



We work with others to protect the health of the people of Washington State by ensuring safe and reliable drinking water.



**NEED HELP PROTECTING
YOUR DRINKING WATER?**

October 24, 2023

Washington State Department of Health

Office of Drinking Water



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Source Water Protection Program



Photo: Tony Cole, PrintGuyStudio, Etsy

Today's Topics

teamwork

alignment

technology

... then money



teamwork

Forming mutually beneficial
working relationships with
your local government

Drinking Water is Fundamental

Fully planning: [RCW 36.70A.020](#)(10)

“Protect the environment and enhance the state's high quality of life, including air and **water quality, and the availability of water.**” (1990)

Partially planning: “**quality and quantity**”

Cities/towns [RCW 35.63.090](#) added 1984; “facilitate adequate provision of water” 1935-1984

Code cities [RCW 35A.63.061](#)(1) added 1984

Counties [RCW 36.70.330](#)(1) required 1984; optional 1959-1984

Drinking Water in Local Comp Plans

- Service area land use & zoning (source water protection, ID pressure/lift issues, main sizing)
- Practicality—system growth & capital investments vs. where new growth is planned to occur
- Zoning dictates land use in wellhead protection areas (WHPAs)

Critical Areas Protections

Designate & protect (via development regulations) critical areas, including critical aquifer recharge areas ("areas with a critical recharging effect on aquifers used for potable water" - CARAs), using best available science

(RCW 36.70A.030(5), .060, 170, & .172)

Local Critical Areas Regulations

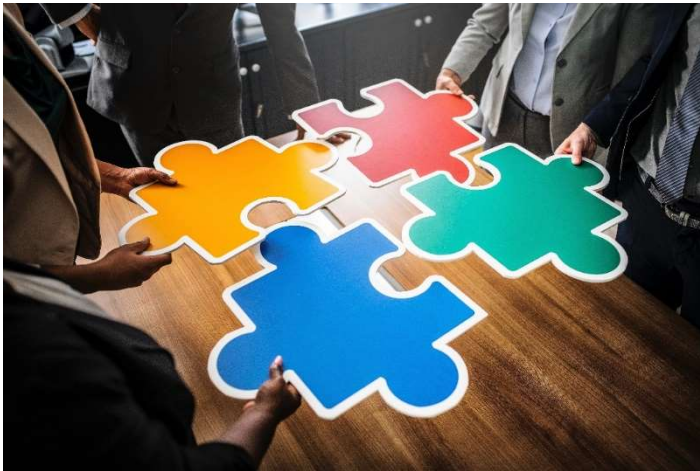
[WAC 365-190-100](#) (4)(b)

"Areas with a critical recharging effect on aquifers used for potable water"

Examples:

- Sole source aquifers ([EPA designation](#))
- Special protection areas > groundwater management program (Ch. [90.44](#), 90.48, & [90.54](#) RCW; & Ch. [173-100](#) & [173-200](#) WAC)
- Wellhead protection areas (*new definition in [WAC 365-190-030](#))
- Areas near marine waters subject to saltwater intrusion
- Other areas meeting the definition of "areas with a critical recharging effect on aquifers used for potable water" (What's in case law & local BAS?)

Help Your Local Government to Help You



Participate in their comprehensive planning process!

- What kind of developments are coming?
- Where will development occur?
 - Provide data
 - Identify issues



alignment

Correlating water system &
comp plans/critical areas
regulations

Group A Water System Plan Content - 1

- Identify “related plans...such as local land use plans...” (20-year horizon) – must be consistent
- Service area land use & zoning (use in wellhead protection or watershed control program)
- Service area population & growth projections (use in demand forecasting)
- Comments from local government

(WAC 246-90-100)

Group A Water System Plan Content - 2

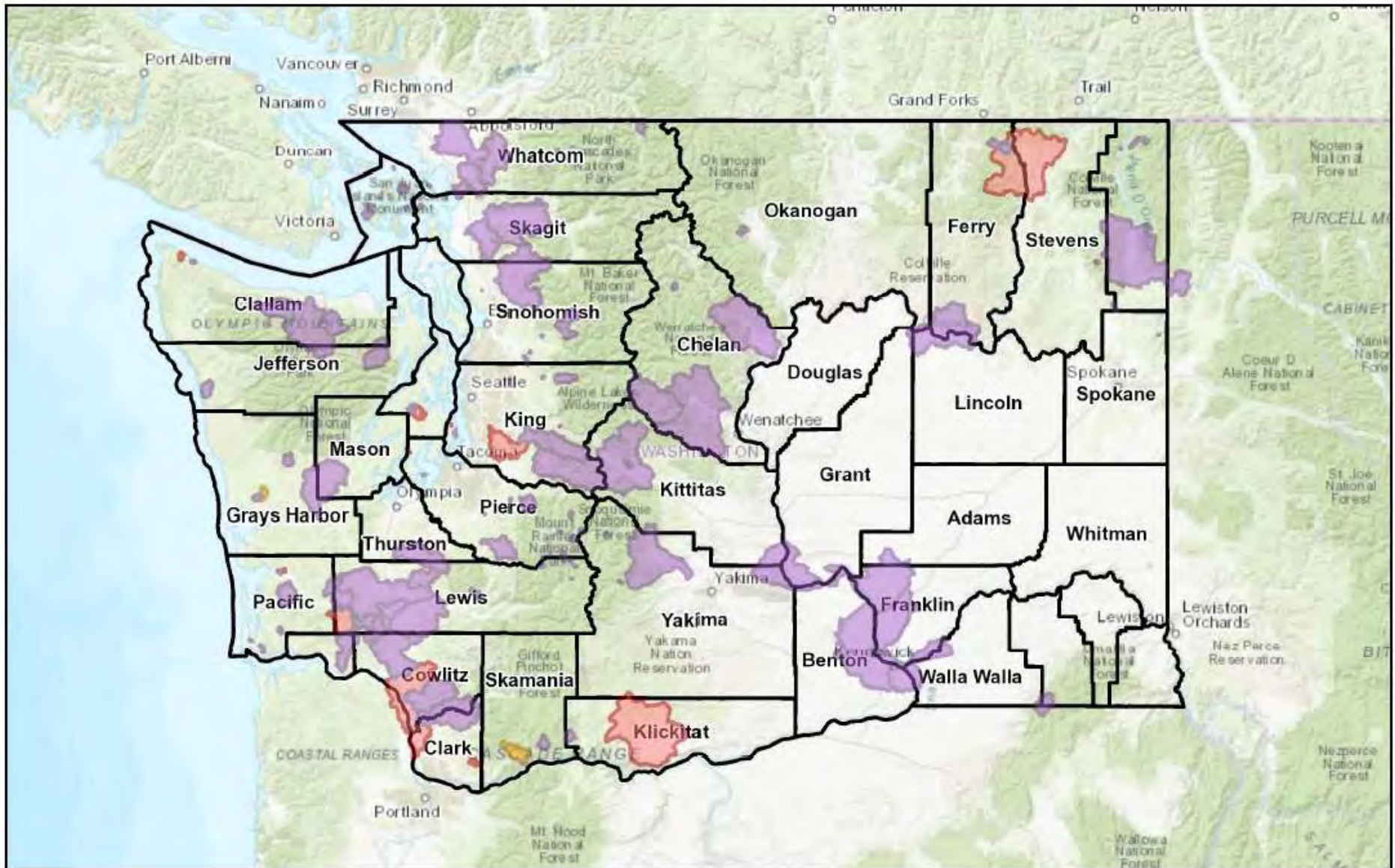
Wellhead protection program (groundwater/spring sources) includes susceptibility assessment

-OR-

Watershed control program (surface water/GWI sources) includes inventory of land ownership & specific location of potential contaminant sources & activities

(WAC 246-290-135)

Surface Water Protection Areas



What is Source Water Protection, Anyway?

- Actions, not policies
- Preventative, not reactive
- Tailored & planning-based considering such things as geography, surroundings, future growth & land uses, capacity, & emergency response
- Actively maintained (current/updated)
- Bottom line: steps to keep your drinking water clean and drinkable!

Source Water Protection 101

- 1996 amendments to federal Safe Drinking Water Act
- WAC 246-290-135—sanitary control area, wellhead protection program (wells & springs), watershed control program (surface water/GWI)
- Part of Group A water system plan or small water system management program (WAC 246-290-100 or -105)
- For Group B—within WAC 246-291-125

Source Water Protection Requirements

- Source water susceptibility assessment
- Sanitary control area (SCA)
- Wellhead protection program
 - Define & map wellhead protection area(s)
 - Inventory of potential contamination sources
 - Notify others of findings
 - Contingency planning
 - Coordination with local emergency responders
- Repeat inventory & notification every two years
- Update as needed (at least with WSP update)

Make Your Source Protection Meaningful

- Maintain contaminant inventory work
- Watershed-scale planning
 - Identify activities & land uses detrimental to water quality
 - Watershed management & control measures
 - Document water quality trends
- Consider a regional approach
 - Work with other utilities
 - Engage the public
 - Communicate with local government & emergency response agencies



State & local weed control boards don't have to consider wellhead protection

A special note on noxious weed control



- Familiarize yourself with state & local noxious weed lists
<https://www.nwcb.wa.gov/>
- Mechanically remove any concerning growth before it establishes
- Be careful! Some can harm workers (Pictured: Giant Hogweed-highly phototoxic)

Local Government Agency Coordination

Notify local emergency responders*
(police/fire/health) of:

- Wellhead protection area boundaries
- Results of susceptibility assessment
- Potential contaminant inventory findings
- Contingency plan

**Suggest including weed control board*

Local Government Consistency

- Water system plans must be consistent with locally adopted plans & regulations.
 - Comp plan & zoning maps in the plan are consistent with the local jurisdiction.
 - The water system's growth projection is consistent with local growth projections.
 - The service area policies are consistent with local plans & regulations.
 - (For only cities & towns only) The plan is consistent with the city or town's utility service extension ordinances.
 - All other relevant plans & regulations are addressed.

Planning Interaction with Local Government

- Request consistency review from local government – who is important!
- Sometimes: \$\$\$
- Give them 60 days to get back to you (can extend to 90 days total)
- If they don't respond, do it yourself
- If consistent: document
- If inconsistent: discuss, fix, & document

(WAC 246-290-108)



Pay Attention to Public Notices!

SEPA determinations

Postings on property

Written notice in mail

Emails

Difference between notice & development review "can you serve this?"

WAC 197-11-970 - Determination of Non-significance (DNS)

Date of Notice: October 23, 2014

Lead Agency/Proponent: Chelan County Public Works

Project Location: The proposed project is located at 3612 US 97A City of Wenatchee in Lots 17 & 18 in the Plat of Rimrock, Chelan approximately 2.92 acres.

Project Description: This proposed project will construct and operate a facility where household hazardous wastes will be sorted, packaged and shipped to a Total Storage and Disposal facility (TSD) Contractor. The project will follow all the regulations under Chapter 173-201, their unwanted items such as paints, garden pesticides, and vehicle parts.

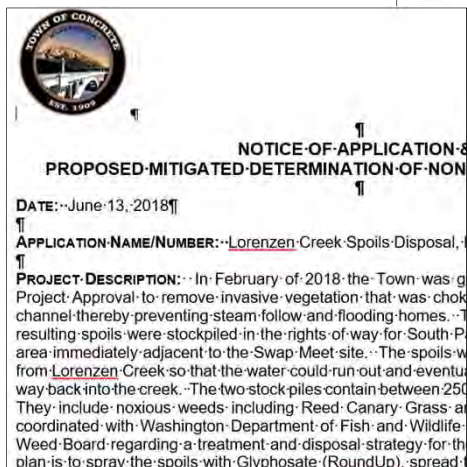
Decision: The lead agency for this proposal has determined that it does not have a significant impact on the environment. An environmental impact statement is not required under RCW 43.21C.030(2)(c). This decision was made after review of a completed environmental impact statement on file with the lead agency. This information is available to the public.

There is no comment period for this DNS.

This DNS is issued using the optional DNS process in WAC 197-11-340(2).

This DNS is issued under WAC 197-11-340(2), the lead agency must provide written notice to the applicant within 10 days from the date below.

Comments must be submitted by November 12, 2014 by 5:00 PM.



Screening Project Notices



Stuff you can probably ignore

Cell towers

Shorelines (bulkheads, stairways, docks, etc.)

Low-density residential

Variances (setbacks, height, etc.)

Code amendments for non-land use regulations



Give these a closer look

High-density residential

Manure, chemical, or waste producing uses

Storage tanks

Stormwater infiltration (larger uses)

Production wastewater (wineries, breweries, distilleries)

Biosolids & pesticides

Code amendments related to land use & CARAs



Note: Examples Only! Not an Exhaustive List

Comment Test

Use
+
Impact

Inside WHPA
+
Potentially contaminating

OR

Inside service area
+
Exceeds water right or
poses infrastructure
concerns (pressure, main
size, developer extension,
etc.)



Comment

What are you asking
them to do?

Submitting Comments

- Earlier is better
 - SEPA “use it or lose it”
 - Critical areas regulations usually kick in as part of development permits
- Call local planner to ask for more info if submittals or impacts not clear
- Put it in writing, don’t just mention it to city staff
- Don’t wait until public hearing, but do testify if concerns haven’t been addressed at earlier stage
- Pay attention if you’re copied on comments submitted by ODW

Regulatory Roles

CARAs/WHPAs	Responsible Party & Role			
	Local government (city/town/county)	DOH	Group A public water systems	Local health dept/district (LHJ)
Land-use authority ("police power of zoning")	YES (CAO, SEPA, & utilities regs)	NO	NO	NO
Advise POs & developers on allowed uses	YES	MAYBE (LOSS/new Group A)	NO stakeholder – WHPAs utility provider	MAYBE (OSS/new Group B)
Regulate development (permit admin.)	YES	PARTNER* (LOSS/new Group A)	NO	PARTNER (OSS/new Group B)

OSS=on-site system (septic) – see [Chapter 246-272A WAC](#) & local health regs
LOSS=large on-site system – see [Chapter 246-272B WAC](#)

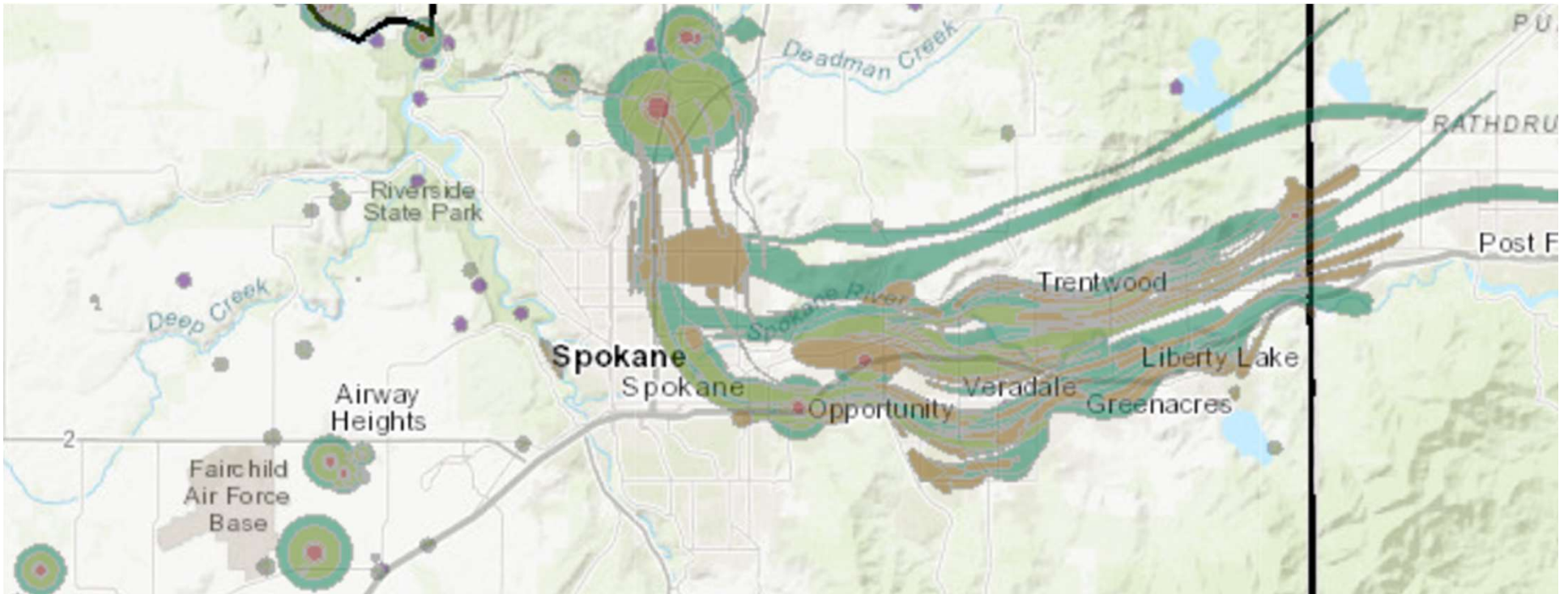
*Certain other roles may apply – see [Title 246 WAC](#)
for entire DOH authority

A stylized illustration featuring a magnifying glass with a teal handle and a white frame. Inside the lens is a globe with light blue oceans and light green continents. An orange location pin is placed on the globe, pointing to a specific area. The entire graphic is set against a light gray background with a few small white dots.

technology

Improving wellhead
protection with modeling

Mapping wellhead protection areas



Source Water Assessment Program (SWAP) Map

<https://fortress.wa.gov/doh/swap/index.html>

Coming soon: GeoHub

Assigned

Purple—Group A

1,000' radius

"Better than nothing"

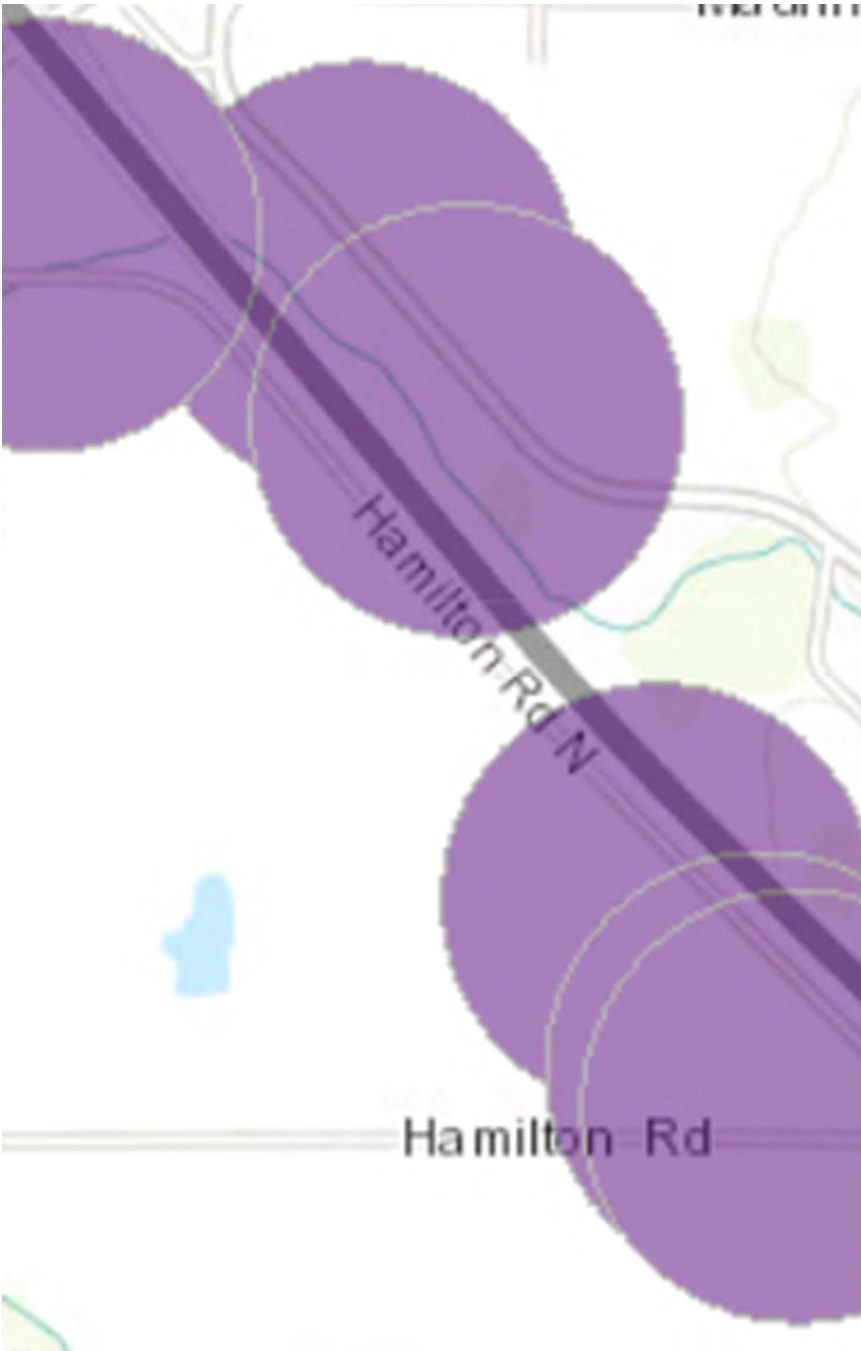
Often emergency/seasonal

Doesn't meet minimum standard



Gray—Group B

600' radius



Calculated Fixed Radius (CFR)

Most common



Red—6-month TOT

Tan—1-year TOT

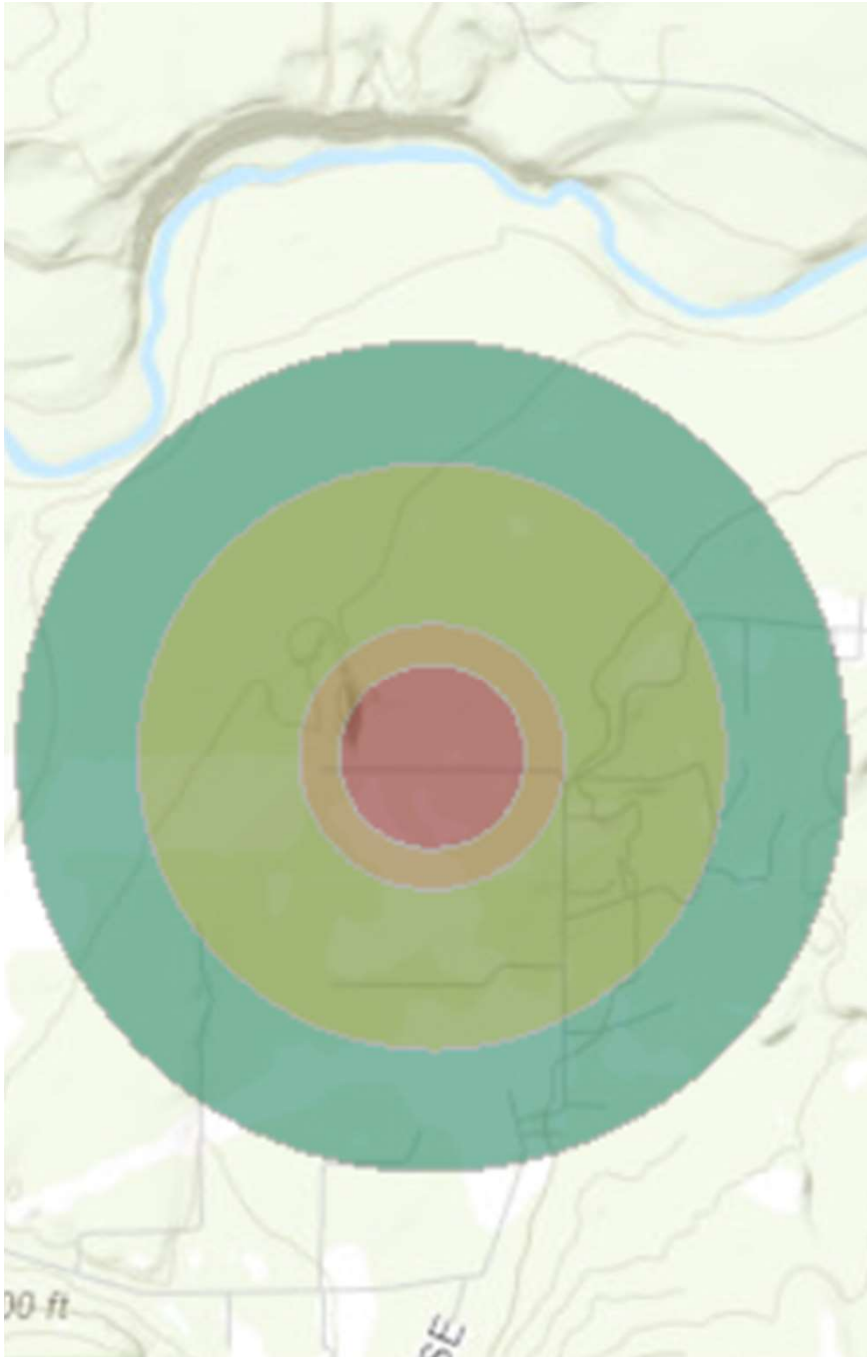
Green—5-year TOT

Teal—10-year TOT

Always a bullseye

Math formula using
operational characteristics

Theoretical model; doesn't
consider topography, soils,
groundwater flow, etc.



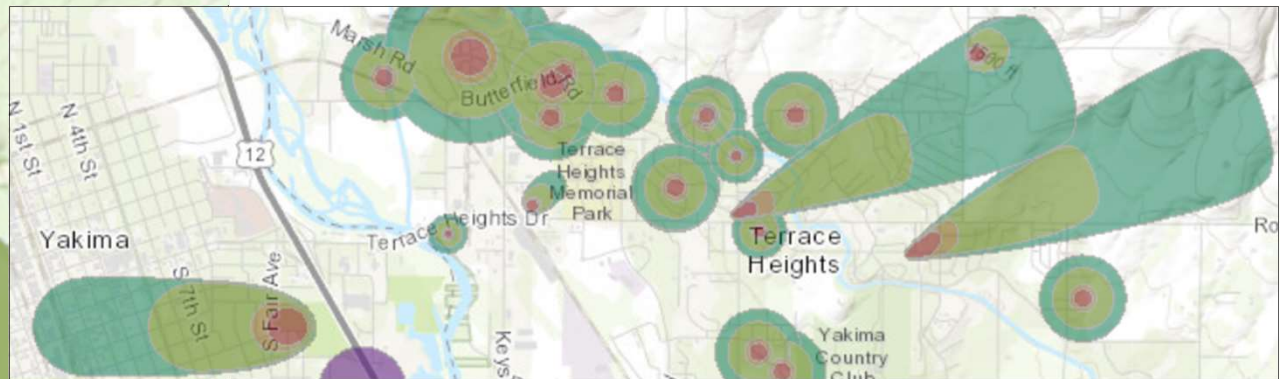
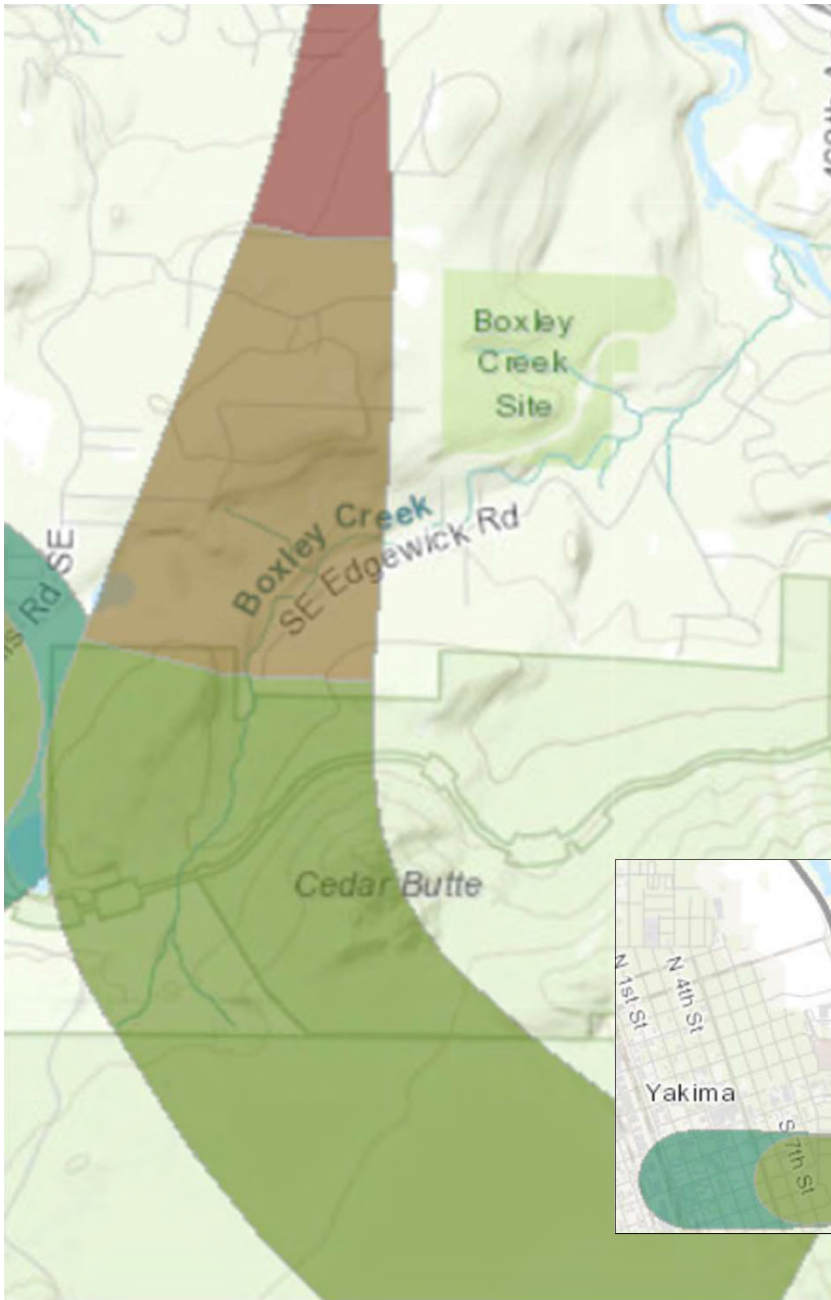
Modeled

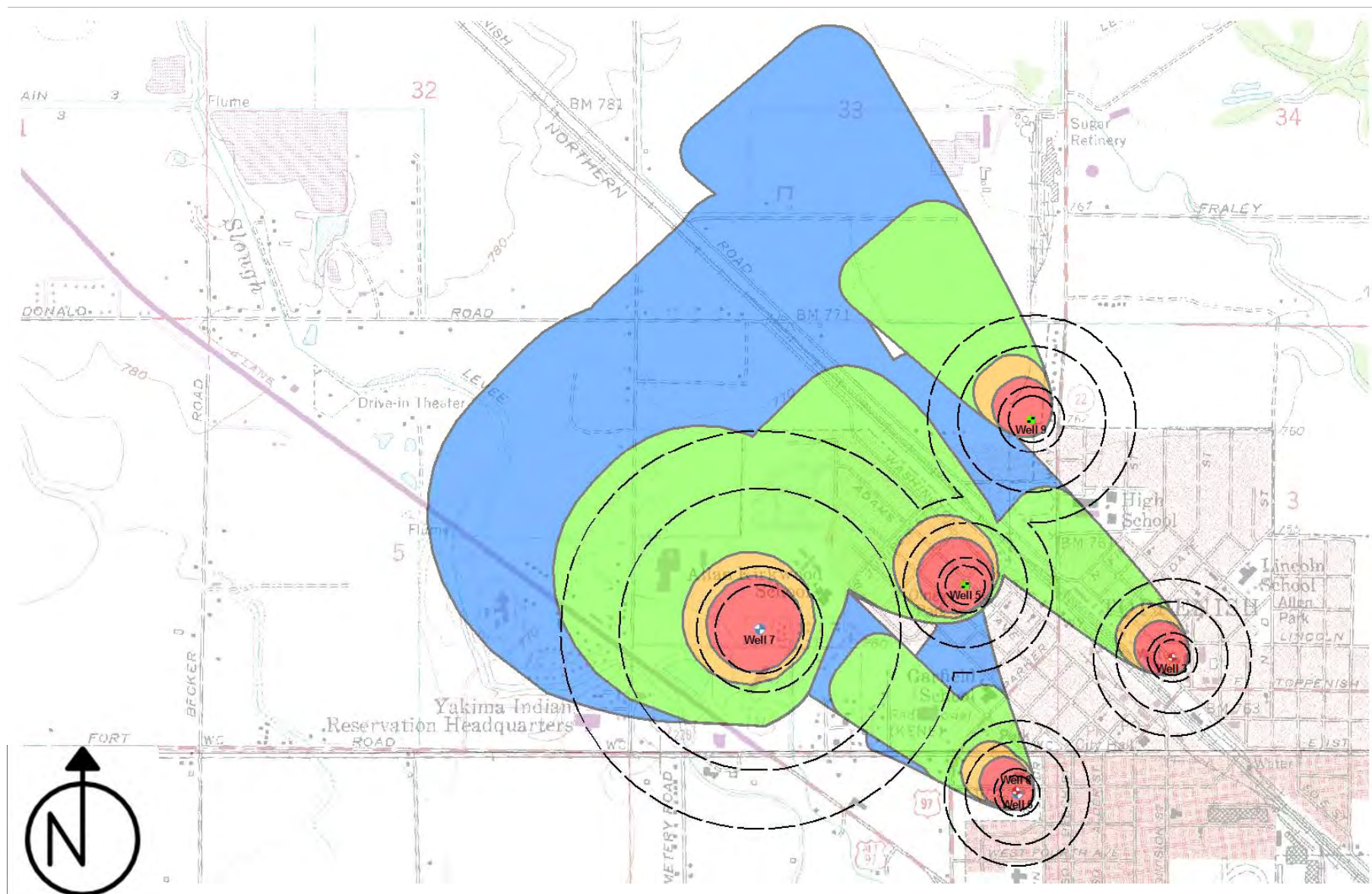


Irregularly shaped

Considers physical land & water features

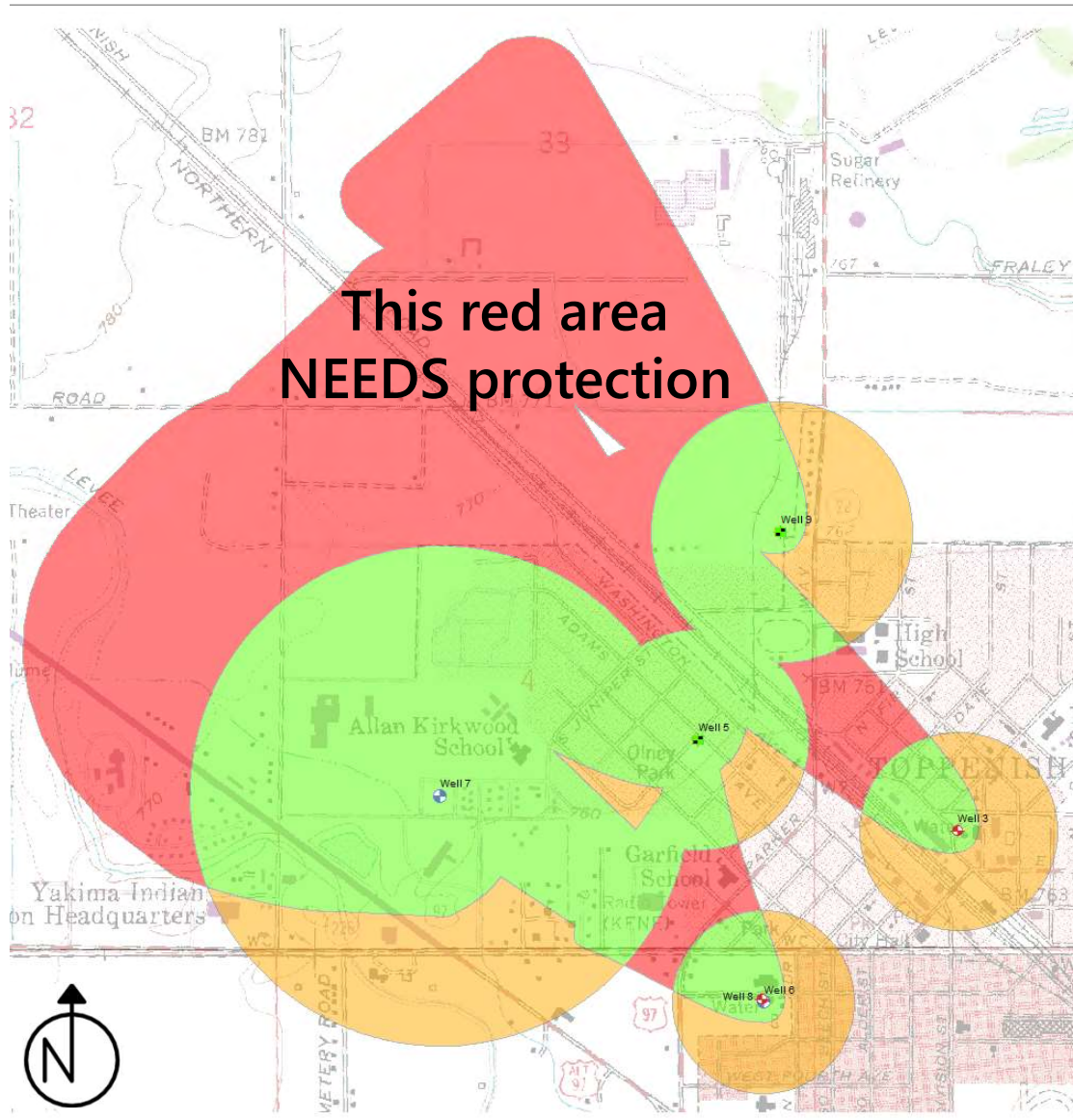
Best available info to protect source water in practice



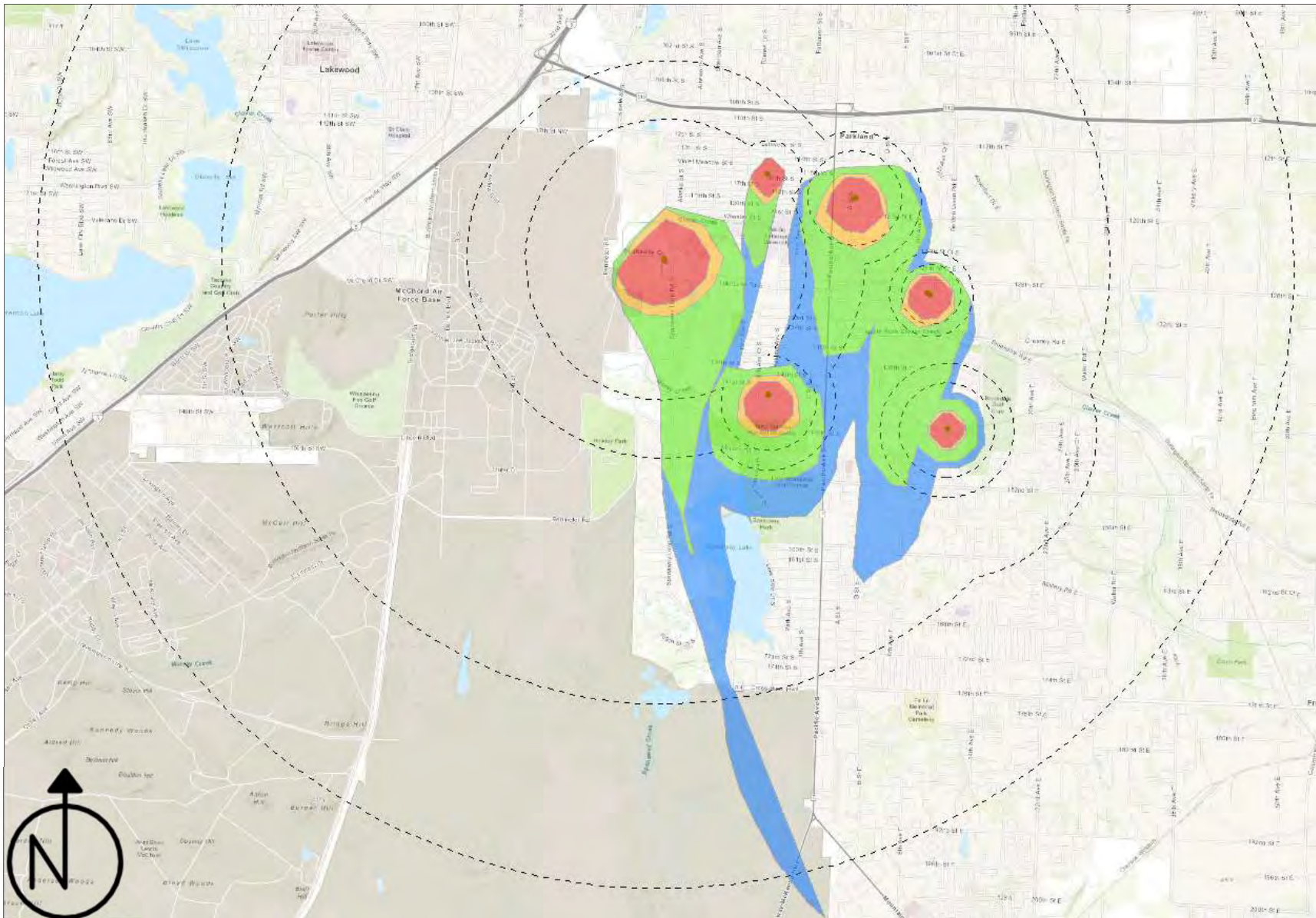


Toppenish

Conclusions - 1

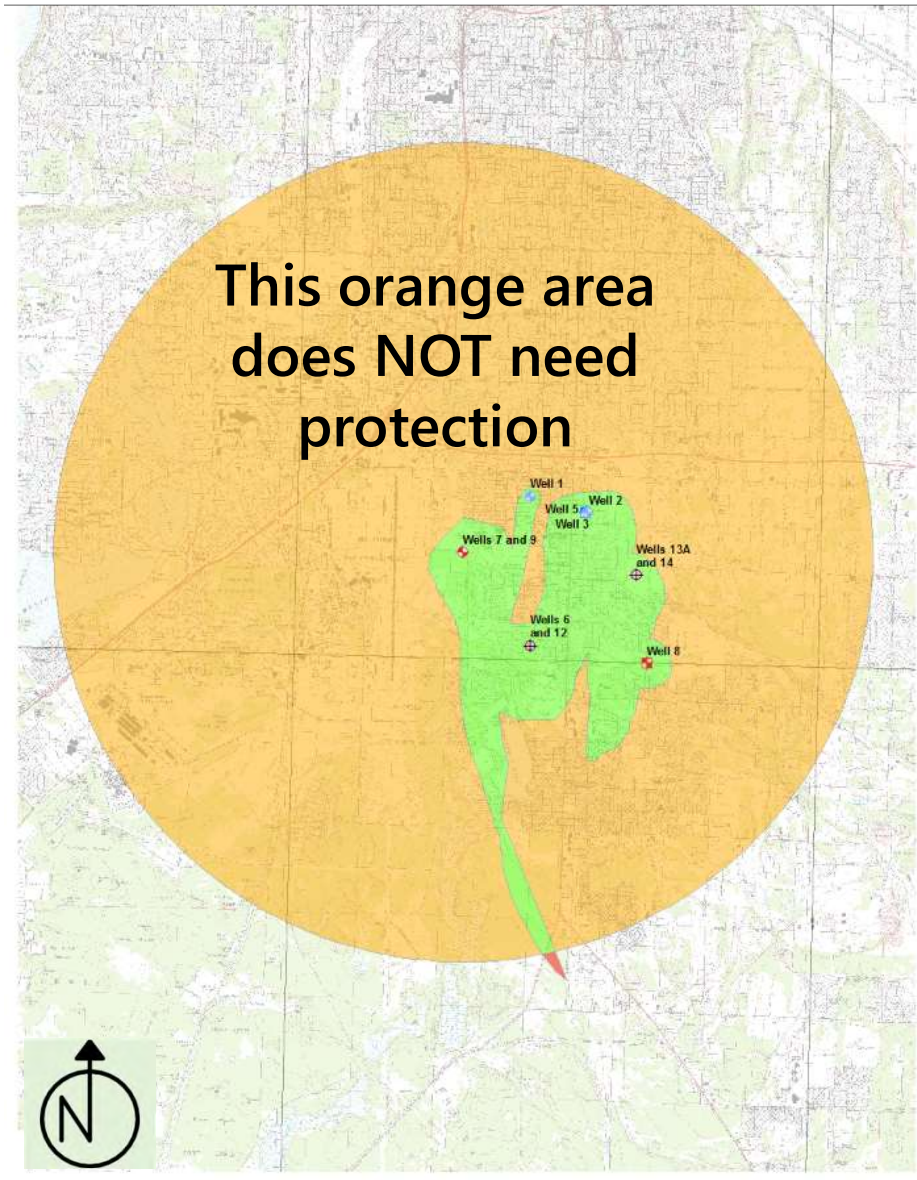


WHPAs created with the CFR method sometimes include the WHPA defined by modeling, **but often do not include areas that need protection.**



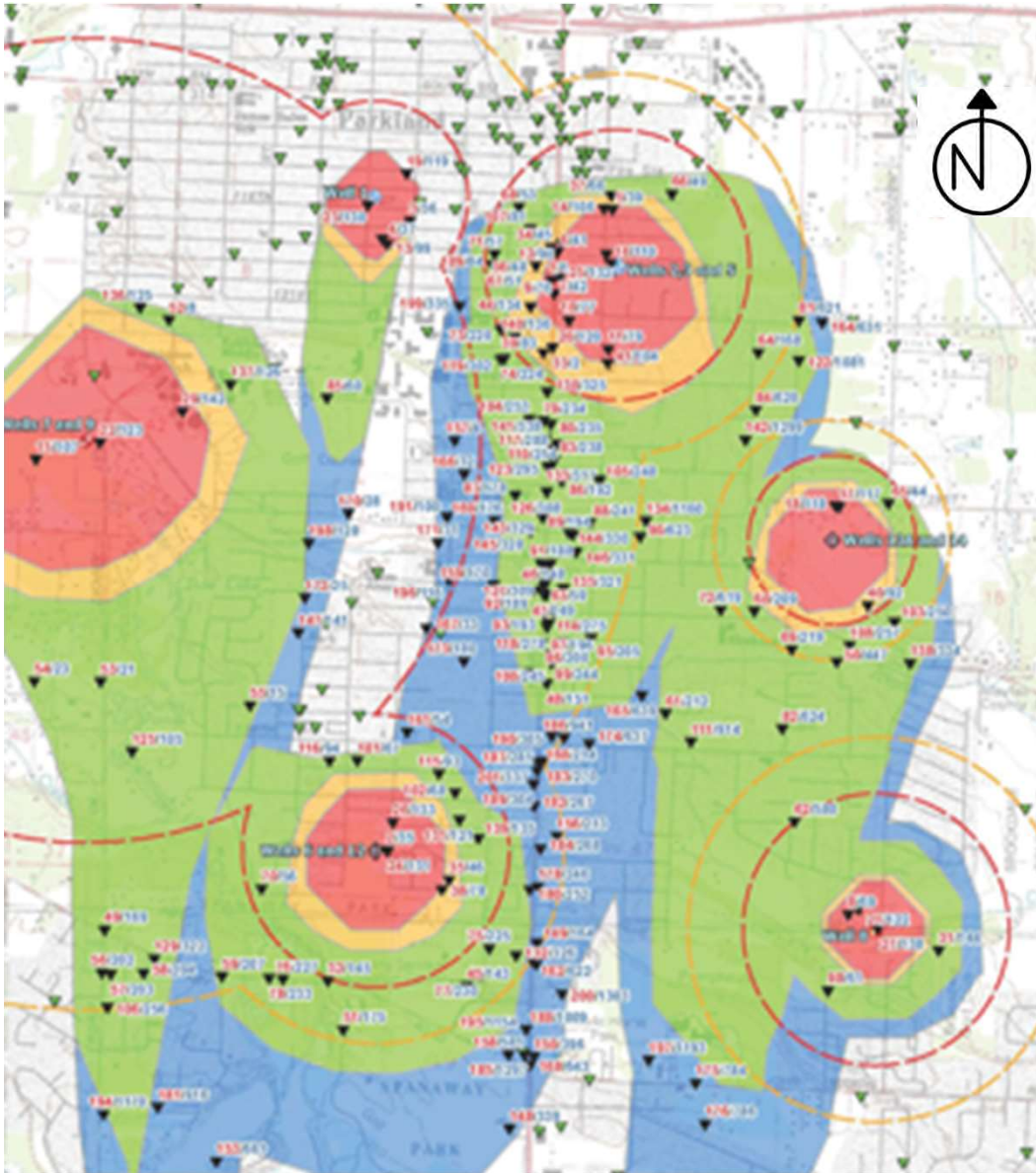
Parkland Power and Light

Conclusions - 2



WHPAs created with the CFR method **tend to include areas that do not need protection.**

Conclusions - 3



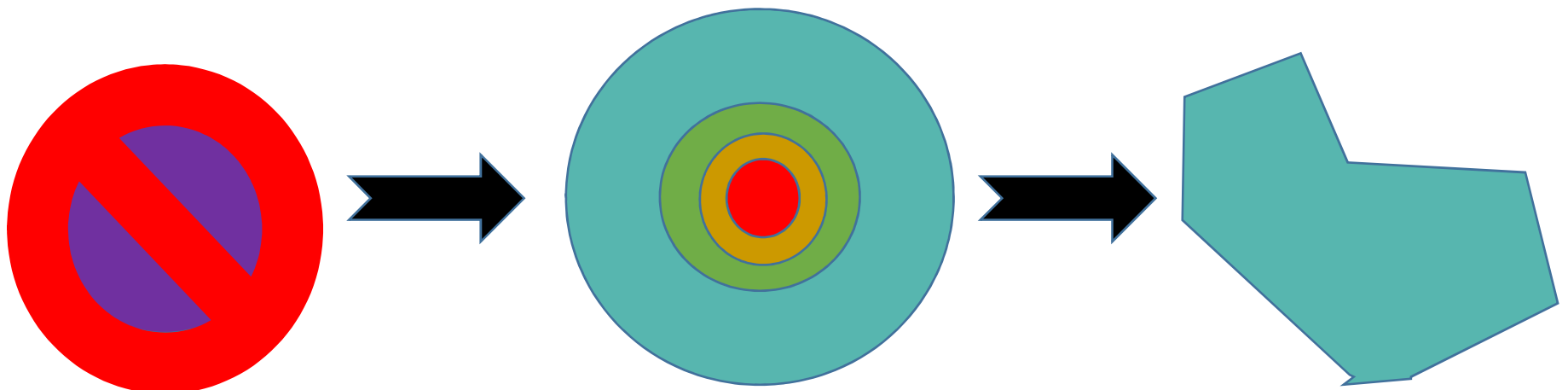
WHPAs created with the CFR method tend to:

- **erroneously identify potential hazards.**
- **under-rank hazards that are identified by modeling.**

Nearly 2,000 hazards here were identified by the CFR method, but not the numerical modeling method

Raising the Bar

- Move from CFR to modeling
 - Improved reliability & predictability
 - Better able to identify contaminants
 - Better able to correspond to zoning
- No more purple!



money

Source water protection
funding available from DOH



Funding Basics

Project parameters: “reasonably expected to provide long-term benefit to drinking water quality or quantity”

Eligible applicants: nonprofit Group As, other nonprofits, local governments, conservation districts, nonprofits, educational institutions, tribes (& otherwise eligible to receive federal grants)

No yearly application period! Grants are first come, first served till available funding is exhausted

\$30,000 per project (unless regional)



Examples of Eligible Projects

Improved WHPA delineation -
moving from CFR to modeling

Developing CARAs protections as
part of GMA critical areas regs

Plans, studies, research, monitoring

Security measures, except
construction costs

Decommissioning potential
contaminants (wells, septic, etc.)

Outreach

This funding cannot be used for groundbreaking or DWSRF-eligible projects

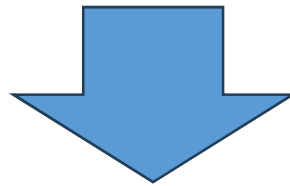
Application Information

Project description

Performance measures

Tasks & deliverables

Numbers! Applicant tax ID#, UBI#, statewide vendor#, federal unique entity ID# (formerly EIN)



Translates to contract

~60 days - contract execution

Quality assurance project plan (QAPP) may be required <https://tinyurl.com/4jmwe33w>

Cost reimbursement

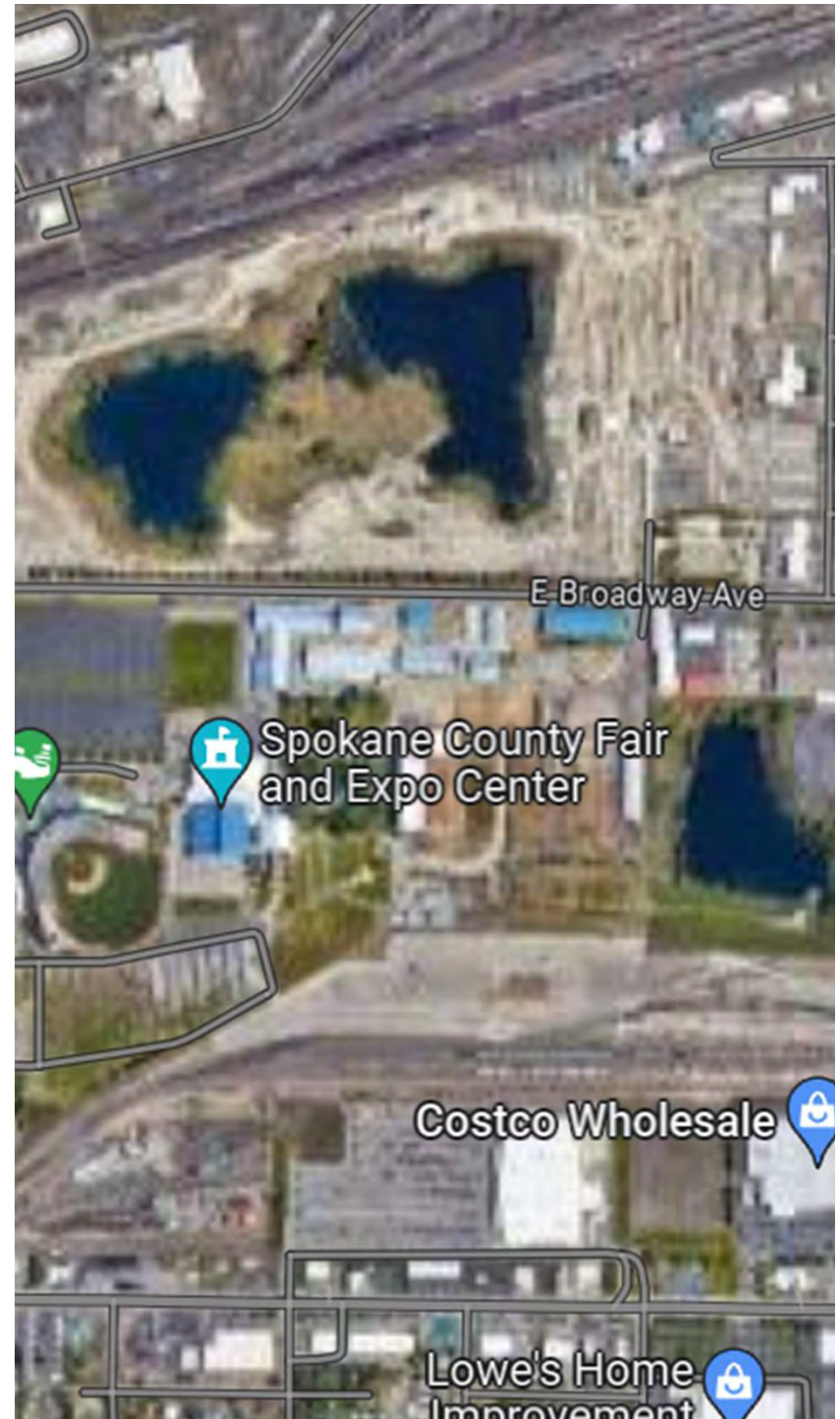
Examples of Funded Projects

- Update wellhead protection areas using modeling
- Preparations needed to acquire 250 acres of priority watershed
- Forest management plans to maintain or enhance water quality
- Watershed protection through community outreach & education
- Nutrient study
- Alternate supply studies—hydrogeological studies
- Critical aquifer mapping

Funded Project:

Spokane Aquifer Joint Board (2022-23)

- Aquifer breaches (Spokane Valley/Rathdrum Prairie sole source aquifer) due to surface mining - “lakes” that aren’t really lakes or regulated shorelines
- Identify locations of existing & planned aggregate quarries
- Evaluate contamination potential
- Regulatory roles & strategy



Drinking Water Providers Partnership

- Restore & protect the health of watersheds that communities depend on for drinking water while also benefiting aquatic & riparian ecosystems, including native fish
- Support local partnerships between drinking water providers, landowners & restoration practitioners
- \$10,000 – \$50,000 per project; 18-mo. turnaround
- Application period opens in Dec. & due by first week of Jan.
- Application link www.workingwatersgeos.org



Related Grants & Loans

- Commerce (Small Communities Initiative)
<https://www.commerce.wa.gov/serving-communities/serving-rural-communities/small-communities-initiative-sci/>
- USDA Rural Development
<https://www.rd.usda.gov/programs-services/water-environmental-programs>
- RCAC Environmental Infrastructure loans
<https://www.rcac.org/lending-2/environmental-loans/>



SWP Grant Guidelines & Application

<https://doh.wa.gov/community-and-environment/drinking-water/source-water/local-assistance-grant-program>

Questions/Technical Assistance

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