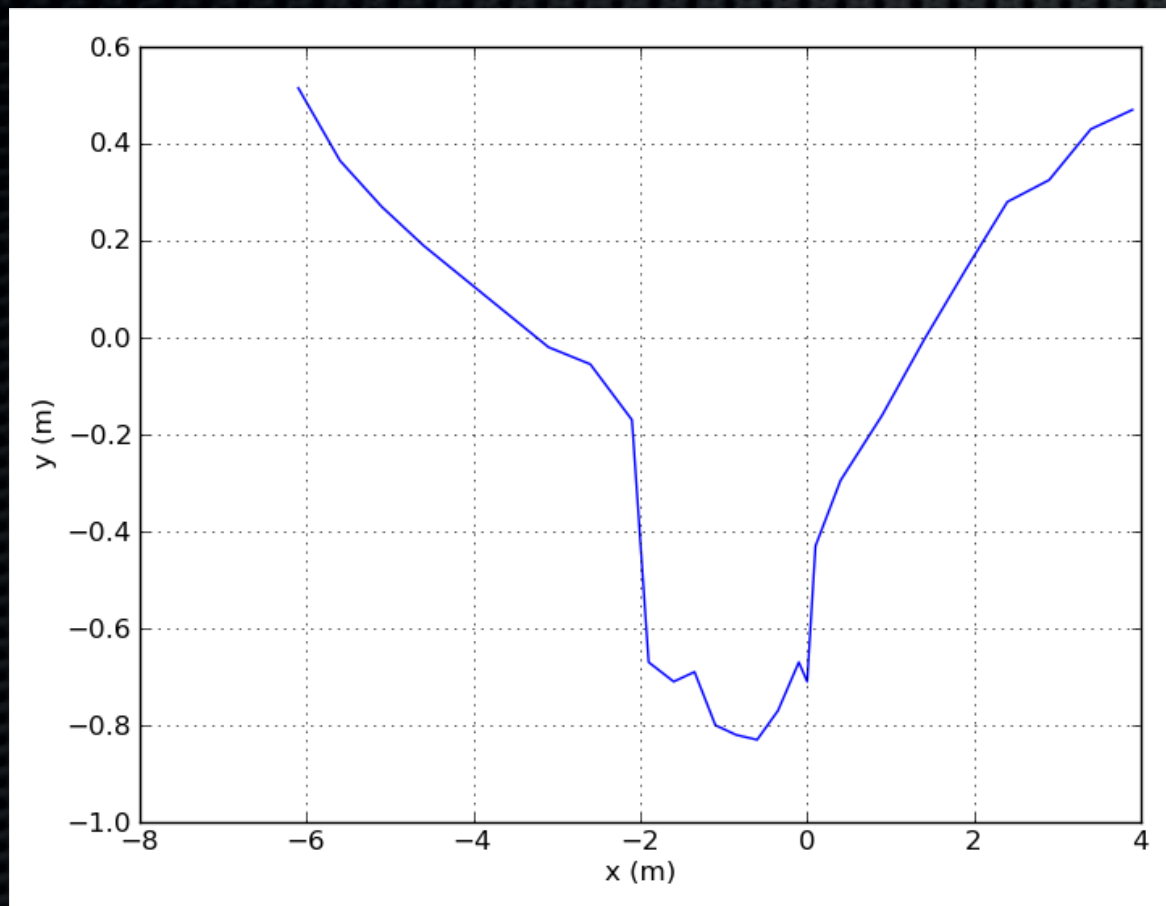


RAF 1

An offline storage pond

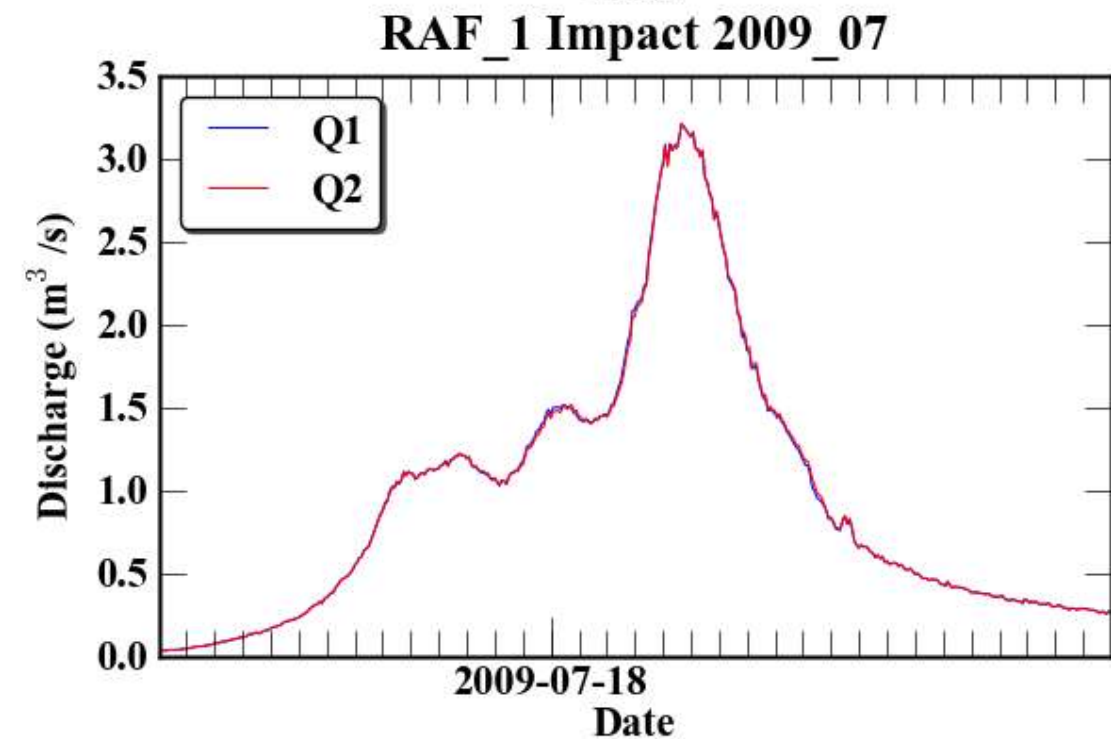
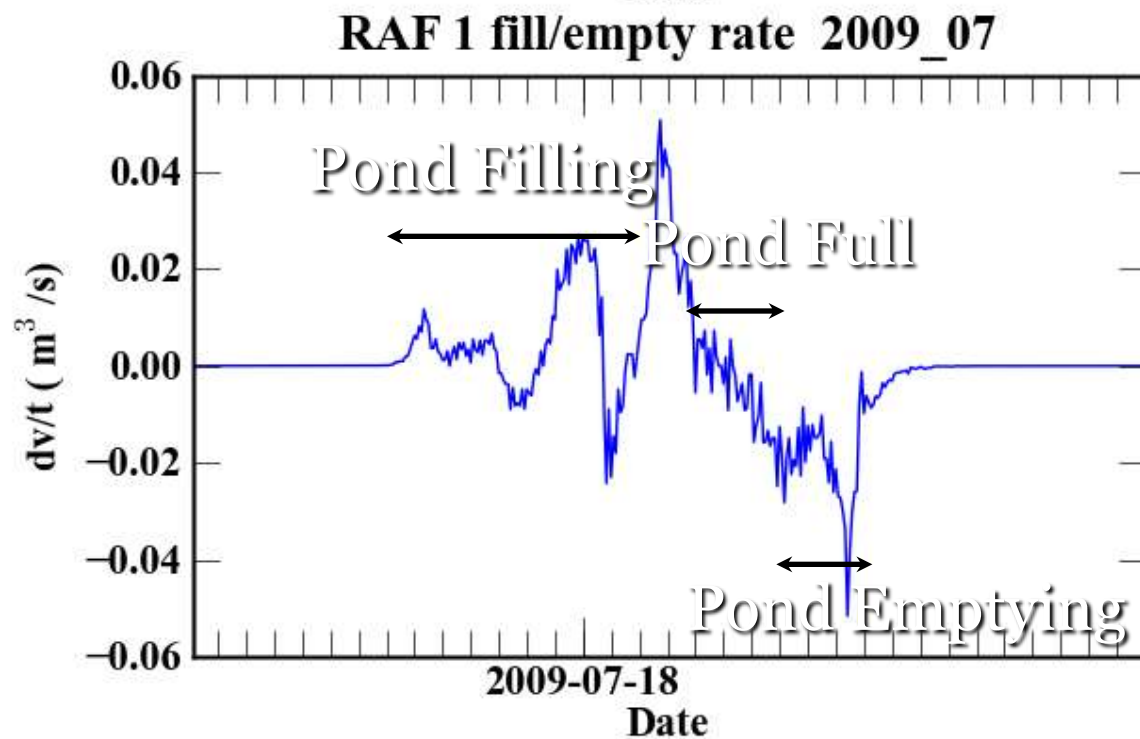
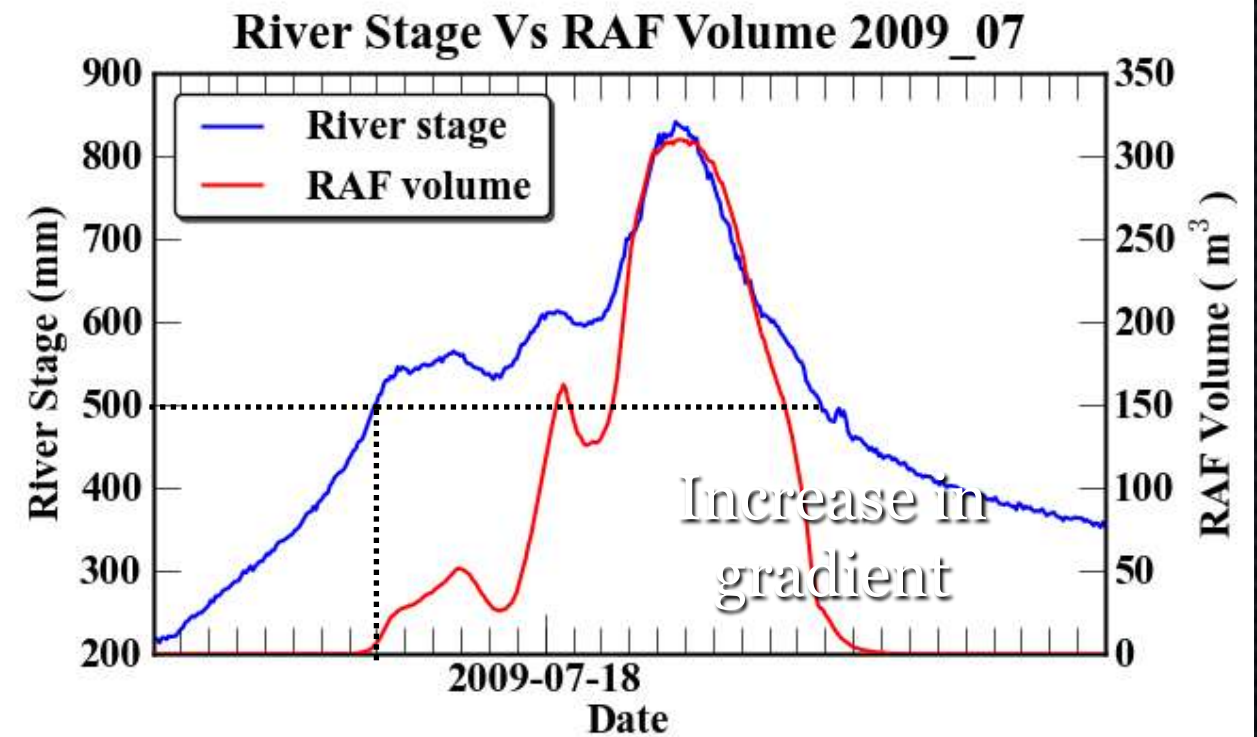
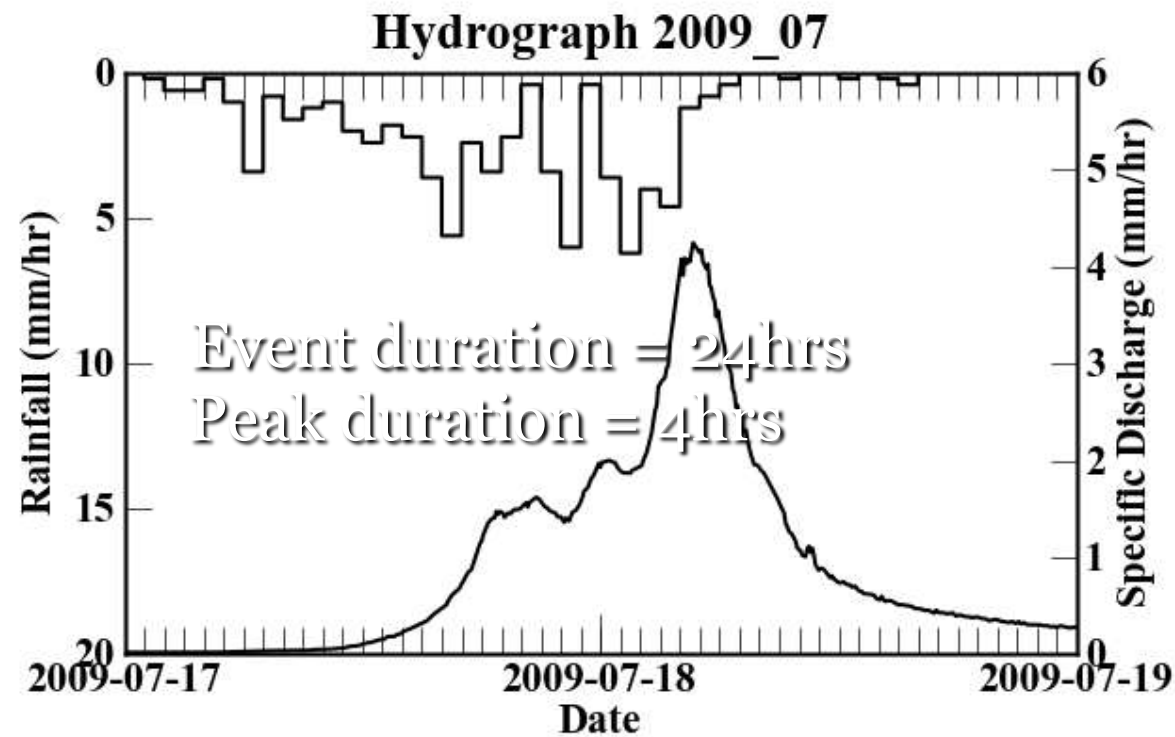


Catchment storage discharge detection tool:

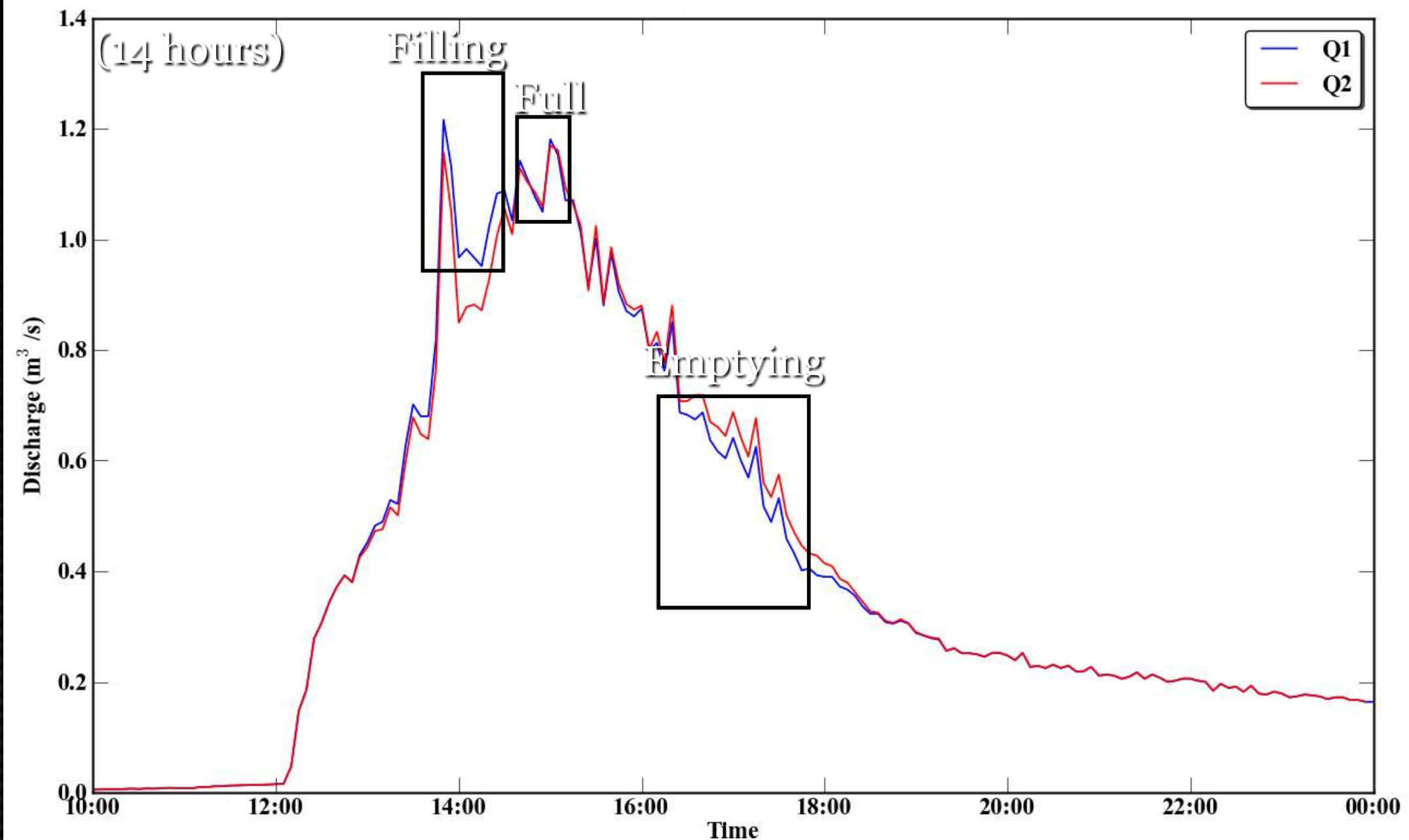


- Input:
- Raw data from Divers, barometers, raingauges & AWS
- Manual stage & flow measurements, cross-sections

Raw data analysis:

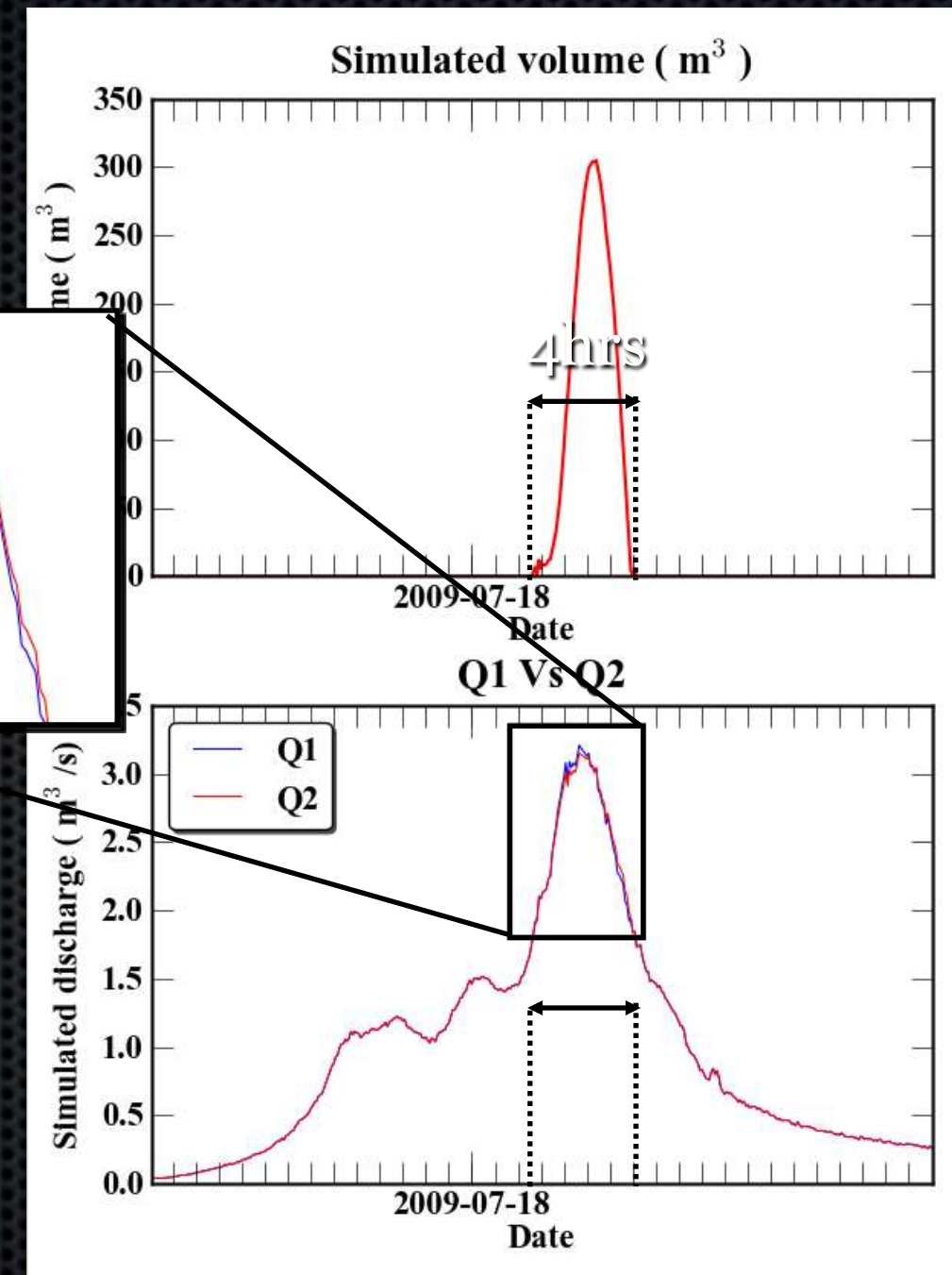
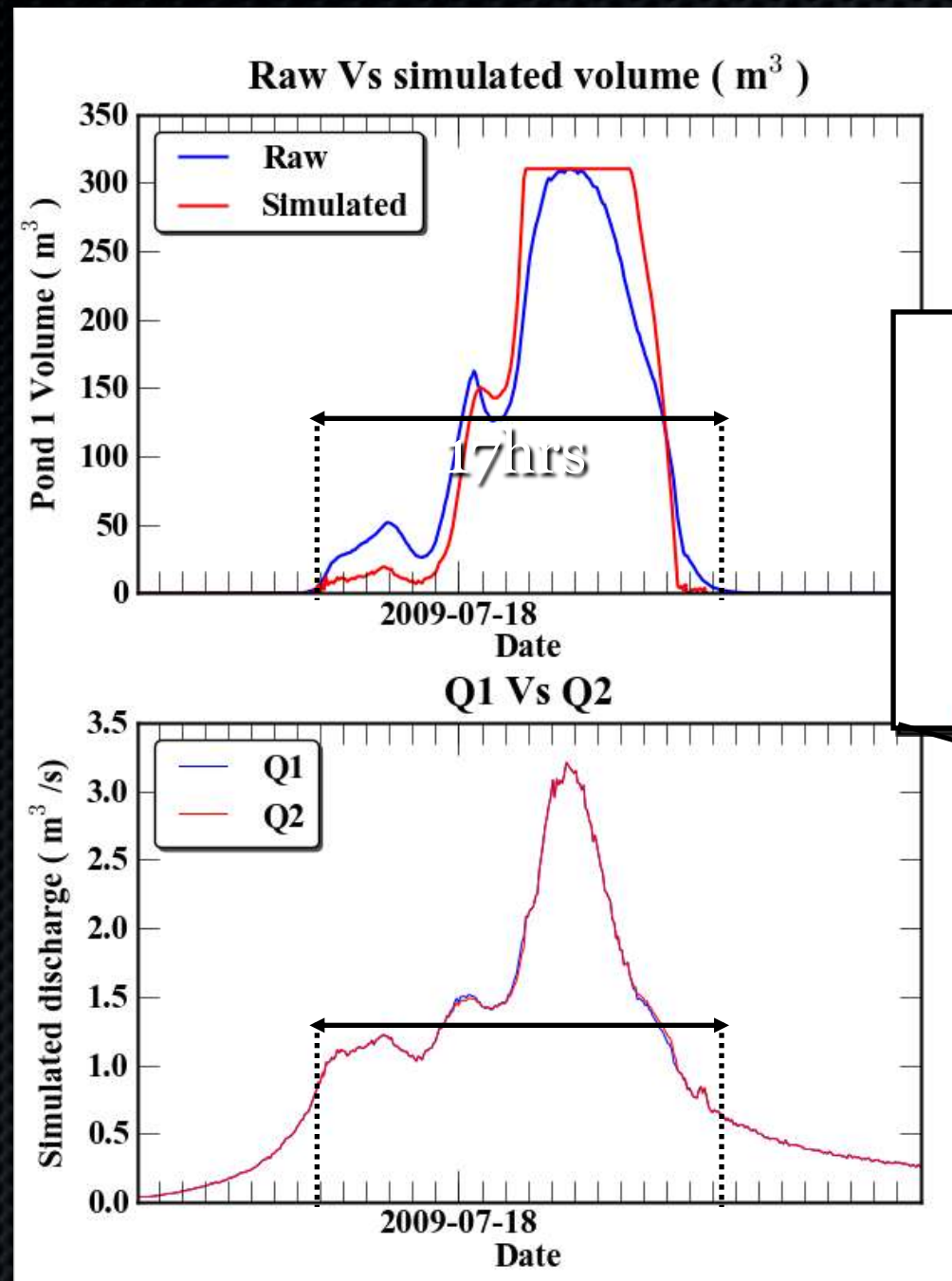


Pond impact - July 2009



Pond impact - November 2009
(Smaller storm event)

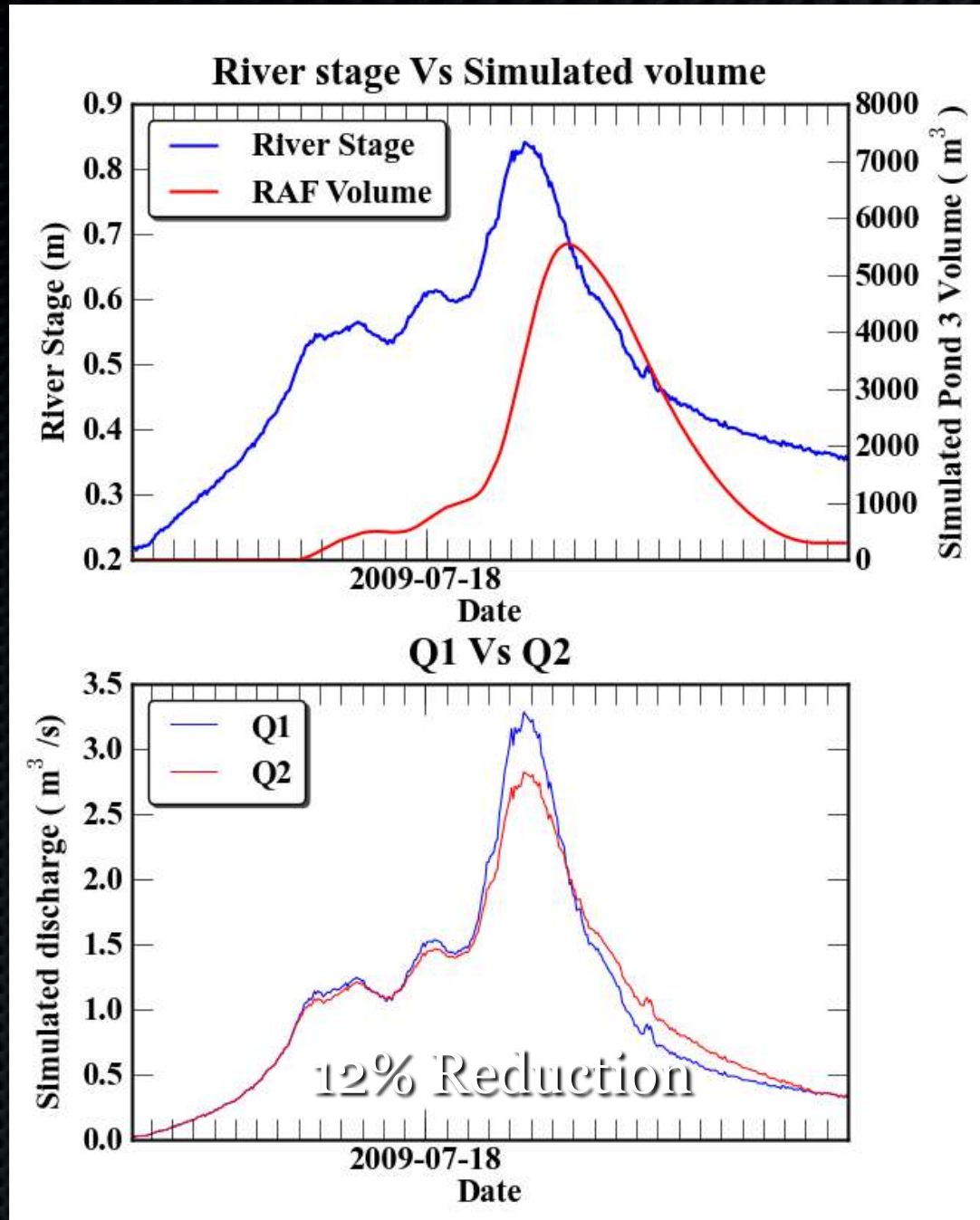
Pond forensics model:



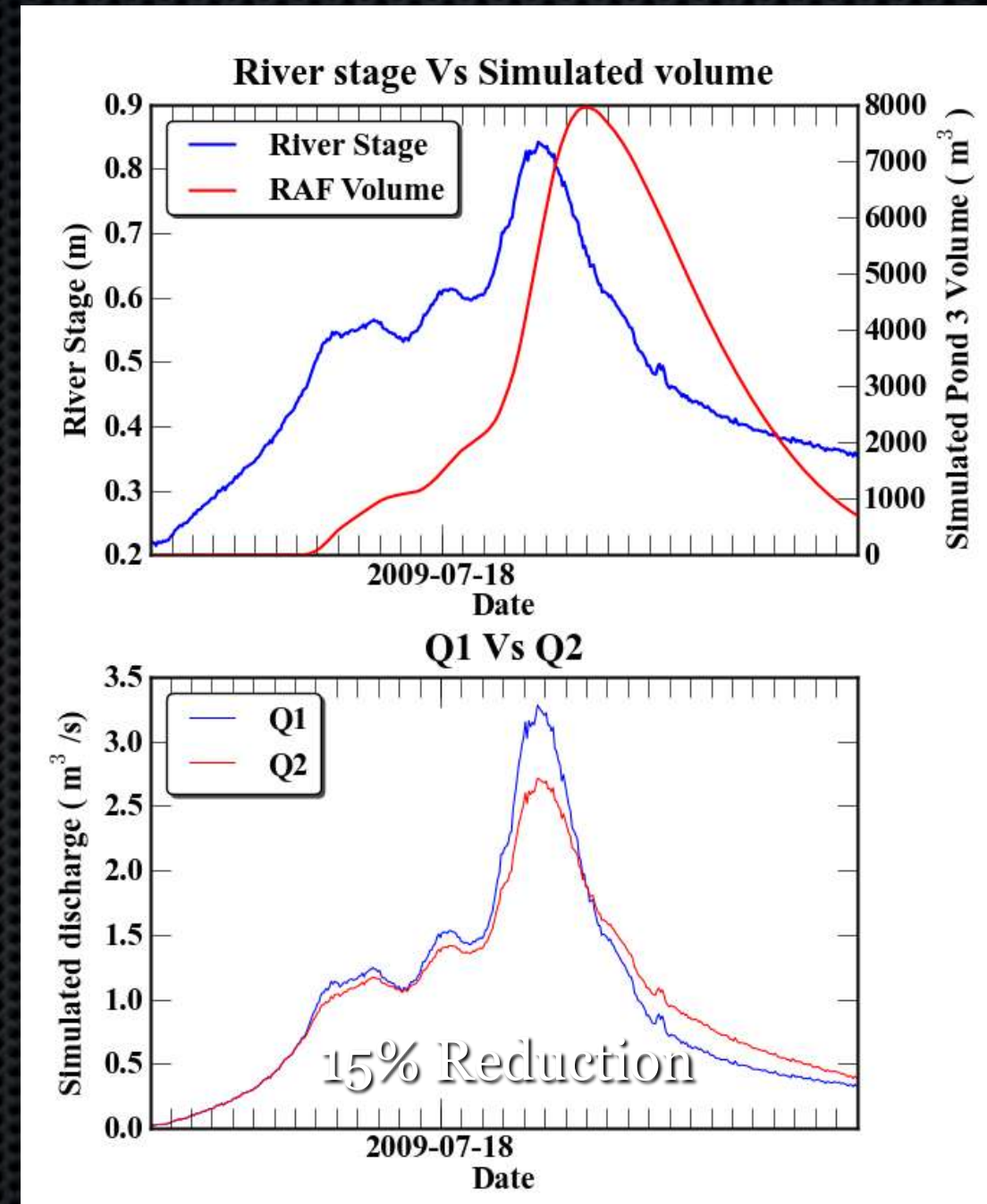
Current conditions:
Inlet height = 0.475m

Post change:
Inlet height = 0.65m

Big pond?

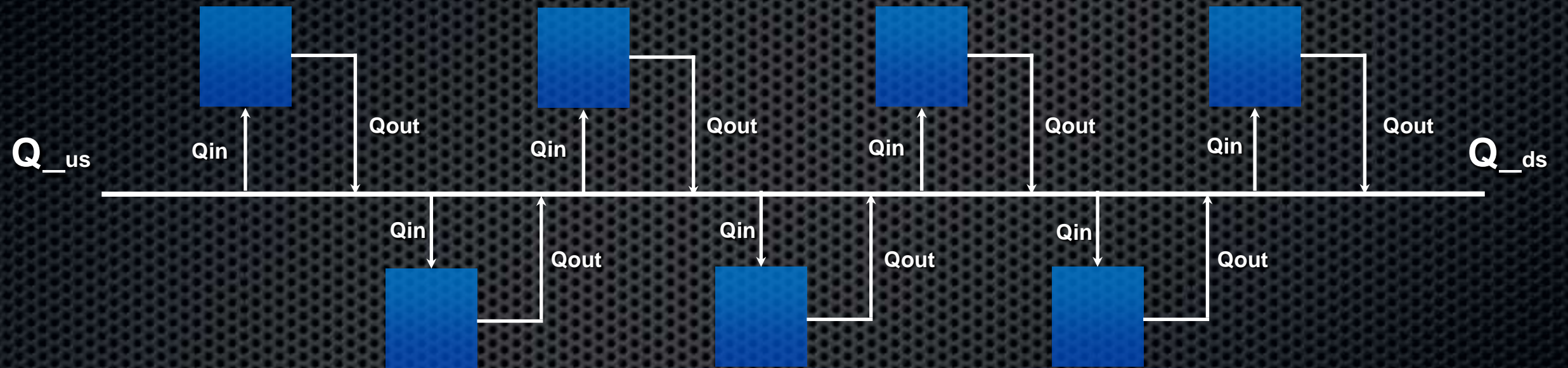


Volume = 6000m³
Inlet height = 0.475m

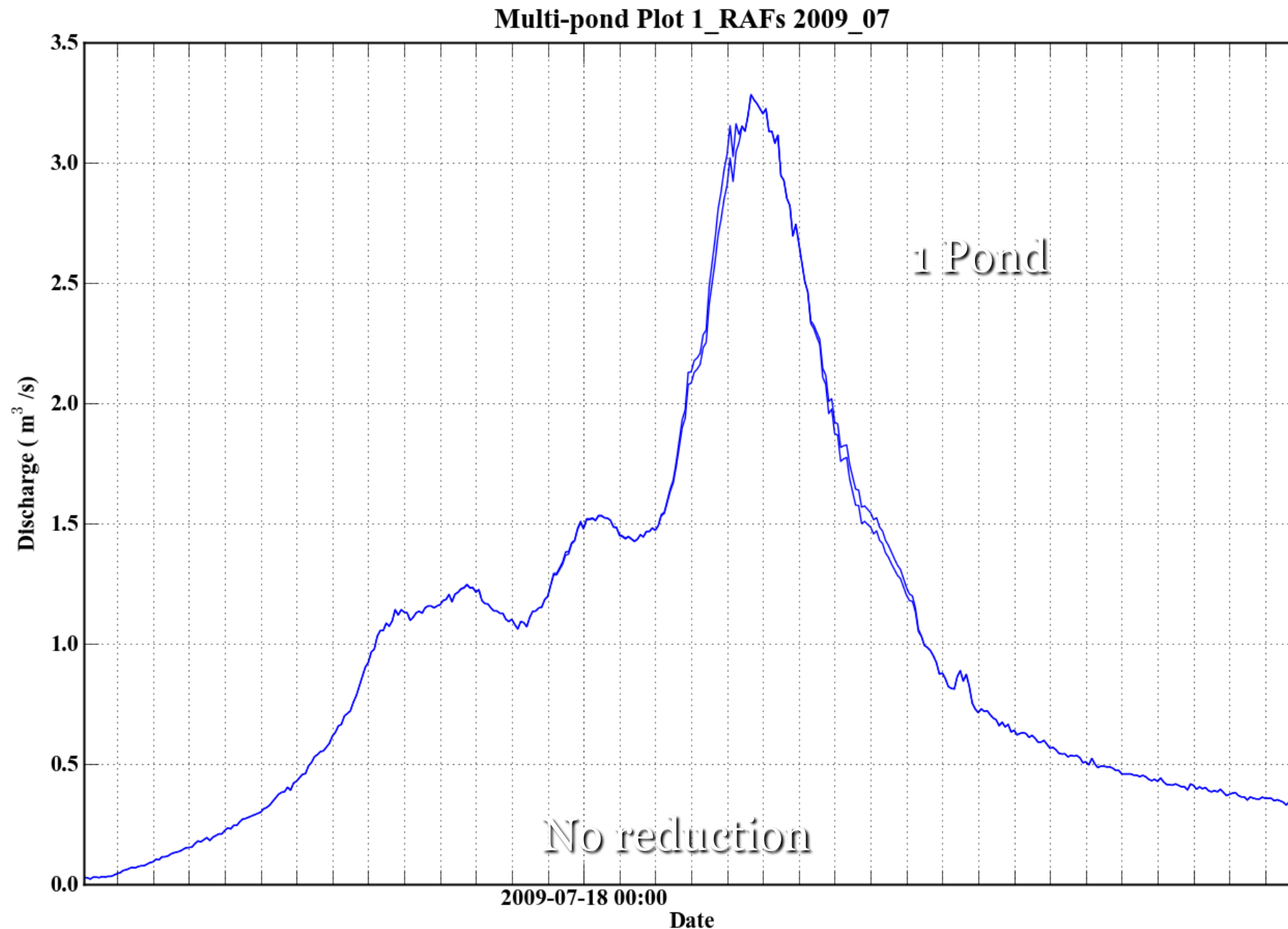


Volume = 8000m³
Inlet height = 0.43m

Pond Network Model:



Pond Network Model:

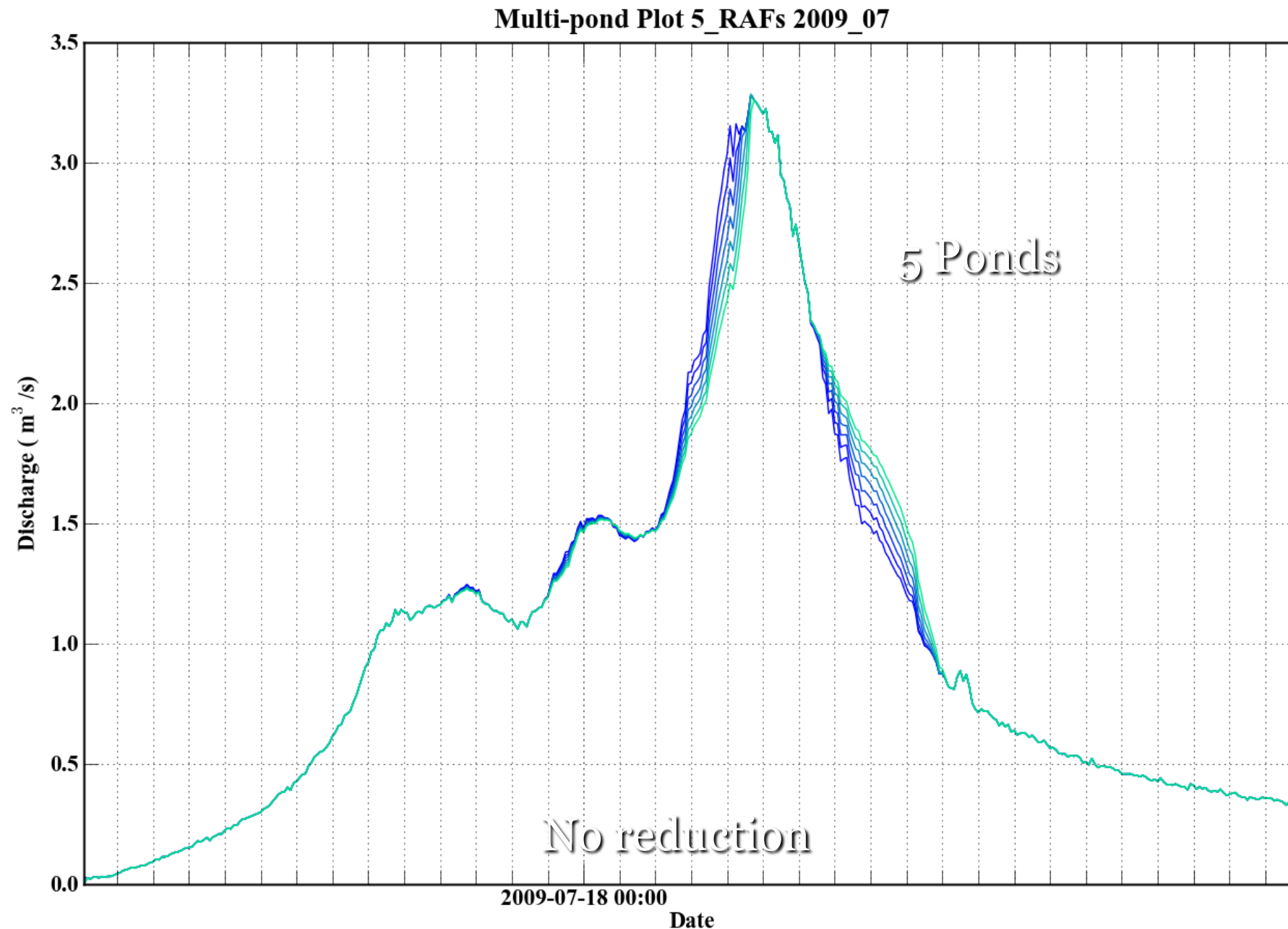


Post change:

Volume capacity = 560m^3

Inlet height = 0.55m

Pond Network Model:

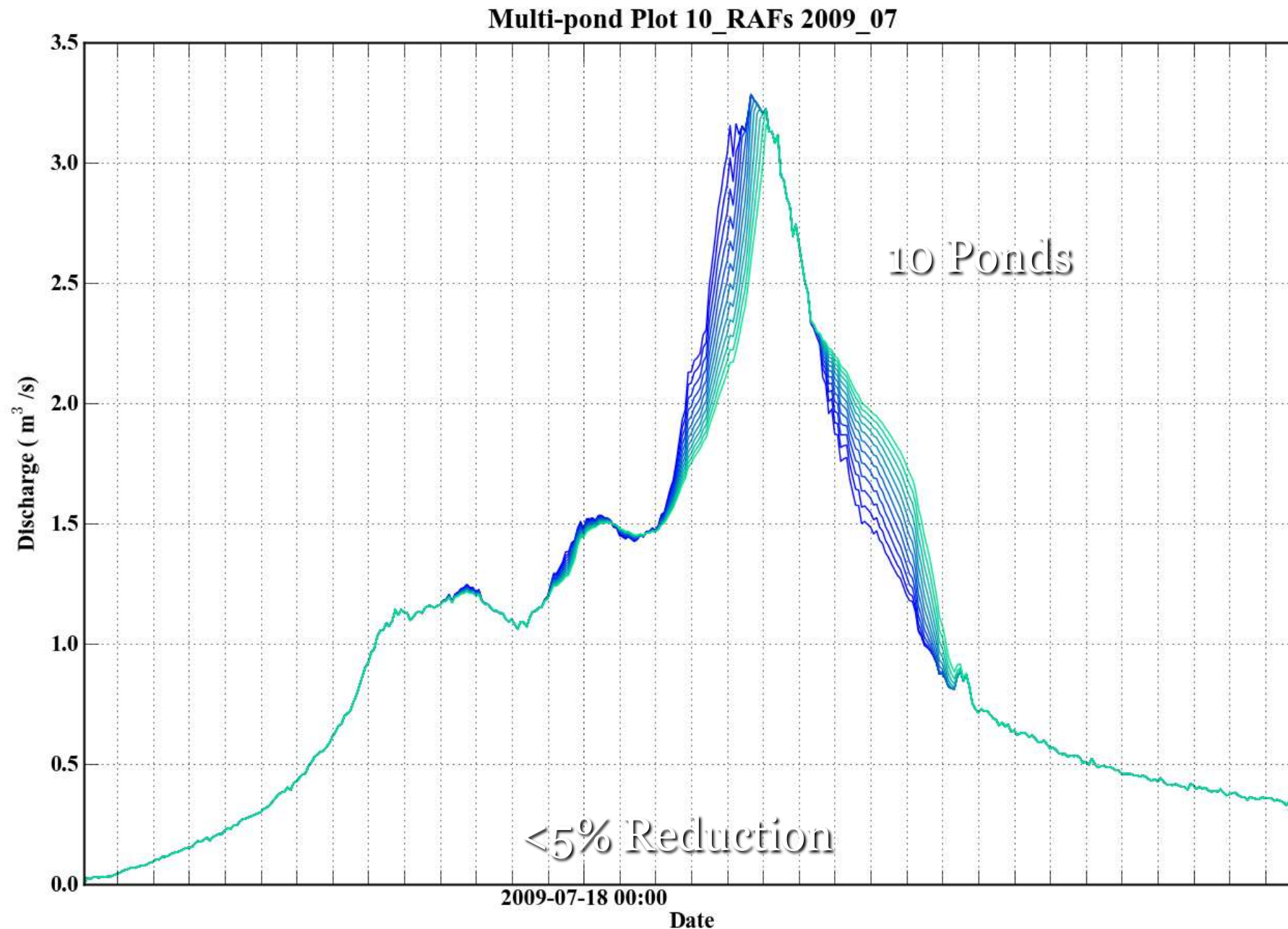


Post change:

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Inlet height = 0.55m

Pond Network Model:

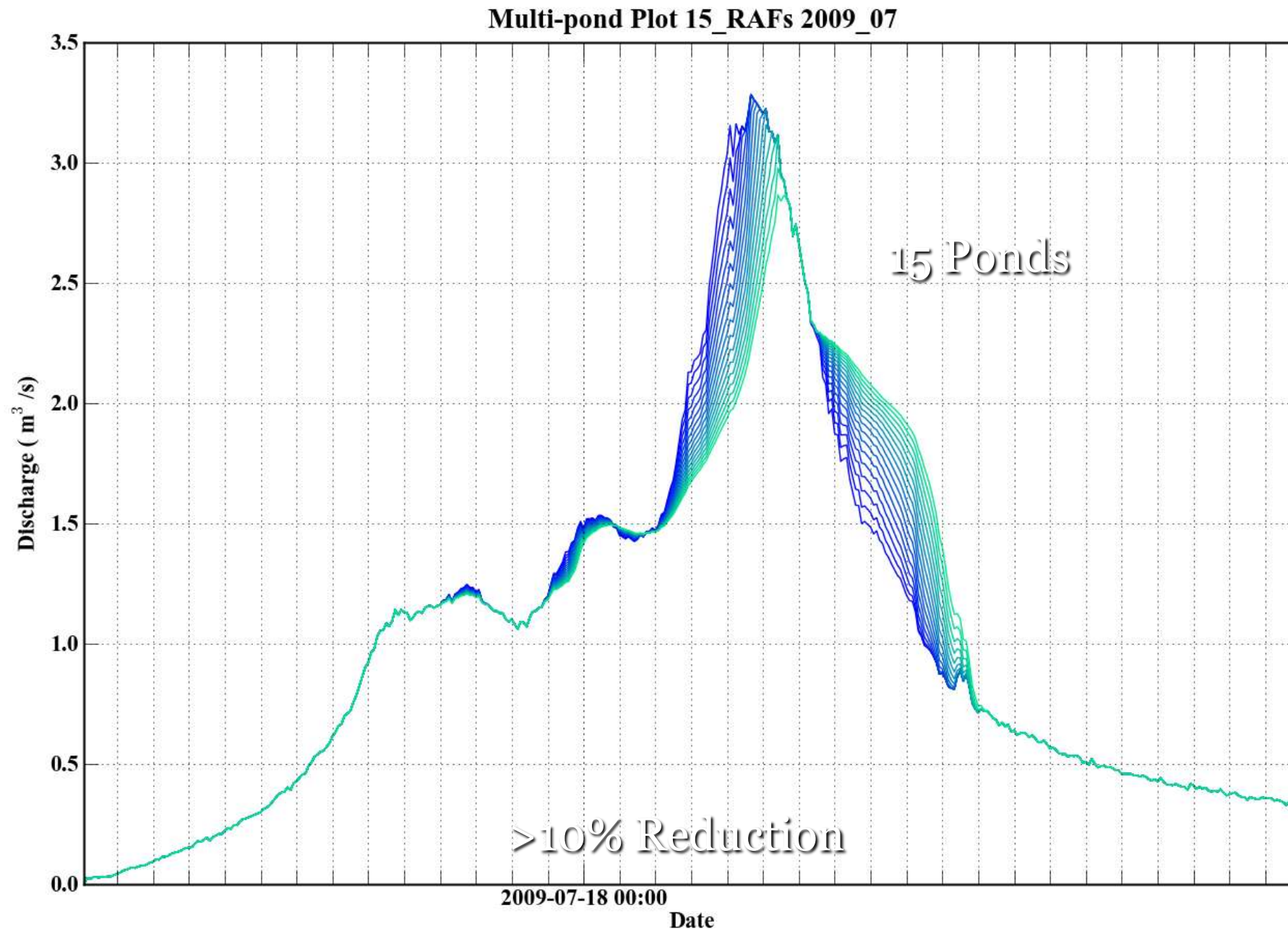


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Pond Network Model:

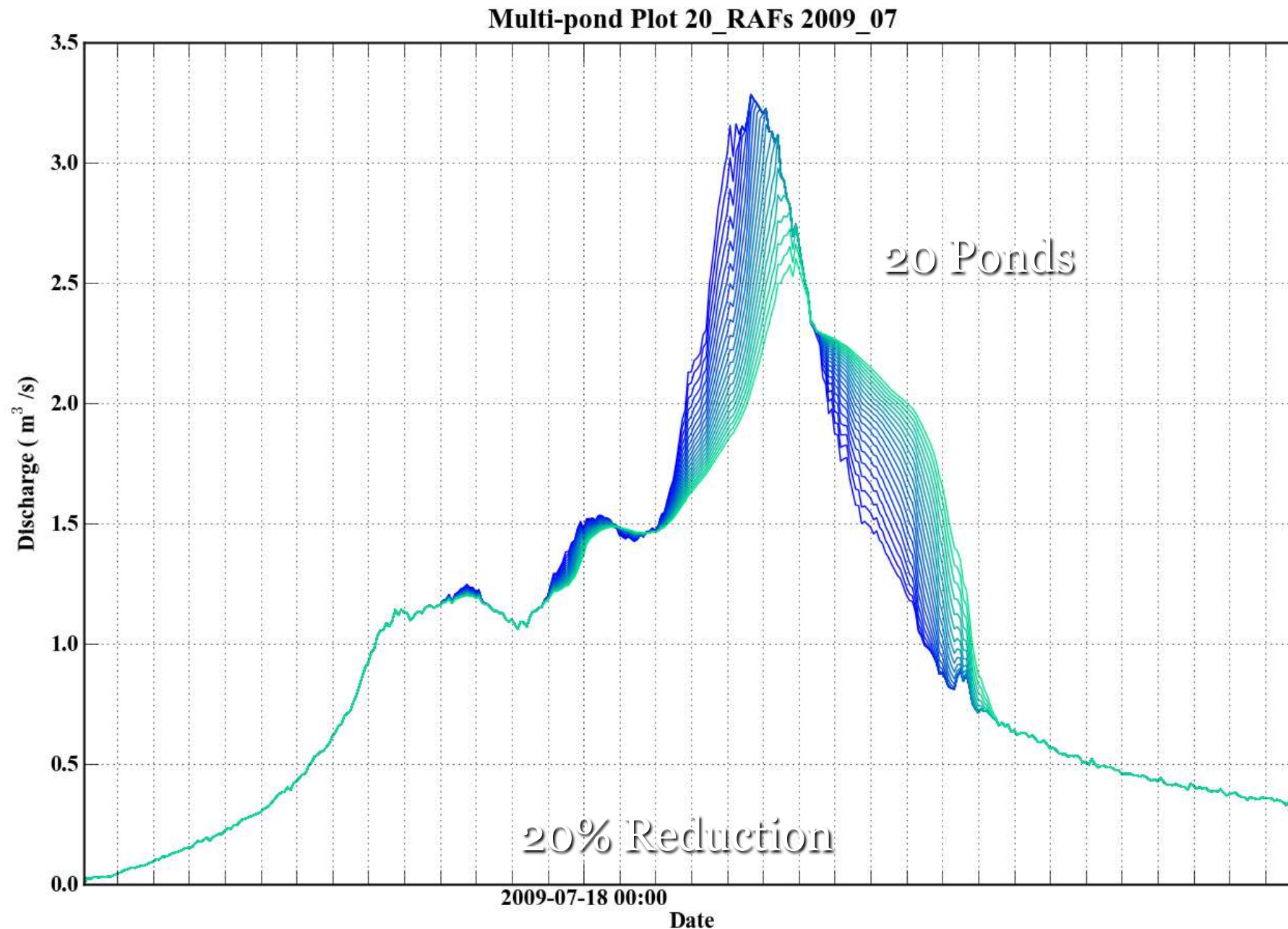


Post change:

Volume capacity = 560m^3

Inlet height = 0.55m

Pond Network Model:

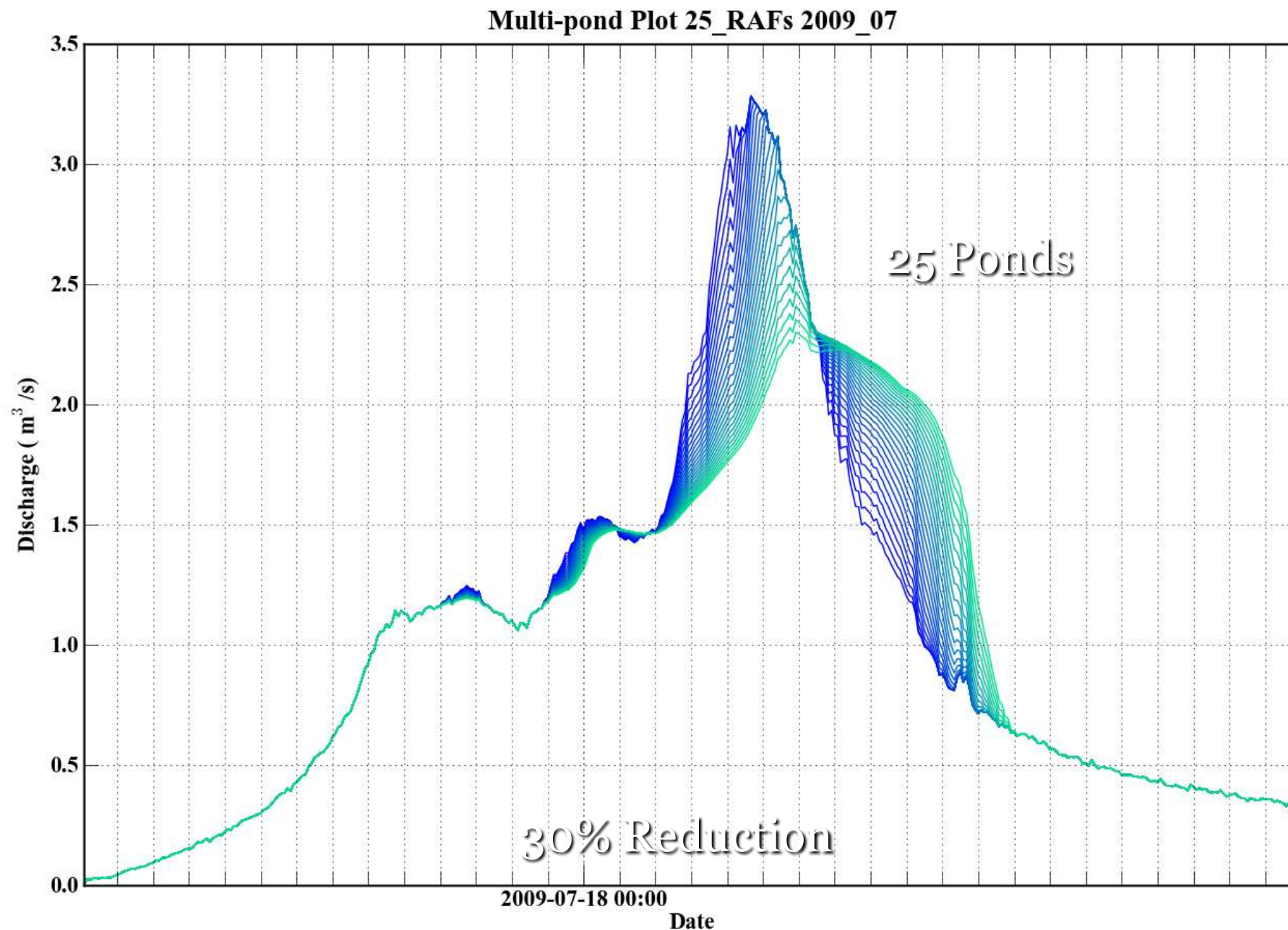


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Pond Network Model:

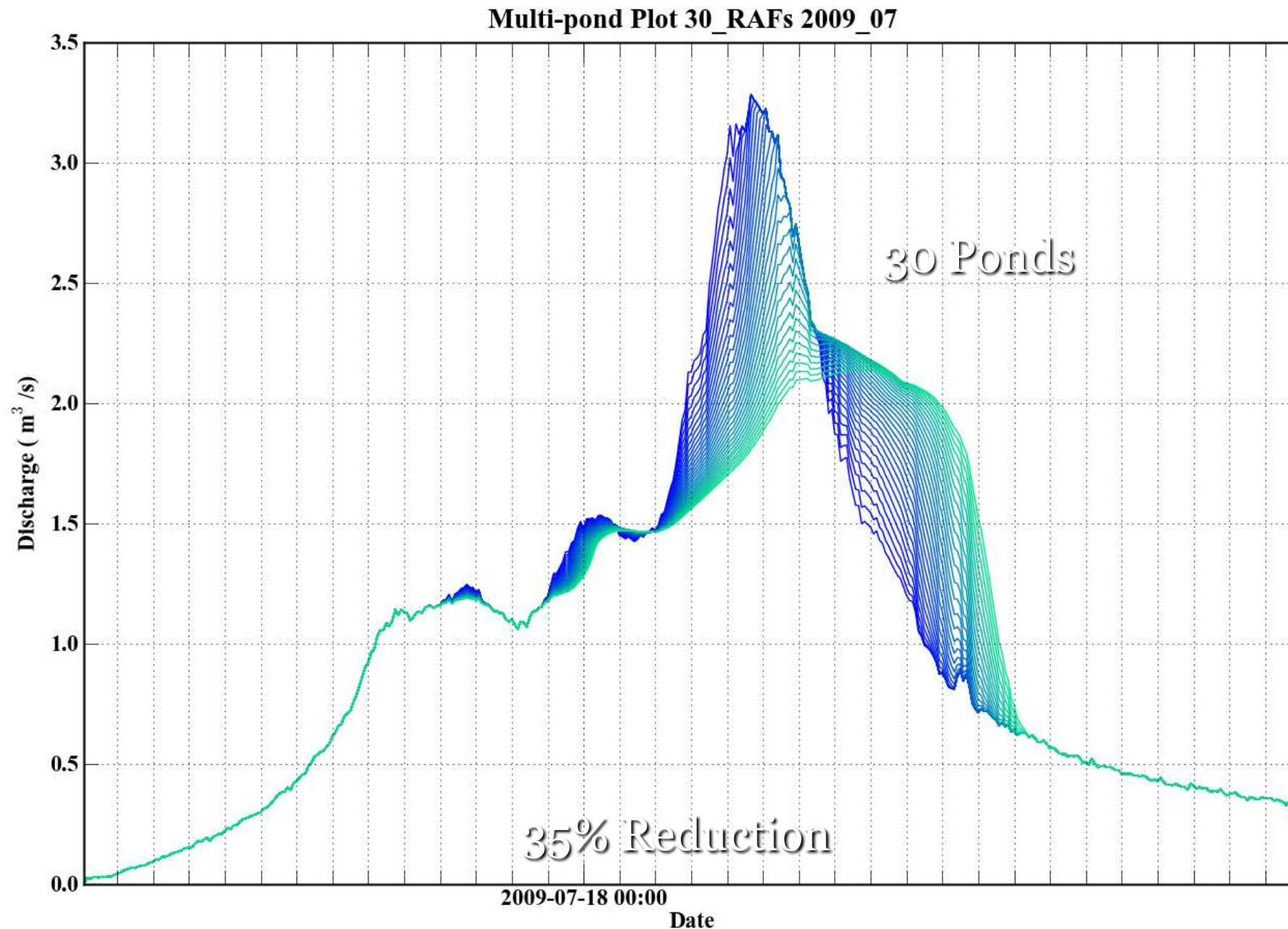


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Questions?



Belford Proactive Flood Solutions is an Environment Agency Project funded by the North East Local Levy, raised by the Northumbria Regional Flood Defence Committee through Local Authorities.

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