MOCABORS site simulation description

Sites: Three MOCABORS sites in southern Norway are needle leaf boreal forest ecosystem. For the soil texture experiments, only Hurdal site was simulated.

Hurdal	60.366N	11.066E
Tingvoll	63.007N	8.02E
Loeten	60.858N	11.435E

Forcings: GSWP3 data are recommended for CLM5 simulations. Forcings are extracted for the three MOCABORS sites. RCP4.5 and RCP8.5 scenarios are used for future simulations. The precipitation was manipulated using observational data from met.no and modified only precipitation.

Simulation period: 1900-2005 (transient climate), 2005-2100 (RCP4.5 and RCP8.5 simulations). For the climate experiment, only transient climate simulations were conducted (1901-2010). For the soil texture manipulation experiments, only the transient climate simulations were conducted.

Vegetation: Total vegetation cover is manipulated to 100% for the sites that does not have 100% cover.

Soil texture manipulation: Three different soil textures are used based on the surface data and observations from Strand et al. (2016).

    Loam: 21% clay, 47% sand
    Sandy clay loam: 25% clay, 52% sand
    Sandy loam: 5% clay, 62% sand

Strand L.T., Callesen I., Dalsgaard L., de Wit H.A. 2016 Carbon and nitrogen stocks in Norwegian forest soils – the importance of soil formation, climate, and vegetation type for organic matter accumulation, Can. J. For. Res. 46: 1–15. dx.doi.org/10.1139/cjfr-2015-0467.

See below for the list of all output variables from the simulations.

netcdf file CLM5 output variable list and description of the output data.

dimensions:

    gridcell = 20975 ;
    landunit = 77378 ;
    column = 255134 ;
    pft = 590734 ;
    cohort = 1678000 ;
    levgrnd = 15 ;
    levurb = 5 ;
    levlak = 10 ;
    levsno = 5 ;
    levsno1 = 6 ;
    levtot = 20 ;
    numrad = 2 ;
    levcan = 1 ;
    string_length = 64 ;
    ntapes = 1 ;
    max_chars = 128 ;

variables:

    int timemgr_rst_nstep_rad_prev ;
        timemgr_rst_nstep_rad_prev:long_name = "previous_radiation_nstep" ;
        timemgr_rst_nstep_rad_prev:units = "unitless positive integer" ;
        timemgr_rst_nstep_rad_prev:interpinic_flag = 3 ;
        timemgr_rst_nstep_rad_prev:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        timemgr_rst_nstep_rad_prev:varnames_on_old_files = "timemgr_rst_nstep_rad_prev" ;
        timemgr_rst_nstep_rad_prev:_FillValue = -999999999 ;
        timemgr_rst_nstep_rad_prev:missing_value = -9999 ;
    int timemgr_rst_type ;
        timemgr_rst_type:long_name = "calendar type" ;
        timemgr_rst_type:units = "unitless" ;
        timemgr_rst_type:interpinic_flag = 3 ;
        timemgr_rst_type:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        timemgr_rst_type:varnames_on_old_files = "timemgr_rst_type" ;
        timemgr_rst_type:_FillValue = -999999999 ;
        timemgr_rst_type:missing_value = -9999 ;
    int timemgr_rst_step_sec ;
        timemgr_rst_step_sec:long_name = "seconds component of timestep size" ;
        timemgr_rst_step_sec:units = "sec" ;
        timemgr_rst_step_sec:interpinic_flag = 3 ;
        timemgr_rst_step_sec:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        timemgr_rst_step_sec:varnames_on_old_files = "timemgr_rst_step_sec" ;
        timemgr_rst_step_sec:_FillValue = -999999999 ;
        timemgr_rst_step_sec:missing_value = -9999 ;
    int timemgr_rst_start_ymd ;
        timemgr_rst_start_ymd:long_name = "start date" ;
        timemgr_rst_start_ymd:units = "YYYYMMDD" ;
        timemgr_rst_start_ymd:interpinic_flag = 3 ;
        timemgr_rst_start_ymd:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        timemgr_rst_start_ymd:varnames_on_old_files = "timemgr_rst_start_ymd" ;
        timemgr_rst_start_ymd:_FillValue = -999999999 ;
        timemgr_rst_start_ymd:missing_value = -9999 ;
    int timemgr_rst_start_tod ;
        timemgr_rst_start_tod:long_name = "start time of day" ;
        timemgr_rst_start_tod:units = "sec" ;
        timemgr_rst_start_tod:interpinic_flag = 3 ;
        timemgr_rst_start_tod:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        timemgr_rst_start_tod:varnames_on_old_files = "timemgr_rst_start_tod" ;
        timemgr_rst_start_tod:_FillValue = -999999999 ;
        timemgr_rst_start_tod:missing_value = -9999 ;
    int timemgr_rst_ref_ymd ;
        timemgr_rst_ref_ymd:long_name = "reference date" ;
        timemgr_rst_ref_ymd:units = "YYYYMMDD" ;
        timemgr_rst_ref_ymd:interpinic_flag = 3 ;
        timemgr_rst_ref_ymd:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        timemgr_rst_ref_ymd:varnames_on_old_files = "timemgr_rst_ref_ymd" ;
        timemgr_rst_ref_ymd:_FillValue = -999999999 ;
        timemgr_rst_ref_ymd:missing_value = -9999 ;
    int timemgr_rst_ref_tod ;

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		timemgr_rst_ref_tod:long_name = "reference time of day" ;
		timemgr_rst_ref_tod:units = "sec" ;
		timemgr_rst_ref_tod:interpinic_flag = 3 ;
		timemgr_rst_ref_tod:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
		timemgr_rst_ref_tod:varnames_on_old_files = "timemgr_rst_ref_tod" ;
		timemgr_rst_ref_tod:_FillValue = -999999999 ;
		timemgr_rst_ref_tod:missing_value = -9999 ;
int timemgr_rst_curr_ymd ;
		timemgr_rst_curr_ymd:long_name = "current date" ;
		timemgr_rst_curr_ymd:units = "YYYYMMDD" ;
		timemgr_rst_curr_ymd:interpinic_flag = 3 ;
		timemgr_rst_curr_ymd:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
		timemgr_rst_curr_ymd:varnames_on_old_files = "timemgr_rst_curr_ymd" ;
		timemgr_rst_curr_ymd:_FillValue = -999999999 ;
		timemgr_rst_curr_ymd:missing_value = -9999 ;
int timemgr_rst_curr_tod ;
		timemgr_rst_curr_tod:long_name = "current time of day" ;
		timemgr_rst_curr_tod:units = "sec" ;
		timemgr_rst_curr_tod:interpinic_flag = 3 ;
		timemgr_rst_curr_tod:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
		timemgr_rst_curr_tod:varnames_on_old_files = "timemgr_rst_curr_tod" ;
		timemgr_rst_curr_tod:_FillValue = -999999999 ;
		timemgr_rst_curr_tod:missing_value = -9999 ;
double grid1d_lon(gridcell) ;
		grid1d_lon:long_name = "gridcell longitude" ;
		grid1d_lon:units = "degrees_east" ;
		grid1d_lon:interpinic_flag = 3 ;
		grid1d_lon:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
		grid1d_lon:varnames_on_old_files = "grid1d_lon" ;
		grid1d_lon:_FillValue = 1.e+36 ;
		grid1d_lon:missing_value = 1.e+36 ;
double grid1d_lat(gridcell) ;
		grid1d_lat:long_name = "gridcell latitude" ;
		grid1d_lat:units = "degrees_north" ;
		grid1d_lat:interpinic_flag = 3 ;
		grid1d_lat:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
		grid1d_lat:varnames_on_old_files = "grid1d_lat" ;
		grid1d_lat:_FillValue = 1.e+36 ;
		grid1d_lat:missing_value = 1.e+36 ;
int grid1d_ixy(gridcell) ;
		grid1d_ixy:long_name = "2d longitude index of corresponding gridcell" ;
		grid1d_ixy:interpinic_flag = 3 ;
		grid1d_ixy:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
		grid1d_ixy:varnames_on_old_files = "grid1d_ixy" ;
		grid1d_ixy:_FillValue = -9999 ;
		grid1d_ixy:missing_value = -9999 ;
int grid1d_jxy(gridcell) ;
		grid1d_jxy:long_name = "2d latitude index of corresponding gridcell" ;
		grid1d_jxy:interpinic_flag = 3 ;
		grid1d_jxy:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
		grid1d_jxy:varnames_on_old_files = "grid1d_jxy" ;
		grid1d_jxy:_FillValue = -9999 ;
		grid1d_jxy:missing_value = -9999 ;
double land1d_lon(landunit) ;
		land1d_lon:long_name = "landunit longitude" ;
		land1d_lon:units = "degrees_east" ;
		land1d_lon:interpinic_flag = 3 ;
		land1d_lon:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
		land1d_lon:varnames_on_old_files = "land1d_lon" ;
		land1d_lon:_FillValue = 1.e+36 ;
		land1d_lon:missing_value = 1.e+36 ;
double land1d_lat(landunit) ;
		land1d_lat:long_name = "landunit latitude" ;
		land1d_lat:units = "degrees_north" ;
		land1d_lat:interpinic_flag = 3 ;
		land1d_lat:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
		land1d_lat:varnames_on_old_files = "land1d_lat" ;
		land1d_lat:_FillValue = 1.e+36 ;
		land1d_lat:missing_value = 1.e+36 ;
int land1d_ixy(landunit) ;
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        land1d_ixy:long_name = "2d longitude index of corresponding landunit" ;
        land1d_ixy:interpinic_flag = 3 ;
        land1d_ixy:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        land1d_ixy:varnames_on_old_files = "land1d_ixy" ;
        land1d_ixy:_FillValue = -9999 ;
        land1d_ixy:missing_value = -9999 ;
int land1d_jxy(landunit) ;
        land1d_jxy:long_name = "2d latitude index of corresponding landunit" ;
        land1d_jxy:interpinic_flag = 3 ;
        land1d_jxy:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        land1d_jxy:varnames_on_old_files = "land1d_jxy" ;
        land1d_jxy:_FillValue = -9999 ;
        land1d_jxy:missing_value = -9999 ;
int land1d_gridcell_index(landunit) ;
        land1d_gridcell_index:long_name = "gridcell index of corresponding landunit" ;
        land1d_gridcell_index:interpinic_flag = 3 ;
        land1d_gridcell_index:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        land1d_gridcell_index:varnames_on_old_files = "land1d_gridcell_index" ;
        land1d_gridcell_index:_FillValue = -9999 ;
        land1d_gridcell_index:missing_value = -9999 ;
int land1d_ityplun(landunit) ;
        land1d_ityplun:long_name = "landunit type (see global attributes)" ;
        land1d_ityplun:units = "" ;
        land1d_ityplun:interpinic_flag = 3 ;
        land1d_ityplun:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        land1d_ityplun:varnames_on_old_files = "land1d_ityplun" ;
        land1d_ityplun:_FillValue = -9999 ;
        land1d_ityplun:missing_value = -9999 ;
int land1d_active(landunit) ;
        land1d_active:long_name = "landunit active flag (1=active, 0=inactive)" ;
        land1d_active:interpinic_flag = 3 ;
        land1d_active:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        land1d_active:varnames_on_old_files = "land1d_active" ;
        land1d_active:_FillValue = -9999 ;
        land1d_active:missing_value = -9999 ;
double cols1d_lon(column) ;
        cols1d_lon:long_name = "column longitude" ;
        cols1d_lon:units = "degrees_east" ;
        cols1d_lon:interpinic_flag = 3 ;
        cols1d_lon:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        cols1d_lon:varnames_on_old_files = "cols1d_lon" ;
        cols1d_lon:_FillValue = 1.e+36 ;
        cols1d_lon:missing_value = 1.e+36 ;
double cols1d_lat(column) ;
        cols1d_lat:long_name = "column latitude" ;
        cols1d_lat:units = "degrees_north" ;
        cols1d_lat:interpinic_flag = 3 ;
        cols1d_lat:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        cols1d_lat:varnames_on_old_files = "cols1d_lat" ;
        cols1d_lat:_FillValue = 1.e+36 ;
        cols1d_lat:missing_value = 1.e+36 ;
int cols1d_ixy(column) ;
        cols1d_ixy:long_name = "2d longitude index of corresponding column" ;
        cols1d_ixy:units = "" ;
        cols1d_ixy:interpinic_flag = 3 ;
        cols1d_ixy:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        cols1d_ixy:varnames_on_old_files = "cols1d_ixy" ;
        cols1d_ixy:_FillValue = -9999 ;
        cols1d_ixy:missing_value = -9999 ;
int cols1d_jxy(column) ;
        cols1d_jxy:long_name = "2d latitude index of corresponding column" ;
        cols1d_jxy:units = "" ;
        cols1d_jxy:interpinic_flag = 3 ;
        cols1d_jxy:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        cols1d_jxy:varnames_on_old_files = "cols1d_jxy" ;
        cols1d_jxy:_FillValue = -9999 ;
        cols1d_jxy:missing_value = -9999 ;
int cols1d_gridcell_index(column) ;
        cols1d_gridcell_index:long_name = "gridcell index of corresponding column" ;
        cols1d_gridcell_index:interpinic_flag = 3 ;
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        cols1d_gridcell_index:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        cols1d_gridcell_index:varnames_on_old_files = "cols1d_gridcell_index" ;
        cols1d_gridcell_index:_FillValue = -9999 ;
        cols1d_gridcell_index:missing_value = -9999 ;
int cols1d_landunit_index(column) ;
        cols1d_landunit_index:long_name = "landunit index of corresponding column" ;
        cols1d_landunit_index:interpinic_flag = 3 ;
        cols1d_landunit_index:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        cols1d_landunit_index:varnames_on_old_files = "cols1d_landunit_index" ;
        cols1d_landunit_index:_FillValue = -9999 ;
        cols1d_landunit_index:missing_value = -9999 ;
int cols1d_ityplun(column) ;
        cols1d_ityplun:long_name = "column landunit type (see global attributes)" ;
        cols1d_ityplun:units = "" ;
        cols1d_ityplun:interpinic_flag = 3 ;
        cols1d_ityplun:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        cols1d_ityplun:varnames_on_old_files = "cols1d_ityplun" ;
        cols1d_ityplun:_FillValue = -9999 ;
        cols1d_ityplun:missing_value = -9999 ;
int cols1d_ityp(column) ;
        cols1d_ityp:long_name = "column type (see global attributes)" ;
        cols1d_ityp:units = "" ;
        cols1d_ityp:interpinic_flag = 3 ;
        cols1d_ityp:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        cols1d_ityp:varnames_on_old_files = "cols1d_ityp" ;
        cols1d_ityp:_FillValue = -9999 ;
        cols1d_ityp:missing_value = -9999 ;
int cols1d_active(column) ;
        cols1d_active:long_name = "column active flag (1=active, 0=inactive)" ;
        cols1d_active:units = "" ;
        cols1d_active:interpinic_flag = 3 ;
        cols1d_active:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        cols1d_active:varnames_on_old_files = "cols1d_active" ;
        cols1d_active:_FillValue = -9999 ;
        cols1d_active:missing_value = -9999 ;
int LEVGRND_CLASS(column, levgrnd) ;
        LEVGRND_CLASS:long_name = "class in which each layer falls" ;
        LEVGRND_CLASS:units = "" ;
        LEVGRND_CLASS:interpinic_flag = 3 ;
        LEVGRND_CLASS:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        LEVGRND_CLASS:varnames_on_old_files = "LEVGRND_CLASS" ;
        LEVGRND_CLASS:switchdim_flag = 1 ;
        LEVGRND_CLASS:switchdim_flag_values = 0, 1 ;
        LEVGRND_CLASS:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        LEVGRND_CLASS:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        LEVGRND_CLASS:_FillValue = -9999 ;
        LEVGRND_CLASS:missing_value = -9999 ;
double COL_Z(column, levgrnd) ;
        COL_Z:long_name = "layer depth, excluding snow layers" ;
        COL_Z:units = "m" ;
        COL_Z:interpinic_flag = 3 ;
        COL_Z:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        COL_Z:varnames_on_old_files = "COL_Z" ;
        COL_Z:switchdim_flag = 1 ;
        COL_Z:switchdim_flag_values = 0, 1 ;
        COL_Z:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        COL_Z:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        COL_Z:_FillValue = 1.e+36 ;
        COL_Z:missing_value = 1.e+36 ;
double pfts1d_lon(pft) ;
        pfts1d_lon:long_name = "pft longitude" ;
        pfts1d_lon:units = "degrees_east" ;
        pfts1d_lon:interpinic_flag = 3 ;
        pfts1d_lon:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        pfts1d_lon:varnames_on_old_files = "pfts1d_lon" ;
        pfts1d_lon:_FillValue = 1.e+36 ;
        pfts1d_lon:missing_value = 1.e+36 ;
double pfts1d_lat(pft) ;
        pfts1d_lat:long_name = "pft latitude" ;
        pfts1d_lat:units = "degrees_north" ;
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        pfts1d_lat:interpinic_flag = 3 ;
        pfts1d_lat:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        pfts1d_lat:varnames_on_old_files = "pfts1d_lat" ;
        pfts1d_lat:_FillValue = 1.e+36 ;
        pfts1d_lat:missing_value = 1.e+36 ;
int pfts1d_ixy(pft) ;
        pfts1d_ixy:long_name = "2d longitude index of corresponding pft" ;
        pfts1d_ixy:units = "" ;
        pfts1d_ixy:interpinic_flag = 3 ;
        pfts1d_ixy:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        pfts1d_ixy:varnames_on_old_files = "pfts1d_ixy" ;
        pfts1d_ixy:_FillValue = -9999 ;
        pfts1d_ixy:missing_value = -9999 ;
int pfts1d_jxy(pft) ;
        pfts1d_jxy:long_name = "2d latitude index of corresponding pft" ;
        pfts1d_jxy:units = "" ;
        pfts1d_jxy:interpinic_flag = 3 ;
        pfts1d_jxy:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        pfts1d_jxy:varnames_on_old_files = "pfts1d_jxy" ;
        pfts1d_jxy:_FillValue = -9999 ;
        pfts1d_jxy:missing_value = -9999 ;
int pfts1d_gridcell_index(pft) ;
        pfts1d_gridcell_index:long_name = "gridcell index of corresponding pft" ;
        pfts1d_gridcell_index:interpinic_flag = 3 ;
        pfts1d_gridcell_index:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        pfts1d_gridcell_index:varnames_on_old_files = "pfts1d_gridcell_index" ;
        pfts1d_gridcell_index:_FillValue = -9999 ;
        pfts1d_gridcell_index:missing_value = -9999 ;
int pfts1d_landunit_index(pft) ;
        pfts1d_landunit_index:long_name = "landunit index of corresponding pft" ;
        pfts1d_landunit_index:interpinic_flag = 3 ;
        pfts1d_landunit_index:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        pfts1d_landunit_index:varnames_on_old_files = "pfts1d_landunit_index" ;
        pfts1d_landunit_index:_FillValue = -9999 ;
        pfts1d_landunit_index:missing_value = -9999 ;
int pfts1d_column_index(pft) ;
        pfts1d_column_index:long_name = "column index of corresponding pft" ;
        pfts1d_column_index:interpinic_flag = 3 ;
        pfts1d_column_index:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        pfts1d_column_index:varnames_on_old_files = "pfts1d_column_index" ;
        pfts1d_column_index:_FillValue = -9999 ;
        pfts1d_column_index:missing_value = -9999 ;
int pfts1d_itypveg(pft) ;
        pfts1d_itypveg:long_name = "pft vegetation type" ;
        pfts1d_itypveg:units = "" ;
        pfts1d_itypveg:interpinic_flag = 3 ;
        pfts1d_itypveg:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        pfts1d_itypveg:varnames_on_old_files = "pfts1d_itypveg" ;
        pfts1d_itypveg:_FillValue = -9999 ;
        pfts1d_itypveg:missing_value = -9999 ;
int pfts1d_itypcol(pft) ;
        pfts1d_itypcol:long_name = "pft column type (see global attributes)" ;
        pfts1d_itypcol:units = "" ;
        pfts1d_itypcol:interpinic_flag = 3 ;
        pfts1d_itypcol:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        pfts1d_itypcol:varnames_on_old_files = "pfts1d_itypcol" ;
        pfts1d_itypcol:_FillValue = -9999 ;
        pfts1d_itypcol:missing_value = -9999 ;
int pfts1d_ityplun(pft) ;
        pfts1d_ityplun:long_name = "pft landunit type (see global attributes)" ;
        pfts1d_ityplun:units = "" ;
        pfts1d_ityplun:interpinic_flag = 3 ;
        pfts1d_ityplun:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        pfts1d_ityplun:varnames_on_old_files = "pfts1d_ityplun" ;
        pfts1d_ityplun:_FillValue = -9999 ;
        pfts1d_ityplun:missing_value = -9999 ;
int pfts1d_active(pft) ;
        pfts1d_active:long_name = "pft active flag (1=active, 0=inactive)" ;
        pfts1d_active:units = "" ;
        pfts1d_active:interpinic_flag = 3 ;
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                pfts1d_active:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
                pfts1d_active:varnames_on_old_files = "pfts1d_active" ;
                pfts1d_active:_FillValue = -9999 ;
                pfts1d_active:missing_value = -9999 ;
        double pfts1d_topoglc(pft) ;
                pfts1d_topoglc:long_name = "mean elevation on glacier elevation classes" ;
                pfts1d_topoglc:units = "m" ;
                pfts1d_topoglc:interpinic_flag = 3 ;
                pfts1d_topoglc:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
                pfts1d_topoglc:varnames_on_old_files = "pfts1d_topoglc" ;
                pfts1d_topoglc:_FillValue = 1.e+36 ;
                pfts1d_topoglc:missing_value = 1.e+36 ;
        int LEVGRND_CLASS_p(pft, levgrnd) ;
                LEVGRND_CLASS_p:long_name = "class in which each layer falls, patch-level" ;
                LEVGRND_CLASS_p:units = "" ;
                LEVGRND_CLASS_p:interpinic_flag = 3 ;
                LEVGRND_CLASS_p:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
                LEVGRND_CLASS_p:varnames_on_old_files = "LEVGRND_CLASS_p" ;
                LEVGRND_CLASS_p:switchdim_flag = 1 ;
                LEVGRND_CLASS_p:switchdim_flag_values = 0, 1 ;
                LEVGRND_CLASS_p:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
                LEVGRND_CLASS_p:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
                LEVGRND_CLASS_p:_FillValue = -9999 ;
                LEVGRND_CLASS_p:missing_value = -9999 ;
        double COL_Z_p(pft, levgrnd) ;
                COL_Z_p:long_name = "layer depth, excluding snow layers, patch-level" ;
                COL_Z_p:units = "m" ;
                COL_Z_p:interpinic_flag = 3 ;
                COL_Z_p:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
                COL_Z_p:varnames_on_old_files = "COL_Z_p" ;
                COL_Z_p:switchdim_flag = 1 ;
                COL_Z_p:switchdim_flag_values = 0, 1 ;
                COL_Z_p:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
                COL_Z_p:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
                COL_Z_p:_FillValue = 1.e+36 ;
                COL_Z_p:missing_value = 1.e+36 ;
        double land1d_wtxy(landunit) ;
                land1d_wtxy:long_name = "landunit weight relative to corresponding gridcell" ;
                land1d_wtxy:interpinic_flag = 3 ;
                land1d_wtxy:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
                land1d_wtxy:varnames_on_old_files = "land1d_wtxy" ;
                land1d_wtxy:_FillValue = 1.e+36 ;
                land1d_wtxy:missing_value = 1.e+36 ;
        double cols1d_wtxy(column) ;
                cols1d_wtxy:long_name = "column weight relative to corresponding gridcell" ;
                cols1d_wtxy:units = "" ;
                cols1d_wtxy:interpinic_flag = 3 ;
                cols1d_wtxy:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
                cols1d_wtxy:varnames_on_old_files = "cols1d_wtxy" ;
                cols1d_wtxy:_FillValue = 1.e+36 ;
                cols1d_wtxy:missing_value = 1.e+36 ;
        double cols1d_wtlnd(column) ;
                cols1d_wtlnd:long_name = "column weight relative to corresponding landunit" ;
                cols1d_wtlnd:units = "" ;
                cols1d_wtlnd:interpinic_flag = 3 ;
                cols1d_wtlnd:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
                cols1d_wtlnd:varnames_on_old_files = "cols1d_wtlnd" ;
                cols1d_wtlnd:_FillValue = 1.e+36 ;
                cols1d_wtlnd:missing_value = 1.e+36 ;
        double cols1d_topoglc(column) ;
                cols1d_topoglc:long_name = "mean elevation on glacier elevation classes" ;
                cols1d_topoglc:units = "m" ;
                cols1d_topoglc:interpinic_flag = 3 ;
                cols1d_topoglc:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
                cols1d_topoglc:varnames_on_old_files = "cols1d_topoglc" ;
                cols1d_topoglc:_FillValue = 1.e+36 ;
                cols1d_topoglc:missing_value = 1.e+36 ;
        double pfts1d_wtxy(pft) ;
                pfts1d_wtxy:long_name = "pft weight relative to corresponding gridcell" ;
                pfts1d_wtxy:units = "" ;
```

```
        pfts1d_wtxy:interpinic_flag = 3 ;
        pfts1d_wtxy:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        pfts1d_wtxy:varnames_on_old_files = "pfts1d_wtxy" ;
        pfts1d_wtxy:_FillValue = 1.e+36 ;
        pfts1d_wtxy:missing_value = 1.e+36 ;
double pfts1d_wtlnd(pft) ;
        pfts1d_wtlnd:long_name = "pft weight relative to corresponding landunit" ;
        pfts1d_wtlnd:units = "" ;
        pfts1d_wtlnd:interpinic_flag = 3 ;
        pfts1d_wtlnd:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        pfts1d_wtlnd:varnames_on_old_files = "pfts1d_wtlnd" ;
        pfts1d_wtlnd:_FillValue = 1.e+36 ;
        pfts1d_wtlnd:missing_value = 1.e+36 ;
double pfts1d_wtcol(pft) ;
        pfts1d_wtcol:long_name = "pft weight relative to corresponding column" ;
        pfts1d_wtcol:units = "" ;
        pfts1d_wtcol:interpinic_flag = 3 ;
        pfts1d_wtcol:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        pfts1d_wtcol:varnames_on_old_files = "pfts1d_wtcol" ;
        pfts1d_wtcol:_FillValue = 1.e+36 ;
        pfts1d_wtcol:missing_value = 1.e+36 ;
int SNLSNO(column) ;
        SNLSNO:long_name = "negative number of snow layers" ;
        SNLSNO:units = "unitless" ;
        SNLSNO:interpinic_flag = 1 ;
        SNLSNO:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        SNLSNO:varnames_on_old_files = "SNLSNO" ;
        SNLSNO:_FillValue = -9999 ;
        SNLSNO:missing_value = -9999 ;
double DZSNO(column, levsno) ;
        DZSNO:long_name = "snow layer thickness" ;
        DZSNO:units = "m" ;
        DZSNO:interpinic_flag = 1 ;
        DZSNO:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        DZSNO:varnames_on_old_files = "DZSNO" ;
        DZSNO:switchdim_flag = 1 ;
        DZSNO:switchdim_flag_values = 0, 1 ;
        DZSNO:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        DZSNO:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        DZSNO:_FillValue = 1.e+36 ;
        DZSNO:missing_value = 1.e+36 ;
double ZSNO(column, levsno) ;
        ZSNO:long_name = "snow layer depth" ;
        ZSNO:units = "m" ;
        ZSNO:interpinic_flag = 1 ;
        ZSNO:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        ZSNO:varnames_on_old_files = "ZSNO" ;
        ZSNO:switchdim_flag = 1 ;
        ZSNO:switchdim_flag_values = 0, 1 ;
        ZSNO:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        ZSNO:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        ZSNO:_FillValue = 1.e+36 ;
        ZSNO:missing_value = 1.e+36 ;
double ZISNO(column, levsno) ;
        ZISNO:long_name = "snow interface depth" ;
        ZISNO:units = "m" ;
        ZISNO:interpinic_flag = 1 ;
        ZISNO:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        ZISNO:varnames_on_old_files = "ZISNO" ;
        ZISNO:switchdim_flag = 1 ;
        ZISNO:switchdim_flag_values = 0, 1 ;
        ZISNO:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        ZISNO:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        ZISNO:_FillValue = 1.e+36 ;
        ZISNO:missing_value = 1.e+36 ;
double FSD24_VALUE(pft) ;
        FSD24_VALUE:long_name = "24hr average of direct solar radiation" ;
        FSD24_VALUE:units = "W/m2" ;
        FSD24_VALUE:interpinic_flag = 1 ;
        FSD24_VALUE:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
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        FSD24_VALUE:varnames_on_old_files = "FSD24_VALUE" ;
        FSD24_VALUE:_FillValue = 1.e+36 ;
        FSD24_VALUE:missing_value = 1.e+36 ;
int FSD24_PERIOD ;
        FSD24_PERIOD:long_name = "" ;
        FSD24_PERIOD:units = "time steps" ;
        FSD24_PERIOD:interpinic_flag = 2 ;
        FSD24_PERIOD:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        FSD24_PERIOD:varnames_on_old_files = "FSD24_PERIOD" ;
        FSD24_PERIOD:_FillValue = 2147483647 ;
        FSD24_PERIOD:missing_value = -9999 ;
double FSD240_VALUE(pft) ;
        FSD240_VALUE:long_name = "240hr average of direct solar radiation" ;
        FSD240_VALUE:units = "W/m2" ;
        FSD240_VALUE:interpinic_flag = 1 ;
        FSD240_VALUE:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        FSD240_VALUE:varnames_on_old_files = "FSD240_VALUE" ;
        FSD240_VALUE:_FillValue = 1.e+36 ;
        FSD240_VALUE:missing_value = 1.e+36 ;
int FSD240_PERIOD ;
        FSD240_PERIOD:long_name = "" ;
        FSD240_PERIOD:units = "time steps" ;
        FSD240_PERIOD:interpinic_flag = 2 ;
        FSD240_PERIOD:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        FSD240_PERIOD:varnames_on_old_files = "FSD240_PERIOD" ;
        FSD240_PERIOD:_FillValue = 2147483647 ;
        FSD240_PERIOD:missing_value = -9999 ;
double FSI24_VALUE(pft) ;
        FSI24_VALUE:long_name = "24hr average of diffuse solar radiation" ;
        FSI24_VALUE:units = "W/m2" ;
        FSI24_VALUE:interpinic_flag = 1 ;
        FSI24_VALUE:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        FSI24_VALUE:varnames_on_old_files = "FSI24_VALUE" ;
        FSI24_VALUE:_FillValue = 1.e+36 ;
        FSI24_VALUE:missing_value = 1.e+36 ;
int FSI24_PERIOD ;
        FSI24_PERIOD:long_name = "" ;
        FSI24_PERIOD:units = "time steps" ;
        FSI24_PERIOD:interpinic_flag = 2 ;
        FSI24_PERIOD:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        FSI24_PERIOD:varnames_on_old_files = "FSI24_PERIOD" ;
        FSI24_PERIOD:_FillValue = 2147483647 ;
        FSI24_PERIOD:missing_value = -9999 ;
double FSI240_VALUE(pft) ;
        FSI240_VALUE:long_name = "240hr average of diffuse solar radiation" ;
        FSI240_VALUE:units = "W/m2" ;
        FSI240_VALUE:interpinic_flag = 1 ;
        FSI240_VALUE:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        FSI240_VALUE:varnames_on_old_files = "FSI240_VALUE" ;
        FSI240_VALUE:_FillValue = 1.e+36 ;
        FSI240_VALUE:missing_value = 1.e+36 ;
int FSI240_PERIOD ;
        FSI240_PERIOD:long_name = "" ;
        FSI240_PERIOD:units = "time steps" ;
        FSI240_PERIOD:interpinic_flag = 2 ;
        FSI240_PERIOD:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        FSI240_PERIOD:varnames_on_old_files = "FSI240_PERIOD" ;
        FSI240_PERIOD:_FillValue = 2147483647 ;
        FSI240_PERIOD:missing_value = -9999 ;
double T_VEG24_VALUE(pft) ;
        T_VEG24_VALUE:long_name = "24hr average of vegetation temperature" ;
        T_VEG24_VALUE:units = "K" ;
        T_VEG24_VALUE:interpinic_flag = 1 ;
        T_VEG24_VALUE:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        T_VEG24_VALUE:varnames_on_old_files = "T_VEG24_VALUE" ;
        T_VEG24_VALUE:_FillValue = 1.e+36 ;
        T_VEG24_VALUE:missing_value = 1.e+36 ;
int T_VEG24_PERIOD ;
        T_VEG24_PERIOD:long_name = "" ;
        T_VEG24_PERIOD:units = "time steps" ;
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        T_VEG24_PERIOD:interpinic_flag = 2 ;
        T_VEG24_PERIOD:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        T_VEG24_PERIOD:varnames_on_old_files = "T_VEG24_PERIOD" ;
        T_VEG24_PERIOD:_FillValue = 2147483647 ;
        T_VEG24_PERIOD:missing_value = -9999 ;
double T_VEG240_VALUE(pft) ;
        T_VEG240_VALUE:long_name = "240hr average of vegetation temperature" ;
        T_VEG240_VALUE:units = "K" ;
        T_VEG240_VALUE:interpinic_flag = 1 ;
        T_VEG240_VALUE:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        T_VEG240_VALUE:varnames_on_old_files = "T_VEG240_VALUE" ;
        T_VEG240_VALUE:_FillValue = 1.e+36 ;
        T_VEG240_VALUE:missing_value = 1.e+36 ;
int T_VEG240_PERIOD ;
        T_VEG240_PERIOD:long_name = "" ;
        T_VEG240_PERIOD:units = "time steps" ;
        T_VEG240_PERIOD:interpinic_flag = 2 ;
        T_VEG240_PERIOD:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        T_VEG240_PERIOD:varnames_on_old_files = "T_VEG240_PERIOD" ;
        T_VEG240_PERIOD:_FillValue = 2147483647 ;
        T_VEG240_PERIOD:missing_value = -9999 ;
double TREFAV_VALUE(pft) ;
        TREFAV_VALUE:long_name = "average over an hour of 2-m temperature" ;
        TREFAV_VALUE:units = "K" ;
        TREFAV_VALUE:interpinic_flag = 1 ;
        TREFAV_VALUE:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        TREFAV_VALUE:varnames_on_old_files = "TREFAV_VALUE" ;
        TREFAV_VALUE:_FillValue = 1.e+36 ;
        TREFAV_VALUE:missing_value = 1.e+36 ;
int TREFAV_PERIOD ;
        TREFAV_PERIOD:long_name = "" ;
        TREFAV_PERIOD:units = "time steps" ;
        TREFAV_PERIOD:interpinic_flag = 2 ;
        TREFAV_PERIOD:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        TREFAV_PERIOD:varnames_on_old_files = "TREFAV_PERIOD" ;
        TREFAV_PERIOD:_FillValue = 2147483647 ;
        TREFAV_PERIOD:missing_value = -9999 ;
double TREFAV_U_VALUE(pft) ;
        TREFAV_U_VALUE:long_name = "average over an hour of urban 2-m temperature" ;
        TREFAV_U_VALUE:units = "K" ;
        TREFAV_U_VALUE:interpinic_flag = 1 ;
        TREFAV_U_VALUE:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        TREFAV_U_VALUE:varnames_on_old_files = "TREFAV_U_VALUE" ;
        TREFAV_U_VALUE:_FillValue = 1.e+36 ;
        TREFAV_U_VALUE:missing_value = 1.e+36 ;
int TREFAV_U_PERIOD ;
        TREFAV_U_PERIOD:long_name = "" ;
        TREFAV_U_PERIOD:units = "time steps" ;
        TREFAV_U_PERIOD:interpinic_flag = 2 ;
        TREFAV_U_PERIOD:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        TREFAV_U_PERIOD:varnames_on_old_files = "TREFAV_U_PERIOD" ;
        TREFAV_U_PERIOD:_FillValue = 2147483647 ;
        TREFAV_U_PERIOD:missing_value = -9999 ;
double TREFAV_R_VALUE(pft) ;
        TREFAV_R_VALUE:long_name = "average over an hour of rural 2-m temperature" ;
        TREFAV_R_VALUE:units = "K" ;
        TREFAV_R_VALUE:interpinic_flag = 1 ;
        TREFAV_R_VALUE:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        TREFAV_R_VALUE:varnames_on_old_files = "TREFAV_R_VALUE" ;
        TREFAV_R_VALUE:_FillValue = 1.e+36 ;
        TREFAV_R_VALUE:missing_value = 1.e+36 ;
int TREFAV_R_PERIOD ;
        TREFAV_R_PERIOD:long_name = "" ;
        TREFAV_R_PERIOD:units = "time steps" ;
        TREFAV_R_PERIOD:interpinic_flag = 2 ;
        TREFAV_R_PERIOD:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        TREFAV_R_PERIOD:varnames_on_old_files = "TREFAV_R_PERIOD" ;
        TREFAV_R_PERIOD:_FillValue = 2147483647 ;
        TREFAV_R_PERIOD:missing_value = -9999 ;
double T10_VALUE(pft) ;
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            T10_VALUE:long_name = "10-day running mean of 2-m temperature" ;
            T10_VALUE:units = "K" ;
            T10_VALUE:interpinic_flag = 1 ;
            T10_VALUE:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
            T10_VALUE:varnames_on_old_files = "T10_VALUE" ;
            T10_VALUE:_FillValue = 1.e+36 ;
            T10_VALUE:missing_value = 1.e+36 ;
    int T10_PERIOD ;
            T10_PERIOD:long_name = "" ;
            T10_PERIOD:units = "time steps" ;
            T10_PERIOD:interpinic_flag = 2 ;
            T10_PERIOD:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
            T10_PERIOD:varnames_on_old_files = "T10_PERIOD" ;
            T10_PERIOD:_FillValue = 2147483647 ;
            T10_PERIOD:missing_value = -9999 ;
    double FSUN24_VALUE(pft) ;
            FSUN24_VALUE:long_name = "24hr average of diffuse solar radiation" ;
            FSUN24_VALUE:units = "fraction" ;
            FSUN24_VALUE:interpinic_flag = 1 ;
            FSUN24_VALUE:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
            FSUN24_VALUE:varnames_on_old_files = "FSUN24_VALUE" ;
            FSUN24_VALUE:_FillValue = 1.e+36 ;
            FSUN24_VALUE:missing_value = 1.e+36 ;
    int FSUN24_PERIOD ;
            FSUN24_PERIOD:long_name = "" ;
            FSUN24_PERIOD:units = "time steps" ;
            FSUN24_PERIOD:interpinic_flag = 2 ;
            FSUN24_PERIOD:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
            FSUN24_PERIOD:varnames_on_old_files = "FSUN24_PERIOD" ;
            FSUN24_PERIOD:_FillValue = 2147483647 ;
            FSUN24_PERIOD:missing_value = -9999 ;
    double FSUN240_VALUE(pft) ;
            FSUN240_VALUE:long_name = "240hr average of diffuse solar radiation" ;
            FSUN240_VALUE:units = "fraction" ;
            FSUN240_VALUE:interpinic_flag = 1 ;
            FSUN240_VALUE:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
            FSUN240_VALUE:varnames_on_old_files = "FSUN240_VALUE" ;
            FSUN240_VALUE:_FillValue = 1.e+36 ;
            FSUN240_VALUE:missing_value = 1.e+36 ;
    int FSUN240_PERIOD ;
            FSUN240_PERIOD:long_name = "" ;
            FSUN240_PERIOD:units = "time steps" ;
            FSUN240_PERIOD:interpinic_flag = 2 ;
            FSUN240_PERIOD:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
            FSUN240_PERIOD:varnames_on_old_files = "FSUN240_PERIOD" ;
            FSUN240_PERIOD:_FillValue = 2147483647 ;
            FSUN240_PERIOD:missing_value = -9999 ;
    double LAI240_VALUE(pft) ;
            LAI240_VALUE:long_name = "240hr average of leaf area index" ;
            LAI240_VALUE:units = "m2/m2" ;
            LAI240_VALUE:interpinic_flag = 1 ;
            LAI240_VALUE:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
            LAI240_VALUE:varnames_on_old_files = "LAI240_VALUE" ;
            LAI240_VALUE:_FillValue = 1.e+36 ;
            LAI240_VALUE:missing_value = 1.e+36 ;
    int LAI240_PERIOD ;
            LAI240_PERIOD:long_name = "" ;
            LAI240_PERIOD:units = "time steps" ;
            LAI240_PERIOD:interpinic_flag = 2 ;
            LAI240_PERIOD:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
            LAI240_PERIOD:varnames_on_old_files = "LAI240_PERIOD" ;
            LAI240_PERIOD:_FillValue = 2147483647 ;
            LAI240_PERIOD:missing_value = -9999 ;
    double qflx_floodg(gridcell) ;
            qflx_floodg:long_name = "flood water flux" ;
            qflx_floodg:units = "mm/s" ;
            qflx_floodg:interpinic_flag = 3 ;
            qflx_floodg:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
            qflx_floodg:varnames_on_old_files = "qflx_floodg" ;
            qflx_floodg:_FillValue = 1.e+36 ;
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        qflx_floodg:missing_value = 1.e+36 ;
int FRAC_VEG_NOSNO_ALB(pft) ;
        FRAC_VEG_NOSNO_ALB:long_name = "fraction of vegetation not covered by snow (0 or 1)" ;
        FRAC_VEG_NOSNO_ALB:units = "" ;
        FRAC_VEG_NOSNO_ALB:interpinic_flag = 1 ;
        FRAC_VEG_NOSNO_ALB:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        FRAC_VEG_NOSNO_ALB:varnames_on_old_files = "FRAC_VEG_NOSNO_ALB" ;
        FRAC_VEG_NOSNO_ALB:_FillValue = -9999 ;
        FRAC_VEG_NOSNO_ALB:missing_value = -9999 ;
double tlai(pft) ;
        tlai:long_name = "one-sided leaf area index, no burying by snow" ;
        tlai:units = "" ;
        tlai:interpinic_flag = 1 ;
        tlai:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        tlai:varnames_on_old_files = "tlai" ;
        tlai:_FillValue = 1.e+36 ;
        tlai:missing_value = 1.e+36 ;
double tsai(pft) ;
        tsai:long_name = "one-sided stem area index, no burying by snow" ;
        tsai:units = "" ;
        tsai:interpinic_flag = 1 ;
        tsai:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        tsai:varnames_on_old_files = "tsai" ;
        tsai:_FillValue = 1.e+36 ;
        tsai:missing_value = 1.e+36 ;
double elai(pft) ;
        elai:long_name = "one-sided leaf area index, with burying by snow" ;
        elai:units = "" ;
        elai:interpinic_flag = 1 ;
        elai:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        elai:varnames_on_old_files = "elai" ;
        elai:_FillValue = 1.e+36 ;
        elai:missing_value = 1.e+36 ;
double esai(pft) ;
        esai:long_name = "one-sided stem area index, with burying by snow" ;
        esai:units = "" ;
        esai:interpinic_flag = 1 ;
        esai:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        esai:varnames_on_old_files = "esai" ;
        esai:_FillValue = 1.e+36 ;
        esai:missing_value = 1.e+36 ;
double htop(pft) ;
        htop:long_name = "canopy top" ;
        htop:units = "m" ;
        htop:interpinic_flag = 1 ;
        htop:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        htop:varnames_on_old_files = "htop" ;
        htop:_FillValue = 1.e+36 ;
        htop:missing_value = 1.e+36 ;
double hbot(pft) ;
        hbot:long_name = "canopy botton" ;
        hbot:units = "m" ;
        hbot:interpinic_flag = 1 ;
        hbot:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        hbot:varnames_on_old_files = "hbot" ;
        hbot:_FillValue = 1.e+36 ;
        hbot:missing_value = 1.e+36 ;
double mlaidiff(pft) ;
        mlaidiff:long_name = "difference between lai month one and month two" ;
        mlaidiff:units = "" ;
        mlaidiff:interpinic_flag = 1 ;
        mlaidiff:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        mlaidiff:varnames_on_old_files = "mlaidiff" ;
        mlaidiff:_FillValue = 1.e+36 ;
        mlaidiff:missing_value = 1.e+36 ;
double fsun(pft) ;
        fsun:long_name = "sunlit fraction of canopy" ;
        fsun:units = "" ;
        fsun:interpinic_flag = 1 ;
        fsun:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
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        fsun:varnames_on_old_files = "fsun" ;
        fsun:_FillValue = 1.e+36 ;
        fsun:missing_value = 1.e+36 ;
double EFLX_LWRAD_OUT(pft) ;
        EFLX_LWRAD_OUT:long_name = "emitted infrared (longwave) radiation" ;
        EFLX_LWRAD_OUT:units = "watt/m^2" ;
        EFLX_LWRAD_OUT:interpinic_flag = 1 ;
        EFLX_LWRAD_OUT:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        EFLX_LWRAD_OUT:varnames_on_old_files = "EFLX_LWRAD_OUT" ;
        EFLX_LWRAD_OUT:_FillValue = 1.e+36 ;
        EFLX_LWRAD_OUT:missing_value = 1.e+36 ;
double URBAN_AC(column) ;
        URBAN_AC:long_name = "urban air conditioning flux" ;
        URBAN_AC:units = "watt/m^2" ;
        URBAN_AC:interpinic_flag = 1 ;
        URBAN_AC:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        URBAN_AC:varnames_on_old_files = "URBAN_AC" ;
        URBAN_AC:_FillValue = 1.e+36 ;
        URBAN_AC:missing_value = 1.e+36 ;
double URBAN_HEAT(column) ;
        URBAN_HEAT:long_name = "urban heating flux" ;
        URBAN_HEAT:units = "watt/m^2" ;
        URBAN_HEAT:interpinic_flag = 1 ;
        URBAN_HEAT:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        URBAN_HEAT:varnames_on_old_files = "URBAN_HEAT" ;
        URBAN_HEAT:_FillValue = 1.e+36 ;
        URBAN_HEAT:missing_value = 1.e+36 ;
double btran2(pft) ;
        btran2:long_name = "" ;
        btran2:units = "" ;
        btran2:interpinic_flag = 1 ;
        btran2:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        btran2:varnames_on_old_files = "btran2" ;
        btran2:_FillValue = 1.e+36 ;
        btran2:missing_value = 1.e+36 ;
double eflx_grnd_lake(pft) ;
        eflx_grnd_lake:long_name = "net heat flux into lake/snow surface, excluding light transmission" ;
        eflx_grnd_lake:units = "W/m^2" ;
        eflx_grnd_lake:interpinic_flag = 1 ;
        eflx_grnd_lake:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        eflx_grnd_lake:varnames_on_old_files = "eflx_grnd_lake" ;
        eflx_grnd_lake:_FillValue = 1.e+36 ;
        eflx_grnd_lake:missing_value = 1.e+36 ;
double Z0MG(column) ;
        Z0MG:long_name = "ground momentum roughness length" ;
        Z0MG:units = "m" ;
        Z0MG:interpinic_flag = 1 ;
        Z0MG:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        Z0MG:varnames_on_old_files = "Z0MG" ;
        Z0MG:_FillValue = 1.e+36 ;
        Z0MG:missing_value = 1.e+36 ;
double LAKE_ICEFRAC(column, levlak) ;
        LAKE_ICEFRAC:long_name = "lake layer ice fraction" ;
        LAKE_ICEFRAC:units = "kg/kg" ;
        LAKE_ICEFRAC:interpinic_flag = 1 ;
        LAKE_ICEFRAC:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        LAKE_ICEFRAC:varnames_on_old_files = "LAKE_ICEFRAC" ;
        LAKE_ICEFRAC:switchdim_flag = 1 ;
        LAKE_ICEFRAC:switchdim_flag_values = 0, 1 ;
        LAKE_ICEFRAC:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        LAKE_ICEFRAC:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        LAKE_ICEFRAC:_FillValue = 1.e+36 ;
        LAKE_ICEFRAC:missing_value = 1.e+36 ;
double SAVEDTKE1(column) ;
        SAVEDTKE1:long_name = "top lake layer eddy conductivity" ;
        SAVEDTKE1:units = "W/(m K)" ;
        SAVEDTKE1:interpinic_flag = 1 ;
        SAVEDTKE1:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        SAVEDTKE1:varnames_on_old_files = "SAVEDTKE1" ;
        SAVEDTKE1:_FillValue = 1.e+36 ;
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                SAVEDTKE1:missing_value = 1.e+36 ;
double USTLAKE(column) ;
                USTLAKE:long_name = "friction velocity for lakes" ;
                USTLAKE:units = "m/s" ;
                USTLAKE:interpinic_flag = 1 ;
                USTLAKE:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
                USTLAKE:varnames_on_old_files = "USTLAKE" ;
                USTLAKE:_FillValue = 1.e+36 ;
                USTLAKE:missing_value = 1.e+36 ;
double FROST_TABLE(column) ;
                FROST_TABLE:long_name = "frost table depth" ;
                FROST_TABLE:units = "m" ;
                FROST_TABLE:interpinic_flag = 1 ;
                FROST_TABLE:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
                FROST_TABLE:varnames_on_old_files = "FROST_TABLE" ;
                FROST_TABLE:_FillValue = 1.e+36 ;
                FROST_TABLE:missing_value = 1.e+36 ;
double WA(column) ;
                WA:long_name = "water in the unconfined aquifer" ;
                WA:units = "mm" ;
                WA:interpinic_flag = 1 ;
                WA:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
                WA:varnames_on_old_files = "WA" ;
                WA:_FillValue = 1.e+36 ;
                WA:missing_value = 1.e+36 ;
double ZWT(column) ;
                ZWT:long_name = "water table depth" ;
                ZWT:units = "m" ;
                ZWT:interpinic_flag = 1 ;
                ZWT:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
                ZWT:varnames_on_old_files = "ZWT" ;
                ZWT:_FillValue = 1.e+36 ;
                ZWT:missing_value = 1.e+36 ;
double ZWT_PERCH(column) ;
                ZWT_PERCH:long_name = "perched water table depth" ;
                ZWT_PERCH:units = "m" ;
                ZWT_PERCH:interpinic_flag = 1 ;
                ZWT_PERCH:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
                ZWT_PERCH:varnames_on_old_files = "ZWT_PERCH" ;
                ZWT_PERCH:_FillValue = 1.e+36 ;
                ZWT_PERCH:missing_value = 1.e+36 ;
double sabs_roof_dir(landunit, numrad) ;
                sabs_roof_dir:long_name = "direct solar absorbed by roof per unit ground area per unit incident flux" ;
                sabs_roof_dir:units = "" ;
                sabs_roof_dir:interpinic_flag = 1 ;
                sabs_roof_dir:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
                sabs_roof_dir:varnames_on_old_files = "sabs_roof_dir" ;
                sabs_roof_dir:switchdim_flag = 1 ;
                sabs_roof_dir:switchdim_flag_values = 0, 1 ;
                sabs_roof_dir:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
                sabs_roof_dir:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
                sabs_roof_dir:_FillValue = 1.e+36 ;
                sabs_roof_dir:missing_value = 1.e+36 ;
double sabs_roof_dif(landunit, numrad) ;
                sabs_roof_dif:long_name = "diffuse solar absorbed by roof per unit ground area per unit incident flux" ;
                sabs_roof_dif:units = "" ;
                sabs_roof_dif:interpinic_flag = 1 ;
                sabs_roof_dif:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
                sabs_roof_dif:varnames_on_old_files = "sabs_roof_dif" ;
                sabs_roof_dif:switchdim_flag = 1 ;
                sabs_roof_dif:switchdim_flag_values = 0, 1 ;
                sabs_roof_dif:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
                sabs_roof_dif:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
                sabs_roof_dif:_FillValue = 1.e+36 ;
                sabs_roof_dif:missing_value = 1.e+36 ;
double sabs_sunwall_dir(landunit, numrad) ;
                sabs_sunwall_dir:long_name = "direct solar absorbed by sunwall per unit wall area per unit incident flux" ;
                sabs_sunwall_dir:units = "" ;
                sabs_sunwall_dir:interpinic_flag = 1 ;
                sabs_sunwall_dir:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
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                sabs_sunwall_dir:varnames_on_old_files = "sabs_sunwall_dir" ;
                sabs_sunwall_dir:switchdim_flag = 1 ;
                sabs_sunwall_dir:switchdim_flag_values = 0, 1 ;
                sabs_sunwall_dir:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
                sabs_sunwall_dir:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
                sabs_sunwall_dir:_FillValue = 1.e+36 ;
                sabs_sunwall_dir:missing_value = 1.e+36 ;
        double sabs_sunwall_dif(landunit, numrad) ;
                sabs_sunwall_dif:long_name = "diffuse solar absorbed by sunwall per unit wall area per unit incident flux" ;
                sabs_sunwall_dif:units = "" ;
                sabs_sunwall_dif:interpinic_flag = 1 ;
                sabs_sunwall_dif:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
                sabs_sunwall_dif:varnames_on_old_files = "sabs_sunwall_dif" ;
                sabs_sunwall_dif:switchdim_flag = 1 ;
                sabs_sunwall_dif:switchdim_flag_values = 0, 1 ;
                sabs_sunwall_dif:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
                sabs_sunwall_dif:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
                sabs_sunwall_dif:_FillValue = 1.e+36 ;
                sabs_sunwall_dif:missing_value = 1.e+36 ;
        double sabs_shadewall_dir(landunit, numrad) ;
                sabs_shadewall_dir:long_name = "direct solar absorbed by shadewall per unit wall area per unit incident flux" ;
                sabs_shadewall_dir:units = "" ;
                sabs_shadewall_dir:interpinic_flag = 1 ;
                sabs_shadewall_dir:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
                sabs_shadewall_dir:varnames_on_old_files = "sabs_shadewall_dir" ;
                sabs_shadewall_dir:switchdim_flag = 1 ;
                sabs_shadewall_dir:switchdim_flag_values = 0, 1 ;
                sabs_shadewall_dir:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
                sabs_shadewall_dir:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
                sabs_shadewall_dir:_FillValue = 1.e+36 ;
                sabs_shadewall_dir:missing_value = 1.e+36 ;
        double sabs_shadewall_dif(landunit, numrad) ;
                sabs_shadewall_dif:long_name = "diffuse solar absorbed by shadewall per unit wall area per unit incident flux" ;
                sabs_shadewall_dif:units = "" ;
                sabs_shadewall_dif:interpinic_flag = 1 ;
                sabs_shadewall_dif:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
                sabs_shadewall_dif:varnames_on_old_files = "sabs_shadewall_dif" ;
                sabs_shadewall_dif:switchdim_flag = 1 ;
                sabs_shadewall_dif:switchdim_flag_values = 0, 1 ;
                sabs_shadewall_dif:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
                sabs_shadewall_dif:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
                sabs_shadewall_dif:_FillValue = 1.e+36 ;
                sabs_shadewall_dif:missing_value = 1.e+36 ;
        double sabs_improad_dir(landunit, numrad) ;
                sabs_improad_dir:long_name = "direct solar absorbed by impervious road per unit ground area per unit incident
flux" ;
                sabs_improad_dir:units = "" ;
                sabs_improad_dir:interpinic_flag = 1 ;
                sabs_improad_dir:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
                sabs_improad_dir:varnames_on_old_files = "sabs_improad_dir" ;
                sabs_improad_dir:switchdim_flag = 1 ;
                sabs_improad_dir:switchdim_flag_values = 0, 1 ;
                sabs_improad_dir:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
                sabs_improad_dir:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
                sabs_improad_dir:_FillValue = 1.e+36 ;
                sabs_improad_dir:missing_value = 1.e+36 ;
        double sabs_improad_dif(landunit, numrad) ;
                sabs_improad_dif:long_name = "diffuse solar absorbed by impervious road per unit ground area per unit incident
flux" ;
                sabs_improad_dif:units = "" ;
                sabs_improad_dif:interpinic_flag = 1 ;
                sabs_improad_dif:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
                sabs_improad_dif:varnames_on_old_files = "sabs_improad_dif" ;
                sabs_improad_dif:switchdim_flag = 1 ;
                sabs_improad_dif:switchdim_flag_values = 0, 1 ;
                sabs_improad_dif:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
                sabs_improad_dif:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
                sabs_improad_dif:_FillValue = 1.e+36 ;
                sabs_improad_dif:missing_value = 1.e+36 ;
        double sabs_perroad_dir(landunit, numrad) ;
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sabs_perroad_dir:long_name = "direct solar absorbed by pervious road per unit ground area per unit incident
flux" ;
                    sabs_perroad_dir:units = "" ;
                    sabs_perroad_dir:interpinic_flag = 1 ;
                    sabs_perroad_dir:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
                    sabs_perroad_dir:varnames_on_old_files = "sabs_perroad_dir" ;
                    sabs_perroad_dir:switchdim_flag = 1 ;
                    sabs_perroad_dir:switchdim_flag_values = 0, 1 ;
                    sabs_perroad_dir:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
                    sabs_perroad_dir:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
                    sabs_perroad_dir:_FillValue = 1.e+36 ;
                    sabs_perroad_dir:missing_value = 1.e+36 ;
            double sabs_perroad_dif(landunit, numrad) ;
                    sabs_perroad_dif:long_name = "diffuse solar absorbed by pervious road per unit ground area per unit incident
flux" ;
                    sabs_perroad_dif:units = "" ;
                    sabs_perroad_dif:interpinic_flag = 1 ;
                    sabs_perroad_dif:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
                    sabs_perroad_dif:varnames_on_old_files = "sabs_perroad_dif" ;
                    sabs_perroad_dif:switchdim_flag = 1 ;
                    sabs_perroad_dif:switchdim_flag_values = 0, 1 ;
                    sabs_perroad_dif:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
                    sabs_perroad_dif:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
                    sabs_perroad_dif:_FillValue = 1.e+36 ;
                    sabs_perroad_dif:missing_value = 1.e+36 ;
            double T_SOISNO(column, levtot) ;
                    T_SOISNO:long_name = "soil-snow temperature" ;
                    T_SOISNO:units = "K" ;
                    T_SOISNO:interpinic_flag = 1 ;
                    T_SOISNO:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
                    T_SOISNO:varnames_on_old_files = "T_SOISNO" ;
                    T_SOISNO:switchdim_flag = 1 ;
                    T_SOISNO:switchdim_flag_values = 0, 1 ;
                    T_SOISNO:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
                    T_SOISNO:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
                    T_SOISNO:_FillValue = 1.e+36 ;
                    T_SOISNO:missing_value = 1.e+36 ;
            double T_VEG(pft) ;
                    T_VEG:long_name = "vegetation temperature" ;
                    T_VEG:units = "K" ;
                    T_VEG:interpinic_flag = 1 ;
                    T_VEG:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
                    T_VEG:varnames_on_old_files = "T_VEG" ;
                    T_VEG:_FillValue = 1.e+36 ;
                    T_VEG:missing_value = 1.e+36 ;
            double TH2OSFC(column) ;
                    TH2OSFC:long_name = "surface water temperature" ;
                    TH2OSFC:units = "K" ;
                    TH2OSFC:interpinic_flag = 1 ;
                    TH2OSFC:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
                    TH2OSFC:varnames_on_old_files = "TH2OSFC" ;
                    TH2OSFC:_FillValue = 1.e+36 ;
                    TH2OSFC:missing_value = 1.e+36 ;
            double T_LAKE(column, levlak) ;
                    T_LAKE:long_name = "lake temperature" ;
                    T_LAKE:units = "K" ;
                    T_LAKE:interpinic_flag = 1 ;
                    T_LAKE:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
                    T_LAKE:varnames_on_old_files = "T_LAKE" ;
                    T_LAKE:switchdim_flag = 1 ;
                    T_LAKE:switchdim_flag_values = 0, 1 ;
                    T_LAKE:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
                    T_LAKE:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
                    T_LAKE:_FillValue = 1.e+36 ;
                    T_LAKE:missing_value = 1.e+36 ;
            double T_GRND(column) ;
                    T_GRND:long_name = "ground temperature" ;
                    T_GRND:units = "K" ;
                    T_GRND:interpinic_flag = 1 ;
                    T_GRND:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;

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        T_GRND:varnames_on_old_files = "T_GRND" ;
        T_GRND:_FillValue = 1.e+36 ;
        T_GRND:missing_value = 1.e+36 ;
double T_GRND_R(column) ;
        T_GRND_R:long_name = "rural ground temperature" ;
        T_GRND_R:units = "K" ;
        T_GRND_R:interpinic_flag = 1 ;
        T_GRND_R:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        T_GRND_R:varnames_on_old_files = "T_GRND_R" ;
        T_GRND_R:_FillValue = 1.e+36 ;
        T_GRND_R:missing_value = 1.e+36 ;
double T_GRND_U(column) ;
        T_GRND_U:long_name = "urban ground temperature" ;
        T_GRND_U:units = "K" ;
        T_GRND_U:interpinic_flag = 1 ;
        T_GRND_U:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        T_GRND_U:varnames_on_old_files = "T_GRND_U" ;
        T_GRND_U:_FillValue = 1.e+36 ;
        T_GRND_U:missing_value = 1.e+36 ;
double T_REF2M(pft) ;
        T_REF2M:long_name = "2m height surface air temperature" ;
        T_REF2M:units = "K" ;
        T_REF2M:interpinic_flag = 1 ;
        T_REF2M:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        T_REF2M:varnames_on_old_files = "T_REF2M" ;
        T_REF2M:_FillValue = 1.e+36 ;
        T_REF2M:missing_value = 1.e+36 ;
double T_REF2M_R(pft) ;
        T_REF2M_R:long_name = "Rural 2m height surface air temperature" ;
        T_REF2M_R:units = "K" ;
        T_REF2M_R:interpinic_flag = 1 ;
        T_REF2M_R:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        T_REF2M_R:varnames_on_old_files = "T_REF2M_R" ;
        T_REF2M_R:_FillValue = 1.e+36 ;
        T_REF2M_R:missing_value = 1.e+36 ;
double T_REF2M_U(pft) ;
        T_REF2M_U:long_name = "Urban 2m height surface air temperature" ;
        T_REF2M_U:units = "K" ;
        T_REF2M_U:interpinic_flag = 1 ;
        T_REF2M_U:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        T_REF2M_U:varnames_on_old_files = "T_REF2M_U" ;
        T_REF2M_U:_FillValue = 1.e+36 ;
        T_REF2M_U:missing_value = 1.e+36 ;
double T_REF2M_MIN(pft) ;
        T_REF2M_MIN:long_name = "daily minimum of average 2 m height surface air temperature (K)" ;
        T_REF2M_MIN:units = "K" ;
        T_REF2M_MIN:interpinic_flag = 1 ;
        T_REF2M_MIN:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        T_REF2M_MIN:varnames_on_old_files = "T_REF2M_MIN" ;
        T_REF2M_MIN:_FillValue = 1.e+36 ;
        T_REF2M_MIN:missing_value = 1.e+36 ;
double T_REF2M_MIN_R(pft) ;
        T_REF2M_MIN_R:long_name = "rural daily minimum of average 2 m height surface air temperature (K)" ;
        T_REF2M_MIN_R:units = "K" ;
        T_REF2M_MIN_R:interpinic_flag = 1 ;
        T_REF2M_MIN_R:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        T_REF2M_MIN_R:varnames_on_old_files = "T_REF2M_MIN_R" ;
        T_REF2M_MIN_R:_FillValue = 1.e+36 ;
        T_REF2M_MIN_R:missing_value = 1.e+36 ;
double T_REF2M_MIN_U(pft) ;
        T_REF2M_MIN_U:long_name = "urban daily minimum of average 2 m height surface air temperature (K)" ;
        T_REF2M_MIN_U:units = "K" ;
        T_REF2M_MIN_U:interpinic_flag = 1 ;
        T_REF2M_MIN_U:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        T_REF2M_MIN_U:varnames_on_old_files = "T_REF2M_MIN_U" ;
        T_REF2M_MIN_U:_FillValue = 1.e+36 ;
        T_REF2M_MIN_U:missing_value = 1.e+36 ;
double T_REF2M_MAX(pft) ;
        T_REF2M_MAX:long_name = "daily maximum of average 2 m height surface air temperature (K)" ;
        T_REF2M_MAX:units = "K" ;
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```
            T_REF2M_MAX:interpinic_flag = 1 ;
            T_REF2M_MAX:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
            T_REF2M_MAX:varnames_on_old_files = "T_REF2M_MAX" ;
            T_REF2M_MAX:_FillValue = 1.e+36 ;
            T_REF2M_MAX:missing_value = 1.e+36 ;
    double T_REF2M_MAX_R(pft) ;
            T_REF2M_MAX_R:long_name = "rural daily maximum of average 2 m height surface air temperature (K)" ;
            T_REF2M_MAX_R:units = "K" ;
            T_REF2M_MAX_R:interpinic_flag = 1 ;
            T_REF2M_MAX_R:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
            T_REF2M_MAX_R:varnames_on_old_files = "T_REF2M_MAX_R" ;
            T_REF2M_MAX_R:_FillValue = 1.e+36 ;
            T_REF2M_MAX_R:missing_value = 1.e+36 ;
    double T_REF2M_MAX_U(pft) ;
            T_REF2M_MAX_U:long_name = "urban daily maximum of average 2 m height surface air temperature (K)" ;
            T_REF2M_MAX_U:units = "K" ;
            T_REF2M_MAX_U:interpinic_flag = 1 ;
            T_REF2M_MAX_U:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
            T_REF2M_MAX_U:varnames_on_old_files = "T_REF2M_MAX_U" ;
            T_REF2M_MAX_U:_FillValue = 1.e+36 ;
            T_REF2M_MAX_U:missing_value = 1.e+36 ;
    double T_REF2M_MIN_INST(pft) ;
            T_REF2M_MIN_INST:long_name = "instantaneous daily min of average 2 m height surface air temp (K)" ;
            T_REF2M_MIN_INST:units = "K" ;
            T_REF2M_MIN_INST:interpinic_flag = 1 ;
            T_REF2M_MIN_INST:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
            T_REF2M_MIN_INST:varnames_on_old_files = "T_REF2M_MIN_INST" ;
            T_REF2M_MIN_INST:_FillValue = 1.e+36 ;
            T_REF2M_MIN_INST:missing_value = 1.e+36 ;
    double T_REF2M_MIN_INST_R(pft) ;
            T_REF2M_MIN_INST_R:long_name = "rural instantaneous daily min of average 2 m height surface air temp
(K)" ;
            T_REF2M_MIN_INST_R:units = "K" ;
            T_REF2M_MIN_INST_R:interpinic_flag = 1 ;
            T_REF2M_MIN_INST_R:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
            T_REF2M_MIN_INST_R:varnames_on_old_files = "T_REF2M_MIN_INST_R" ;
            T_REF2M_MIN_INST_R:_FillValue = 1.e+36 ;
            T_REF2M_MIN_INST_R:missing_value = 1.e+36 ;
    double T_REF2M_MIN_INST_U(pft) ;
            T_REF2M_MIN_INST_U:long_name = "urban instantaneous daily min of average 2 m height surface air temp
(K)" ;
            T_REF2M_MIN_INST_U:units = "K" ;
            T_REF2M_MIN_INST_U:interpinic_flag = 1 ;
            T_REF2M_MIN_INST_U:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
            T_REF2M_MIN_INST_U:varnames_on_old_files = "T_REF2M_MIN_INST_U" ;
            T_REF2M_MIN_INST_U:_FillValue = 1.e+36 ;
            T_REF2M_MIN_INST_U:missing_value = 1.e+36 ;
    double T_REF2M_MAX_INST(pft) ;
            T_REF2M_MAX_INST:long_name = "instantaneous daily max of average 2 m height surface air temp (K)" ;
            T_REF2M_MAX_INST:units = "K" ;
            T_REF2M_MAX_INST:interpinic_flag = 1 ;
            T_REF2M_MAX_INST:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
            T_REF2M_MAX_INST:varnames_on_old_files = "T_REF2M_MAX_INST" ;
            T_REF2M_MAX_INST:_FillValue = 1.e+36 ;
            T_REF2M_MAX_INST:missing_value = 1.e+36 ;
    double T_REF2M_MAX_INST_R(pft) ;
            T_REF2M_MAX_INST_R:long_name = "rural instantaneous daily max of average 2 m height surface air temp
(K)" ;
            T_REF2M_MAX_INST_R:units = "K" ;
            T_REF2M_MAX_INST_R:interpinic_flag = 1 ;
            T_REF2M_MAX_INST_R:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
            T_REF2M_MAX_INST_R:varnames_on_old_files = "T_REF2M_MAX_INST_R" ;
            T_REF2M_MAX_INST_R:_FillValue = 1.e+36 ;
            T_REF2M_MAX_INST_R:missing_value = 1.e+36 ;
    double T_REF2M_MAX_INST_U(pft) ;
            T_REF2M_MAX_INST_U:long_name = "urban instantaneous daily max of average 2 m height surface air temp
(K)" ;
            T_REF2M_MAX_INST_U:units = "K" ;
            T_REF2M_MAX_INST_U:interpinic_flag = 1 ;
            T_REF2M_MAX_INST_U:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
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        T_REF2M_MAX_INST_U:varnames_on_old_files = "T_REF2M_MAX_INST_U" ;
        T_REF2M_MAX_INST_U:_FillValue = 1.e+36 ;
        T_REF2M_MAX_INST_U:missing_value = 1.e+36 ;
double taf(landunit) ;
        taf:long_name = "urban canopy air temperature" ;
        taf:units = "K" ;
        taf:interpinic_flag = 1 ;
        taf:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        taf:varnames_on_old_files = "taf" ;
        taf:_FillValue = 1.e+36 ;
        taf:missing_value = 1.e+36 ;
double DSL(column) ;
        DSL:long_name = "dsl thickness" ;
        DSL:units = "mm" ;
        DSL:interpinic_flag = 1 ;
        DSL:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        DSL:varnames_on_old_files = "DSL" ;
        DSL:_FillValue = 1.e+36 ;
        DSL:missing_value = 1.e+36 ;
double SOILRESIS(column) ;
        SOILRESIS:long_name = "soil resistance" ;
        SOILRESIS:units = "s/m" ;
        SOILRESIS:interpinic_flag = 1 ;
        SOILRESIS:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        SOILRESIS:varnames_on_old_files = "SOILRESIS" ;
        SOILRESIS:_FillValue = 1.e+36 ;
        SOILRESIS:missing_value = 1.e+36 ;
double qflx_snofrz_lyr(column, levsno) ;
        qflx_snofrz_lyr:long_name = "snow layer ice freezing rate" ;
        qflx_snofrz_lyr:units = "kg m-2 s-1" ;
        qflx_snofrz_lyr:interpinic_flag = 1 ;
        qflx_snofrz_lyr:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        qflx_snofrz_lyr:varnames_on_old_files = "qflx_snofrz_lyr" ;
        qflx_snofrz_lyr:switchdim_flag = 1 ;
        qflx_snofrz_lyr:switchdim_flag_values = 0, 1 ;
        qflx_snofrz_lyr:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        qflx_snofrz_lyr:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        qflx_snofrz_lyr:_FillValue = 1.e+36 ;
        qflx_snofrz_lyr:missing_value = 1.e+36 ;
double qflx_snow_drain(column) ;
        qflx_snow_drain:long_name = "drainage from snow column" ;
        qflx_snow_drain:units = "mm/s" ;
        qflx_snow_drain:interpinic_flag = 1 ;
        qflx_snow_drain:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        qflx_snow_drain:varnames_on_old_files = "qflx_snow_drain:qflx_snow_melt" ;
        qflx_snow_drain:_FillValue = 1.e+36 ;
        qflx_snow_drain:missing_value = 1.e+36 ;
double AnnET(column) ;
        AnnET:long_name = "Annual ET" ;
        AnnET:units = "mm/s" ;
        AnnET:interpinic_flag = 1 ;
        AnnET:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        AnnET:varnames_on_old_files = "AnnET" ;
        AnnET:_FillValue = 1.e+36 ;
        AnnET:missing_value = 1.e+36 ;
double INT_SNOW(column) ;
        INT_SNOW:long_name = "accuumulated snow" ;
        INT_SNOW:units = "mm" ;
        INT_SNOW:interpinic_flag = 1 ;
        INT_SNOW:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        INT_SNOW:varnames_on_old_files = "INT_SNOW" ;
        INT_SNOW:_FillValue = 1.e+36 ;
        INT_SNOW:missing_value = 1.e+36 ;
double H2OSFC(column) ;
        H2OSFC:long_name = "surface water" ;
        H2OSFC:units = "kg/m2" ;
        H2OSFC:interpinic_flag = 1 ;
        H2OSFC:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        H2OSFC:varnames_on_old_files = "H2OSFC" ;
        H2OSFC:_FillValue = 1.e+36 ;
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        H2OSFC:missing_value = 1.e+36 ;
double H2OSNO(column) ;
        H2OSNO:long_name = "snow water" ;
        H2OSNO:units = "kg/m2" ;
        H2OSNO:interpinic_flag = 1 ;
        H2OSNO:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        H2OSNO:varnames_on_old_files = "H2OSNO" ;
        H2OSNO:_FillValue = 1.e+36 ;
        H2OSNO:missing_value = 1.e+36 ;
double H2OSOI_LIQ(column, levtot) ;
        H2OSOI_LIQ:long_name = "liquid water" ;
        H2OSOI_LIQ:units = "kg/m2" ;
        H2OSOI_LIQ:interpinic_flag = 1 ;
        H2OSOI_LIQ:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        H2OSOI_LIQ:varnames_on_old_files = "H2OSOI_LIQ" ;
        H2OSOI_LIQ:switchdim_flag = 1 ;
        H2OSOI_LIQ:switchdim_flag_values = 0, 1 ;
        H2OSOI_LIQ:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        H2OSOI_LIQ:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        H2OSOI_LIQ:_FillValue = 1.e+36 ;
        H2OSOI_LIQ:missing_value = 1.e+36 ;
double H2OSOI_ICE(column, levtot) ;
        H2OSOI_ICE:long_name = "ice lens" ;
        H2OSOI_ICE:units = "kg/m2" ;
        H2OSOI_ICE:interpinic_flag = 1 ;
        H2OSOI_ICE:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        H2OSOI_ICE:varnames_on_old_files = "H2OSOI_ICE" ;
        H2OSOI_ICE:switchdim_flag = 1 ;
        H2OSOI_ICE:switchdim_flag_values = 0, 1 ;
        H2OSOI_ICE:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        H2OSOI_ICE:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        H2OSOI_ICE:_FillValue = 1.e+36 ;
        H2OSOI_ICE:missing_value = 1.e+36 ;
double H2OCAN(pft) ;
        H2OCAN:long_name = "canopy water" ;
        H2OCAN:units = "kg/m2" ;
        H2OCAN:interpinic_flag = 1 ;
        H2OCAN:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        H2OCAN:varnames_on_old_files = "H2OCAN" ;
        H2OCAN:_FillValue = 1.e+36 ;
        H2OCAN:missing_value = 1.e+36 ;
double SNOCAN(pft) ;
        SNOCAN:long_name = "canopy snow water" ;
        SNOCAN:units = "kg/m2" ;
        SNOCAN:interpinic_flag = 1 ;
        SNOCAN:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        SNOCAN:varnames_on_old_files = "SNOCAN" ;
        SNOCAN:_FillValue = 1.e+36 ;
        SNOCAN:missing_value = 1.e+36 ;
double LIQCAN(pft) ;
        LIQCAN:long_name = "canopy liquid water" ;
        LIQCAN:units = "kg/m2" ;
        LIQCAN:interpinic_flag = 1 ;
        LIQCAN:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        LIQCAN:varnames_on_old_files = "LIQCAN:H2OCAN" ;
        LIQCAN:_FillValue = 1.e+36 ;
        LIQCAN:missing_value = 1.e+36 ;
double SNOUNLOAD(pft) ;
        SNOUNLOAD:long_name = "Canopy snow unloading" ;
        SNOUNLOAD:units = "kg/m2" ;
        SNOUNLOAD:interpinic_flag = 1 ;
        SNOUNLOAD:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        SNOUNLOAD:varnames_on_old_files = "SNOUNLOAD" ;
        SNOUNLOAD:_FillValue = 1.e+36 ;
        SNOUNLOAD:missing_value = 1.e+36 ;
double FH2OSFC(column) ;
        FH2OSFC:long_name = "fraction of ground covered by h2osfc (0 to 1)" ;
        FH2OSFC:units = "" ;
        FH2OSFC:interpinic_flag = 1 ;
        FH2OSFC:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
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        FH2OSFC:varnames_on_old_files = "FH2OSFC" ;
        FH2OSFC:_FillValue = 1.e+36 ;
        FH2OSFC:missing_value = 1.e+36 ;
double SNOW_DEPTH(column) ;
        SNOW_DEPTH:long_name = "snow depth" ;
        SNOW_DEPTH:units = "m" ;
        SNOW_DEPTH:interpinic_flag = 1 ;
        SNOW_DEPTH:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        SNOW_DEPTH:varnames_on_old_files = "SNOW_DEPTH" ;
        SNOW_DEPTH:_FillValue = 1.e+36 ;
        SNOW_DEPTH:missing_value = 1.e+36 ;
double SNOW_PERS(column) ;
        SNOW_PERS:long_name = "continuous snow cover time" ;
        SNOW_PERS:units = "sec" ;
        SNOW_PERS:interpinic_flag = 1 ;
        SNOW_PERS:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        SNOW_PERS:varnames_on_old_files = "SNOW_PERS" ;
        SNOW_PERS:_FillValue = 1.e+36 ;
        SNOW_PERS:missing_value = 1.e+36 ;
double frac_sno_eff(column) ;
        frac_sno_eff:long_name = "fraction of ground covered by snow (0 to 1)" ;
        frac_sno_eff:units = "unitless" ;
        frac_sno_eff:interpinic_flag = 1 ;
        frac_sno_eff:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        frac_sno_eff:varnames_on_old_files = "frac_sno_eff" ;
        frac_sno_eff:_FillValue = 1.e+36 ;
        frac_sno_eff:missing_value = 1.e+36 ;
double frac_sno(column) ;
        frac_sno:long_name = "fraction of ground covered by snow (0 to 1)" ;
        frac_sno:units = "unitless" ;
        frac_sno:interpinic_flag = 1 ;
        frac_sno:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        frac_sno:varnames_on_old_files = "frac_sno" ;
        frac_sno:_FillValue = 1.e+36 ;
        frac_sno:missing_value = 1.e+36 ;
double FWET(pft) ;
        FWET:long_name = "fraction of canopy that is wet (0 to 1)" ;
        FWET:units = "" ;
        FWET:interpinic_flag = 1 ;
        FWET:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        FWET:varnames_on_old_files = "FWET" ;
        FWET:_FillValue = 1.e+36 ;
        FWET:missing_value = 1.e+36 ;
double FCANSNO(pft) ;
        FCANSNO:long_name = "fraction of canopy that is snow covered (0 to 1)" ;
        FCANSNO:units = "" ;
        FCANSNO:interpinic_flag = 1 ;
        FCANSNO:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        FCANSNO:varnames_on_old_files = "FCANSNO" ;
        FCANSNO:_FillValue = 1.e+36 ;
        FCANSNO:missing_value = 1.e+36 ;
double snw_rds(column, levsno) ;
        snw_rds:long_name = "snow layer effective radius" ;
        snw_rds:units = "um" ;
        snw_rds:interpinic_flag = 1 ;
        snw_rds:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        snw_rds:varnames_on_old_files = "snw_rds" ;
        snw_rds:switchdim_flag = 1 ;
        snw_rds:switchdim_flag_values = 0, 1 ;
        snw_rds:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        snw_rds:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        snw_rds:_FillValue = 1.e+36 ;
        snw_rds:missing_value = 1.e+36 ;
double qaf(landunit) ;
        qaf:long_name = "urban canopy specific humidity" ;
        qaf:units = "kg/kg" ;
        qaf:interpinic_flag = 1 ;
        qaf:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        qaf:varnames_on_old_files = "qaf" ;
        qaf:_FillValue = 1.e+36 ;
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        qaf:missing_value = 1.e+36 ;
int n_irrig_steps_left(pft) ;
        n_irrig_steps_left:long_name = "number of irrigation time steps left" ;
        n_irrig_steps_left:units = "#" ;
        n_irrig_steps_left:interpinic_flag = 1 ;
        n_irrig_steps_left:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        n_irrig_steps_left:varnames_on_old_files = "n_irrig_steps_left" ;
        n_irrig_steps_left:_FillValue = -9999 ;
        n_irrig_steps_left:missing_value = -9999 ;
double irrig_rate(pft) ;
        irrig_rate:long_name = "irrigation rate" ;
        irrig_rate:units = "mm/s" ;
        irrig_rate:interpinic_flag = 1 ;
        irrig_rate:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        irrig_rate:varnames_on_old_files = "irrig_rate" ;
        irrig_rate:_FillValue = 1.e+36 ;
        irrig_rate:missing_value = 1.e+36 ;
double mss_bcpho(column, levsno) ;
        mss_bcpho:long_name = "snow layer hydrophobic black carbon mass" ;
        mss_bcpho:units = "kg m-2" ;
        mss_bcpho:interpinic_flag = 1 ;
        mss_bcpho:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        mss_bcpho:varnames_on_old_files = "mss_bcpho" ;
        mss_bcpho:switchdim_flag = 1 ;
        mss_bcpho:switchdim_flag_values = 0, 1 ;
        mss_bcpho:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        mss_bcpho:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        mss_bcpho:_FillValue = 1.e+36 ;
        mss_bcpho:missing_value = 1.e+36 ;
double mss_bcphi(column, levsno) ;
        mss_bcphi:long_name = "snow layer hydrophilic black carbon mass" ;
        mss_bcphi:units = "kg m-2" ;
        mss_bcphi:interpinic_flag = 1 ;
        mss_bcphi:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        mss_bcphi:varnames_on_old_files = "mss_bcphi" ;
        mss_bcphi:switchdim_flag = 1 ;
        mss_bcphi:switchdim_flag_values = 0, 1 ;
        mss_bcphi:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        mss_bcphi:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        mss_bcphi:_FillValue = 1.e+36 ;
        mss_bcphi:missing_value = 1.e+36 ;
double mss_ocpho(column, levsno) ;
        mss_ocpho:long_name = "snow layer hydrophobic organic carbon mass" ;
        mss_ocpho:units = "kg m-2" ;
        mss_ocpho:interpinic_flag = 1 ;
        mss_ocpho:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        mss_ocpho:varnames_on_old_files = "mss_ocpho" ;
        mss_ocpho:switchdim_flag = 1 ;
        mss_ocpho:switchdim_flag_values = 0, 1 ;
        mss_ocpho:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        mss_ocpho:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        mss_ocpho:_FillValue = 1.e+36 ;
        mss_ocpho:missing_value = 1.e+36 ;
double mss_ocphi(column, levsno) ;
        mss_ocphi:long_name = "snow layer hydrophilic organic carbon mass" ;
        mss_ocphi:units = "kg m-2" ;
        mss_ocphi:interpinic_flag = 1 ;
        mss_ocphi:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        mss_ocphi:varnames_on_old_files = "mss_ocphi" ;
        mss_ocphi:switchdim_flag = 1 ;
        mss_ocphi:switchdim_flag_values = 0, 1 ;
        mss_ocphi:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        mss_ocphi:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        mss_ocphi:_FillValue = 1.e+36 ;
        mss_ocphi:missing_value = 1.e+36 ;
double mss_dst1(column, levsno) ;
        mss_dst1:long_name = "snow layer dust species 1 mass" ;
        mss_dst1:units = "kg m-2" ;
        mss_dst1:interpinic_flag = 1 ;
        mss_dst1:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
```

```
        mss_dst1:varnames_on_old_files = "mss_dst1" ;
        mss_dst1:switchdim_flag = 1 ;
        mss_dst1:switchdim_flag_values = 0, 1 ;
        mss_dst1:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        mss_dst1:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        mss_dst1:_FillValue = 1.e+36 ;
        mss_dst1:missing_value = 1.e+36 ;
double mss_dst2(column, levsno) ;
        mss_dst2:long_name = "snow layer dust species 2 mass" ;
        mss_dst2:units = "kg m-2" ;
        mss_dst2:interpinic_flag = 1 ;
        mss_dst2:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        mss_dst2:varnames_on_old_files = "mss_dst2" ;
        mss_dst2:switchdim_flag = 1 ;
        mss_dst2:switchdim_flag_values = 0, 1 ;
        mss_dst2:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        mss_dst2:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        mss_dst2:_FillValue = 1.e+36 ;
        mss_dst2:missing_value = 1.e+36 ;
double mss_dst3(column, levsno) ;
        mss_dst3:long_name = "snow layer dust species 3 mass" ;
        mss_dst3:units = "kg m-2" ;
        mss_dst3:interpinic_flag = 1 ;
        mss_dst3:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        mss_dst3:varnames_on_old_files = "mss_dst3" ;
        mss_dst3:switchdim_flag = 1 ;
        mss_dst3:switchdim_flag_values = 0, 1 ;
        mss_dst3:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        mss_dst3:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        mss_dst3:_FillValue = 1.e+36 ;
        mss_dst3:missing_value = 1.e+36 ;
double mss_dst4(column, levsno) ;
        mss_dst4:long_name = "snow layer dust species 4 mass" ;
        mss_dst4:units = "kg m-2" ;
        mss_dst4:interpinic_flag = 1 ;
        mss_dst4:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        mss_dst4:varnames_on_old_files = "mss_dst4" ;
        mss_dst4:switchdim_flag = 1 ;
        mss_dst4:switchdim_flag_values = 0, 1 ;
        mss_dst4:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        mss_dst4:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        mss_dst4:_FillValue = 1.e+36 ;
        mss_dst4:missing_value = 1.e+36 ;
double coszen(column) ;
        coszen:long_name = "cosine of solar zenith angle" ;
        coszen:units = "unitless" ;
        coszen:interpinic_flag = 1 ;
        coszen:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        coszen:varnames_on_old_files = "coszen" ;
        coszen:_FillValue = 1.e+36 ;
        coszen:missing_value = 1.e+36 ;
double albd(pft, numrad) ;
        albd:long_name = "surface albedo (direct) (0 to 1)" ;
        albd:units = "" ;
        albd:interpinic_flag = 1 ;
        albd:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        albd:varnames_on_old_files = "albd" ;
        albd:switchdim_flag = 1 ;
        albd:switchdim_flag_values = 0, 1 ;
        albd:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        albd:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        albd:_FillValue = 1.e+36 ;
        albd:missing_value = 1.e+36 ;
double albi(pft, numrad) ;
        albi:long_name = "surface albedo (diffuse) (0 to 1)" ;
        albi:units = "" ;
        albi:interpinic_flag = 1 ;
        albi:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        albi:varnames_on_old_files = "albi" ;
        albi:switchdim_flag = 1 ;
```

```
        albi:switchdim_flag_values = 0, 1 ;
        albi:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        albi:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        albi:_FillValue = 1.e+36 ;
        albi:missing_value = 1.e+36 ;
double albgrd(column, numrad) ;
        albgrd:long_name = "ground albedo (direct) (0 to 1)" ;
        albgrd:units = "" ;
        albgrd:interpinic_flag = 1 ;
        albgrd:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        albgrd:varnames_on_old_files = "albgrd" ;
        albgrd:switchdim_flag = 1 ;
        albgrd:switchdim_flag_values = 0, 1 ;
        albgrd:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        albgrd:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        albgrd:_FillValue = 1.e+36 ;
        albgrd:missing_value = 1.e+36 ;
double albgri(column, numrad) ;
        albgri:long_name = "ground albedo (indirect) (0 to 1)" ;
        albgri:units = "" ;
        albgri:interpinic_flag = 1 ;
        albgri:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        albgri:varnames_on_old_files = "albgri" ;
        albgri:switchdim_flag = 1 ;
        albgri:switchdim_flag_values = 0, 1 ;
        albgri:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        albgri:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        albgri:_FillValue = 1.e+36 ;
        albgri:missing_value = 1.e+36 ;
double albsod(column, numrad) ;
        albsod:long_name = "soil albedo (direct) (0 to 1)" ;
        albsod:units = "" ;
        albsod:interpinic_flag = 1 ;
        albsod:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        albsod:varnames_on_old_files = "albsod" ;
        albsod:switchdim_flag = 1 ;
        albsod:switchdim_flag_values = 0, 1 ;
        albsod:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        albsod:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        albsod:_FillValue = 1.e+36 ;
        albsod:missing_value = 1.e+36 ;
double albsoi(column, numrad) ;
        albsoi:long_name = "soil albedo (indirect) (0 to 1)" ;
        albsoi:units = "" ;
        albsoi:interpinic_flag = 1 ;
        albsoi:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        albsoi:varnames_on_old_files = "albsoi" ;
        albsoi:switchdim_flag = 1 ;
        albsoi:switchdim_flag_values = 0, 1 ;
        albsoi:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        albsoi:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        albsoi:_FillValue = 1.e+36 ;
        albsoi:missing_value = 1.e+36 ;
double albsnd_hst(column, numrad) ;
        albsnd_hst:long_name = "snow albedo (direct) (0 to 1)" ;
        albsnd_hst:units = "proportion" ;
        albsnd_hst:interpinic_flag = 1 ;
        albsnd_hst:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        albsnd_hst:varnames_on_old_files = "albsnd_hst" ;
        albsnd_hst:switchdim_flag = 1 ;
        albsnd_hst:switchdim_flag_values = 0, 1 ;
        albsnd_hst:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        albsnd_hst:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        albsnd_hst:_FillValue = 1.e+36 ;
        albsnd_hst:missing_value = 1.e+36 ;
double albsni_hst(column, numrad) ;
        albsni_hst:long_name = "snow albedo (diffuse) (0 to 1)" ;
        albsni_hst:units = "proportion" ;
        albsni_hst:interpinic_flag = 1 ;
        albsni_hst:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
```

```
        albsni_hst:varnames_on_old_files = "albsni_hst" ;
        albsni_hst:switchdim_flag = 1 ;
        albsni_hst:switchdim_flag_values = 0, 1 ;
        albsni_hst:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        albsni_hst:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        albsni_hst:_FillValue = 1.e+36 ;
        albsni_hst:missing_value = 1.e+36 ;
double tlai_z(pft, levcan) ;
        tlai_z:long_name = "tlai increment for canopy layer" ;
        tlai_z:units = "" ;
        tlai_z:interpinic_flag = 1 ;
        tlai_z:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        tlai_z:varnames_on_old_files = "tlai_z" ;
        tlai_z:switchdim_flag = 1 ;
        tlai_z:switchdim_flag_values = 0, 1 ;
        tlai_z:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        tlai_z:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        tlai_z:_FillValue = 1.e+36 ;
        tlai_z:missing_value = 1.e+36 ;
double tsai_z(pft, levcan) ;
        tsai_z:long_name = "tsai increment for canopy layer" ;
        tsai_z:units = "" ;
        tsai_z:interpinic_flag = 1 ;
        tsai_z:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        tsai_z:varnames_on_old_files = "tsai_z" ;
        tsai_z:switchdim_flag = 1 ;
        tsai_z:switchdim_flag_values = 0, 1 ;
        tsai_z:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        tsai_z:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        tsai_z:_FillValue = 1.e+36 ;
        tsai_z:missing_value = 1.e+36 ;
int ncan(pft) ;
        ncan:long_name = "number of canopy layers" ;
        ncan:units = "" ;
        ncan:interpinic_flag = 1 ;
        ncan:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        ncan:varnames_on_old_files = "ncan" ;
        ncan:_FillValue = -9999 ;
        ncan:missing_value = -9999 ;
int nrad(pft) ;
        nrad:long_name = "number of canopy layers, above snow for radiative transfer" ;
        nrad:units = "" ;
        nrad:interpinic_flag = 1 ;
        nrad:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        nrad:varnames_on_old_files = "nrad" ;
        nrad:_FillValue = -9999 ;
        nrad:missing_value = -9999 ;
double fsun_z(pft, levcan) ;
        fsun_z:long_name = "sunlit fraction for canopy layer" ;
        fsun_z:units = "" ;
        fsun_z:interpinic_flag = 1 ;
        fsun_z:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        fsun_z:varnames_on_old_files = "fsun_z" ;
        fsun_z:switchdim_flag = 1 ;
        fsun_z:switchdim_flag_values = 0, 1 ;
        fsun_z:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        fsun_z:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        fsun_z:_FillValue = 1.e+36 ;
        fsun_z:missing_value = 1.e+36 ;
double vcmaxcintsun(pft) ;
        vcmaxcintsun:long_name = "sunlit canopy scaling coefficient" ;
        vcmaxcintsun:units = "" ;
        vcmaxcintsun:interpinic_flag = 1 ;
        vcmaxcintsun:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        vcmaxcintsun:varnames_on_old_files = "vcmaxcintsun" ;
        vcmaxcintsun:_FillValue = 1.e+36 ;
        vcmaxcintsun:missing_value = 1.e+36 ;
double vcmaxcintsha(pft) ;
        vcmaxcintsha:long_name = "shaded canopy scaling coefficient" ;
        vcmaxcintsha:units = "" ;
```

```
        vcmaxcintsha:interpinic_flag = 1 ;
        vcmaxcintsha:interpinic_flag_meanings = "1=nearest neighbor, 2=copy directly, 3=skip" ;
        vcmaxcintsha:varnames_on_old_files = "vcmaxcintsha" ;
        vcmaxcintsha:_FillValue = 1.e+36 ;
        vcmaxcintsha:missing_value = 1.e+36 ;
double fabd(pft, numrad) ;
        fabd:long_name = "flux absorbed by veg per unit direct flux" ;
        fabd:units = "" ;
        fabd:interpinic_flag = 1 ;
        fabd:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        fabd:varnames_on_old_files = "fabd" ;
        fabd:switchdim_flag = 1 ;
        fabd:switchdim_flag_values = 0, 1 ;
        fabd:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        fabd:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        fabd:_FillValue = 1.e+36 ;
        fabd:missing_value = 1.e+36 ;
double fabi(pft, numrad) ;
        fabi:long_name = "flux absorbed by veg per unit diffuse flux" ;
        fabi:units = "" ;
        fabi:interpinic_flag = 1 ;
        fabi:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        fabi:varnames_on_old_files = "fabi" ;
        fabi:switchdim_flag = 1 ;
        fabi:switchdim_flag_values = 0, 1 ;
        fabi:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        fabi:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        fabi:_FillValue = 1.e+36 ;
        fabi:missing_value = 1.e+36 ;
double fabd_sun(pft, numrad) ;
        fabd_sun:long_name = "flux absorbed by sunlit leaf per unit direct flux" ;
        fabd_sun:units = "" ;
        fabd_sun:interpinic_flag = 1 ;
        fabd_sun:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        fabd_sun:varnames_on_old_files = "fabd_sun" ;
        fabd_sun:switchdim_flag = 1 ;
        fabd_sun:switchdim_flag_values = 0, 1 ;
        fabd_sun:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        fabd_sun:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        fabd_sun:_FillValue = 1.e+36 ;
        fabd_sun:missing_value = 1.e+36 ;
double fabd_sha(pft, numrad) ;
        fabd_sha:long_name = "flux absorbed by shaded leaf per unit direct flux" ;
        fabd_sha:units = "" ;
        fabd_sha:interpinic_flag = 1 ;
        fabd_sha:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        fabd_sha:varnames_on_old_files = "fabd_sha" ;
        fabd_sha:switchdim_flag = 1 ;
        fabd_sha:switchdim_flag_values = 0, 1 ;
        fabd_sha:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        fabd_sha:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        fabd_sha:_FillValue = 1.e+36 ;
        fabd_sha:missing_value = 1.e+36 ;
double fabi_sun(pft, numrad) ;
        fabi_sun:long_name = "flux absorbed by sunlit leaf per unit diffuse flux" ;
        fabi_sun:units = "" ;
        fabi_sun:interpinic_flag = 1 ;
        fabi_sun:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        fabi_sun:varnames_on_old_files = "fabi_sun" ;
        fabi_sun:switchdim_flag = 1 ;
        fabi_sun:switchdim_flag_values = 0, 1 ;
        fabi_sun:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        fabi_sun:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        fabi_sun:_FillValue = 1.e+36 ;
        fabi_sun:missing_value = 1.e+36 ;
double fabi_sha(pft, numrad) ;
        fabi_sha:long_name = "flux absorbed by shaded leaf per unit diffuse flux" ;
        fabi_sha:units = "" ;
        fabi_sha:interpinic_flag = 1 ;
        fabi_sha:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
```

```
        fabi_sha:varnames_on_old_files = "fabi_sha" ;
        fabi_sha:switchdim_flag = 1 ;
        fabi_sha:switchdim_flag_values = 0, 1 ;
        fabi_sha:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        fabi_sha:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        fabi_sha:_FillValue = 1.e+36 ;
        fabi_sha:missing_value = 1.e+36 ;
double fabd_sun_z(pft, levcan) ;
        fabd_sun_z:long_name = "absorbed sunlit leaf direct PAR (per unit lai+sai) for canopy layer" ;
        fabd_sun_z:units = "" ;
        fabd_sun_z:interpinic_flag = 1 ;
        fabd_sun_z:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        fabd_sun_z:varnames_on_old_files = "fabd_sun_z" ;
        fabd_sun_z:switchdim_flag = 1 ;
        fabd_sun_z:switchdim_flag_values = 0, 1 ;
        fabd_sun_z:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        fabd_sun_z:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        fabd_sun_z:_FillValue = 1.e+36 ;
        fabd_sun_z:missing_value = 1.e+36 ;
double fabd_sha_z(pft, levcan) ;
        fabd_sha_z:long_name = "absorbed shaded leaf direct PAR (per unit lai+sai) for canopy layer" ;
        fabd_sha_z:units = "" ;
        fabd_sha_z:interpinic_flag = 1 ;
        fabd_sha_z:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        fabd_sha_z:varnames_on_old_files = "fabd_sha_z" ;
        fabd_sha_z:switchdim_flag = 1 ;
        fabd_sha_z:switchdim_flag_values = 0, 1 ;
        fabd_sha_z:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        fabd_sha_z:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        fabd_sha_z:_FillValue = 1.e+36 ;
        fabd_sha_z:missing_value = 1.e+36 ;
double fabi_sun_z(pft, levcan) ;
        fabi_sun_z:long_name = "absorbed sunlit leaf diffuse PAR (per unit lai+sai) for canopy layer" ;
        fabi_sun_z:units = "" ;
        fabi_sun_z:interpinic_flag = 1 ;
        fabi_sun_z:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        fabi_sun_z:varnames_on_old_files = "fabi_sun_z" ;
        fabi_sun_z:switchdim_flag = 1 ;
        fabi_sun_z:switchdim_flag_values = 0, 1 ;
        fabi_sun_z:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        fabi_sun_z:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        fabi_sun_z:_FillValue = 1.e+36 ;
        fabi_sun_z:missing_value = 1.e+36 ;
double fabi_sha_z(pft, levcan) ;
        fabi_sha_z:long_name = "absorbed shaded leaf diffuse PAR (per unit lai+sai) for canopy layer" ;
        fabi_sha_z:units = "" ;
        fabi_sha_z:interpinic_flag = 1 ;
        fabi_sha_z:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        fabi_sha_z:varnames_on_old_files = "fabi_sha_z" ;
        fabi_sha_z:switchdim_flag = 1 ;
        fabi_sha_z:switchdim_flag_values = 0, 1 ;
        fabi_sha_z:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        fabi_sha_z:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        fabi_sha_z:_FillValue = 1.e+36 ;
        fabi_sha_z:missing_value = 1.e+36 ;
double ftdd(pft, numrad) ;
        ftdd:long_name = "down direct flux below veg per unit direct flux" ;
        ftdd:units = "" ;
        ftdd:interpinic_flag = 1 ;
        ftdd:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        ftdd:varnames_on_old_files = "ftdd" ;
        ftdd:switchdim_flag = 1 ;
        ftdd:switchdim_flag_values = 0, 1 ;
        ftdd:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        ftdd:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        ftdd:_FillValue = 1.e+36 ;
        ftdd:missing_value = 1.e+36 ;
double ftid(pft, numrad) ;
        ftid:long_name = "down diffuse flux below veg per unit direct flux" ;
        ftid:units = "" ;
```

```
        ftid:interpinic_flag = 1 ;
        ftid:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        ftid:varnames_on_old_files = "ftid" ;
        ftid:switchdim_flag = 1 ;
        ftid:switchdim_flag_values = 0, 1 ;
        ftid:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        ftid:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        ftid:_FillValue = 1.e+36 ;
        ftid:missing_value = 1.e+36 ;
double ftii(pft, numrad) ;
        ftii:long_name = "down diffuse flux below veg per unit diffuse flux" ;
        ftii:units = "" ;
        ftii:interpinic_flag = 1 ;
        ftii:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        ftii:varnames_on_old_files = "ftii" ;
        ftii:switchdim_flag = 1 ;
        ftii:switchdim_flag_values = 0, 1 ;
        ftii:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        ftii:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        ftii:_FillValue = 1.e+36 ;
        ftii:missing_value = 1.e+36 ;
double flx_absdv(column, levsno1) ;
        flx_absdv:long_name = "snow layer flux absorption factors (direct, VIS)" ;
        flx_absdv:units = "fraction" ;
        flx_absdv:interpinic_flag = 1 ;
        flx_absdv:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        flx_absdv:varnames_on_old_files = "flx_absdv" ;
        flx_absdv:switchdim_flag = 1 ;
        flx_absdv:switchdim_flag_values = 0, 1 ;
        flx_absdv:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        flx_absdv:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        flx_absdv:_FillValue = 1.e+36 ;
        flx_absdv:missing_value = 1.e+36 ;
double flx_absdn(column, levsno1) ;
        flx_absdn:long_name = "snow layer flux absorption factors (direct, NIR)" ;
        flx_absdn:units = "fraction" ;
        flx_absdn:interpinic_flag = 1 ;
        flx_absdn:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        flx_absdn:varnames_on_old_files = "flx_absdn" ;
        flx_absdn:switchdim_flag = 1 ;
        flx_absdn:switchdim_flag_values = 0, 1 ;
        flx_absdn:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        flx_absdn:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        flx_absdn:_FillValue = 1.e+36 ;
        flx_absdn:missing_value = 1.e+36 ;
double flx_absiv(column, levsno1) ;
        flx_absiv:long_name = "snow layer flux absorption factors (diffuse, VIS)" ;
        flx_absiv:units = "fraction" ;
        flx_absiv:interpinic_flag = 1 ;
        flx_absiv:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        flx_absiv:varnames_on_old_files = "flx_absiv" ;
        flx_absiv:switchdim_flag = 1 ;
        flx_absiv:switchdim_flag_values = 0, 1 ;
        flx_absiv:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        flx_absiv:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        flx_absiv:_FillValue = 1.e+36 ;
        flx_absiv:missing_value = 1.e+36 ;
double flx_absin(column, levsno1) ;
        flx_absin:long_name = "snow layer flux absorption factors (diffuse, NIR)" ;
        flx_absin:units = "fraction" ;
        flx_absin:interpinic_flag = 1 ;
        flx_absin:interpinic_flag_meanings = "1=>nearest_neighbor 2=>copy 3=>skip" ;
        flx_absin:varnames_on_old_files = "flx_absin" ;
        flx_absin:switchdim_flag = 1 ;
        flx_absin:switchdim_flag_values = 0, 1 ;
        flx_absin:switchdim_flag_is_0 = "1st and 2nd dims are same as model representation" ;
        flx_absin:switchdim_flag_is_1 = "1st and 2nd dims are switched from model representation" ;
        flx_absin:_FillValue = 1.e+36 ;
        flx_absin:missing_value = 1.e+36 ;
char locfnh(ntapes, max_chars) ;
```

```
                locfnh:long_name = "History filename" ;
                locfnh:comment = "This variable NOT needed for startup or branch simulations" ;
                locfnh:interpinic_flag = 3 ;
        char locfnhr(ntapes, max_chars) ;
                locfnhr:long_name = "Restart history filename" ;
                locfnhr:comment = "This variable NOT needed for startup or branch simulations" ;
                locfnhr:interpinic_flag = 3 ;

// global attributes:
                :Conventions = "CF-1.0" ;
                :history = "created on 04/20/16 03:53:02" ;
                :username = "hannal" ;
                :host = "yellowstone" ;
                :version = "unknown" ;
                :source = "Community Land Model CLM4.0" ;
                :revision_id = "$Id: restFileMod.F90 41292 2012-10-26 13:51:45Z erik $" ;
                :case_title = "UNSET" ;
                :case_id = "mt_code_dev02" ;
                :surface_dataset =
"/glade/p/cesmdata/cseg/inputdata/lnd/clm2/surfdata_map/surfdata_0.9x1.25_simyr2000_c141219.nc" ;
                :flanduse_timeseries = "" ;
                :title = "CLM Restart information" ;
                :created_glacier_mec_landunits = "false" ;
                :ipft_not_vegetated = 0 ;
                :ipft_needleleaf_evergreen_temperate_tree = 1 ;
                :ipft_needleleaf_evergreen_boreal_tree = 2 ;
                :ipft_needleleaf_deciduous_boreal_tree = 3 ;
                :ipft_broadleaf_evergreen_tropical_tree = 4 ;
                :ipft_broadleaf_evergreen_temperate_tree = 5 ;
                :ipft_broadleaf_deciduous_tropical_tree = 6 ;
                :ipft_broadleaf_deciduous_temperate_tree = 7 ;
                :ipft_broadleaf_deciduous_boreal_tree = 8 ;
                :ipft_broadleaf_evergreen_shrub = 9 ;
                :ipft_broadleaf_deciduous_temperate_shrub = 10 ;
                :ipft_broadleaf_deciduous_boreal_shrub = 11 ;
                :ipft_c3_arctic_grass = 12 ;
                :ipft_c3_non-arctic_grass = 13 ;
                :ipft_c4_grass = 14 ;
                :ipft_c3_crop = 15 ;
                :ipft_c3_irrigated = 16 ;
                :ipft_temperate_corn = 17 ;
                :ipft_irrigated_temperate_corn = 18 ;
                :ipft_spring_wheat = 19 ;
                :ipft_irrigated_spring_wheat = 20 ;
                :ipft_winter_wheat = 21 ;
                :ipft_irrigated_winter_wheat = 22 ;
                :ipft_temperate_soybean = 23 ;
                :ipft_irrigated_temperate_soybean = 24 ;
                :ipft_barley = 25 ;
                :ipft_irrigated_barley = 26 ;
                :ipft_winter_barley = 27 ;
                :ipft_irrigated_winter_barley = 28 ;
                :ipft_rye = 29 ;
                :ipft_irrigated_rye = 30 ;
                :ipft_winter_rye = 31 ;
                :ipft_irrigated_winter_rye = 32 ;
                :ipft_cassava = 33 ;
                :ipft_irrigated_cassava = 34 ;
                :ipft_citrus = 35 ;
                :ipft_irrigated_citrus = 36 ;
                :ipft_cocoa = 37 ;
                :ipft_irrigated_cocoa = 38 ;
                :ipft_coffee = 39 ;
                :ipft_irrigated_coffee = 40 ;
                :ipft_cotton = 41 ;
                :ipft_irrigated_cotton = 42 ;
                :ipft_datepalm = 43 ;
                :ipft_irrigated_datepalm = 44 ;
                :ipft_foddergrass = 45 ;
                :ipft_irrigated_foddergrass = 46 ;
```

```
:ipft_grapes = 47 ;
:ipft_irrigated_grapes = 48 ;
:ipft_groundnuts = 49 ;
:ipft_irrigated_groundnuts = 50 ;
:ipft_millet = 51 ;
:ipft_irrigated_millet = 52 ;
:ipft_oilpalm = 53 ;
:ipft_irrigated_oilpalm = 54 ;
:ipft_potatoes = 55 ;
:ipft_irrigated_potatoes = 56 ;
:ipft_pulses = 57 ;
:ipft_irrigated_pulses = 58 ;
:ipft_rapeseed = 59 ;
:ipft_irrigated_rapeseed = 60 ;
:ipft_rice = 61 ;
:ipft_irrigated_rice = 62 ;
:ipft_sorghum = 63 ;
:ipft_irrigated_sorghum = 64 ;
:ipft_sugarbeet = 65 ;
:ipft_irrigated_sugarbeet = 66 ;
:ipft_sugarcane = 67 ;
:ipft_irrigated_sugarcane = 68 ;
:ipft_sunflower = 69 ;
:ipft_irrigated_sunflower = 70 ;
:ipft_miscanthus = 71 ;
:ipft_irrigated_miscanthus = 72 ;
:ipft_switchgrass = 73 ;
:ipft_irrigated_switchgrass = 74 ;
:ipft_tropical_corn = 75 ;
:ipft_irrigated_tropical_corn = 76 ;
:ipft_tropical_soybean = 77 ;
:ipft_irrigated_tropical_soybean = 78 ;
:cft_lb = 17 ;
:cft_ub = 16 ;
:icol_vegetated_or_bare_soil = 1 ;
:icol_crop = 2 ;
:icol_crop_noncompete = "2*100+m, m=cft_lb,cft_ub" ;
:icol_landice = 3 ;
:icol_landice_multiple_elevation_classes = "4*100+m, m=1,glcnec" ;
:icol_deep_lake = 5 ;
:icol_wetland = 6 ;
:icol_urban_roof = 71 ;
:icol_urban_sunwall = 72 ;
:icol_urban_shadewall = 73 ;
:icol_urban_impervious_road = 74 ;
:icol_urban_pervious_road = 75 ;
:ilun_vegetated_or_bare_soil = 1 ;
:ilun_crop = 2 ;
:ilun_landice = 3 ;
:ilun_landice_multiple_elevation_classes = 4 ;
:ilun_deep_lake = 5 ;
:ilun_wetland = 6 ;
:ilun_urban_tbd = 7 ;
:ilun_urban_hd = 8 ;
:ilun_urban_md = 9 ;
}
```