**Implementation Instructions for NLDAS\_V2.5.2:**

It should be noted that newly added three source codes are represented in bold)

1. Check out the whole package from <https://svnemc.ncep.noaa.gov/projects/nldas/trunk/nldas.v2.5.>2
2. Compile the codes using compile.sh and install.sh in sorc directory to compile and install all codes. The sorc code directory and its role are described below:

cpc\_precip\_convert.fd – convert CPC precipitation into the format the system requires

nldas\_prep.fd – generate current operational NLDAS v2.0 forcing

**nldas\_precip.fd –** use CPC daily gauge precipitation, Stage II, and NAMv4 to generate hourly precipitation

**nldas\_namrr.fd –** Merge hourly precipitation with NAMv4 reanalysis data to produce NLDAS v2.5.2 hourly intermediate forcing

**nldas\_nam.fd –** Use 13-36 hour NAM forecast product to produce last one-day NLDAS v2.5 hourly intermedia forcing

nldas\_noah\_ldas.fd – run noah model

nldas\_mosaic\_ldas.fd – run mosaic model

nldas\_sac\_ldas.fd – run sac model

nldas\_vic\_ldas.cd – run vic model

nldas\_vic\_prep.cd – run vic pre-pre-processor

nldas\_vic\_post.fd - run vic post-processor

nldas\_rout.fd – run river routing model

1. Build the "ecflow" files according to my examples in the "lsf" directory.
2. The system only runs once per day (12Z). The prep1 job could start once the operational jrcdas\_post job is complete. Run JNLDAS\_PREP1 first and then run JNLDAS\_PREP2 to produce nldas hourly forcing.
3. Please set up the triggers according to the job dependency chart provided along with the RFC. As mentioned in 4), the jnldas\_prep1 job should be the first one to run, the jnldas\_prep2 job should be the second one to run (it should be triggered off the completion of the jrcdas\_post).
4. Since the models need the RCDAS data to generate the forcing, and the RCDAS runs 3 days behind the current day, the NLDAS v2.0.5 models usually run 3-4 days behind the current PDY. For NLDAS v2.5.2, we have achieved real-time with a zero day lag.
5. Use Convert\_Initials.sh and Convert\_forcing\_model.sh in util/convert directory to obtain initials and some forcing/model data from /come/nldas to setup initial NLDAS v2.5.2 run

Resource Usage:

All the jobs in this NLDAS system will be running in serial mode (i.e. using only one task, can be shared with other jobs). Total runtime is around 200 minutes:

jnldas\_prep1: 15 minutes

jnldas\_prep2: 20 minutes

jnldas\_noah: < 10 minutes

jnldas\_mosaic: < 10 minutes

jnldas\_vic: 180 minutes

jnldas\_sac: < 5 minutes

jnldas\_rout\_noah: < 5 minutes

jnldas\_rout\_mosaic: < 5 minutes

jnldas\_rout\_vic: < 5 minutes

jnldas\_rout\_sac: < 5 minutes

Disk Usage:

Total disk usage is about 3.5 GB per day. We would like to keep the NLDAS data in /com area for up to 10 days. And all the data in com should be archived to HPSS.