Observing **Systems**

Air temperature and precipitation gauge data

Civil Air Patrol flights

Community-based observations

Local Traditional Knowledge

MODIS

MRMS precipitation

NESDIS JPSS VIIRS satellite

River gauges (NWS, FWS, others)

River Watch reconnaisance flights

Sentinel-1 and 2 satellites

Snotel Data

USGS River Gauge Network

USGS ice thickness

Weather forecast models

Webcams

Observation and Model-derived Data Products

Community reports, social media posts, river basin telecons (Yukon and Kuskokwim)

Direct aerial river ice observations

Forecaster assessment of river ice conditions

Hydrologic Models

NOHRSC swe

Ice thickness

CPC Outlooks

National Water Center SAR river ice analysis product (internal)

NRCS SNOTEL monthly reports

Oblique aerial photographs

River water levels

Satellite derived data products (flood and river ice)

Applications

Societal **Benefits**

Disaster preparedness

Environmental quality

Food security

River Watch community/site-specific decision support

Infrastructure and operations

Natural resource management

> Sociocultural services

River Watch weather service products

Terrestial and freshwater ecosystems and processes

> Weather and climate

Performance

