Appendix A - Regional Climate Comparisons

The following pages contain more detailed results for each of the climate statistics discussed in the main body of the report. The statistics included here are:

Temperature:

- Figures 1-5: Annual Average Dry-bulb
- Figures 6-10: January Average Dry-bulb
- Figures 11-15: July Average Dry-bulb
- Figures 16-20: 1% Cooling Dry-bulb
- Figures 21-25: 99% Heating Dry-bulb

Humidity:

- Figures 26:30: 1% Dehumidification Humidity Ratio
- Figures 31:35: 99% Humidification Humidity Ratio

Wind:

- Figures 36:40: Annual Average Wind Speed
- Figures 41:45: January Average Wind Speed
- Figures 46:50: July Average Wind Speed
- Figures 51:55: Annual 1% Wind Speed

Precipitation:

- Figures 56:60: Average Annual Precipitation
- Figures 61:65: Average January Precipitation
- Figures 66:70: Average July Precipitation

Solar:

- Figures 71:75: Average Annual Daily Solar Radiation
- Figures 76:80: Average January Daily Solar Radiation
- Figures 81:85: Average July Daily Solar Radiation

For each statistic we provide a scatter plot comparing model results (y-axis) against observational data (x-axis) for each region; and for each region, a figure containing model results against available gridded datasets such as NARR, CFSR, PRISM, and NREL and the available observational point datasets such as HOF, NSRDB, and MADIS.

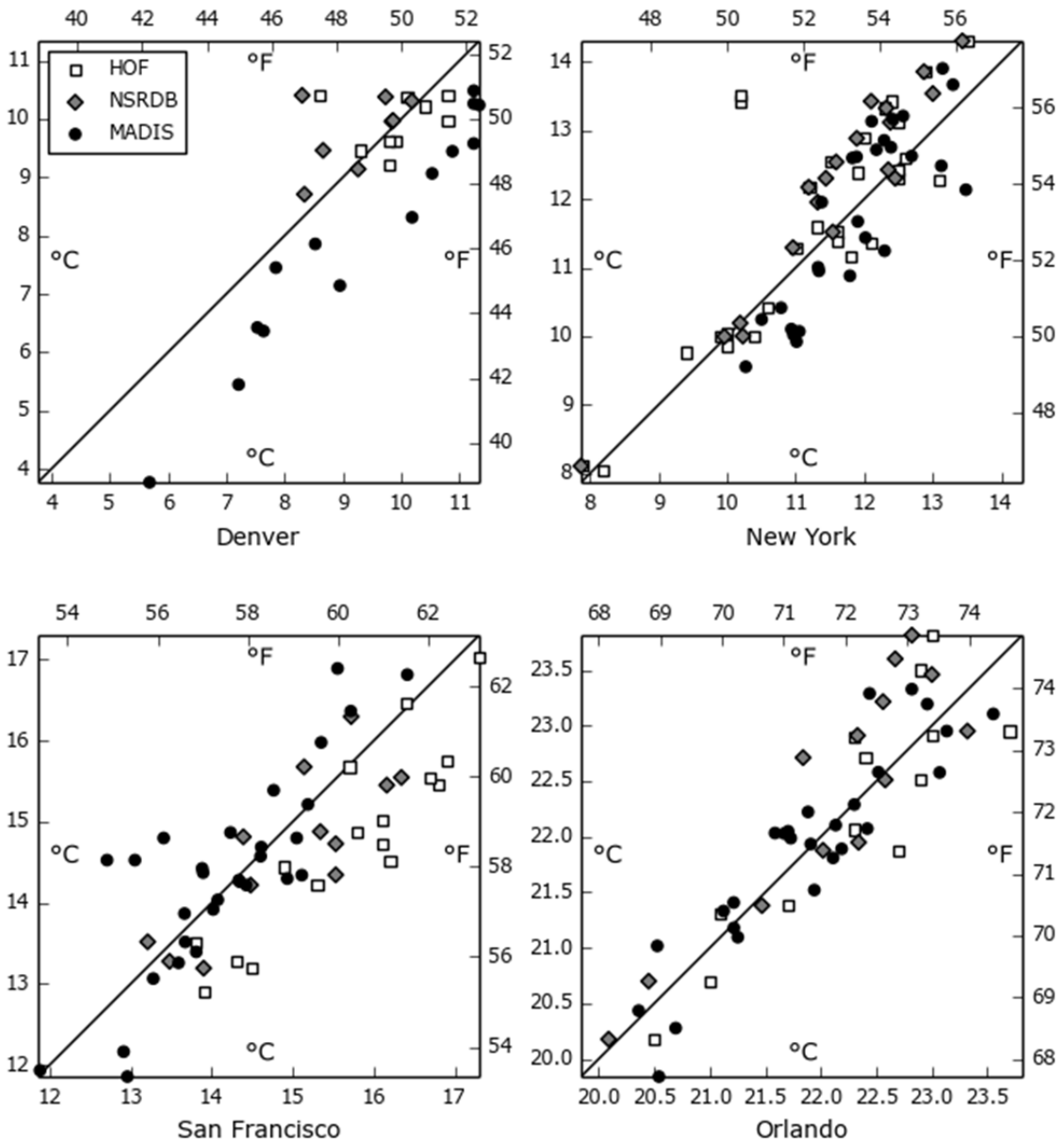

Figure 1 – Average Annual Daily Temperature. Note that the x-axis represents "observed", e.g. HOF, while the y-axis represents the "modelled", i.e. WRF.

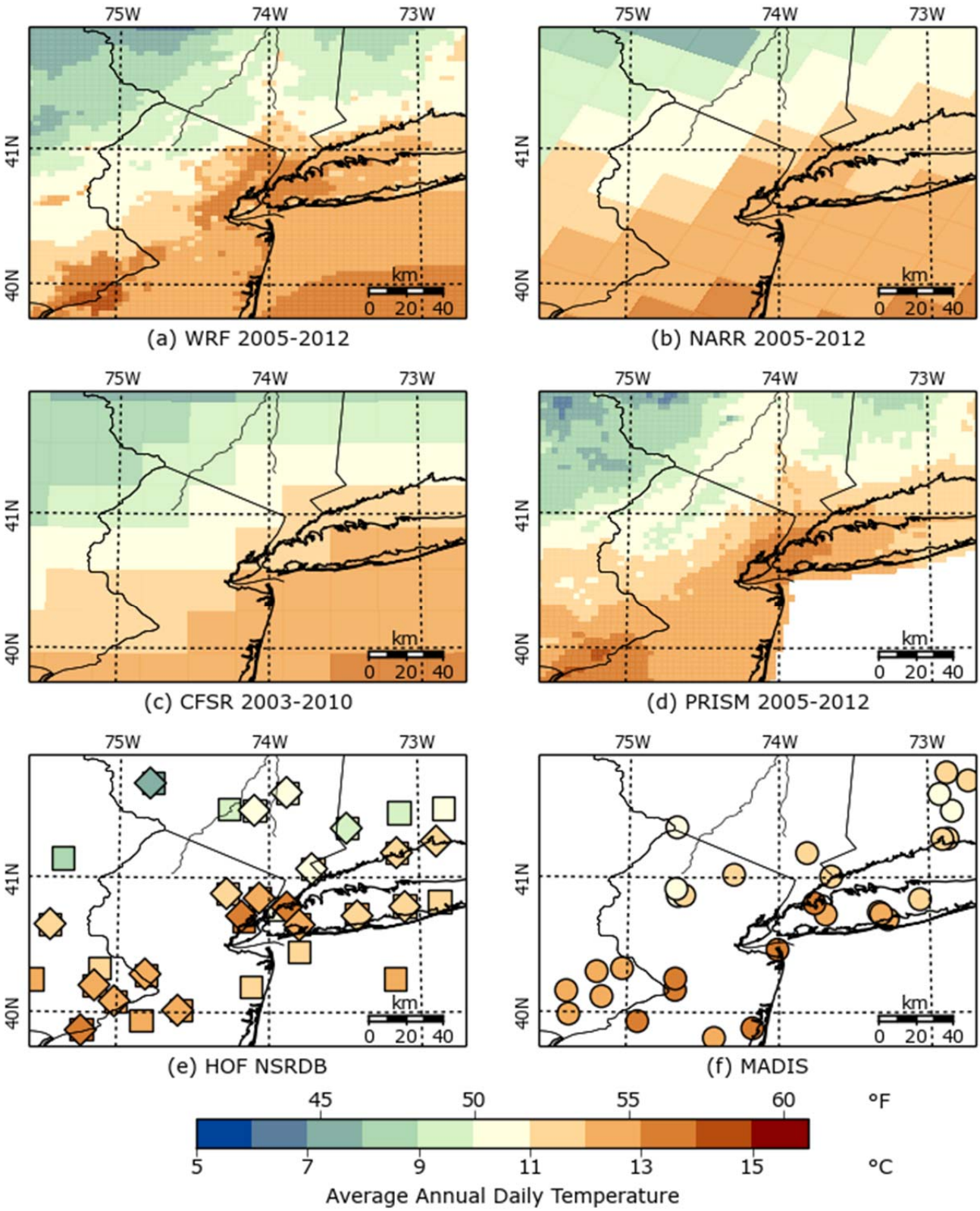

Figure 2 – New York Average Annual Daily Temperature

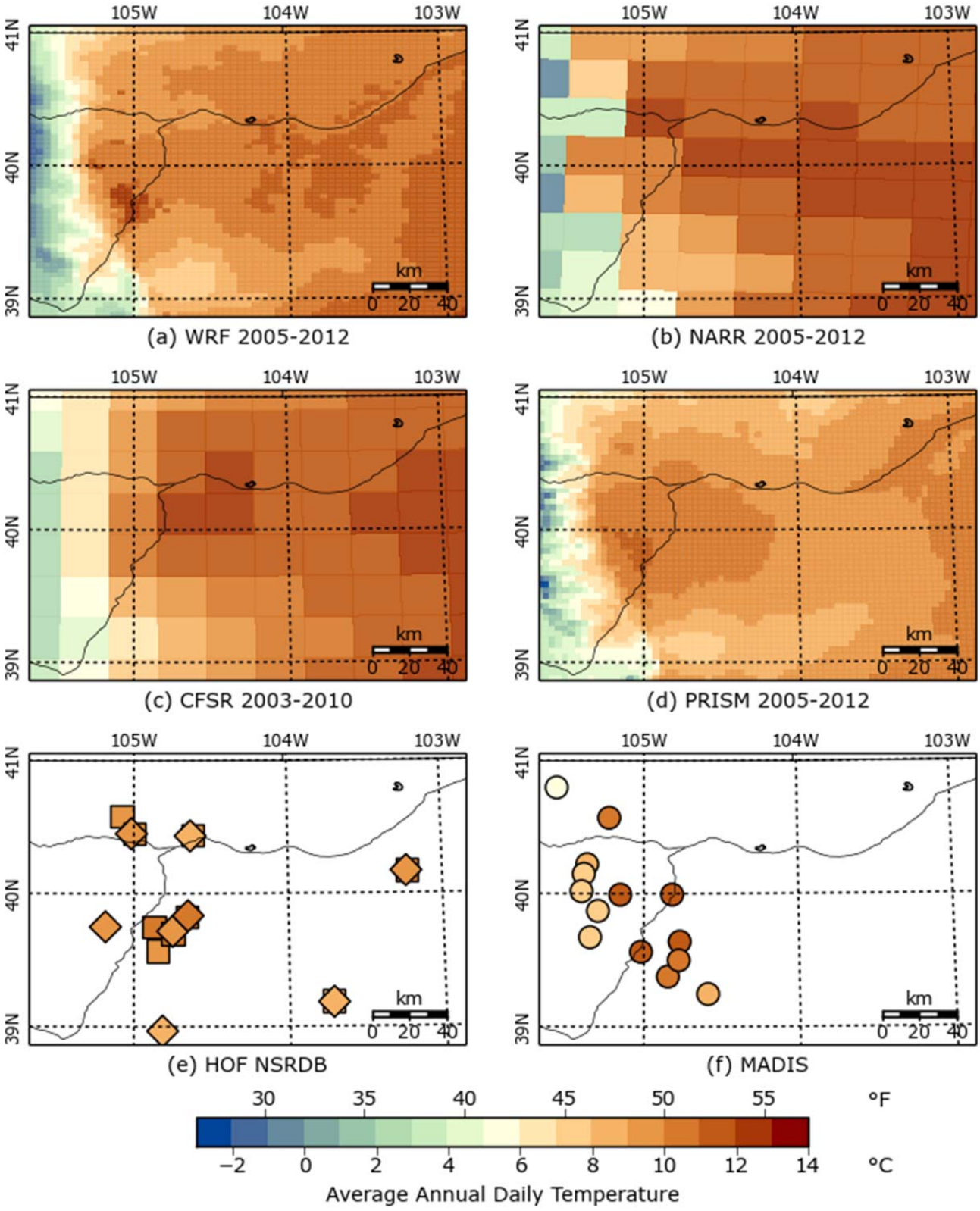

Figure 3 – Denver Average Annual Daily Temperature

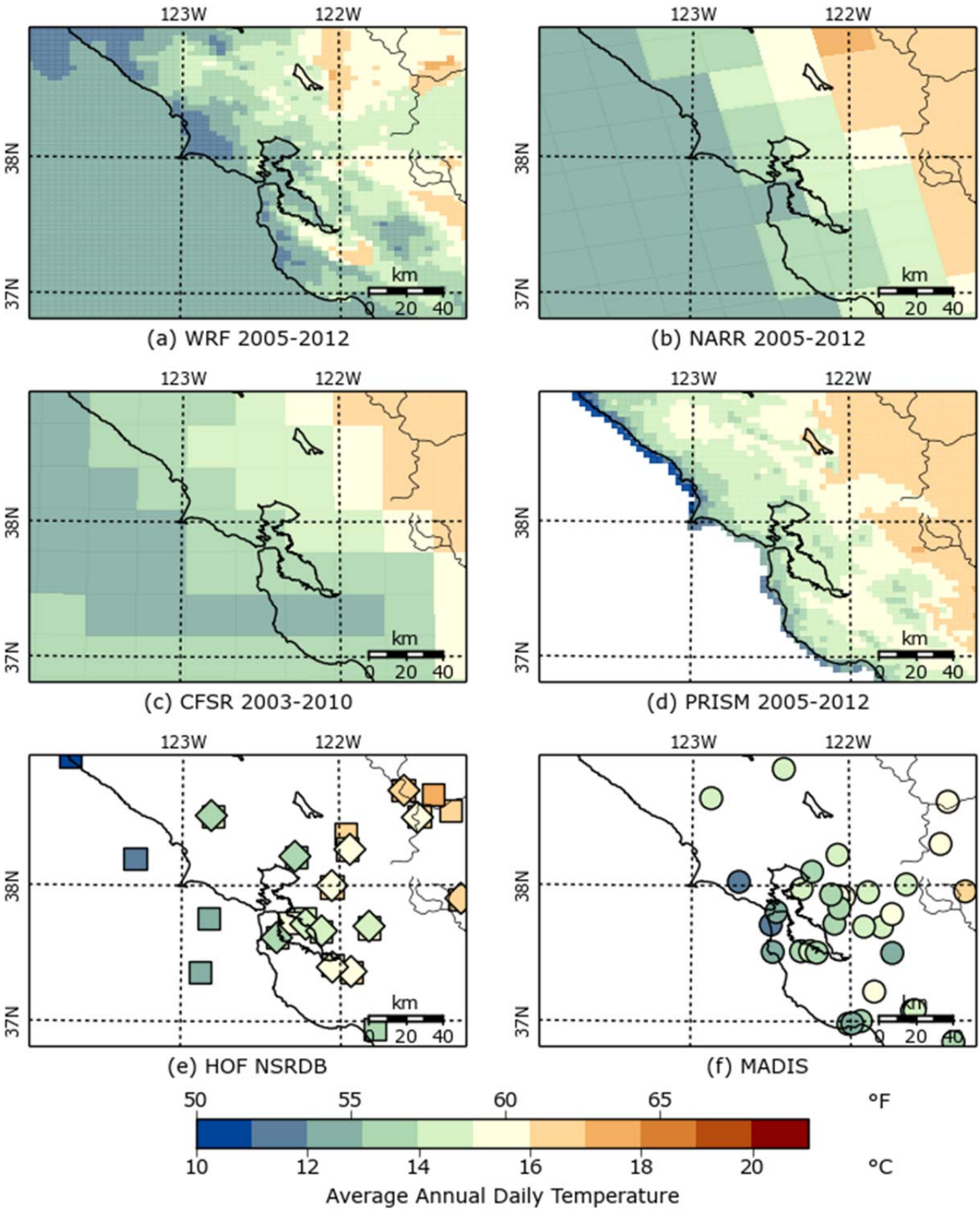

Figure 4 – San Francisco Average Annual Daily Temperature

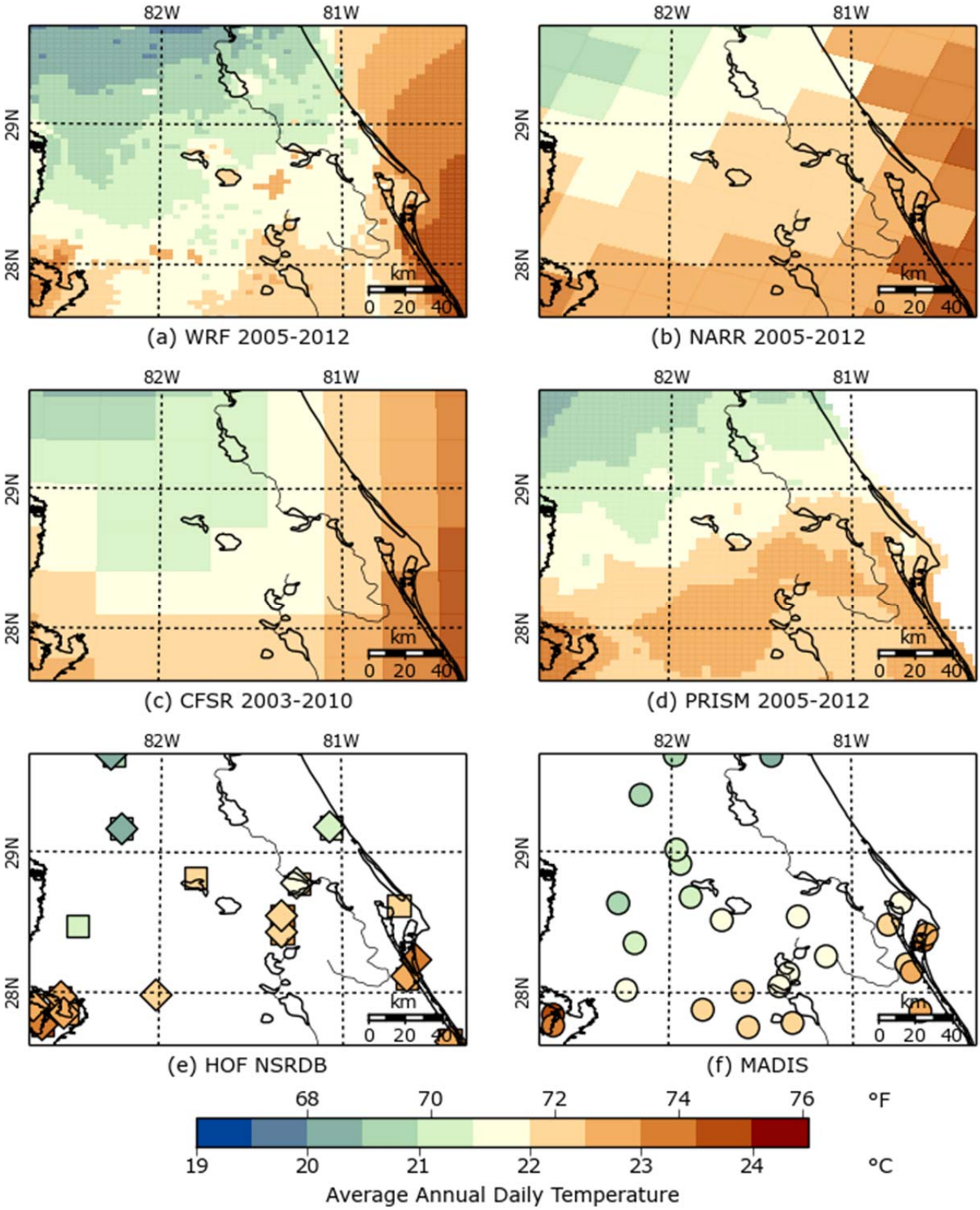

Figure 5 – Orlando Average Annual Daily Temperature

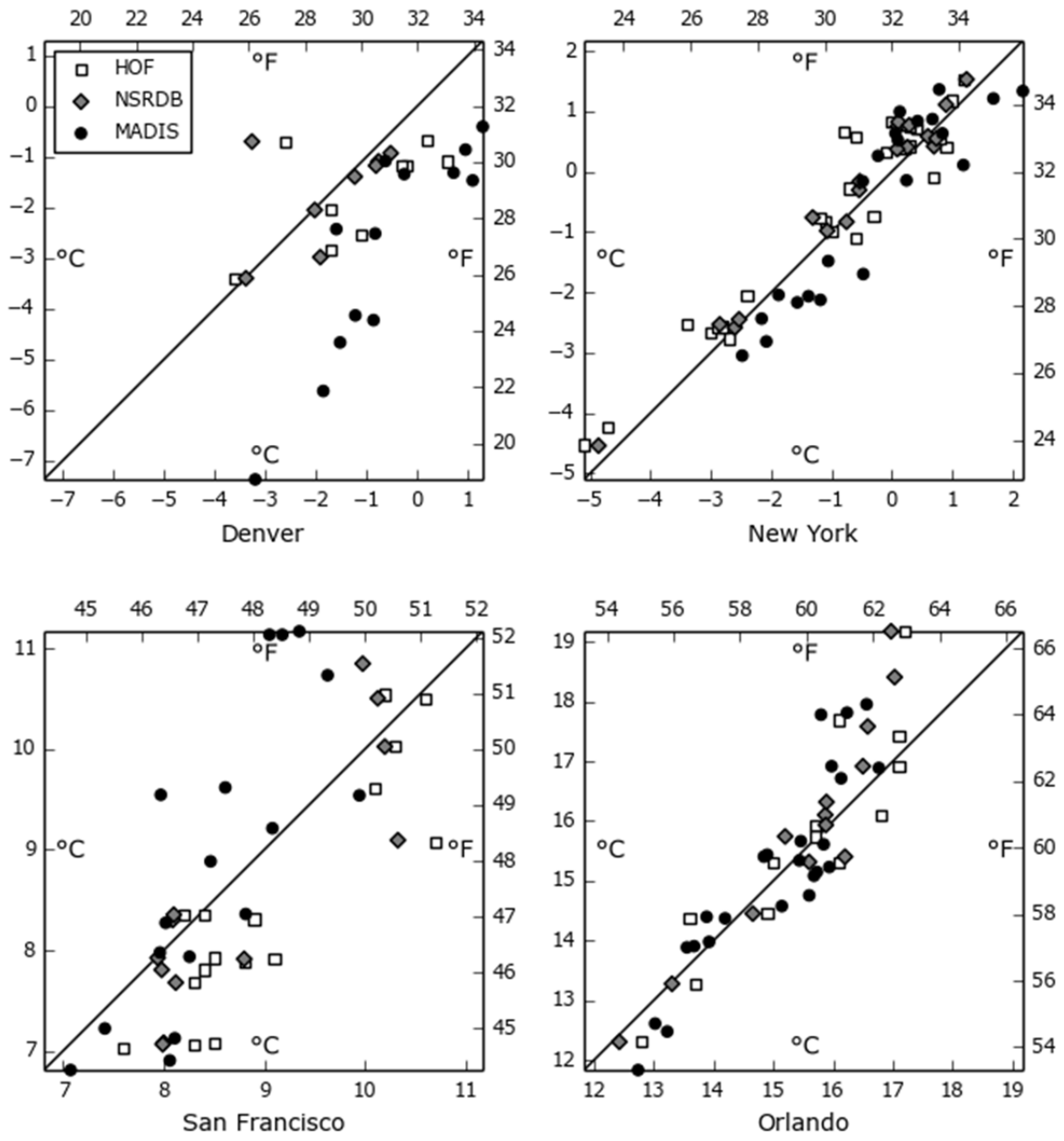

Figure 6 – Average January Daily Temperature

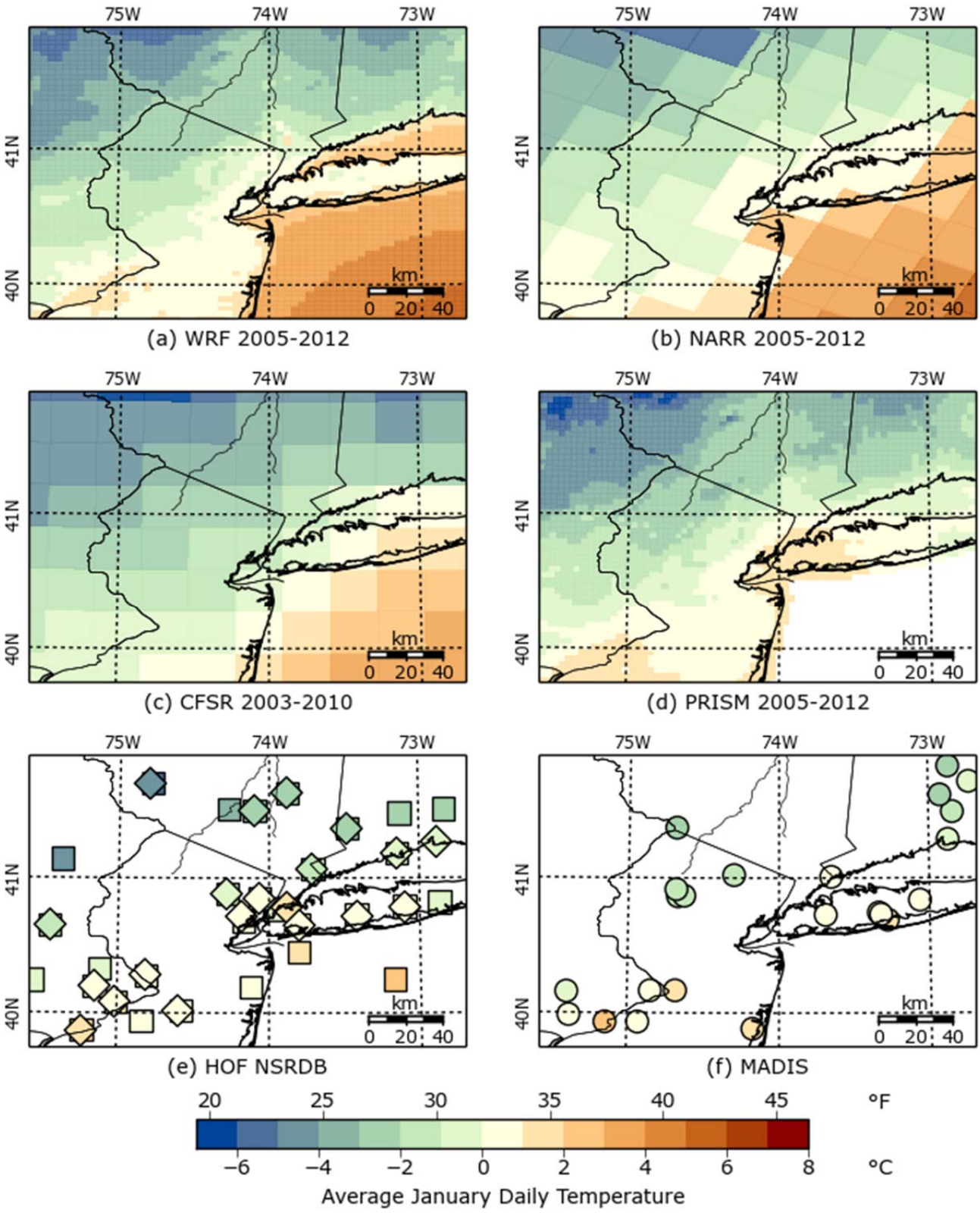

Figure 7 – New York Average January Daily Temperature

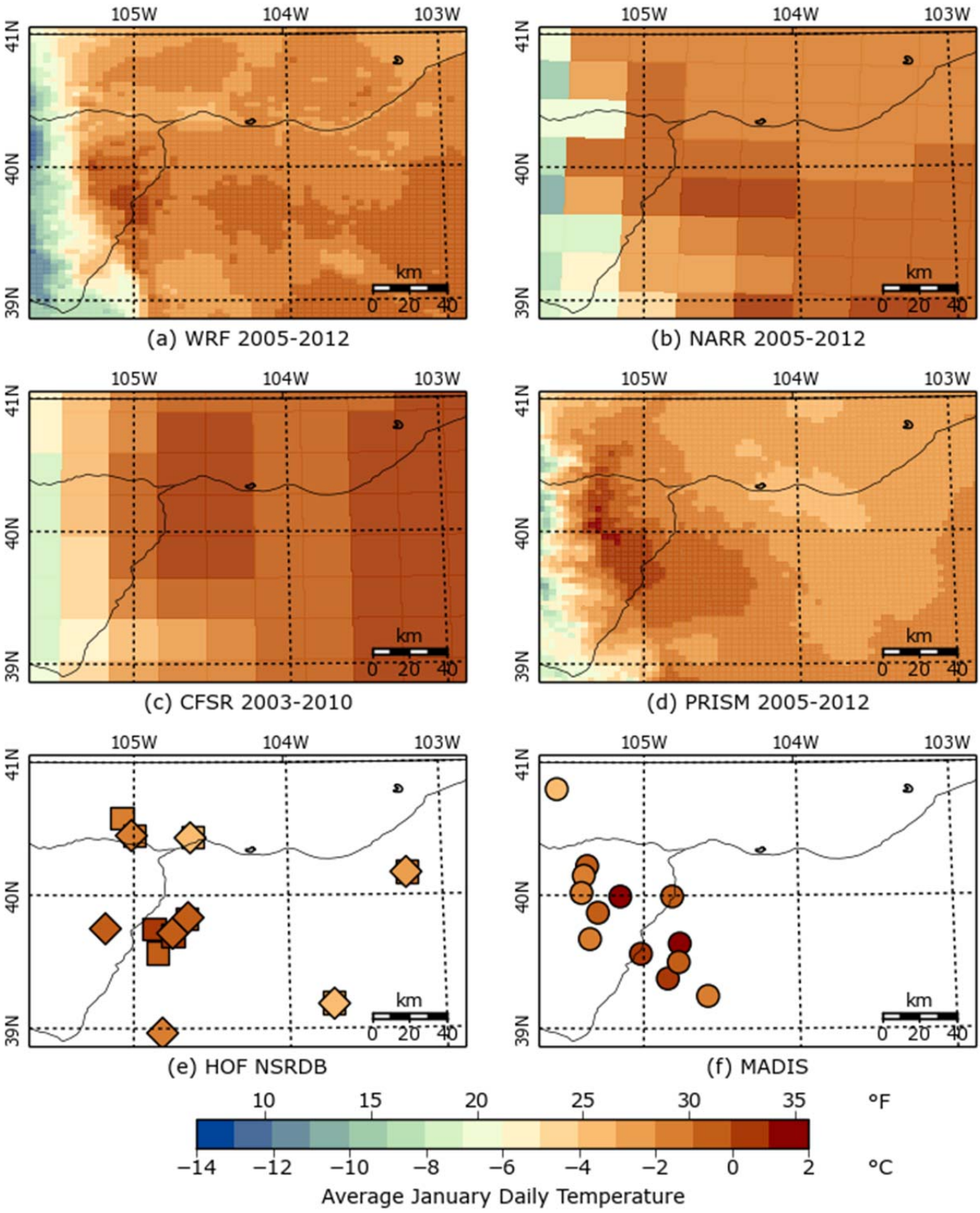

Figure 8 – Denver Average January Daily Temperature

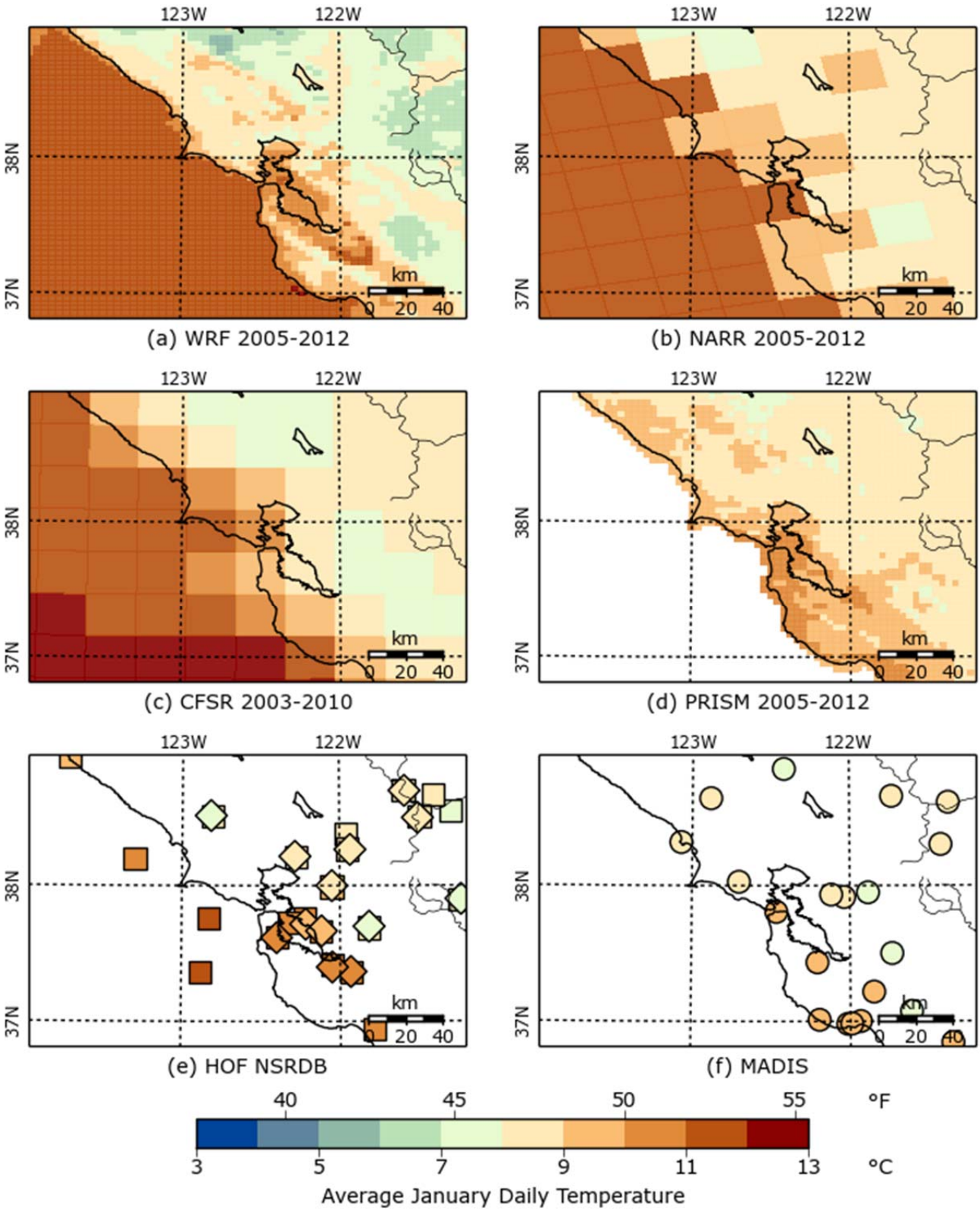

Figure 9 – San Francisco Average January Daily Temperature

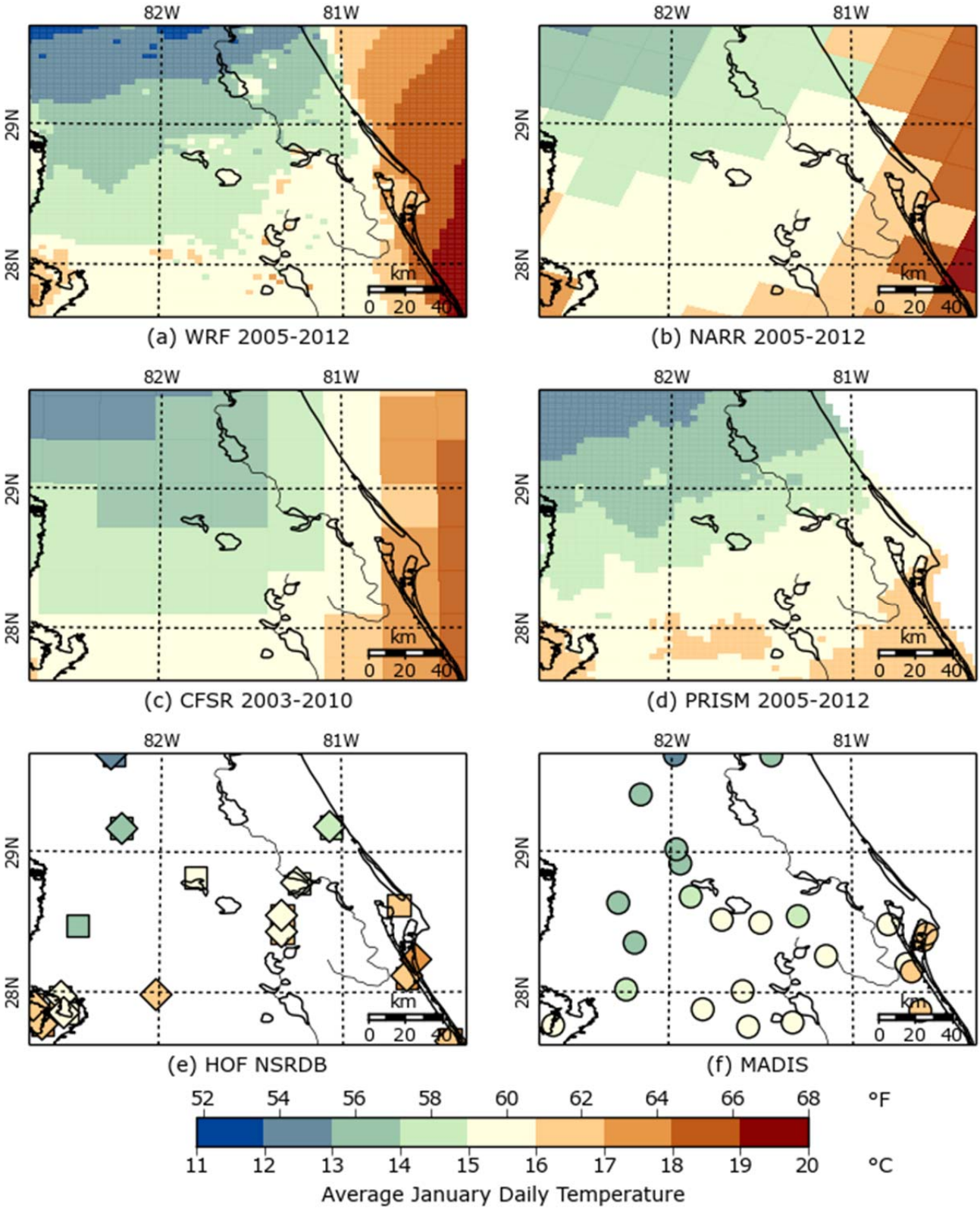

Figure 10 – Orlando Average January Daily Temperature

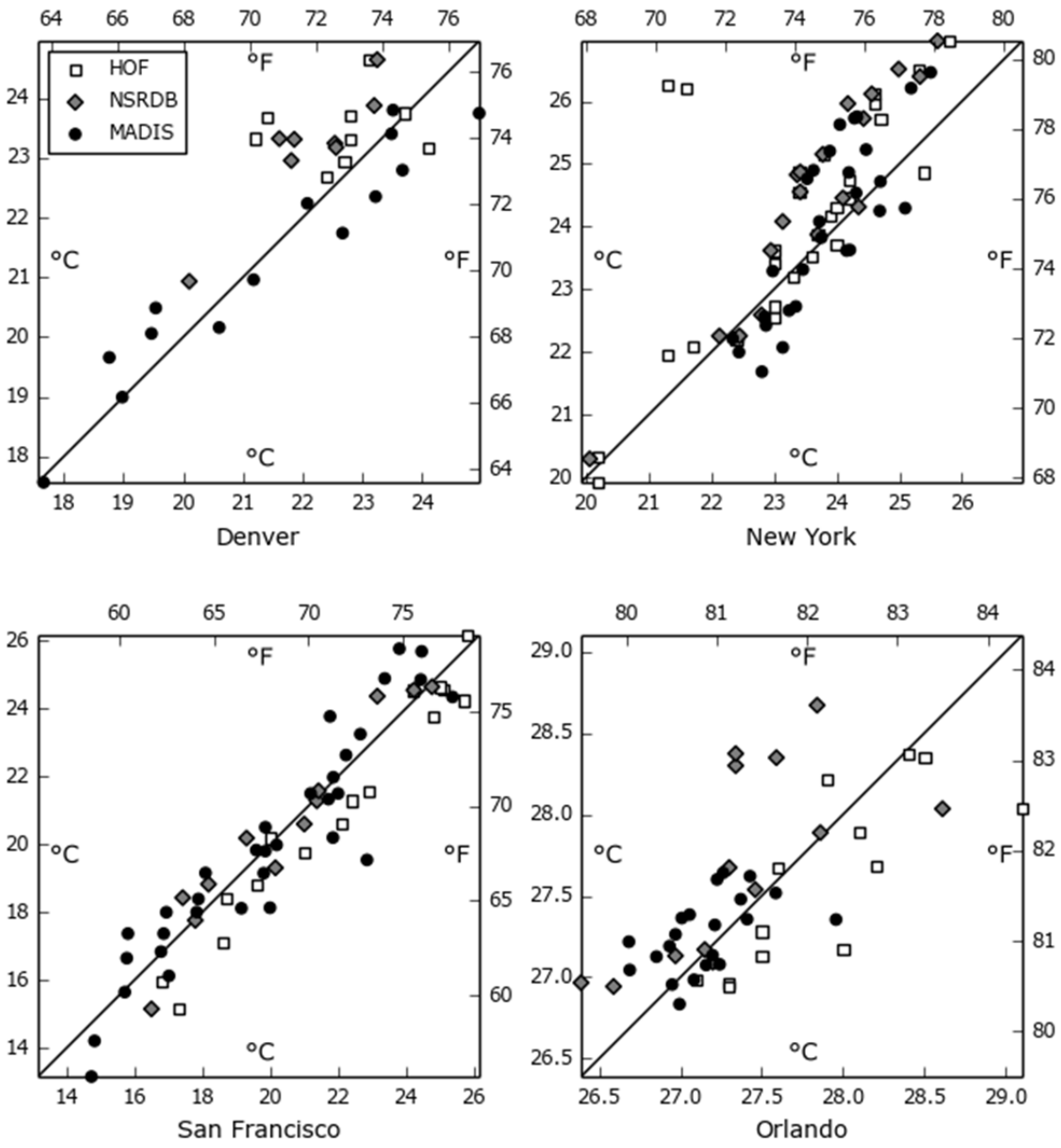

Figure 11 – Average July Daily Temperature

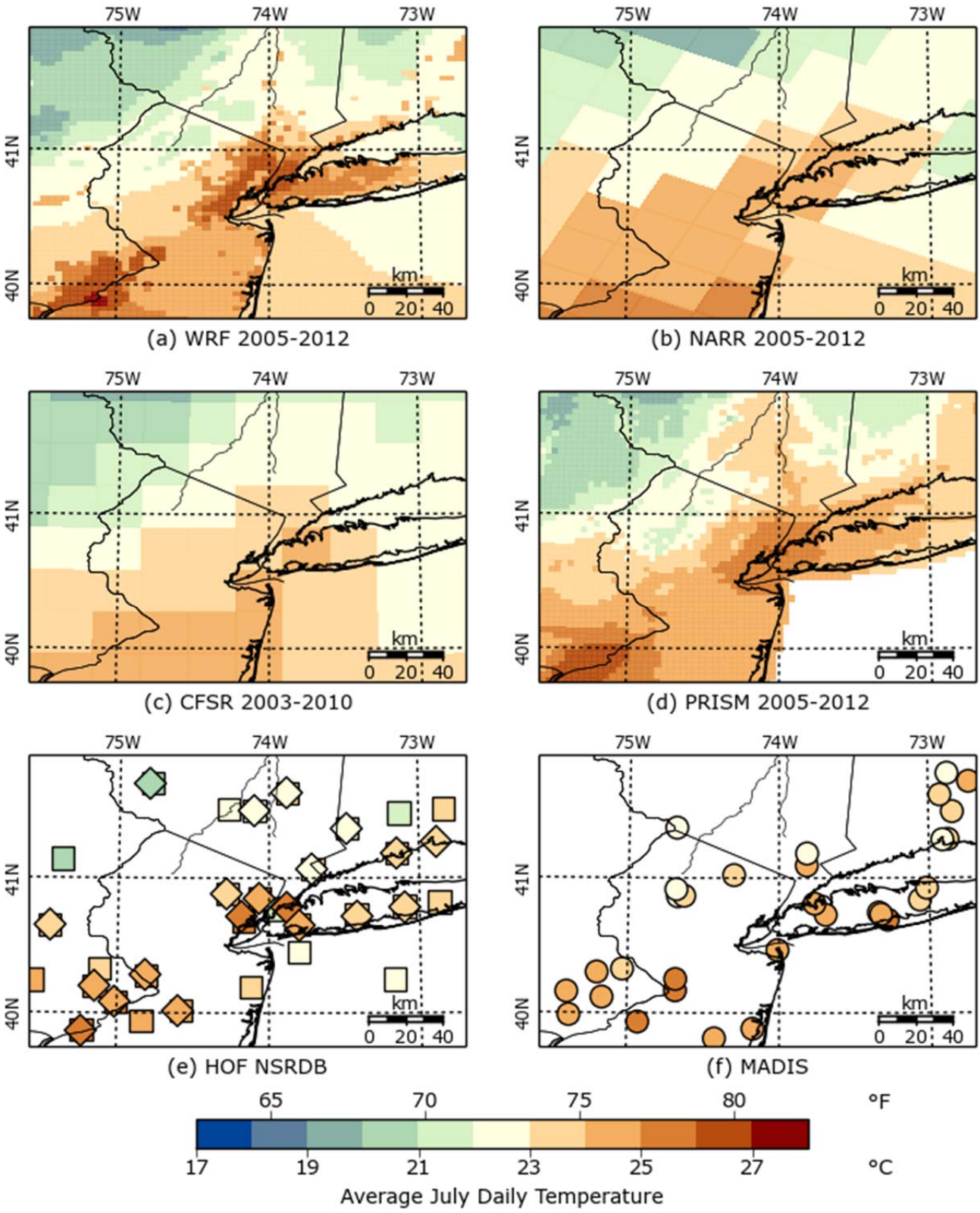

Figure 12 – New York Average July Daily Temperature

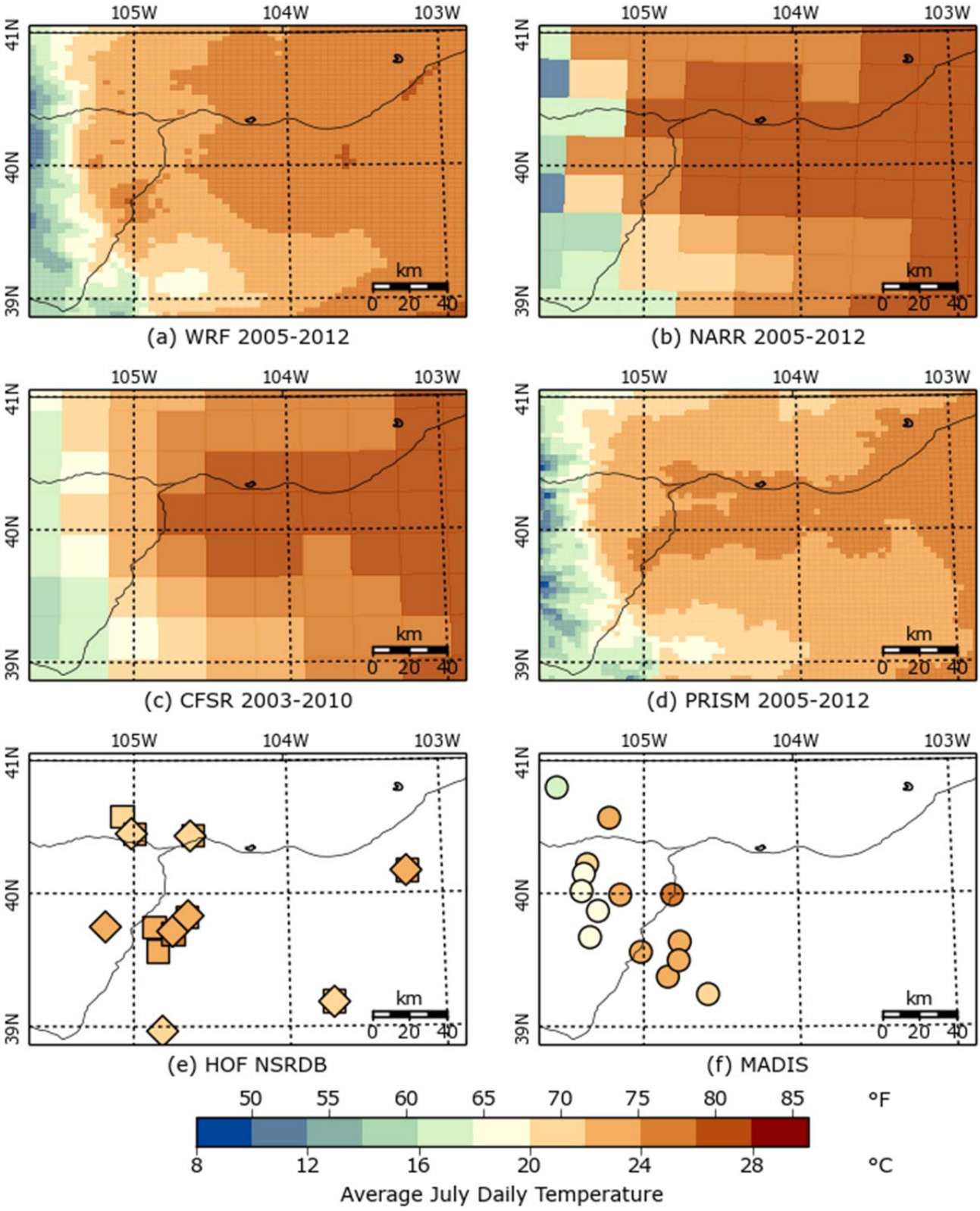

Figure 13 – Denver Average July Daily Temperature

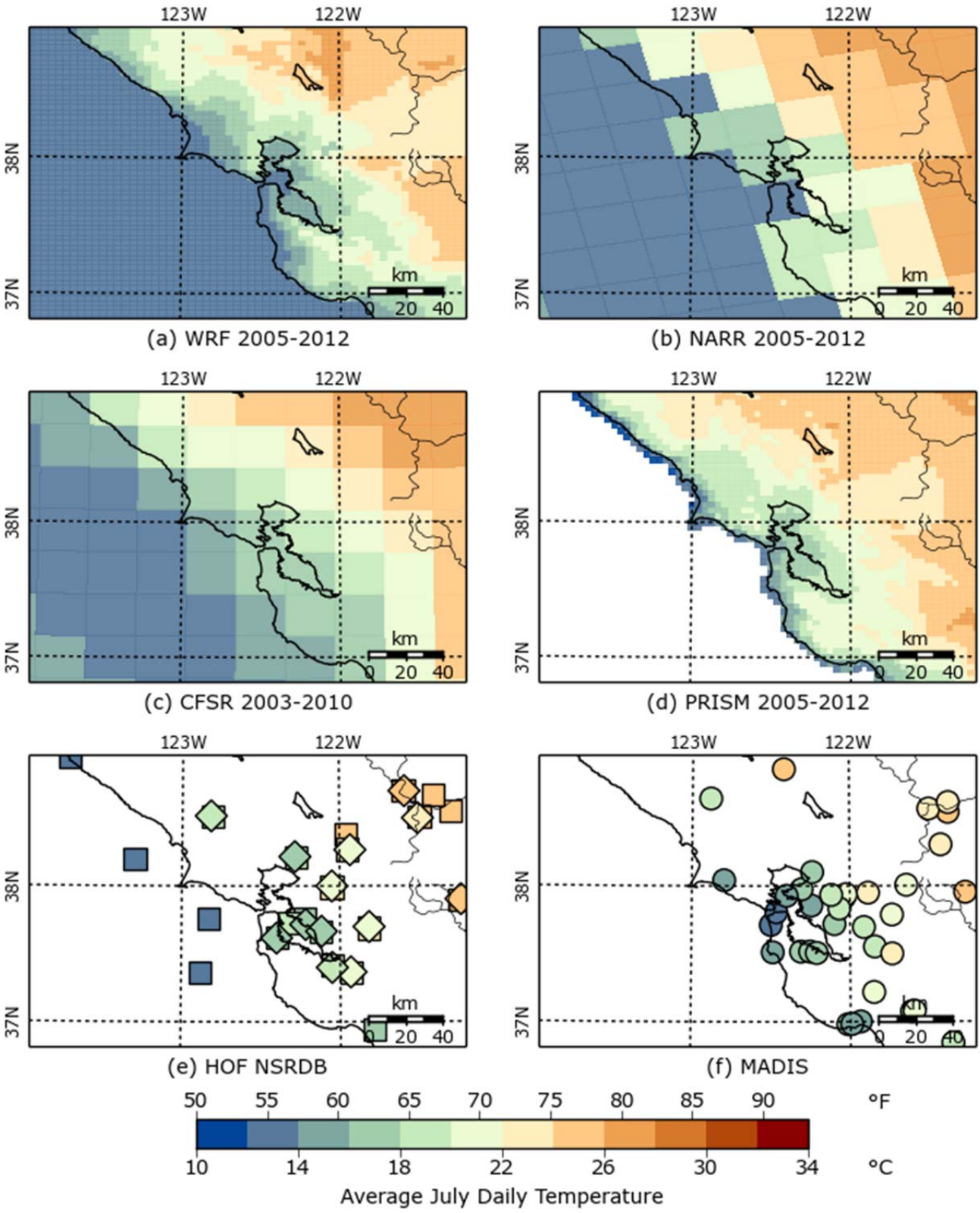

Figure 14 – San Francisco Average July Daily Temperature

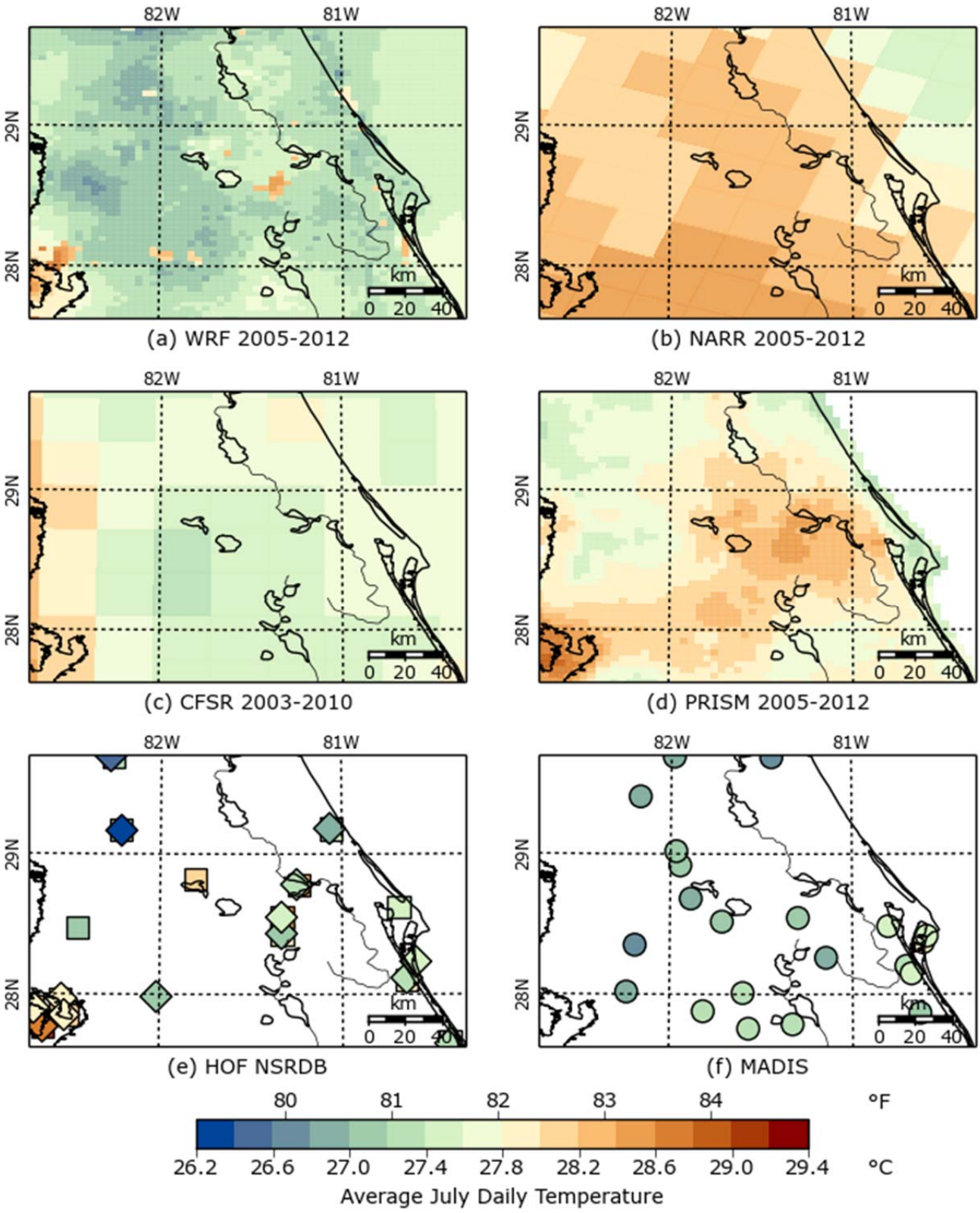

Figure 15 – Orlando Average July Daily Temperature

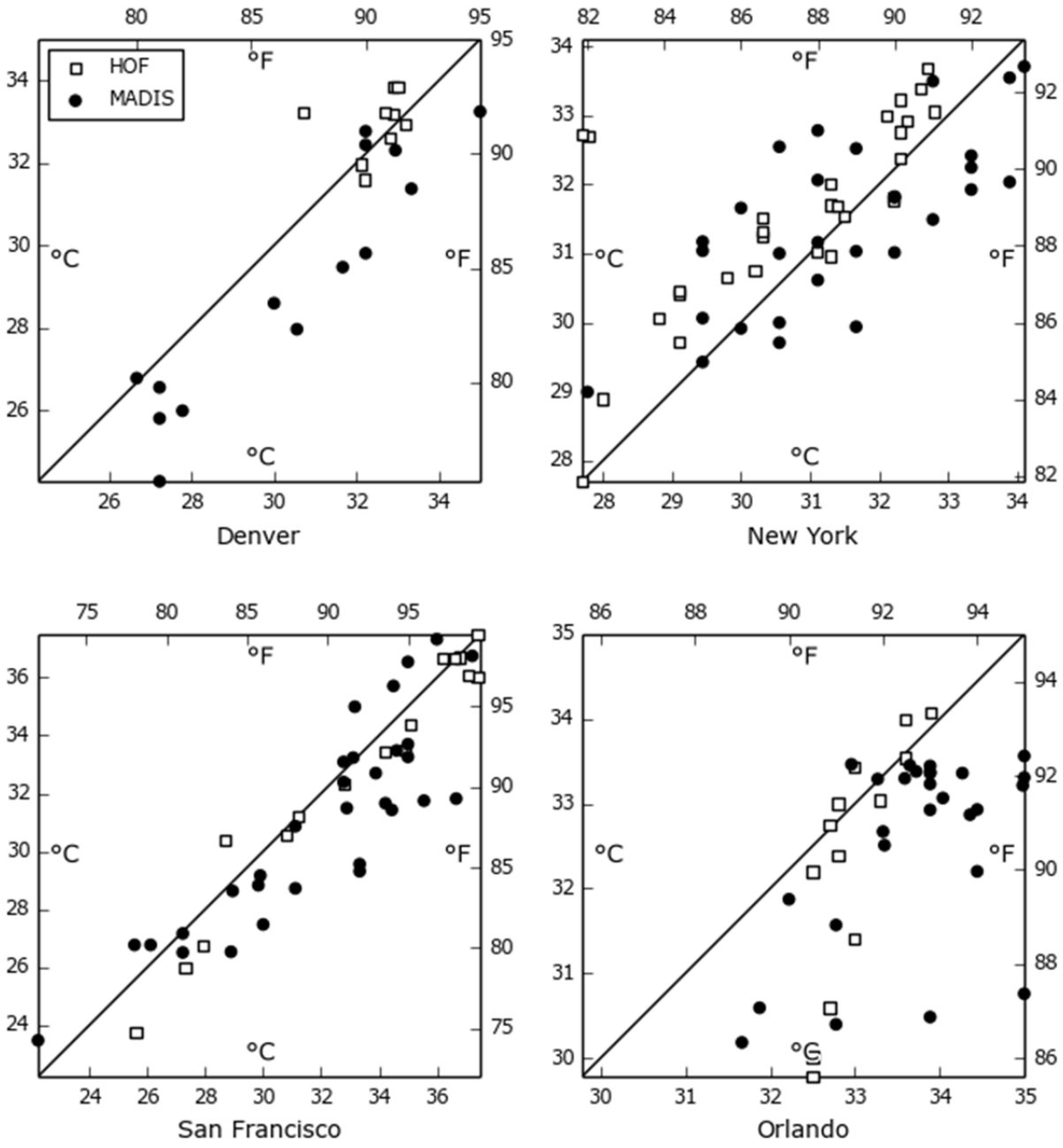

Figure 16 – Annual 1% Cooling Dry-Bulb Temperature

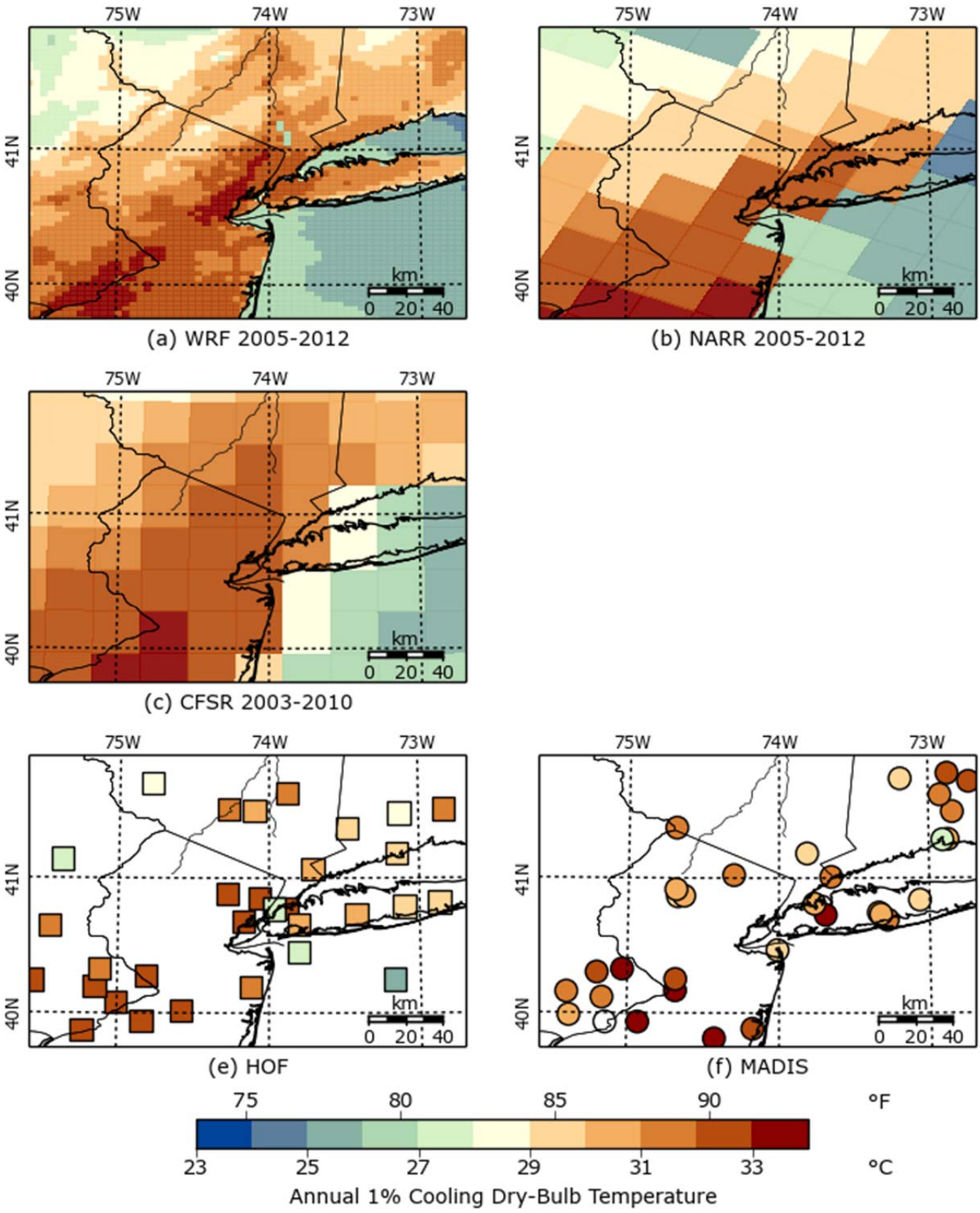

Figure 17 – New York Annual 1% Cooling Dry-Bulb Temperature

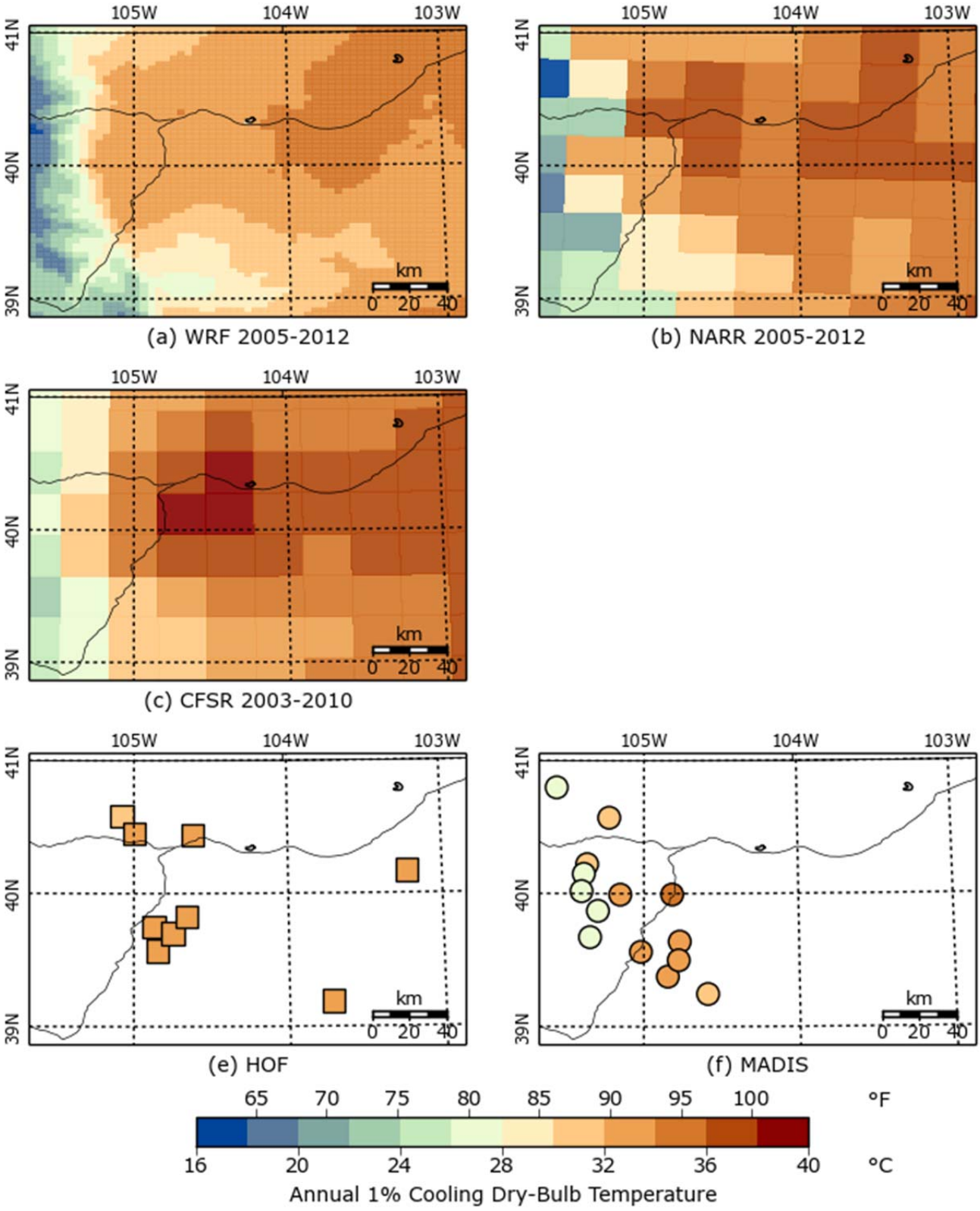

Figure 18 – Denver Annual 1% Cooling Dry-Bulb Temperature

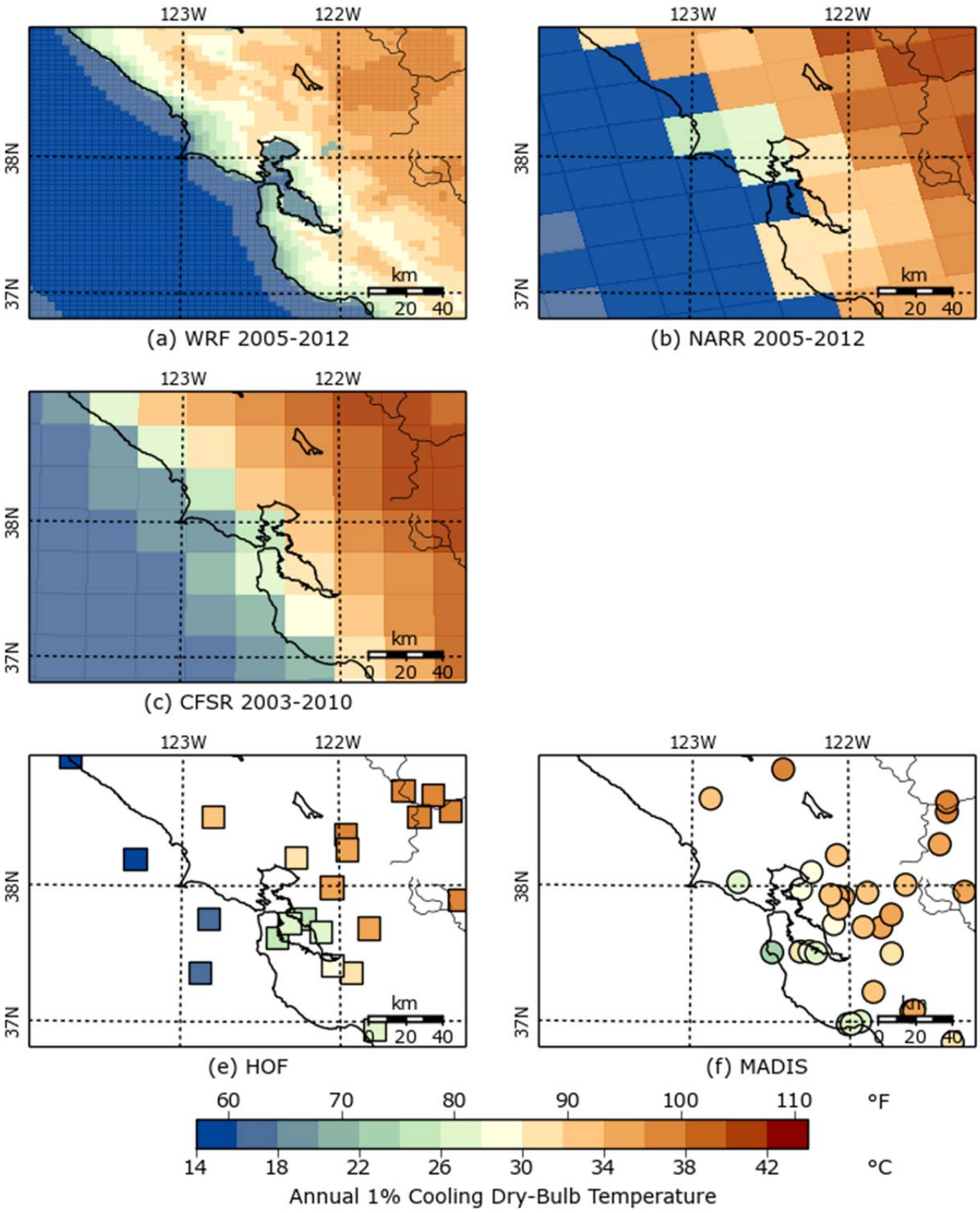

Figure 19 – San Francisco Annual 1% Cooling Dry-Bulb Temperature

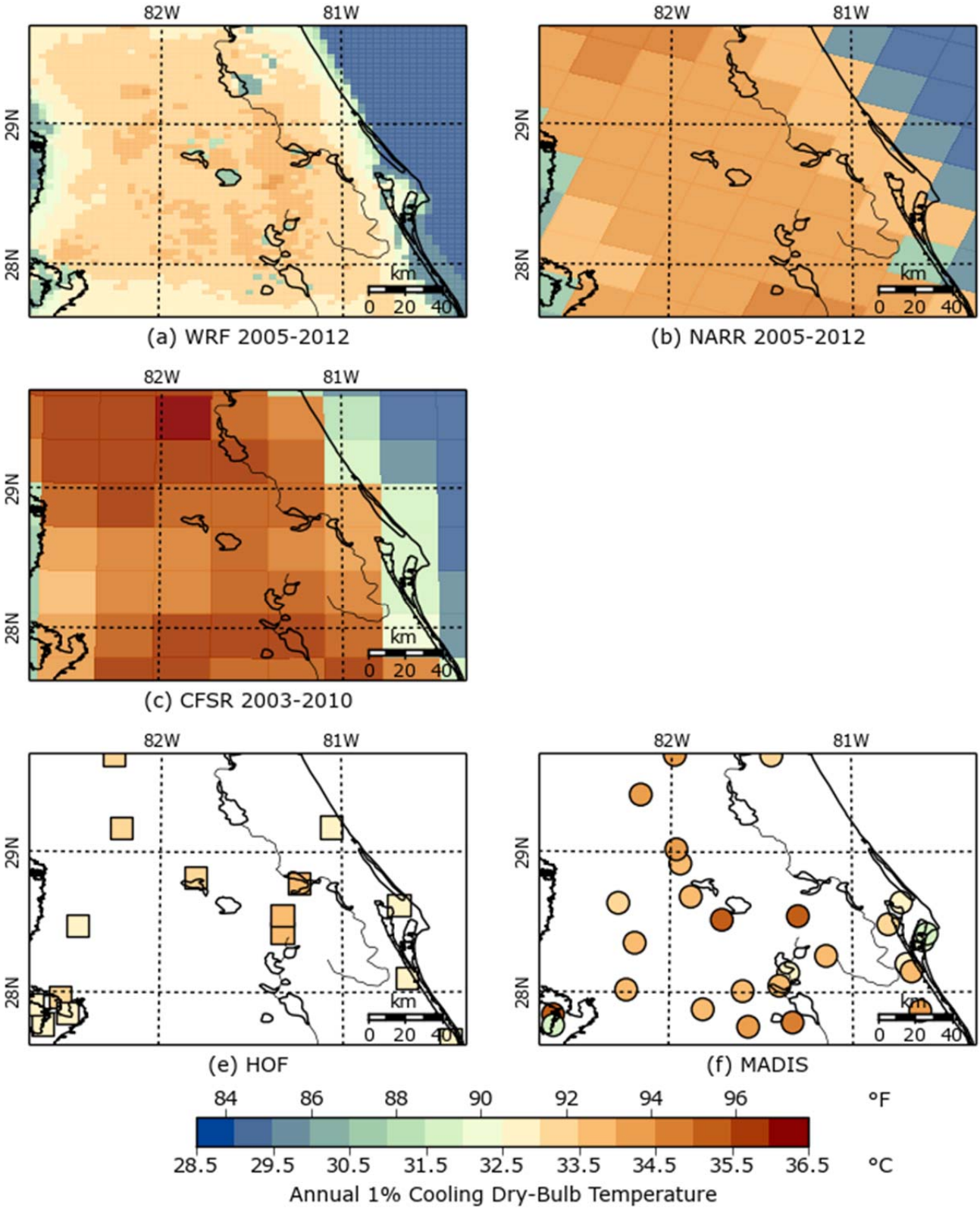

Figure 20 – Orlando Annual 1% Cooling Dry-Bulb Temperature

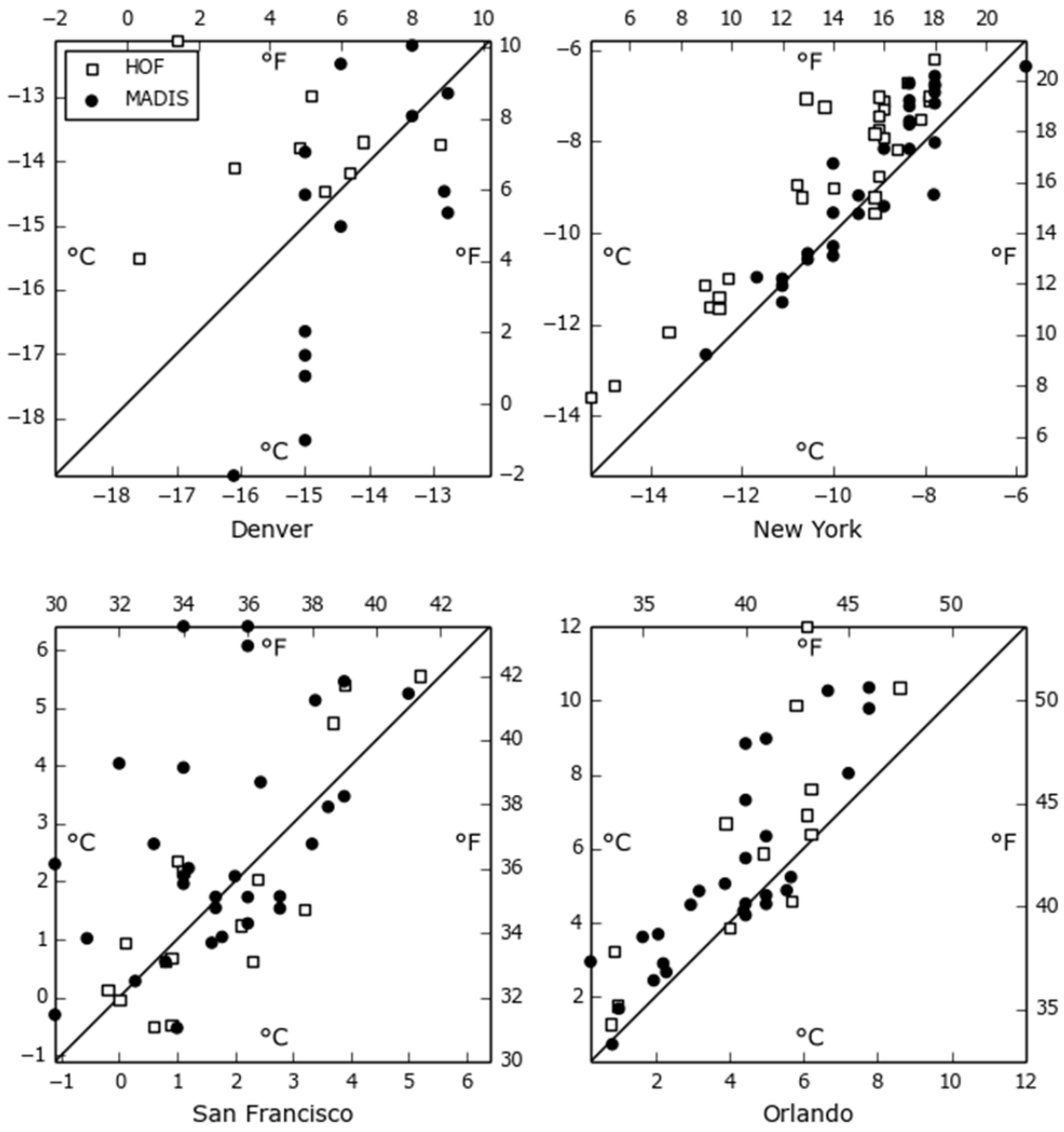

Figure 21 – Annual 99% Heating Dry-Bulb Temperature

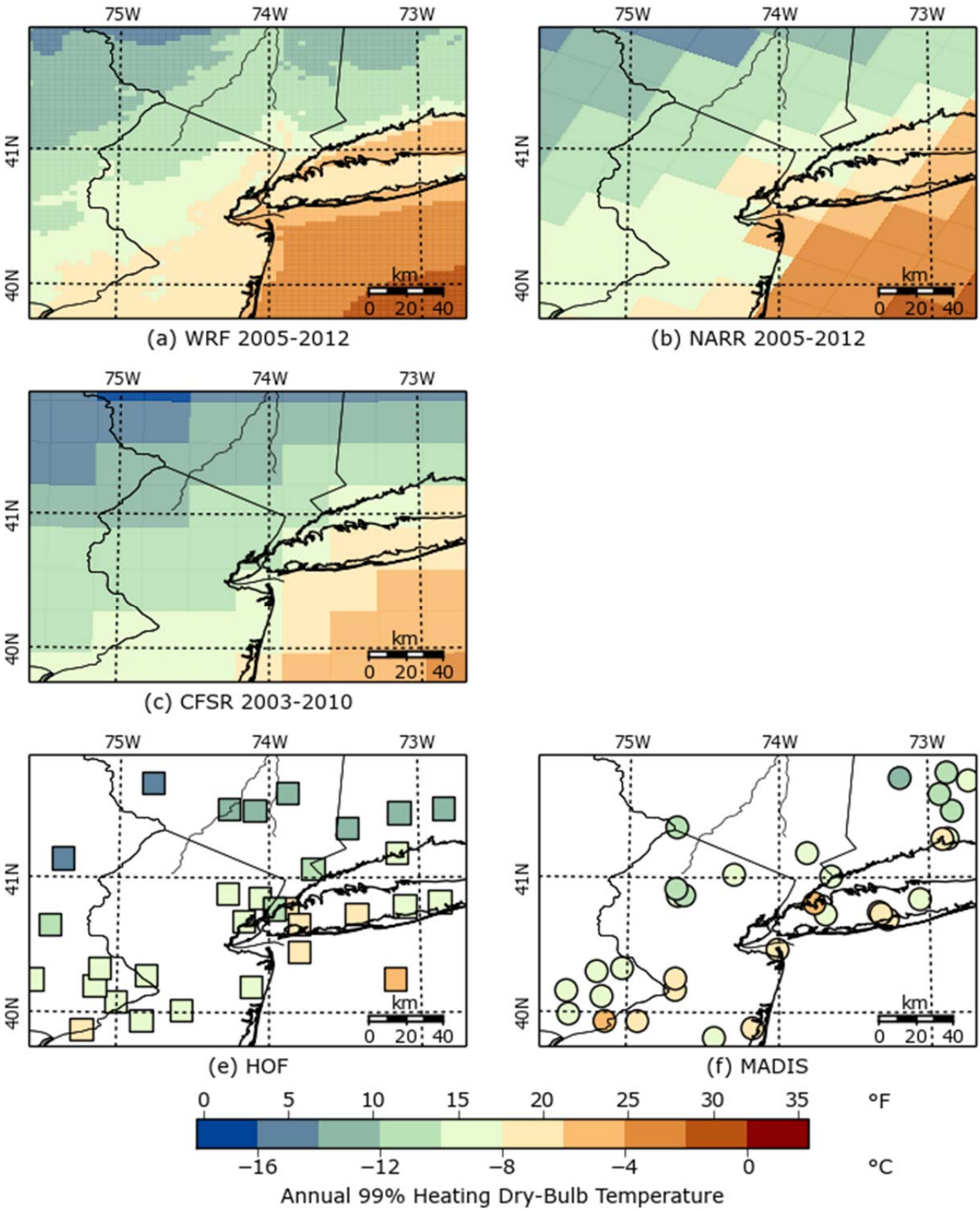

Figure 22 – New York Annual 99% Heating Dry-Bulb Temperature

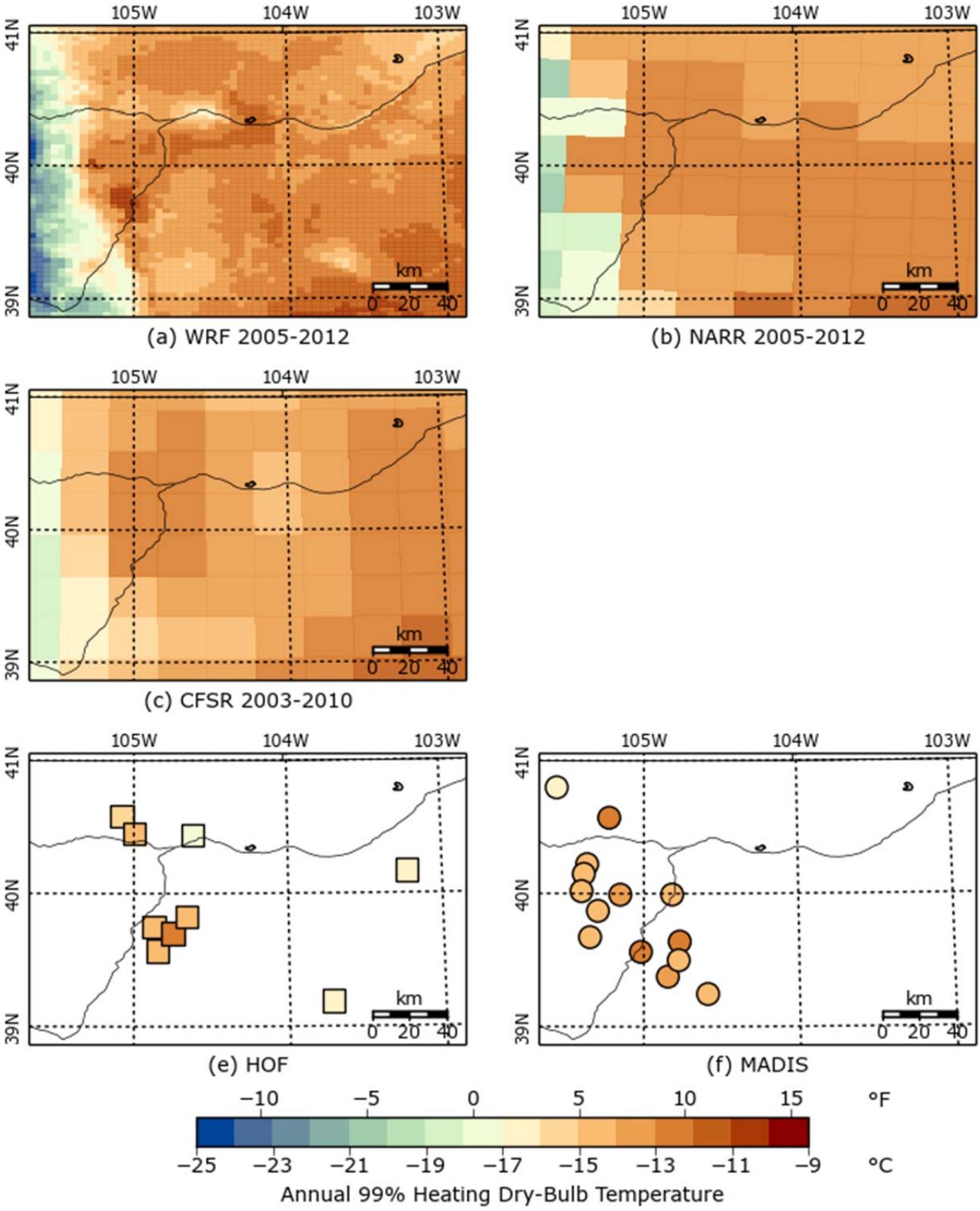

Figure 23 –d Denver Annual 99% Heating Dry-Bulb Temperature

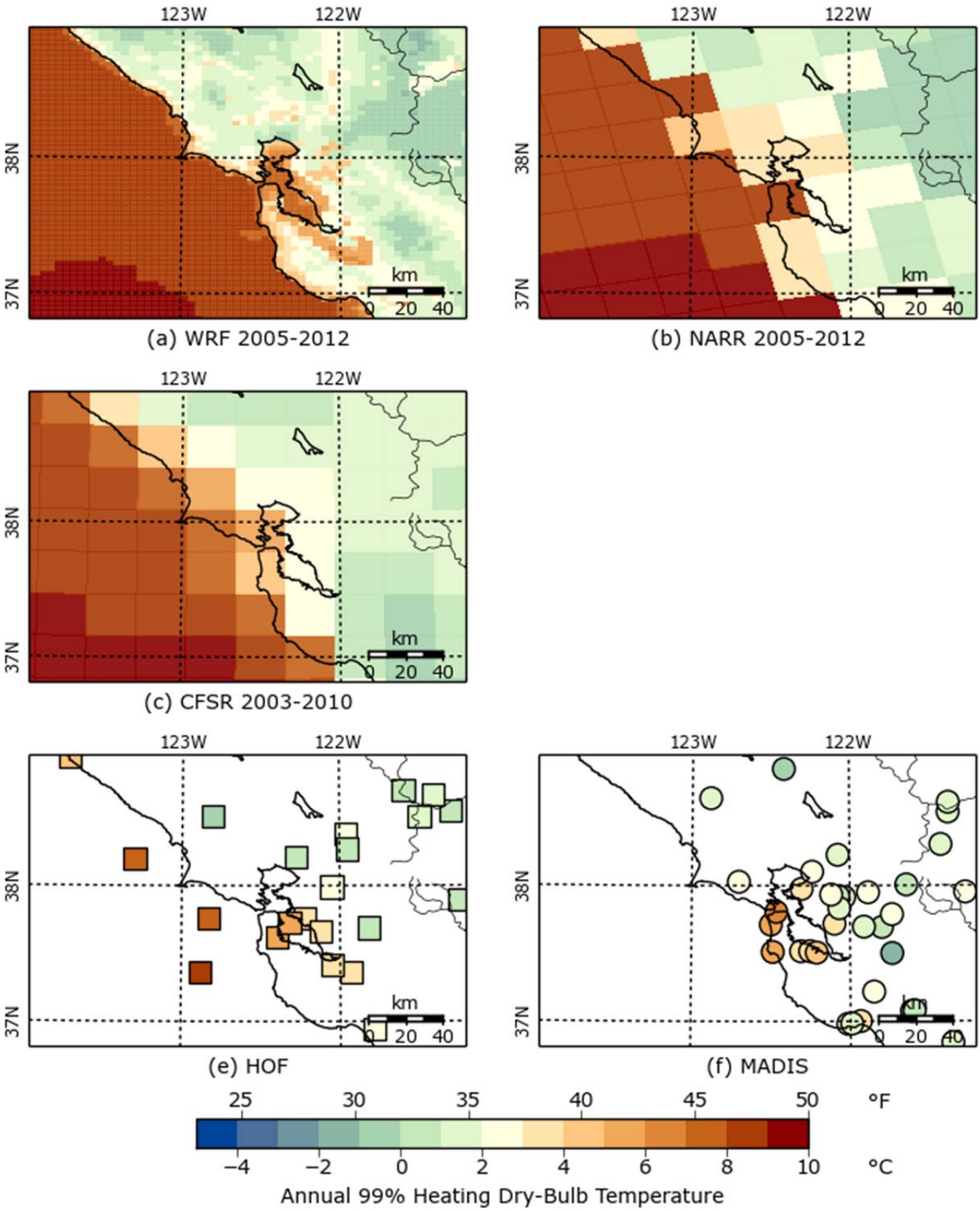

Figure 24 – San Francisco Annual 99% Heating Dry-Bulb Temperature

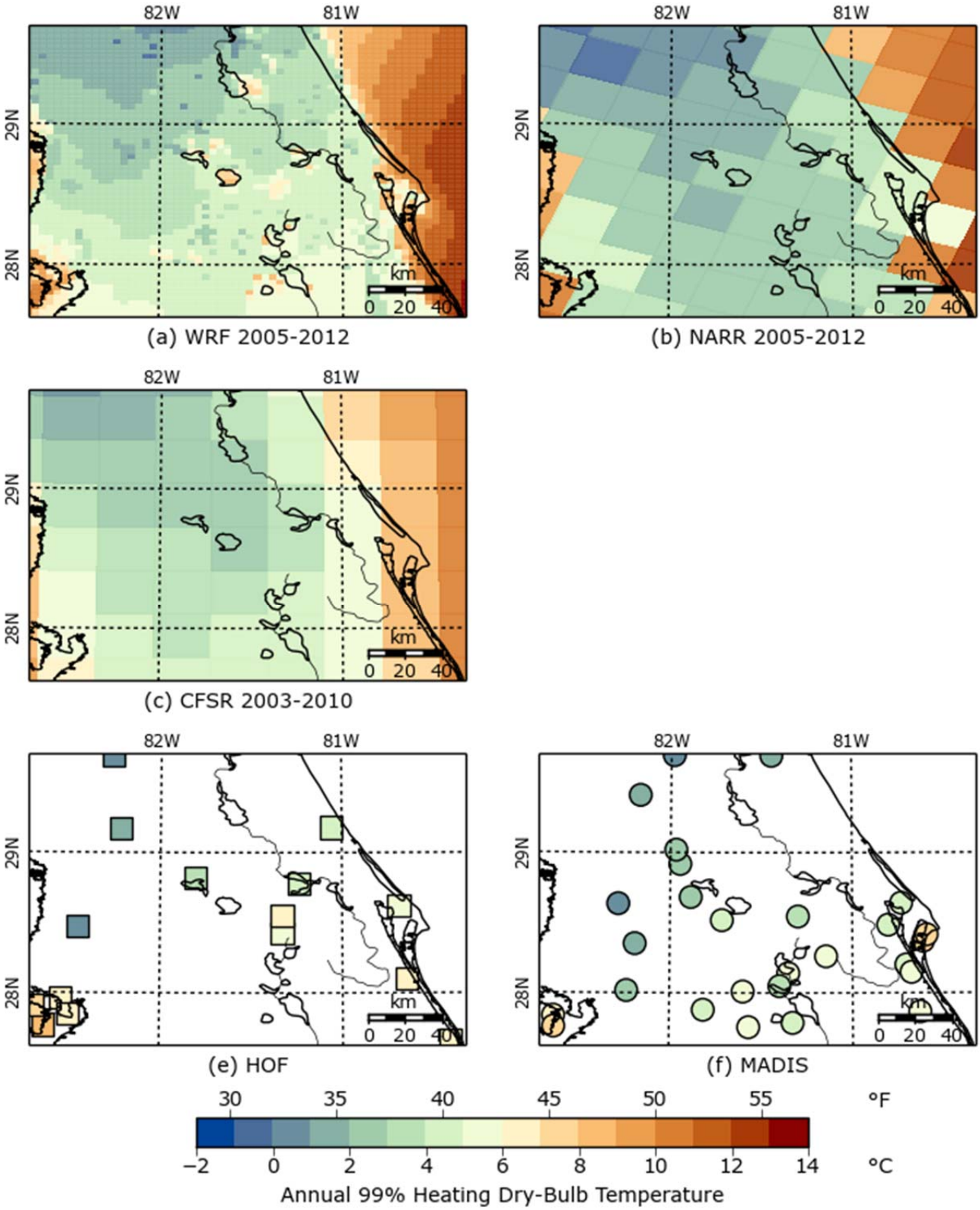

Figure 25 – Orlando Annual 99% Heating Dry-Bulb Temperature

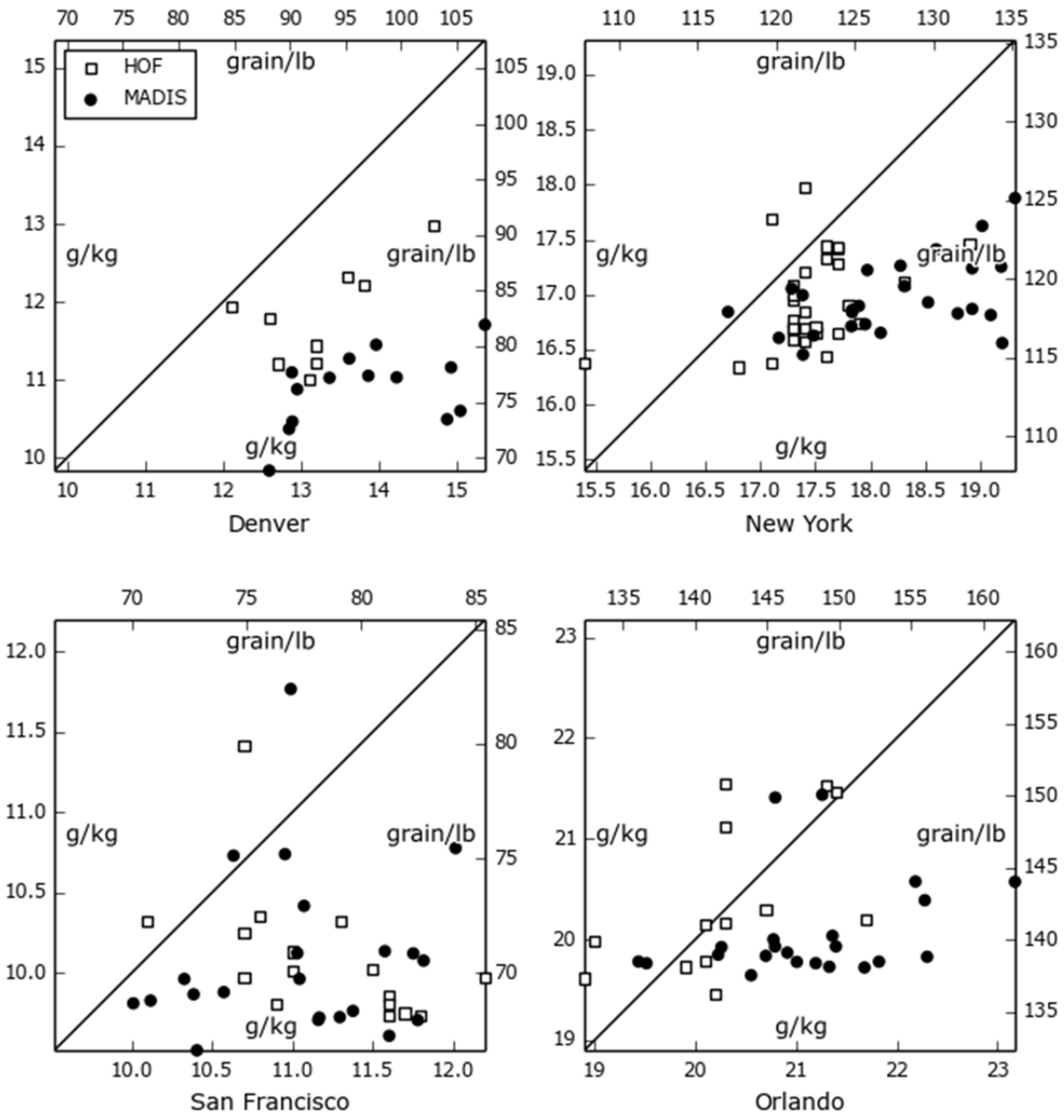

Figure 26 – Annual 1% Dehumidification Humidity Ratio

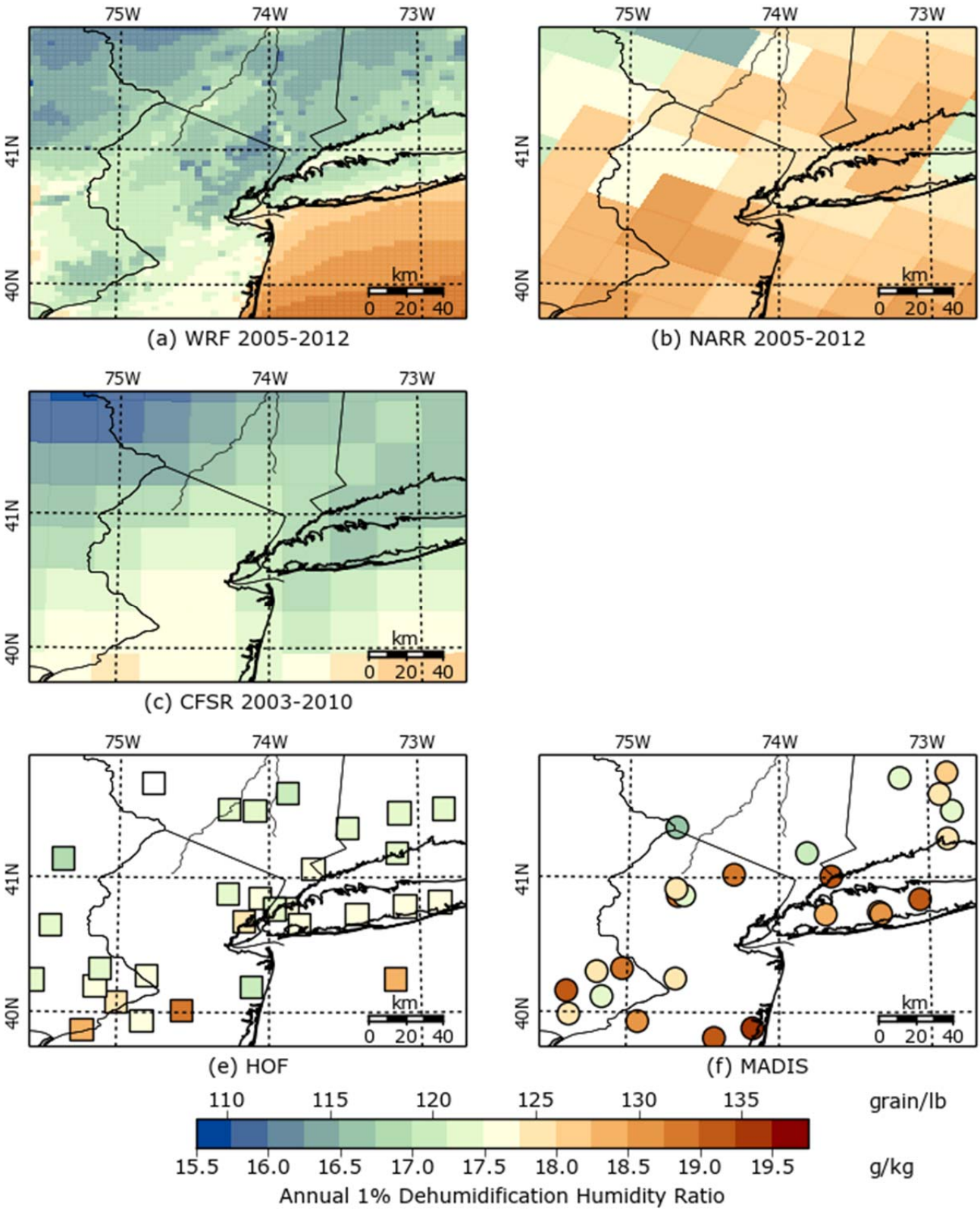

Figure 27 – New York Annual 1% Dehumidification Humidity Ratio

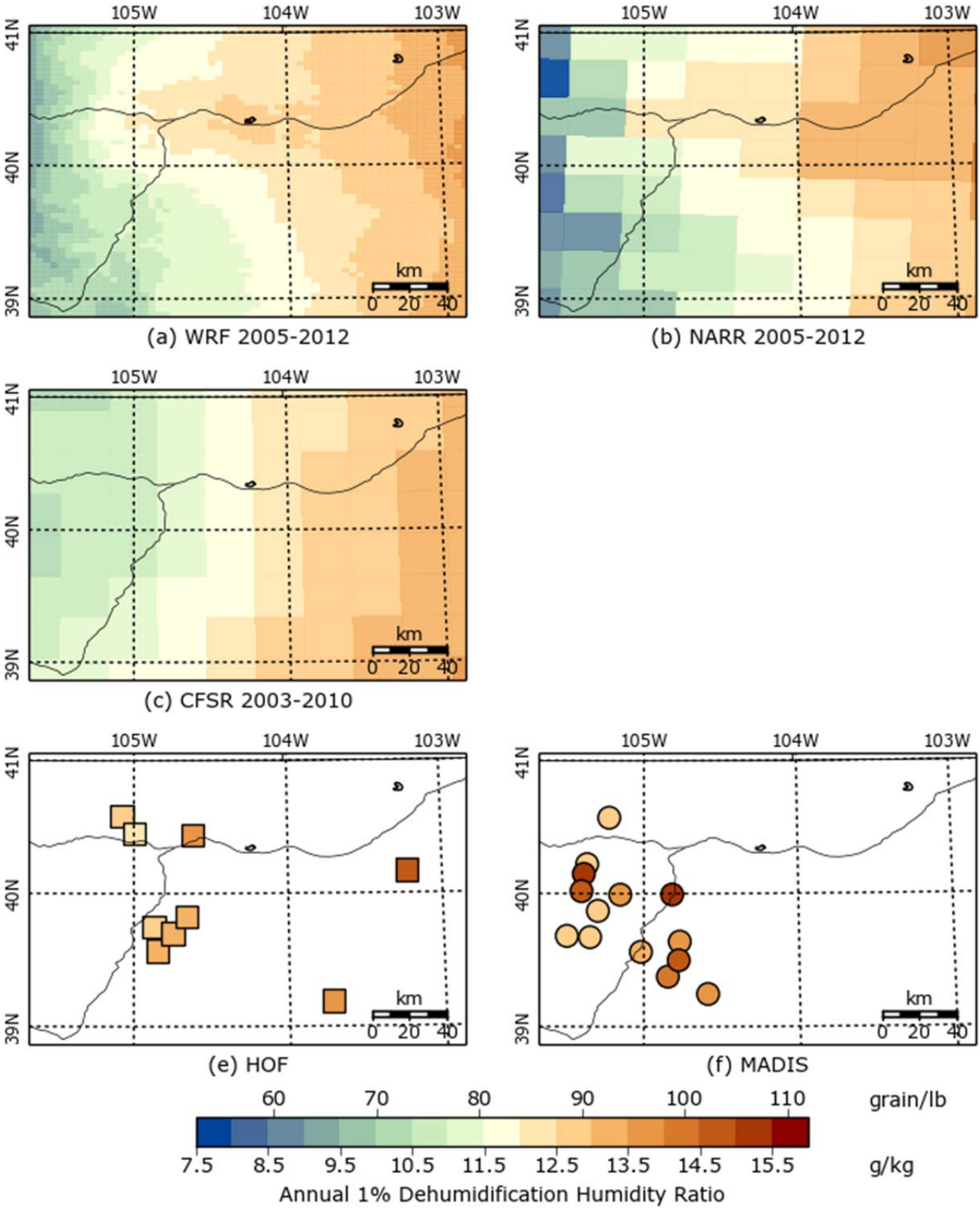

Figure 28 – Denver Annual 1% Dehumidification Humidity Ratio

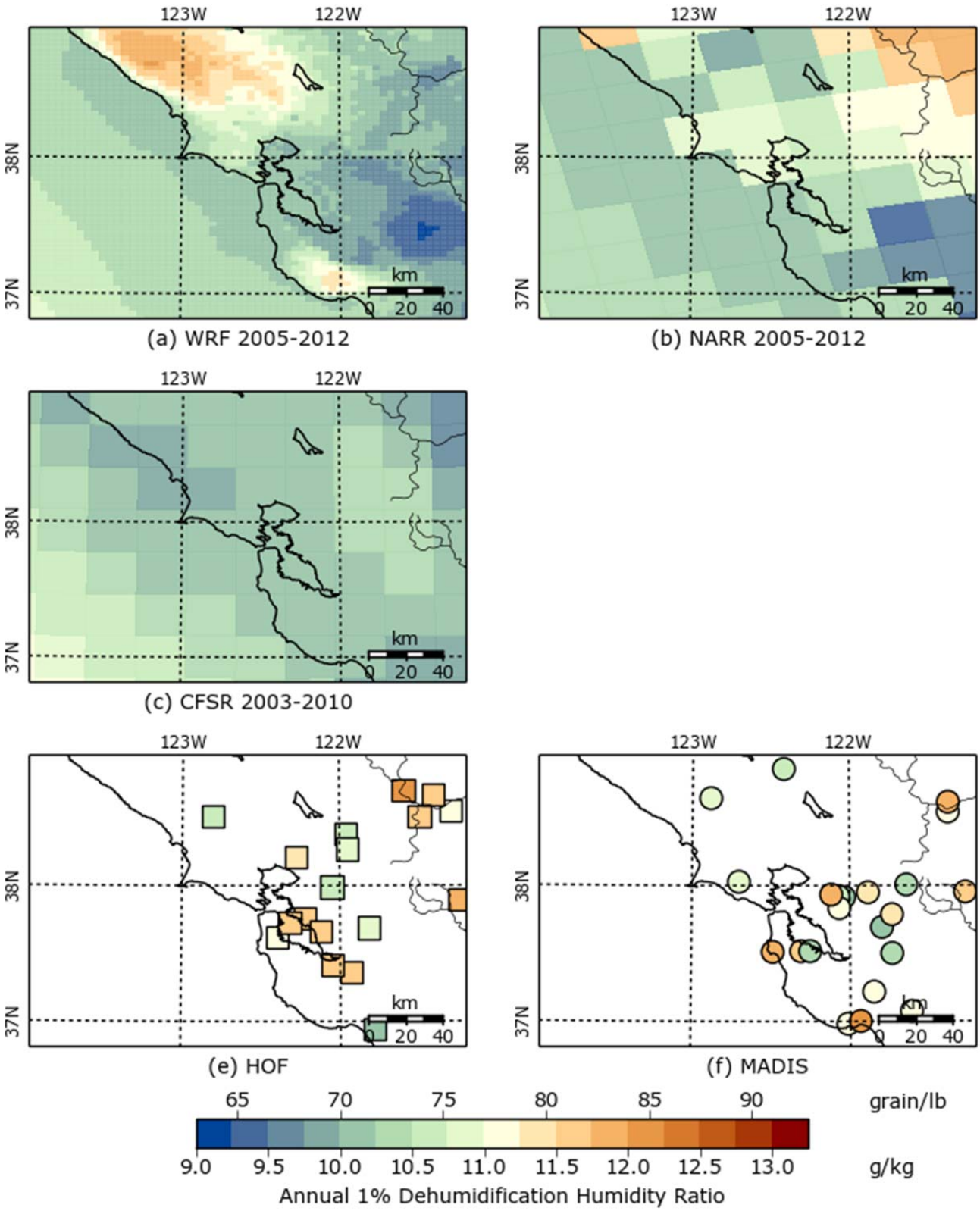

Figure 29 – San Francisco Annual 1% Dehumidification Humidity Ratio

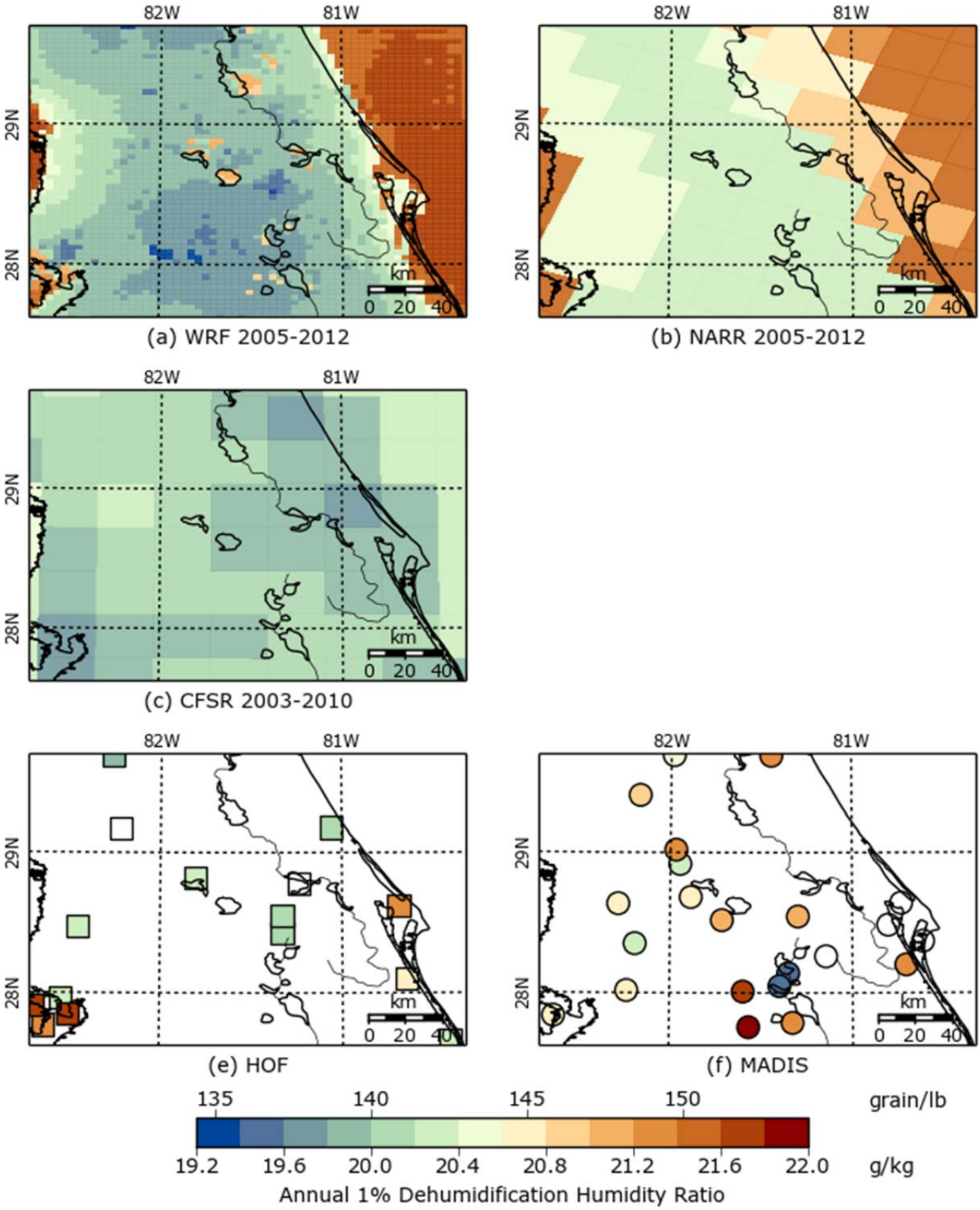

Figure 30 – Orlando Annual 1% Dehumidification Humidity Ratio

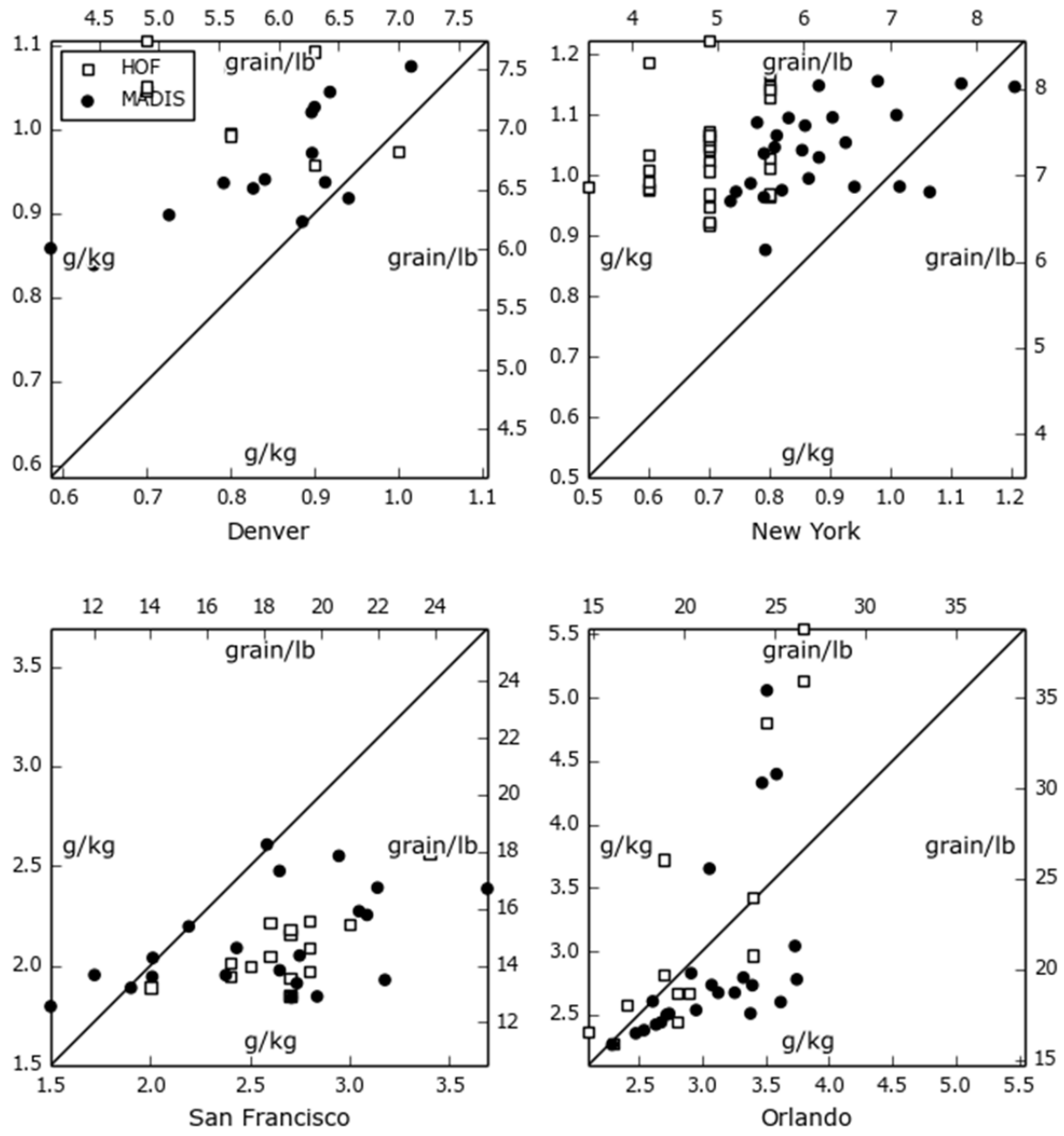

Figure 31 – Annual 99% Humidification Humidity Ratio

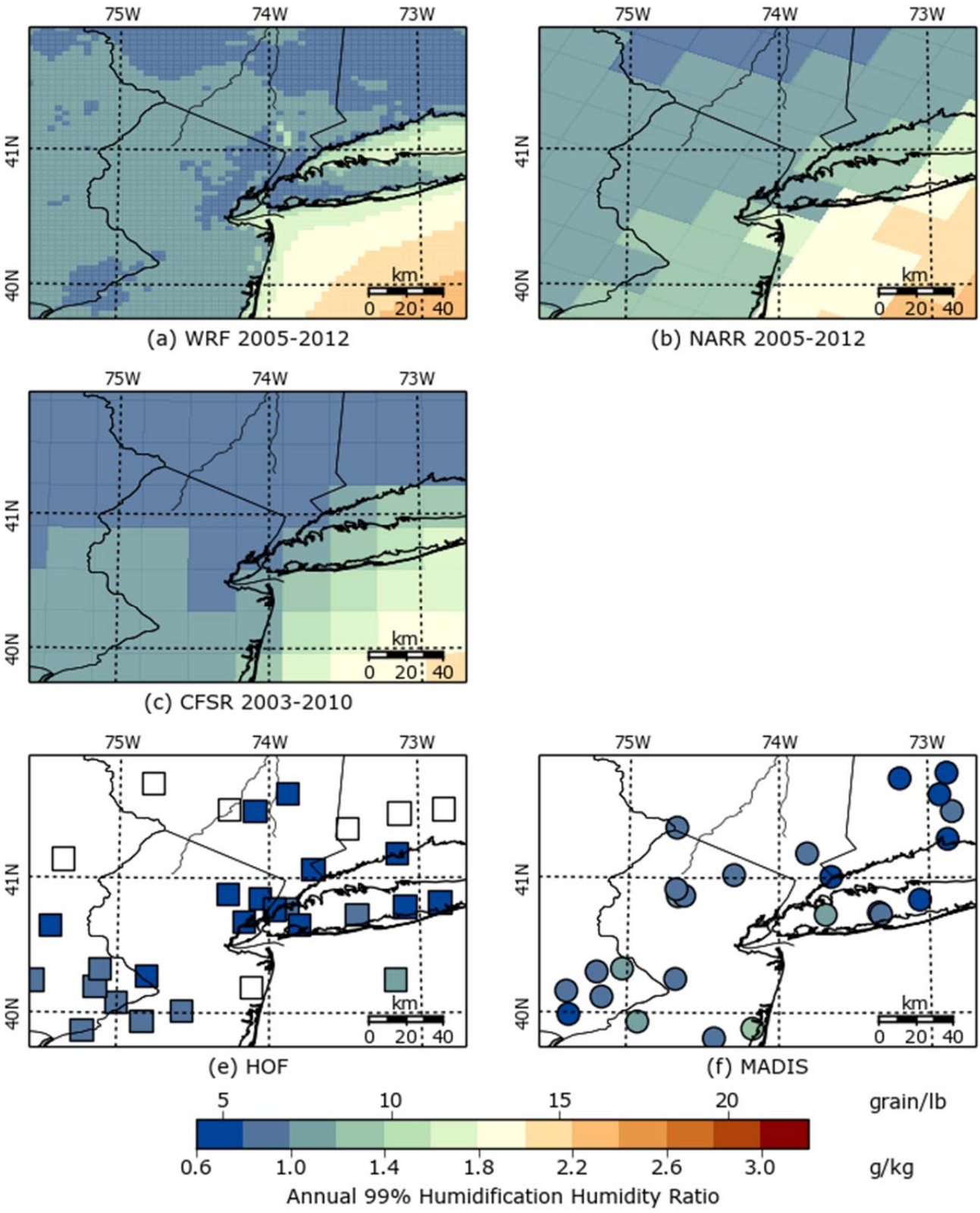

Figure 32 – New York Annual 99% Humidification Humidity Ratio

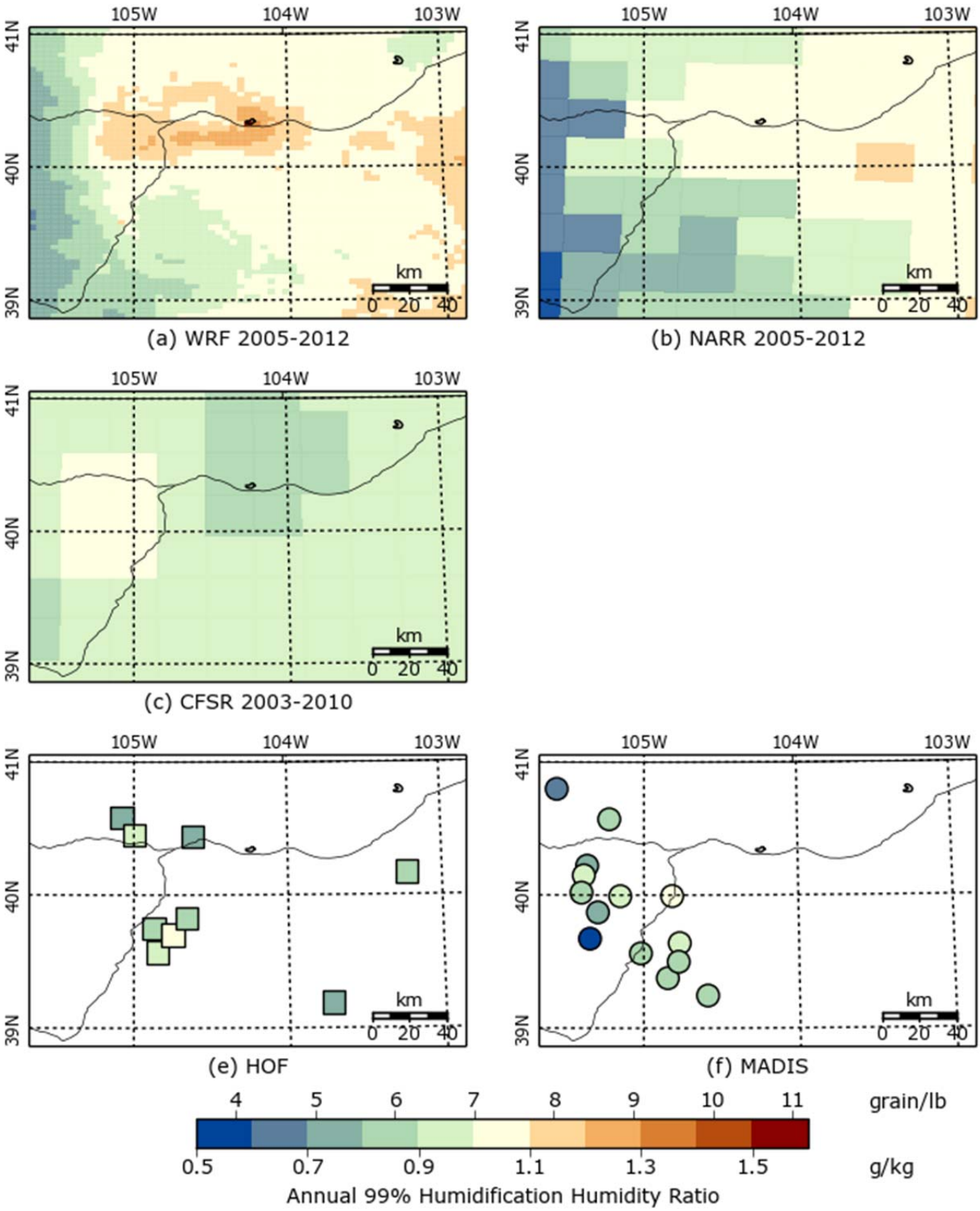

Figure 33 – Denver Annual 99% Humidification Humidity Ratio

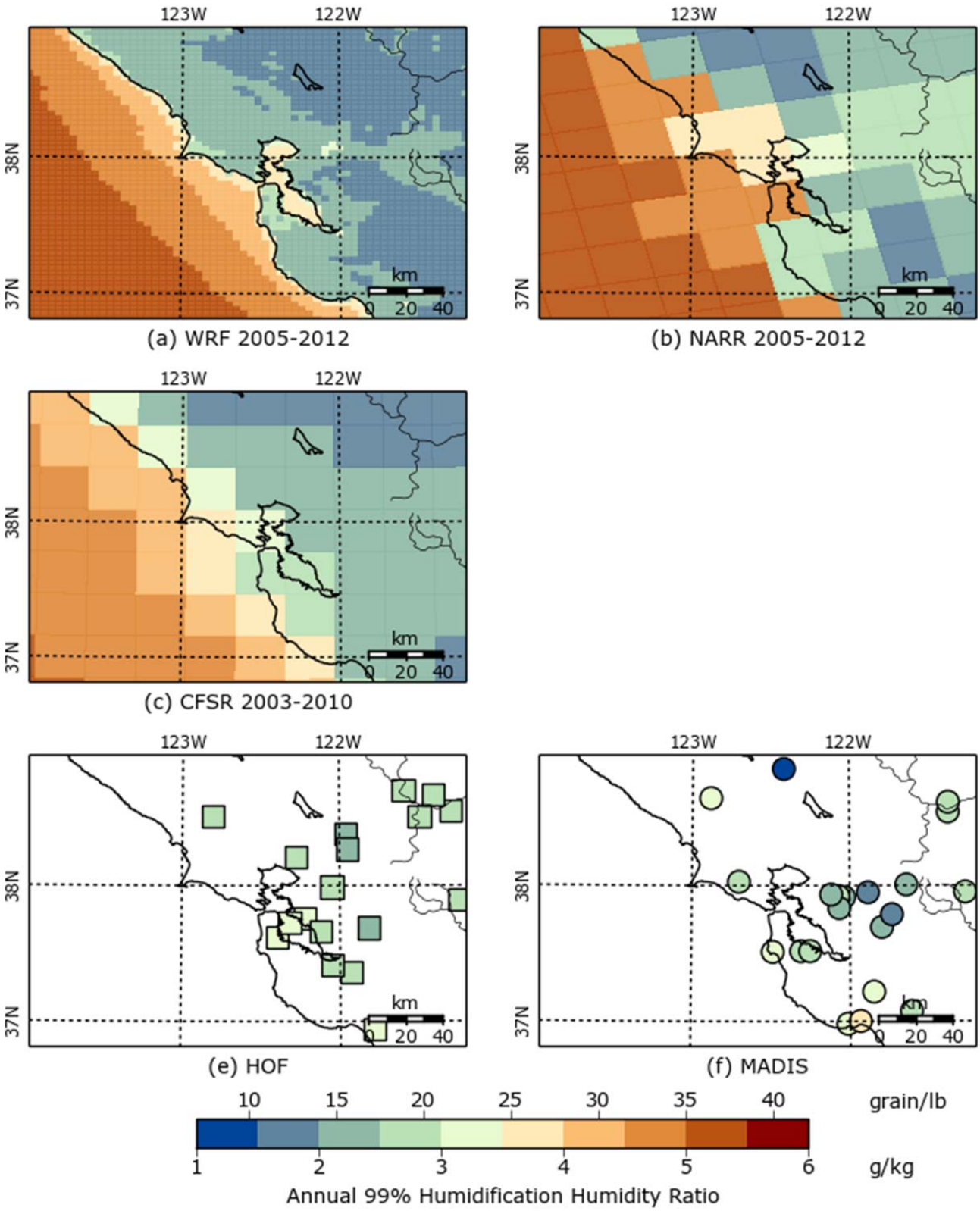

Figure 34 – San Francisco Annual 99% Humidification Humidity Ratio

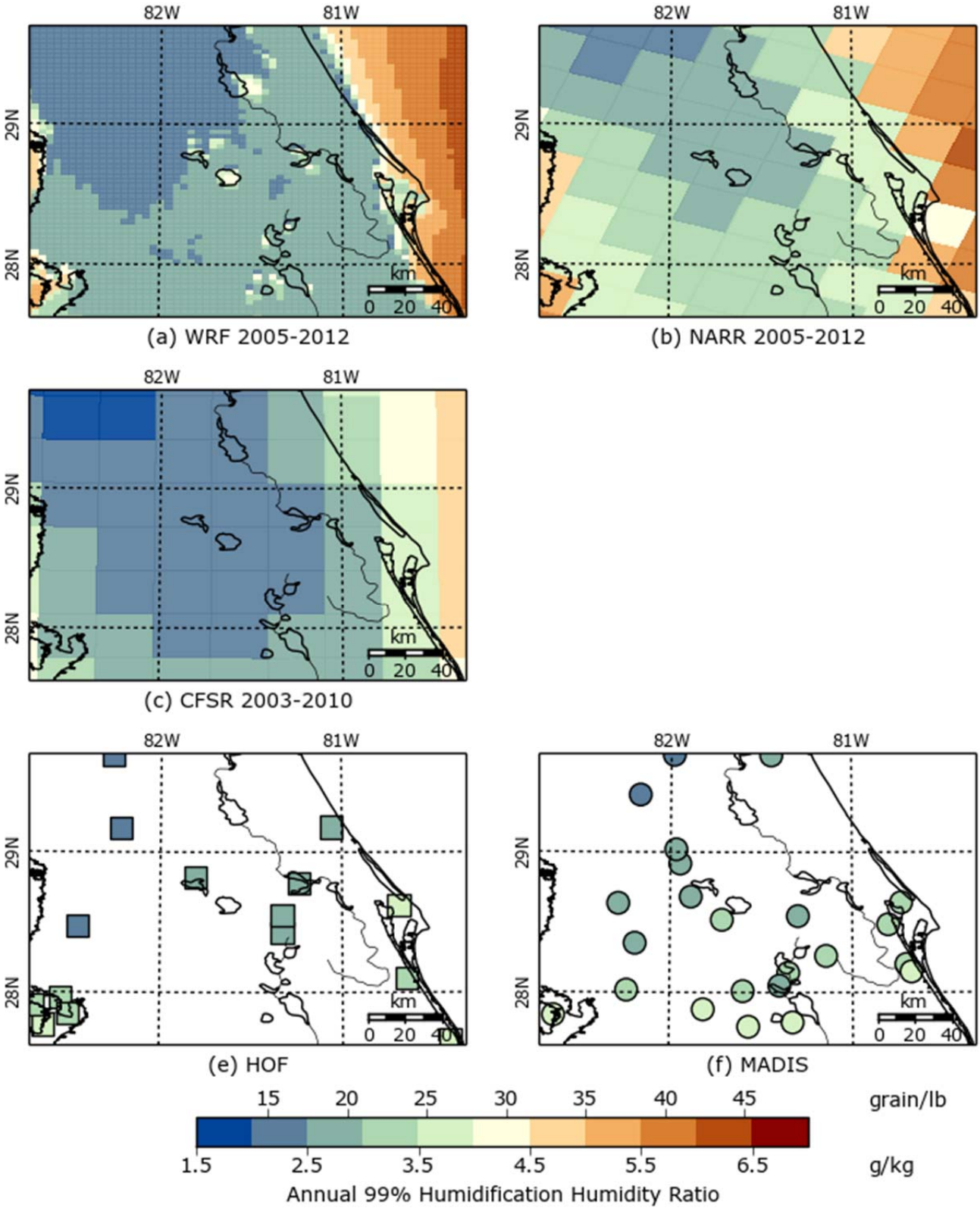

Figure 35 – Orlando Annual 99% Humidification Humidity Ratio

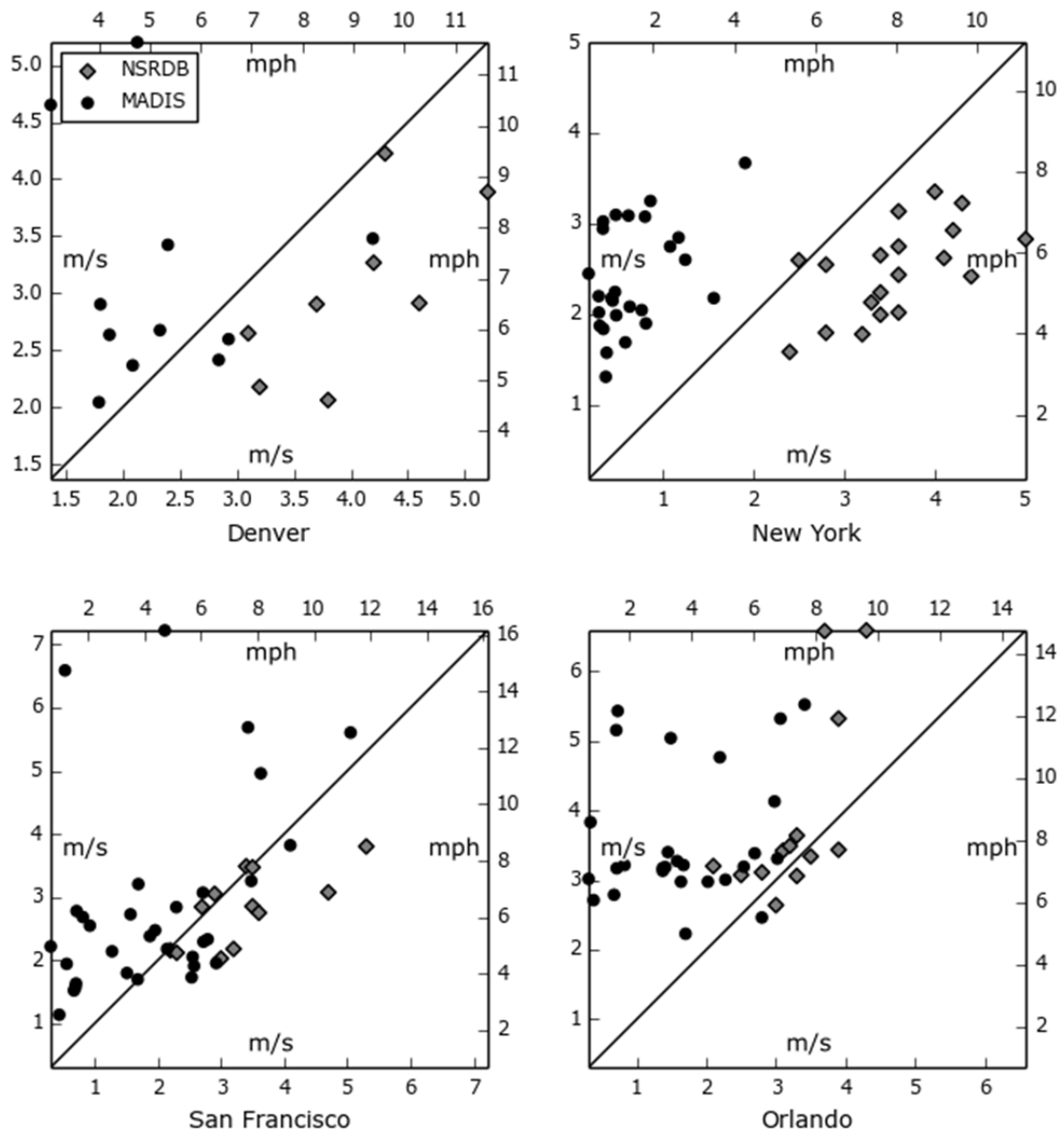

Figure 36 – Annual Average Wind Speed

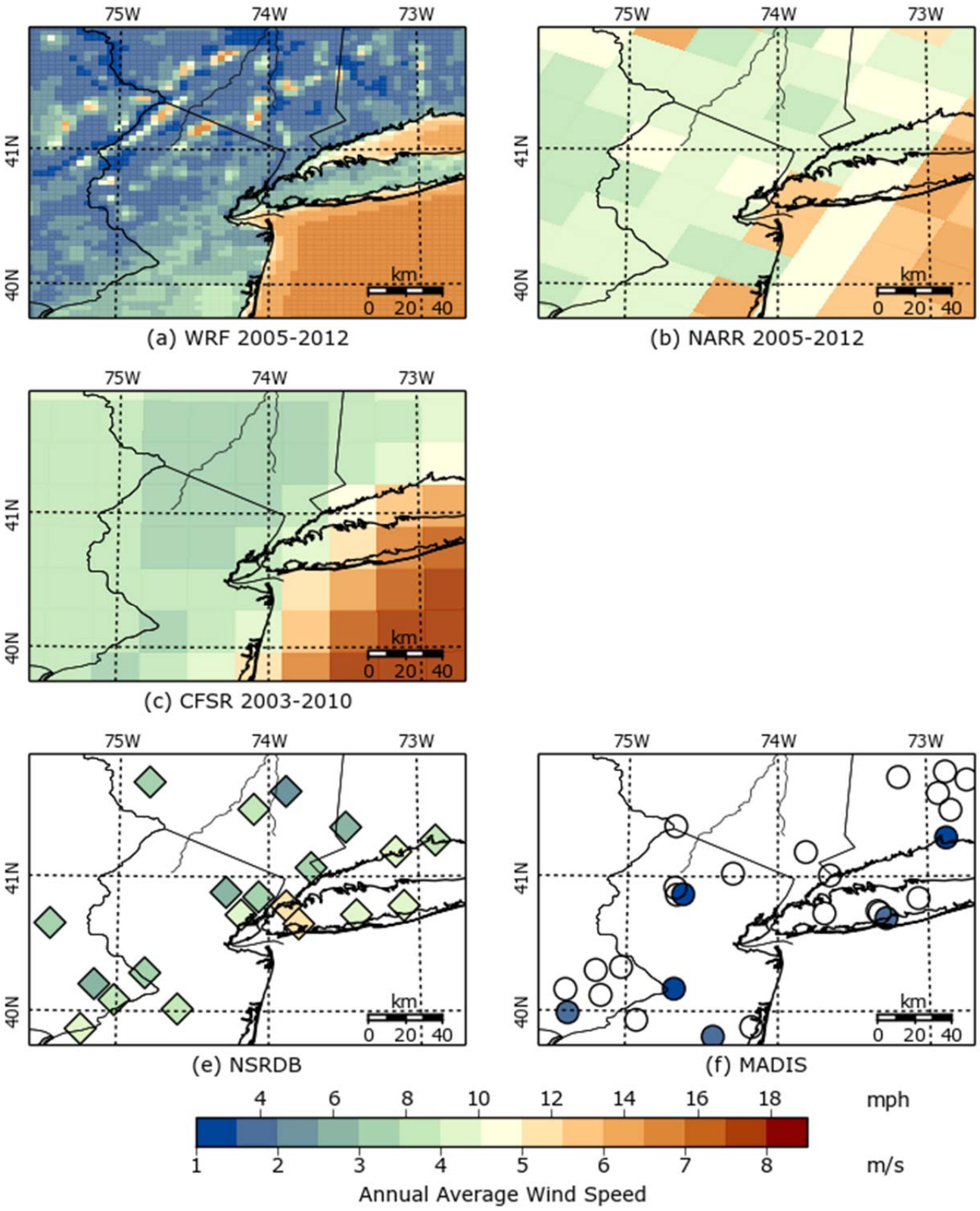

Figure 37 – New York Annual Average Wind Speed

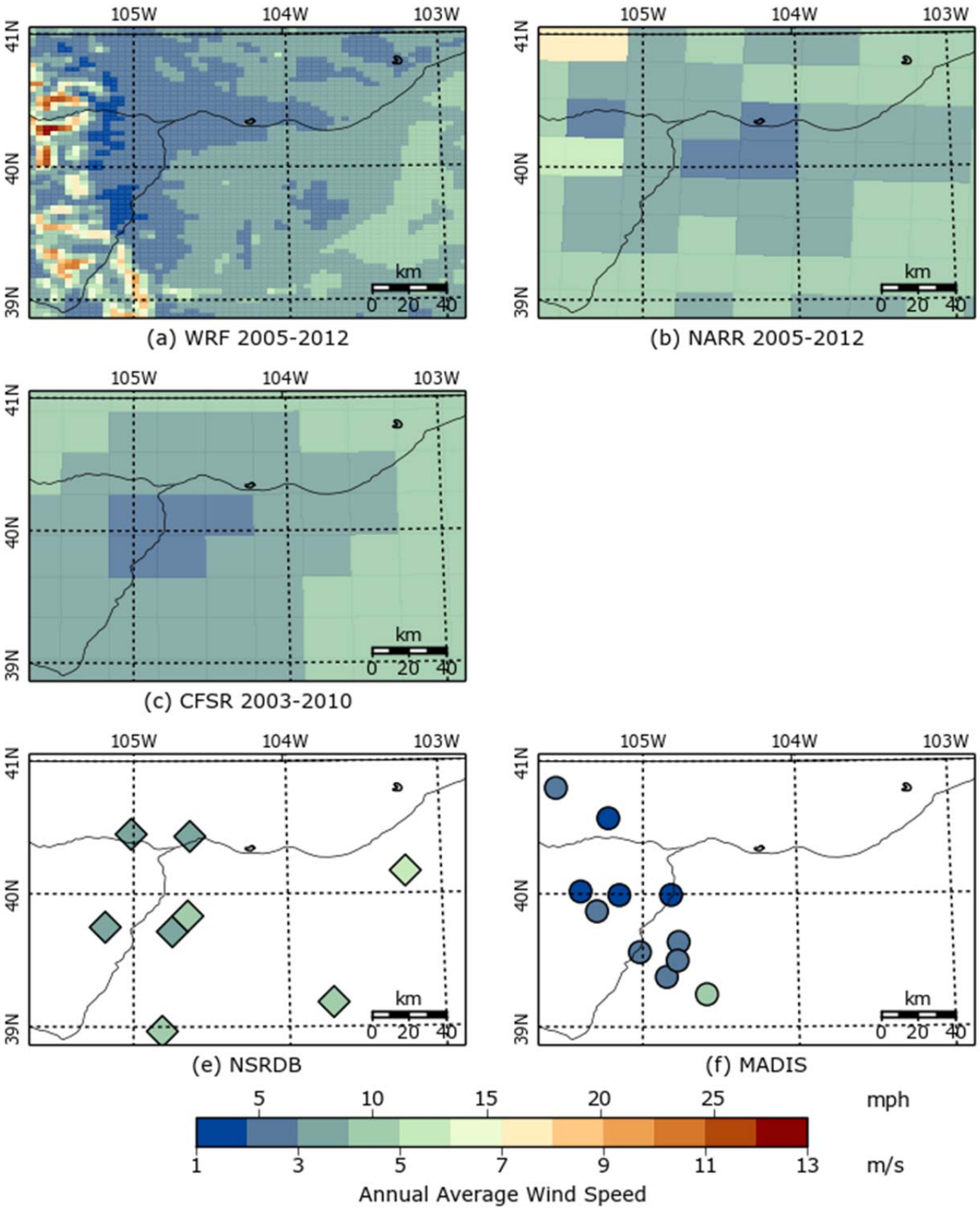

Figure 38 – Denver Annual Average Wind Speed

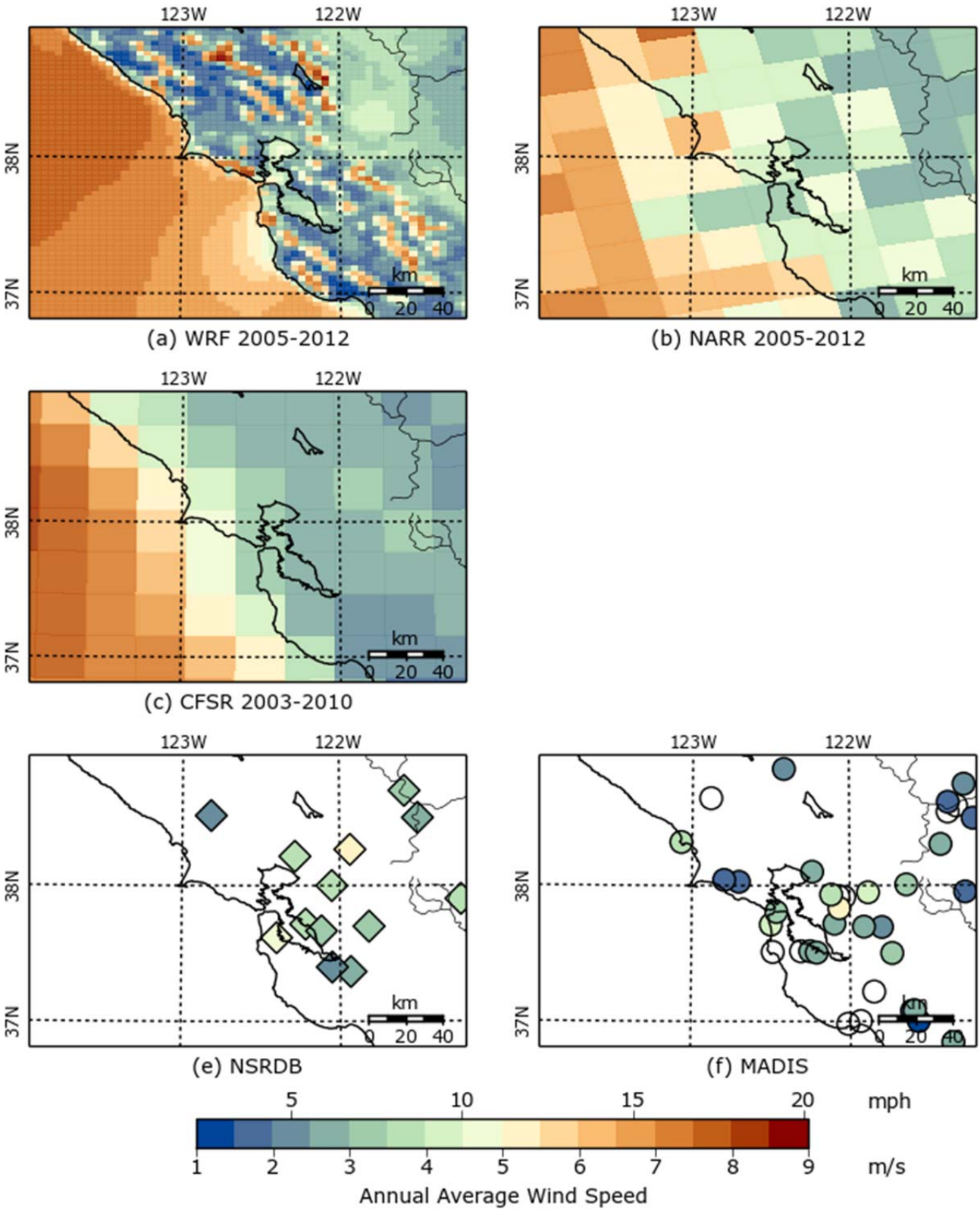

Figure 39 – San Francisco Annual Average Wind Speed

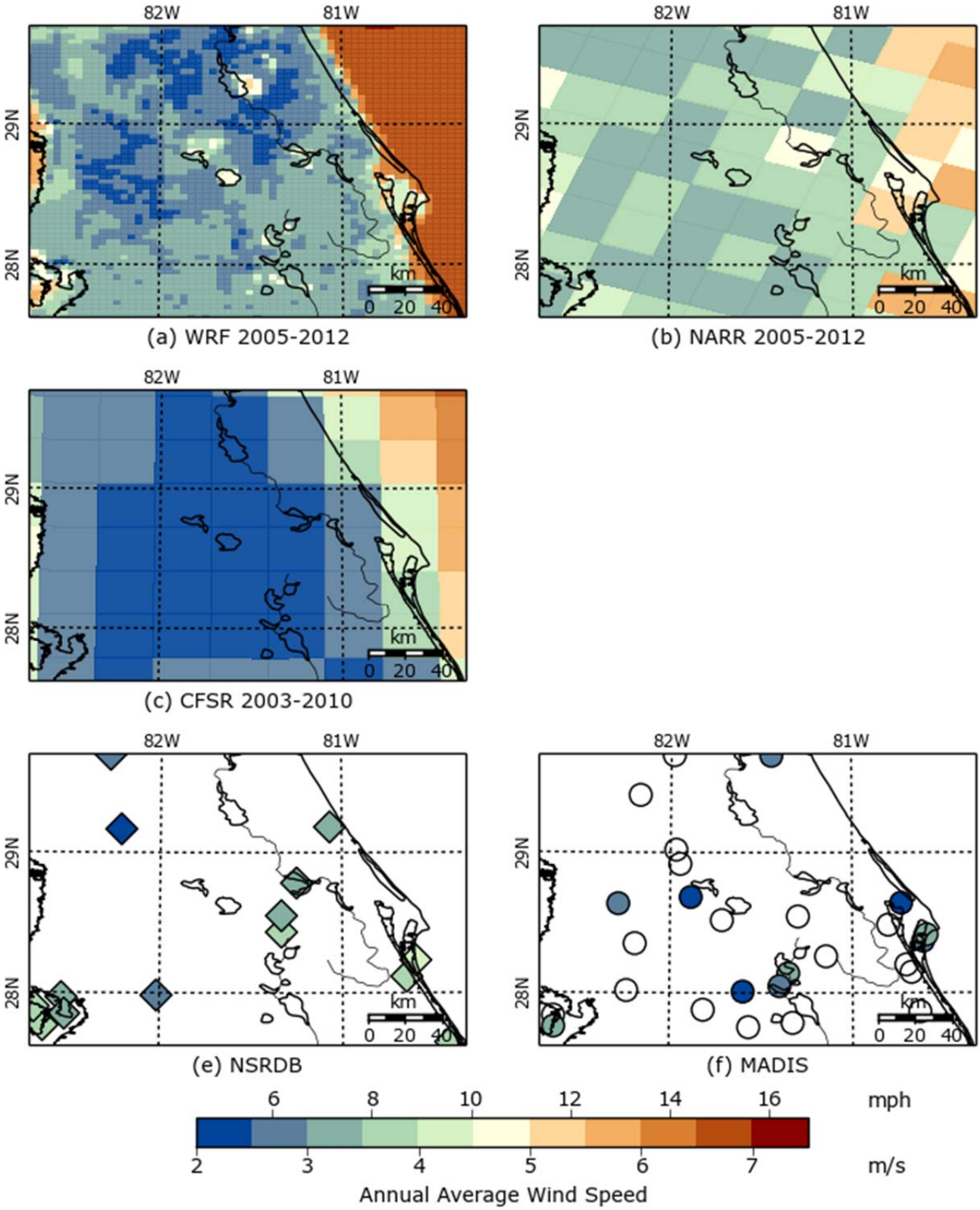

Figure 40 – Orlando Annual Average Wind Speed

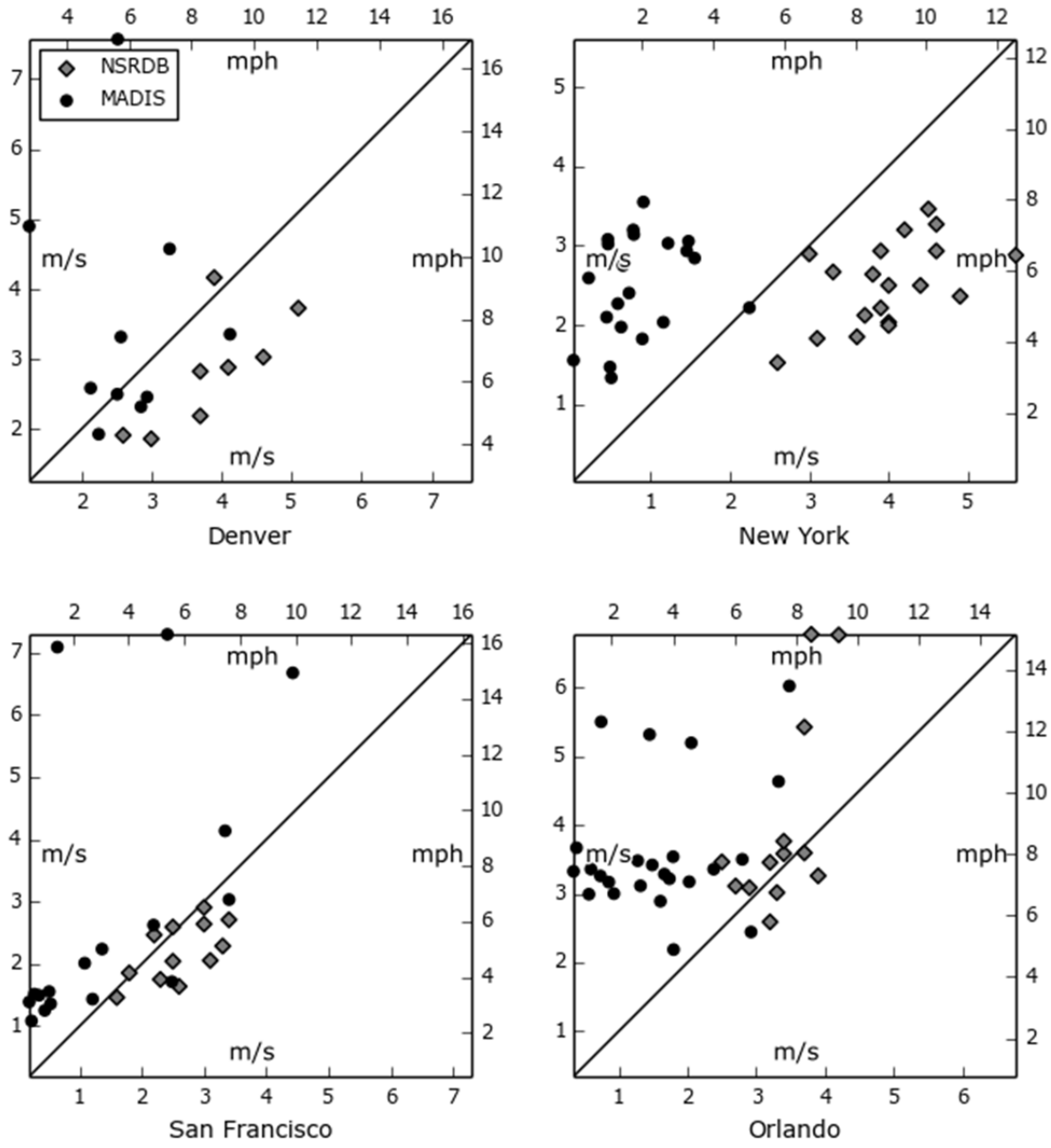

Figure 41 – Average January Wind Speed

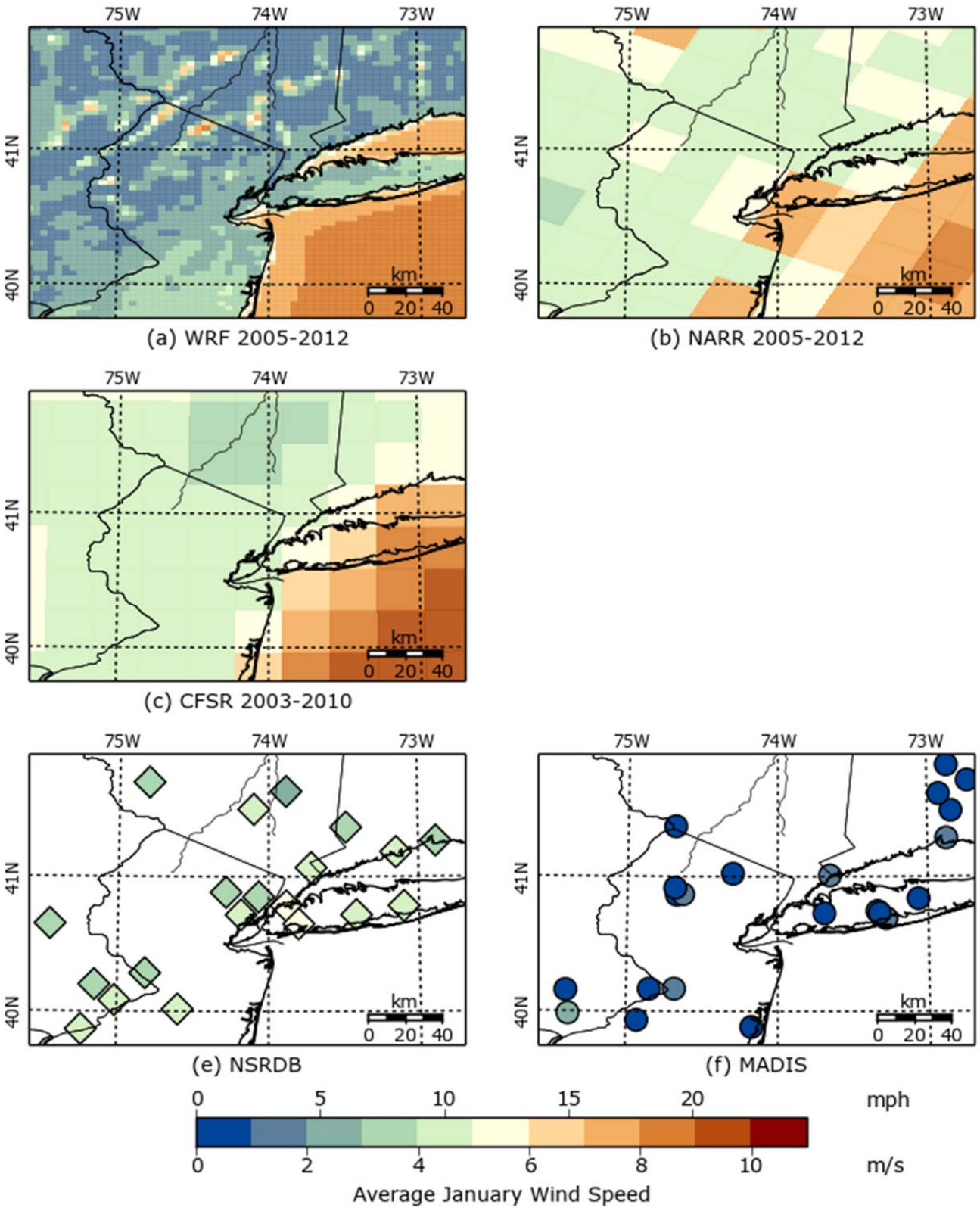

Figure 42 – New York Average January Wind Speed

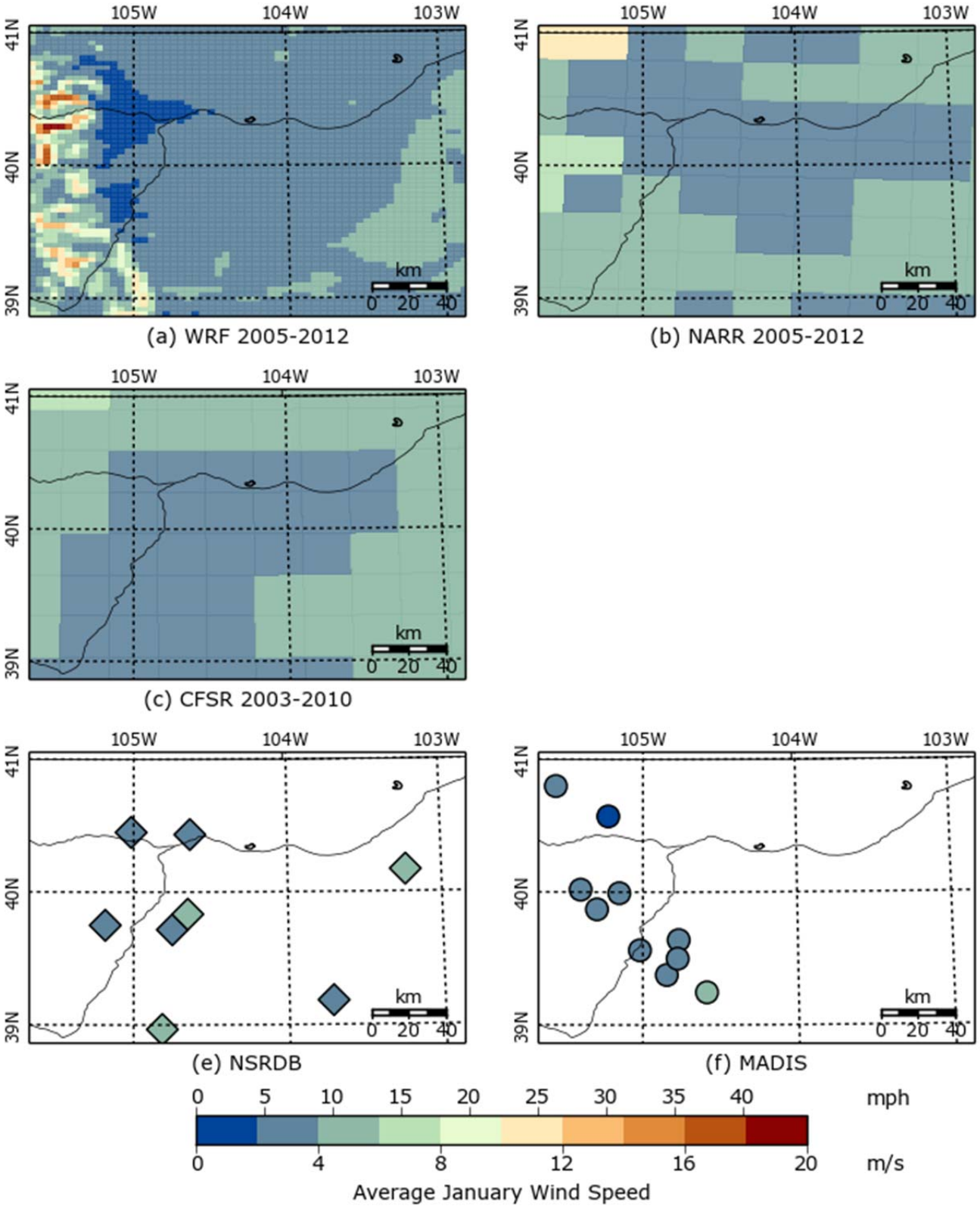

Figure 43 – Denver Average January Wind Speed

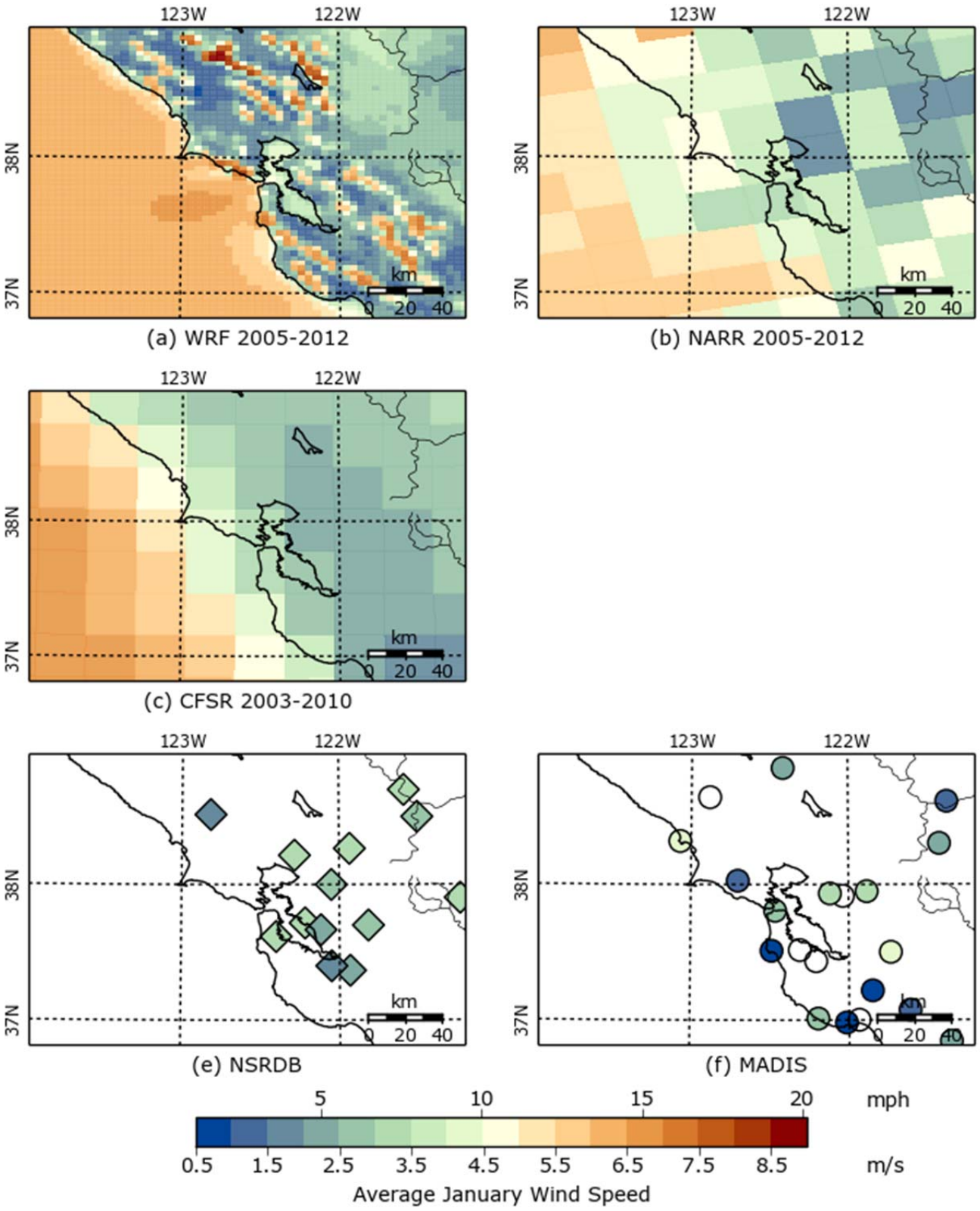

Figure 44 – San Francisco Average January Wind Speed

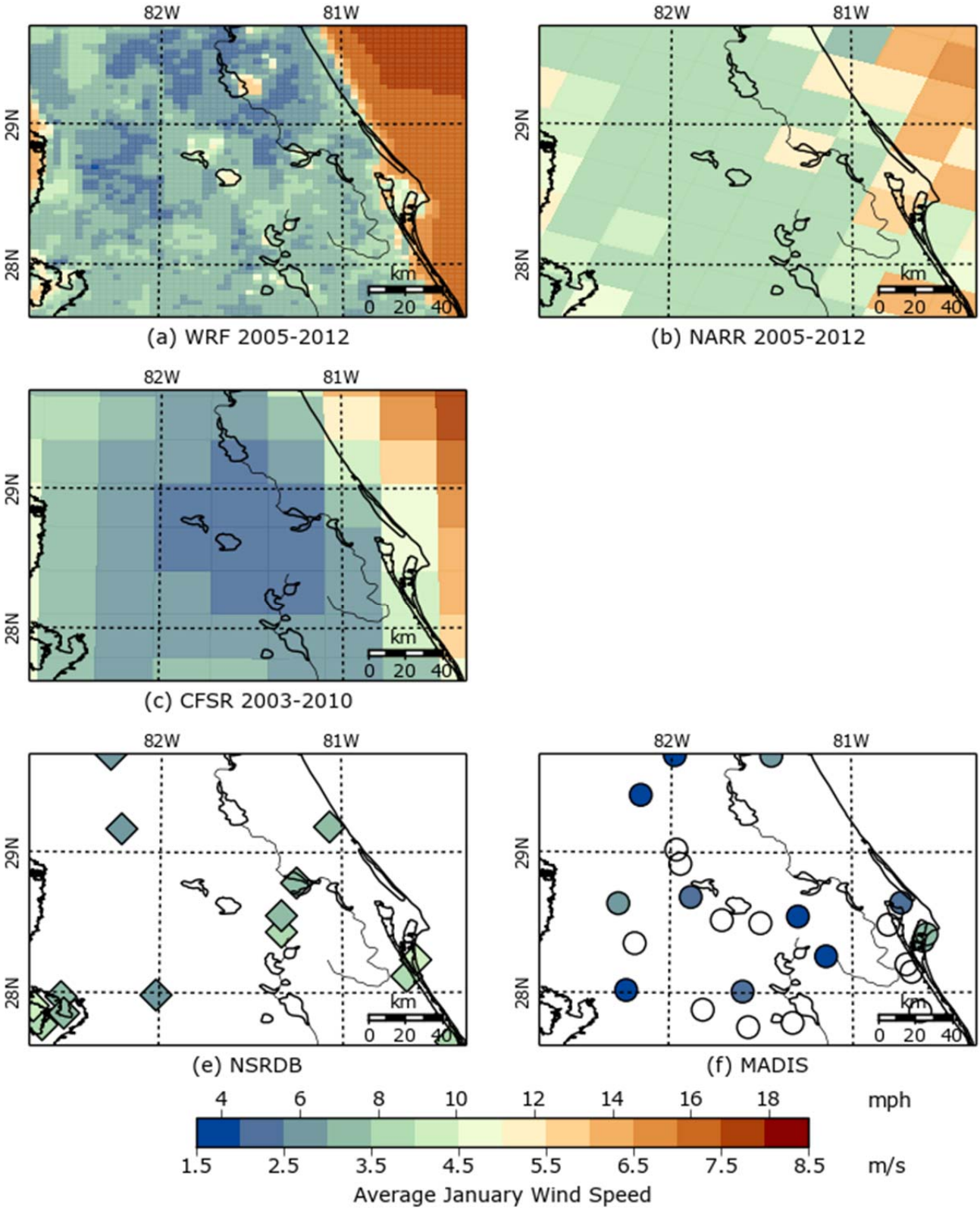

Figure 45 – Orlando Average January Wind Speed

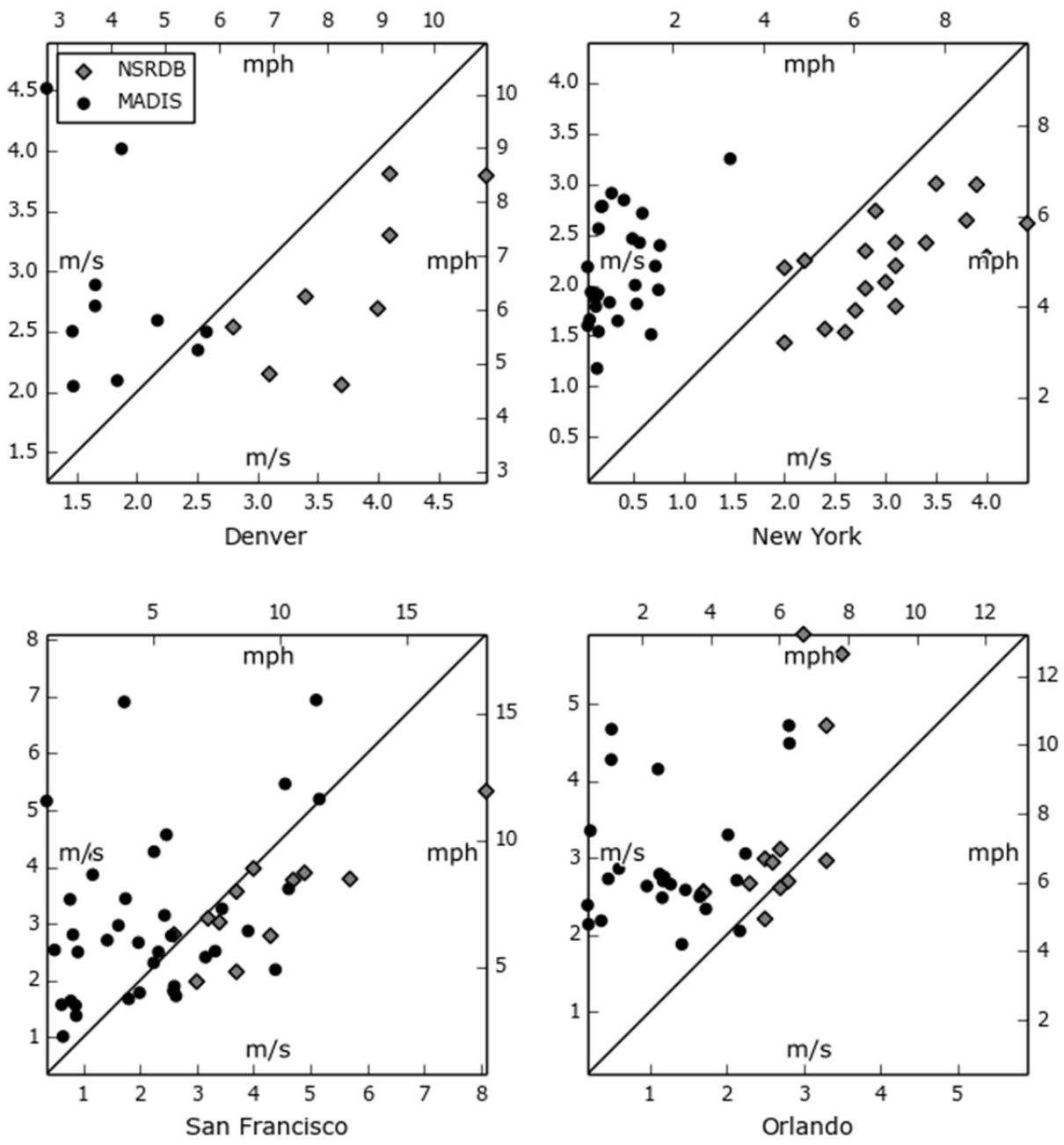

Figure 46 – Average July Wind Speed

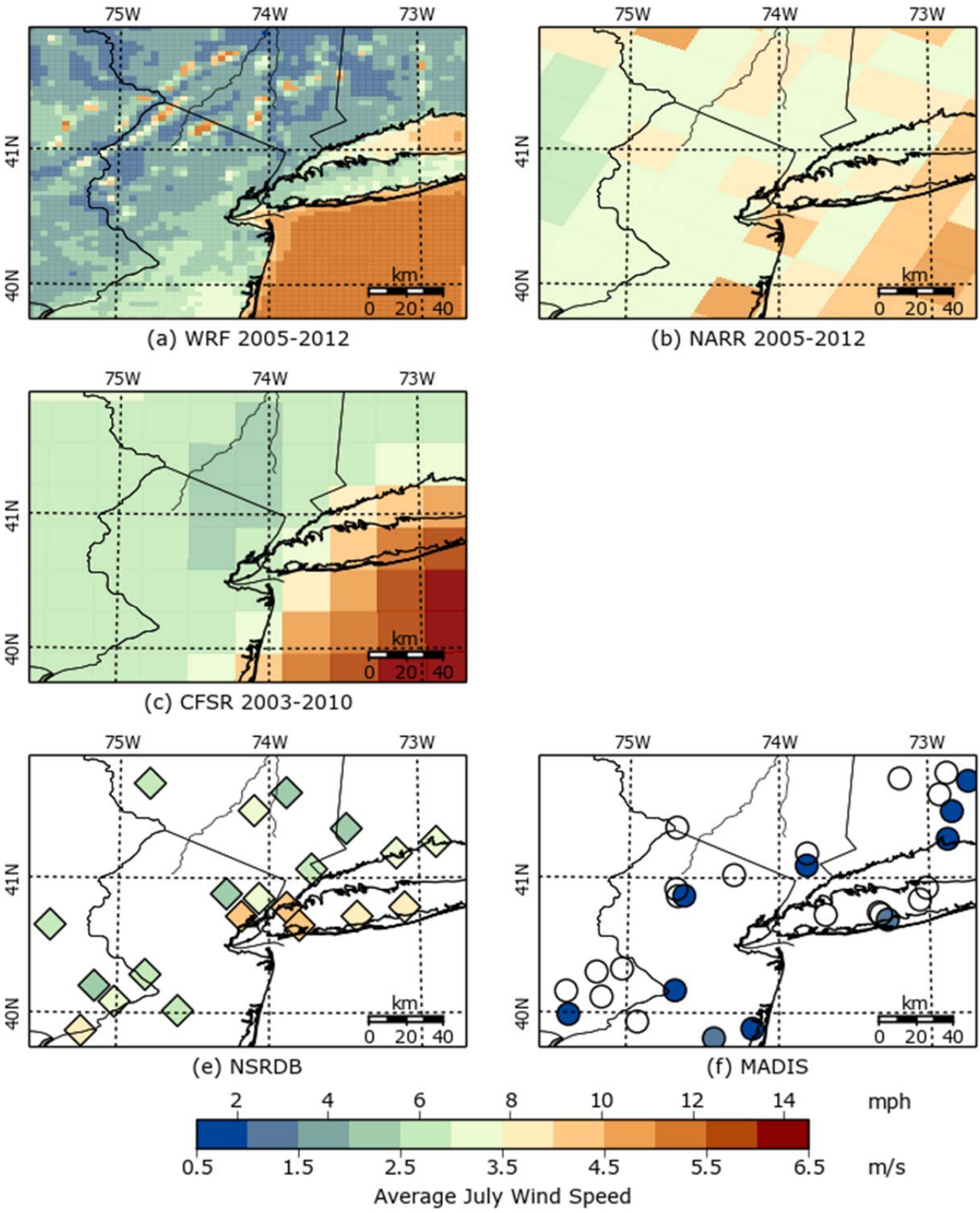

Figure 47 – New York Average July Wind Speed

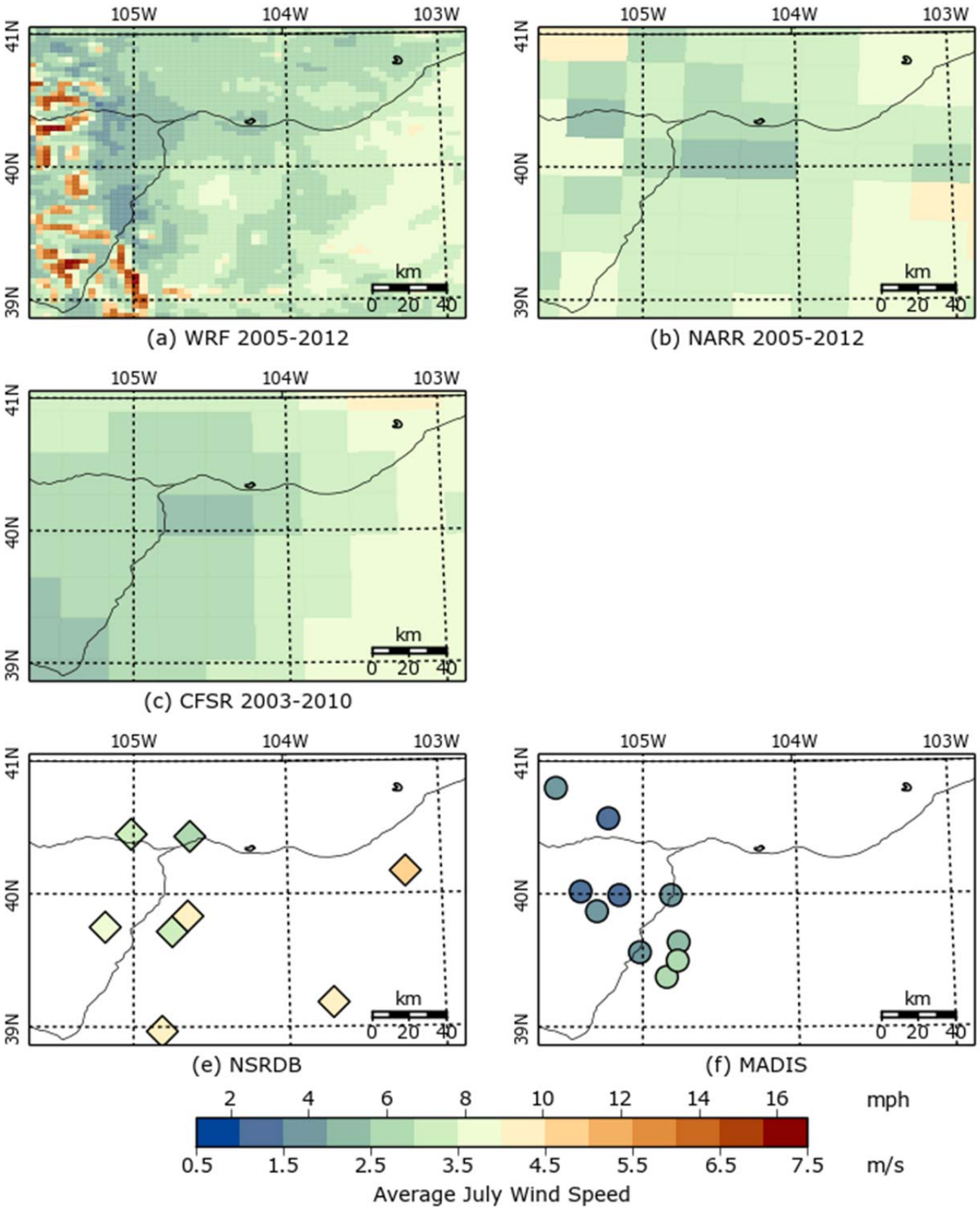

Figure 48 – Denver Average July Wind Speed

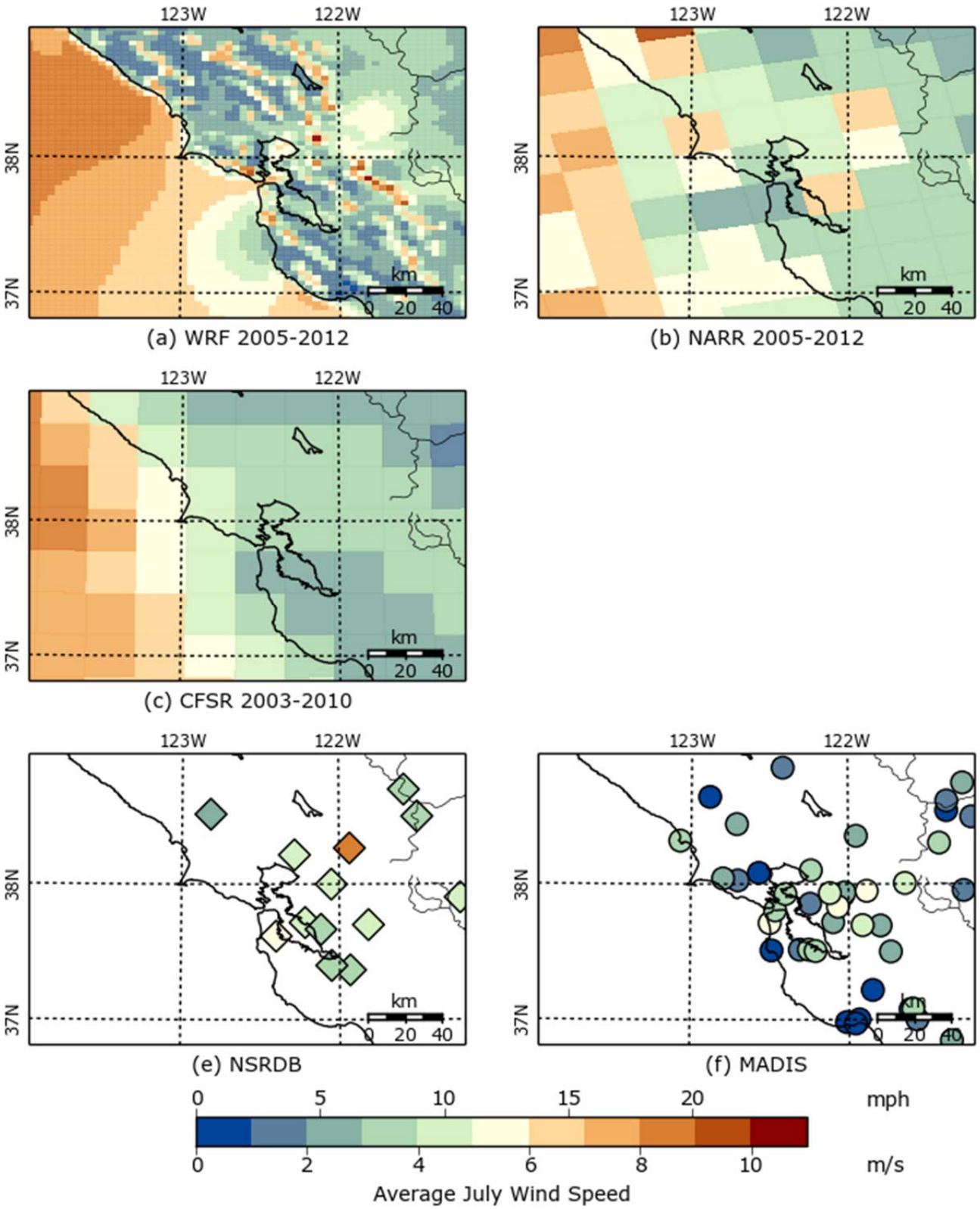

Figure 49 – San Francisco Average July Wind Speed

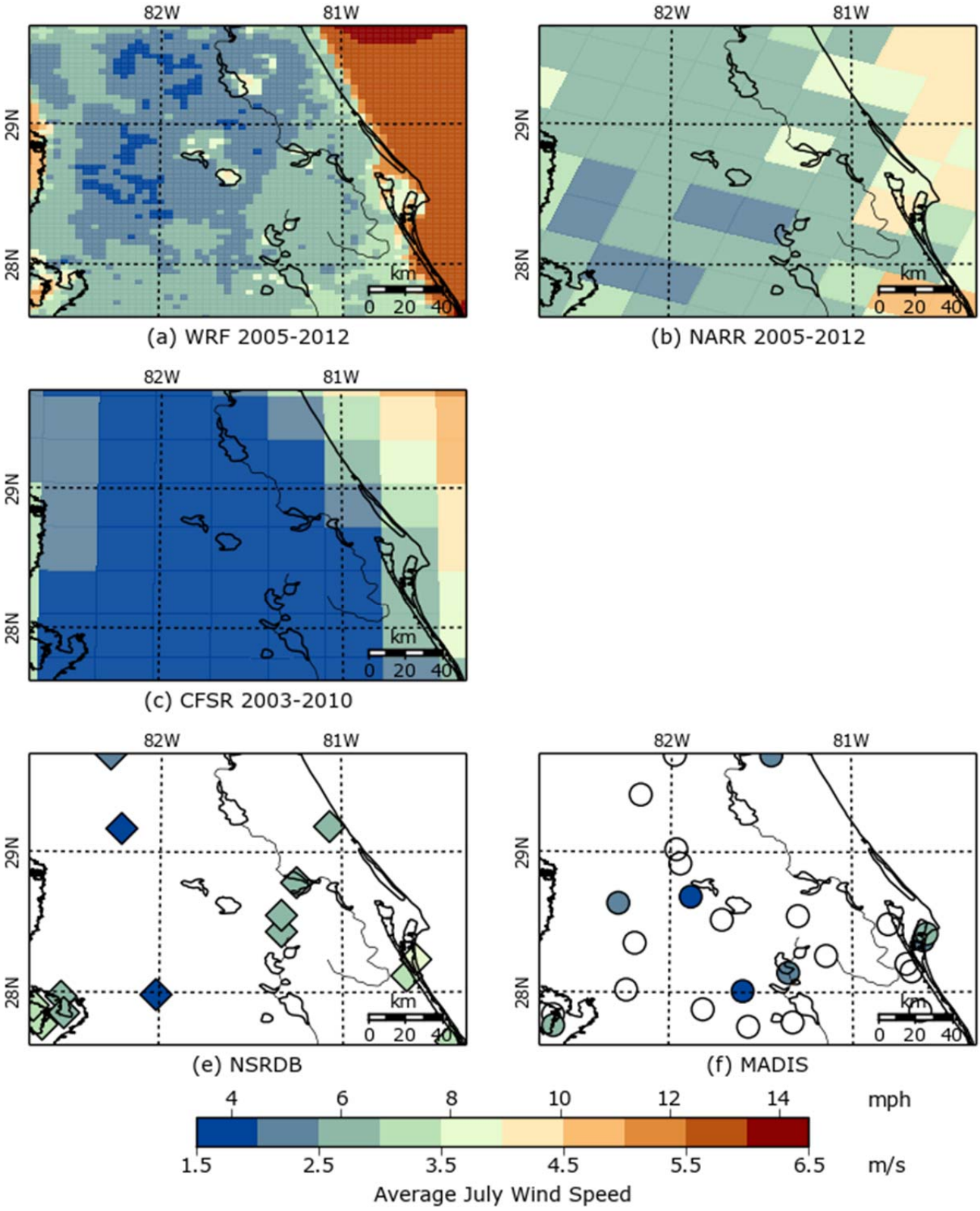

Figure 50 – Orlando Average July Wind Speed

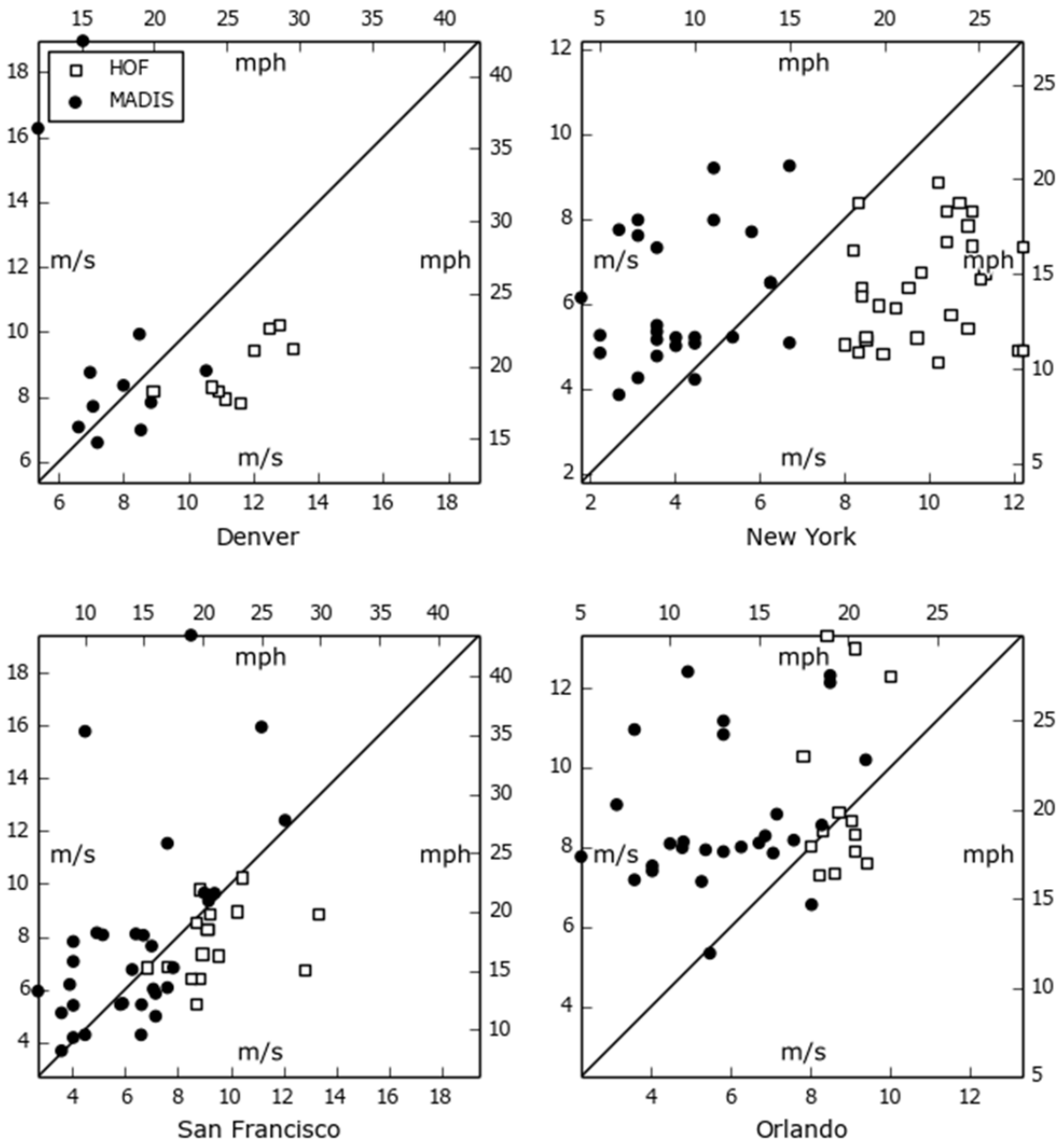

Figure 51 – Annual 1% Wind Speed

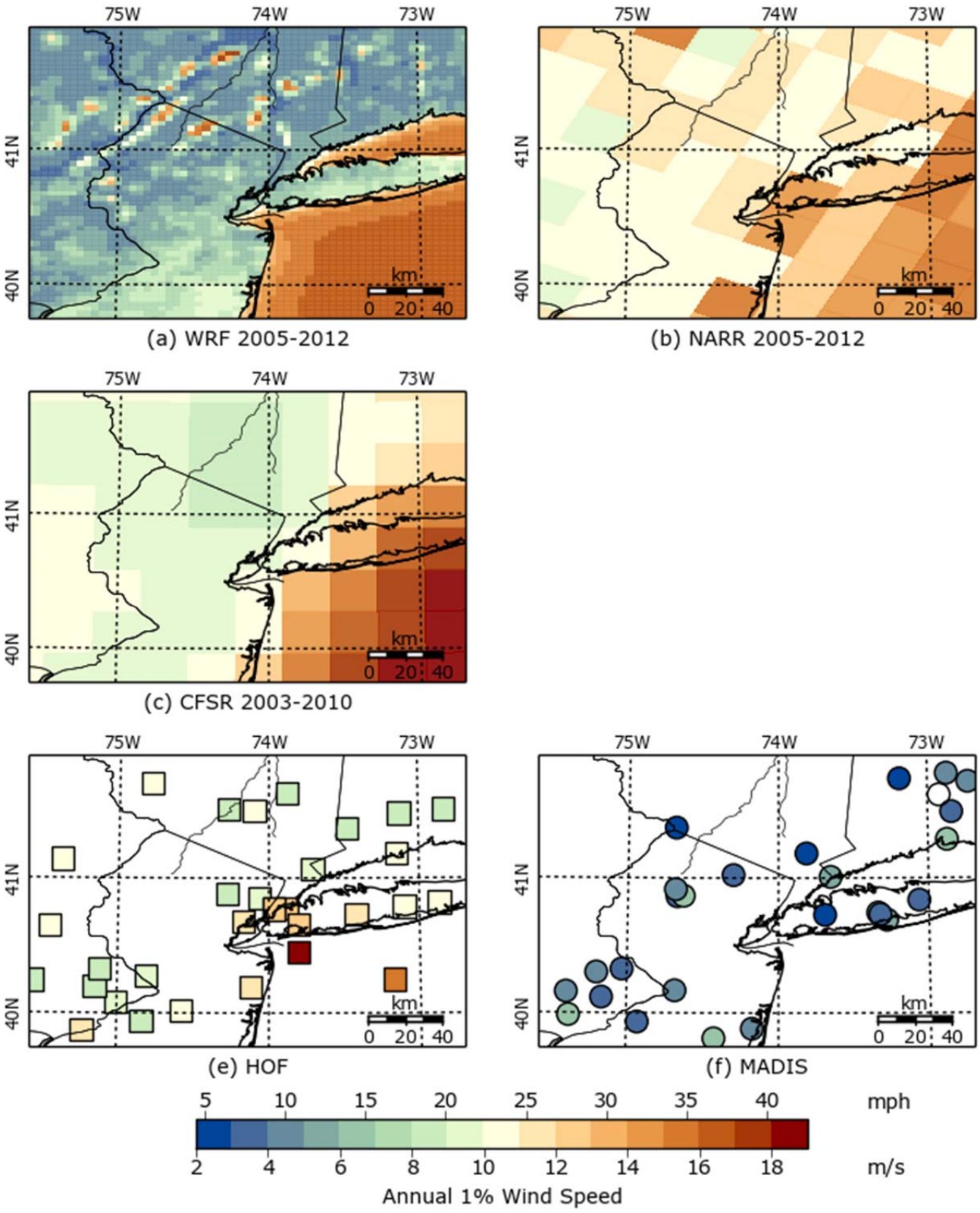

Figure 52 – New York Annual 1% Wind Speed

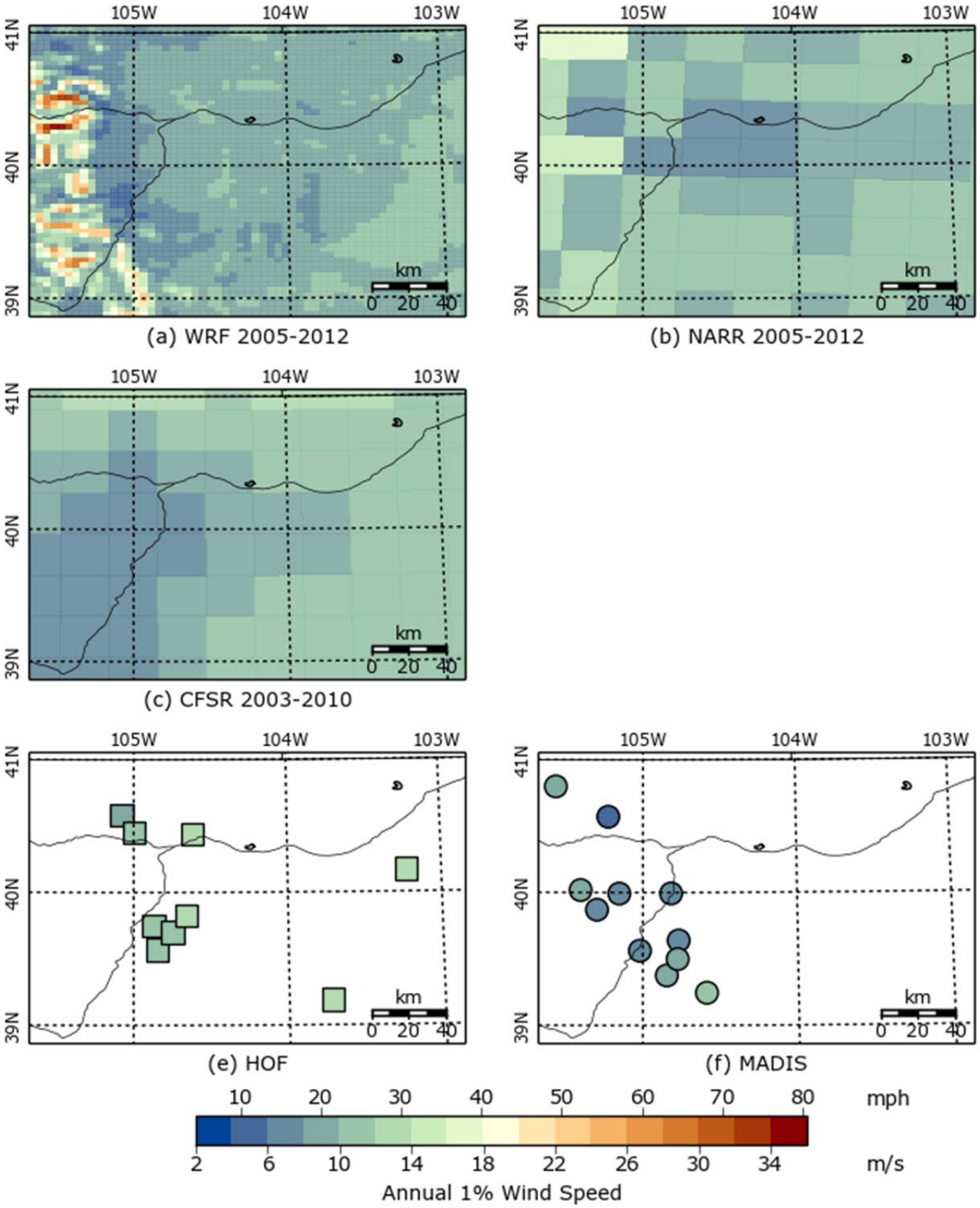

Figure 53 – Denver Annual 1% Wind Speed

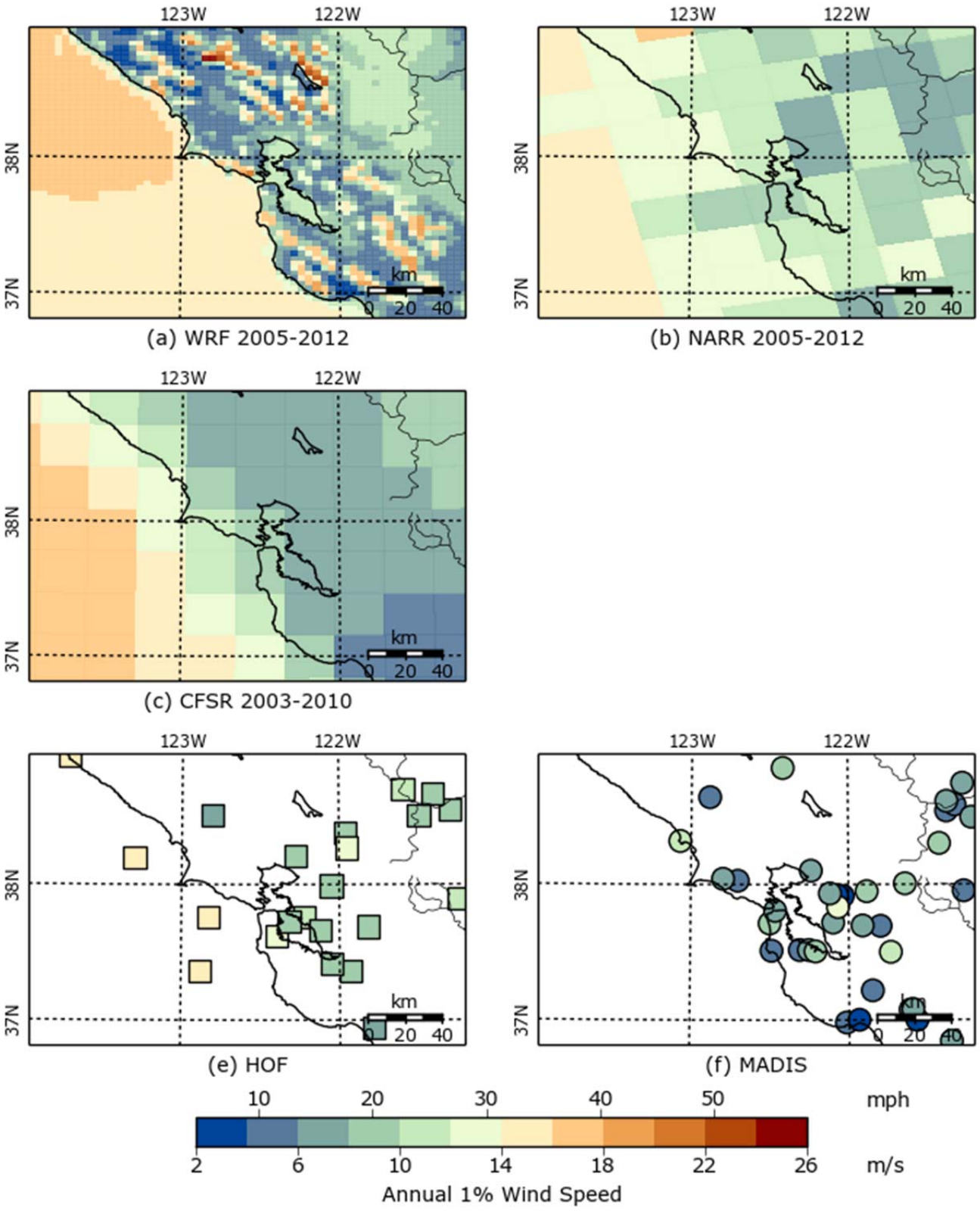

Figure 54 – San Francisco Annual 1% Wind Speed

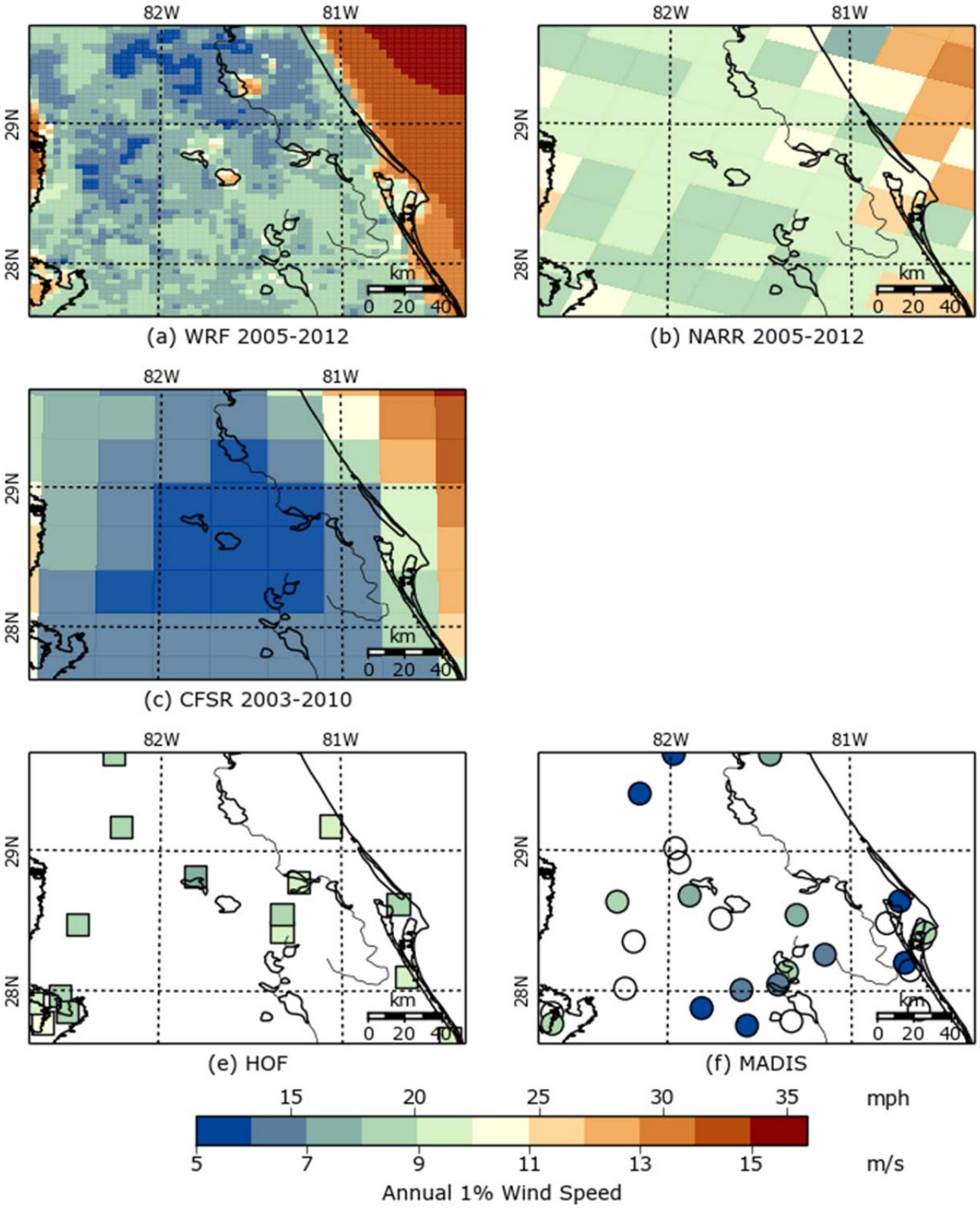

Figure 55 – Orlando Annual 1% Wind Speed

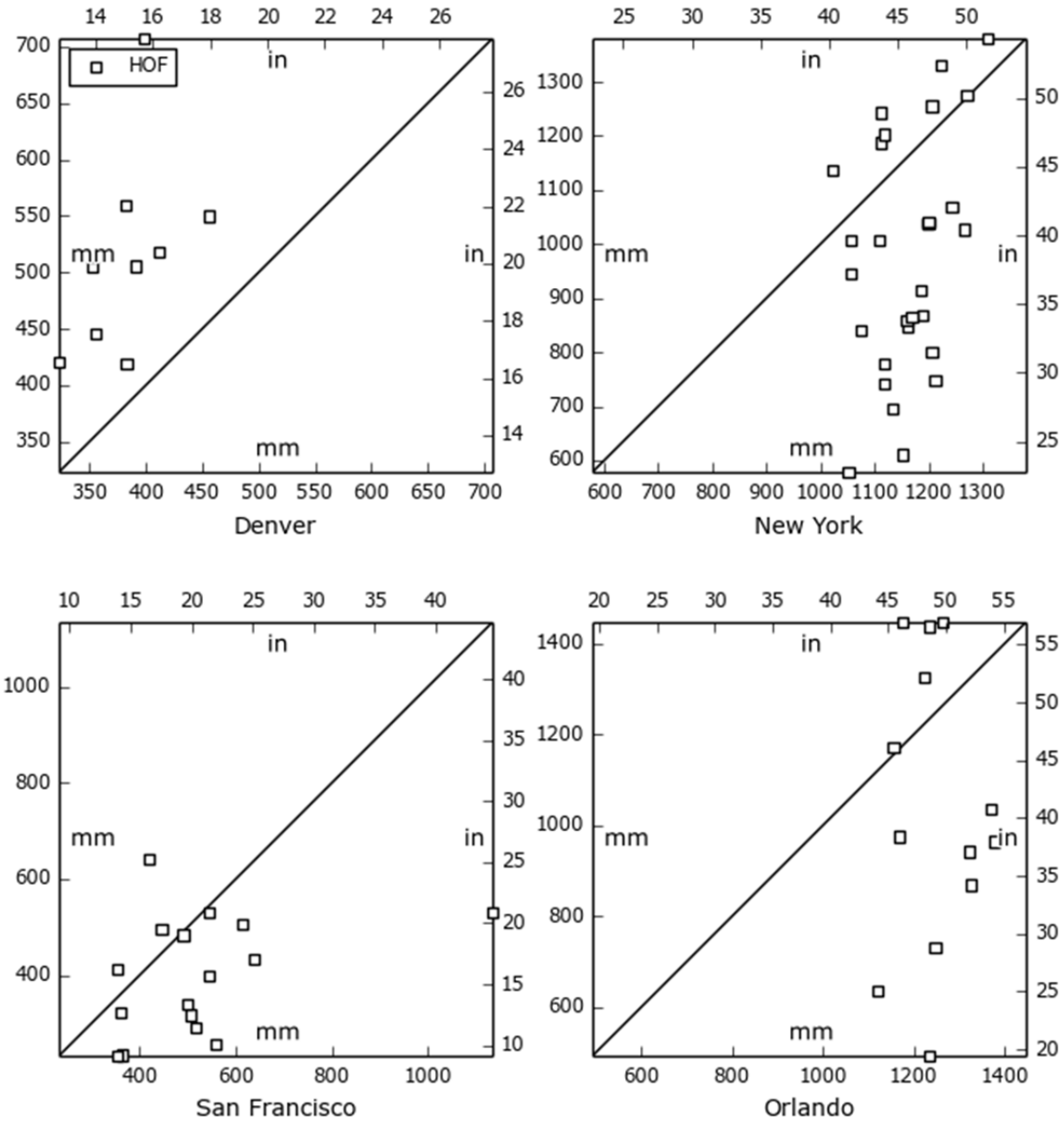

Figure 56 – Average Annual Precipitation

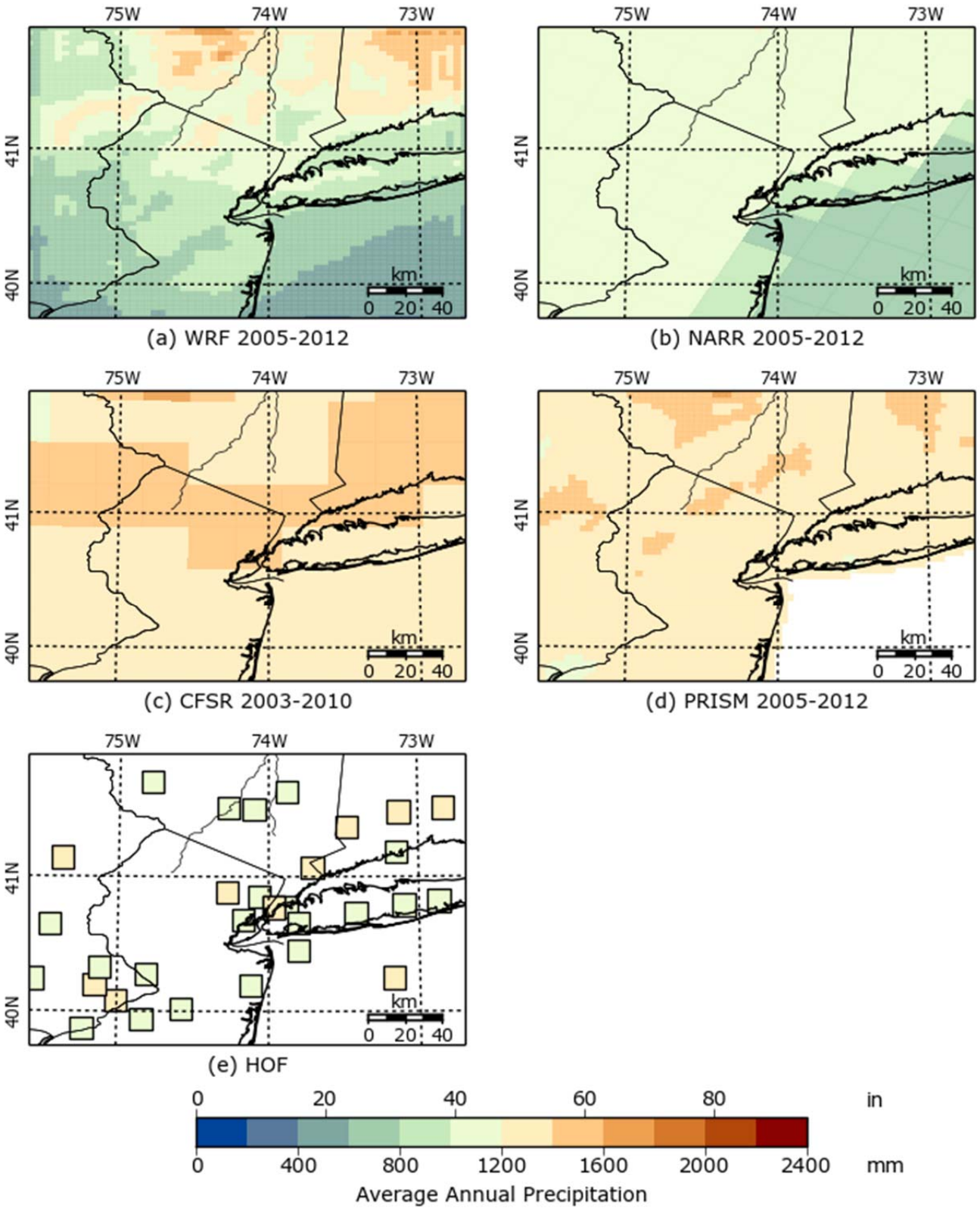

Figure 57 – New York Average Annual Precipitation

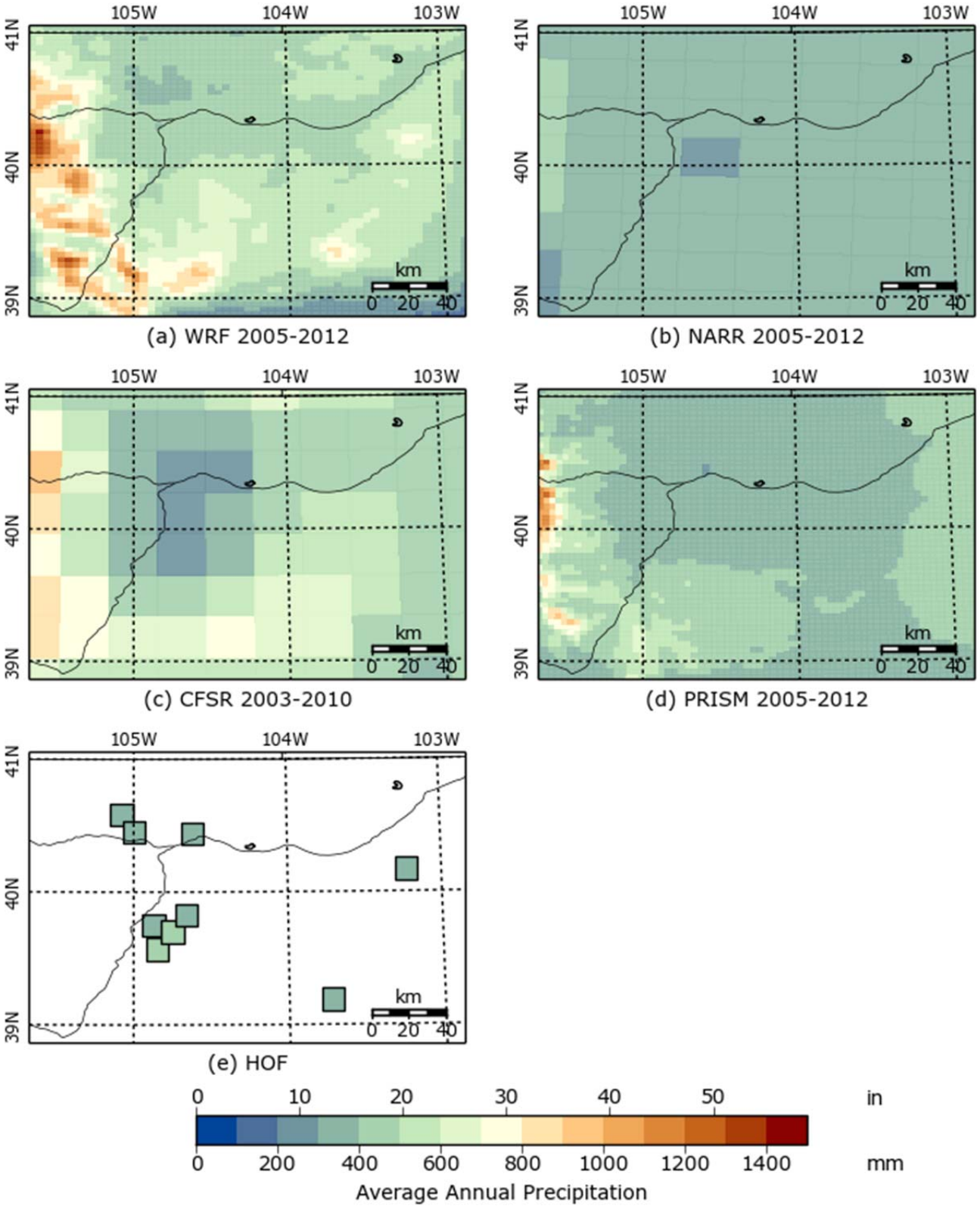

Figure 58 – Denver Average Annual Precipitation

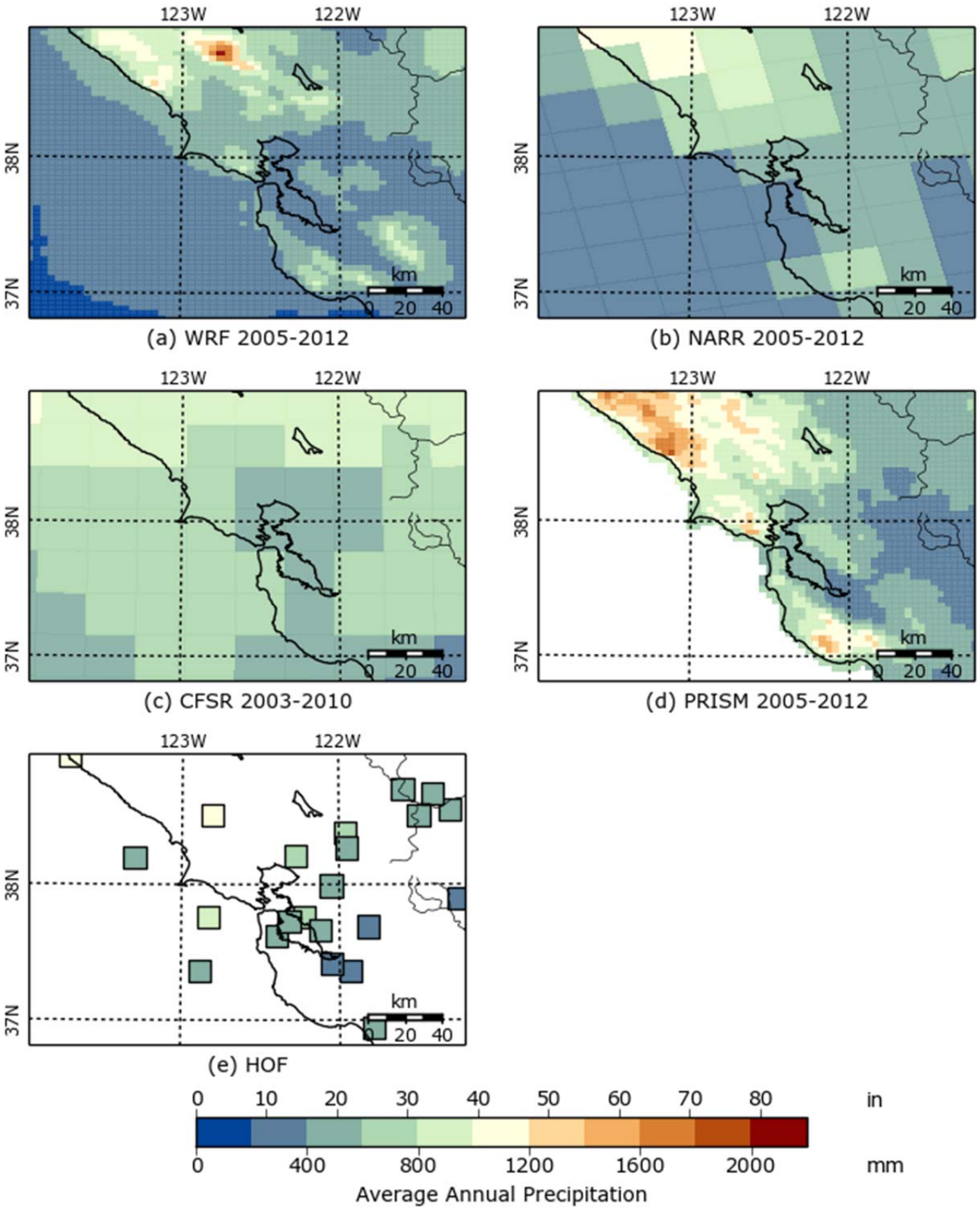

Figure 59 – San Francisco Average Annual Precipitation

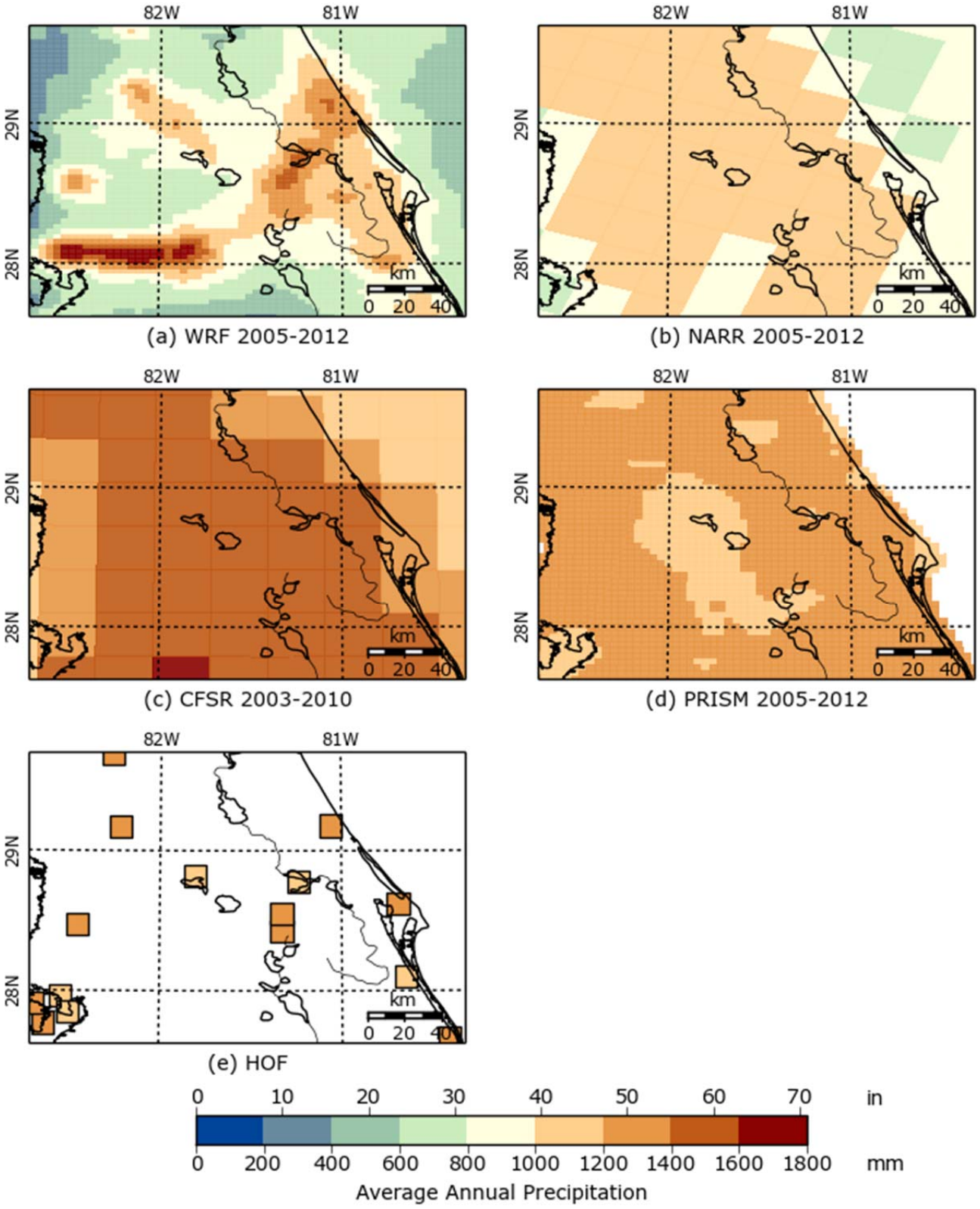

Figure 60 – Orlando Average Annual Precipitation

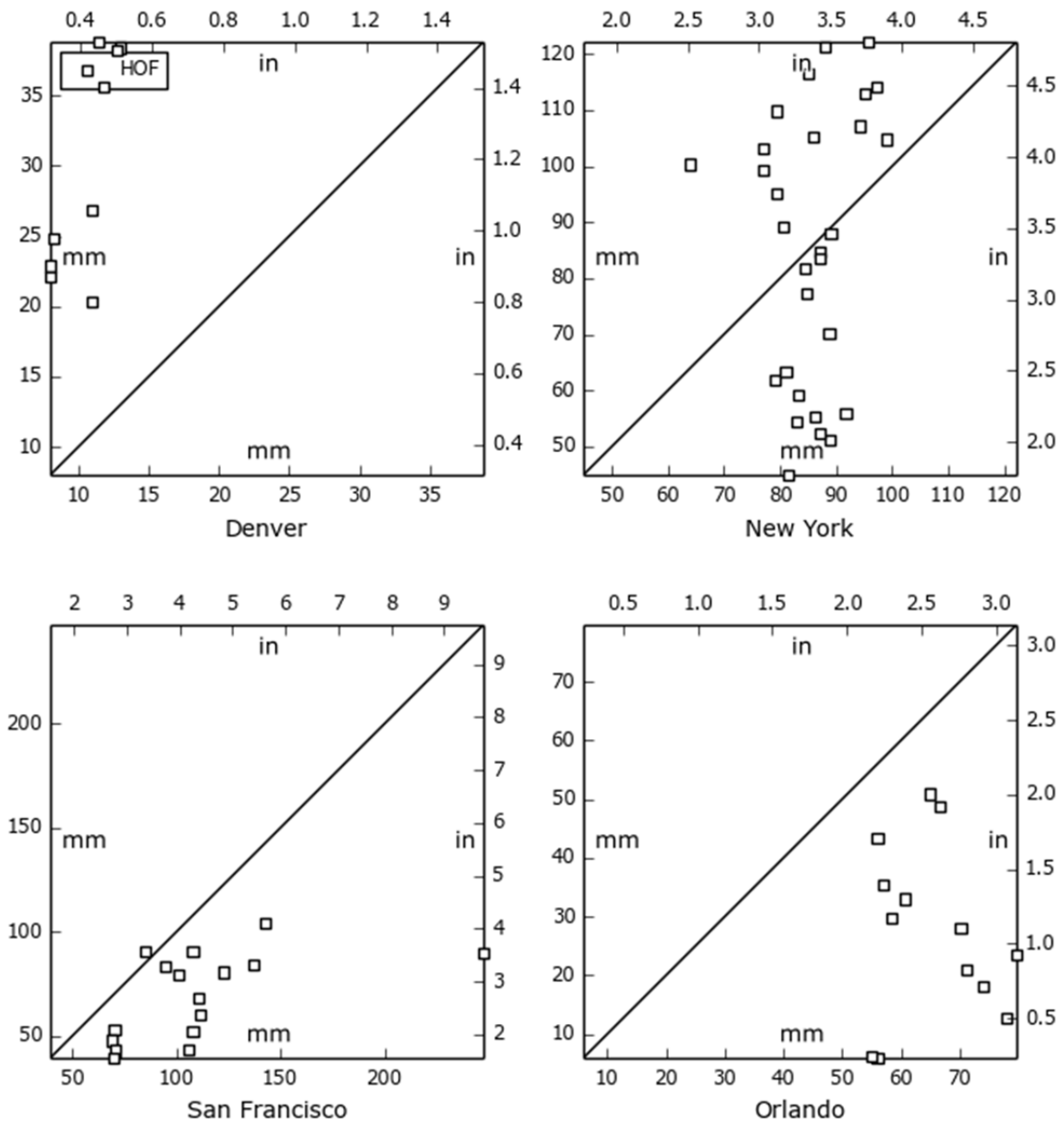

Figure 61 – Average January Precipitation

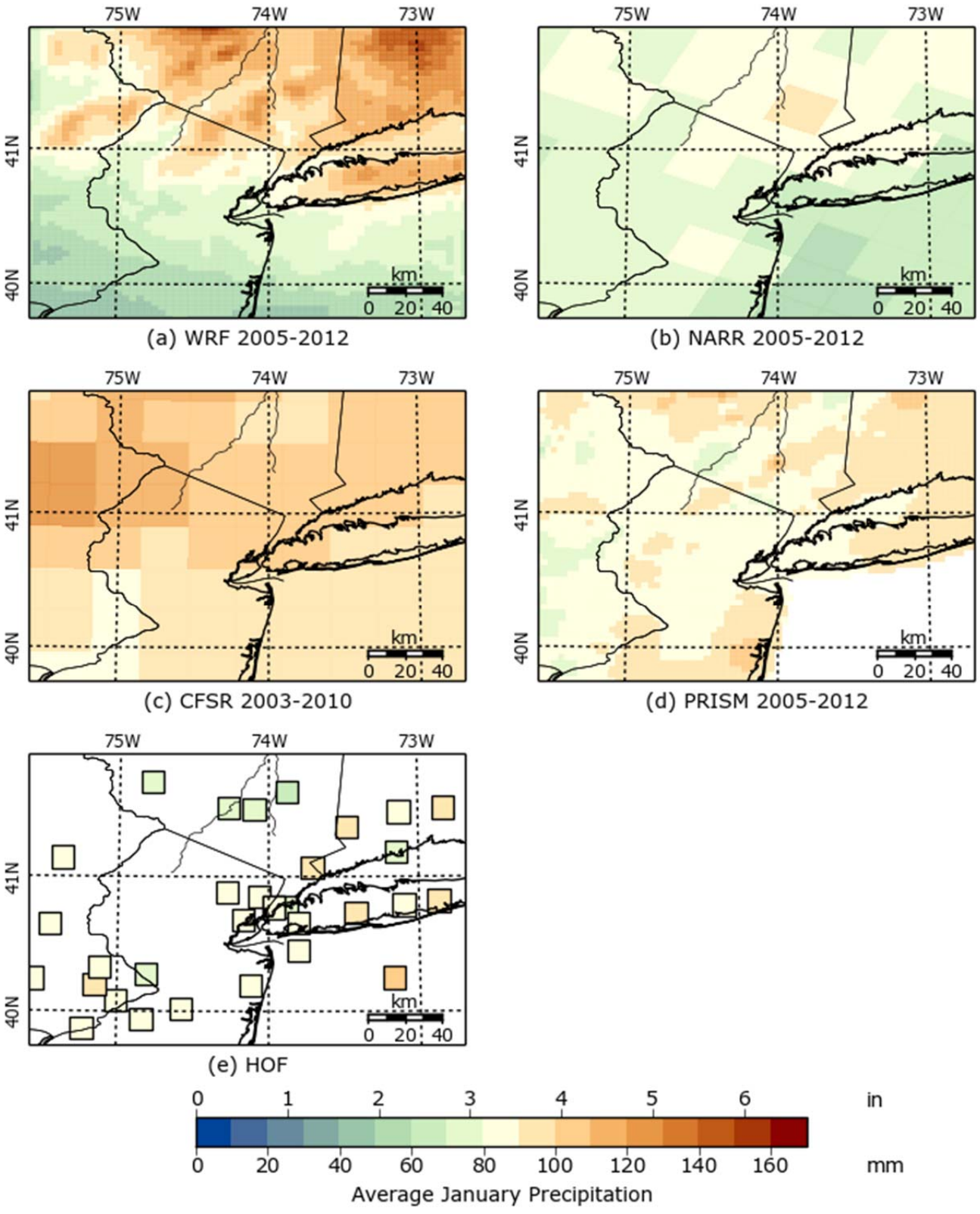

Figure 62 – New York Average January Precipitation

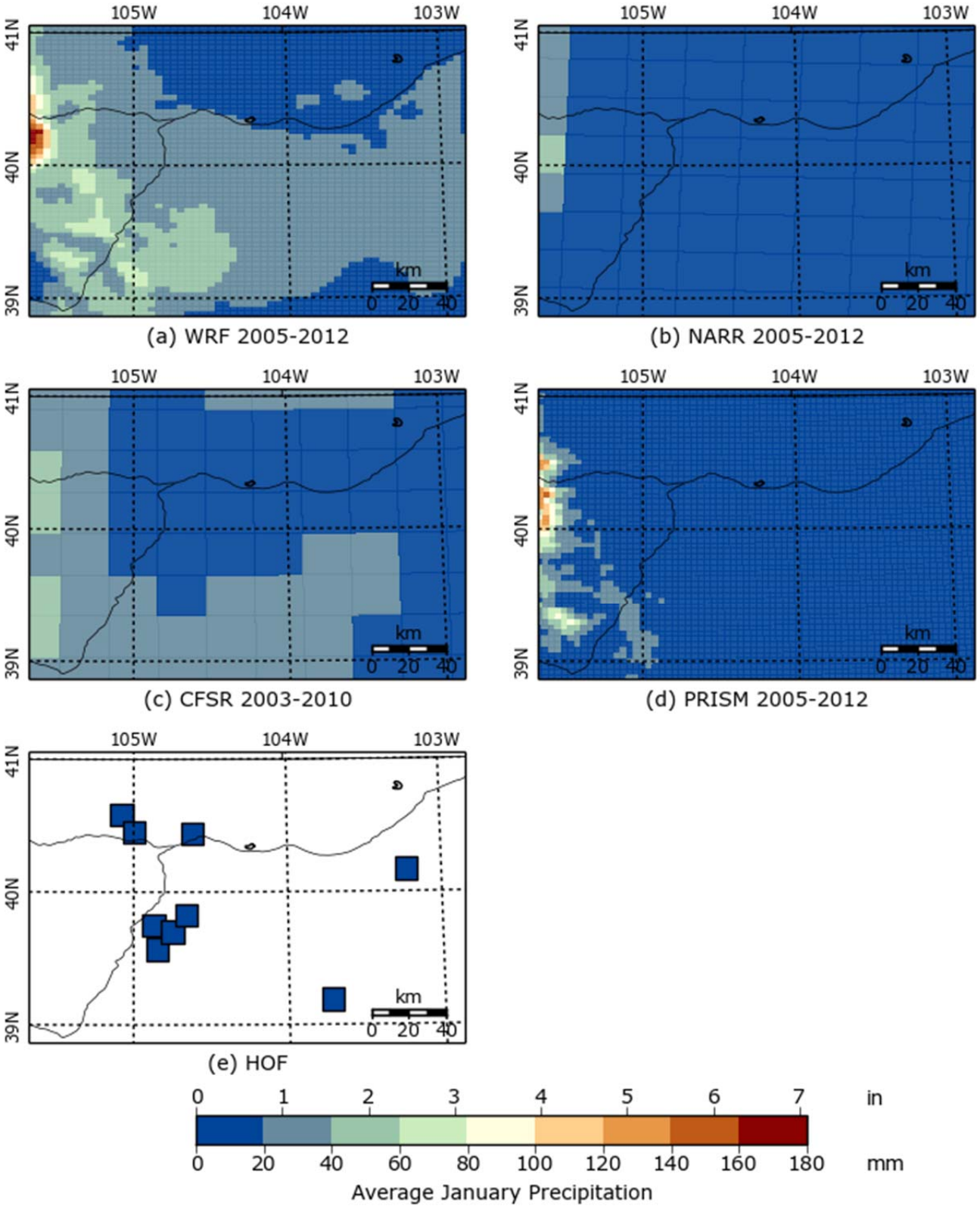

Figure 63 – Denver Average January Precipitation

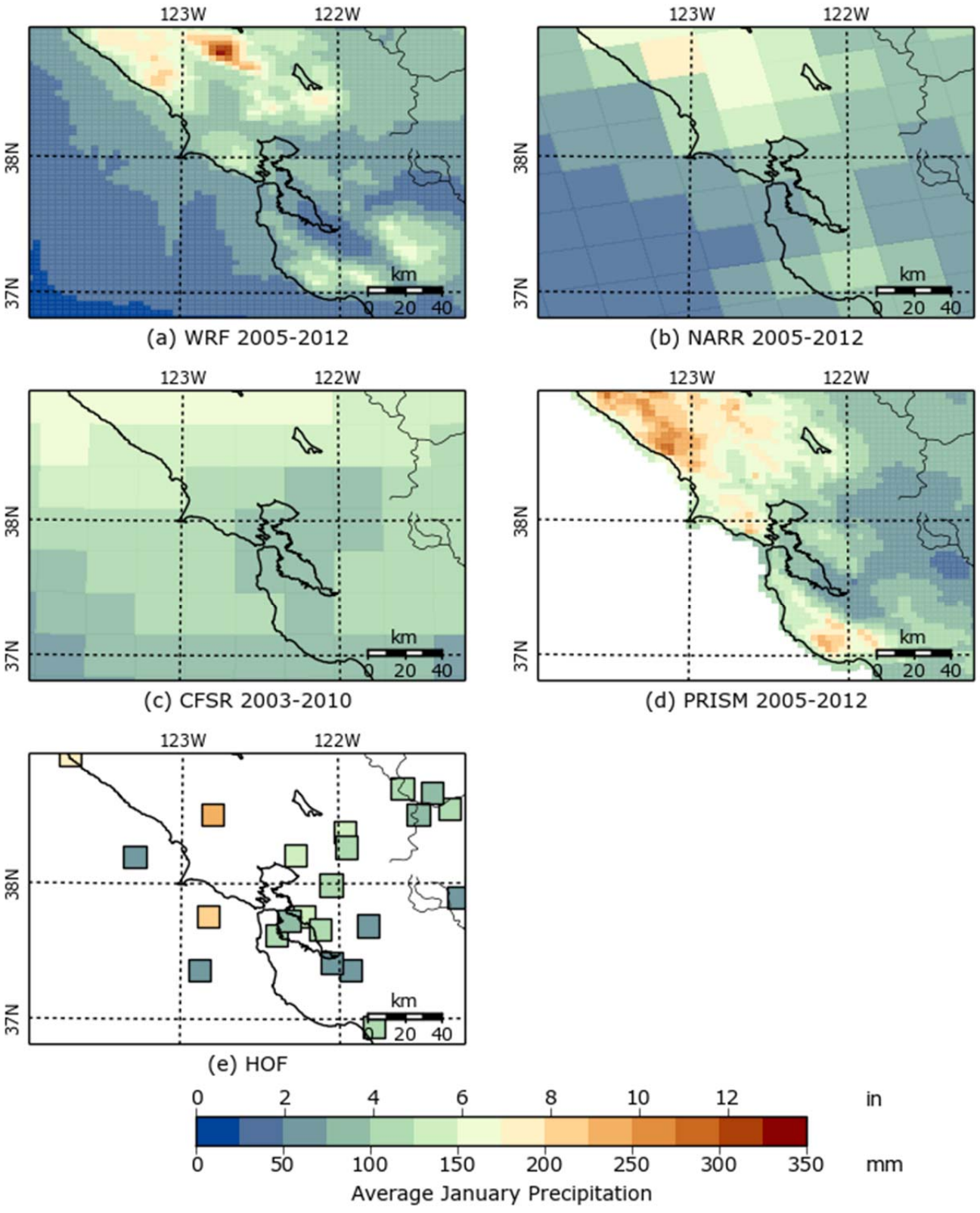

Figure 64 – San Francisco Average January Precipitation

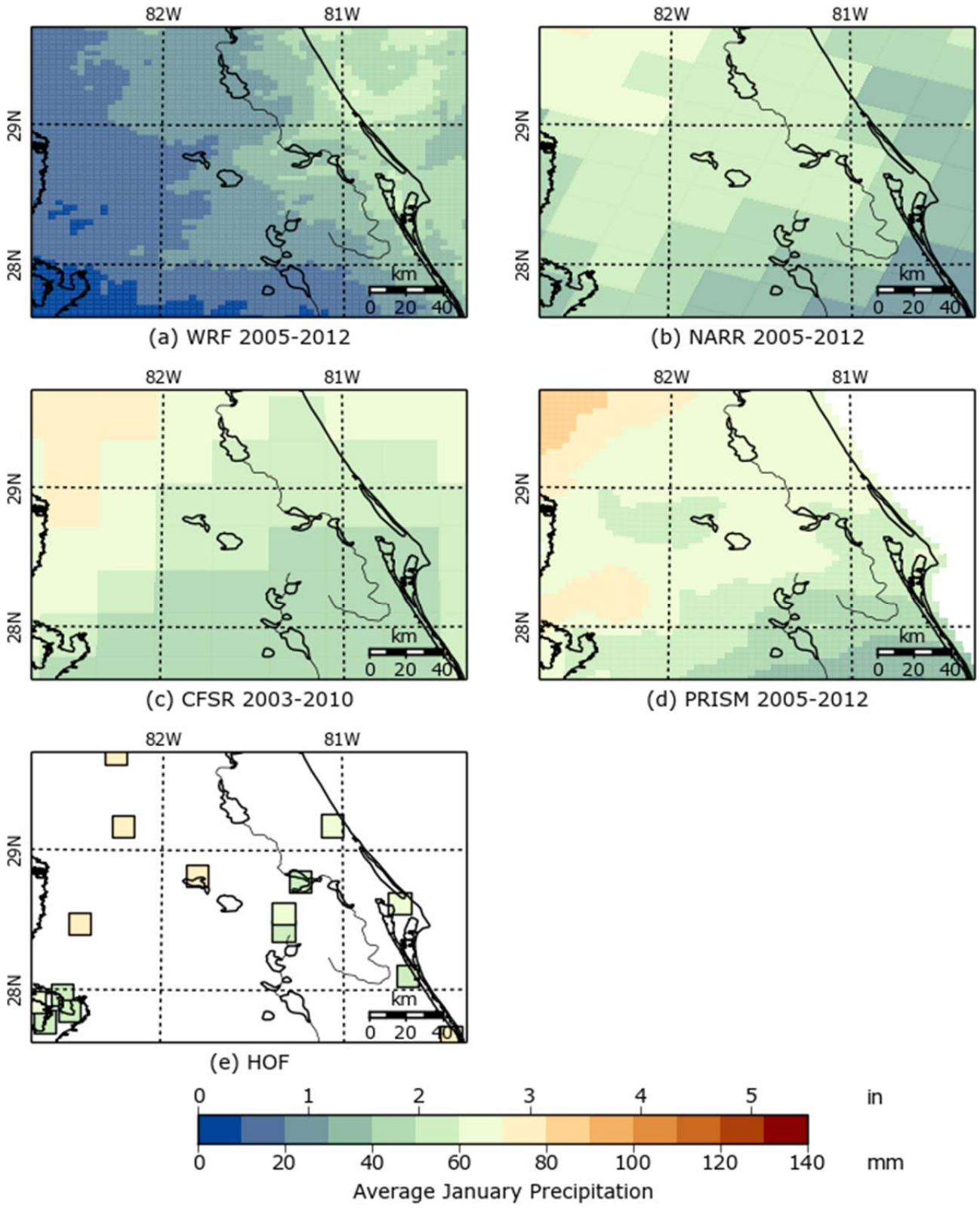

Figure 65 – Orlando Average January Precipitation

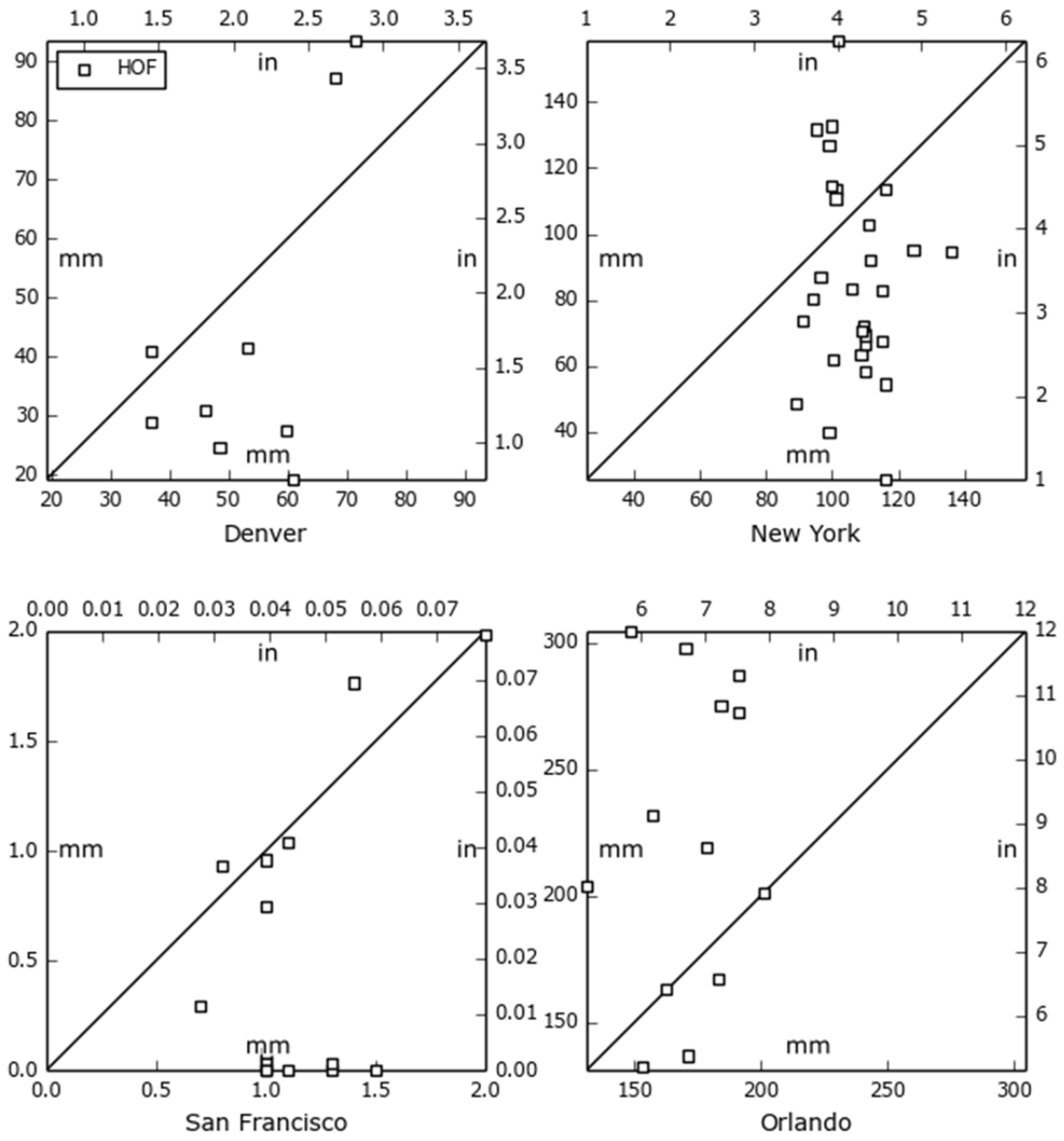

Figure 66 – Average July Precipitation

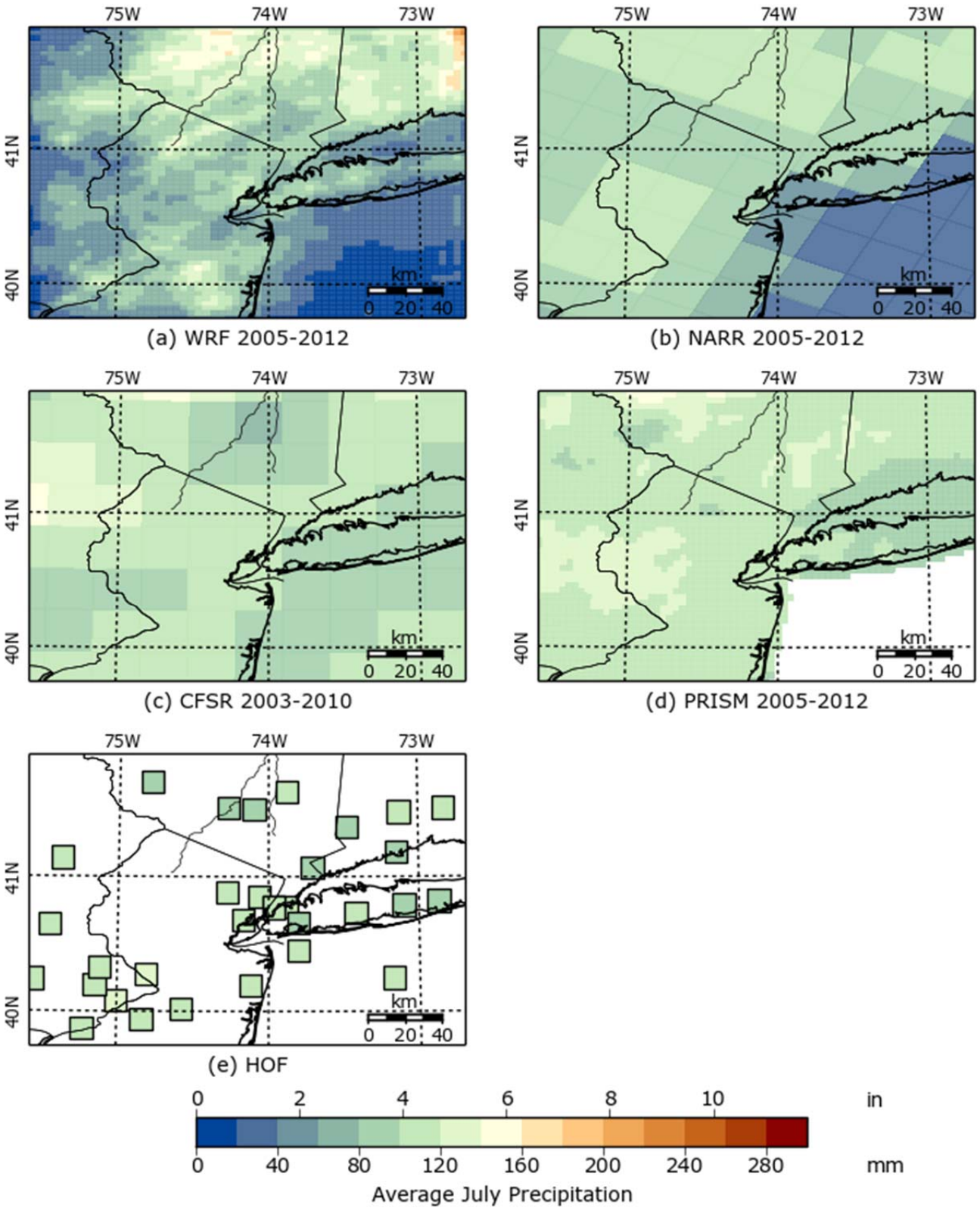

Figure 67 – New York Average July Precipitation

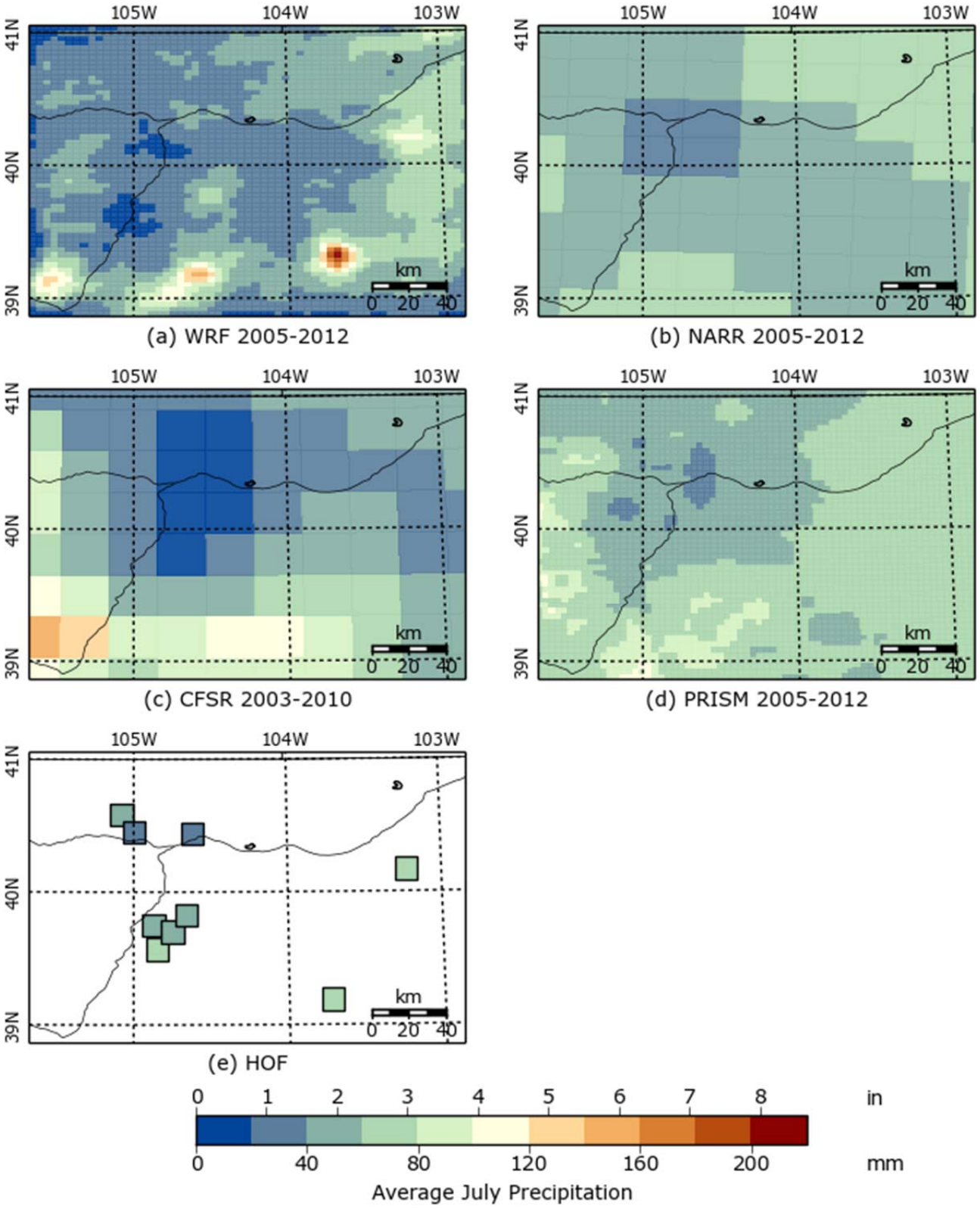

Figure 68 – Denver Average July Precipitation

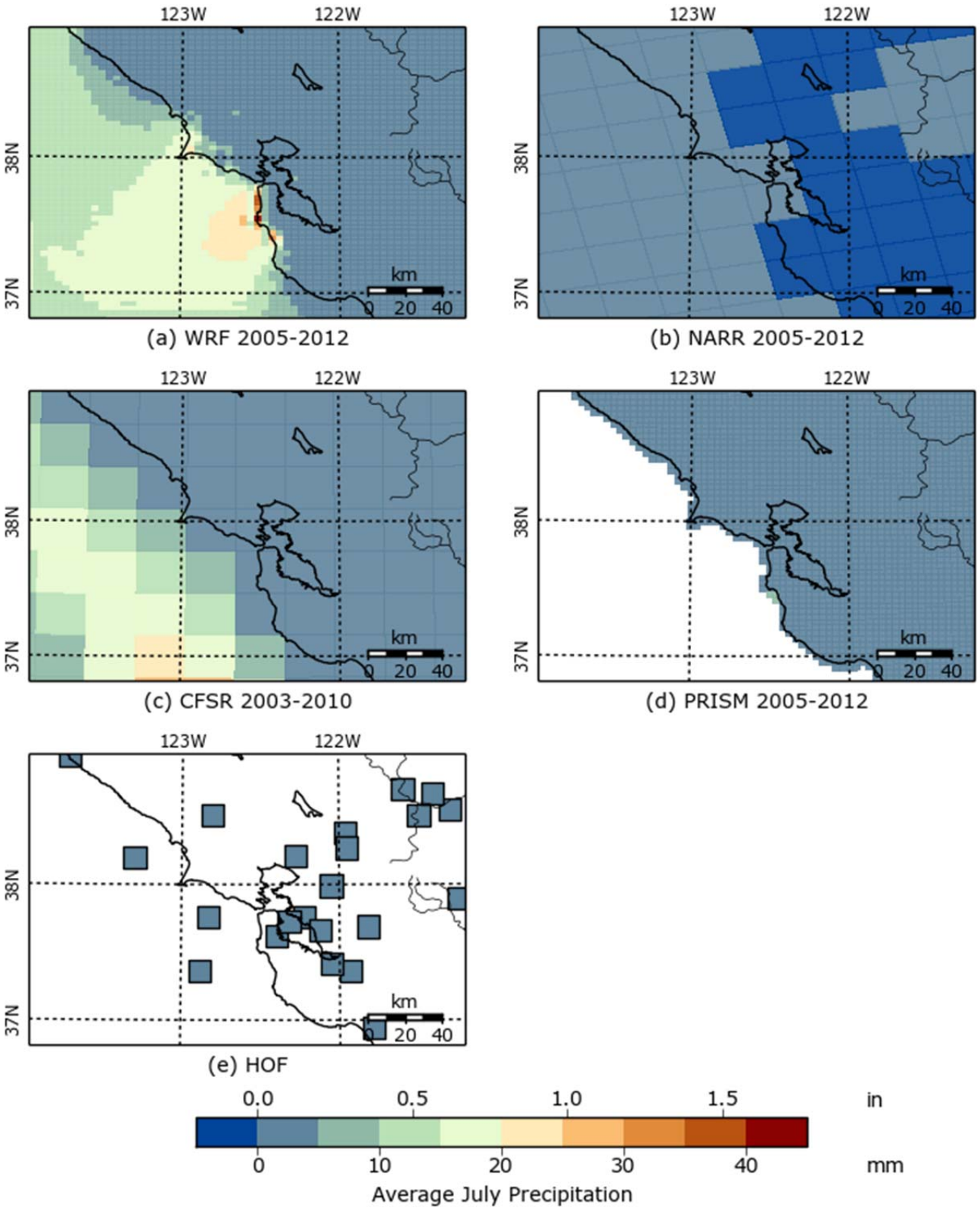

Figure 69 – San Francisco Average July Precipitation

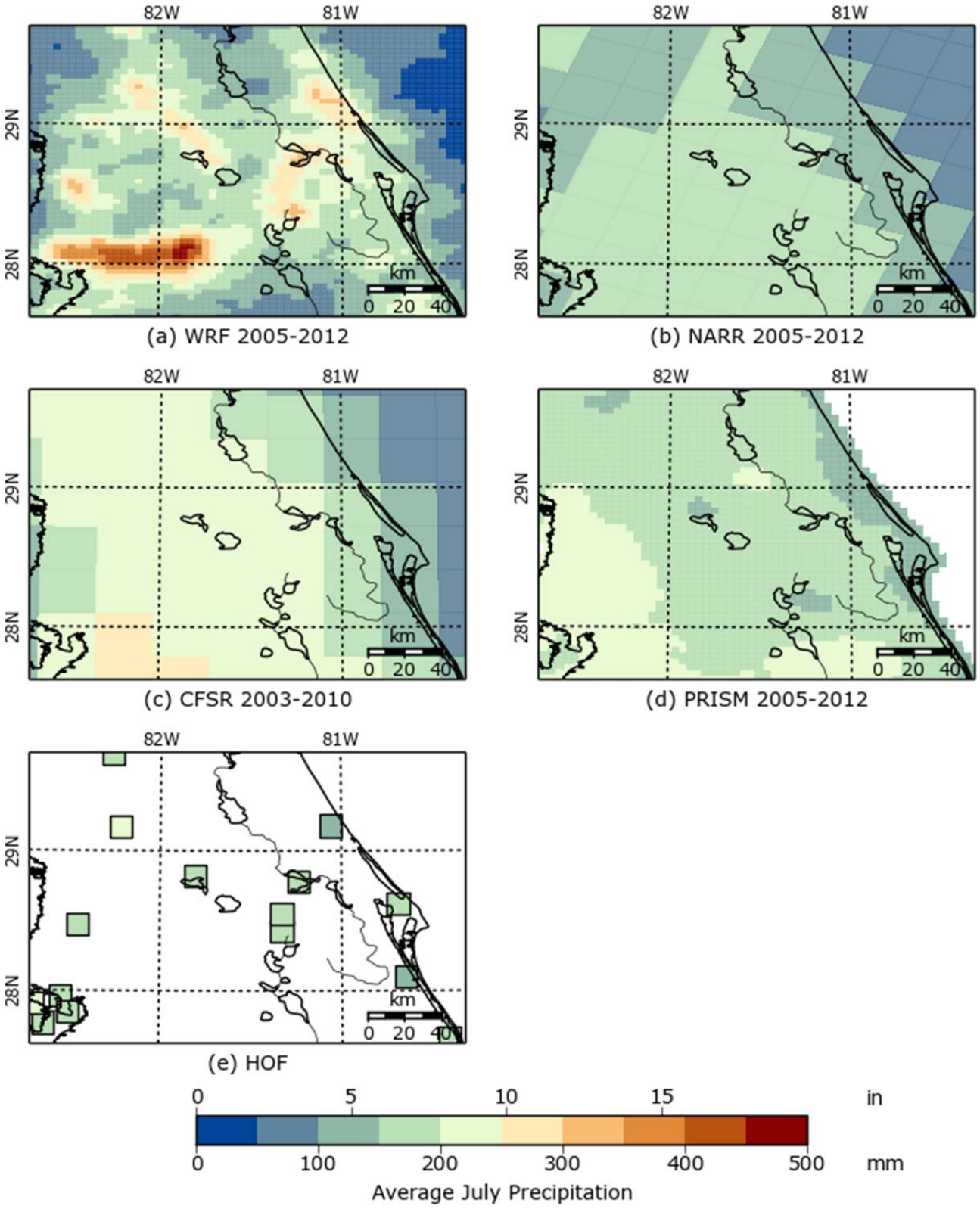

Figure 70 – Orlando Average July Precipitation

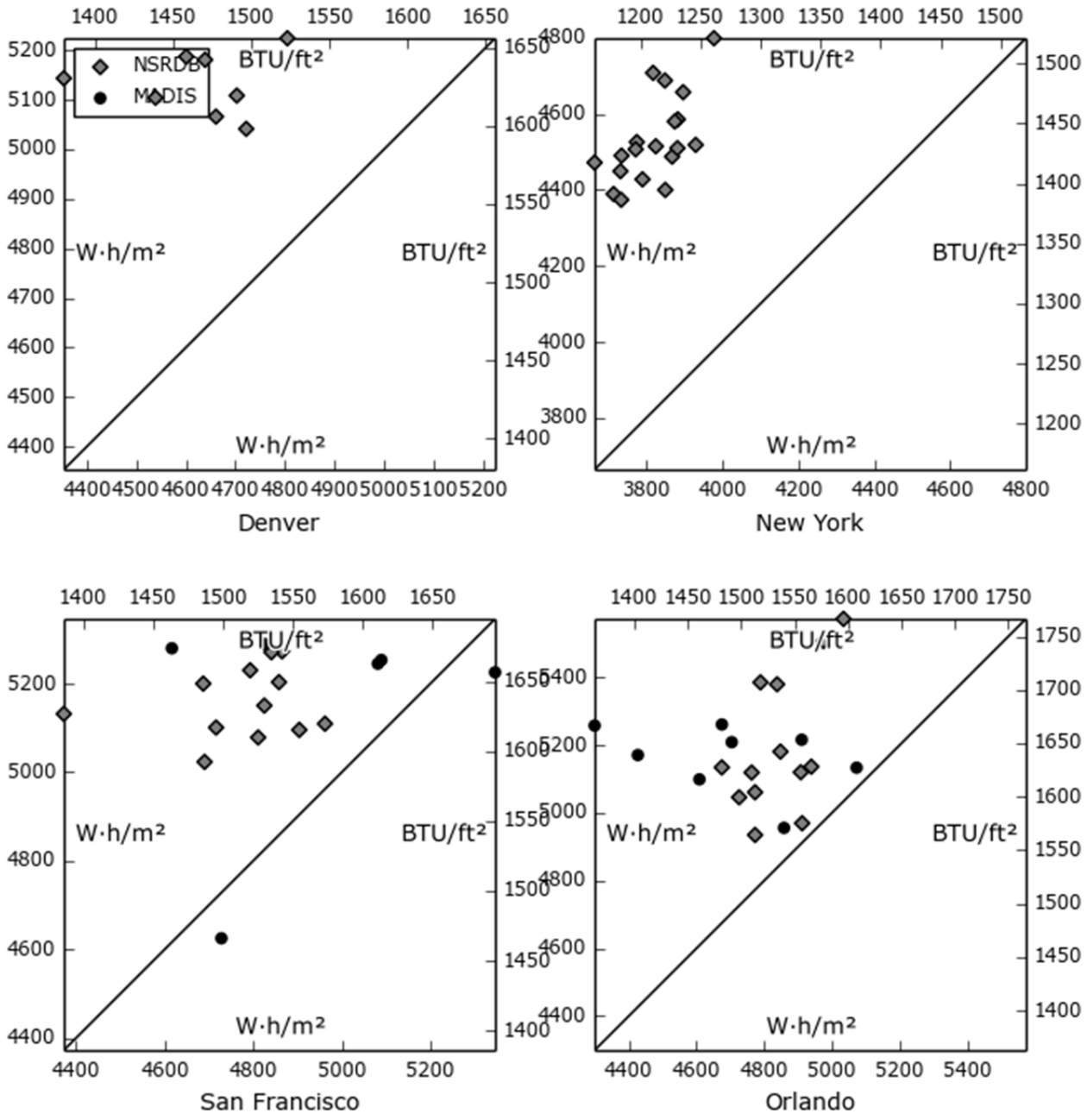

Figure 71 – Average Annual Daily Solar Radiation

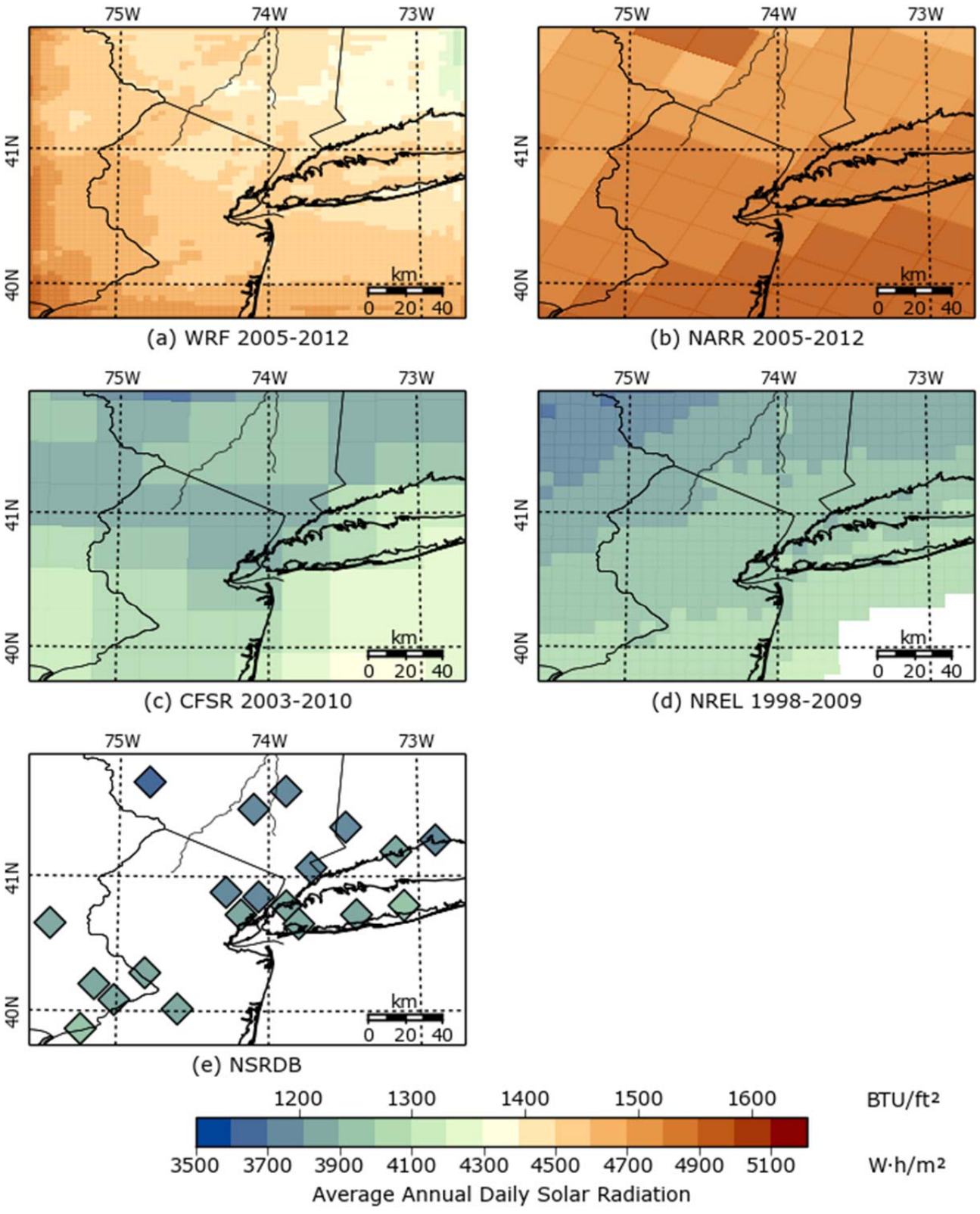

Figure 72 – New York Average Annual Daily Solar Radiation

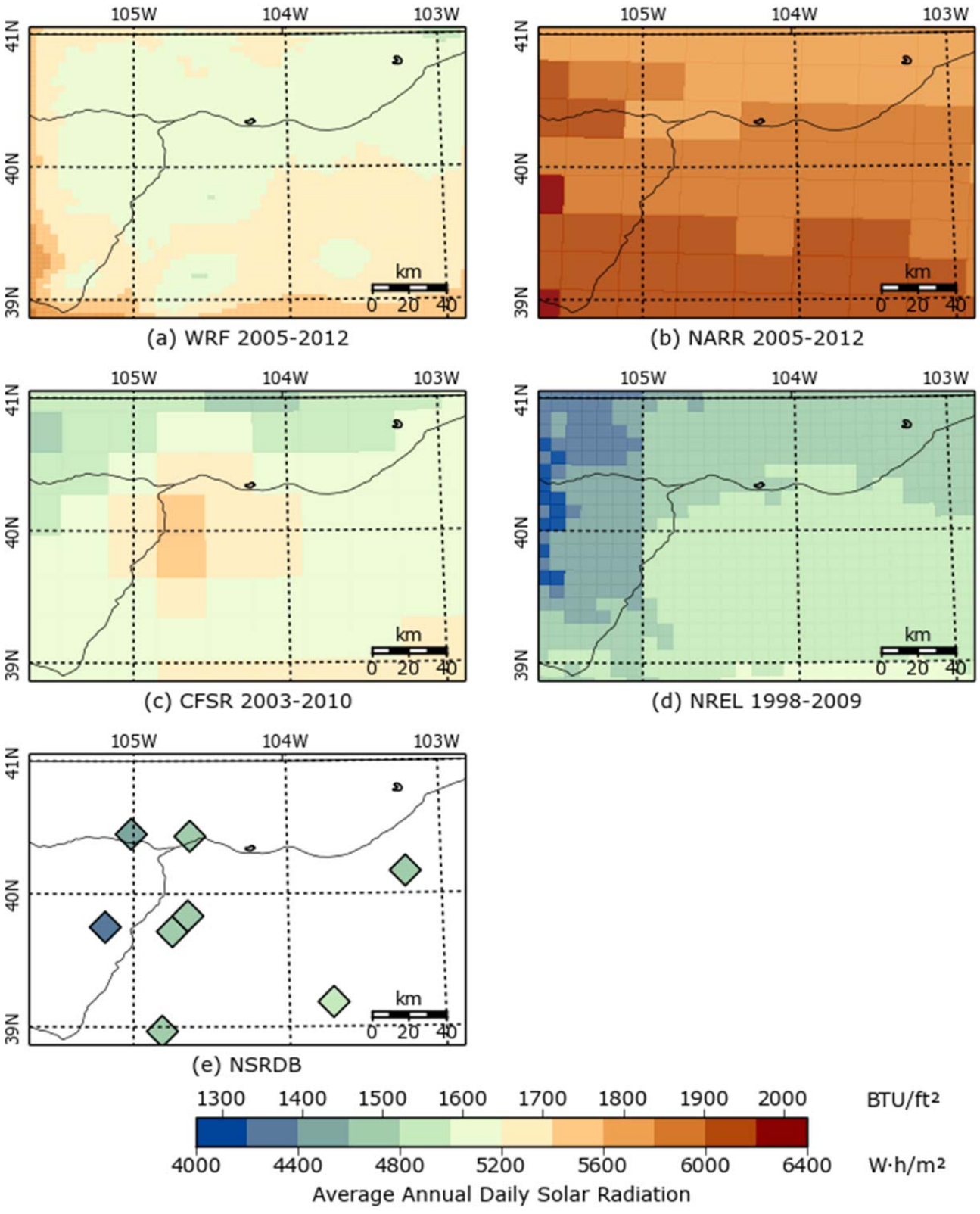

Figure 73 – Denver Average Annual Daily Solar Radiation

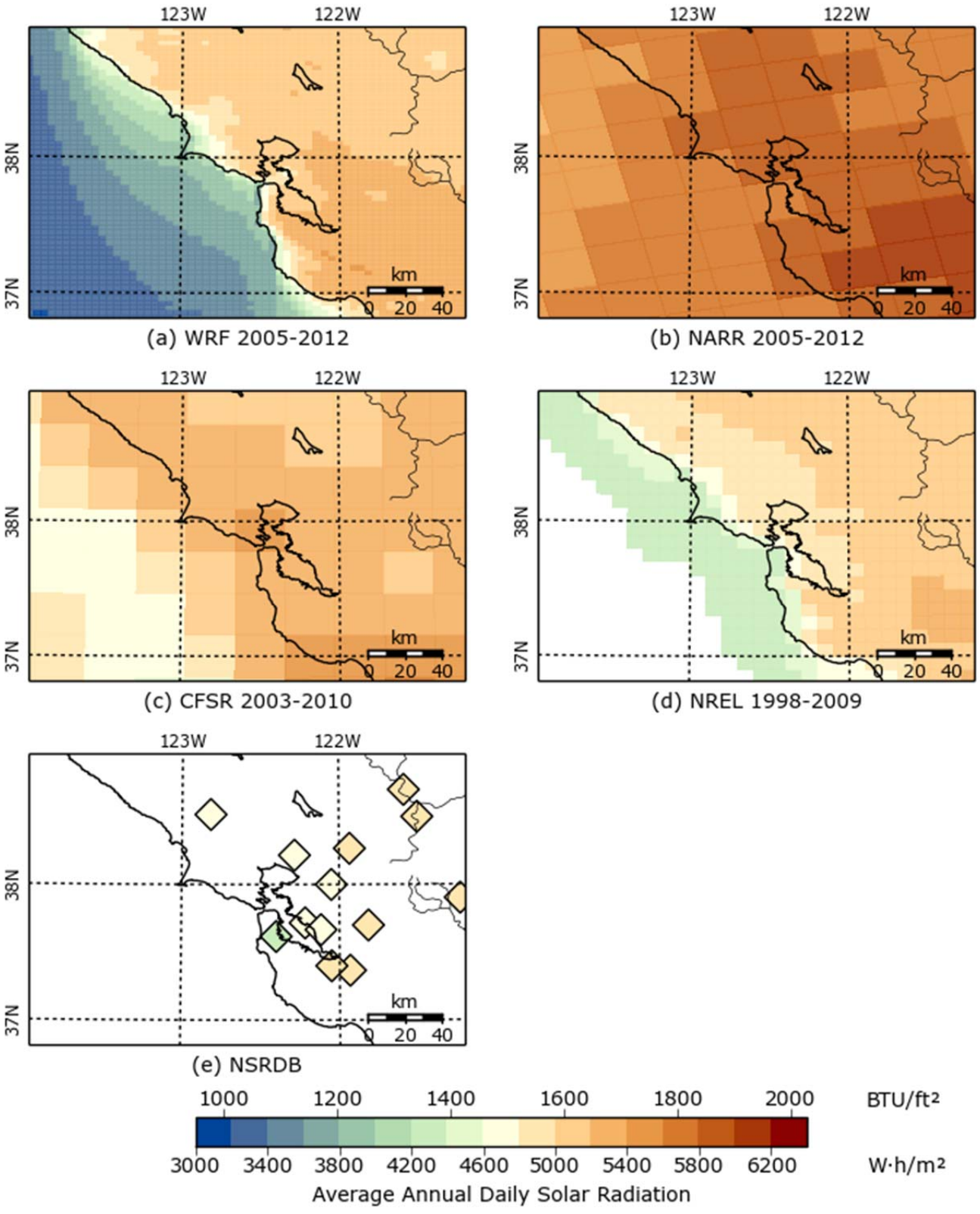

Figure 74 – San Francisco Average Annual Daily Solar Radiation

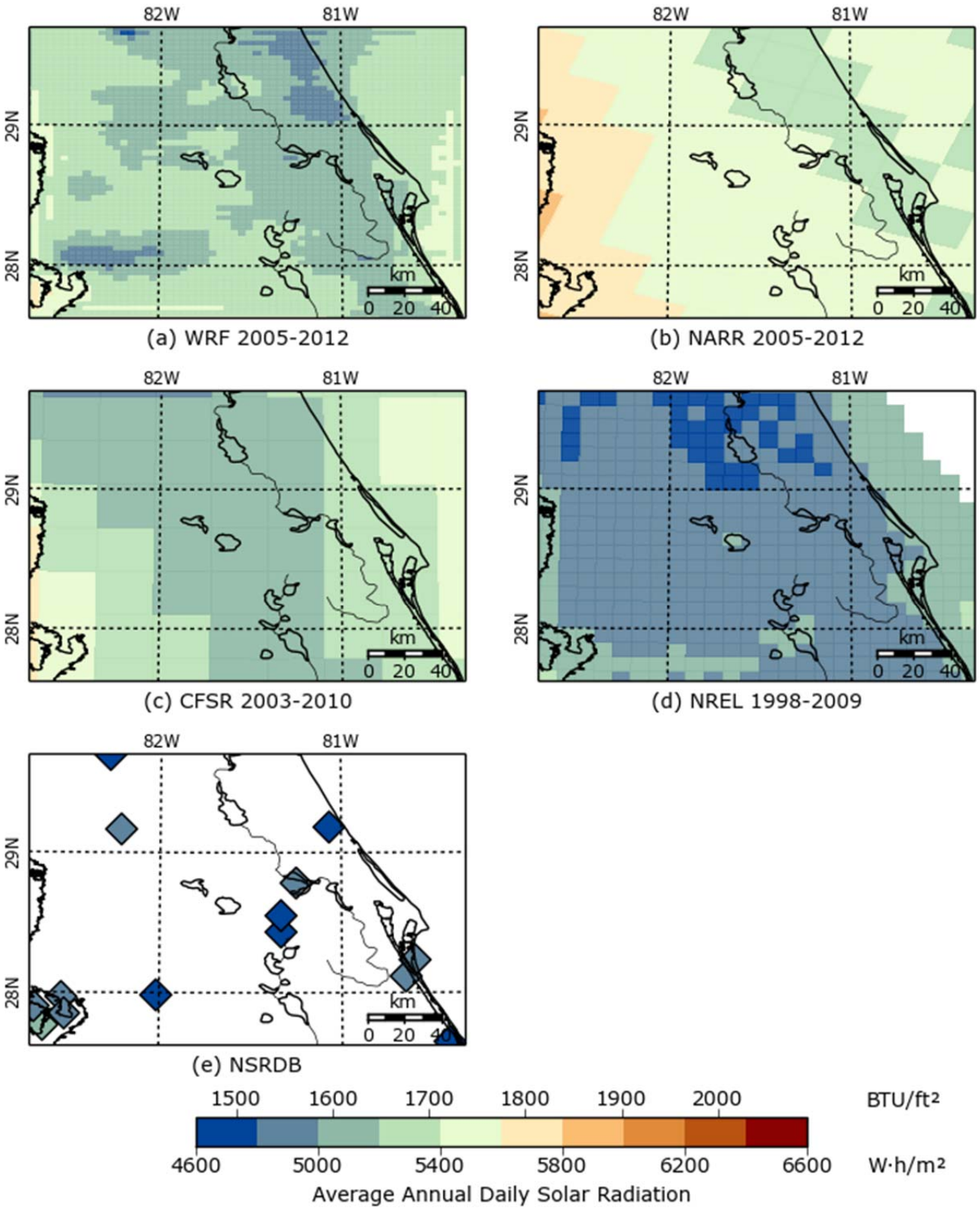

Figure 75 – Orlando Average Annual Daily Solar Radiation

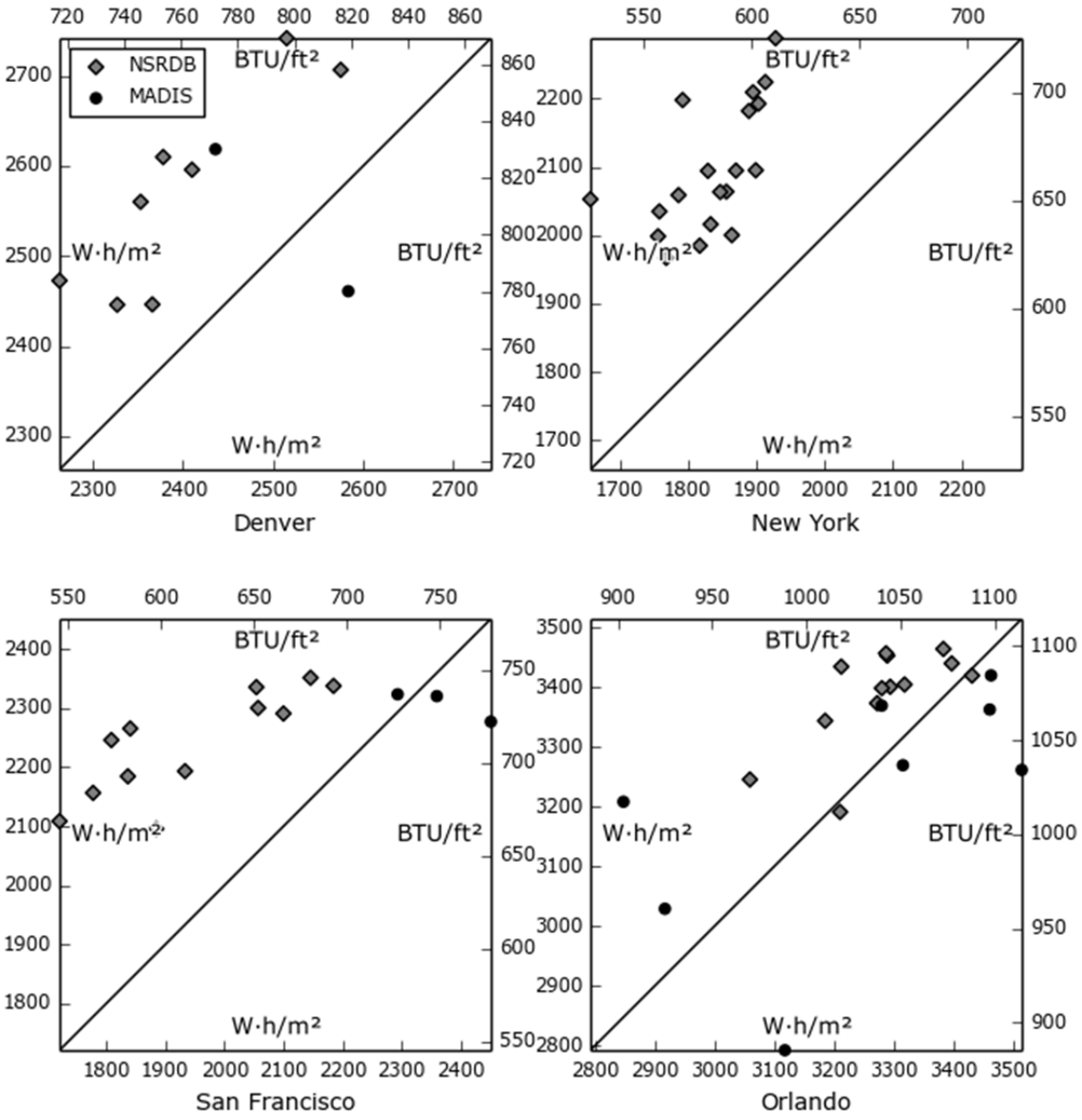

Figure 76 – Average January Daily Solar Radiation

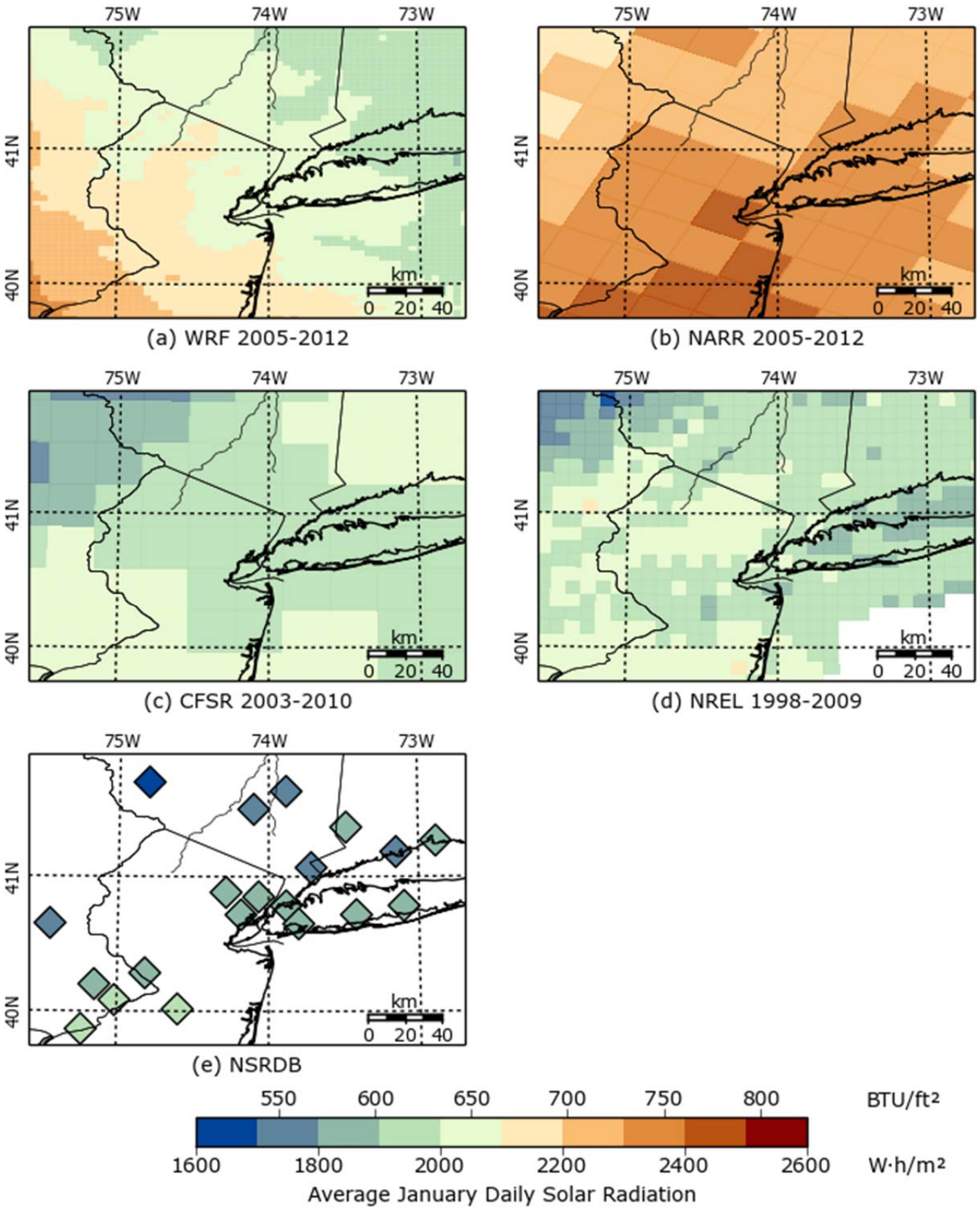

Figure 77 – New York Average January Daily Solar Radiation

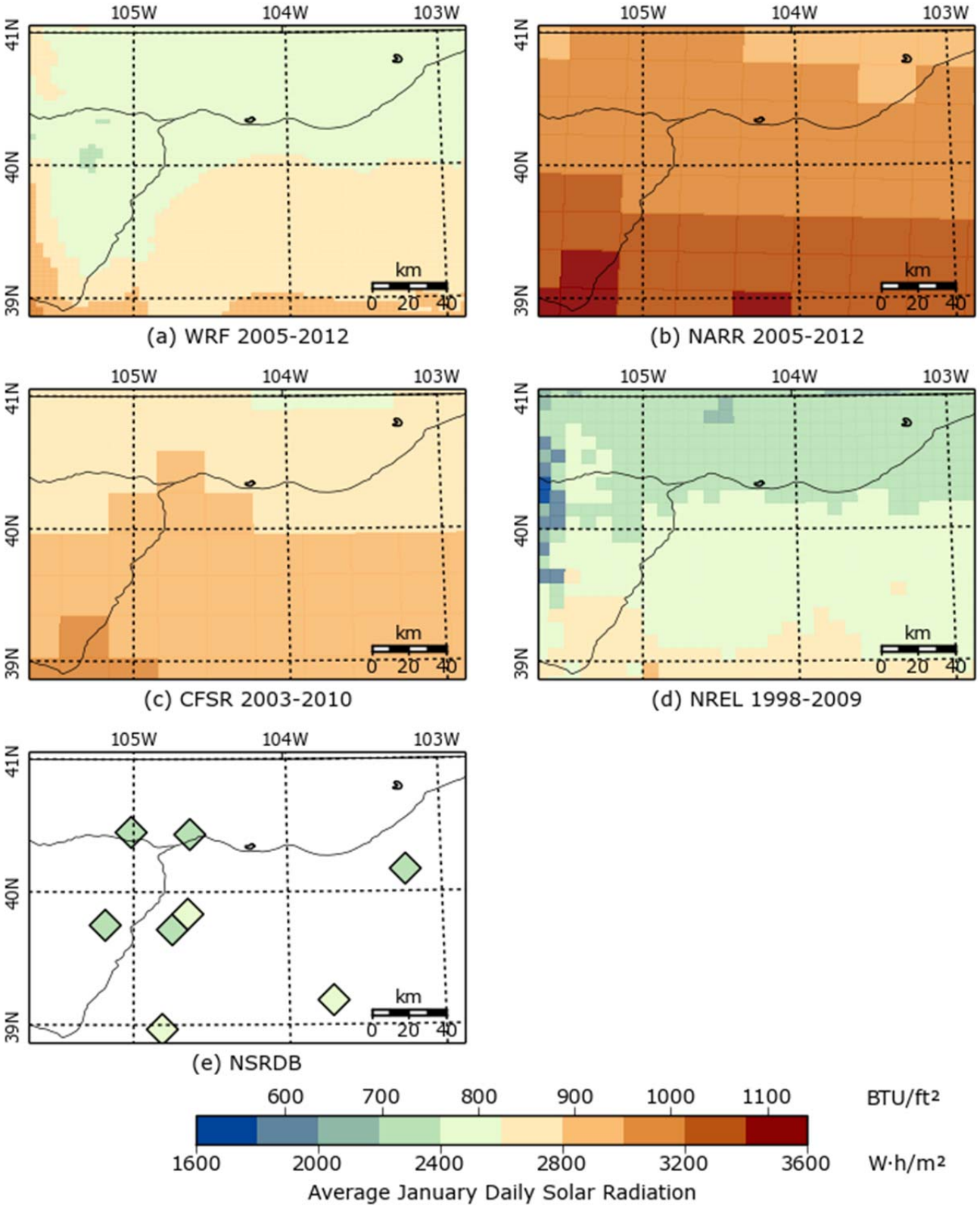

Figure 78 – Denver Average January Daily Solar Radiation

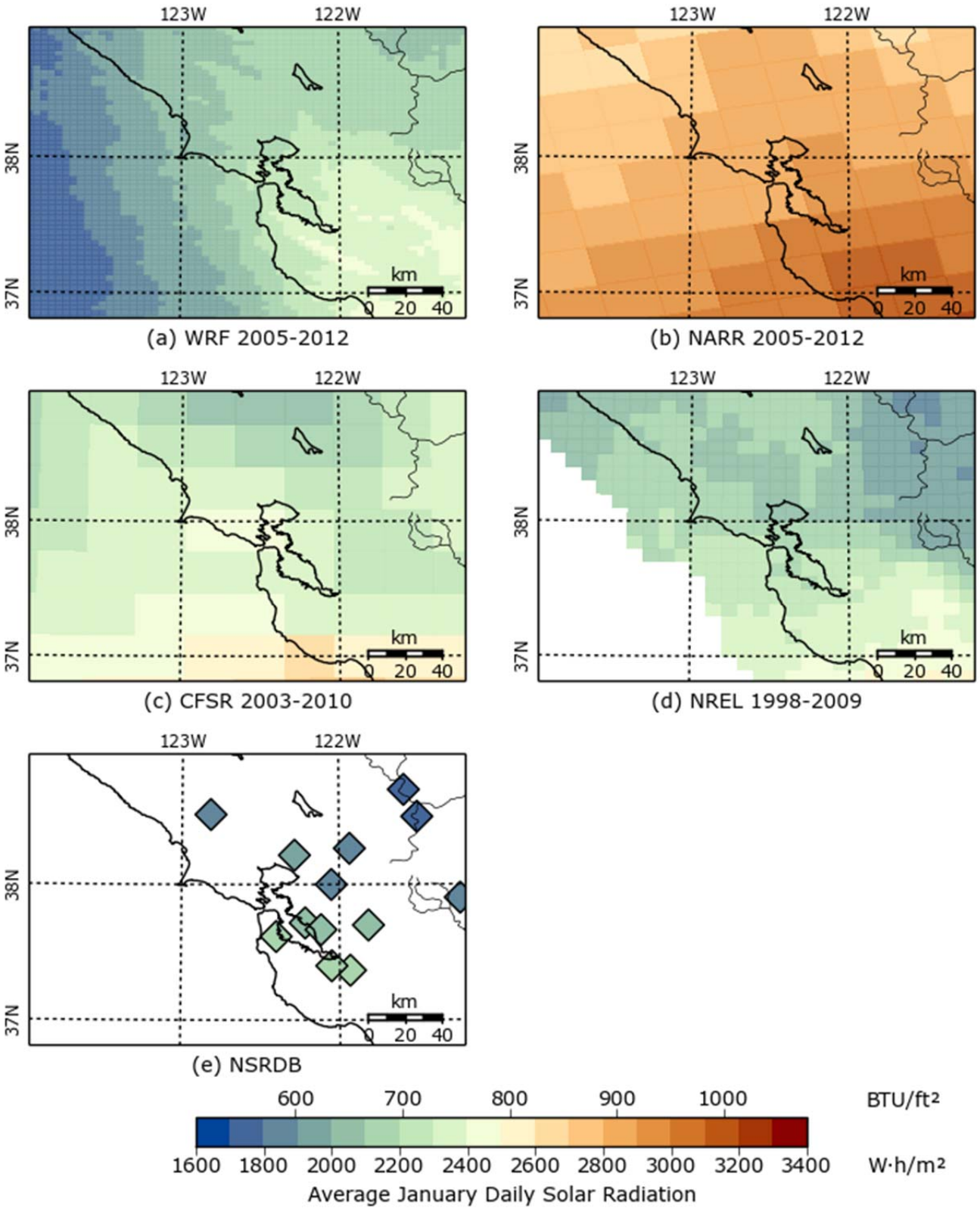

Figure 79 – San Francisco Average January Daily Solar Radiation

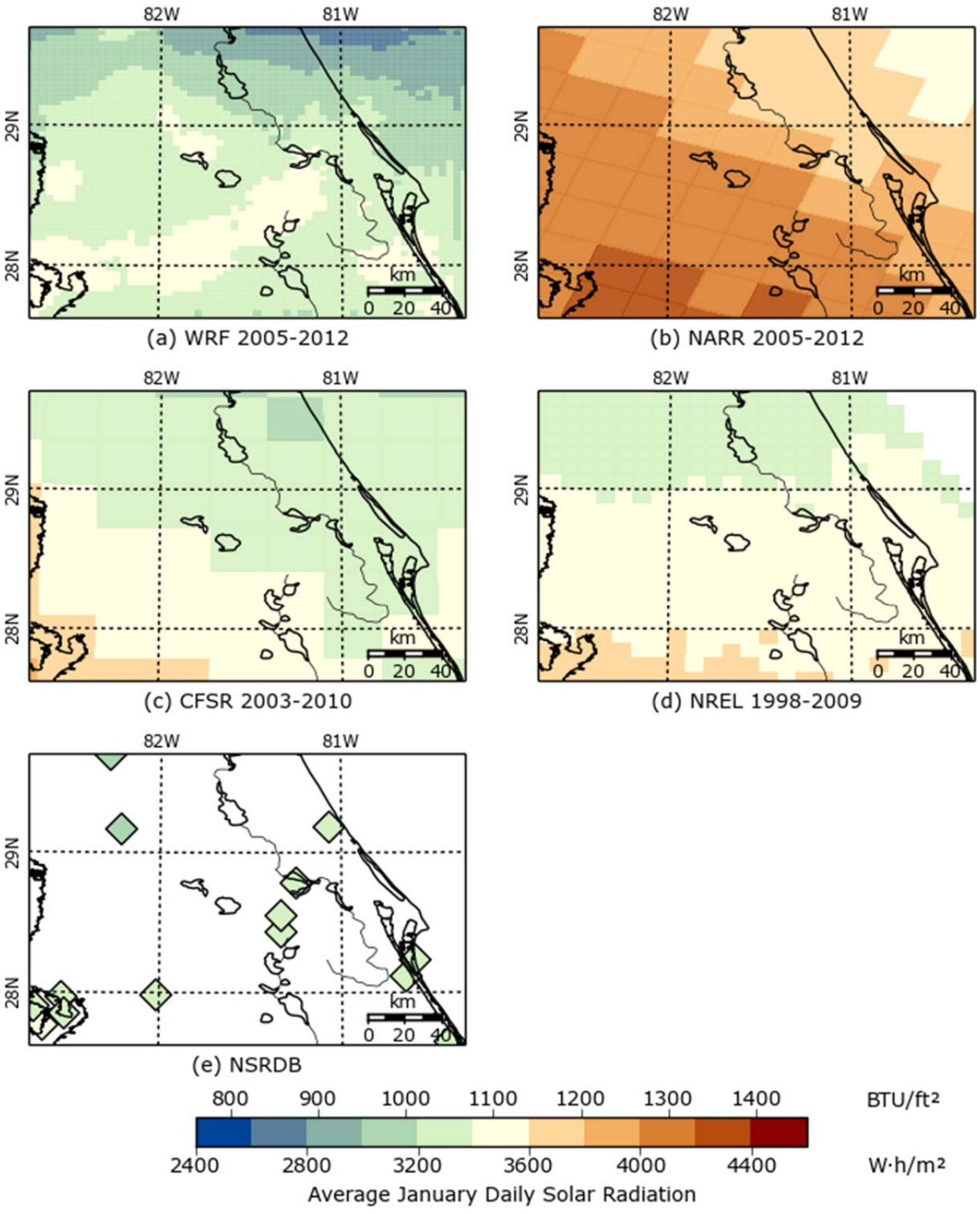

Figure 80 – Orlando Average January Daily Solar Radiation

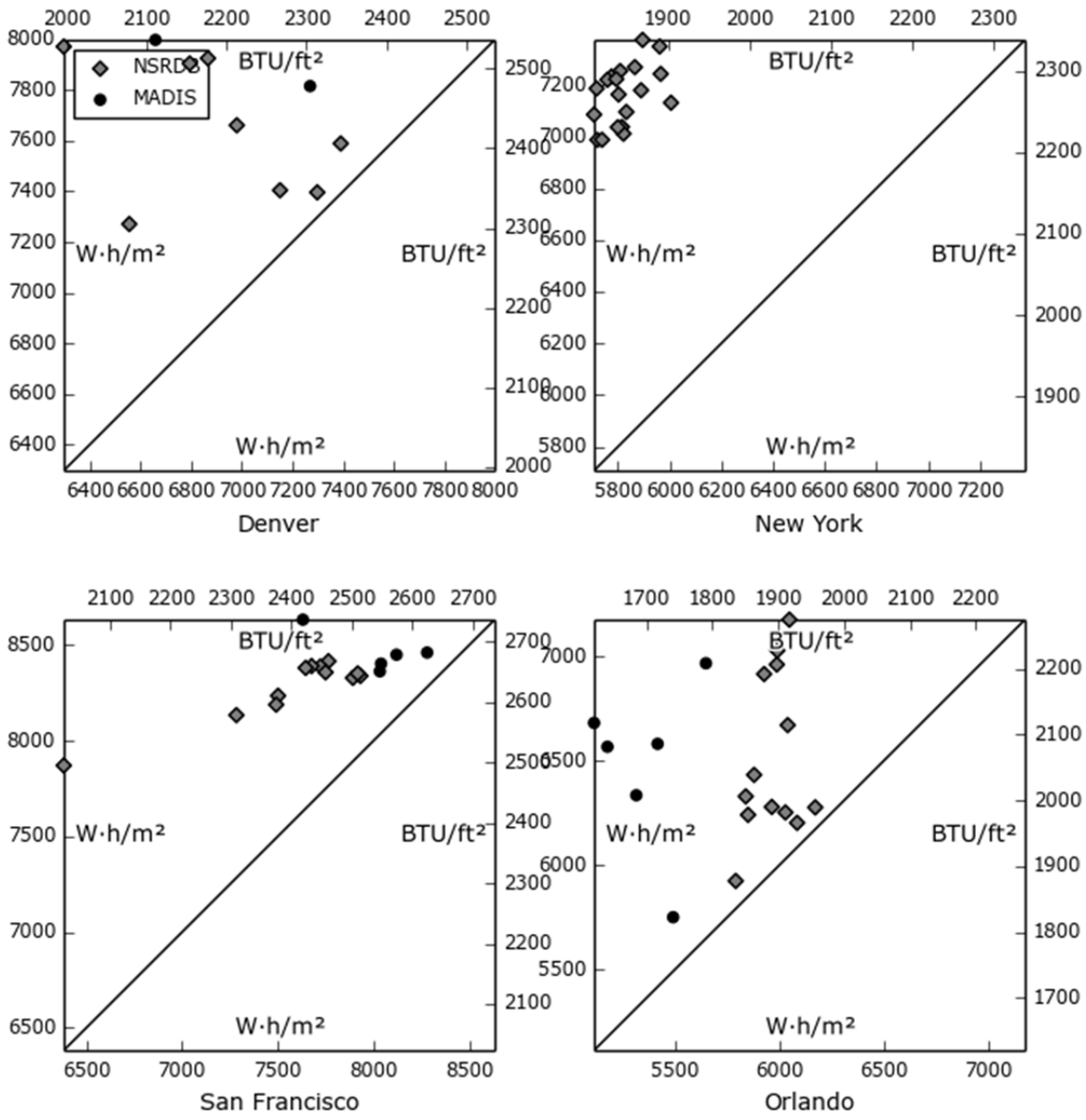

Figure 81 – Average July Daily Solar Radiation

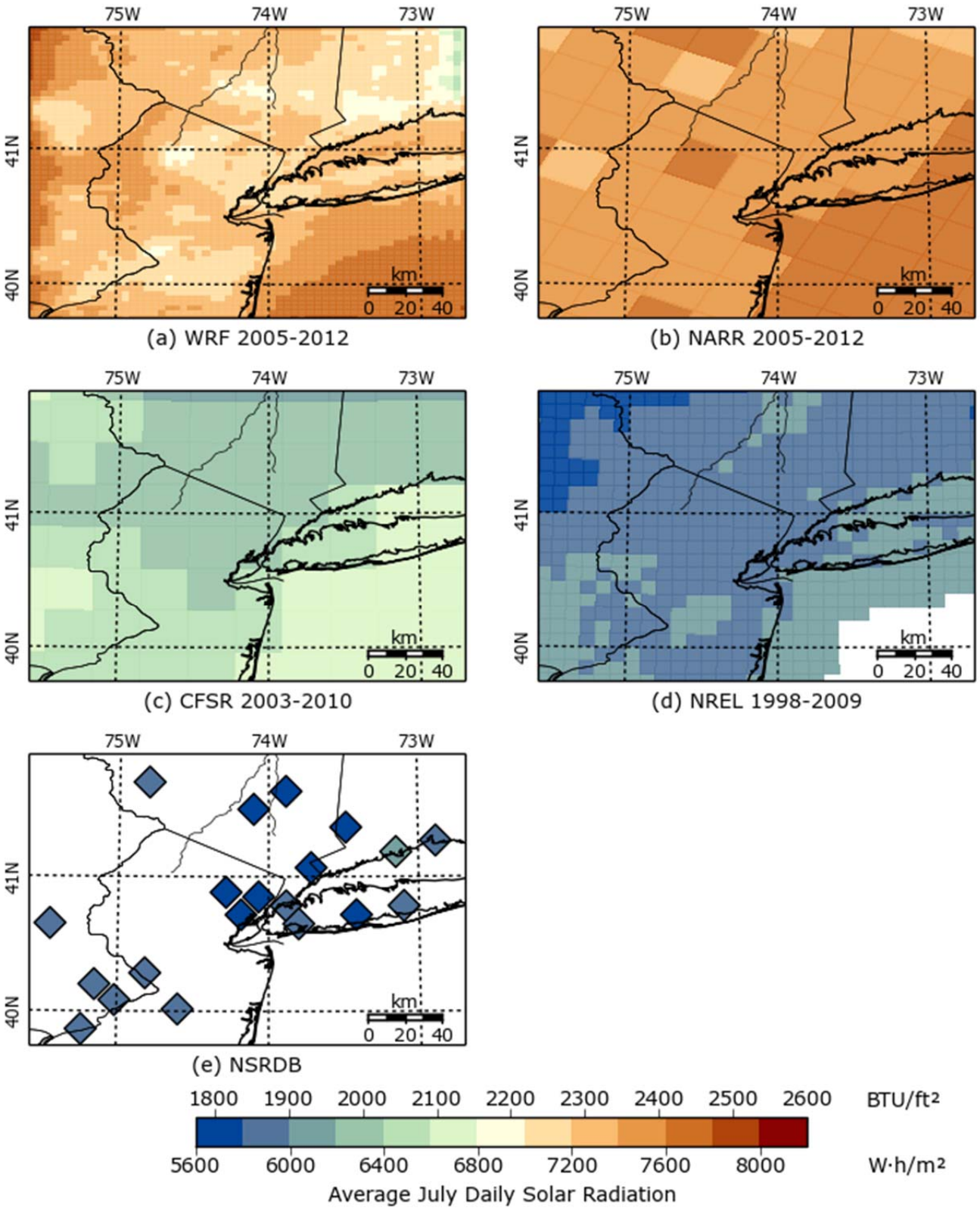

Figure 82 – New York Average July Daily Solar Radiation

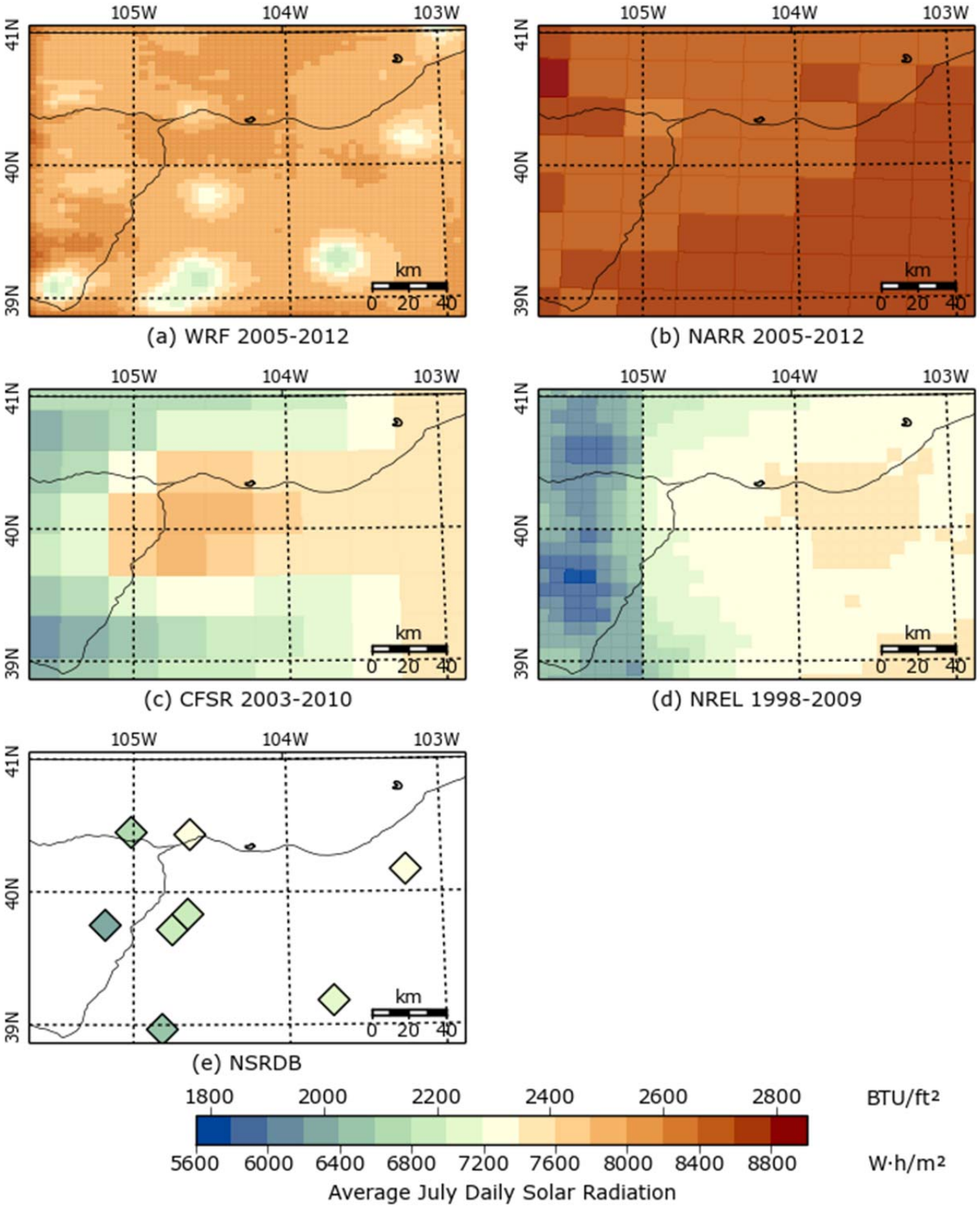

Figure 83 – Denver Average July Daily Solar Radiation

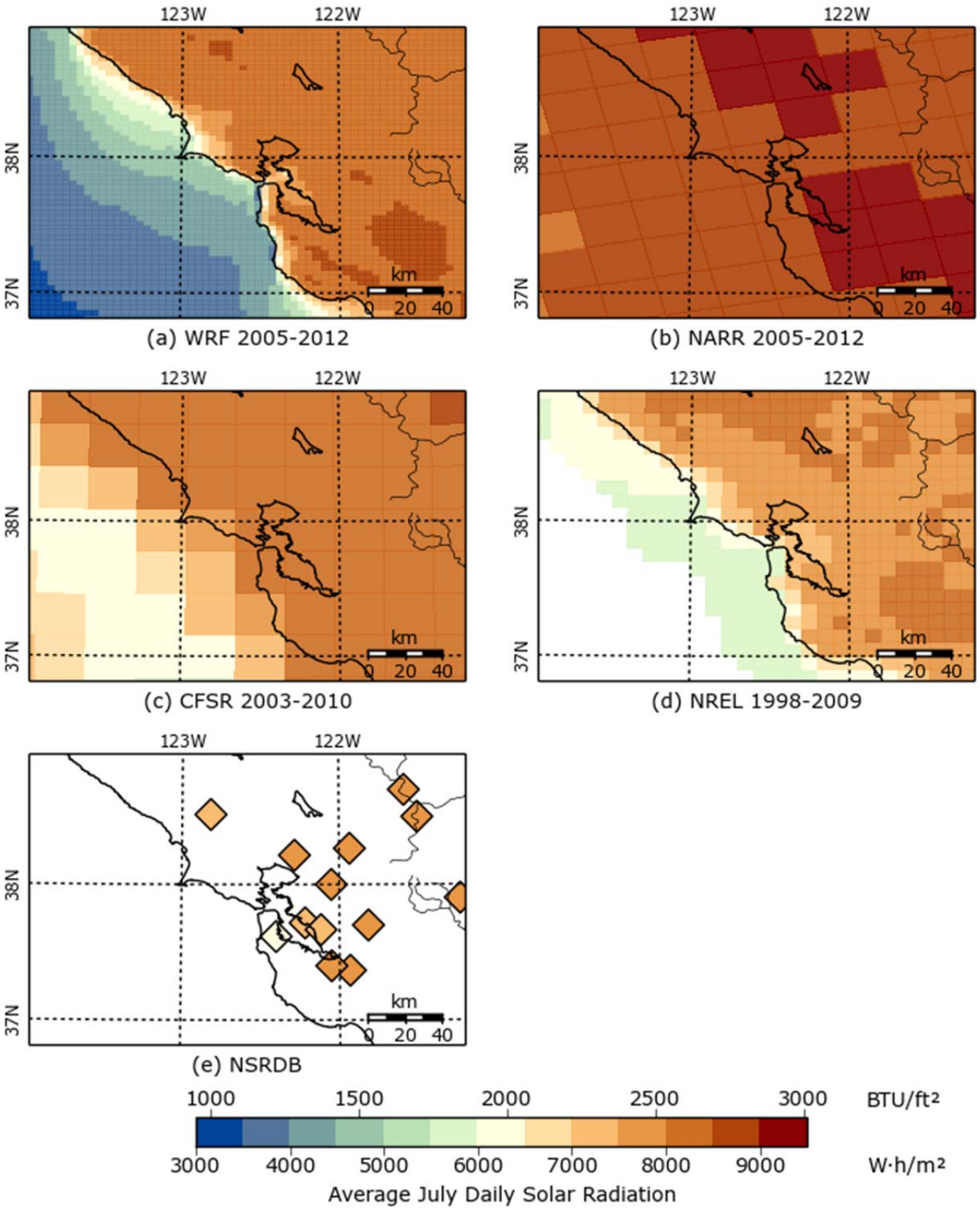

Figure 84 – San Francisco Average July Daily Solar Radiation

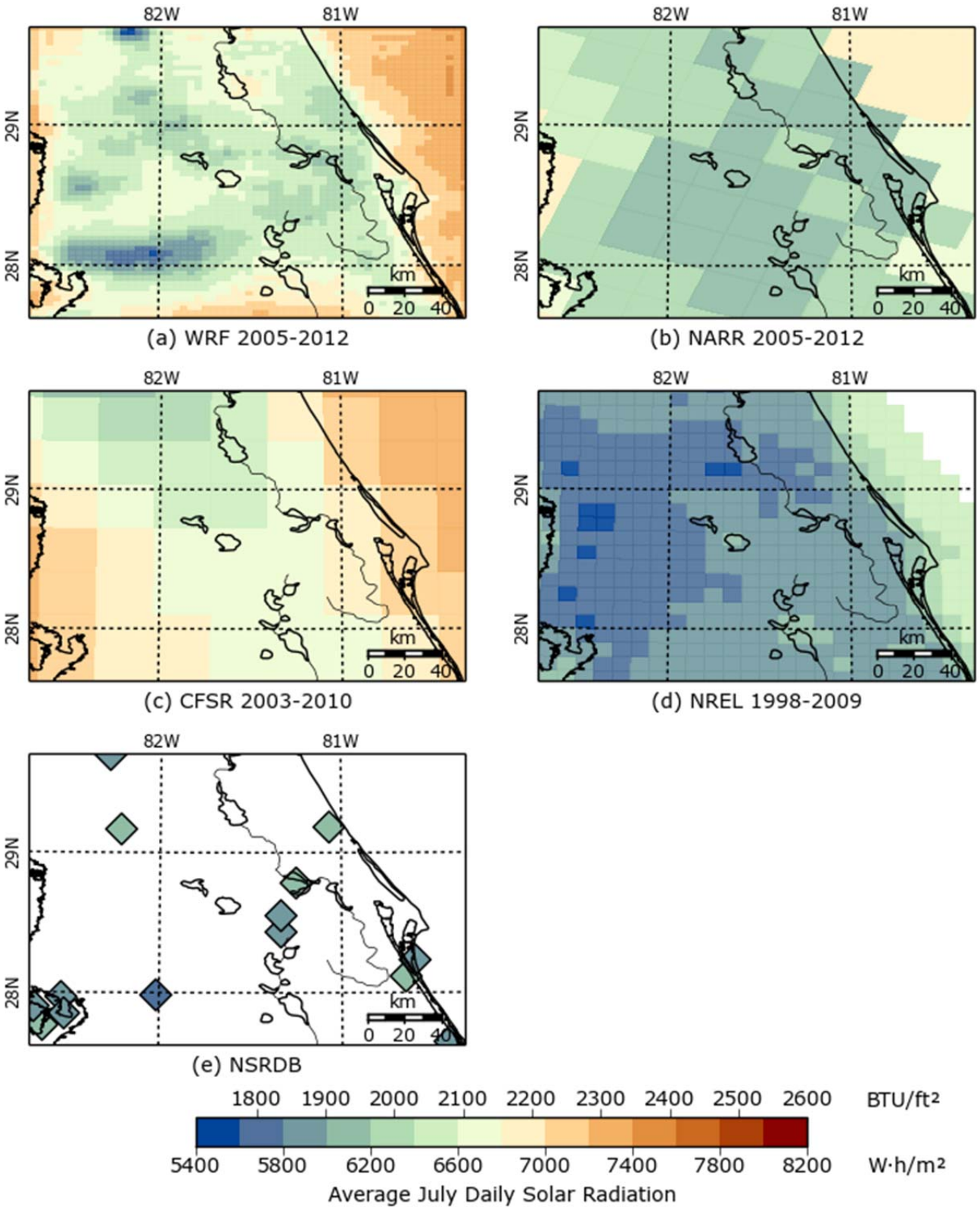

Figure 85 – Orlando Average July Daily Solar Radiation

Appendix B – Mesonet Station Locations for WRF Validation

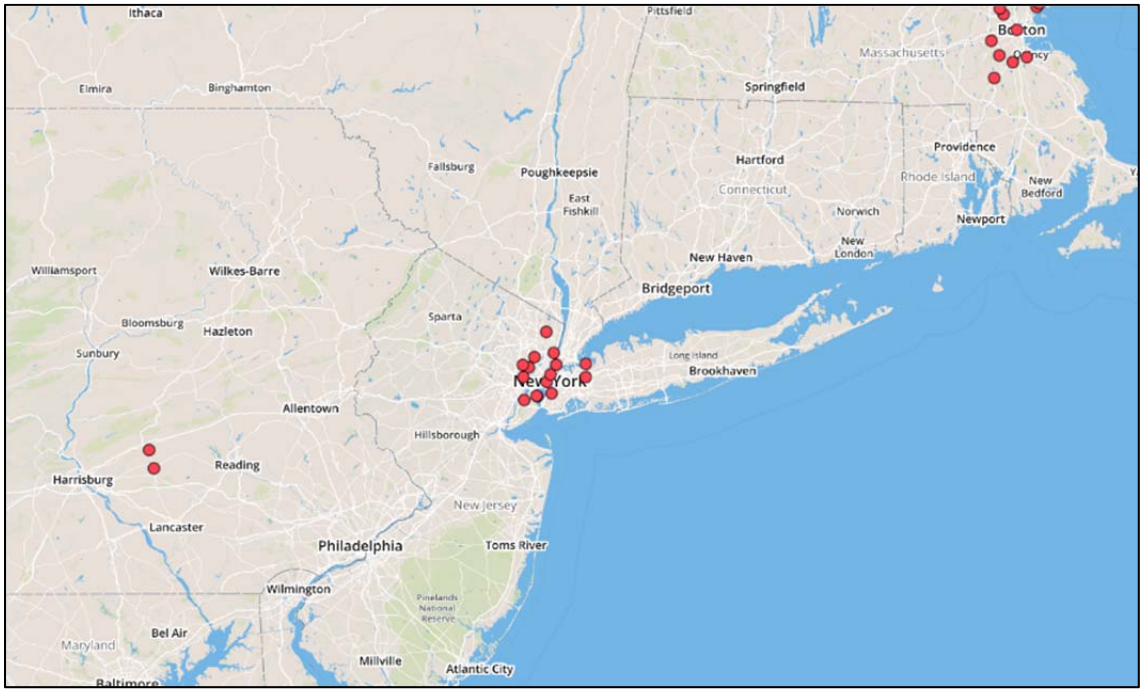

Figure 86 – Mesonet Stations Considered in New York, Boston, and Harrisburg

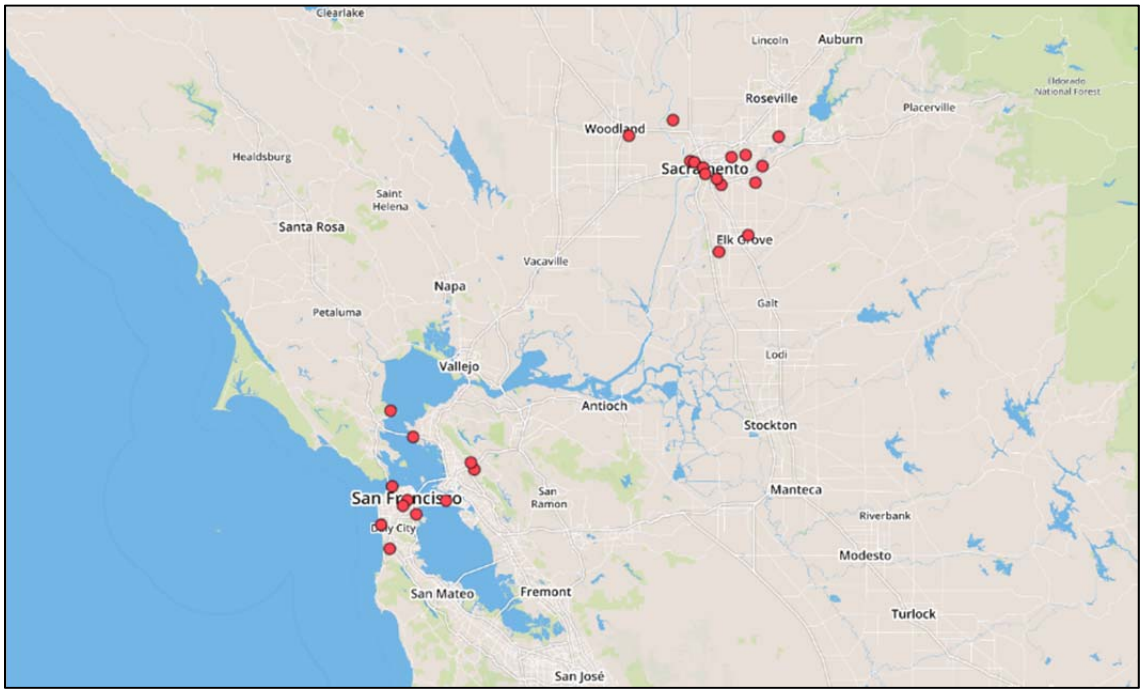

Figure 87 – Mesonet Stations Considered in San Francisco and Sacramento

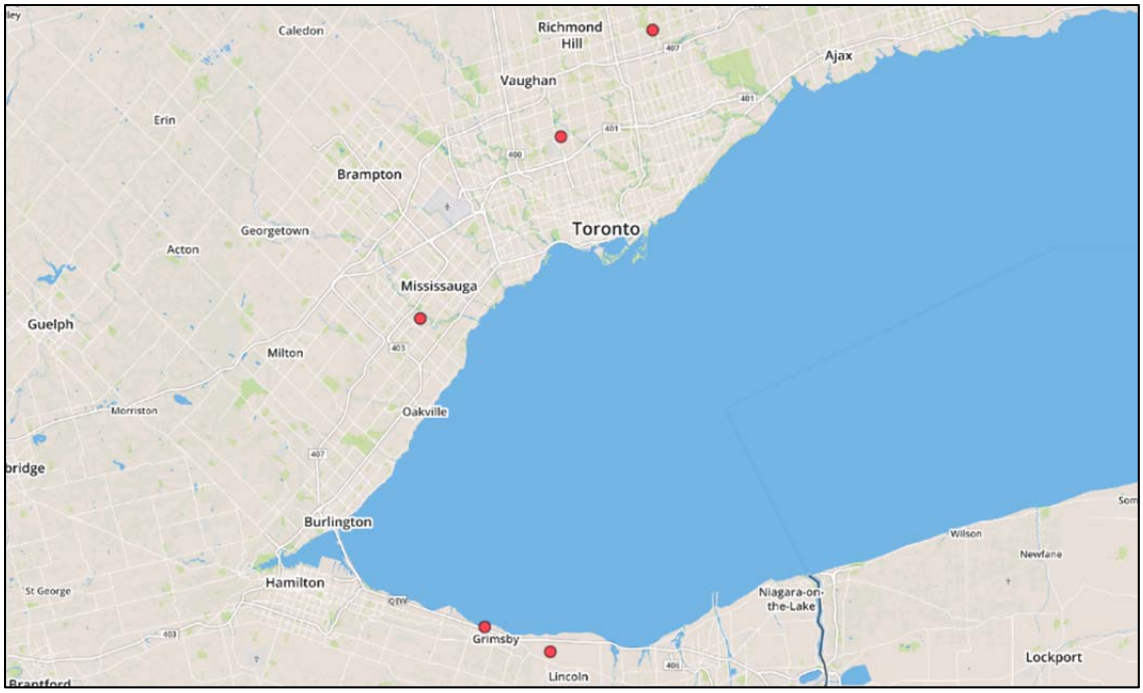

Figure 88 – Mesonet Stations Considered in Toronto

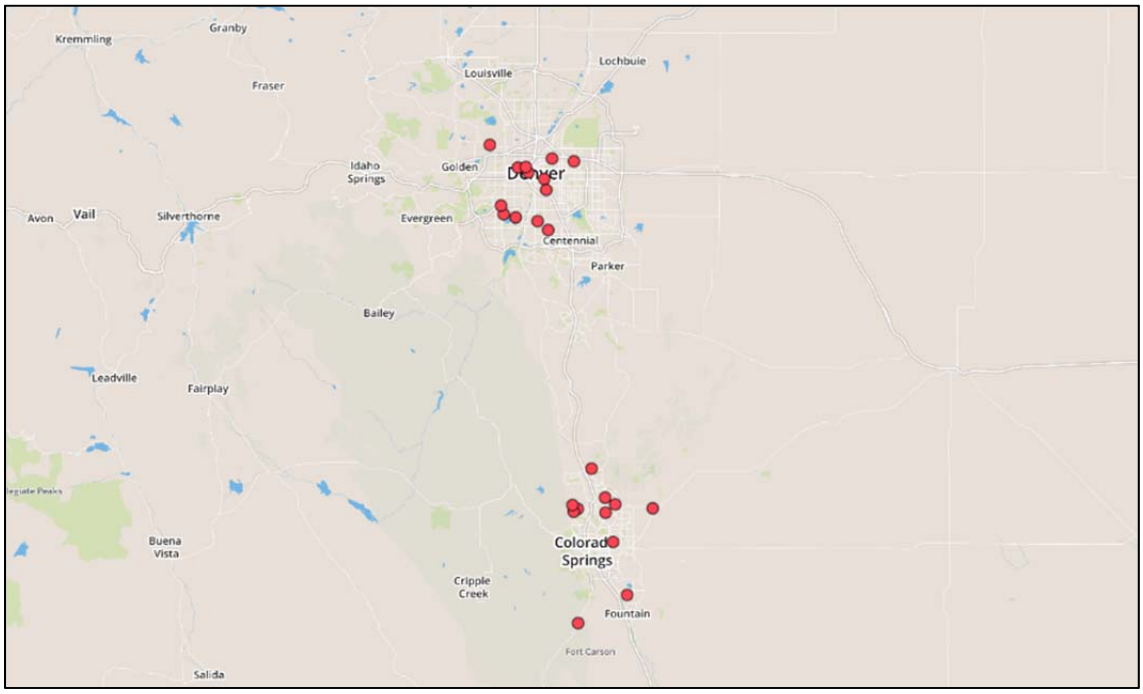

Figure 89 – Mesonet Stations Considered in Denver and Colorado Springs

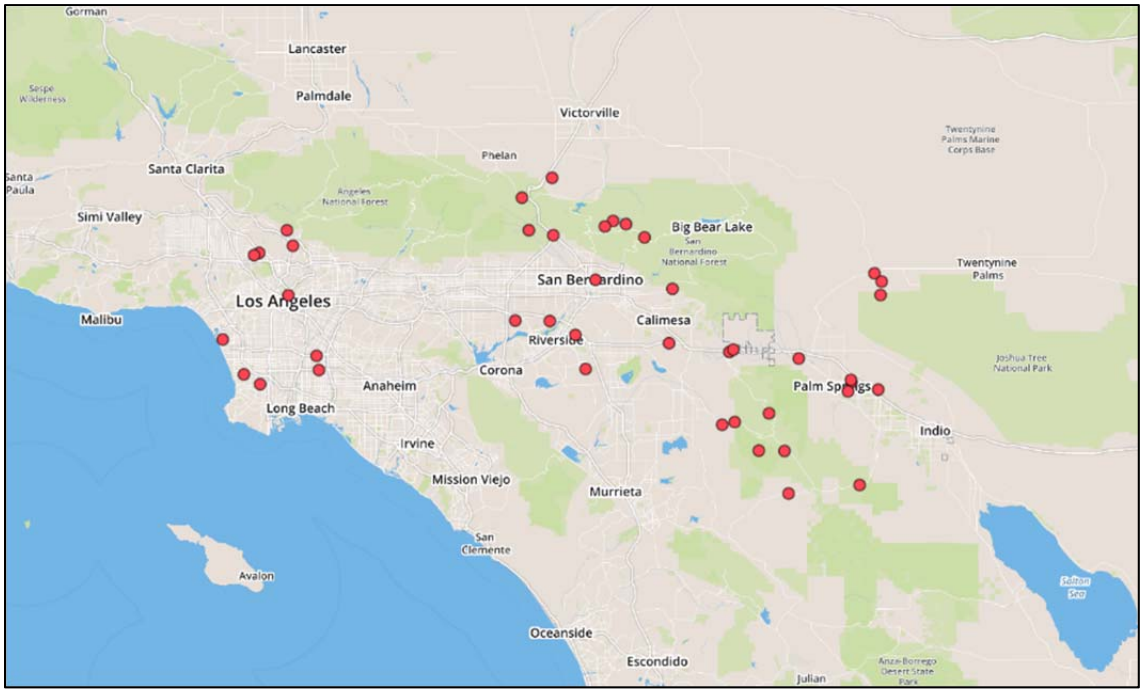

Figure 90 – Mesonet Stations Considered in Los Angeles

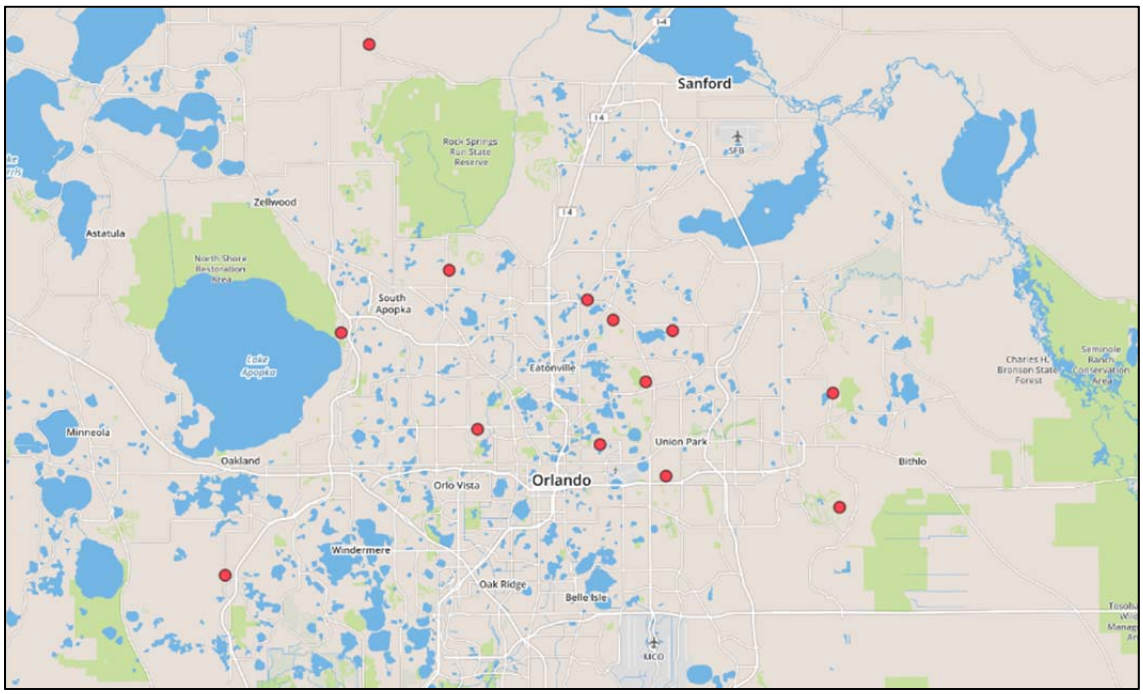

Figure 91 – Mesonet Stations Included in Orlando

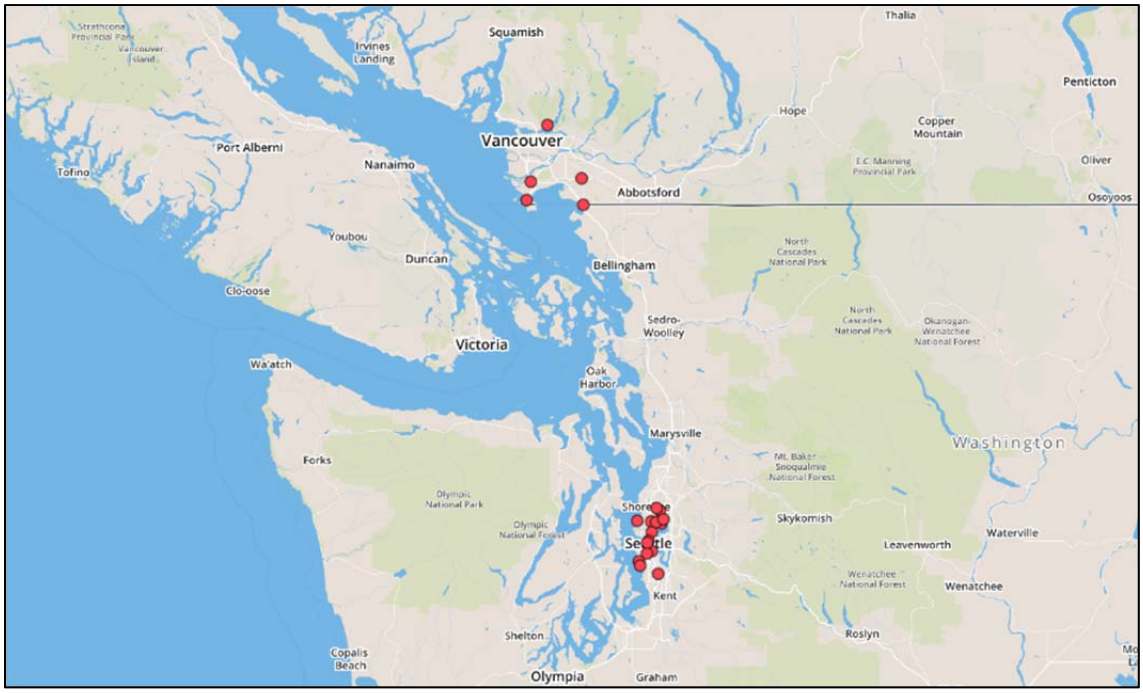

Figure 92 – Mesonet Stations Considered in Seattle and Vancouver

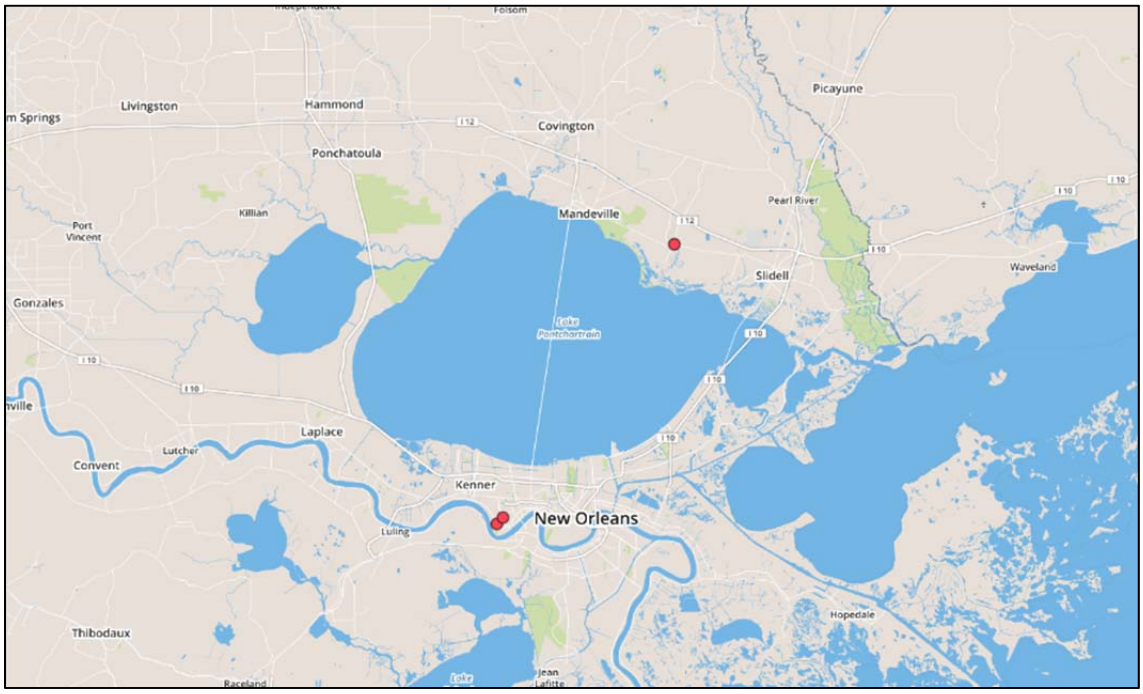

Figure 93 – Mesonet Stations Considered in New Orleans