

OREGON



WATER RESOURCES
DEPARTMENT

Groundwater Allocation Process Rulemaking

Oregon Water Resources Department

Rules Advisory Committee Meeting

May 10, 2023



Welcome & Agenda

Meeting Agenda

Schedule	Topic	Lead/Presenter
8:30 am	Welcome & Agenda	Annette Liebe
	Meeting & RAC Operating Guidelines - Reminders	Laura Hartt
	Timeline Discussion	Laura Hartt/ Annette Liebe
	RAC Meeting #1 Recap <ul style="list-style-type: none"> • Meeting Summary - Review • Follow Up Items <ul style="list-style-type: none"> ○ “Water is Available” Definition ○ “Over-Appropriated” Definition ○ “Capacity of the Resource” Definition 	Justin Iverson
	Break	
	Draft Rules – Discussion <ul style="list-style-type: none"> • Division 8 	Ben Scandella
	Break	
11:30 am	Public Comment	Laura Hartt
By noon	Wrap-up & Next Steps	Annette Liebe



Reminders & Timeline

Please Remember To

- Treat others respectfully
- Remain “muted” when not speaking
- Use the “raise hand” feature to indicate you would like to speak
- RAC members: Please hold your questions/comments until the end of the presentation
- Other attendees: Please hold your questions/comments until the Public Comment Period

RAC Operating Guidelines

RAC Role

- Attend and participate in meetings
- Provide information/recommendations regarding draft rules and potential fiscal impacts

OWRD Role

- Facilitate meetings
- Provide technical support and subject matter expertise
- Foster collaboration and consensus building

RAC Input Process

- OWRD provides pre-meeting materials at least one week prior to each RAC meeting
- RAC members review pre-meeting materials prior to each meeting
- During each RAC meeting, RAC members provide input on draft rules and other materials discussed during the RAC meeting
- Following each RAC meeting, RAC members may provide additional input by requested date (generally, within one week)
- Please try to limit post-meeting input to the draft rules and other materials discussed during the RAC meeting so that we can incorporate that input prior to the next RAC meeting
- OWRD will share all input received from RAC members at the next RAC meeting.

Rulemaking Timeline





RAC Meeting #1 ReCap

RAC Meeting # 1 - Summary

Any questions, comments or corrections to the draft meeting summary?

RAC Meeting # 1 - Follow Up

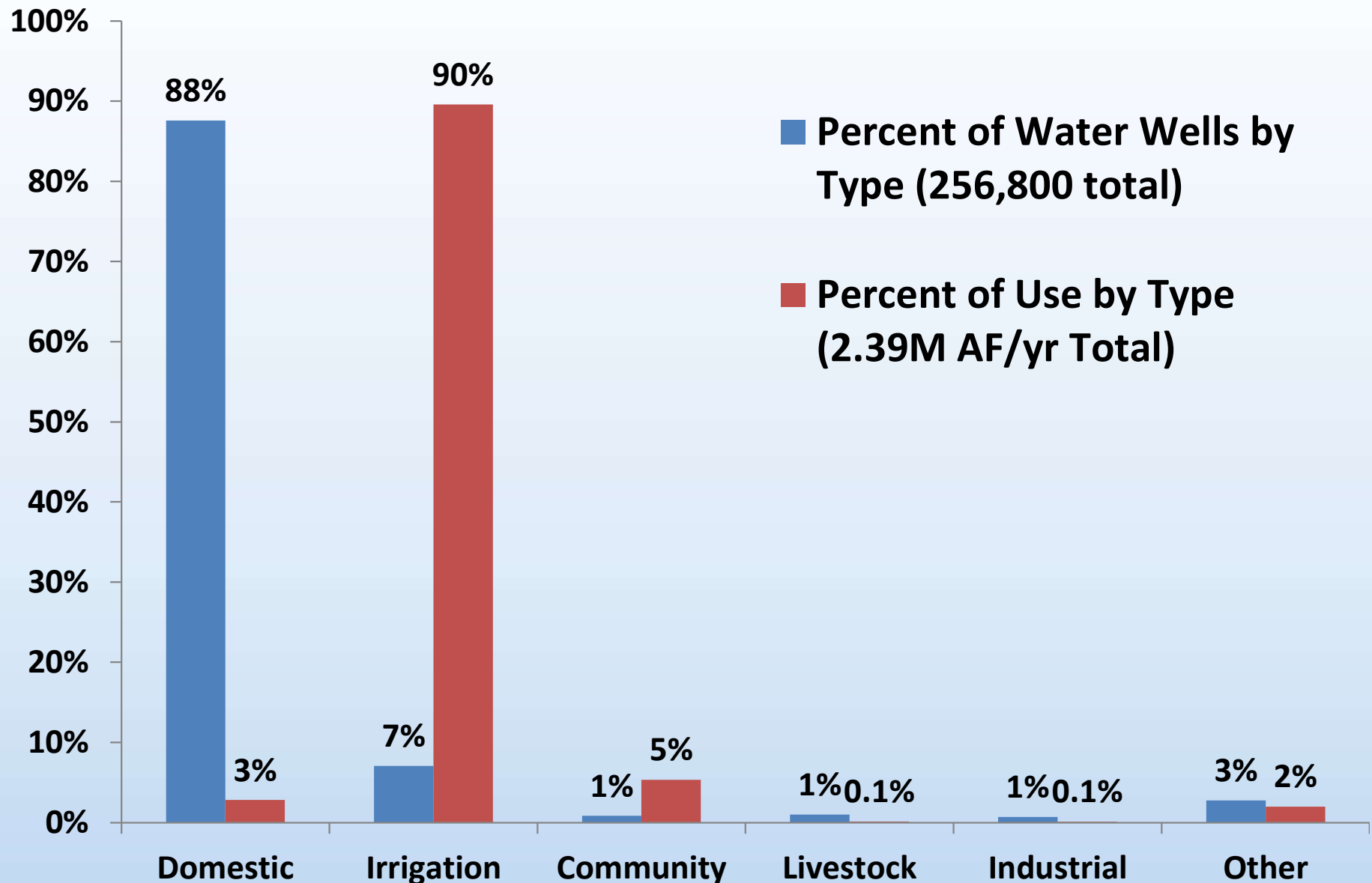
- **Exempt Use Wells**
- Revised Definition of "Water is Available"
(690-300-0010(57))
- Revised Definition of "Over-Appropriated"
(690-400-0010(11))
- Revised Definition of "Capacity of the Resource" (690-400-0010(4))

Exempt Groundwater Uses

ORS 537.545 Exempt uses:

- 15,000 gallons per day (gpd) single or group domestic
- 5,000 gpd industrial or commercial
- Stockwater
- Irrigation up to one-half acre of lawn or non-commercial garden
- 3 other seldom-used exemptions

Groundwater Use in Oregon



RAC Meeting # 1 - Follow Up

- Exempt Use Wells
- Revised Definition of “Water is Available” (690-300-0010(57))
- Revised Definition of "Over-Appropriated" (690-400-0010(11))
- Revised Definition of "Capacity of the Resource" (690-400-0010(4))



“Water is Available” Definition - 690-300-0010(57)

The following definitions apply in OAR chapter 690, divisions 15, 310, 320, 330, 340, and 350 and to any permits, certificates or transfers issued under these rules:

(57) "Water is Available," when used in OAR 690-310-0080, 690-310-0110 and 690-310-0130, means:

- (a) The requested surface water source is not over-appropriated under OAR 690-400-0010 and 690-410-0070 during any period of the proposed use; or
- (b) If the requested surface water source is already over-appropriated for any portion of the period of use proposed in a new application:
 - (A) The applicant can show the proposed use requires surface water only during the period of time in which the requested source is not already over-appropriated;
 - (B) The applicant has obtained or has shown the applicant can obtain authorization to use water from an alternate source to provide water needed during any period of use in which the source is over-appropriated; or
 - (C) If the applicant has shown they can obtain authorization to use water from an alternate source during the time water is unavailable, the department conditions the approval of the application to require that prior to diversion of water the applicant obtains authorization for use of water from the alternate source.



“Water is Available” Definition - 690-300-0010(57) revised

(57) "Water is Available," when used in OAR 690-310-0080, 690-310-0110 and 690-310-0130, means:

- (c) For surface water applications received before July 17, 1992, the provisions of subsection (a) of this section shall apply except that the determination of whether a requested source is over-appropriated under OAR 690-400-0010 and 690-410-0070 shall be based upon whether the quantity of water available during a specified period is not sufficient to meet the expected demands for all water rights at least 50 percent of the time during that period.
- (d) The requested groundwater source is not overdrawn under OAR 690-008-0001, and when existing appropriation has occurred from the requested source that water levels are reasonably stable under OAR 690-008-0001 as measured at one or more representative wells; and
- (e) The proposed use is available within the capacity of the resource under OAR 690-400-0010.

“Over-Appropriated” Definition - 690-400-0010(11) revised

As used in the rules contained in divisions 400 and 410, unless the context requires otherwise:

(11)~~(a)~~ “Over-Appropriated” means a condition of water allocation in which:

(A) The quantity of surface water available during a specified period is not sufficient to meet the expected demands from all water rights at least 80 percent of the time during that period; ~~or~~

~~(B) The appropriation of groundwater resources by all water rights exceeds the average annual recharge to a groundwater source over the period of record or results in the further depletion of already over-appropriated surface waters.~~

(b) The standards for determining over-appropriation described in paragraph (A) of this subsection shall apply to water availability determination for permit applications submitted after July 17, 1992.

“Capacity of the Resource” Definition - 690-400-0010(4) revised

As used in the rules contained in divisions 400 and 410, unless the context requires otherwise:

- (4) “Capacity of the Resource” means the ability of a surface water or groundwater resource to sustain a balance of public and private uses without ~~causing~~ contributing to:
- (a) over-appropriation of the surface water source as defined in OAR 690-400-0010
 - (b) overdrawing of the groundwater source as defined in OAR 690-008-0001, or
 - (c) otherwise significantly impairing the function or character of the resource.



Draft Rules Overview

Objective Reminder

Update groundwater allocation rules to be more sustainable and protective of existing water right holders, both instream and out-of-stream.



Division Overview (300, 400, 8)

ORS 537.621: Review of an application for a permit to acquire a new water right

- ↳ Division 300 - definitions of water right application processing rules
- ↳ Division 400 - definitions of statewide water resource management rules
- ↳ Division 8 - definitions of statutory groundwater terms

Rule Revision Overview

ORS 537.621: Four-part test includes “water is available”

↳ Division 300 – defines groundwater is available as not overdrawn and within capacity

↳ Division 400 – defines within capacity

↳ Division 8 – defines statutory groundwater terms including overdraw and “reasonably stable groundwater levels”, among others



Division 8 Draft Rules

Division 008 Overview

<i>Rule</i>	<i>Revision Overview</i>
690-008-0001(1) <i>Definition of "Aquifer"</i>	Align with Division 200 definition

“Aquifer”

Revised Definition - 690-008-0001(1)

A number of terms are used in the statutes, ORS 537.505–537.795, prescribing the management of ground water in Oregon. These rules define terms to qualify and clarify the statutes. In all statutes and rules employed in the management of ground water by the Water Resources Department and Commission, the following definitions shall apply, unless the context requires otherwise:

- (1) “Aquifer” means a geologic formation, group of formations, or part of a formation that contains saturated and permeable material capable of transmitting water in sufficient quantity to supply wells or springs and that contains water that is similar throughout in characteristics such as potentiometric head, chemistry, and temperature. ~~a water-bearing body of naturally occurring earth materials that is sufficiently permeable to yield useable quantities of water to wells and/or springs.~~

Division 008 Overview

<i>Rule</i>	<i>Revision Overview</i>
<i>690-008-0001(9)</i> <i>Definition of “Overdraw,” “Overdrawn,” “Overdrawing”</i>	Define as appropriation from a groundwater source where <ul style="list-style-type: none">- groundwater levels are declining, or- pumping contributes to substantial interference with a surface water source.

Overdraw/Overdrawn/Overdrawing Revised/New Definitions - 690-008-0001(9)(a)

~~(79)~~ “Overdraw”, “overdrawn”, or “overdrawing” means to pump or otherwise extract groundwater from an aquifer, groundwater reservoir, or part thereof when artificially produce water, in any one-year period, from a ground water reservoir, or part thereof, at an annual rate that:

(a) One or more representative wells exhibit declining groundwater levels as per OAR 690-008-0001(5) Exceeds the average annual recharge to that ground water supply over the period of record; or,

Overdraw/Overdrawn/Overdrawing Revised/New Definitions - 690-008-0001(9)(b)

- (79) “Overdraw”, “overdrawn”, or “overdrawing” means to pump or otherwise extract groundwater from an aquifer, groundwater reservoir, or part thereof when artificially produce water, in any one-year period, from a ground water reservoir, or part thereof, at an annual rate that:
- (b) The use of groundwater under existing water rights already substantially interferes with surface water sources as per OAR 690-008-0001(8)(a)~~Reduces surface water availability resulting in:~~
 - (A) ~~One or more senior appropriators being unable to use either their permitted or customary quantity of surface water, whichever is less; or~~
 - (B) ~~Failure to satisfy an adopted minimum streamflow or instream water right with an effective date senior to the causative ground water appropriation(s).~~
 - (c) ~~Reduces the availability of surface waters that have been:~~
 - (A) ~~Withdrawn with an effective date senior to the priority dates of the causative ground water appropriations; or~~
 - (B) ~~Restrictively classified with an effective date senior to the priority date(s) of the causative ground water appropriations.~~

Division 008 Overview

<i>Rule</i>	<i>Revision Overview</i>
<p><i>690-008-0001(8)</i></p> <p><i>Definition of “Impairment, Substantial Interference, Undue Interference” (I/SI/UI)</i></p>	<p>If hydraulic connection with surface water source then I/SI/UI if the surface water source is:</p> <ul style="list-style-type: none">• over-appropriated• withdrawn• restrictively classified• regulated for insufficient supply• has an unmet instream flow

Impairment/Interference

New Definitions - 690-008-0001(8)(a)

- (10)(8) “Impairment”, “impair”, “substantial interference”, “substantially interfere”, “undue interference”, or “unduly interfere” ~~“Substantial or Undue Interference”~~ means the spreading of the cone of depression of a well to intersect a surface water ~~body~~ source or another well, or the reduction of the ground water gradient and flow as a result of pumping or otherwise extracting groundwater from an aquifer, which contributes to:
- (a) Depletion of a surface water source ~~A reduction in surface water availability to an extent that:~~
- (A) is already over-appropriated during any period of the year; or
 - (B) is administratively or statutorily withdrawn; or
 - (C) is restrictively classified; or
 - (D) is the source for o ~~One or more senior~~ existing surface water appropriators rights ~~are unable to use either their permitted or customary quantity of water, whichever is less~~ that have been regulated off due to insufficient supply to satisfy senior surface water rights or is subject to a rotation agreement to address limited surface water supplies; or
 - (E) ~~An adopted~~ has a minimum perennial streamflow or instream water right ~~with an effective date senior to the causative ground water appropriation(s) cannot be satisfied~~ that is unmet during any period of the year.

Impairment/Interference

New Definitions - 690-008-0001(8)(b), (c)

(10) (8) ~~“Substantial or Undue Interference”~~ “Impairment”, “impair”, “substantial interference”, “substantially interfere”, “undue interference”, or “unduly interfere” means the spreading of the cone of depression of a well to intersect a surface water ~~body~~ source or another well, or the reduction of the ground water gradient and flow as a result of pumping, which contributes to:

...

- (b) The ground water level being drawn down to the economic level of the senior appropriator(s); or
- (c) One or more of the senior ground water appropriators being unable to obtain either the permitted or the customary quantity of ground water, whichever is less, from a reasonably efficient well that fully penetrates the aquifer where the aquifer is relatively uniformly permeable. However, in aquifers where flow is predominantly through fractures, full penetration may not be required as a condition of substantial or undue interference.

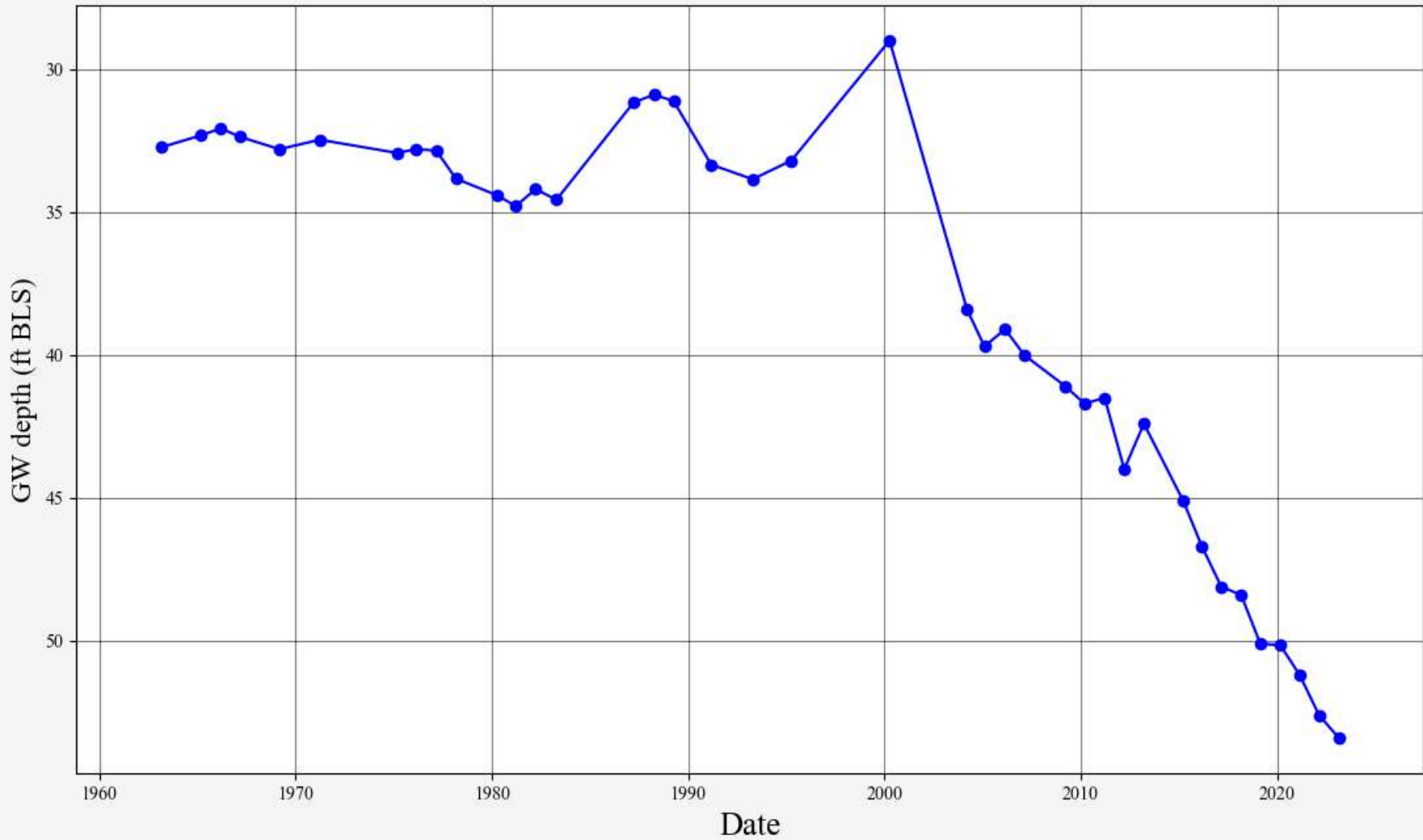
Division 008 Overview

<i>Rule</i>	Revision Overview
<p><i>690-008-0001(10)</i></p> <p><i>Definition of “Reasonably Stable Groundwater Levels”</i></p>	<p>Statewide definition</p> <ul style="list-style-type: none">• considers both rate of decline and total decline from first measured• “insufficient data” implies “water is not available” but not “overdrawn”• can be superseded by a basin program rule that is no less stringent

“Reasonably Stable” Goals

- a) Applies to a well
- b) Is reasonably consistent with hydrogeologist interpretation
- c) Can be tested automatically with sufficient data
- d) Is complementary to “declining groundwater levels”
- e) Detects onset of rapid declines within 10 years
- f) Detects slow declines with decades before 50 feet total
- g) Avoids oscillations due to short-term variability unrelated to pumping
- h) Limits the burden of collecting initial water levels
- i) Remains robust to missing data

Example 1: When do declines begin?

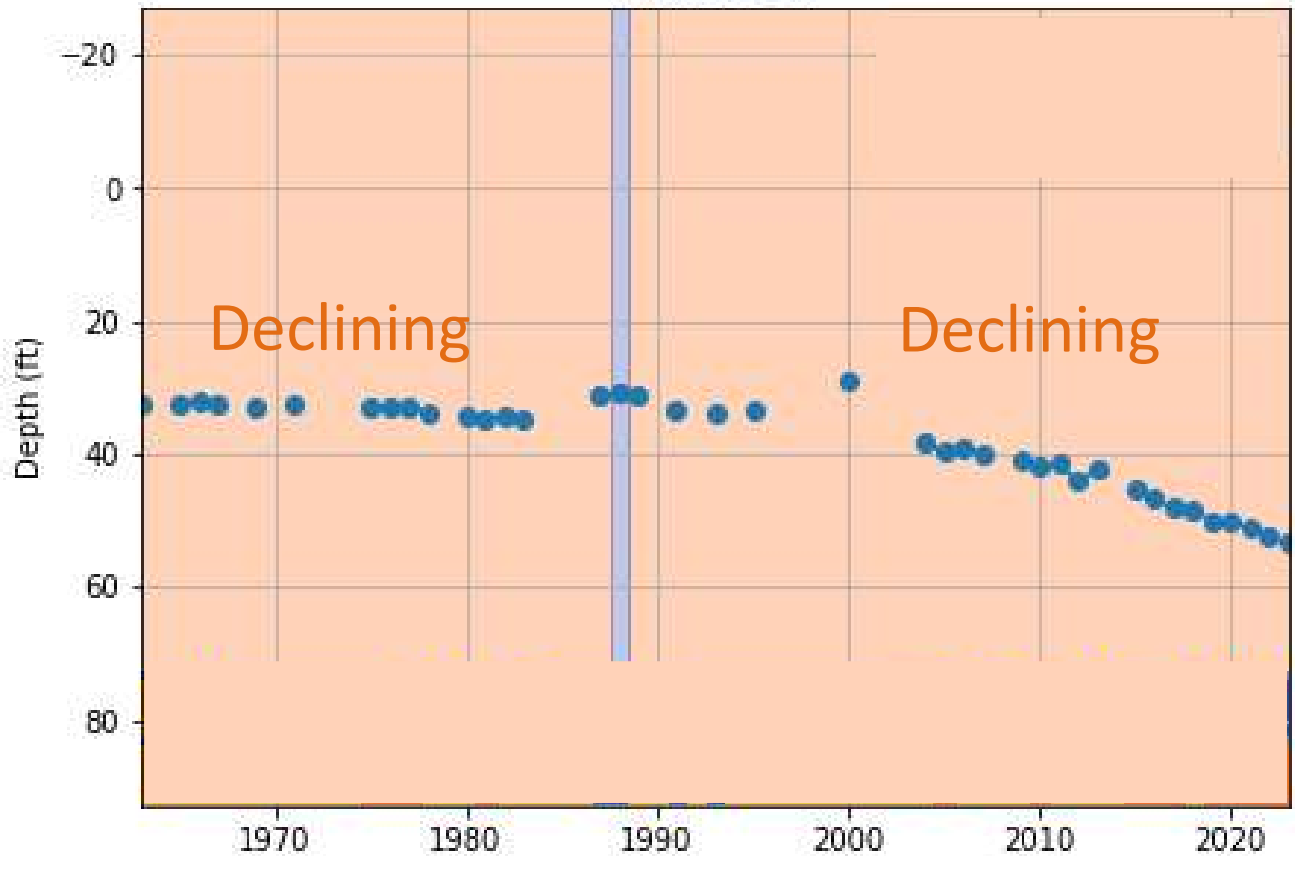


Existing definition is too strict

Reasonably Stable: Water is Available



HARN 1387



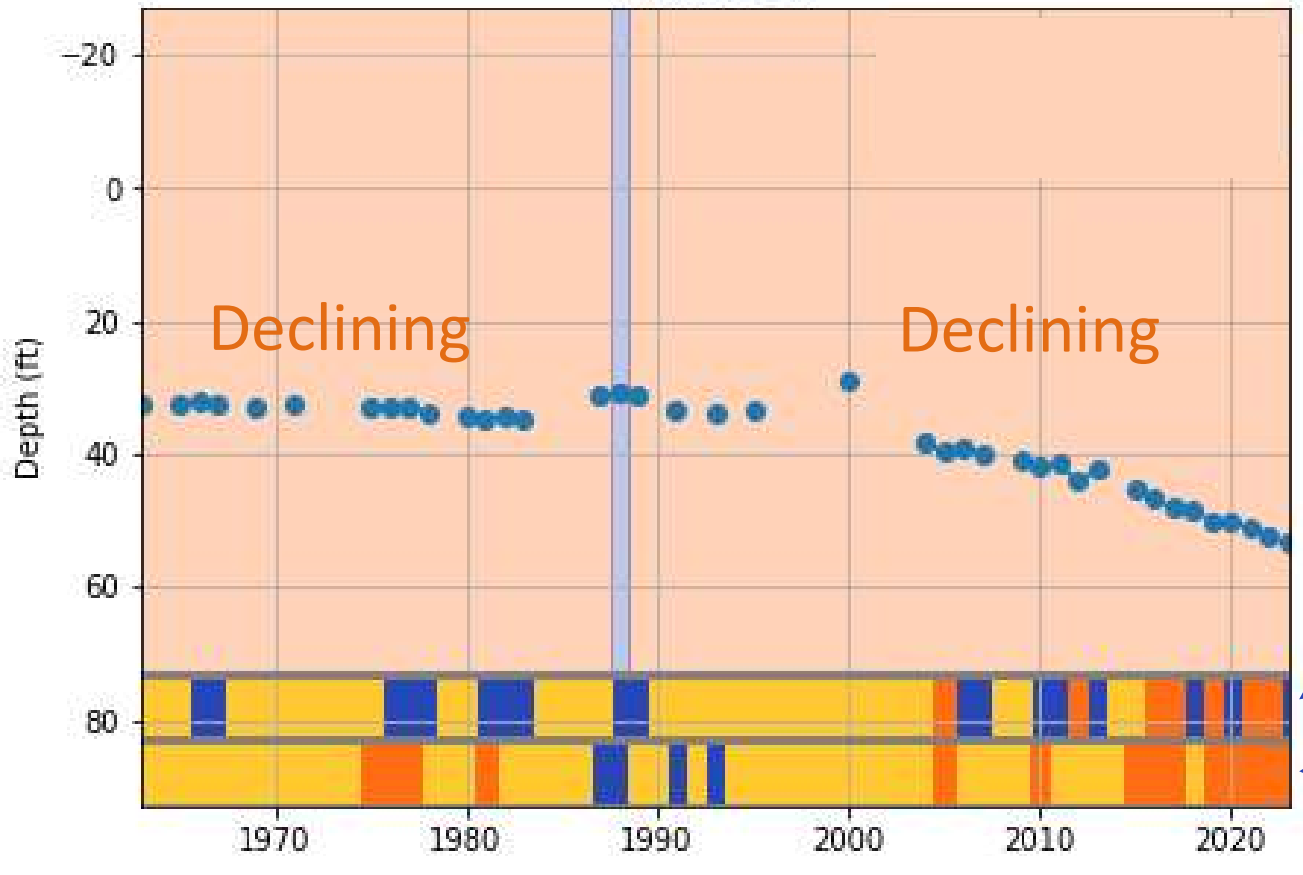
Definition from Umatilla
Critical Groundwater
Areas, *applied to 1 well*

Existing definition is too strict

Reasonably Stable: Water is Available



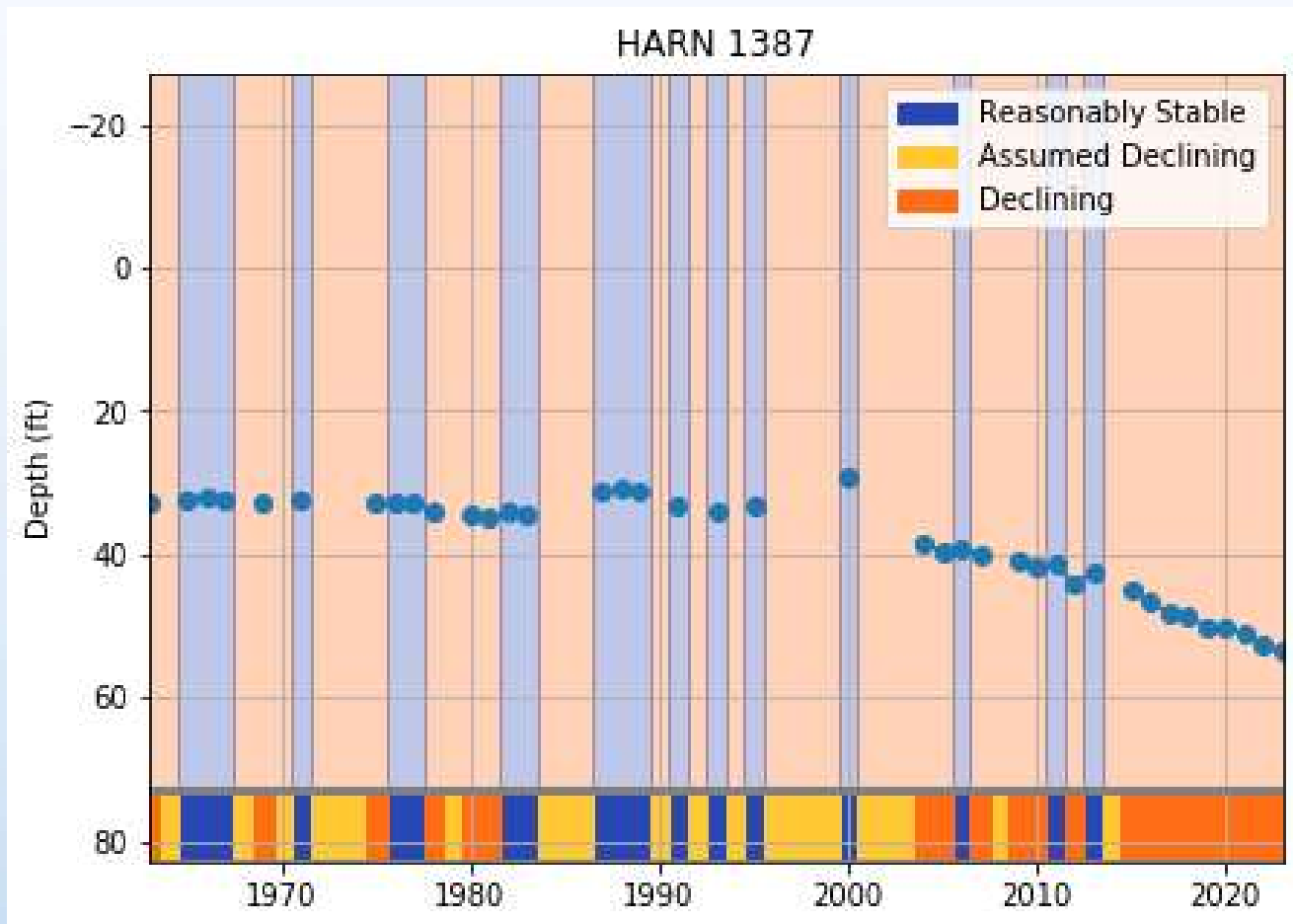
HARN 1387



Definition from Umatilla
Critical Groundwater
Areas, *applied to 1 well*

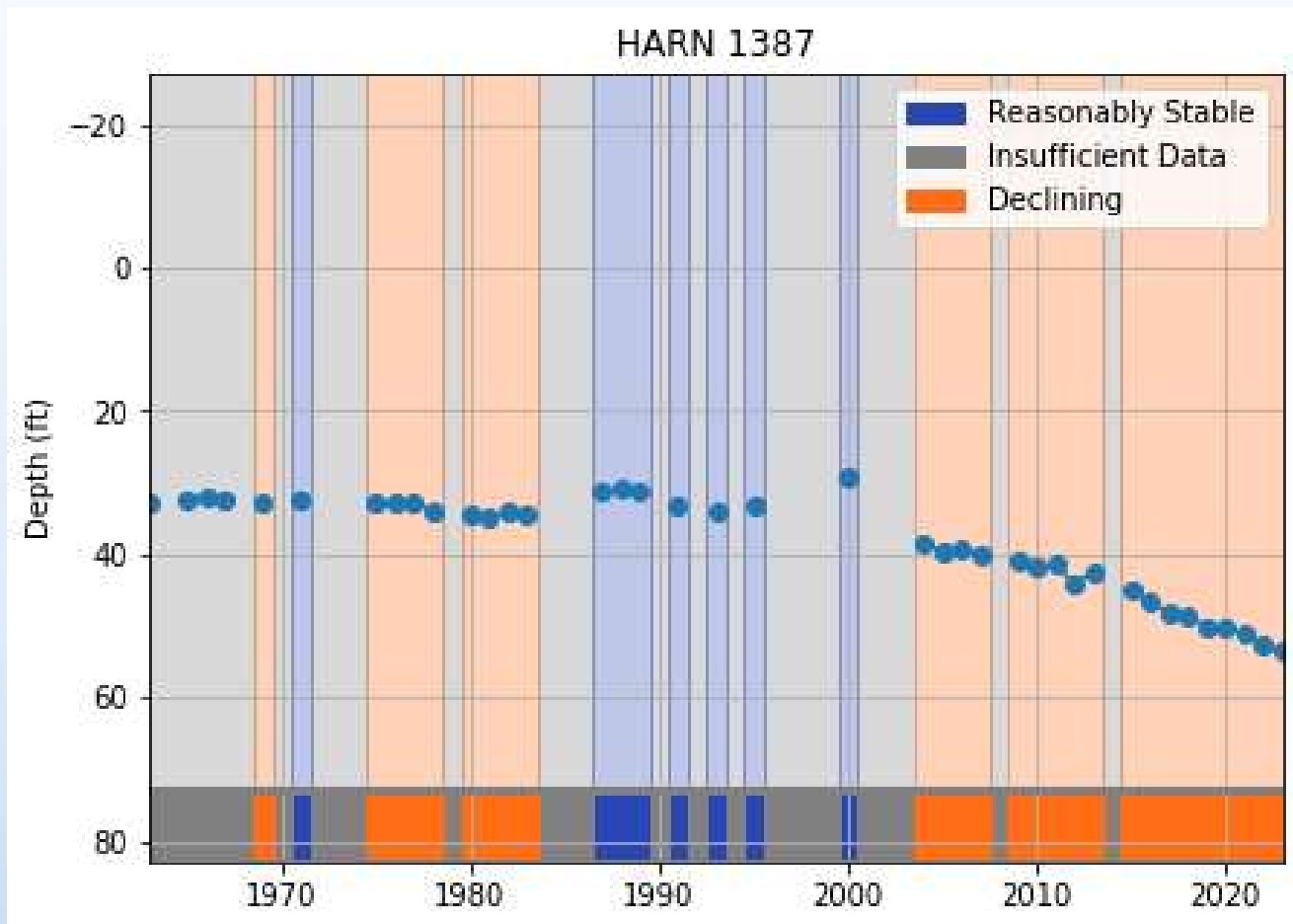
- 1-year declines less than 1 foot
- 10-year changes show no decline

Allow any stable rate to qualify

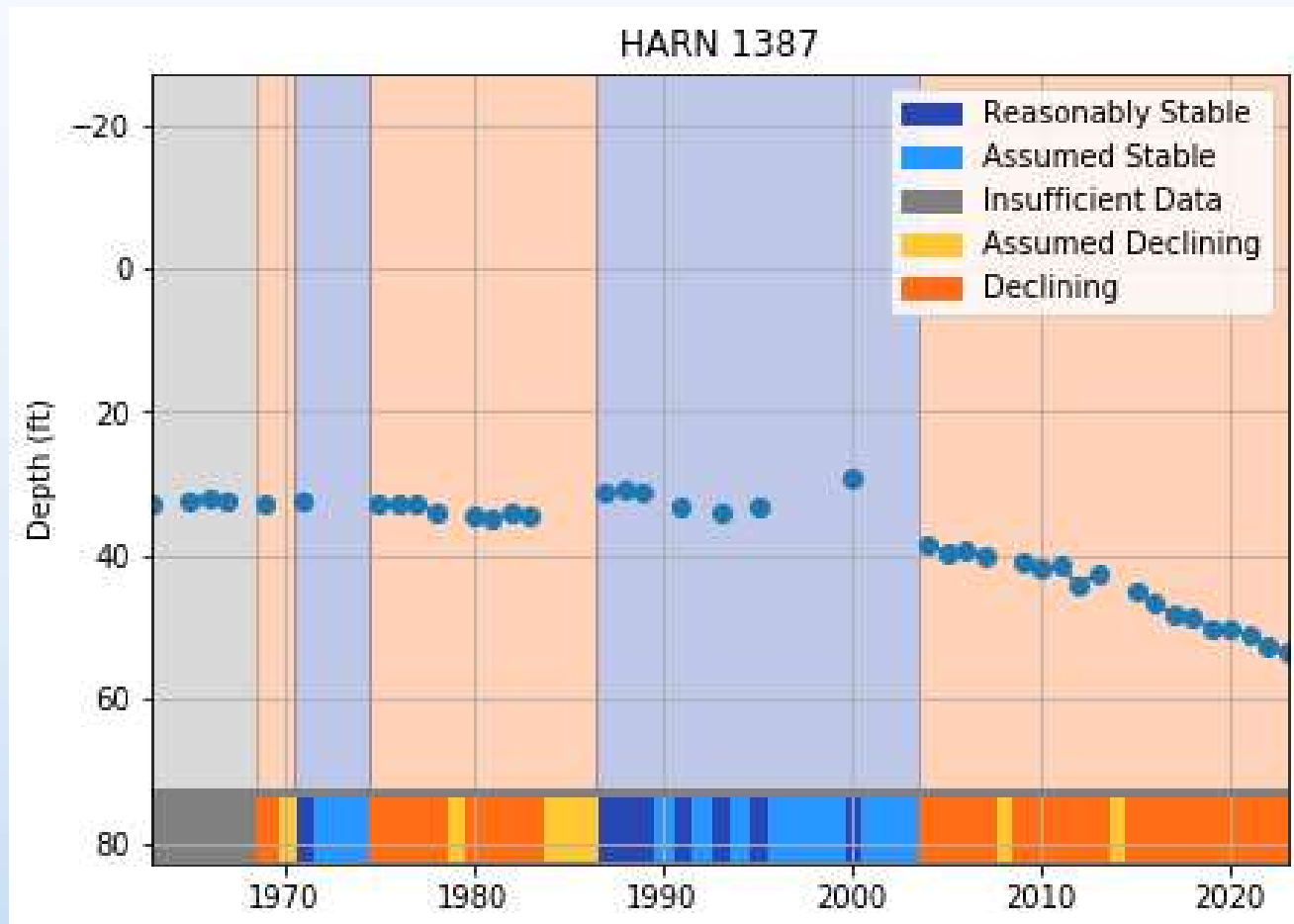


Any historic rate is not declining

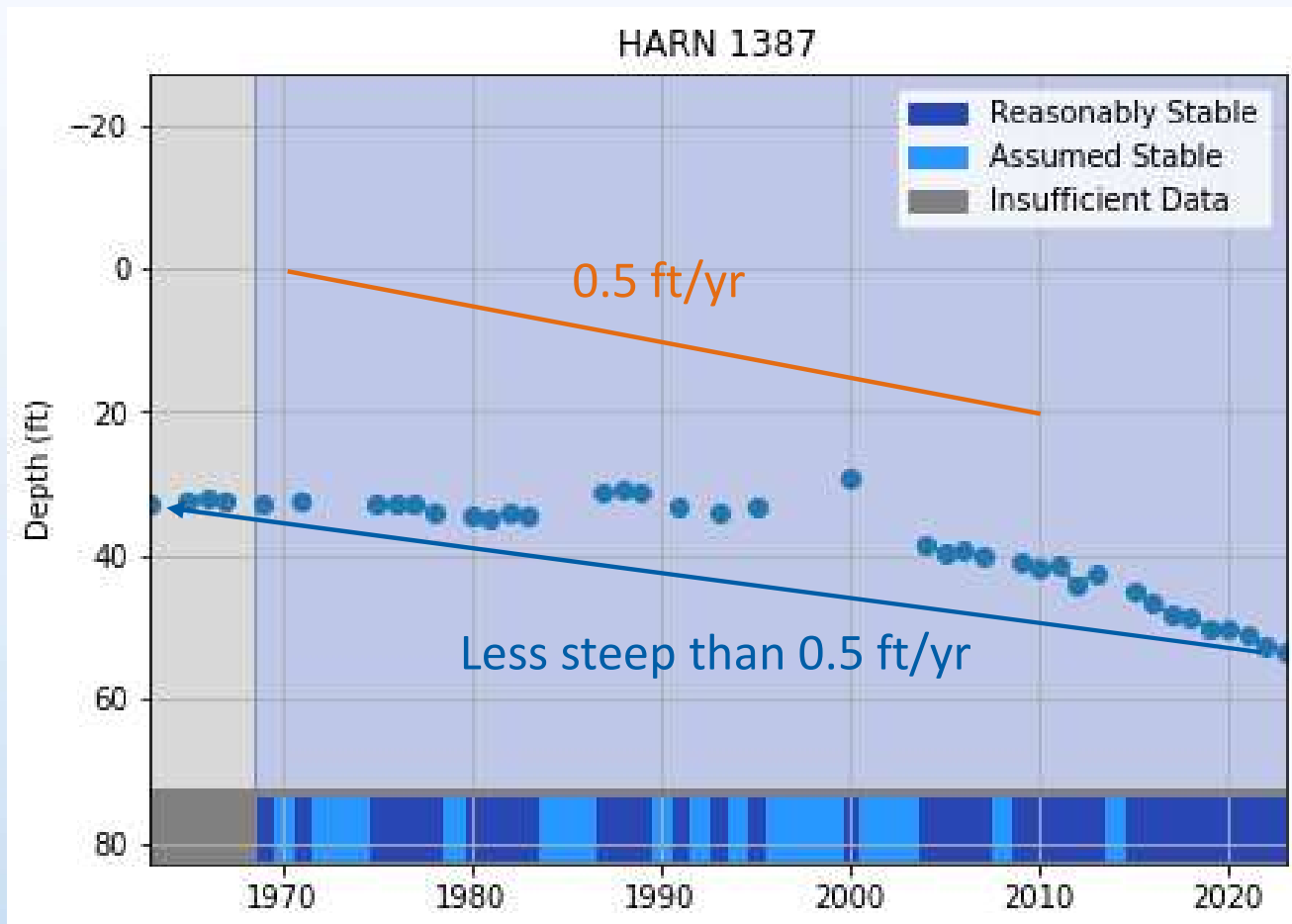
Allow any rate over 5 years



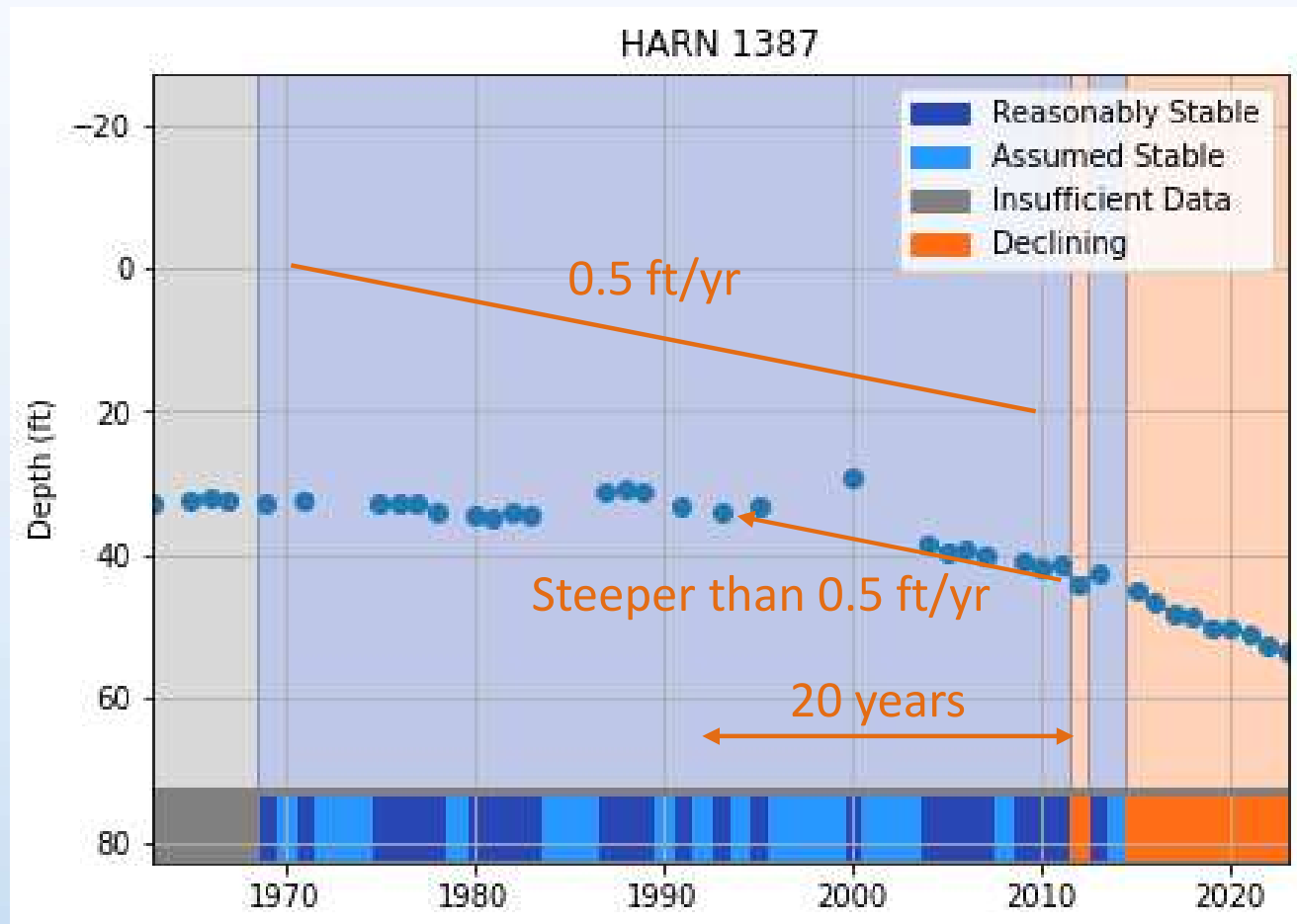
Allow findings to persist 5 years



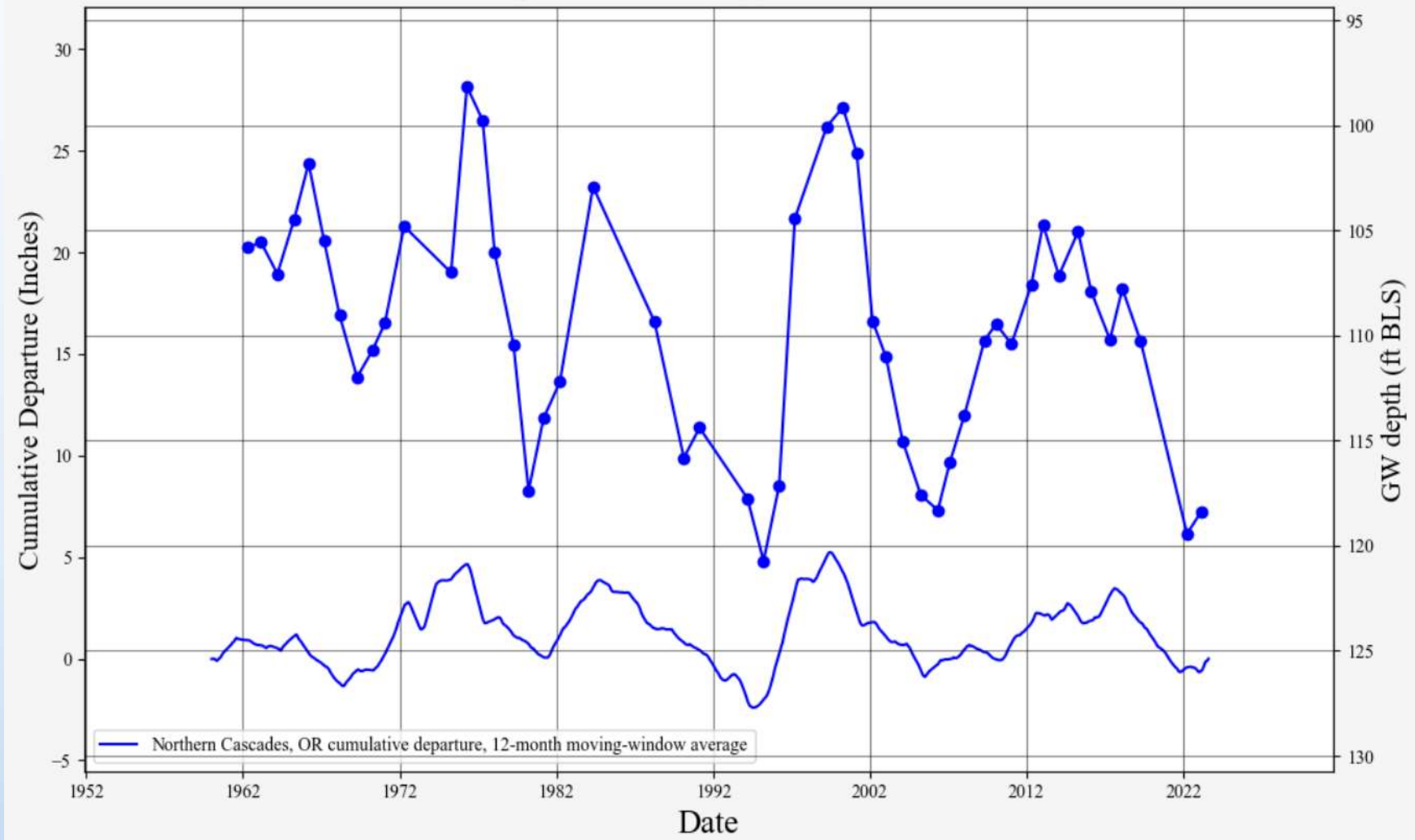
Allow declines up to 0.5 ft/yr



Limit averaging period to 20 years



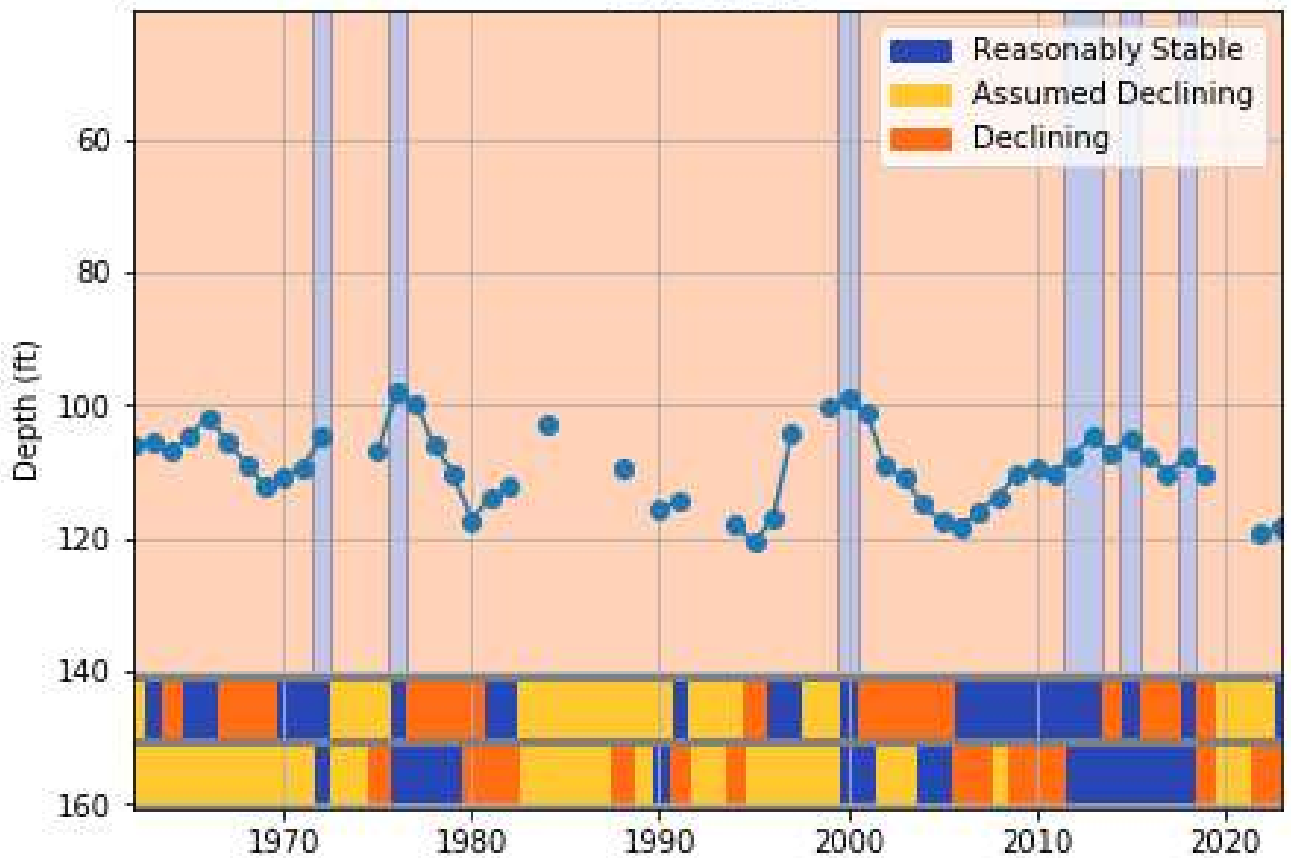
Example 2: Declining or Oscillating?



Original CGWA definition

Definition from Umatilla Critical Groundwater Areas, *applied to 1 well:*

DESC 3016



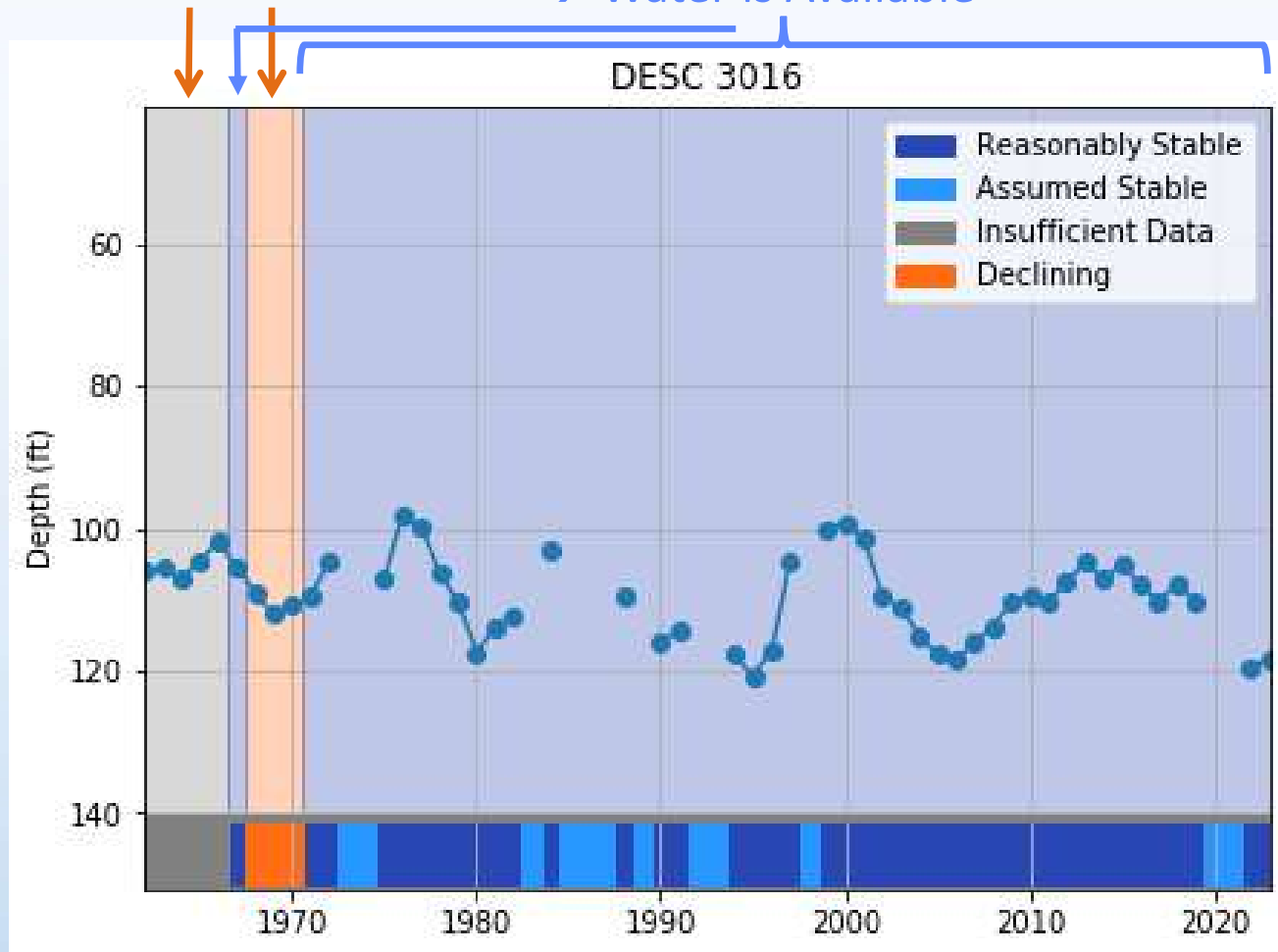
• 1-year declines less than 1 foot

• 10-year changes show no decline

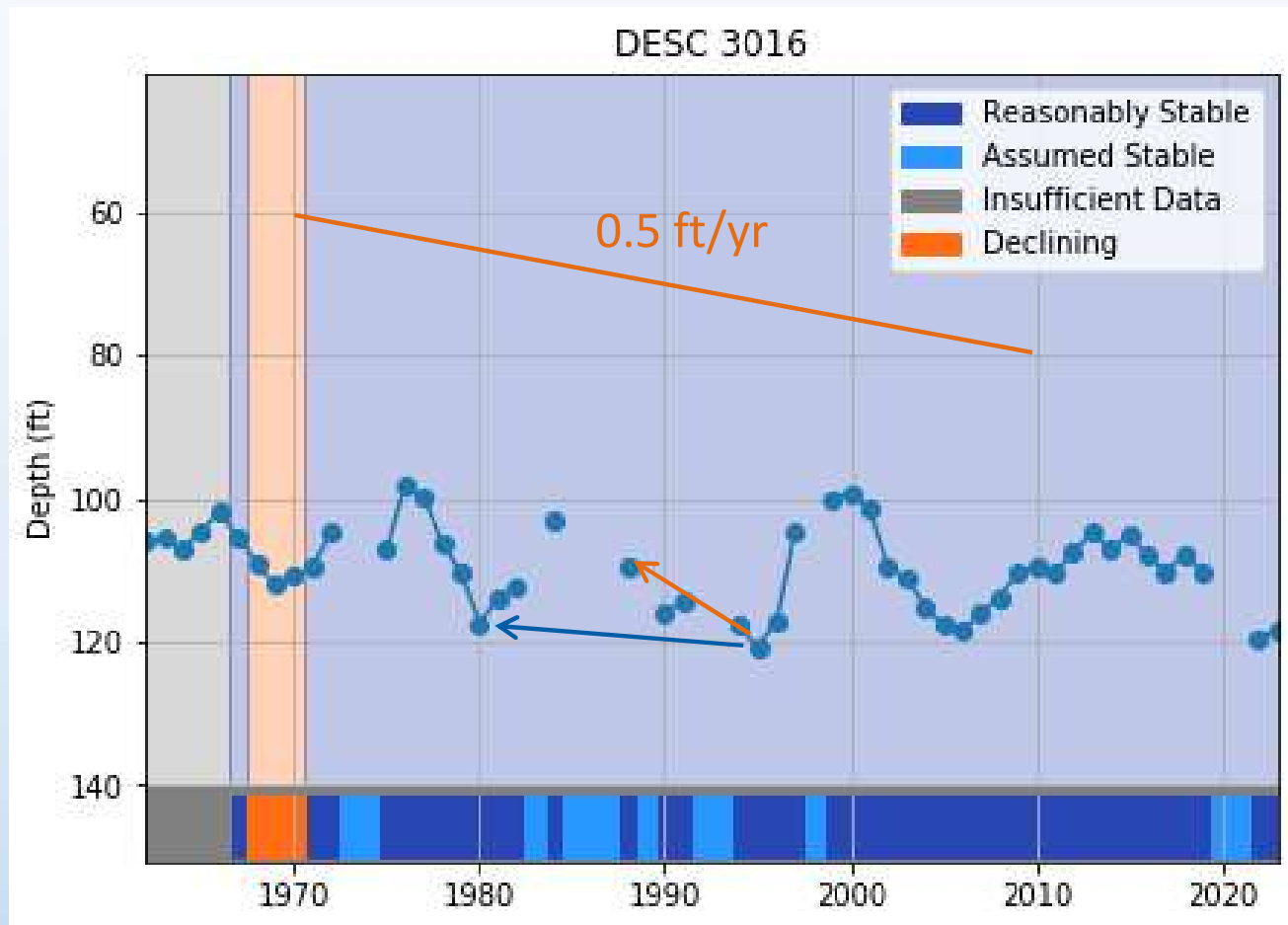
More Flexible Definition

Water is
Not Available

Reasonably Stable
→ Water is Available

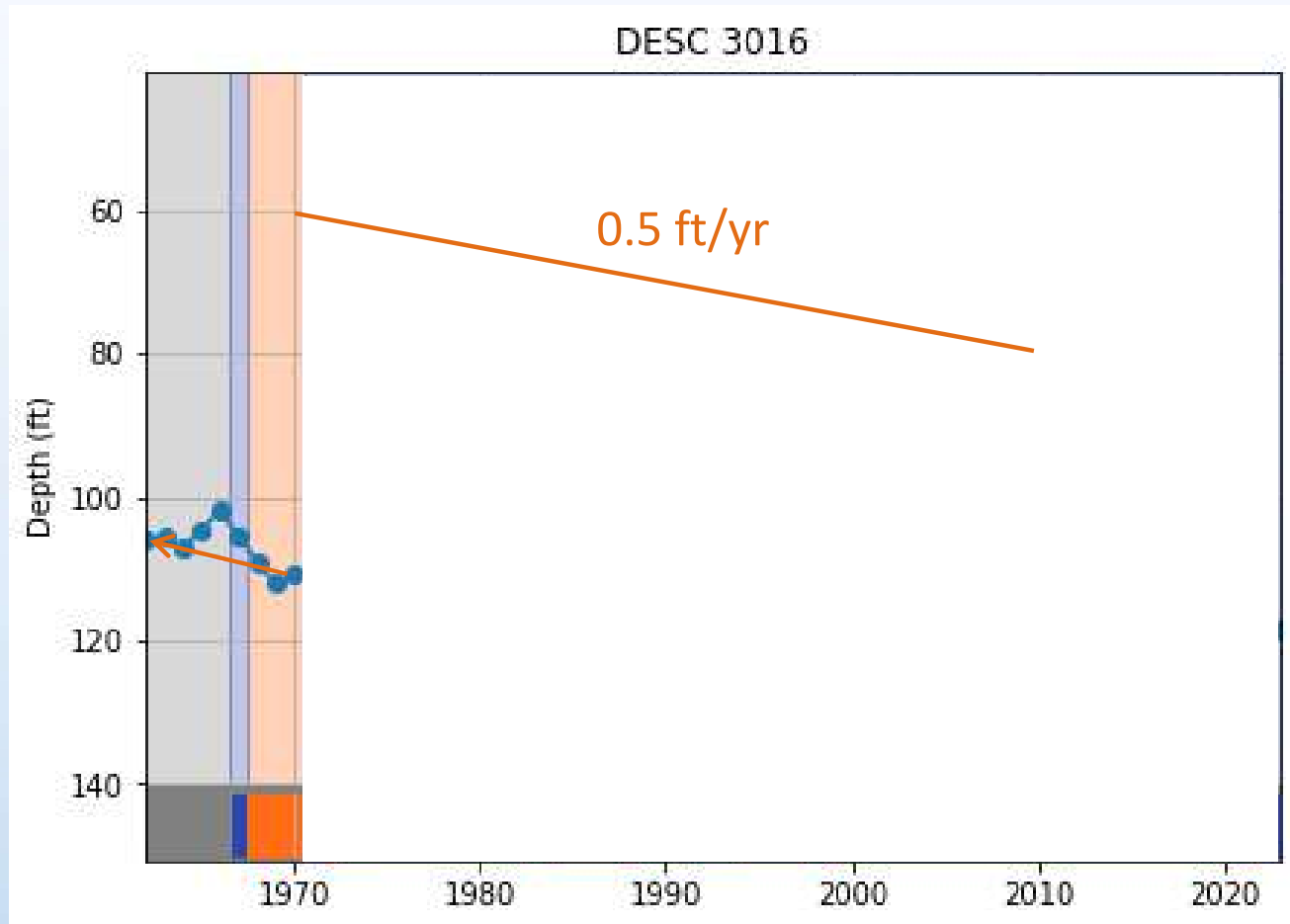


More Flexible Definition



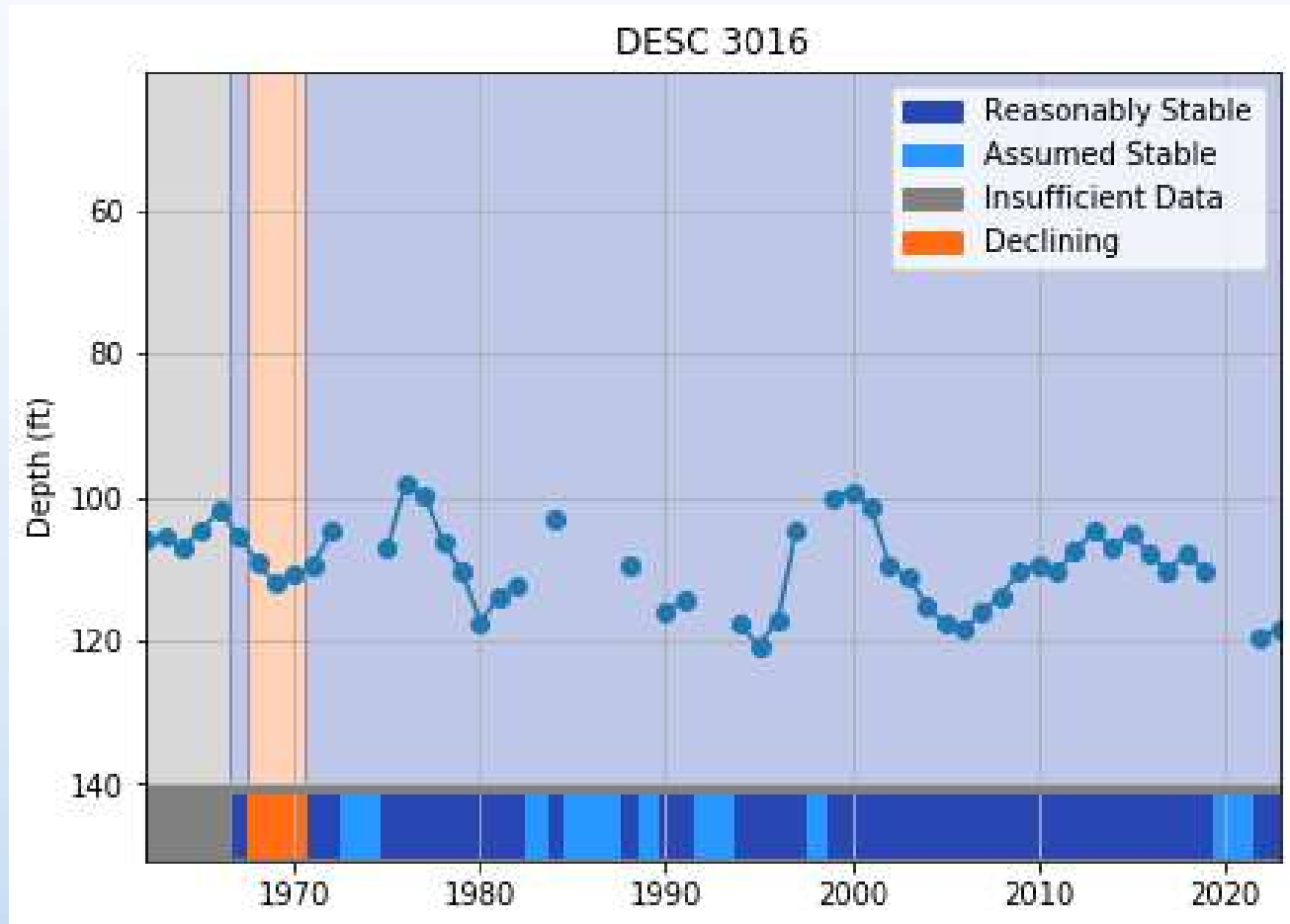
Decline rate
less than 0.5 ft/yr
over any period
between 5 and 20 years

More Flexible Definition



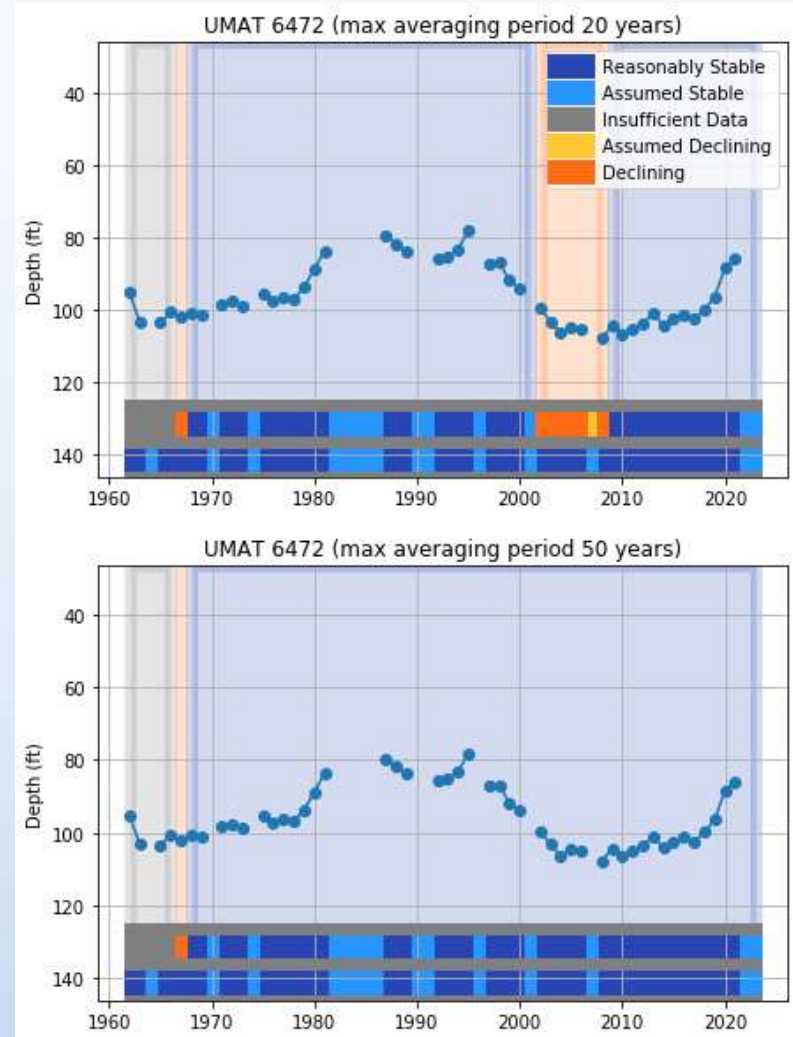
Decline rate
less than 0.5 ft/yr
over any period
between 5 and 20 years

More Flexible Definition

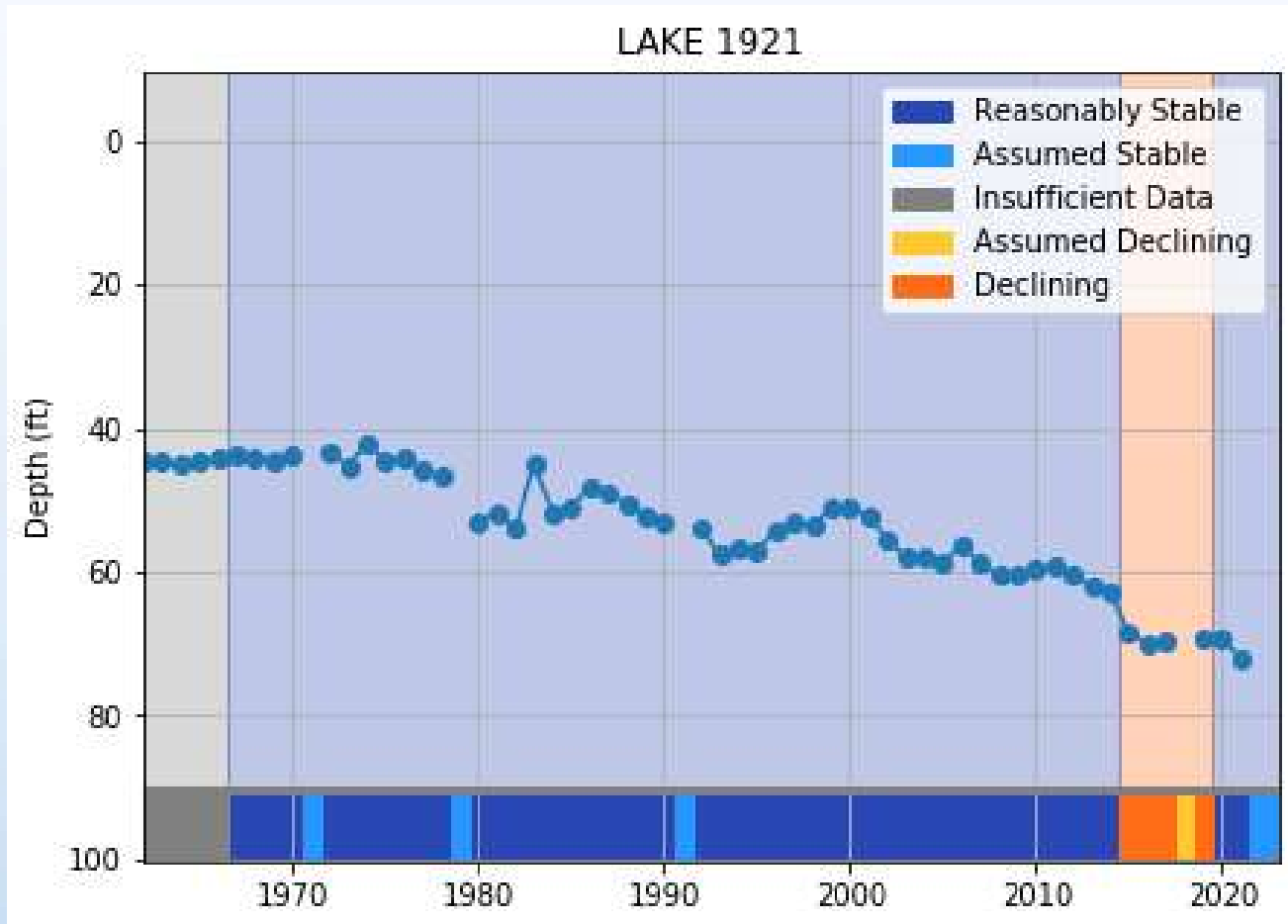


Example 3: Long-term Oscillations

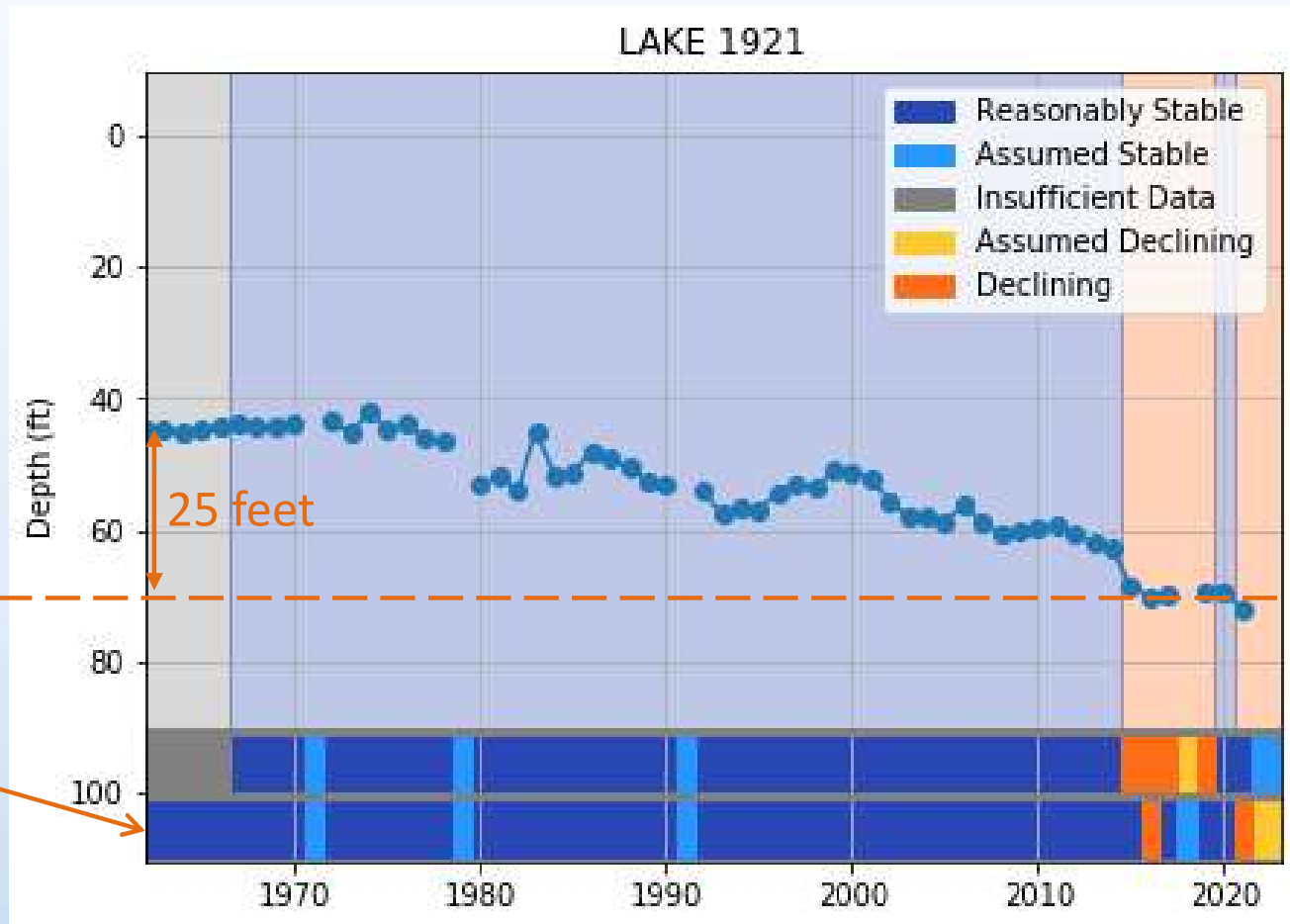
- 20-year limit averages over ~decadal climate oscillations
- It does not capture longer cycles



Example 4: Long, Slow Declines



Limit declines from first



“Reasonably Stable” Goals

Goal	How addressed in proposed rule?
Applies to a well	Define the test for a well.
Is reasonably consistent with hydrogeologist interpretation	Test rate and total declines with limits tuned on representative data. Allow interpretation of representative annual high.
Can be tested automatically with sufficient data	Define and test with computer code.
Is complementary to “declining groundwater levels”	Define test with only 3 options: “reasonably stable”, “declining”, “insufficient data”.

“Reasonably Stable” Goals

Goal	How addressed in proposed rule?
Detects onset of rapid declines within 10 years	Rate between 5 and 20 years less than 0.5 ft/year.
Detects slow declines with decades before 50 ft	Total declines less than 25 feet from first.
Avoids oscillations due to short-term variability unrelated to pumping	Require minimum 5 years of data. Allow averaging up to 20 years.
Limits the burden of collecting initial water levels	Allow data over 5 years sufficient to test stability. Allow inference of initial level from nearby wells.
Remains robust to missing data	Allow status to persist 5 years based on rate and indefinitely if total more than 25 feet. Allow inference of initial level from nearby wells.

“Reasonably Stable Groundwater Levels” New Definition - 690-008-0001(10)

(10) “Reasonably Stable Groundwater Levels” means that, for a well:

(a) The representative annual high water level for the year under evaluation:

(A) indicates an average rate of decline in representative annual high water levels of less than 0.5 foot per year over any immediately preceding averaging period between 5 and 20 years; and

(B) is less than 25 feet deeper than the first measured representative annual high water level. If preceding water level data in nearby wells accessing the same aquifer are sufficient to establish the water level elevation as it would have existed earlier in the subject well, then that water level may be used to represent the annual high water level.

“Reasonably Stable Groundwater Levels” New Definition - 690-008-0001(10)

(10) “Reasonably Stable Groundwater Levels” means that, for a well:

...

(b) In the absence of more recent data, a finding of reasonable stability may be presumed to persist for a maximum of 5 years.

(c) This definition may be superseded by a basin program rule adopted pursuant to the Commission’s authority in ORS 536.300 and 536.310, but such a definition may not indicate reasonably stable groundwater levels when they would not be indicated by this statewide rule. A superseding definition must also be consistent with the superseding definition of “Declining Groundwater Levels” in OAR 690-008-0001(5) such that water levels cannot simultaneously be both reasonably stable and declining.

Division 008 Overview

<i>Rule</i>	Revision Overview
<i>690-008-0001(5)</i> <i>Definition of “Declining Groundwater Levels”</i>	<p>New statewide definition of term in statute:</p> <ul style="list-style-type: none">• nearly inverse of reasonably stable• “insufficient data” implies “water is not available” but not “overdrawn”• can be superseded by a basin program rule that is no less stringent

“Declining Groundwater Levels” New Definition - 690-008-0001(5)

(5) “Declining Groundwater Levels” means that, for a well:

(a) The representative annual high water level for the year under evaluation:

(A) indicates an average rate of decline in representative annual high water levels of at least 0.5 foot per year over all immediately preceding averaging periods between 5 and 20 years that can be evaluated; or

(B) is at least 25 feet deeper than the first measured representative annual high water level. If preceding water level data in nearby wells accessing the same aquifer are sufficient to establish the water level elevation as it would have existed earlier in the subject well, then that water level may be used to represent the annual high water level.

“Declining Groundwater Levels” New Definition - 690-008-0001(5)

- (5) “Declining Groundwater Levels” means that, for a well:
- (b) In the absence of more recent data, a finding of declining water levels may be presumed to persist for a maximum of 5 years if based on the average rate of decline as in (a)(A) above, or indefinitely if based on decline from the first measurement, as described in (a)(B) above.
 - (c) This definition may be superseded by a basin program rule adopted pursuant to the Commission’s authority in ORS 536.300 and 536.310, but such a definition must also indicate declining groundwater levels whenever they would be indicated by this statewide rule. A superseding definition must also be consistent with the superseding definition of “Reasonably Stable Water levels” in OAR 690-008-0001(10) such that water levels cannot be both reasonably stable and declining.



Public Comment



Wrap Up/Next Steps

Wrap Up/Next Steps

Email Rules Coordinator (laura.a.hartt@water.oregon.gov)

- Any additional input regarding today's draft rules by May 3, 2023
- Suggestions on how to improve meeting logistics

Next RAC Meeting

- **When:** May 31, 2023, from 8:30 am - noon
- **Where:** Rogue Conference Room, 3rd Floor, OWRD, Salem & via Zoom
- **What:** Division 410, Division 9