



Thurs 1-17-19

1. **Sample dataset**
2. **Matlab introduction**
3. **other.zip**
4. **Read notes_1.pdf, appendixa.pdf**
5. **Should have your data gathered by next Thurs (1/24)**

Sample Data

Tree-ring and hydroclimatic dataset

V1



11 series

V2



10 series

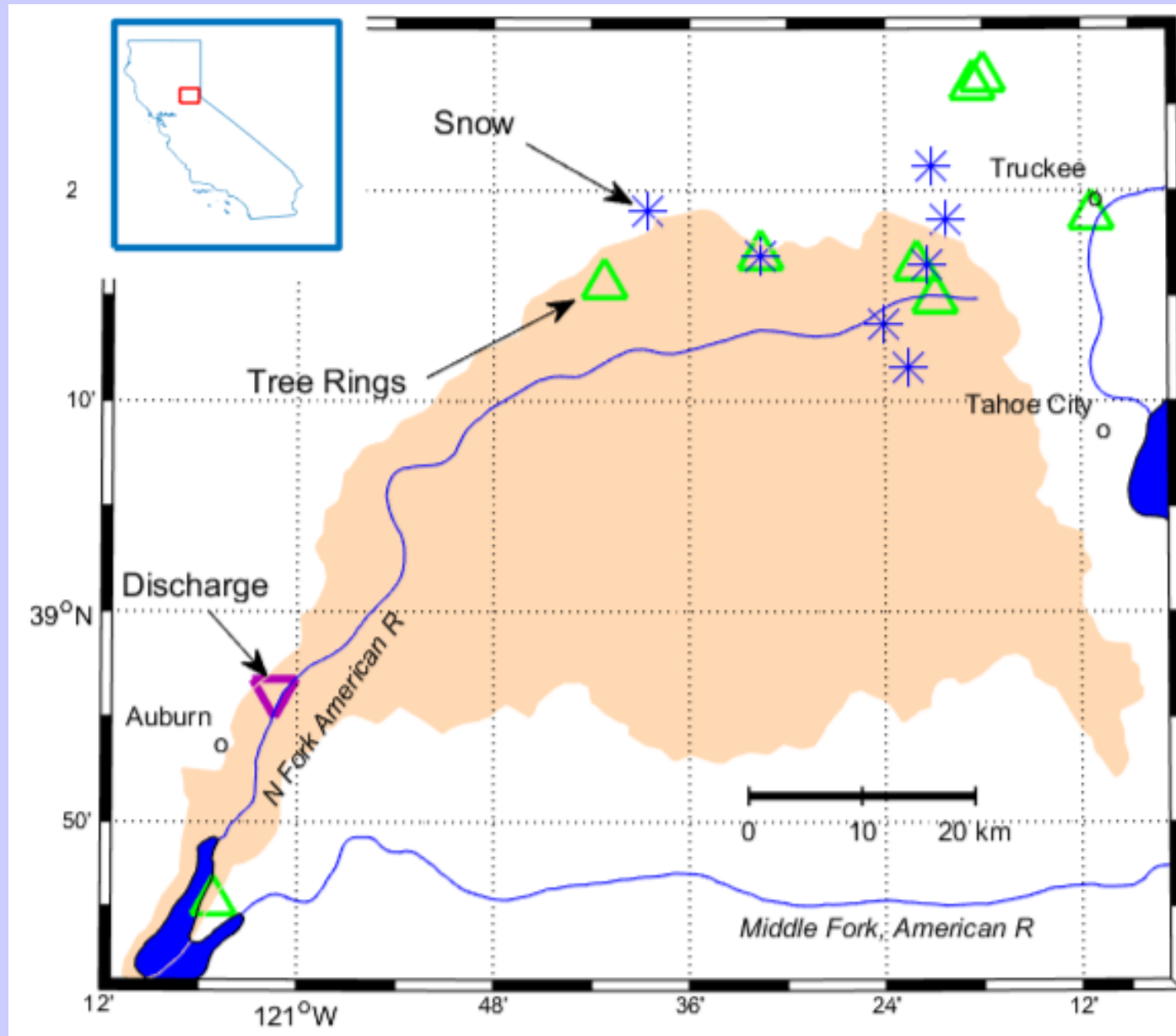
V3

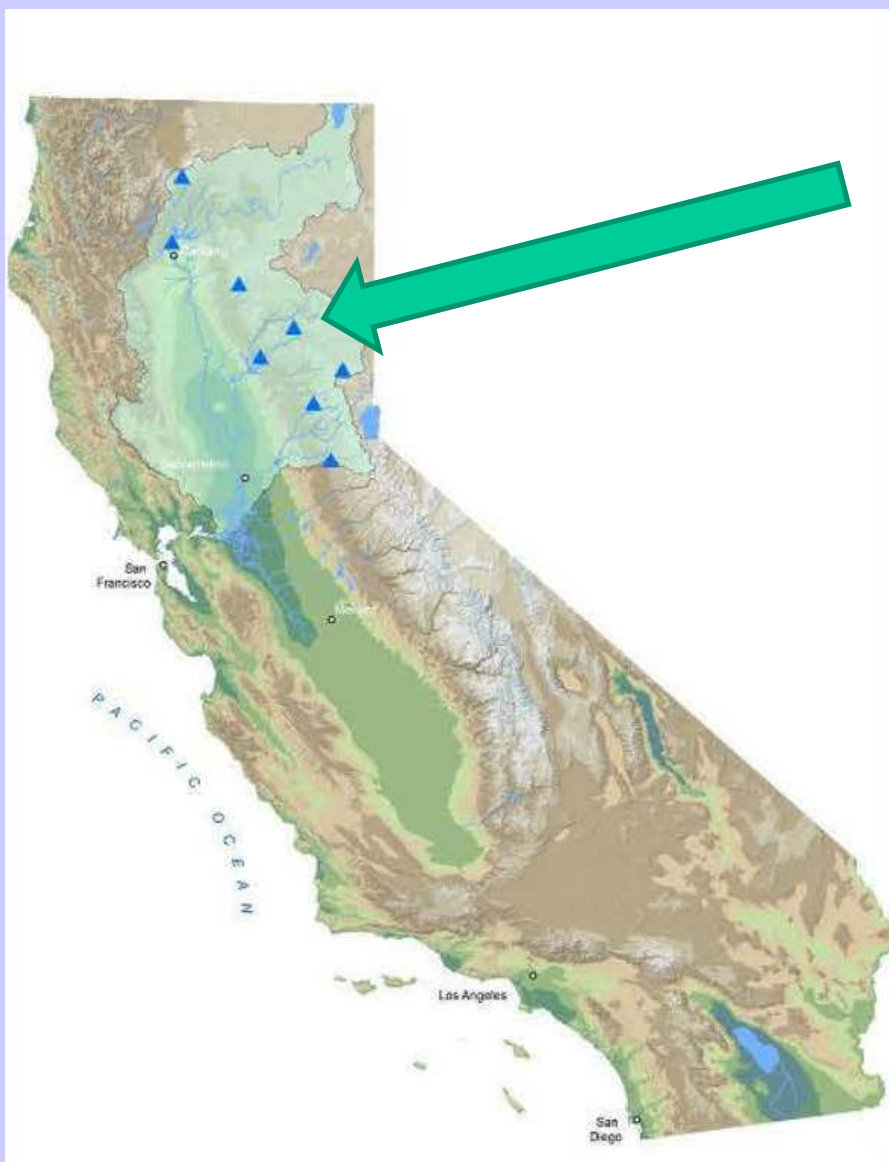


6 series

Note: you do not need so many series:
3 V1, 3 V2 and 2 V3 would suffice

Basin of North Fork American River





**Northern Sierra 8-
station precipitation
network
+
A few additional
miscellaneous time
series**

V1 = “output” = “response”

11 V1 series

'AMERICAN R AT FOLSOM'	{	River Discharge
'AMERICAN NF AT N FORK DAM'		
'Folsom Rec Area blue oak'		
'Onion Creek incense cedar'	{	Tree-ring Indices
'Huysink red fir'		
'Rocky Ridge juniper'		
'Fulma Creek P. pine'		
'Truckee pond. pine'		
'Truckee white fir'		
'Carpenter Ridge hemlock'		
'Carpenter Ridge red fir'		

V2 = “input” = “stimulus”

10 V2 series

precipitation

'NORTHERN SIERRA 8-STATION PRECIP INDEX'

'Onion Creek Apr 1 SWE'

'Wabena Meadows Apr 1 SWE'

'Huysink Apr 1 SWE'

'Talbot Camp Apr 1 SWE'

'Cottonwood Pass Apr 1 SWE'

'Castle Creek 5 Apr 1 SWE'

'Webber Peak Apr 1 SWE'

'Donner Summit Apr 1 SWE'

'Lake Spaulding Apr 1 SWE'

Snow water
content

V3: intended primarily to illustrate trend

6 V3 series

'Annual mean sunspot number'	}	misc.
'Nino 3.4 index, Nov-Apr mean'		
'CO2 concentration, annual average at Mauna Loa'		
'Ringwidth series AMR05C from site ca620.rwl'	}	ring width
'Ringwidth series AMR08B from site ca620.rwl'		
'Ringwidth series AMR37B from site ca620.rwl'		

The first Matlab script you run will expect:

3 tab-separated
data files

Make using Excel

3 \$-separated
metadata files

Write using text editor

Those files for the sample datasets ...

Scripts vs Functions

- Both are collections of matlab commands
- Both are used in the assignments
- Functions can be Matlab's or "user-written"
- No coding required in this course
- Best way to learn is by example
- Can see by way of script Tsp_examples.m and functions it calls

Script

1. One-time task
2. Variables in workspace

Function

1. Repetitive tasks
2. Variables in function space

- Use of functions to do lower-level repetitive tasks is structured programming
- Coding some tasks as function is time-saving in long run
- Online user-written function repositories are available and can save much work

other.zip

- Holds miscellaneous files
 - Pdfs of powerpoint slides from lectures
 - Demo scripts, functions and data used in lectures
- Cumulative
- Updated after every lecture
- Made available in D2L under Contents