

Features of the ITWS SD

Display Configuration Buttons **Current Date & Time (UTC)**

Product Status Buttons **ITWS Alerts**

Standard ITWS Precip Window

Terminal Winds Window **Forecast Loop Window**

Start/Stop Loop Control

This configuration controls the starting and stopping of the forecast loops. When the loop is stopped, each static image (past weather through forecast weather) is available for display.

Display Configuration Buttons



Create a Window. Click the left trackball button on the Window button then on the New button. Click the left trackball button to choose window type.

Save a Window Configuration. Click the left trackball button on the Window button then on the Save button. Enter the window configuration name using the soft keypad then click Save

Window Configuration Buttons



Product Interaction Mode (arrow)



Pan Interaction Mode (hand)



Zoom In (Z)



Zoom Out or Un-zoom (U)



Home (house)



Re-center Interaction Mode (target)



Range Menu (R)



Overlay Menu (O)



Color bar Toggle (C)



Loop Settings (L)



Forecast Accuracy (%)



Start/Stop Loop Control

* Buttons on the FORECAST window that are not present on the PRECIP graphics windows.

Features of the ITWS SD

Product Status Buttons



Product Status Button Color

Product Display State	Product Available	Product Unavailable**
Displayed	Green	Red
Partially Displayed	Yellow	Red
Not Displayed	White	Red

** At least one product represented by the product status button is unavailable. Available products are displayable even while the button for the product suite remains red.

Product Status Button Definitions

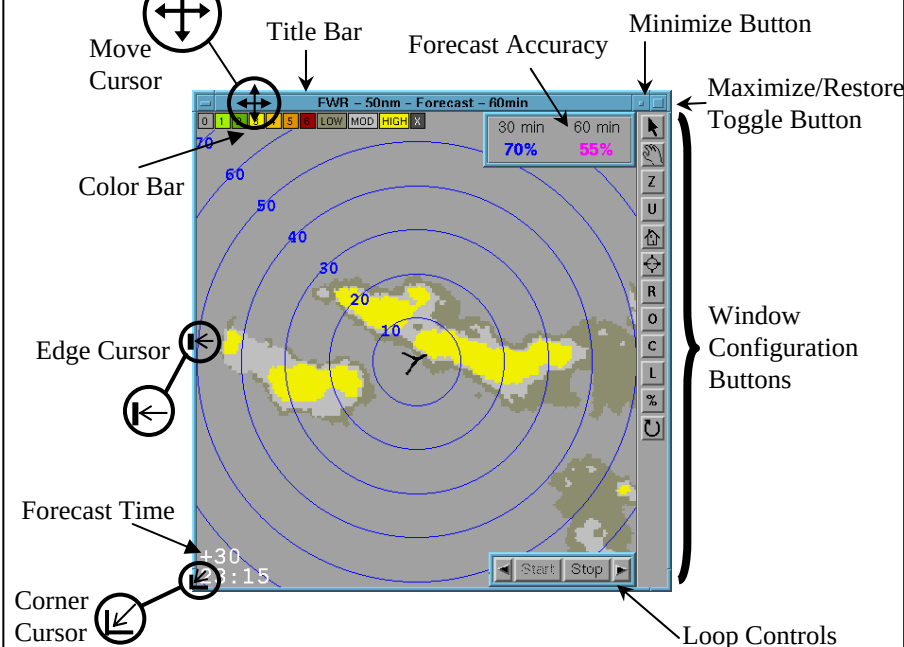
Button Text	Product Name
Precip	Precipitation
Stm Exp	Storm Extrapolated Position
Stm Mot	Storm Motion
Stm Cell	Storm Cell Information
Forecast	Terminal Convective Weather Forecast
Tornado	Tornado
ASR	AP-Flagged Precipitation
Term Wind	Terminal Winds
Lightning	Lightning
Rwy Config	Runway Configuration

Alert Panel

Example of alert panel for a non-TDWR ITWS. The order of the boxes from left to right is 1) Airport/Product Display Operational Mode, 2) Mode Transition Indicator, 3) Tornado, 4) Lightning, and 5) AP. Alert buttons (3-5) are grey unless an alert is in effect.



Graphics and Forecast Loop Windows

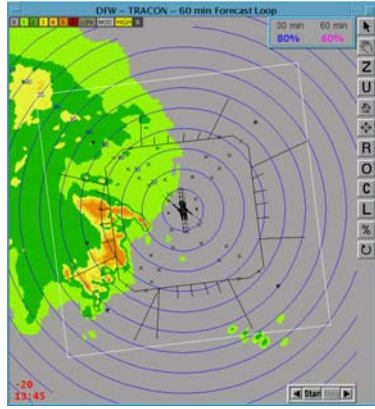


Graphics and Forecast Window Range Selection

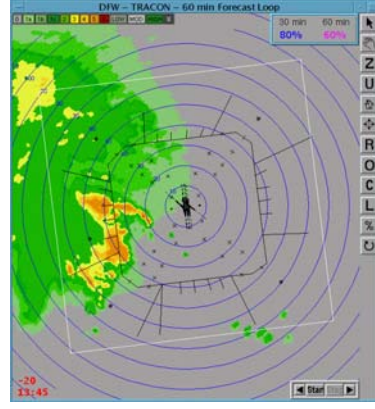
Range Option	Precipitation Product	Radar	Resolution	Update Rate
5 nm	TRACON	ASR	0.5 nm	0.5 min
10 nm	TRACON	↓	↓	↓
15 nm	TRACON			
30 nm	TRACON			
50 nm	TRACON			
TRACON	TRACON			
100 nm	100 nm	NEXRAD + TDWR	0.5 nm	2.5 min
200 nm	200 nm	NEXRAD + TDWR	0.5 nm	2.5 min

Products on the ITWS SD

Precipitation Products



Standard Mode



Winter Mode

Standard Mode: Precipitation displayed in the precipitation graphics window and as past and current weather images in the Forecast Loop window. Precipitation is represented by seven intensity levels; light gray and greens denote lighter precipitation; yellows, oranges, and reds represent heavier precipitation.



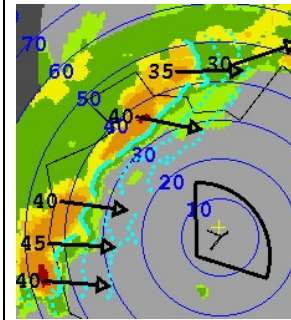
Winter Mode: Precipitation providing greater detail in light (Level 1) precipitation. Available as past and current weather images in Forecast Loop window **only**. Precipitation is denoted by nine intensity levels, with three lowest levels (Level 1a, 1b, 1c) enhancing depictions of weak precipitation characteristic of winter time snow events.



CLT - Terminal Winds (ALT DIR SPD)											
RWY06			RWY12			RWY15			RWY36		
010 040	10	010 050	8	010 040	5	010 050	6	010 050	6	010 050	6
040 040	14	040 070	10	040 040	6	040 070	7	040 070	7	040 070	7
070 070	16	070 070	12	070 080	7	070 080	8	070 080	8	070 080	8
060 070	17	060 080	10	060 070	9	060 070	9	060 070	9	060 070	9
070 070	16	070 080	9	070 060	5	070 040	6	070 040	6	070 040	6
080 070	14	080 070	10	080 070	5	080 050	6	080 050	6	080 050	6
070 060	8	070 040	5	070 010	5	070 010	5	070 010	5	070 010	5
100 060	16	100 050	16	100 050	16	100 050	16	100 050	16	100 050	16
120 040	9	120 040	5	120 040	14	120 040	14	120 040	14	120 040	14
140 040	12	140 040	12	140 040	16	140 040	16	140 040	16	140 040	16
RWY06											
010 040	4	010 040	4	010 040	4	010 040	4	010 040	4	010 040	4
040 070	12	040 070	10	040 070	10	040 070	9	040 070	9	040 070	9
070 070	14	070 070	12	070 070	12	070 070	10	070 070	10	070 070	10
060 040	14	060 070	12	060 070	12	060 070	9	060 070	9	060 070	9
070 070	7	070 100	6	070 070	7	070 130	4	070 130	4	070 130	4
080 060	11	080 120	6	080 140	3	080 170	6	080 170	6	080 170	6
070 070	5	070 040	5	070 040	5	070 020	5	070 020	5	070 020	5
100 060	16	100 060	16	100 060	16	100 060	16	100 060	16	100 060	16
120 040	9	120 040	5	120 040	14	120 040	14	120 040	14	120 040	14
140 040	12	140 040	12	140 040	16	140 040	16	140 040	16	140 040	16
RWY12											
010 040	5	010 040	4	010 070	5	010 050	7	010 050	7	010 050	7
040 070	11	040 070	11	040 070	11	040 070	9	040 070	9	040 070	9
070 070	14	070 070	12	070 070	12	070 070	10	070 070	10	070 070	10
060 070	11	060 070	10	060 070	10	060 070	11	060 070	11	060 070	11
070 070	4	070 070	5	070 070	14	070 070	11	070 070	11	070 070	11
080 060	12	080 070	5	080 130	5	080 050	7	080 050	7	080 050	7
070 070	5	070 070	5	070 070	5	070 070	5	070 070	5	070 070	5
100 060	16	100 060	16	100 060	16	100 060	16	100 060	16	100 060	16
120 040	9	120 040	5	120 040	14	120 040	14	120 040	14	120 040	14
140 040	12	140 040	12	140 040	16	140 040	16	140 040	16	140 040	16
RWY15											
010 040	6	010 040	6	010 070	8	010 070	8	010 070	8	010 070	8
040 070	11	040 070	11	040 070	11	040 070	9	040 070	9	040 070	9
070 070	12	070 070	11	070 070	10	070 070	10	070 070	10	070 070	10
060 070	13	060 070	13	060 070	11	060 070	11	060 070	11	060 070	11
070 070	10	070 070	10	070 070	6	070 070	6	070 070	6	070 070	6
080 070	5	080 060	5	080 050	8	080 050	8	080 050	8	080 050	8
070 070	5	070 070	5	070 070	5	070 070	5	070 070	5	070 070	5
100 070	14	100 070	14	100 060	16	100 060	16	100 060	16	100 060	16
120 040	9	120 040	9	120 040	13	120 040	13	120 040	13	120 040	13
140 040	11	140 040	10	140 040	14	140 040	14	140 040	14	140 040	14

Terminal Winds

Table provides wind direction and speed at selected locations and altitudes.



Storm Motion and Storm Extrapolated Position

Storm Motion: Black arrow with black number indicates direction of motion and speed in knots of storm cell; black square is speed less than 5 knots.

Storm Extrapolated Position: Solid cyan line indicates leading edge of level 3 or greater weather. Dashed cyan lines indicate estimated location of level 3 or greater weather 10 and 20 minutes in the future.



Lightning

Alert box turns yellow if cloud-to-ground lightning is detected within 20 nm of the airport.

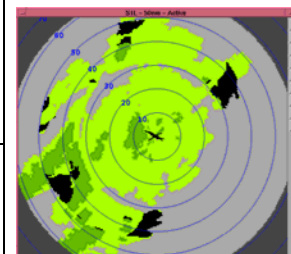


Tornado

Detection: Open black circle containing inverted triangle indicates possible tornadic storm.

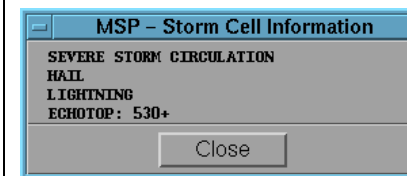


Alert: Box turns black if a possibly tornadic storm is within 10 nm of the airport.



AP-Flagged Precipitation

Precipitation from individual ASR radars with AP shown in black. If operationally significant AP exists, the AP alert box turns black.



Storm Cell Information

Text window indicates presence of hail, lightning, severe storm circulation, and an estimate of echo top. Closes automatically after 30 seconds.

Display Control: Click left trackball button on the desired storm cell in a graphics window.

Products on the ITWS SD



Precipitation Forecast



Standard Mode

Winter Mode

Loop Settings
 Select Loop Type
☒ 60 minute
☐ 30 minute
☐ Show past weather
☐ Display winter levels
☐ Display scoring region
 Select Speed
☒ Slow
☐ Moderate
☐ Fast
 Select Contours
☒ 60 minute
☐ 30 Minute
☐ No contours
 Close

Forecast Intensity	Standard Mode	Winter Mode
LOW	Level 1 (18-29 dBZ)	Level 1a (5-22 dBZ)
MODERATE	Level 2 (30-40 dBZ)	Level 1b (23-26 dBZ)
HIGH	Level 3+ (41+ dBZ)	Level 1c+ (27+ dBZ)

Forecast: Two modes: Standard mode provides forecasts of LOW, MODerate, and HIGH intensity precipitation corresponding to levels 1, 2, and 3+. Winter mode provides forecasts of LOW, MODerate, and HIGH intensity precipitation corresponding to levels 1a, 1b, and 1c+. Colors associated with the precipitation levels and forecasts are shown in the table above.

Forecast Time: Time appears in the lower left hand corner of the Forecast window. The relative Forecast time is on the top (negative for past weather images, positive for the forecast images); corresponding time in UTC is on the bottom. The font is white when the images are looping and red when the loop is stopped. (Loop is stopped by selecting "Stop" from the Start/Stop Loop Control Button.)

+30
22:22

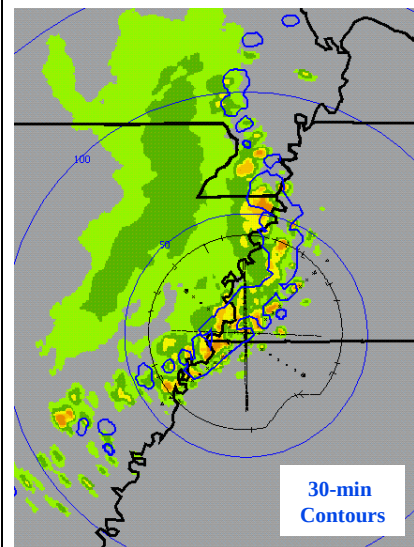
Display Control: The Precipitation Forecast product loops only in the Forecast Loop window from 30-min of past weather to 60-min forecasts in 10-min increments. If the end of loop is set to 30 min (Loop Settings dialog box), the product loops from 30-min of past weather to the 30-min forecast. Mode is toggled via the L button at the right of the Forecast Loop window and the Loop Settings dialog box. Range (and product source) is changed via the R button. Color levels may not be changed in the Forecast Loop window.

Forecast Accuracy

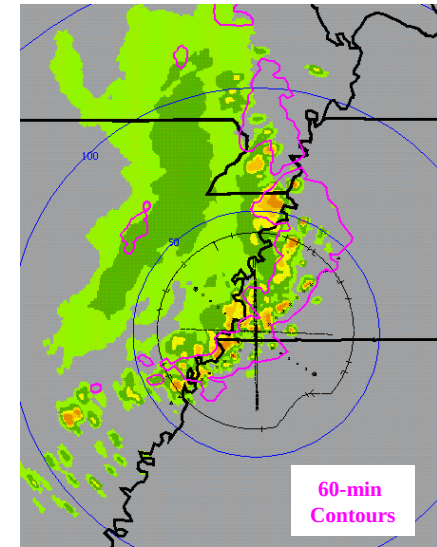
Real-time scores of precipitation forecast accuracy for the Regional or Airport views. Forecasts of HIGH intensity precipitation (level 3+ in standard mode or level 1c+ in winter mode) are scored. The regions within which Forecast Accuracy scores are computed may be displayed as a white box via the "Display scoring region" option in the Loop Setting dialog box.

30 min	60 min
80%	60%

Display Control: Click the left trackball button on the % button on the right side of the Forecast Loop window to toggle display of the Forecast Accuracy scores.



30-min
Contours



60-min
Contours

Forecast Verification Contours

Contours of past HIGH intensity (level 3+ or level 1c+, depending on mode) forecasts are displayed over past and current images in the Forecast Loop window. The 30-min contours are blue and 60-min are magenta.

Display Control: Click the left trackball button on the L button at the right side of the Forecast Loop window to display the Loop Settings dialog box. Select "30 minute" to display the 30-min verification contours, "60 minute" to display the 60-min verification contours, or "No contours" to suppress the display of all verification contours.