Variables	Frequency	Aggregation	EUP_MP22	EUP_MP23	EUP_MP23	SPECS_MPL1	Available at SYSTEMS seasonal hindcast	Available at CFS, v2 reforecast	Available at SPECS	Comments
Air temperature	At 7am, 2pm and 9pm (local time)	point	PET				Yes, (lhwsgt 2t)	Yes, (lhwsgt tscpm)	Yes, (lhwsgt tas)	
Air temperature	Daily	mean		GSS, HI, Hy, HDD, LEDC	AQUATOCL, B-HYPE, CGMS, LPJml, JULES, GLAM, MORDOR , JC3	VORTEX, ENBA	Yes, (mean2t24)	Yes, (tmp2m)	Yes, (tas)	
Air temperature	Daily	minimum	T<-17°C, C1		CGMS, GUESS, GLAM, (AQUATOCL), (B-HYPE), (MORDOR)	LUBEDS	Yes, (min2t24)	Yes, (tmin)	Yes, (tasmin)	
Air temperature	Daily	maximum	HI, FWI		CGMS, GUESS, GLAM, (AQUATOCL), (B-HYPE), (MORDOR)	LUBEDS, ENBA	Yes, (max2t24)	Yes, (tmax)	Yes, (tasmax)	
Air temperature	Monthly	mean		JC3			Yes, (mean2t24)	Yes, (tmp2m)	Yes, (tas)	
Precipitation	Daily	mean		GSP, Hyl	AQUATOCL, B-HYPE, CGMS, LPJml, JULES, GUESS, GLAM, MORDOR, JC3	LUBEDS, JC3	Yes, (tp)	Yes, (prate)	Yes, (pr)	
Precipitation	Monthly				JC3		Yes, (tp)	Yes, (prate)	Yes, (pr)	
Surface downwelling shortwave flux in air	Daily	mean			CGMS, LPJml, JULES, GLAM, (MORDOR)	LUBEDS, ENBA, JC3	Yes, (ssrd)	Yes, (dswrf)	Yes, (rsds)	
Surface downwelling longwave flux in air	Daily	mean			CGMS, LPJml, JULES		Yes, (strd)	Yes, (dlwrf)	Yes, (rlds)	
Wind speed (at 10m)	Daily	mean	FW		CGMS, (AQUATOCL), (B-HYPE)	VORTEX, ENBA	Yes, (Derived 10u, 10v)	Yes, (Derived u-comp, v-comp)	Yes, (Derived uas, vas)	
Wind speed (at 10m)	Daily	maximum			(GUESS)		Yes, (Derived 10u, 10v)	Yes, (Derived u-comp, v-comp)	Yes, (Derived uas, vas)	
Wind speed (at 10m)	Monthly	mean	CFU				Yes, (Derived 10u, 10v)	Yes, (Derived u-comp, v-comp)	Yes, (Derived uas, vas)	
Geopotential 850mb	Daily	mean				VORTEX, ENBA	Yes, (z850)	Yes, (Derived z850)	No. (Proxy: monthly z500)	
U-component 850mb Wind speed	Daily	mean				VORTEX	Yes, (u850)	Yes, (ua850)	No. (Proxy: monthly ua850)	
V-component 850mb Wind speed	Daily	mean				VORTEX	Yes, (v850)	Yes, (va850)	No. (Proxy: monthly va850)	
U-component 925mb wind speed	Daily	mean				VORTEX	Yes, (u925)	Yes, (ua925)	No.	
V-component 925mb wind speed	Daily	mean				VORTEX	Yes, (v925)	Yes, (va925)	No.	
Geopotential height at 700hPa	Daily	At 12 UTC		MORDOR			Yes, (Derived z700)	Yes, (gpm700)	No.	
Geopotential height at 1000hPa	Daily	At 12 UTC		MORDOR			Yes, (Derived z1000)	Yes, (gpm1000)	No.	
Water Content of Soil Layer	Daily	mean			(GUESS)		Yes, (Derived swv3, swv2, swv3, swv4)	Yes, (Proxy: soilm1, soilm2, soilm3, soilm4)	No.	Total?
Water Content of Soil Layer	Monthly				GUESS, (AQUATOCL)		Yes, (Derived swv3, swv2, swv3, swv4)	Yes, (Proxy: soilm1, soilm2, soilm3, soilm4)	No.	Monthly?
Surface Runoff	Daily	mean			(AQUATOCL)		Yes, (sro)	Yes, (runoff)	No.	
Sea level pressure	Daily	mean				VORTEX	Yes, (msl)	No. (Proxy pressfc)	Yes, (psl)	
Dew point temperature	Daily	mean	LEDC		(B-HYPE)		Yes, (2d)	No. (Proxy:q2m, mixpbn, pressfc)	Yes, (tdps)	
Total Runoff	Monthly				(AQUATOCL)		Yes, (sc)	No.	Yes, (mrro)	Monthly?
Snowfall flux	Daily	mean			GUESS, (B-HYPE)		Yes (sf)	No.	Yes, (prsn)	
Water Evaporation from Soil	Daily				(GUESS)		Yes, (e)	No.	Yes, (Evbs)	Total and if they include transpiration
Water Evaporation from Soil	Monthly				GUESS, (AQUATOCL)		Yes, (e)	No.	Yes, (Evbs)	Monthly?
Sea surface temperature	Daily	mean				VORTEX	Yes, (sst)	No.	No. (Proxy: monthly tos)	
SUB SURFACE RUNOFF FLUX	Daily	mean			(AQUATOCL)		Yes, (ssrd)	No.	No.	
Geopotential 925mb	Daily	mean				VORTEX, ENBA	Yes, (z925)	No.	No.	
WIND GUST	Daily	maximum			(GUESS)		Yes, (10fg)	No.	No.	
Precipitation	At noon	Accumulated in the last 24h	FW				No.	Yes, (prate)	Yes, (pr)	
Surface air pressure	Daily	mean			JULES, (ICS, B-HYPE)		No. (Proxy msl)	Yes, (pressfc)	No. (Proxy psl)	
Surface air pressure	Monthly				JC3		No. (Proxy msl)	Yes, (pressfc)	No. (Proxy psl)	
Specific humidity	Daily	mean			JULES, (AQUATOCL), (GUESS), (SLAM)		No.	Yes, (q2m)	No.	
Moisture in Upper Portion of Soil Column	Monthly				(AQUATOCL)		No. (Proxy swv12)	Yes, (soilm1)	No.	What does Upper Portion mean?, Monthly?
Cloud area fraction	Daily	mean				ENBA	No. (Proxy lcc)	No.	Yes, (cl)	
Total Soil Moisture Content	Daily	mean			(AQUATOCL)		No. (Proxy swv0, swv2, swv3, swv4)	No. (Derived soilm1, soilm2, soilm3, soilm4)	Yes, (mrsos)	
Relative humidity	At 7am, 2pm and 9pm (local time)	point	PET				No. (Proxy 2d)	No. (Proxy:q2m, mixpbn, pressfc)	No. (Proxy hlpbn)	
Relative humidity	At noon local standard time or daily mean	point	FW				No. (Proxy 2d)	No. (Proxy:q2m, mixpbn, pressfc)	No. (Proxy hlpbn)	
Relative humidity	Daily	mean			CGMS, (B-HYPE)		No. (Proxy 2d)	No. (Proxy:q2m, mixpbn, pressfc)	No. (Proxy hlpbn)	
Wind speed (at 10m)	At 7am, 2pm and 9pm (local time)	point	PET				No. (Proxy 10u, 10v)	No. (Proxy:u-comp,v-comp)	No. (Proxy uas, vas)	
Wind speed (at 10m)	At noon local standard time	point	FW				No. (Proxy 10u, 10v)	No. (Proxy:u-comp,v-comp)	No. (Proxy uas, vas)	
Surface downwelling longwave flux in air	At 7am, 2pm and 9pm (local time)	point	PET				No. (Proxy: daily strd)	No. (Derived:strd)	No.	
Surface downwelling shortwave flux in air	At 7am, 2pm and 9pm (local time)	point	PET				No. (Proxy: daily ssrd)	No. (Derived:ssrd)	No.	
Cloudiness (0-octas)	At 7am, 2pm and 9pm (local time)	point	PET				No. (Proxy lcc)	No.	No. (Proxy: cl)	
Relative humidity at 300mb	Daily	mean				VORTEX	No. (Proxy L4)	No.	No.	
Ozone	Daily	mean			(JULES)		No. (Proxy O3. Ozone-mix-mixing ratio-> tcoz. Total column ozone)	No.	No.	It needs clarification
Skin temperature	Daily	mean			Mirkovasiki.		No.	No. (Proxy: tsrpsfc)	No.	
Air temperature	At noon local standard time	point	FW				No.	No.	No.	
1-hr Snowfall Total Gridbox TLES	Daily	mean			(GUESS)		No.	No.	No.	
1-hr Snowfall Total Gridbox TLES	Daily	maximum			(GUESS)		No.	No.	No.	
1-hr Snowfall Total Gridbox TLES	Daily	minimum			(GUESS)		No.	No.	No.	
Precipitation	hourly rate	maximum			GUESS		No.	No.	No.	
Snowfall rate in COMPONENT 0-1000	Daily	mean			ICS, (MORDOR)		No.	No.	No.	
Snowfall rate in COMPONENT 0-1000	Monthly				ICS		No.	No.	No.	
Snowfall rate in COMPONENT 0-1000	Daily	mean			ICS, (MORDOR)		No.	No.	No.	
Snowfall rate in COMPONENT 0-1000	Monthly				ICS		No.	No.	No.	
U-component 100 metre wind speed	Daily	mean				VORTEX, ENBA, JC3	No.	No.	No.	
V-component 100 metre wind speed	Daily	mean				VORTEX, ENBA, JC3	No.	No.	No.	
Surface snow amount	Daily	mean			GUESS		No.	No.	No.	
Surface moisture	Daily	mean	LEDC				No.	No.	No.	What does it refer to? Humidity? Water in soil?
CLOUD SKY (1) DOWN SURFACE SW FLUX	Daily	mean			ICS, (GUESS)		No.	No.	No.	What does (1) refer to?
CLOUD SKY (1) DOWN SURFACE SW FLUX	Monthly				ICS		No.	No.	No.	
Water sublimation flux	Daily	mean			B-HYPE		No.	No.	No.	
1.5M SPECIFIC HUMIDITY OVER TILES	Daily	mean			(GUESS)		No.	No.	No.	
GROWDA OUTFLOW	Daily	mean			(MeloRue)		No.	No.	No.	This variable needs clarification
Inst Weather Product Tx/Tn	Daily	mean			(MeloRue)		No.	No.	No.	What does it mean?
Inst Weather Product Tx/Tn Gs/HTG	Daily	mean			(MeloRue)		No.	No.	No.	What does it mean?
NET DOWN SURFACE LW RAD FLUX (used for Ava)	Daily	mean			(JULES)		No.	No.	No.	
GRPLUSB FLUX	Daily	mean			(JULES)		No.	No.	No.	
Canopy Throughfall Flux SUM	Daily	mean			(AQUATOCL)		No.	No.	No.	
Evaporation from Canopy	Daily	mean			(AQUATOCL)		No.	No.	No.	
Sublimation from Snowpack	Daily	mean			(AQUATOCL)		No.	No.	No.	
Transpiration	Monthly				(AQUATOCL)		No.	No.	No.	Monthly?
Soil Frozen Water Content	Monthly				(AQUATOCL)		No.	No.	No.	Monthly?
Slow Radiation (Global Horizontal Radiation)	Daily	mean				LUBEDS, ENBA, JC3	No.	No.	No.	It needs clarification. Horizontal?