FOG FORECASTING AND NOWCASTING PROCESS CHECKLIST

ANALYSING PRECURSORS AND FORECASTING

1. Analyse latest observations:
    - Satellite images
    - MSLP and upper analyses
    - Surface observations
    - Temperature soundings

2. Ground truth NWP guidance

3. Analyse trends in NWP guidance, in particular:
    - MSLP & upper system structure
    - Relative humidity in mid-upper levels (700, 500hPa)
    - Relative humidity in low levels (850hPa and near sfc)
    - Winds through all levels, especially the low levels.
    - Temperature and dewpoint at the surface
    - Soundings

4. Determine which of the requirements are likely to be sufficient for fog formation?
    - Rapid cooling
    - Light winds
    - Low level moisture

5. Determine the fog type:
    - Radiation fog
    - Advection fog
    - Post rain fog
    - Upslope fog
    - Steam fog
    - Advected fog
    - Sea fog
    - Not expecting fog

6. Use local aids, consider local influences, climatology and persistence forecasting to help determine likelihood of fog.

DEVELOPMENT/MONITORING

1. Identify fog areas by monitoring:
    - Enhanced satellite imagery
    - Surface observations (especially t, td, winds)
    - Ceilometer/visibility meter data
    - Temperature soundings
    - Profiler data (if available)

NOWCASTING AND DISSIPATION

1. Analyse the depth, intensity and aerial extent of the fog based on:
    - Observations
        - Satellite imagery
        - Ceilometer/Visibility meter
        - Surface observations (t, td, winds)
        - Soundings
    - NWP guidance
    - Climatology

2. Identify dissipation processes by considering the:
    - Changes in wind direction and strength
    - Potential advection of different airmasses
    - Increase in solar radiation
    - Influence of cloud layers