



12.0 FACTSHEET

Water Security of North Whidbey

Climate Change, Low Snowpack

How Oak Harbor and NAS Whidbey's Skagit River Supply Is Becoming More Vulnerable

Oak Harbor and Naval Air Station Whidbey Island (NASWI) receive their drinking water from the **City of Anacortes**, which draws and treats water from the **Skagit River**. This makes North Whidbey fundamentally different from the rest of the island: instead of relying on groundwater, it depends on a regional surface-water system fed by mountain snowpack.

In a normal year, the Skagit River's flow is sustained by winter snow accumulation in the North Cascades and gradual spring and summer melt. But climate change is disrupting this pattern — and this year's record-low snowpack is a warning signal for the entire region.

1. The Skagit River Depends on Snow — and Snow Is Disappearing

The Skagit watershed is one of the most snow-dependent river systems in Washington. Historically:

- Winter storms built deep mountain snowpack
- Spring melt provided steady flows
- Summer melt sustained the river during dry months

Climate change is altering all three phases:

- **Warmer winters mean more rain, less snow**
- **Snow melts earlier**, leaving less water for summer
- **Summer flows drop lower and earlier**
- **Drought conditions intensify**

This year's record-low snowpack is exactly what climate models have been predicting.

2. Why Low Snowpack Threatens Oak Harbor & NASWI

Because both communities rely on Skagit River water, low snowpack creates several risks:

A. Reduced Summer and Fall River Flows

When snowpack is low, the Skagit River can drop to levels that strain:

- Water treatment operations
- Fish habitat protections
- Water rights allocations
- Regional supply reliability

Oak Harbor and NASWI depend on consistent flows to maintain treatment capacity and pipeline delivery.

B. Increased Competition for Water

Low flows trigger:

- Instream flow protections for salmon
- Tribal treaty rights considerations
- Agricultural water needs
- Hydropower constraints
- Municipal supply priorities

In drought years, these competing demands intensify.

C. Higher Water Treatment Challenges

Low flows often mean:

- Higher water temperatures
- More algae and organic material
- Increased turbidity during rain events
- More complex treatment requirements

This can raise operational costs and stress treatment systems.

D. Infrastructure Stress

The submarine pipeline and regional transmission system depend on:

- Stable supply
- Predictable flows
- Reliable treatment operations

Climate-driven variability increases operational risk.

3. This Year's Record-Low Snowpack Is a Preview of the Future

The North Cascades snowpack this year is among the lowest ever recorded. This means:

- Earlier and sharper declines in Skagit River flows
- Higher likelihood of summer drought restrictions
- Increased pressure on Anacortes' treatment system
- Greater vulnerability for Oak Harbor and NASWI

This is not an anomaly — it is the emerging pattern.

4. What This Means for North Whidbey's Water Security

Oak Harbor and NASWI are not currently at risk of running out of water, but the **trend line is clear**:

- The Skagit River is becoming more variable
- Snowpack is becoming less reliable
- Summer flows are becoming more stressed
- Climate change is accelerating these patterns

North Whidbey's water future will depend on:

- Regional climate adaptation planning
 - Stronger drought-response coordination
 - Long-term investment in resilient infrastructure
 - Collaboration between Anacortes, Island County, NASWI, and state agencies
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5. The Bigger Picture for Whidbey Island

This situation highlights a broader truth:

Whidbey's water systems — whether groundwater-dependent or surface-water-dependent — are all becoming more vulnerable under climate change.

For North Whidbey, the risk is regional snowpack decline.

For Central and South Whidbey, the risk is aquifer depletion and saltwater intrusion.

Both require coordinated, long-term planning.
