

# Lab meetings

## Someday

Cho's goals

- ROSES
  - Work with the research office to improve the proposal
- ERDC
  - Start a pre-proposal
- SWE
  - Literature review
- AGU abstracts
  - POSE
  - SWE
- Dr. Srinu for SWAT
- POSE GRASS workshop
- Asad
  - Revisit the culvert capacity discussion
- NMCAMP weekly maps

## 2024-07-08

Mahesh

- LSTM1D (spent 16 hours, 12 hours)
  - Throws an exception (TensorFlow cannot be interpreted as an integer)
- Literature review (spent 4 hours)
- GRASS (8 hours)

Asad

- CAMP
  - Culvert ID script
    - Sent to NMDOT
    - Waiting for their response about AGOL profiles
  - Frequency analysis
    - PeakFQ (10 hours)
  - Calculate the culvert capacity (10 hours): [Hydraulic Design of Highway Culverts 3rd Edition](#)
  - [CAMP \\*report\\*](#) (spent 2-3 hours)
  - DL-FIM (0 hours) [dl4fim](#)
- Publication ⇒ Thesis
  - Important
- AGU abstract
  - Data: [NFHL REST Services](#)

## Abdullah

- WRRRA
  - Scripting for weather forcing is complete
    - Started on Friday 7/5: Precipitation, min/max temperature, wind velocity into our VIC grid
  - Completed
    - Soil
    - LAI
  - TODOs
    - Global parameters (10 hours)
  - Working
    - Elevation in soil: Aggregate USGS 10m DEM and replace the elev column in the soil input file (10 hours)
- DISES
  - Field trip (20 hours)
    - Write down your questions for modeling
    - Ask very specific questions about data
    - Questions for stakeholders
      - Water supply sources for El Rito
      - Any water diversions in El Rito
  - Completed on Overleaf
    - Issue documentation
    - How to reproduce everything
- HEC-RAS 2D floodway (wants to publish it ASAP)
  - Chattahoochee model, but we changed the study site to Ruidoso, NM
  - Ruidoso
    - Hourly precipitation data for rain-on-grid modeling
    - If not possible, we'll use hourly hydrograph for the downstream of the USGS gage
  - Basic model ready
    - 1m DEM
    - Chattahoochee River (250m-long river section)
  - TODOs
    - Encroachment
    - Hydrograph
    - Study rhdf5 (R library)
- Working
  - AGU abstract

## 2024-06-24

### Mahesh

- SWE
  - Complete the training (8 hours spent)
  - Literature review & summary (0 hours spent)
  - NSE (12 hours spent, 8 hours)
  - Forecasting for the proposal (12 hours, plan to finish it by Wednesday)
    - Expected output: A text file with observed and predicted SWE time series

## Asad

- CAMP
  - Regression raster calculations (5 hours spent)
    - Done in GRASS GIS
  - Documentation (0 hours spent, 4 hours)
    - Spent time on publication (NO! NMDOT doesn't pay for your publication and thesis)
    - This time is for the [CAMP \\*report\\*](#).
  - Frequency analysis (8 hours)
  - Calculate the culvert capacity (0 hours spent waiting for q\*.tif, 8 hours): [Hydraulic Design of Highway Culverts 3rd Edition](#)
  - DL-FIM (0 hours) [dl4fim](#)
- Publication ⇒ Thesis
  - Important
- AGU abstract

## Abdullah

- WRRR
  - Prepare VIC inputs (30 hours)
    - Completed
      - Soil
      - LAI
    - Working and TODOs
      - Weather forcing
      - Global parameters
      - Elevation in soil: Aggregate USGS 10m DEM and replace the elev column in the soil input file
  - Literature review for the proposal (0 hours)
    - 2-3 hours last week
- DISES: Documentation (10 hours)
  - On Overleaf
  - Last week's work
    - Issue documentation
    - How to reproduce everything
- HEC-RAS 2D floodway (wants to publish it this year)
  - Basic model ready
    - 1m DEM
    - Chattahoochee River (250m-long river section)
  - TODOs
    - Encroachment
    - Hydrograph
    - Study rhdf5 (R library)
- AGU abstract

## 2024-06-17

### Cho's goals

- NSF ROSES

- Complete section 3a
- ERDC
  - Select an appropriate program
  - Start a literature review
- POSE
  - macOS CMake

#### Abdullah's goals

- WRRRA
  - Prepare VIC inputs (25 hours)
  - Literature review for the proposal (5 hours)
- DISES: Documentation (10 hours)
- HEC-RAS 2D floodway (wants to publish it this year)
  1. Identify the study area and resolution
  2. Make a HEC-RAS 2D model

#### Asad's goals

- CAMP
  - Complete the regression raster calculations (2 hours)
  - Documentation (10 hours)
  - Calculate the culvert capacity (8 hours)
- Publication ⇒ Thesis
  - Important

#### Mahesh's goals

- SWE
  - Complete the training (5 hours)
  - Literature review & summary (15 hours)

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<https://hydrowiki.isnew.info/> - **HydroCS Wiki**

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