

# Watershed Restoration & Protection Cowiche Case Study



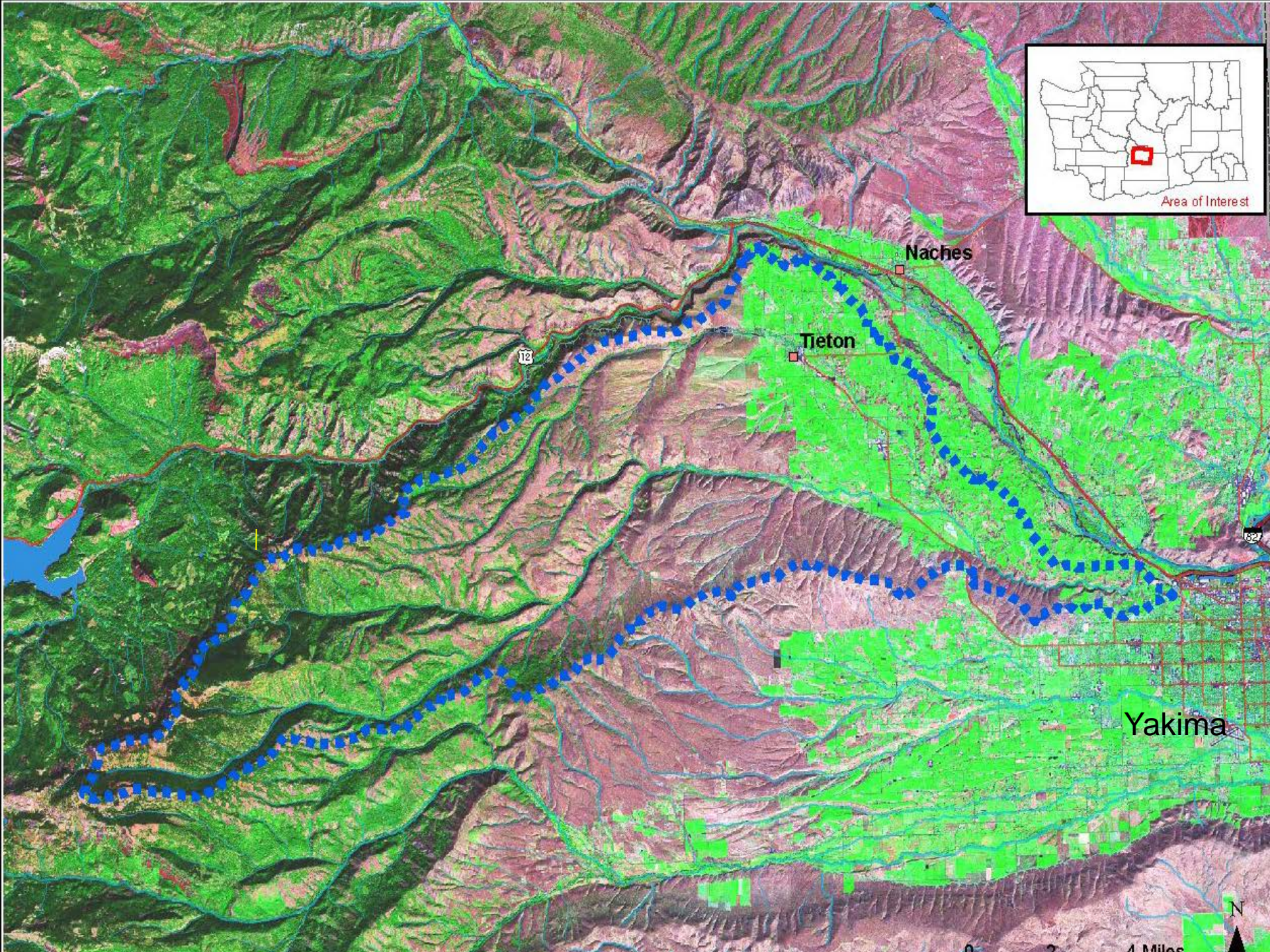




**Project Site**

**Cowiche Watershed  
Project Area**





Naches

Tieton

Yakima

112

N

4 Miles

0 2



# Watershed Visions & Planning

- Restoration (general and specific)
  - Planning units (stream, geologic, land use characteristics)
    - Headwaters (WQ & habitat protection)
    - Upper basin (passage and screening, flow, riparian)
    - Canyon (passage)
    - Lower basin (irrigation consolidation, passage, diking, riparian, WQ)
- Protection (fish and wildlife)
  - Habitat – Specific habitat values and specific threats
  - Key migration corridors & ecological connectivity



## COWICHE CREEK ASSESSMENT AND INTERIM STRATEGY

Native species: Steelhead, chinook (rearing), coho (extirpated and reintroduced), resident rainbow trout, westslope cutthroat trout, and possible bull trout.

Drainage area: ### acres

**STATUS:** High priority for passage restoration for steelhead

### **SIGNIFICANT SUBWATERSHEDS:**

South Fork Cowiche, Reynolds, and North Fork Cowiche (restoration and protection efforts should be focused on SF Cowiche and Reynolds Creeks)

### **FACTORS AFFECTING HABITAT CONDITION:**

- Passage & Screening
- Low instream flows in mid and lower reaches of Cowiche and SF Cowiche.
- Dikes and riprapped in places resulting in a highly simplified channel.
- LWD levels and recruitment potential below desired amounts due to riparian degradation in mid and lower reaches of Cowiche and SF Cowiche.
- High temperature associated with low flows and degraded riparian and floodplain.
- Other water quality issues - 303(d)
- Beaver activity is limited where riparian vegetation is cleared in mid and lower reaches of Cowiche and SF Cowiche
- Some road placement constricts the stream channel & increases sediment input

### **LEVEL OF CERTAINTY:**

- Field surveys by YTAHP have been conducted. Surveys identified barriers, screening needs, and riparian habitat condition. This survey provides a high confidence level in assessment of limiting factors for restoration projects and assessment of habitat function for protection projects.
- Some uncertainty exists on relation of instream flows and fish habitat.

### **RECOMMENDATIONS (IN PRIORITY):**

1. Remove passage barriers& address screening needs
2. Improve instream flow conditions in the mid and lower reaches of Cowiche and the SF Cowiche.
3. Protect and restore floodplains, side channels, and riparian areas
4. Reduce road densities, improve roads, and relocate problem roads to reduce their effects on hydrology and instream sediment conditions.
5. Monitor baseline water quality parameters throughout the watershed.

▪

### **MEANS TO MEASURE EFFECTIVENESS:**

- Monitor passage at fixed barrier sites and throughout the Cowiche and SF Cowiche
- Conduct spawning survey for both steelhead and coho yearly.
- Monitor screening effectiveness
- Monitor stream flows at fixed stations year-round.
- Monitor stream channel sinuosity, width/depth ratio, riparian coverage from fixed stations and with remote sensing on a periodic schedule (i.e., every 3 or 5 years).
- Monitor Road improvements and relocation efforts.
- Monitor selected water quality parameters (temperature, turbidity, etc.) at fixed stations.



# Develop Partnerships

- YTAHP = Yakima Tributary Access & Habitat Program
  - Resource & Community Development (RC&D)
  - Conservation Districts
  - Water Purveyors & Irrigation Districts
  - WDFW & Ecology
- Cowiche Canyon Conservancy
- The Nature Conservancy
- The Yakama Nation
- Landowners

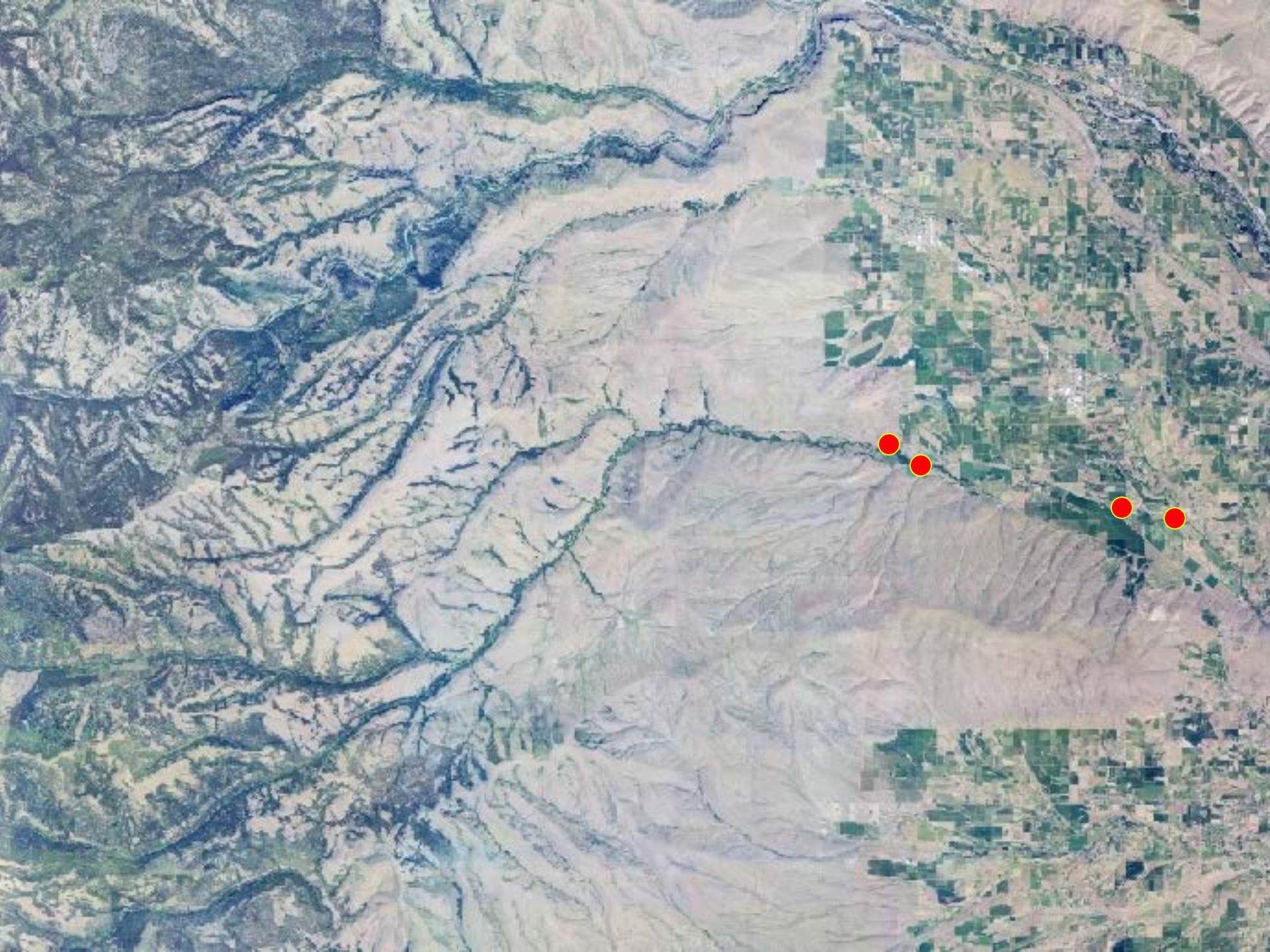


# **Cowiche Creek Stream Restoration Story**













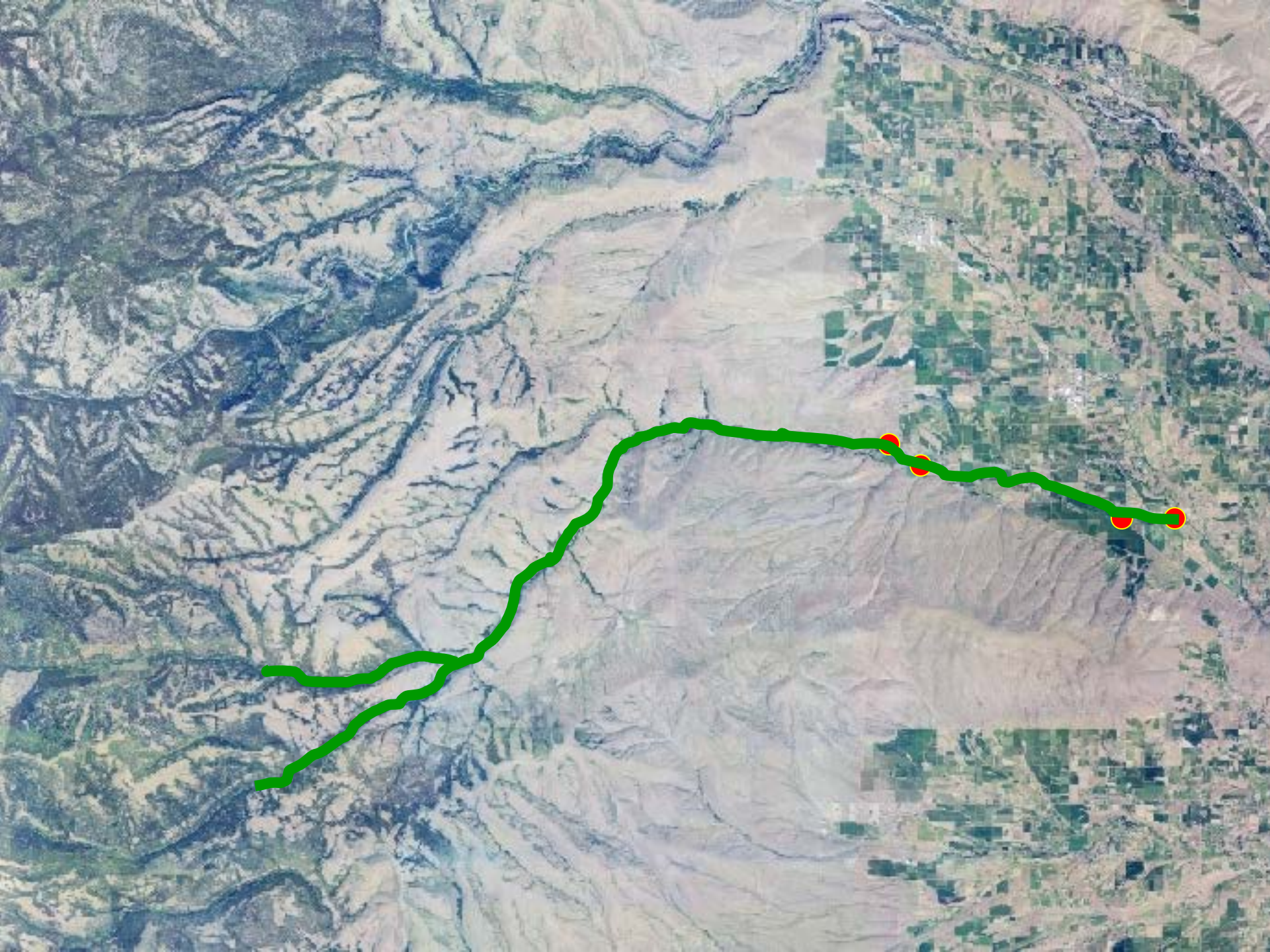






















# Habitat Protection Story

Why Protect This Area?

Habitat & Species  
Values and Risks

**Tieton Project**

**Phase 3**

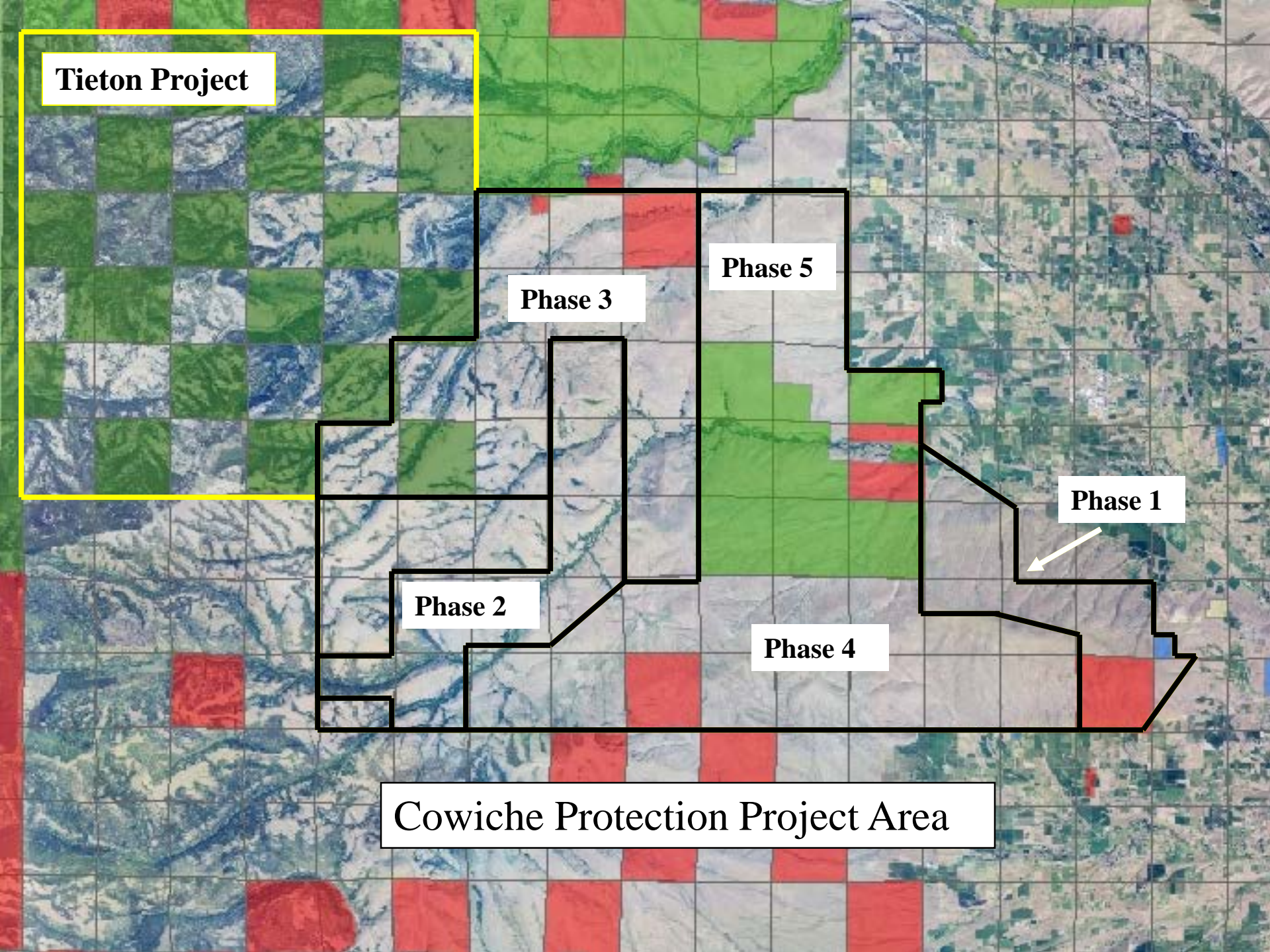
**Phase 5**

**Phase 2**

**Phase 1**

**Phase 4**

**Cowiche Protection Project Area**







Forest Zone

The map displays a grid-based landscape with various colored regions. A large black-outlined area in the center is labeled 'Cowiche Protection Project Area'. To its left, a yellow wavy line separates a green-shaded area from the rest of the map. The background is a mosaic of green, blue, red, and greyish-brown squares, overlaid on a satellite-style terrain map. A grid is visible across the entire image.

Shrub-steppe  
zone

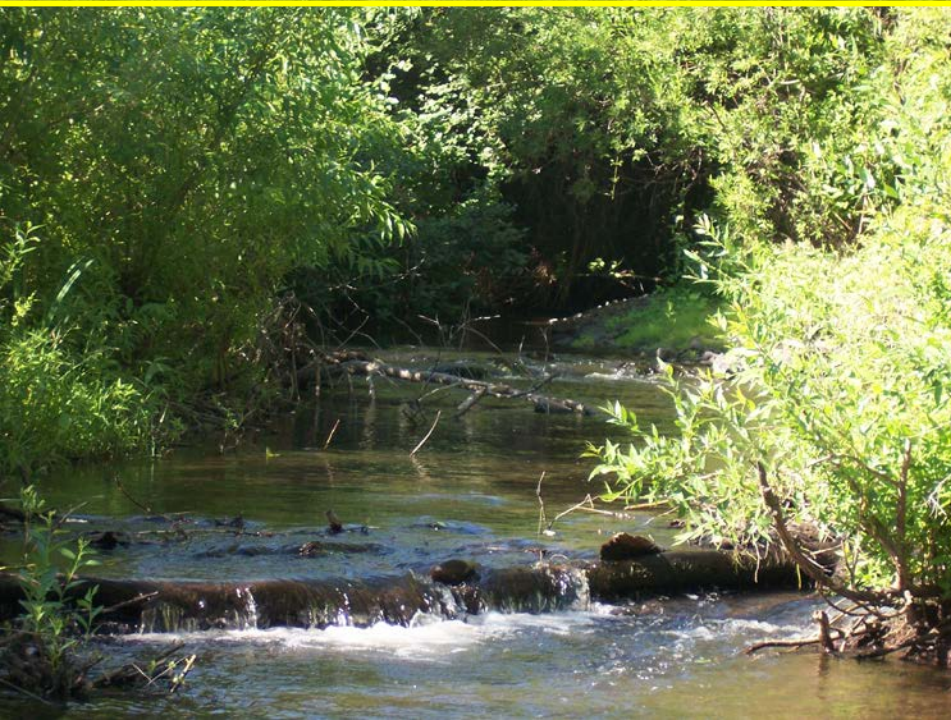
Cowiche Protection Project Area



# Habitat Diversity & Quality

- Riparian (good to excellent) PHS
- Instream (good to excellent) PHS
- Wetlands (good to excellent) PHS
- Aspen stands (good to excellent) PHS
- Oak Woodland (good to excellent) PHS
- Shrub-steppe (fair to excellent) PHS
- Cliffs and talus (good to excellent) PHS
- Ponderosa Pine (fair to good)
- Deer and elk winter range (fair to good)



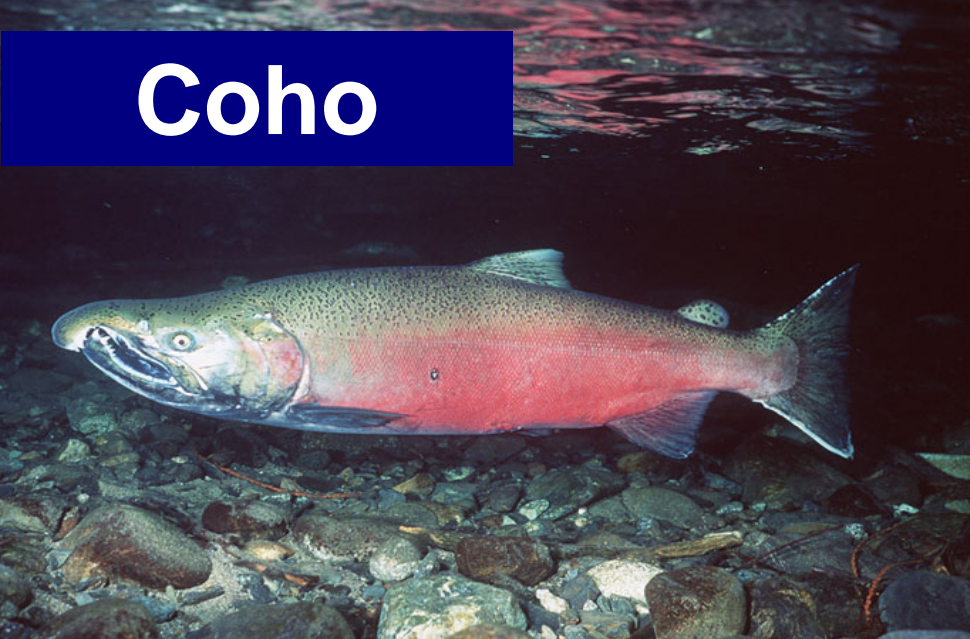






**Steelhead**

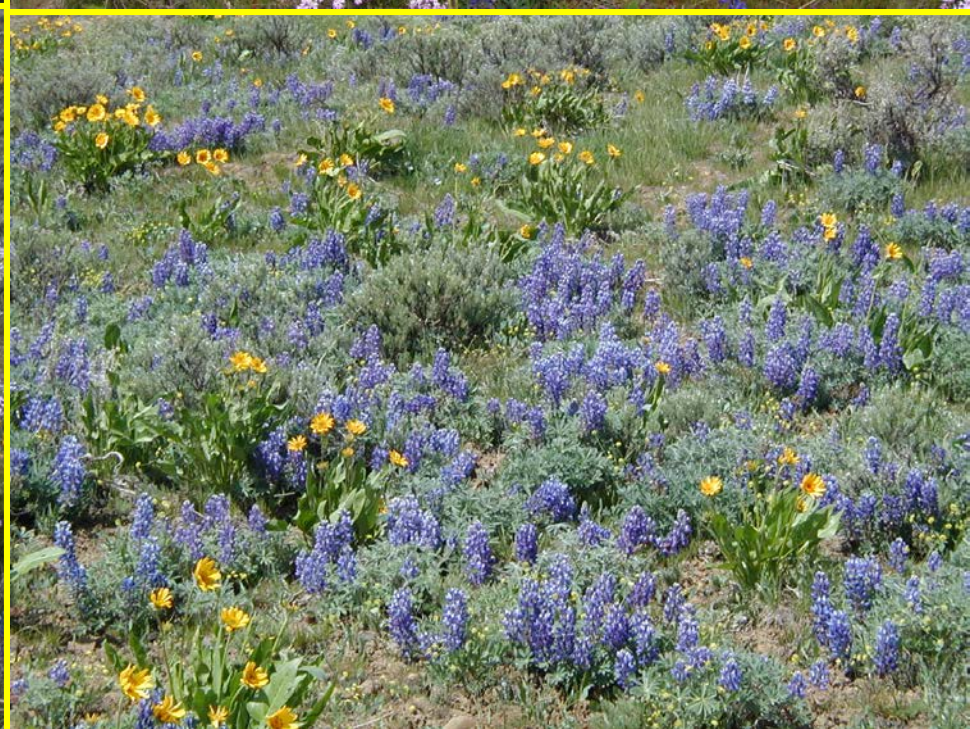
**West-slope  
Cutthroat**



**Coho**









**Sage  
sparrow**



**Sage  
Thrasher**



**Loggerhead  
shrike**









# White Headed Woodpecker & Lewis' Woodpecker









**Golden eagle**



**Bald eagle**



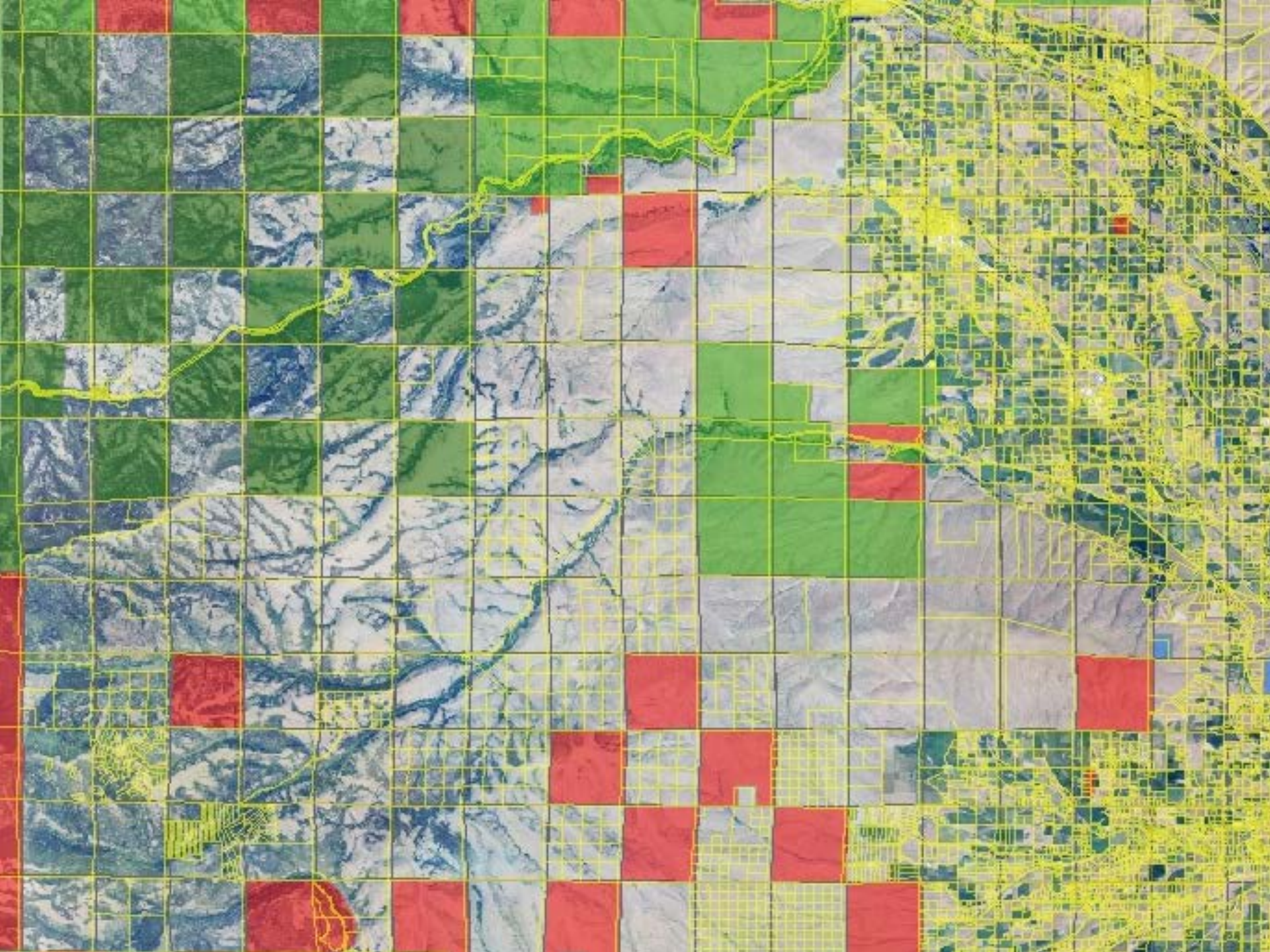
# Game Species





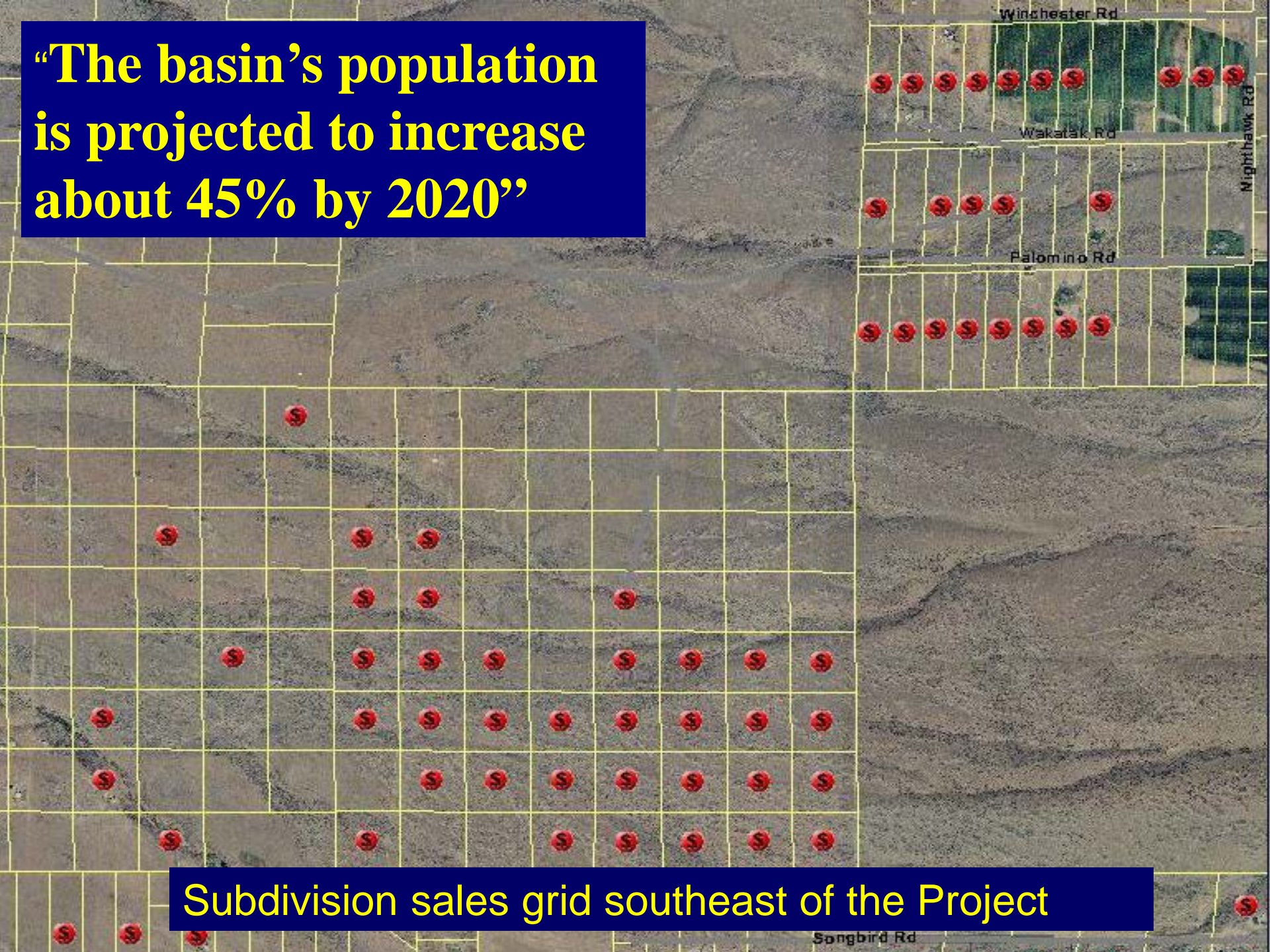
# Habitat and Species Risks







**“The basin’s population is projected to increase about 45% by 2020”**



**Subdivision sales grid southeast of the Project**



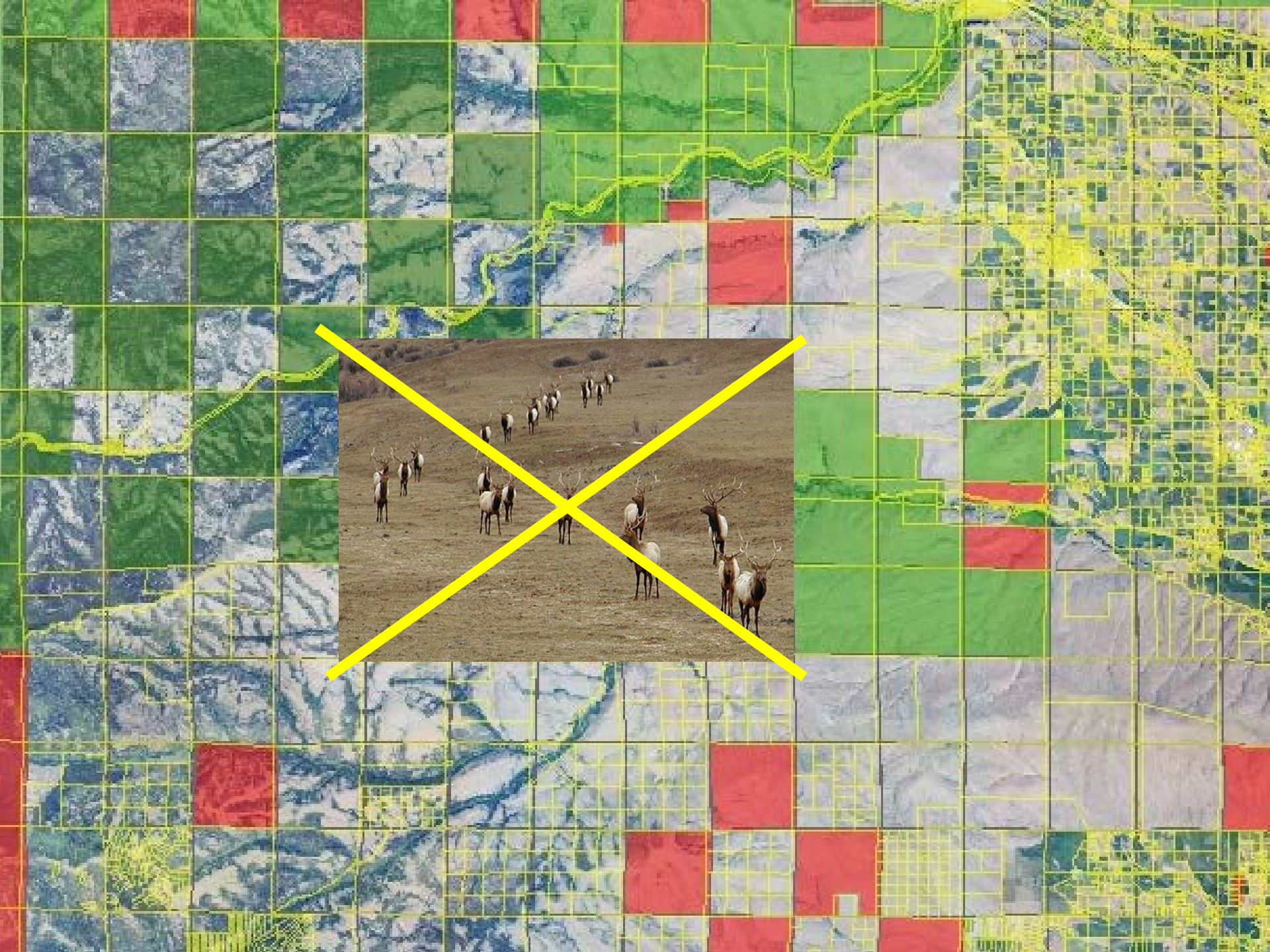




# Parasite Threat









Cowiche Project

ongoing stewardship



John McGowan, Oak Creek WLA Manager



# Cowiche Project

ongoing stewardship





# Political Support

Yakima County Commissioner Palacios



Congressman Hastings' Yakima director





BOARD OF **YAKIMA COUNTY** COMMISSIONERS

★ District One  
James M. Lewis

★ District Two  
Ronald F. Gamache

★ District Three  
Jesse S. Palacios  
RECEIVED  
STATE OF WASHINGTON  
JUL 15 2004  
DEPT OF FISH AND WILDLIFE  
YAKIMA OFFICE

July 14, 2004

Jeff Tayer, Regional Director  
Washington Department of Fish and Wildlife  
1701 S 24<sup>th</sup> Ave  
Yakima WA 98902

Dear Jeff,

The Board of Yakima County Commissioners would like to acknowledge your efforts to secure federal and state funds to protect known critical fish and wildlife habitats in the Cowiche Watershed, through the purchase of conservation easements and/or fee simple ownership. We support your protection efforts, and assure you that our interest in this project is to reduce issues surrounding dispersed development in areas identified as critical fish and wildlife habitat, and to reduce the potential cost to the citizens of Yakima County by linking state and federal properties for fish and wildlife habitat corridors.

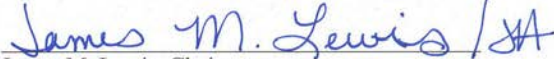
Yakima County is developing a Non-Regulatory Critical Areas and Natural Resources Program (Non-Regulatory Program). This program is designed to help protect critical and natural resource areas using non-regulatory landowner incentives (e.g. conservation easement purchases). We are also currently updating our Critical Areas Ordinance and Comprehensive Plan, which call for the protection of fish and wildlife habitat through region-wide and coordinated efforts. We believe, however, that regulatory measures should not be the only tool available to protect critical fish and wildlife habitat. We want to encourage WDFW to work with Yakima County to find funding for non-regulatory solutions, and hope that these funds can be further leveraged with our program to protect critical areas in the Cowiche Project Area.

We encourage WDFW and their partners to continue their efforts to protect the critical habitat values found in the Cowiche Project Area. We also look forward to supporting your efforts through our incentive-based Non-Regulatory Program.

Please keep us apprised of your efforts to protect this critical habitat.

Sincerely,

BOARD OF YAKIMA COUNTY COMMISSIONERS

  
James M. Lewis, Chairman

  
Ronald F. Gamache, Commissioner

  
Jesse S. Palacios, Commissioner

# Letter of Support from Yakima County Commissioners



# WILLIAM O. DOUGLAS TRAIL Yakima to Mount Rainier

*"My love of the mountains, my interest in conservation, my longing for the wilderness—all these were lifetime concerns that were established in my boyhood in the hills around Yakima and in the mountains to the west of it."* - William O. Douglas - Go East, Young Man

William O. Douglas spent most of his youth in Yakima and attended Columbia Grade School and Yakima High School. He was raised in a very poor, single-parent family. He took children with goats as a child, and developed a life-long passion for hiking to strengthen his weakened legs. Douglas became a member of the "B" Regiment Cavalry, where his sports were characterized by a fierce commitment to individual rights and a powerful distrust of government power. Franklin D. Roosevelt came close to picking Douglas as his running mate in the 1944 presidential election, which would have made Douglas President upon Roosevelt's death in 1945. Douglas wrote 12 books, several about hiking in and around the Yakima Valley and hiking from Yakima to the Cascades.

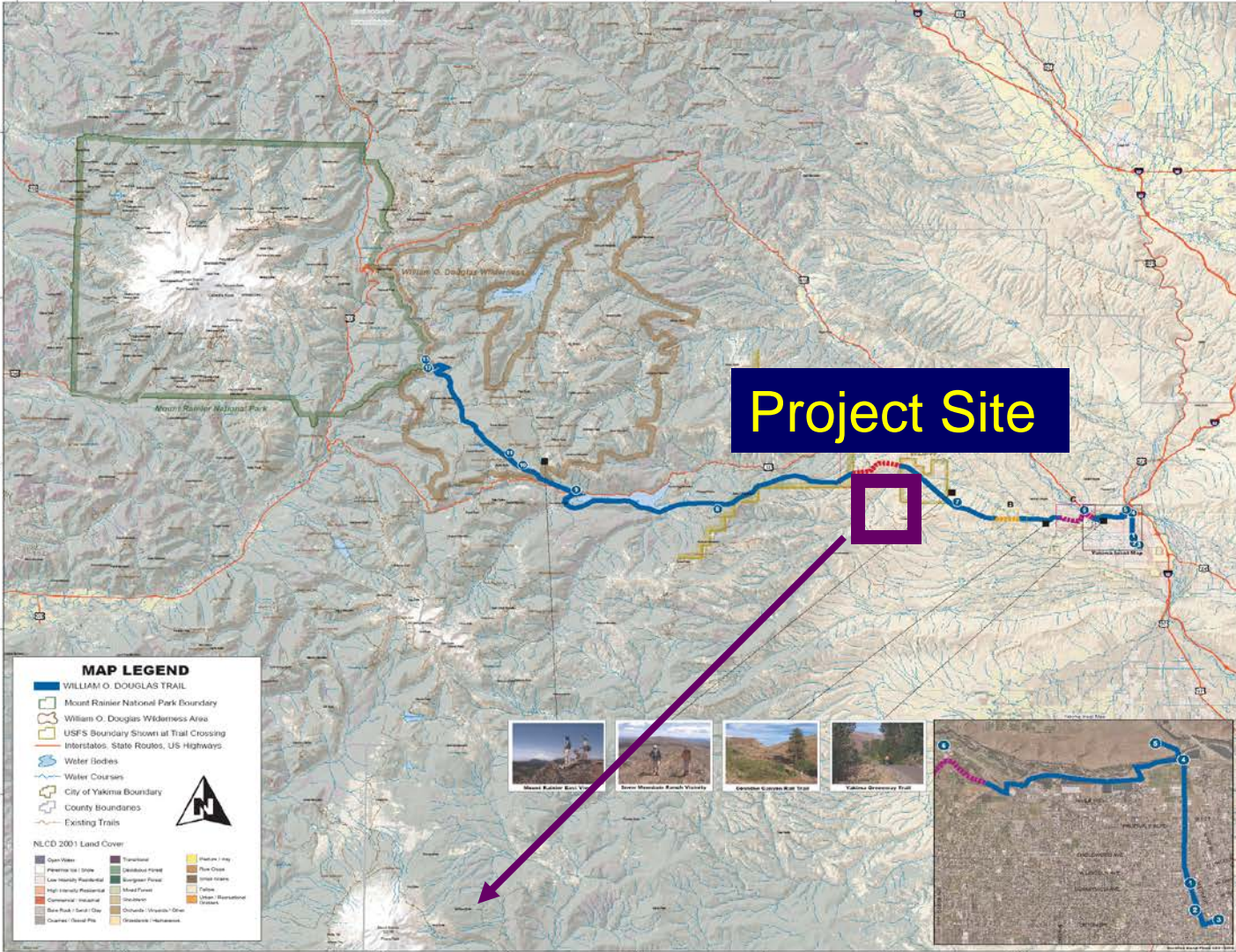
- 1 Douglas Borned Home: Douglas lived at 111 North 4th Avenue. The only source of family income was odd jobs by Walter and his sister Martha doing neighborhood work, washing and mending garments that are being garbage taken for free from the neighborhood and a small ranch for films and fish Aquatics to go hiking in the Squawamish hills and mountains around Yakima.
- 2 Yakima (Davis High School): Douglas graduated from his high school in 1916 and received a full scholarship to attend Whitman College. He wrote about the high quality of education that he received from the Yakima School system. He later returned to Yakima High School as a teacher in English, Latin, and Public Speaking from 1922 to 1923.
- 3 1917: Young Man: Douglas frequently used summer transportation as part of his young manhood. The young manhood (hobby) hobby and passed immediately adjacent to Yakima (Davis) High School in the northern route.
- 4 Naches River Bridge: Douglas hiked across the national bridge many times on his way to climb the 500-foot tall adjacent to Swan Lake. The VVI bridge was replaced across the river in 1922. He first crossed the river with the Yakima and the old bridge where he was identified and identified.
- 5 Near Lake Creek: Douglas received mail in order to overcome the loneliness effects of work. He would escape by taking the log cabin boats across Yakima. Swan Lake was his favorite place to go, and he frequently stayed there. He stayed in the log cabin, and found the log and log across the Swan Lake bridge. In this way, he eventually overcame the loneliness condition brought on by work.
- 6 Indian Forested Rocks State Park: ancient Indian site see the collection of the Teachers' Union and Central Club.
- 7 Snow Mountain Ranch: Henry of Douglas's road front, John Gilbert. Douglas frequently visited the ranch during the Supreme Court summer recesses and held or odd jobs there with John Gilbert, the history of scientific knowledge. The Douglas Court Justice sometimes slept in the lake.
- 8 Knochman Rock: Douglas (David) Knochman Rock in 1913 with Doug Cooper, while he was in Yakima prison. This collection was used as a well and allowed a full set of the teachers' union of Knochman Park.
- 9 Indian Creek: Douglas took notice in spotting salmon from an Indian and contacted extensively about cultural issues and philosophy.
- 10 1914 Newlander Case: At the beginning of World War I, Douglas camped with a mountain hiker and discussed the gathering stars of war and the potential involvement of the U.S. in the Pacific.
- 11 Council Proceedings: that in Yakima, considerable full used health. It's history involves for hundreds of years as the town cross-cascade route, new called land bridge Knochman Lake trail.
- 12 Fish Lake Camp: Douglas, at age 16, wrote to his mother about an intended coming trip to the Fish Lake area with his mother's children, mosquitoes, and difficult carrying her to the lake.
- 13 Mt. Rainier National Park - Pacific Crest National Scenic Trail

**The Vision to Connect Existing Trail Systems over 75 Miles From the City of Yakima to Mount Rainier**

- City Sidewalks and Pathways
- Yakima Valley Trailway Corridor
- Greenway Pathway System
- Cowiche Canyon Trail
- BLM Trails
- Snow Mountain Ranch
- State Wildlife Lands
- Forest Service Lands (including existing trails)
- U.S. Park Service Lands (including existing trails)
- 90% of 75 mile trail intact

**The Opportunity to Foster Economic Development Through Recreation**

- Enhancing the Outdoor Experience
- Increasing Home Values
- Providing a New Tourism Draw
- Connecting Communities
- Hiking, Biking, Running, Ski Touring, Birding
- Nature Study, etc.
- Attracting New Business Through Enhanced Recreation Opportunities



**MAP LEGEND**

- WILLIAM O. DOUGLAS TRAIL
- Mount Rainier National Park Boundary
- William O. Douglas Wilderness Area
- USFS Boundary Shown at Trail Crossing
- Interstates, State Routes, US Highway
- Water Bodies
- Water Courses
- City of Yakima Boundary
- County Boundaries
- Existing Trails

**NLCD 2001 Land Cover**

Open Water	Transition	Yellow Pine
Pine/ Fir/ Spruce	Shrubland Forest	Fluvial
Low Humidity Forest/ Shrub	Shrubland Forest	Other Forest
High Humidity Forest/ Shrub	Shrubland Forest	Other Forest
Deciduous/ Coniferal	Shrubland	Urban/ Suburban
Barren Rock/ Sand/ Clay	Shrubland/ Wetland/ Other	Urban/ Suburban
Chert/ Sand/ Clay	Shrubland/ Wetland/ Other	Urban/ Suburban

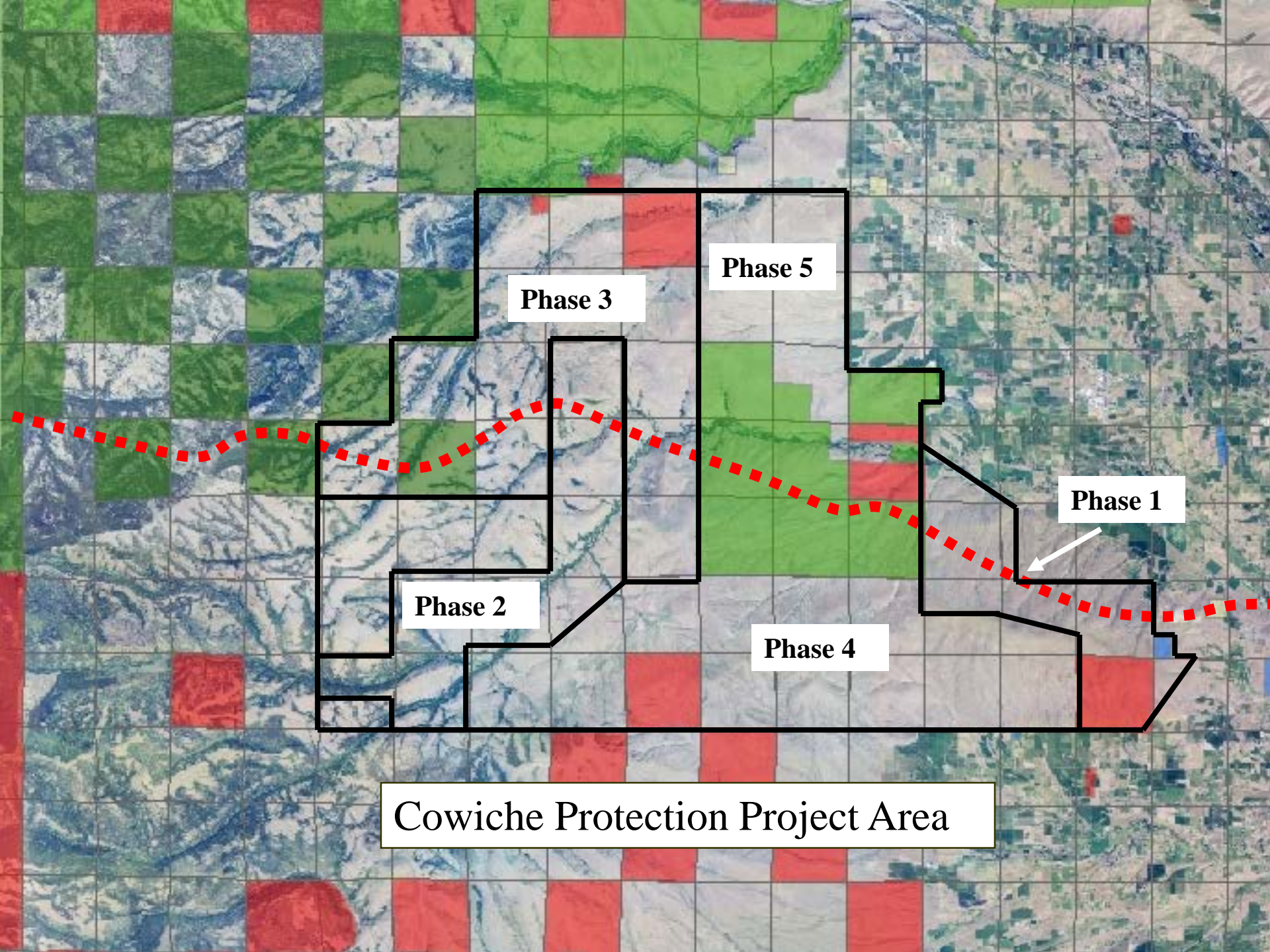


**A. Tieton River - Cowiche Creek Land Bridge**

**B. Cowiche Mountain Land Bridge**

**C. Greenway - Cowiche Canyon Land Bridge**





Phase 3

Phase 5

Phase 1

Phase 2

Phase 4

Cowiche Protection Project Area



# Cowiche Project

project support

BPA	594,500
SRFB	953,000
IAC WWRP	905,000
IAC WWRP	1,600,000
WDFW	102,000
RFEG	15,000
RMEF	15,000
<u>CCC</u>	<u>5,000</u>

**\$4,189,500**





# Changing Landscape



**Tieton Project**

**Phase 3**

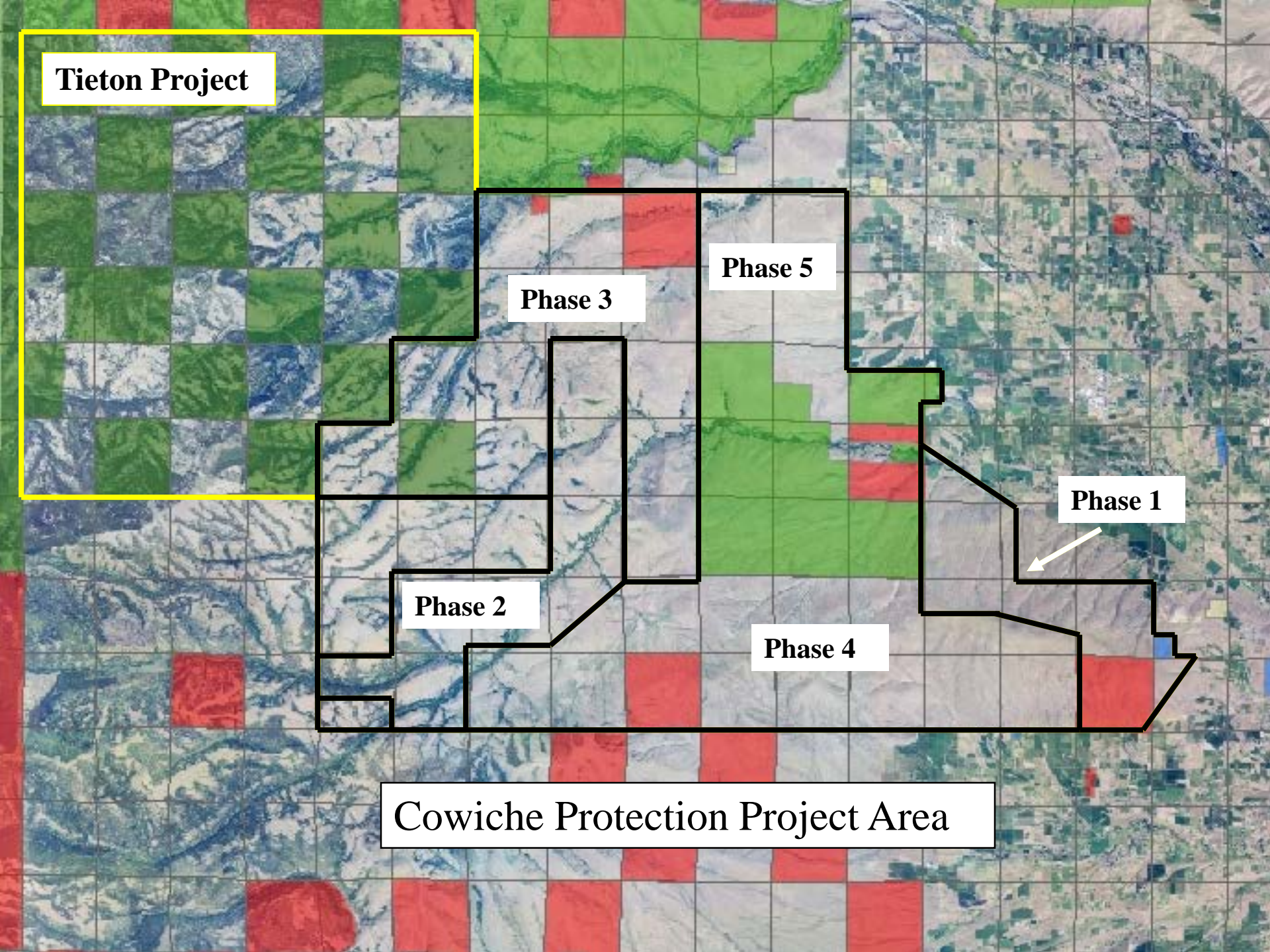
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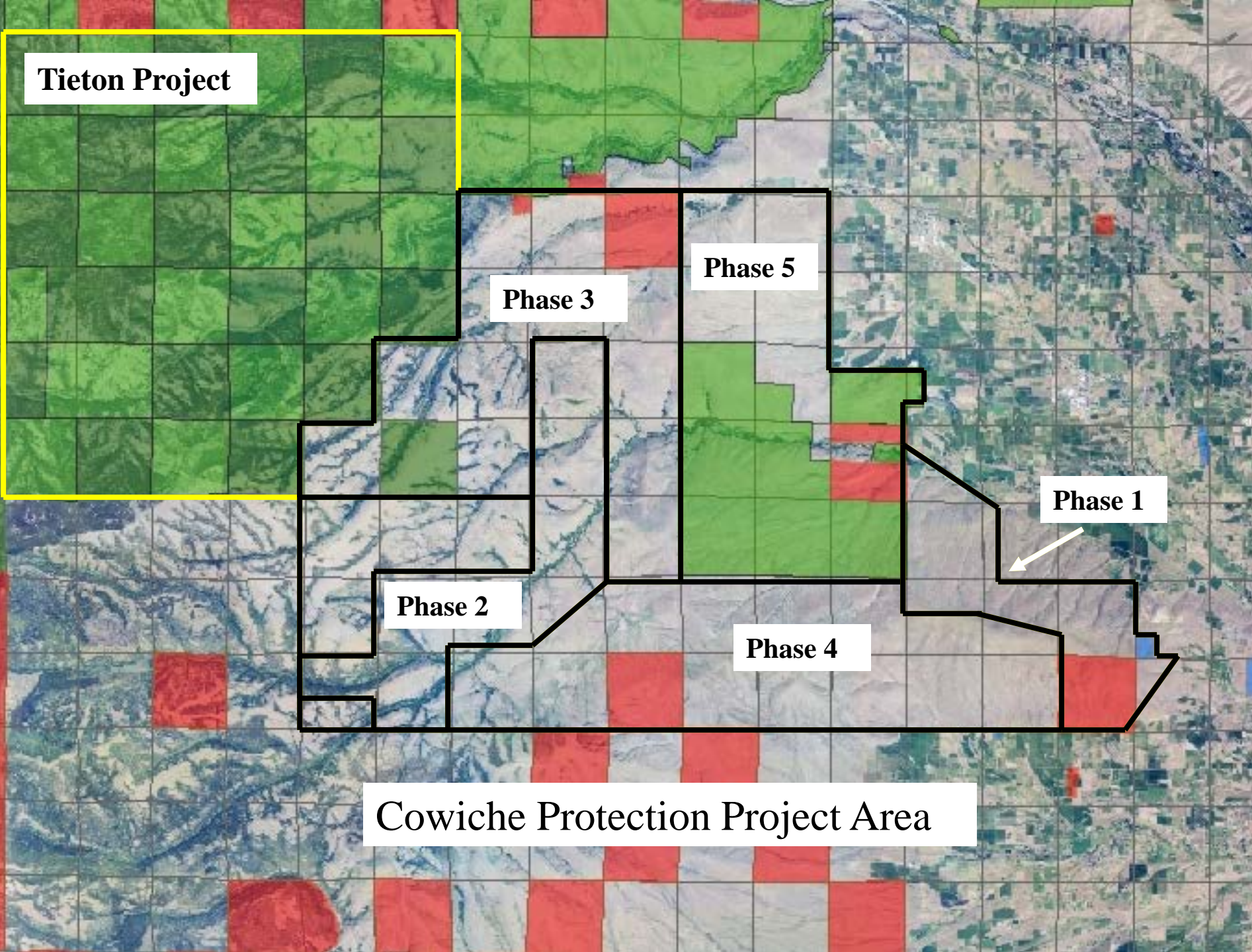
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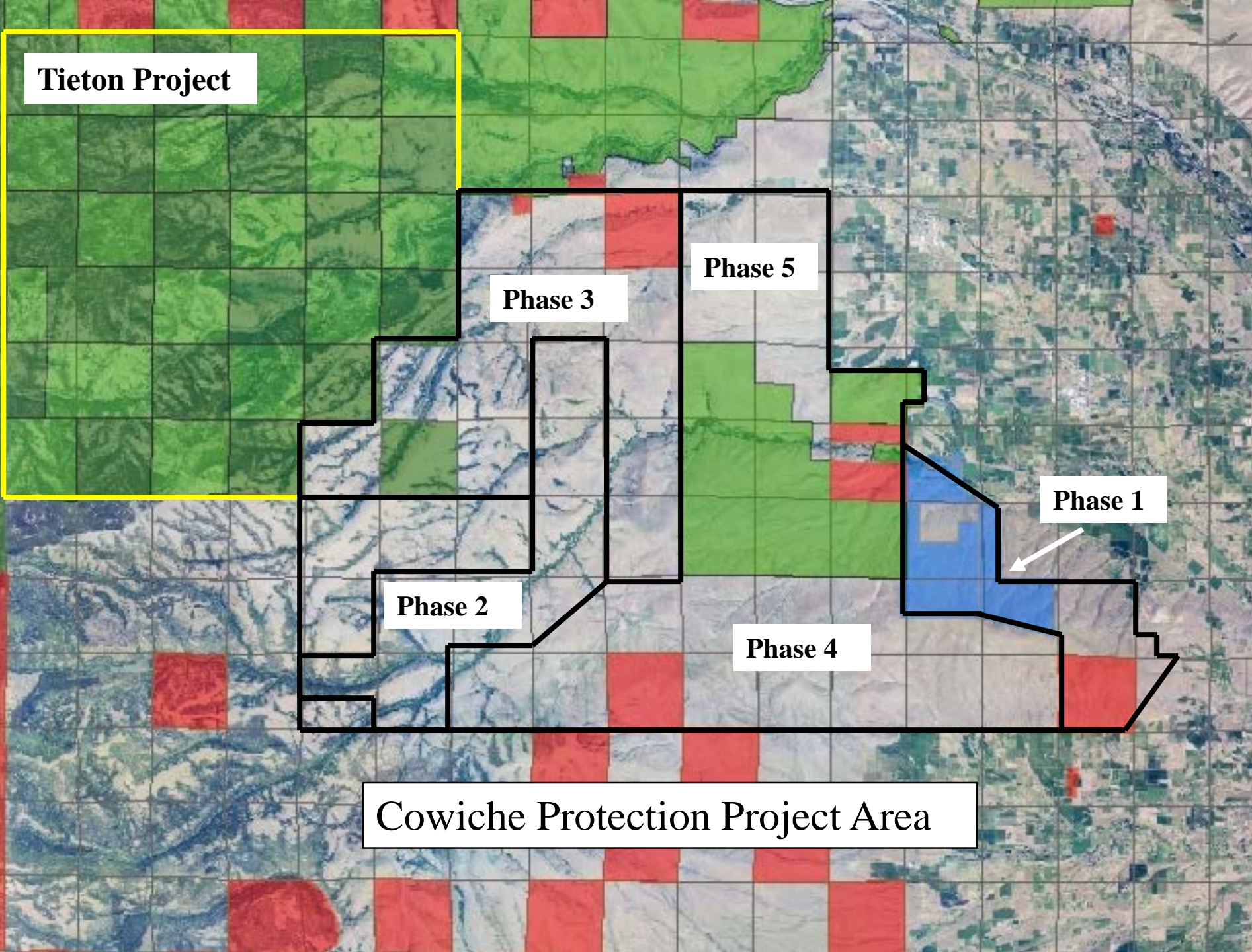
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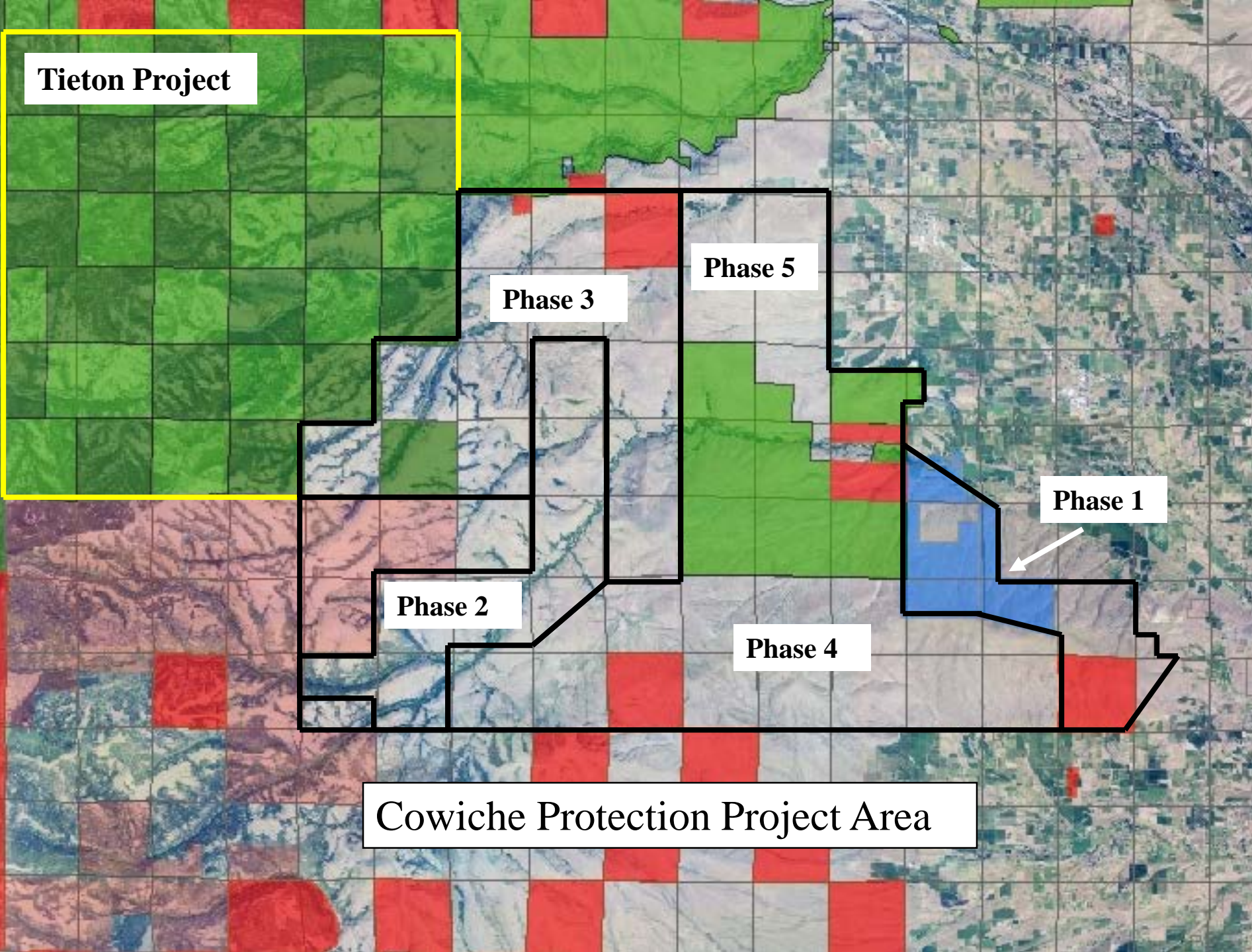
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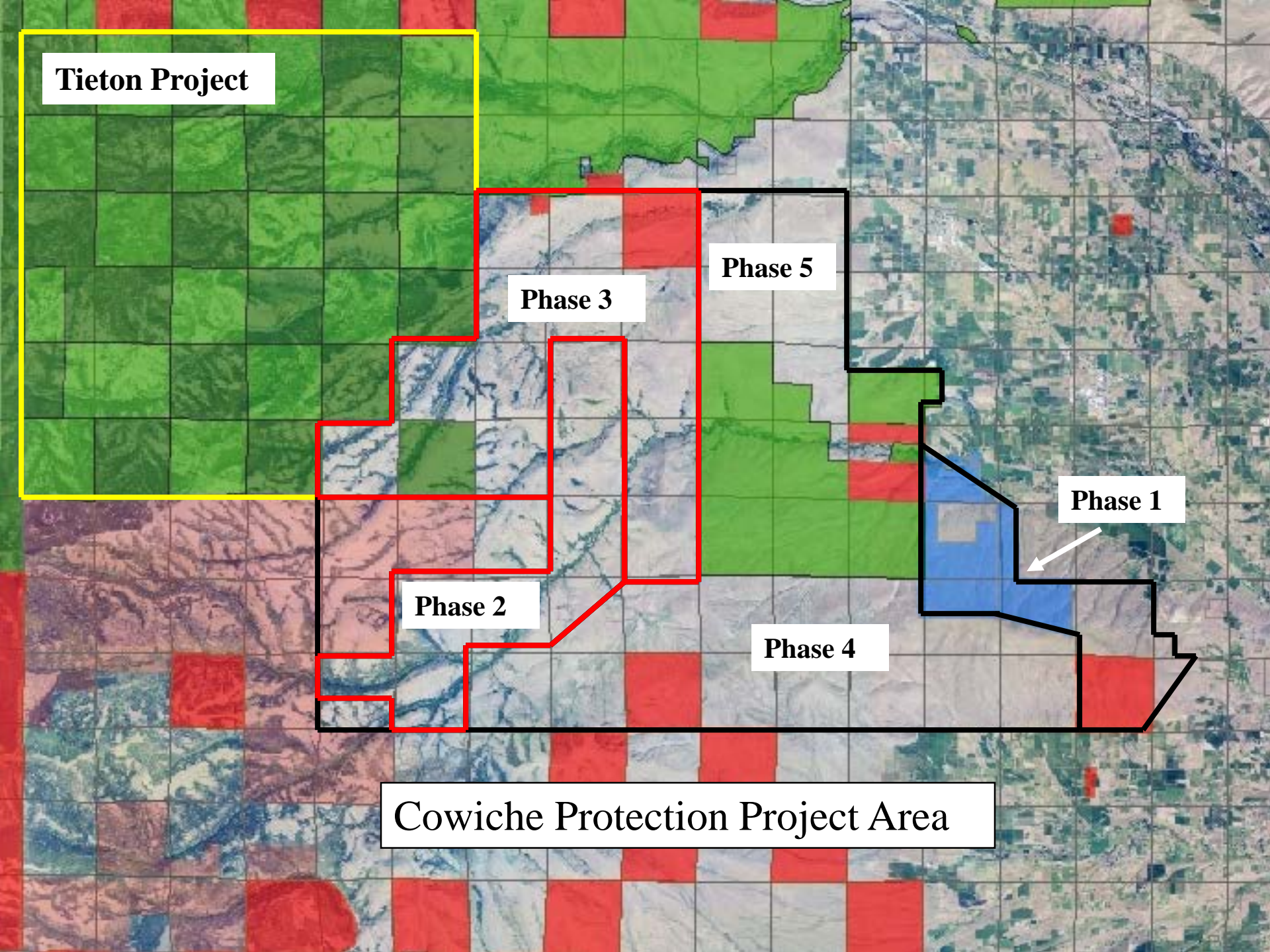
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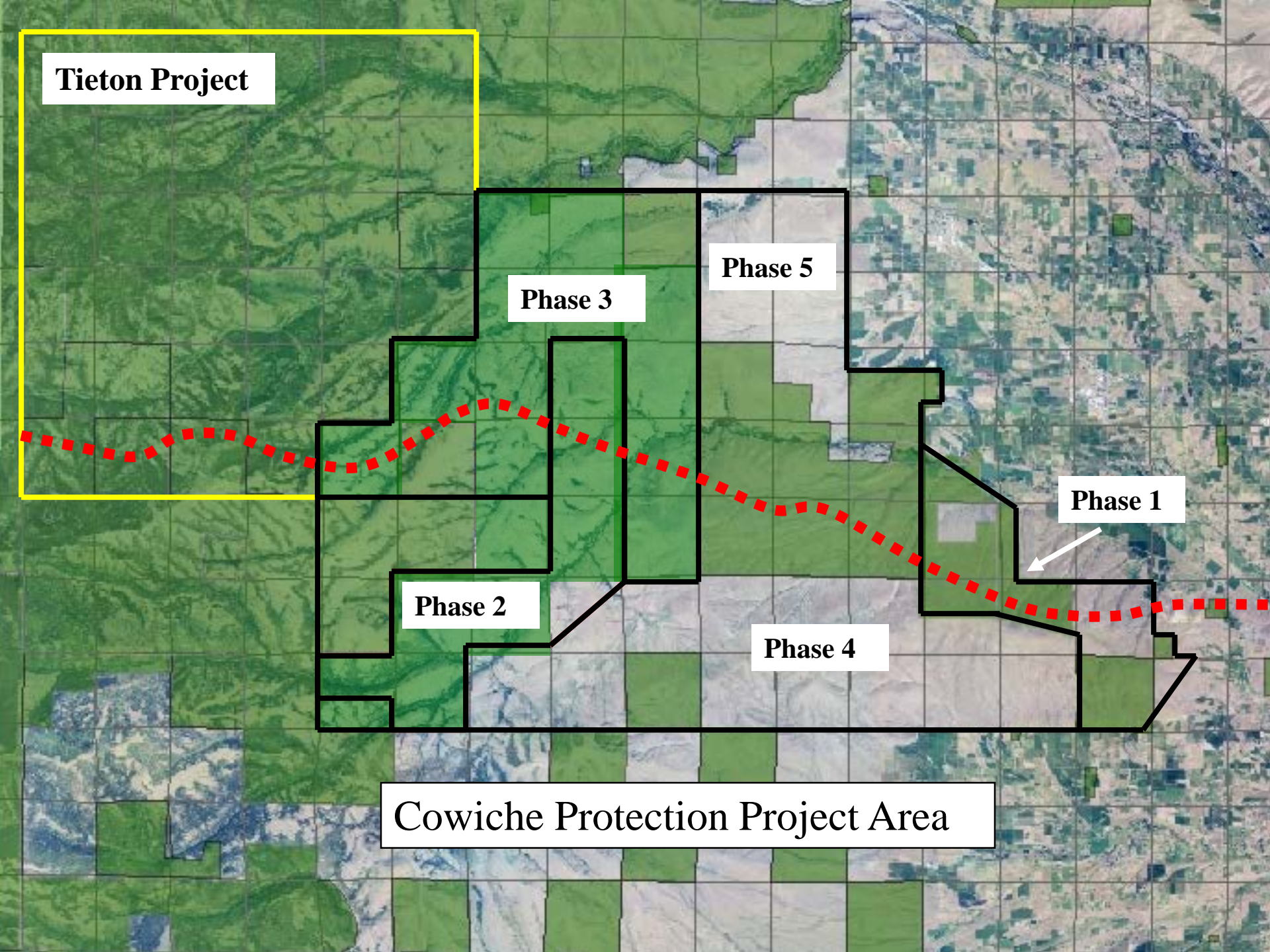
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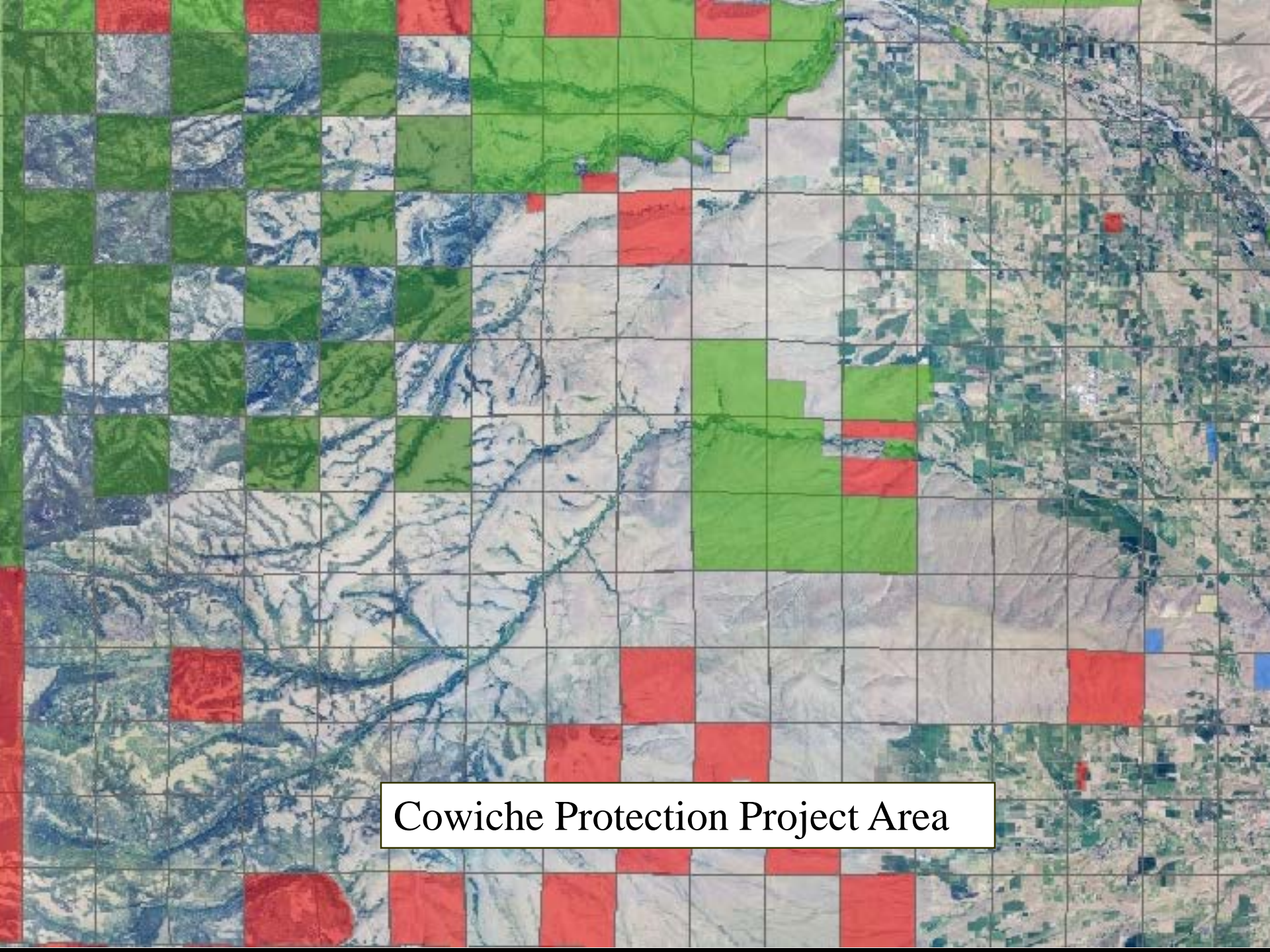
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Cowiche Protection Project Area



**Tieton Project**

**Phase 3**

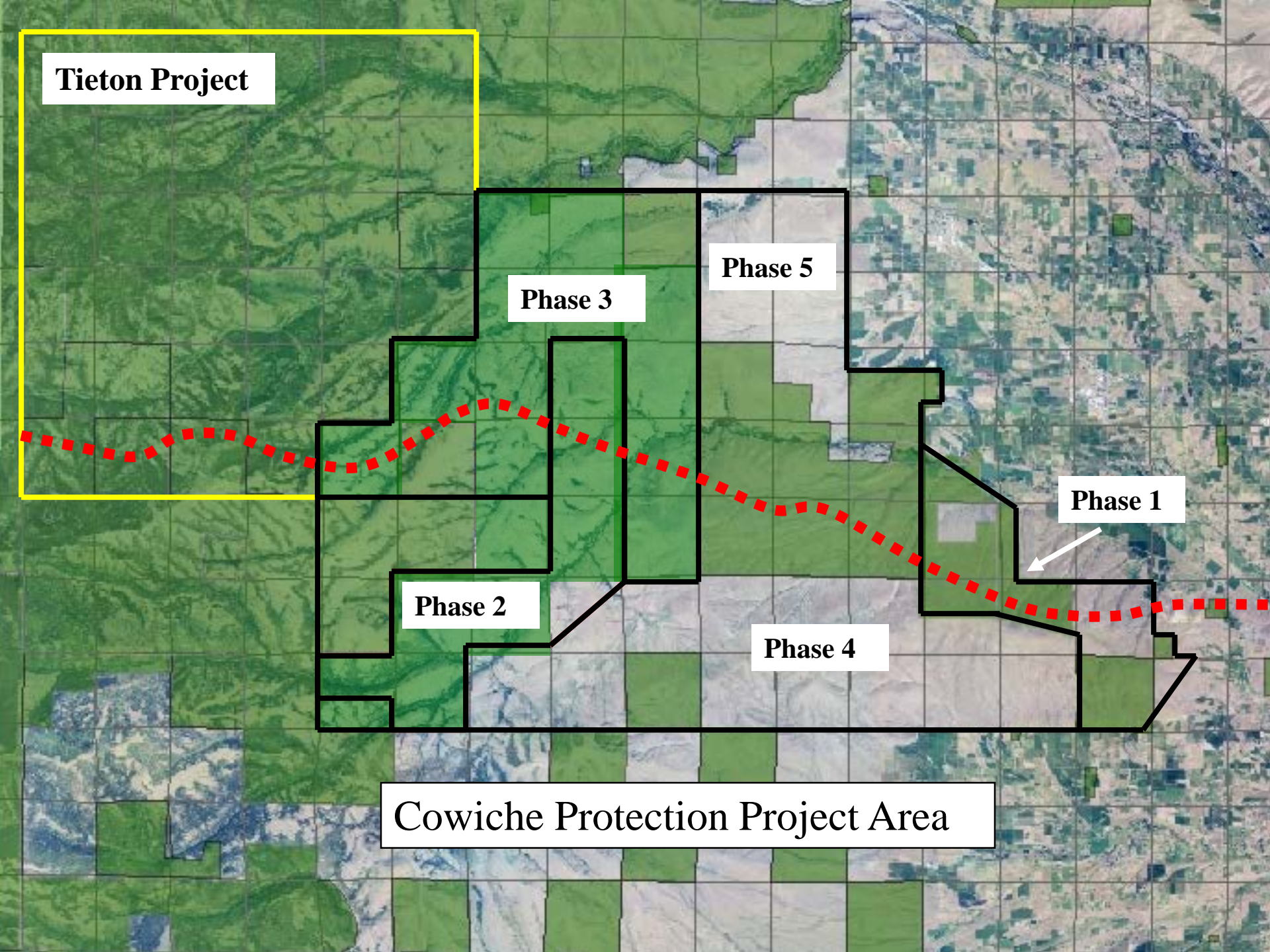
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**Phase 1**

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**Cowiche Protection Project Area**





# Summary For Success

- Vision
- Detailed Plan
- Develop Partnerships
- Have a Compelling Story
  - Grantors = \$\$\$
  - Gain Political Support
- Be Patient, Persistent, and Flexible
- Develop a Good Team



Thank You.

Questions?

