

Quarterly load update

July 19, 2021



Photo: Hawley Substation

Operational July 9, 2021

Why we are here today

- Growth trends through 2nd quarter 2021
- Load forecast update
- Heat impacts on load and utility systems
- Large projects of interest
- Substation build status
- West Wenatchee water reservoir planning and siting
- No action requested today

System growth observations into Q3 2021

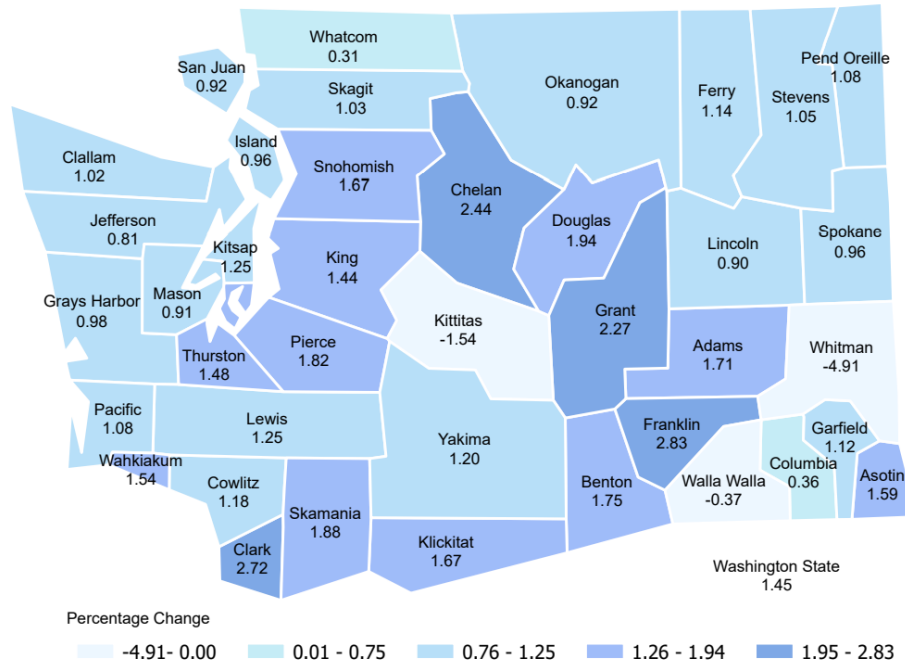


Photo: New Hotel – North Wenatchee Ave

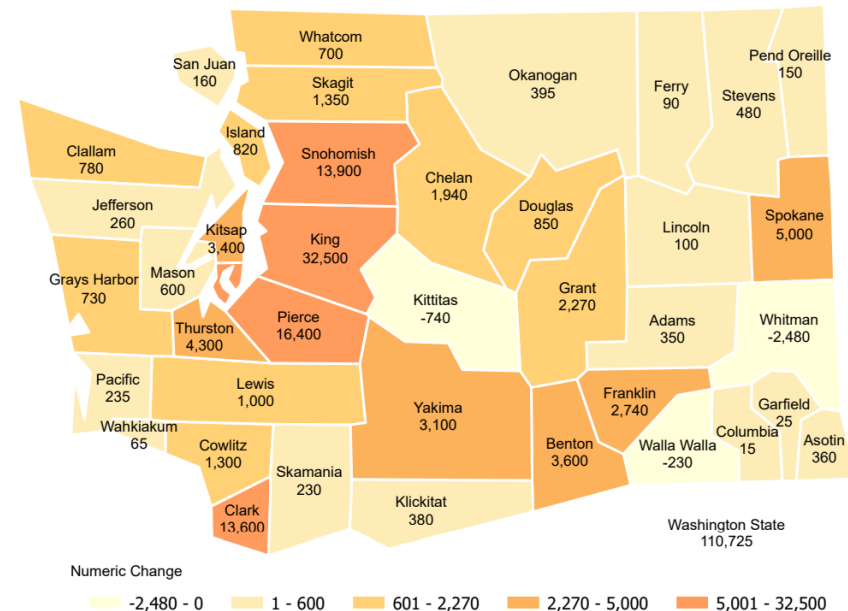
- New residential housing and multi-family housing construction continues at high volumes throughout the County
- Emerging new development in commercial- including hotels and retail shops
- Restaurants, bars and retail space back to full occupancy level
- Commercial electrical loads back to pre-covid occupancy

County demographic observations- 2021

Percentage Change in Population: 2020–21



Numeric Change in Population: 2020–21



County demographic observations cont. - 2021

Top 25 Cities in WA state – population change

Municipality	Percent Change	Rank	Change Due to Annexation
	2020–21		2020–21
Ridgefield	18.32	1	0
Black Diamond	15.08	2	0
Winlock	8.93	3	0
Edgewood	7.71	4	0
Leavenworth	7.45	5	0
Tenino	7.30	6	0
La Center	6.88	7	0
West Richland	6.37	8	0
Chelan	6.20	9	0
Sumas	5.71	10	0
Arlington	5.39	11	0
Bonney Lake	5.38	12	0
Snoqualmie	5.04	13	0
Liberty Lake	4.96	14	0
Long Beach	4.84	15	0
Ferndale	4.59	16	0
Ocean Shores	4.56	17	0
Mountlake Terrace	4.52	18	0
Buckley	4.33	19	0
Royal City	4.22	20	0
Camas	4.22	21	0
Stanwood	4.21	22	0
Newcastle	4.20	23	0
Cle Elum	4.01	24	0
Winthrop	4.00	25	0



Source data: Washington State- Office of Financial Management. June 30, 2021

Active projects of note- Q3 2021

New large project applications since April of 2021:

All energy is shown in estimated
(Peak) Megawatts

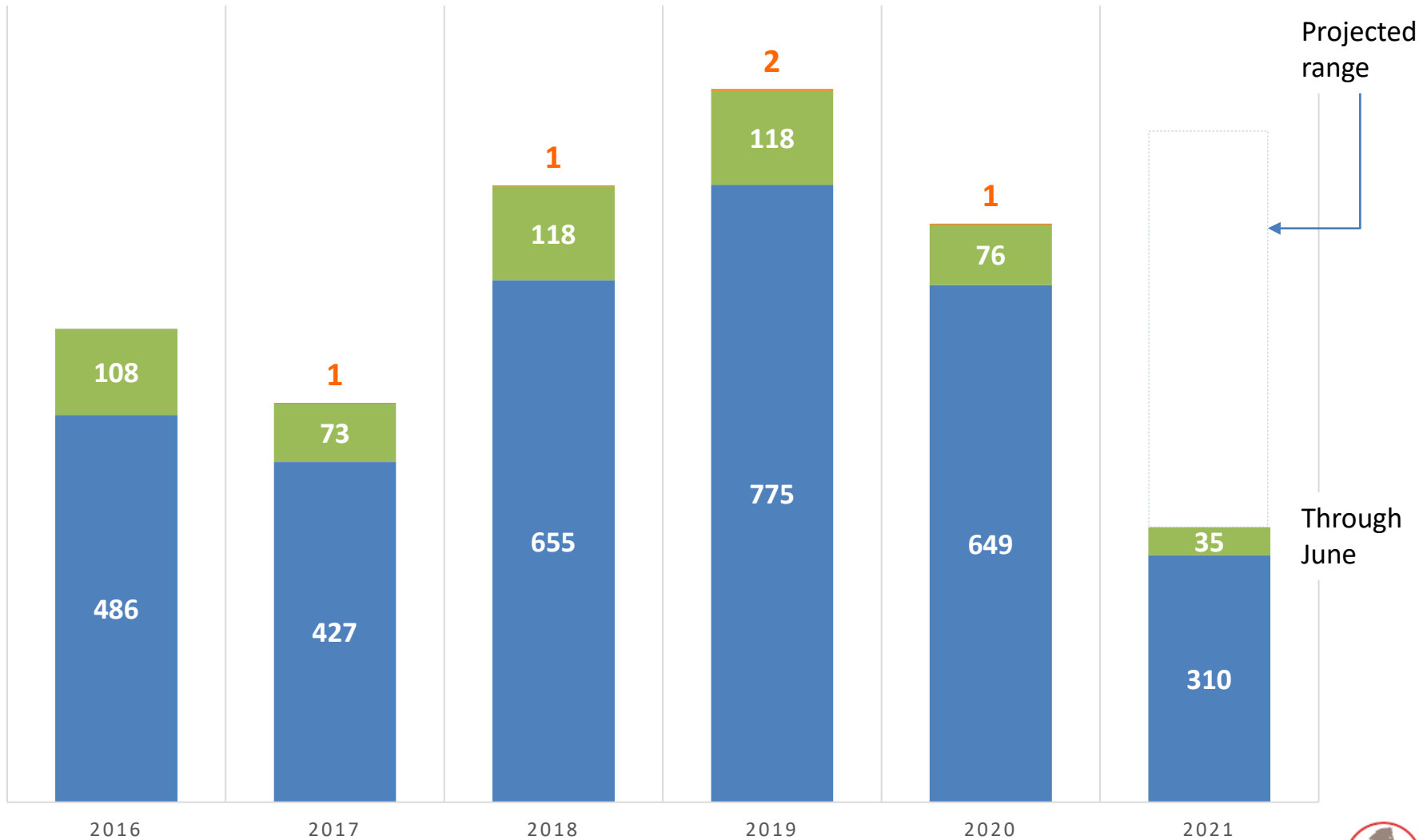
Hiland Subdivision ~400 lots above golf course Chelan	2.25 MW
Ag fruit warehouse Wells dam area Chelan	1.50 MW
Various new residential developments Wenatchee	0.60 MW
Various residential development – Chelan	0.75 MW

Peak Demand ~ 5.10 MW

- Some calls and inquiries about cryptocurrency mining loads
- No completed applications for mining loads currently

Electric meter installs through June 2021

■ Electric - Residential ■ Electric - Commercial ■ Electric - Industrial



10-year load forecast

(net of energy conservation plans)

Date of Forecast	Base Case	High Case	Low Case
Jan 2020	26 aMW * 1.1 %	130 aMW 4.6 %	-1 aMW - 0 %
April 2021	26 aMW * 1.1 %	130 aMW 4.6 %	-1 aMW - 0 %
July 2021 Annual growth rate	26 aMW * 1.1 %	130 aMW 4.6 %	-1 aMW - 0 %

Current
forecast →

Action item for the load forecast team is to understand how to incorporate climate change into future load forecasts.

Impacts of high regional temperatures

Fiber system

- Approx. 50 of 17K optical network terminals (ONT) devices failure during high heat
- Root cause of failures under evaluation, likely aged equipment and high heat
- Long term ONT replacement program under consideration
- Fiber node A/C units upgrades in 2019, functioned well under high heat conditions

Water system

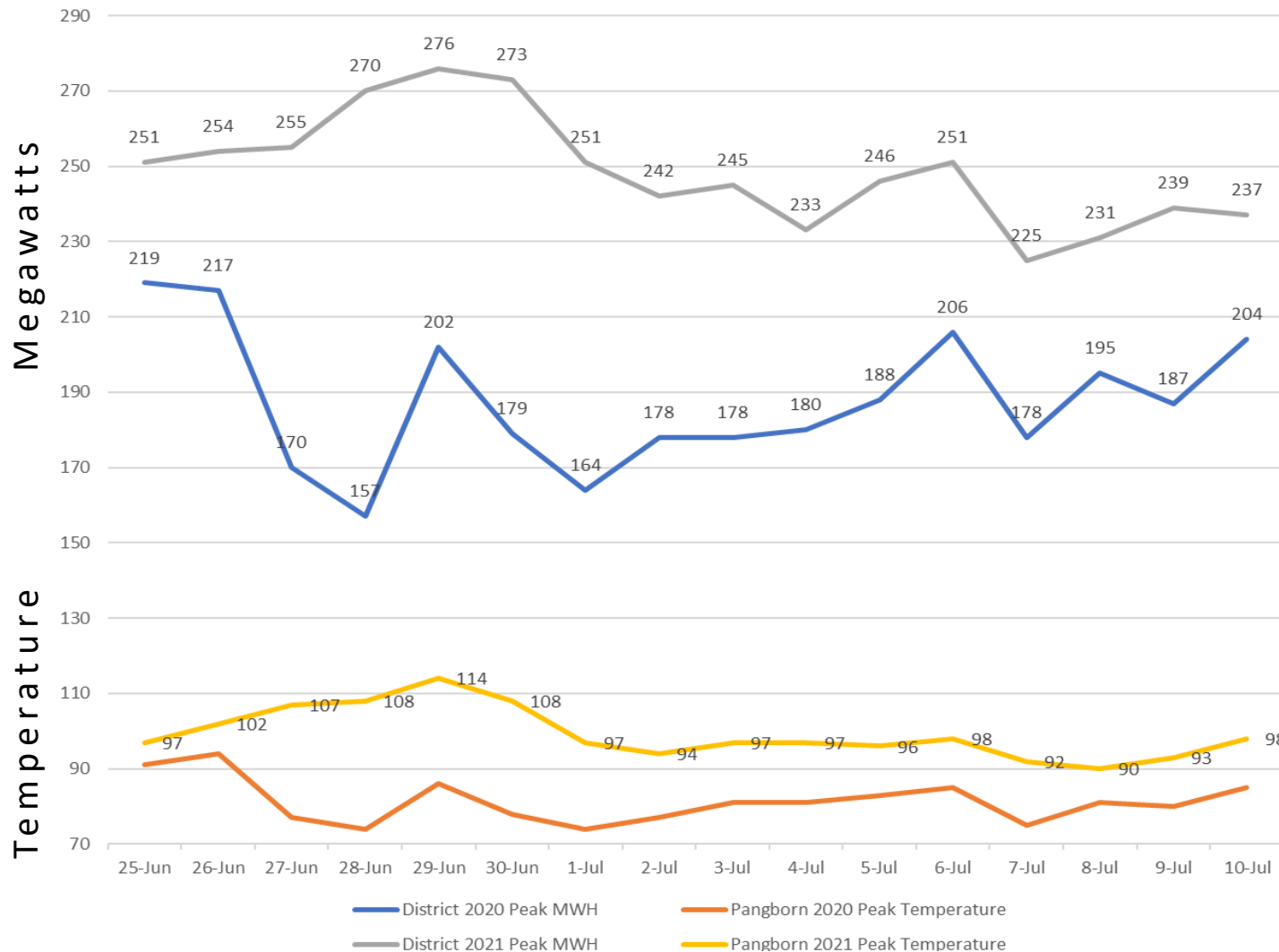
- High heat inside booster pump stations, resulting in momentary interruptions in the operator interface with SCADA- introduced exhaust fans to resolve issues
- Higher retail water consumption than normal
- Electrical cable failure resulted in interruption of regional water system on July 3

Electric system

- Substation control building A/C unit failures- replaced as needed
- Power transformer temperatures and other SCADA alarms triggered investigations
- Marginal increase in underground cable failures- replaced or repaired as needed

Electrical system consumption

(June 25 through July 10, 2021)



New summer peak demand on June 29, 2021:

276 MWh

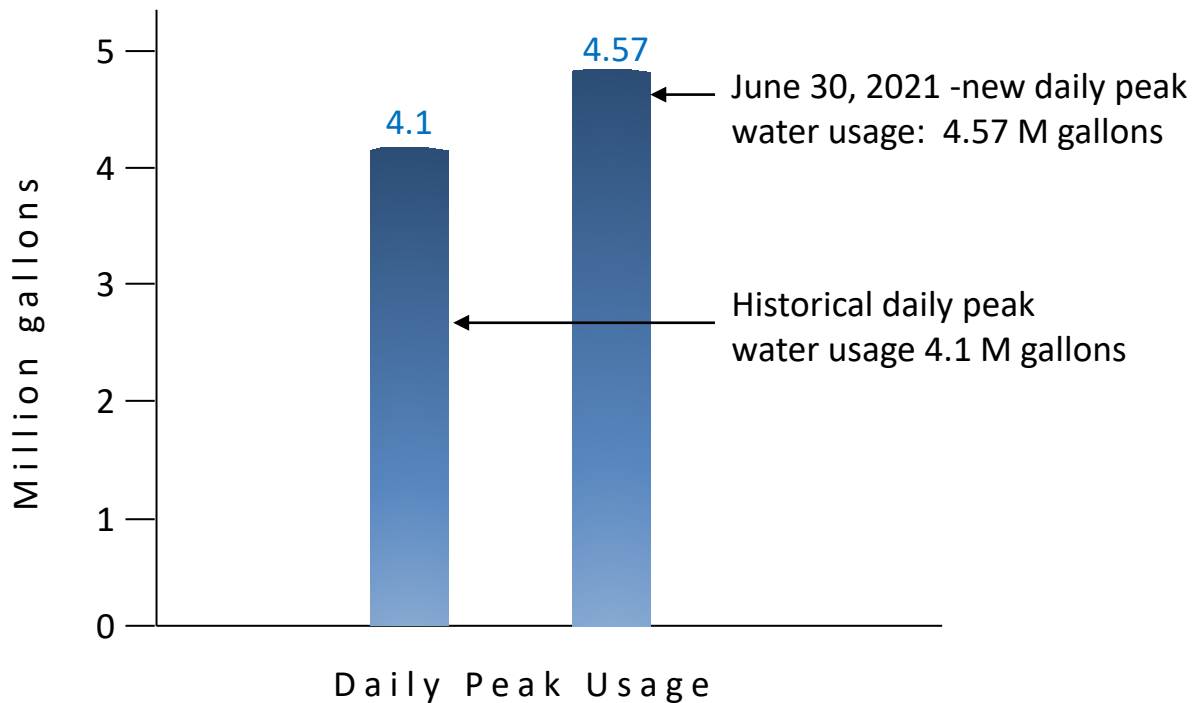
114 F.
Pangborn

Winter peak demand in 2017:

491 MWh

-1 F.
Jan 5, 2017

Water system consumption



**11% over
historical peak**



Substation build activity

Station	Next Build Phase	Expected Complete
Hawley	Energize & in-service	July 2021
Ohme	Energize planned	September 2021
North Shore	Outreach and civil design	August 2021
Leavenworth (Bavarian)	Outreach and civil design	September 2021
Wenatchee (upsized)	Finalize project plan	Q4 2021
Wenatchee Foothills	Siting and utility plans	Q4 2021
Malaga/Stemilt	Site property evaluations	ongoing

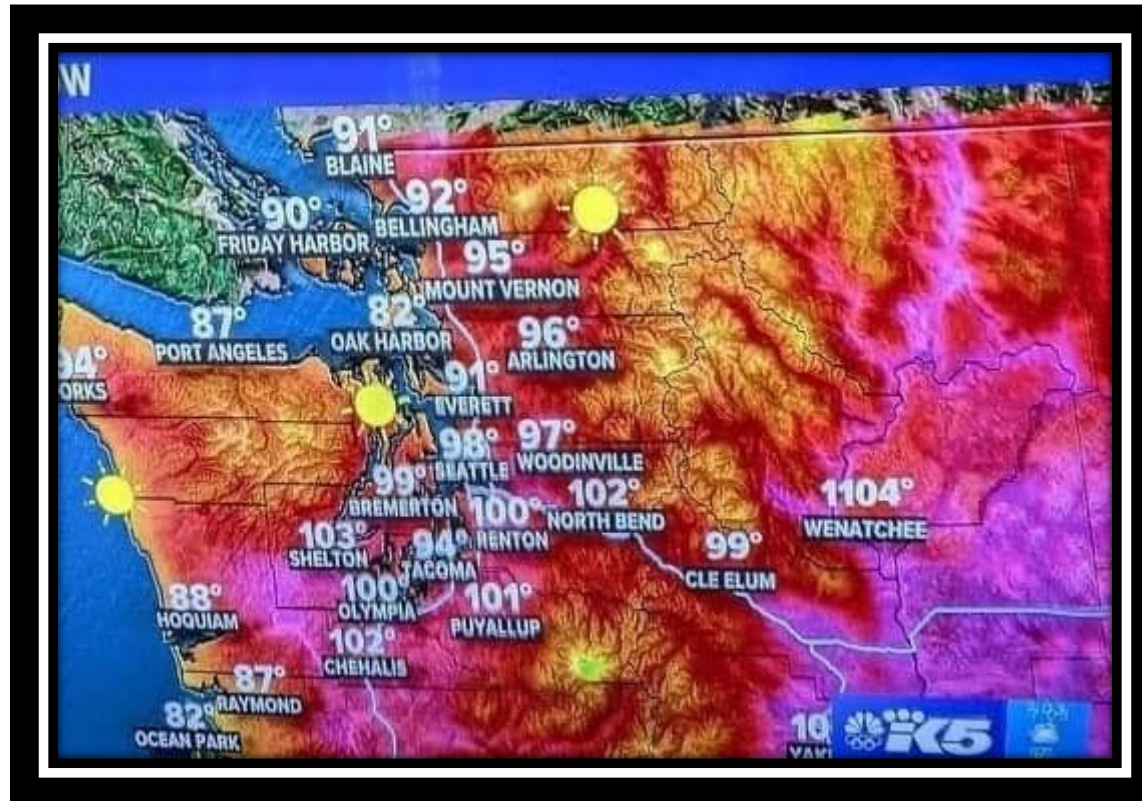
Please note:

- Schedules are subject to change (station build team is updating)
- See 2021 District Performance Plan for more details

New water reservoir planning – (Wenatchee system)



Questions



Annual Distribution Peak Loads

This is the District's Distribution Load, which is lower than the System Load which was 494 MWh on 1/5/2017 HE8 & 285 MWh on 6/29/2021 HE17 which includes Alcoa and Lake Chelan Reclamation District.

Annual District's Distribution Peak Load	Date, Time Hour Ending (HE)	Load (MWh)	Temp. for that hour at Saddlerock Substation (Miller St.)	NWS Temp. at Pangborn Lowest/Highest For the day
All time – highest Annual Peak	Jan 5, 2017, HE8 (Thursday)	491	-1.4 F	-1 F
2 nd highest Annual Peak	Feb 6, 2014, HE8 (Thursday)	464	0.3 F*	0 F
Highest Annual YTD Summer Peak (Jun-Sep)	Jun 29, 2021, HE19 (Tuesday)	276	119.2 F	114 F
2 nd highest Annual Summer Peak	Jul 30, 2020, HE18-19 (Thursday)	253	101.4 F	99 F