

A.R.E.A.M

**AGGREGATE
RULES
EVERYTHING
AROUND
ME**



A CRITICAL TOUR OF AN AGGREGATE NETWORK

LANE COUNTY, OREGON

MAY 26, 2022

**“CHECK OUT MY GRAVEL PIT
A MYSTERY UNRAVELIN’...
DON’T GO AGAINST THE GRAIN IF YOU CAN’T HANDLE IT”**

- WU-TANG CLAN

“GRAVEL PIT” 2000

ABBREVIATIONS:

CY: CUBIC YARD

FT: FOOT

MW: MEGA WATTS

USFS: UNITED STATES FOREST SERVICE

TOUR DEVELOPMENT AND PHOTOGRAPHS BY STEPHEN LORBER

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EUGENE, OREGON

2022

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TOUR SCHEDULE



9 AM – TOUR STARTS

9:50 – BASALT MINE

10:15 – HILLS CREEK DAM

10:45 – TV BUTTE

12:00 – LUNCH @ FISH HATCHERY



2:05 – DELTA SAND AND GRAVEL

2:55 – URBAN RESERVE

3:25 – JUNCTION CITY PONDS

4:05 – DELTA PONDS

4:45 – TOUR ENDS

AGGREGATES ON TOUR

HARD ROCK AGGREGATE



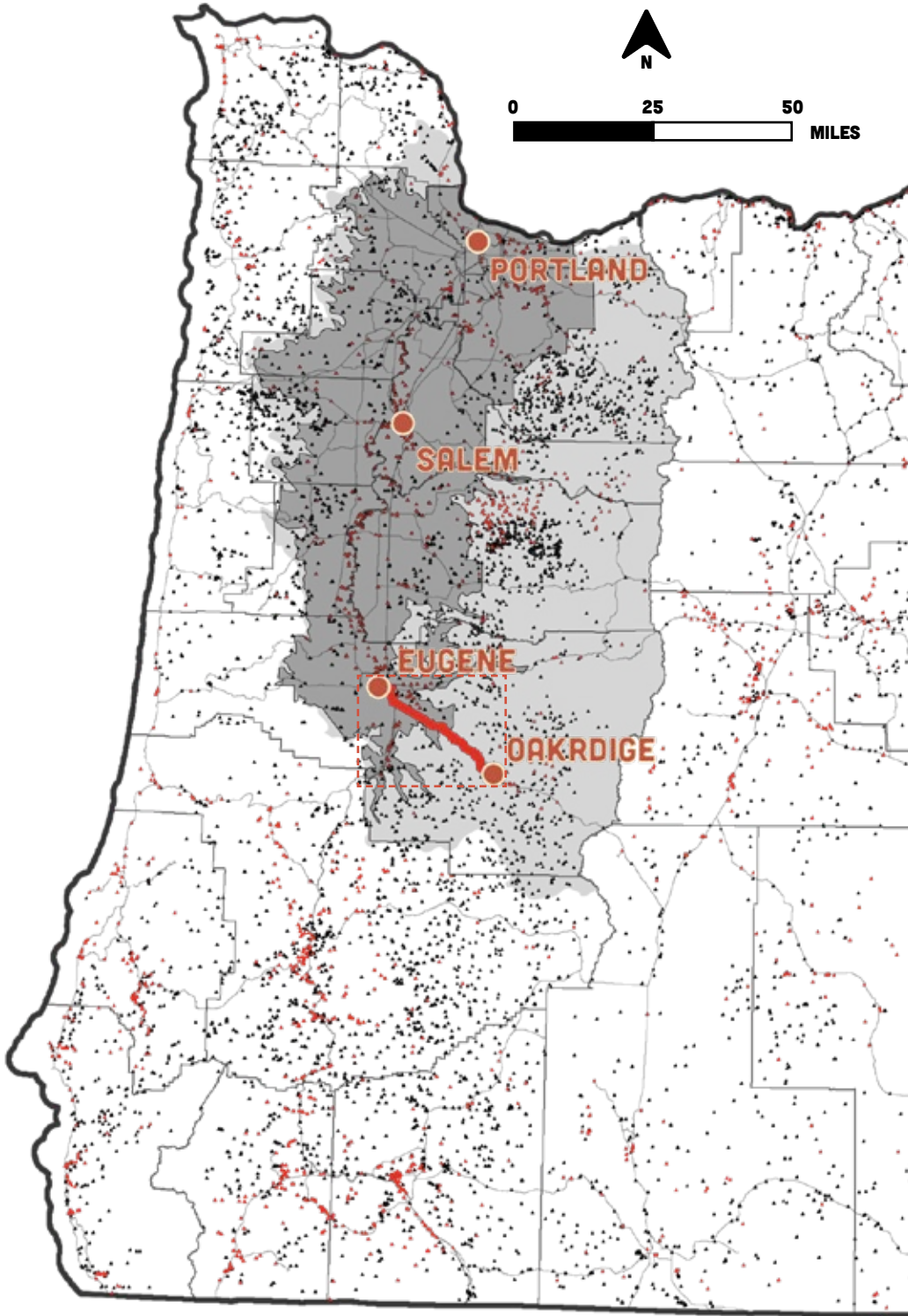
- » **IN LANE COUNTY, USUALLY FROM BASALT OUTCROPS, FORMED 15–20 MILLION YEARS AGO**
- » **ANGULAR SHAPE**
- » **DEEP MINES**
- » **SOLID MASS BEFORE EXTRACTION**
- » **DRILLED AND BLASTED TO EXTRACT**
- » **PROCESSING NEEDED FOR USE**

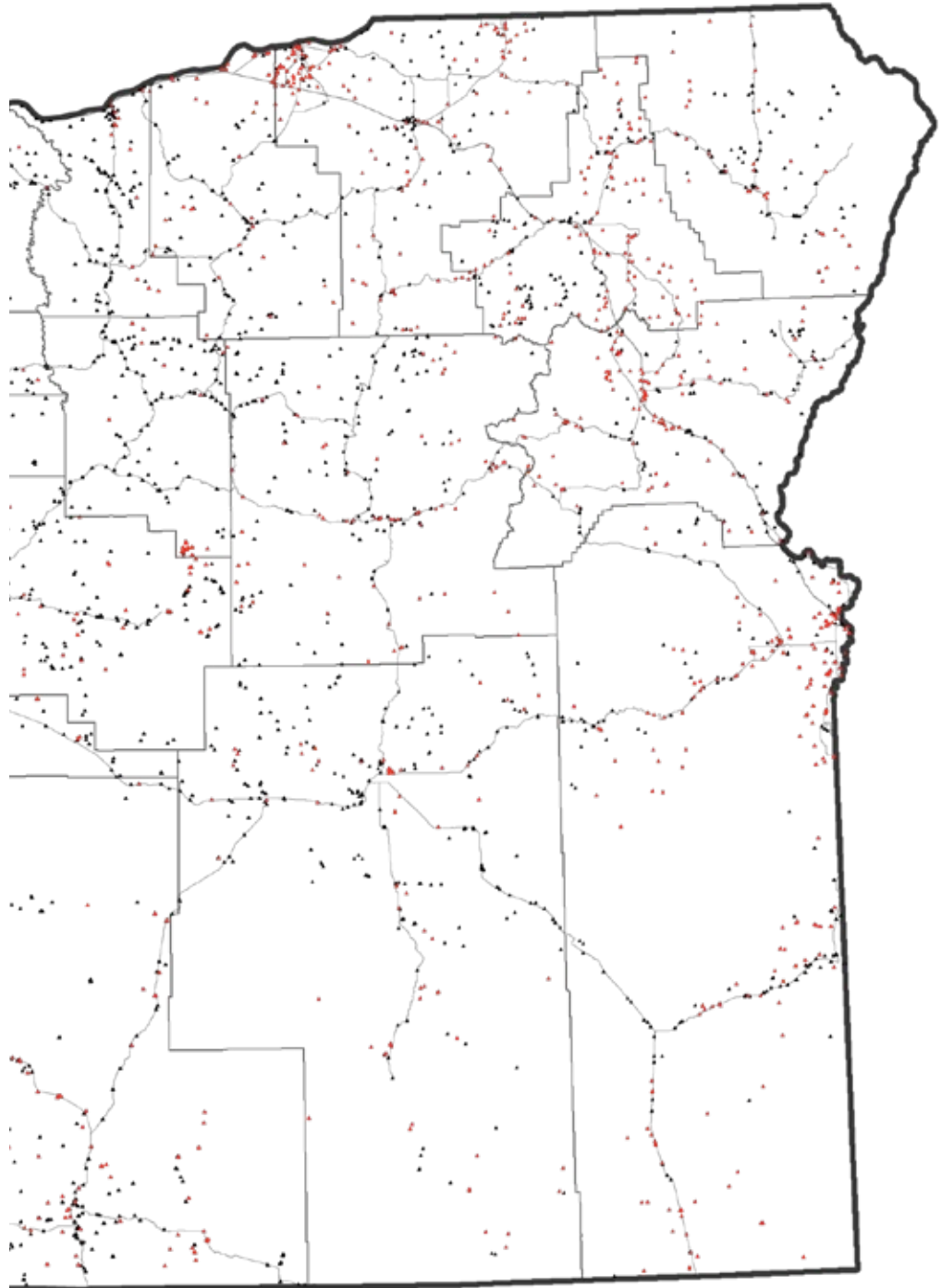
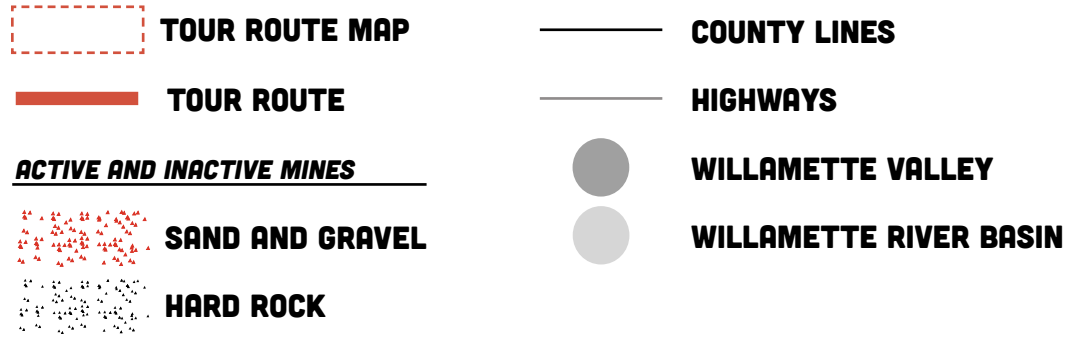
SAND AND GRAVEL AGGREGATE



- » **GLACIAL AND ALLUVIAL DEPOSITS 10,000 YEARS AGO**
- » **ROUNDED SHAPE**
- » **SHALLOW AND WIDE MINES**
- » **FOUND LOOSE UNDER SOIL**
- » **SCOOPED AND SCRAPED TO EXTRACT**
- » **MIX OF PETROLOGIES**

AGGREGATE MINES

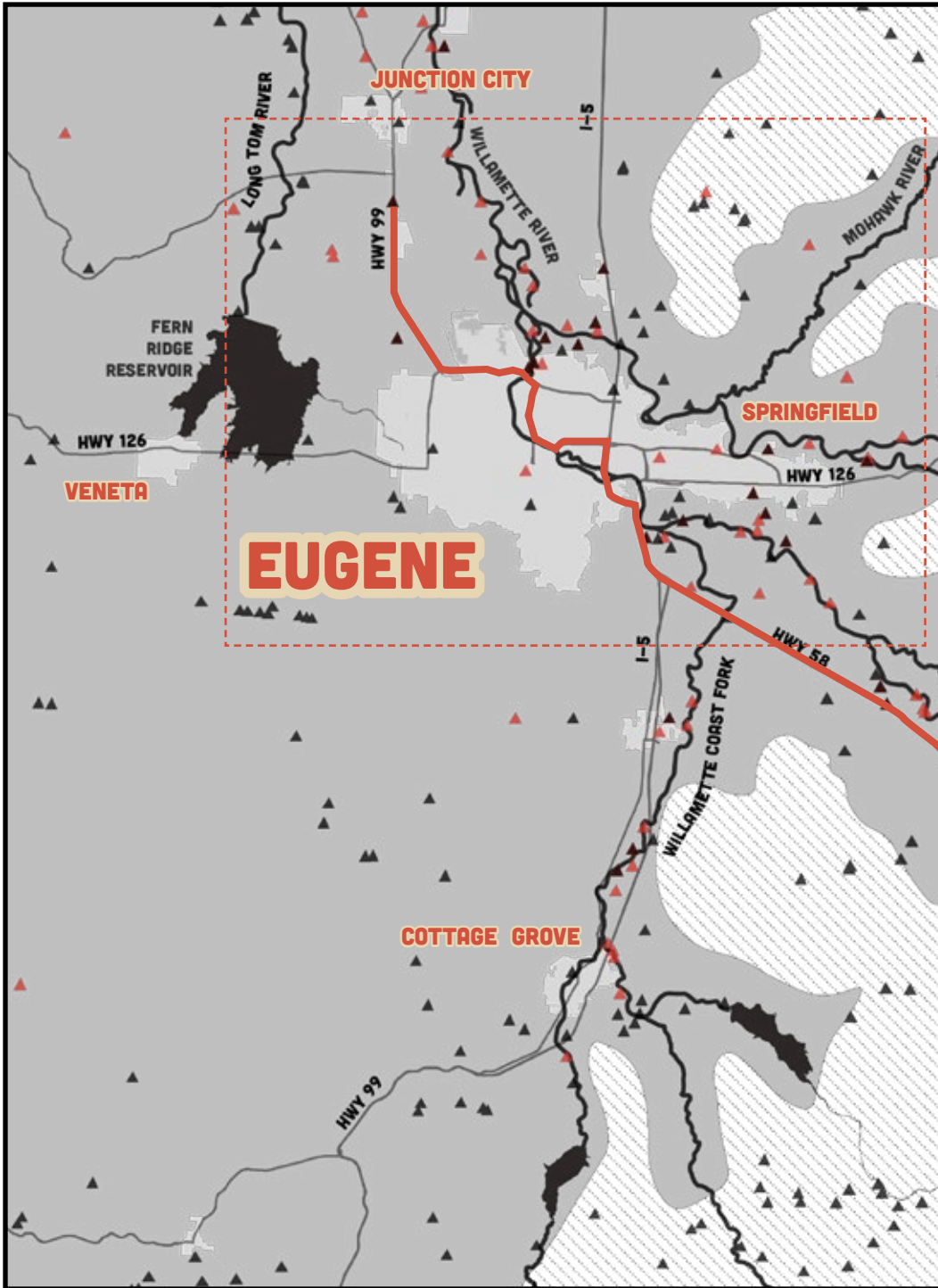
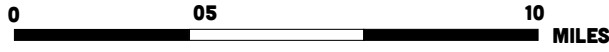


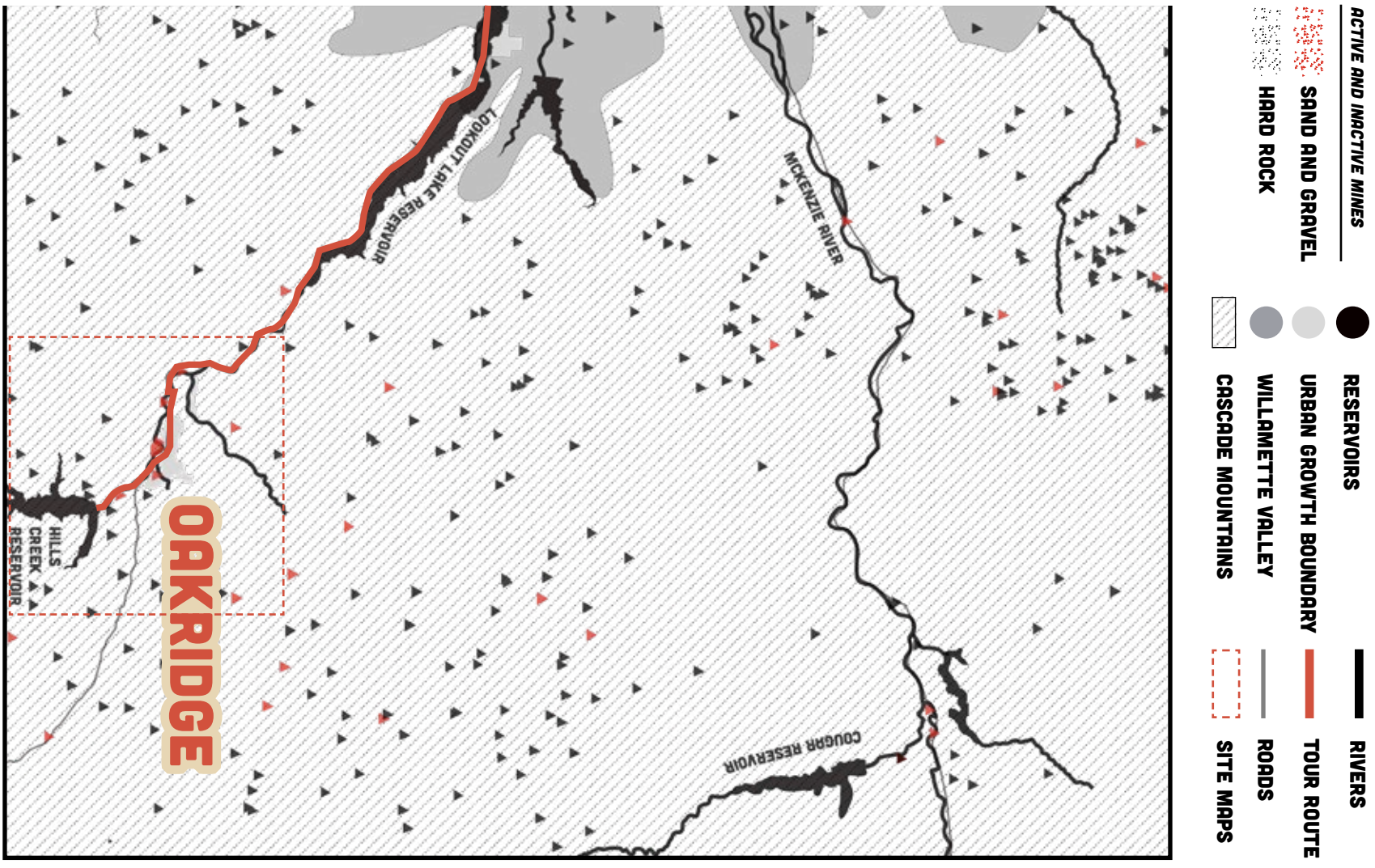


Mine Data Source: Gray, Jerry J., Clark A. Niewendorp, and Ron P. Geitze, "Mineral Information Layer for Oregon-Release 2," Data Basin, 2012, <https://databasin.org/datasets/bcca203c3a314936b4975ac412616425/>



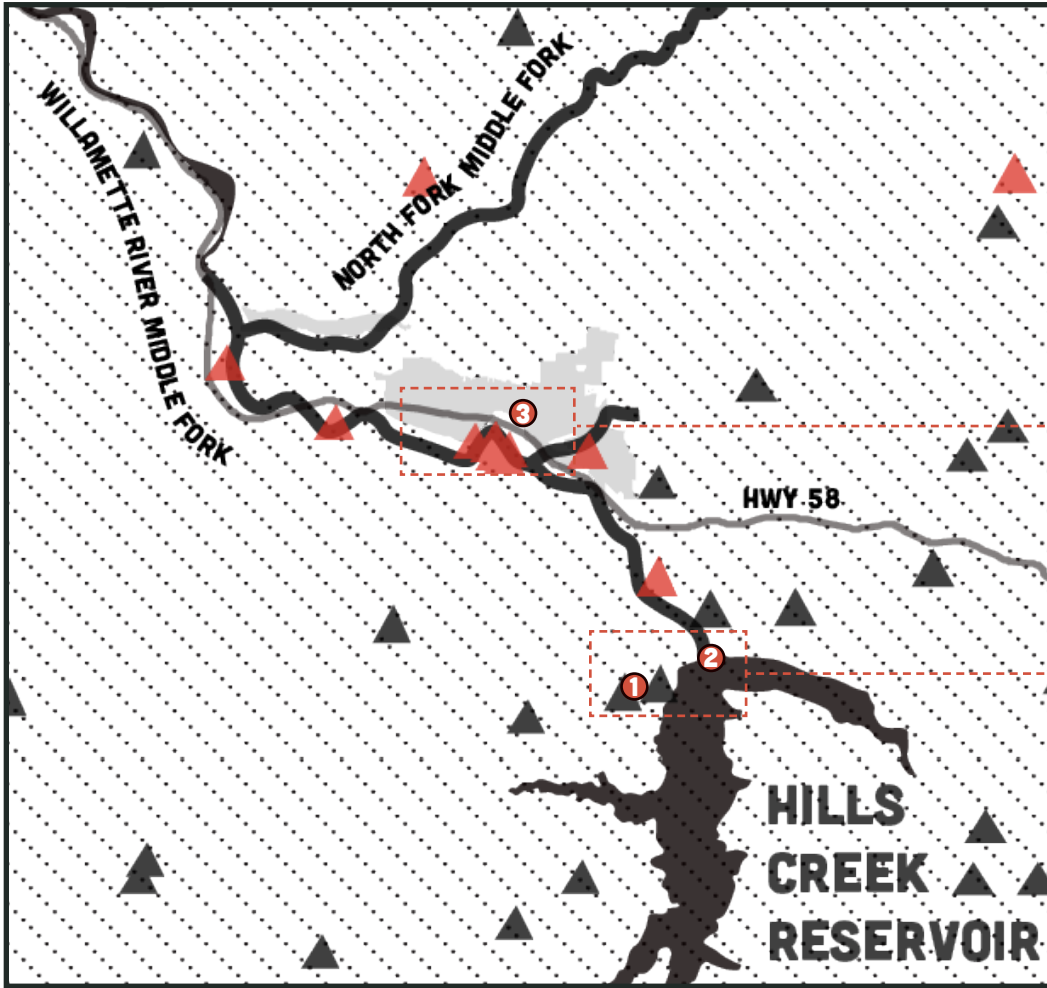
TOUR ROUTE





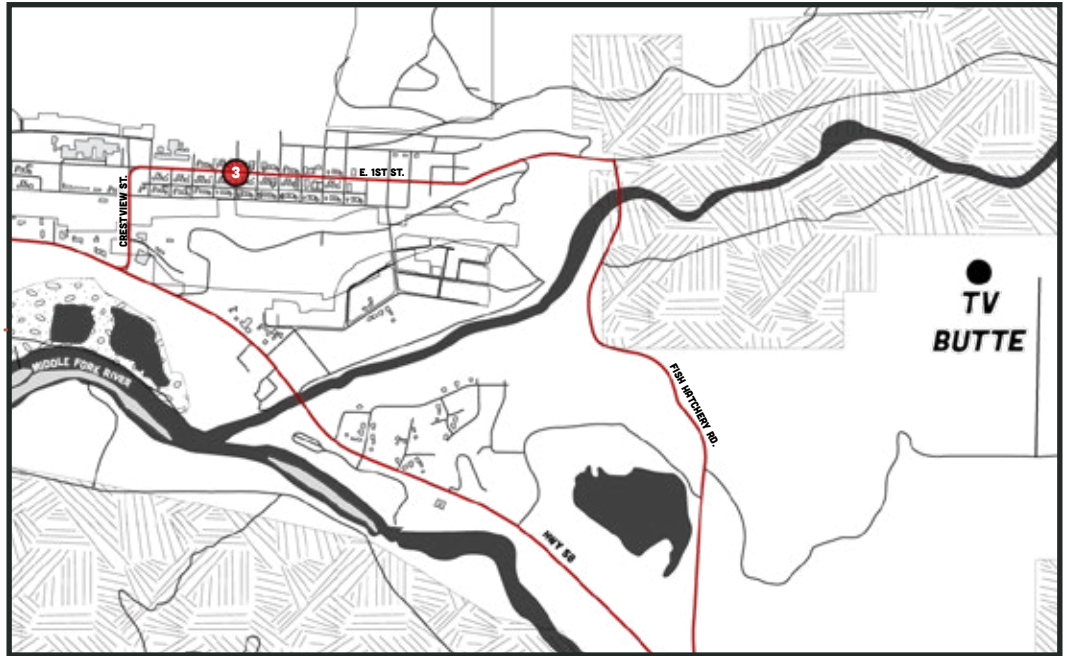


ROUTE - OAKRIDGE

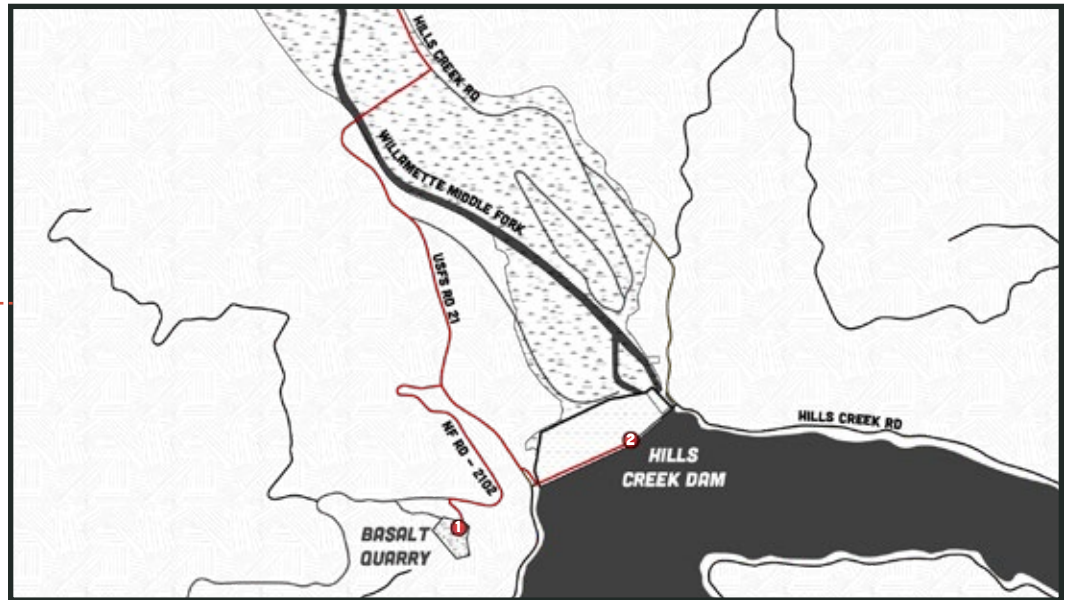


OAKRIDGE URBAN GROWTH BOUNDARY
















VIEW OF TV BUTTE AND TV BUTTE

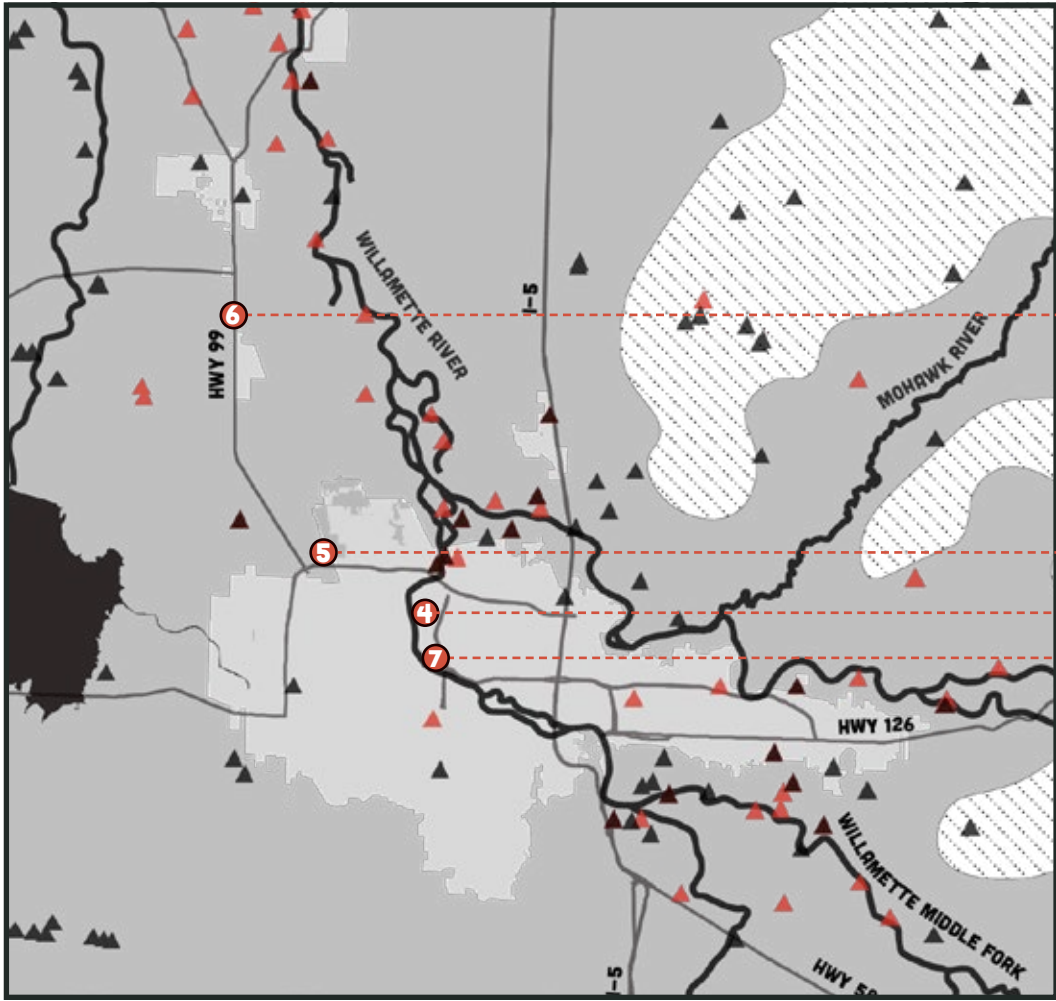


HILLS CREEK DAM AND BASALT QUARRY

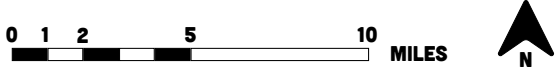
- | | | |
|--|--|---|
|  STOP ON TOUR |  RESERVOIR |  RIVERS |
|  CASCADES |  URBAN GROWTH BOUNDARY |  TOUR ROUTE |
|  FOREST |  BUILDINGS |  ROADS |
|  RIPARIAN ZONE |  DAM BOUNDARY | |

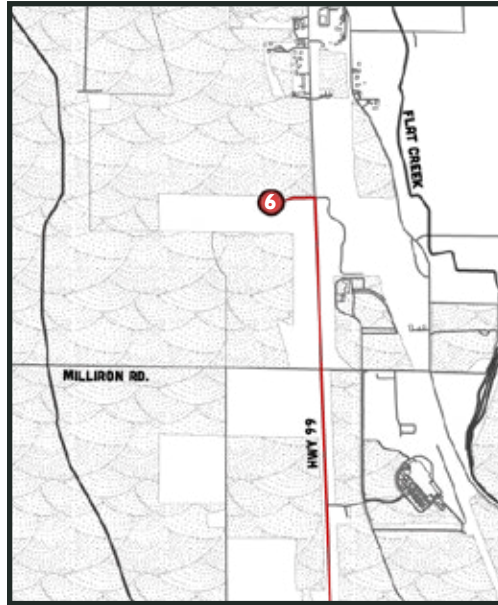


ROUTE - EUGENE



EUGENE/ SPRINGFIELD METRO URBAN GROWTH BOUNDARY





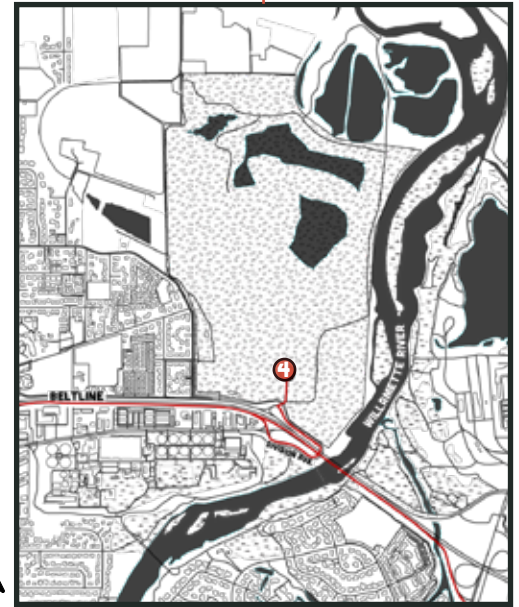
JUNCTION CITY PONDS PARK















URBAN RESERVES



DELTA PONDS



DELTA SAND AND GRAVEL

- | | | |
|--|--|--|
|  STOP ON TOUR |  WATER |  RIVERS |
|  MINED LAND |  URBAN GROWTH BOUNDARY |  TOUR ROUTE |
|  RIPARIAN ZONE |  WILLAMETTE VALLEY |  ROADS |
|  FARM LAND | |   BUILDINGS |

NARRATIVE TOOLS

THESE NARRATIVE TOOLS UNVEIL HIDDEN NARRATIVES INTERSECTING WITH EACH SITE. BY UNVEILING THESE STORIES, A MORE COMPLEX PICTURE OF THE MATERIAL NETWORK CAN BE EXPLORED.

STEP 1

Find the corresponding image in the back of the guidebook. Then, hold the image up at the site to unveil hidden stories.



EXAMPLE: ELK HERD AT TV BUTTE



HOW – TO USE

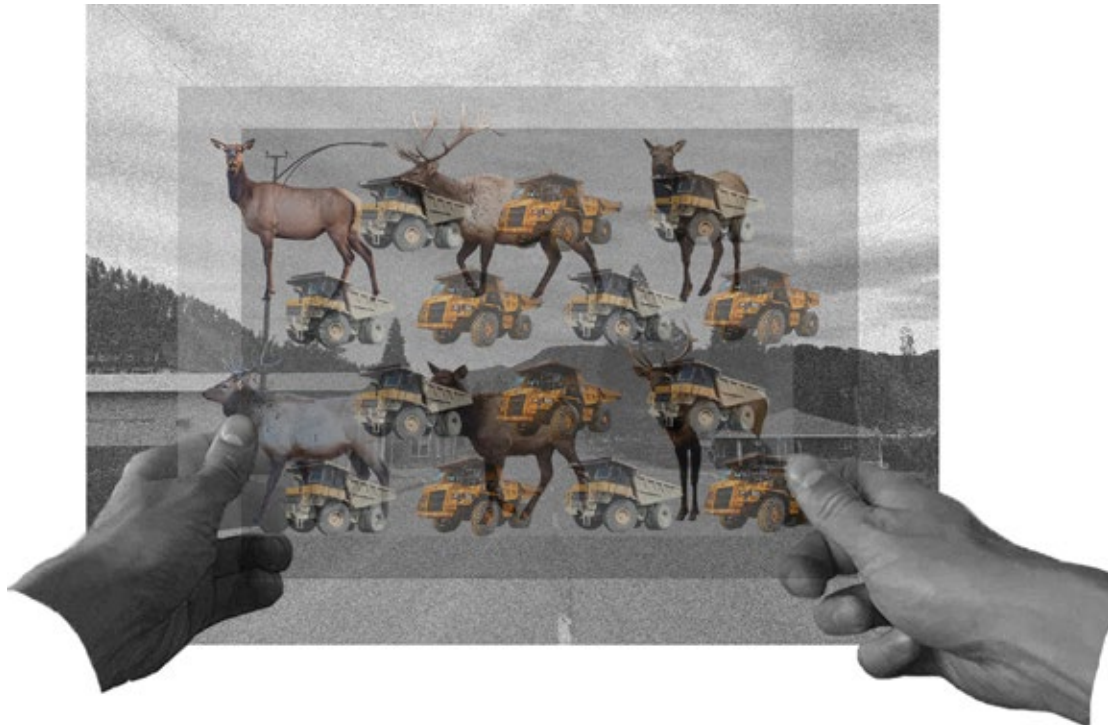
THESE NARRATIVE TOOLS WORK IN CONCERT WITH THE GUIDEBOOK FACTS AND TOUR NARRATIVE TO SPARK FURTHER DISCUSSION AND INQUIRY.

STEP 2

Find another corresponding image in the back of the guidebook. These corresponding site images can be used to show which stories intersect on the site.



EXAMPLE: AGGREGATE TRUCKS OVERLAYED ON ELK HERD AT TV BUTTE

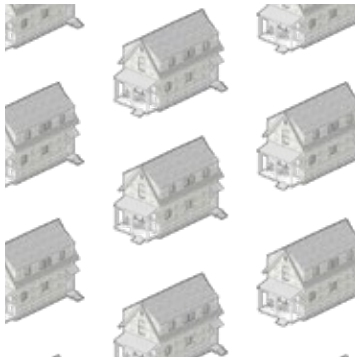


NARRATIVE TOOLS

These narrative tools are found in the back of this guidebook. Each image corresponds to a site on this tour—revealing stories about the landscape that are hidden from our perspective. These are narratives of **future projections, displacement, and material flow** in the network.

While these tools are coordinated with specific tour sites, it doesn't mean these narratives are exclusive to that site. These narratives resonate with landscapes across Oregon and can be layered to reveal intersections in the material network.

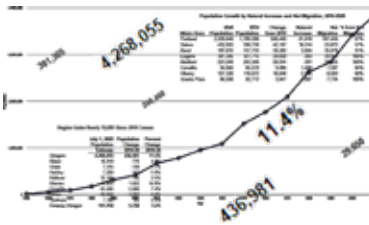
FUTURE PROJECTION NARRATIVES



HOUSING DEVELOPMENT



URBAN RESERVES

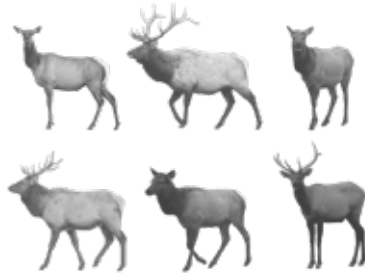


POPULATION TREND



DISAPPEARANCE

DISPLACEMENT NARRATIVES



ELK HERD



SHEEP



FARMERS

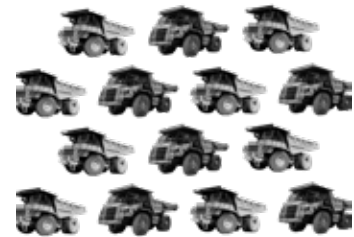


NATIVE TURTLES

MATERIAL FLOW NARRATIVES



PROTEST



AGGREGATE TRUCKS



EXPLOSIVES



LOGGING TRUCK

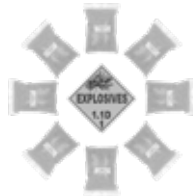
BASALT QUARRY



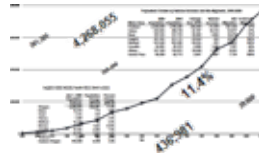
HIDDEN NARRATIVES



LOGGING TRUCK

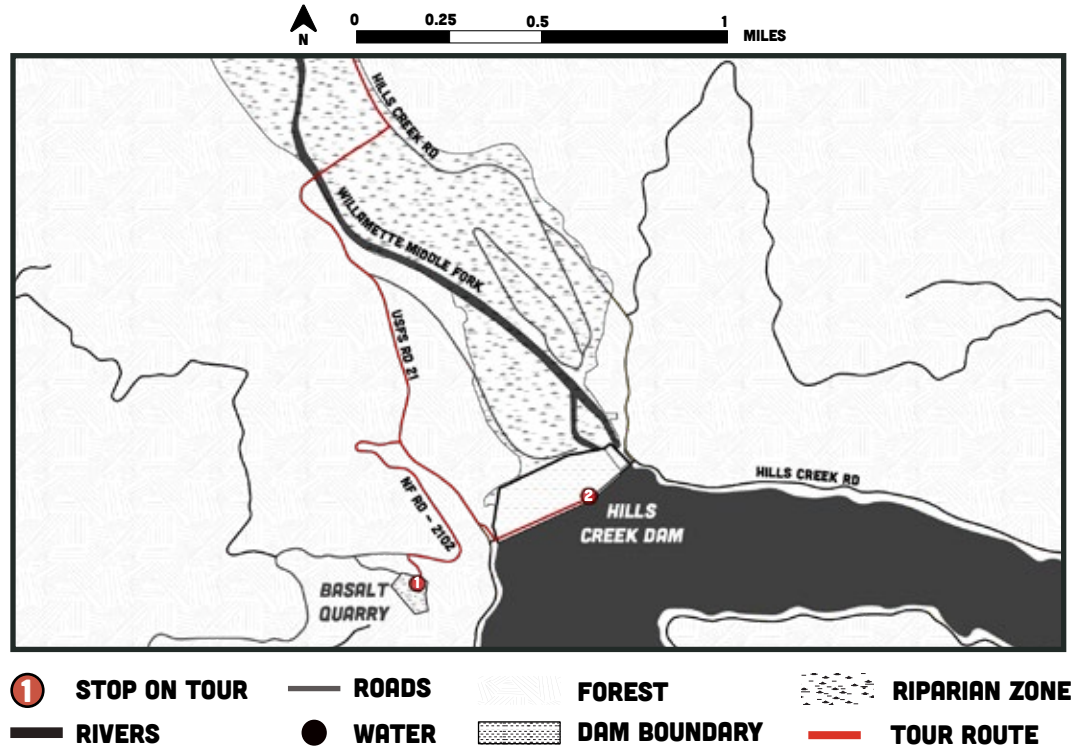


EXPLOSIVES



POPULATION TREND

SITE TYPE: ABANDONED SOURCE

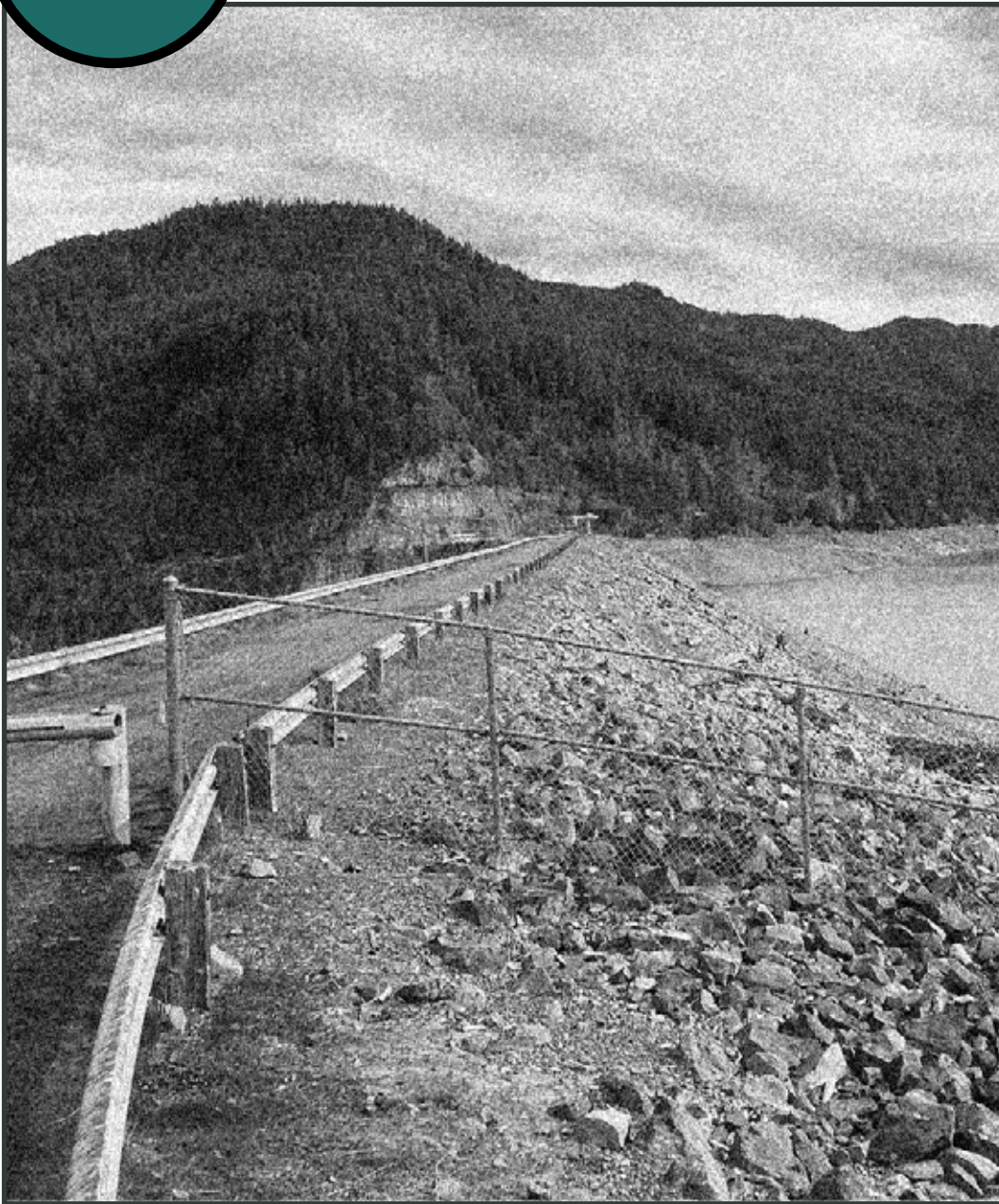


FACTS!

[GENERAL FACTS]

- » Extraction can last 25-50 years, or longer.⁴
- » About 90% of aggregate is extracted within an average of 35 miles to destination sites.⁴
- » Roughly 2500 aggregate mine sites are on Oregon USFS lands.¹
- » Oregon uses roughly 52 million tons of aggregate a year and the demand is projected to grow to 150 million tons by 2050.¹
- » In Lane County alone, the USFS used approximately 85,000 cy of aggregate to create stable timber harvesting roads and public works projects in 2021.⁵

HILLS CREEK DAM



HIDDEN NARRATIVES



FARMERS



URBAN EXPANSION

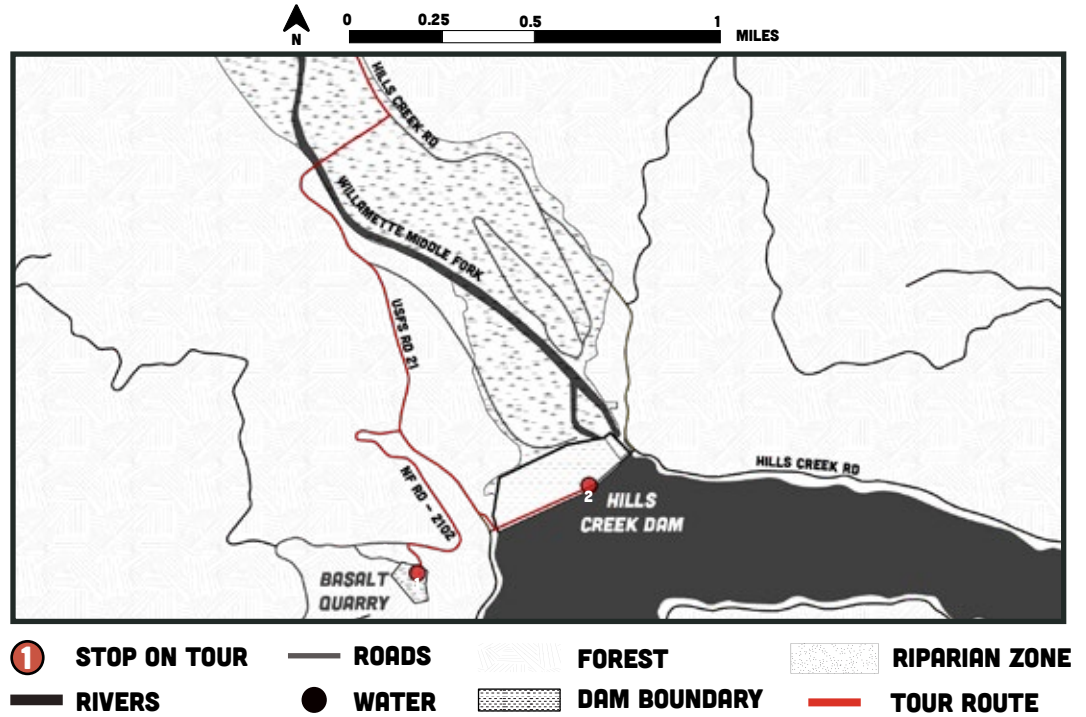


HOUSING DEVELOPMENT



DISAPPEARANCE

SITE TYPE: FORMER DESTINATION



FACTS!

[SITE FACTS]

» Dam Info :

- > Structure size: 2,235 ft. wide x 304 ft. tall.¹²
- > 36 MW of power output.¹²
- > Started in 1956, completed in 1961.¹²
- > When full, reservoir is 2,735 acres.¹²

[GENERAL FACTS]

- » Aggregate makes up about 85% of large-scale structures, such as roads, bridges, airports, driveways, and canals.⁴
- » An Oregonian typically generates 10-15 tons of aggregate a year, "or about one dump truck load per person."¹
- » By 2040, aggregate demand in Oregon is projected to range from 60,000,000 - 90,000,000 tons per year.¹

TV BUTTE



HIDDEN NARRATIVES



AGGREGATE TRUCKS



PROTEST

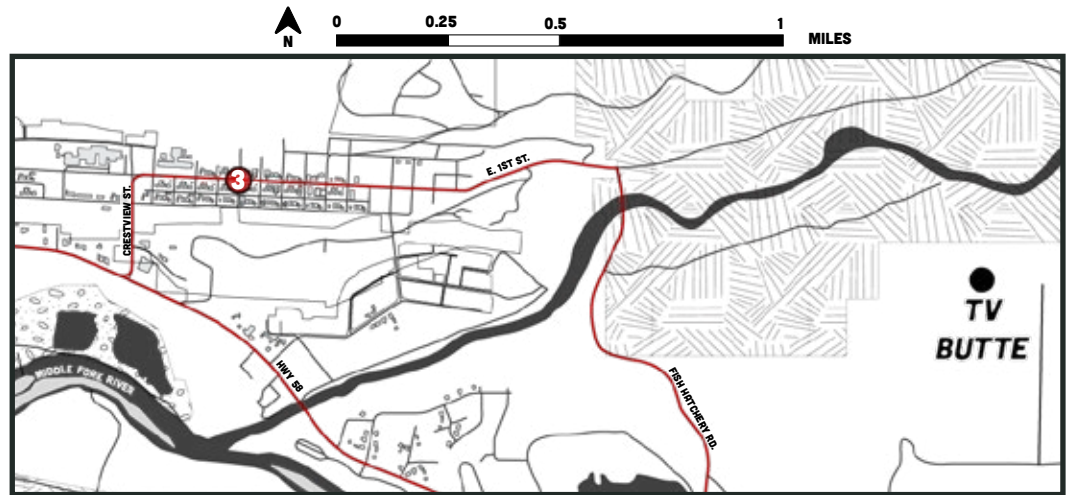


DISAPPEARANCE



ELK HERD

SITE TYPE: PROSPECTIVE SOURCE



FACTS!

[SITE FACTS]

- » TV Butte is expected to produce 17 million tons of aggregate over the next 50 years.²
- » 400 ft. will be extracted off the top of TV Butte.²
- » 183-acre quarry proposed.²
- » Elk herd of about 100-150 use the Butte.²
- » Foraging, fawning, and overwintering area for elk.
- » 86 dump trucks per day to haul gravel through Oakridge.²
- » Mine will generate large quantities of silica dust—currently Oakridge is among the worst air quality communities in US.²
- » Pre-colonial hunting land of the Molalla, Kalapuya, Klamath and Warm Springs indigenous peoples.
- » Economy relies on outdoor recreation tourism—mountain biking alone brings in \$2.3 - \$4.9 million each year.⁷

DELTA SAND AND GRAVEL



HIDDEN NARRATIVES



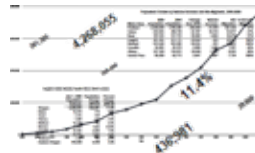
URBAN EXPANSION



HOUSING DEVELOPMENT

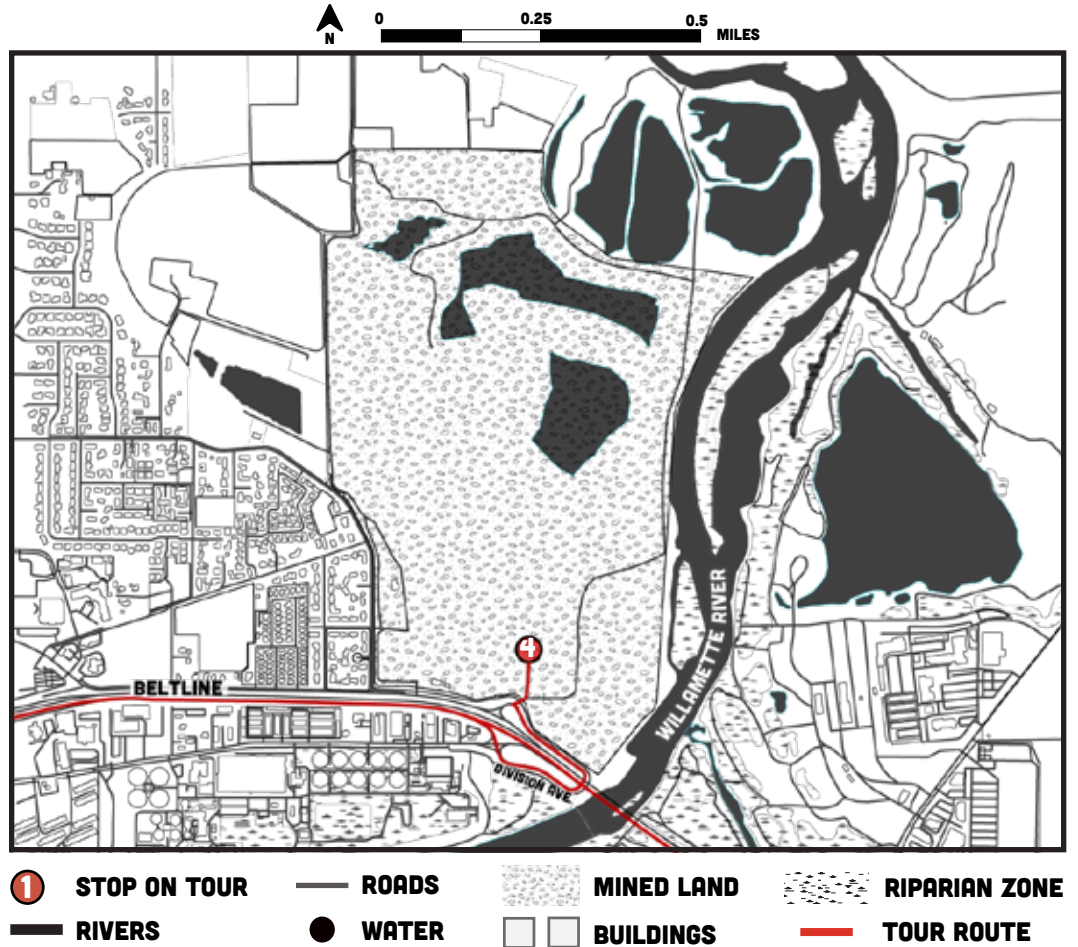


AGGREGATE TRUCKS



POPULATION TREND

SITE TYPE: ACTIVE SOURCE



FACTS!

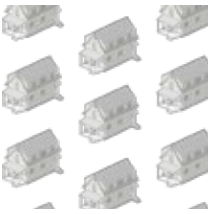
[GENERAL FACTS ABOUT AGGREGATE IN OREGON]

- » “Natural Aggregate production had a greater value than the copper, gold, and silver produced during this same year [2002].”⁴
- » 1,209 employed in nonfuel mineral mines in 2014.³
- » 191 employed in mills and plants in 2014.³
- » 17.3 million tons of quarried aggregate extracted in 2014 with \$134 million in value.³
- » 10,900 thousand metric tons of sand and gravel in 2014 with \$94.3 million in value.³

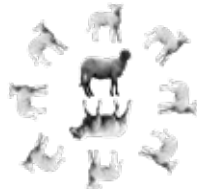
URBAN RESERVE



HIDDEN NARRATIVES



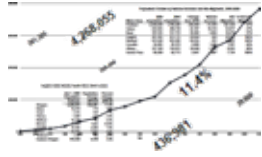
HOUSING DEVELOPMENT



SHEEP

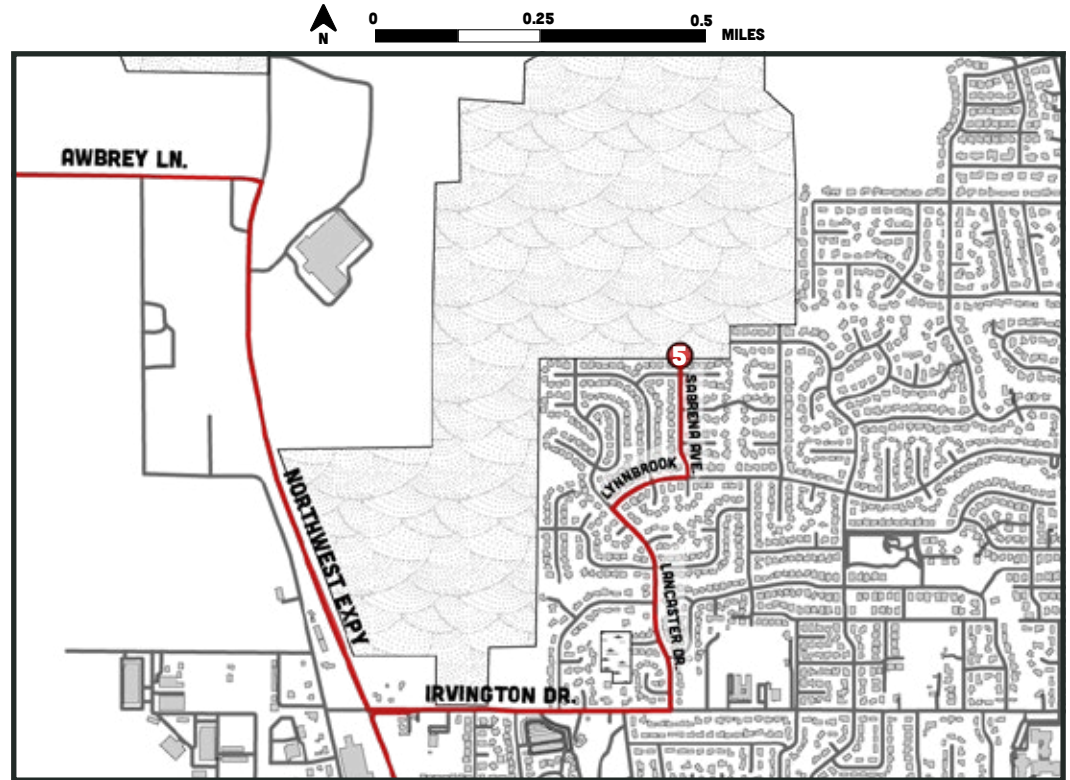


FARMERS



POPULATION TREND

SITE TYPE: PROSPECTIVE DESTINATION



- ① STOP ON TOUR
- ROADS
- FARM LAND
- BUILDINGS
- TOUR ROUTE

FACTS!

[GENERAL FACTS]

- » 10% population growth in Oregon from 2010-2020.¹⁰
- » 87% of population growth was from net in-migration.¹⁰
- » Oregon expected to reach 4.744 million people by 2030.¹⁰
- » Consumption of aggregate typically increases with wealth.⁴
- » "The wealthy area may demand more aggregate from a poor area than the poor area demands for its own needs."⁴
- » 90 tons of aggregate are needed to build a typical six-room house.¹

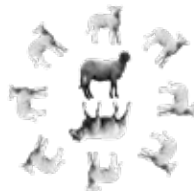
JUNCTION CITY PONDS



HIDDEN NARRATIVES



HOUSING DEVELOPMENT

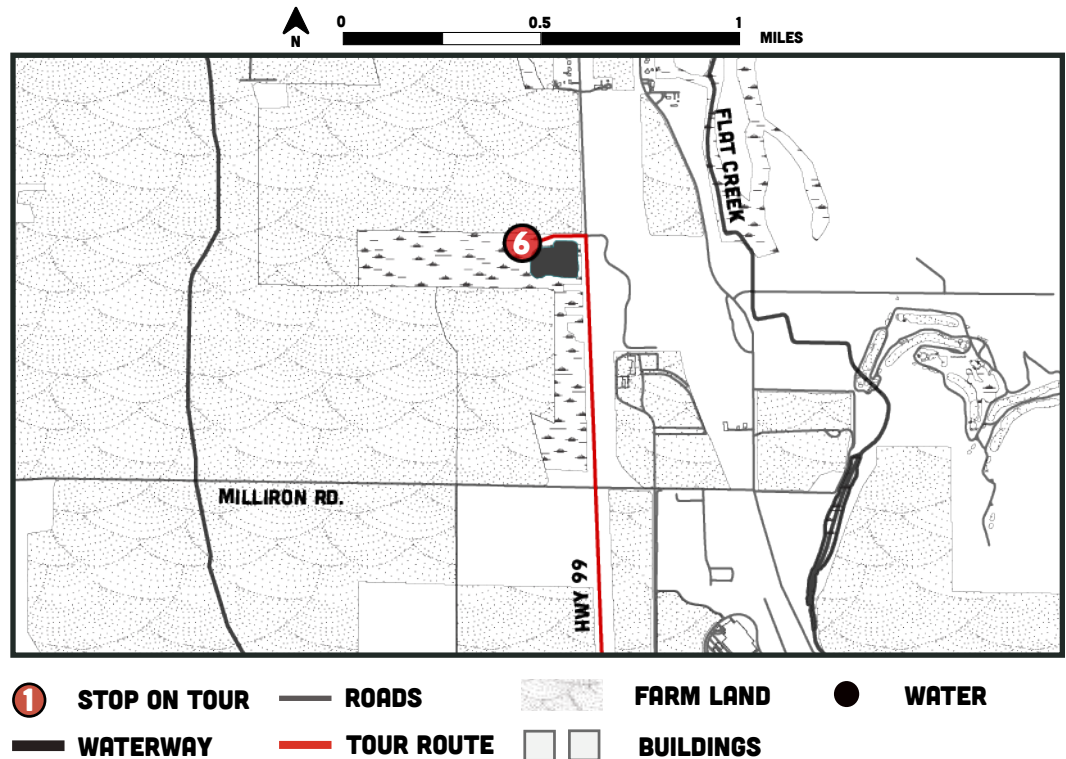


SHEEP



FARMERS

SITE TYPE: RECLAIMED SOURCE



FACTS!

[GENERAL FACTS]

- » 66% of total aggregate production in Oregon comes from the Willamette Valley.¹¹
- » Essentially all extracted sand and gravel in Willamette Valley comes from alluvial deposits in 100-year floodplain along Willamette River and tributaries.¹¹
- » Alluvial deposits also provide nutrient rich agricultural soil and rural farmers depend on this for productive farms.¹¹
- » Only 22% of reclaimed mine sites are returned to agricultural use, though this definition is loose and does not mean the land becomes productive again.¹

DELTA PONDS



HIDDEN NARRATIVES



HOUSING DEVELOPMENT

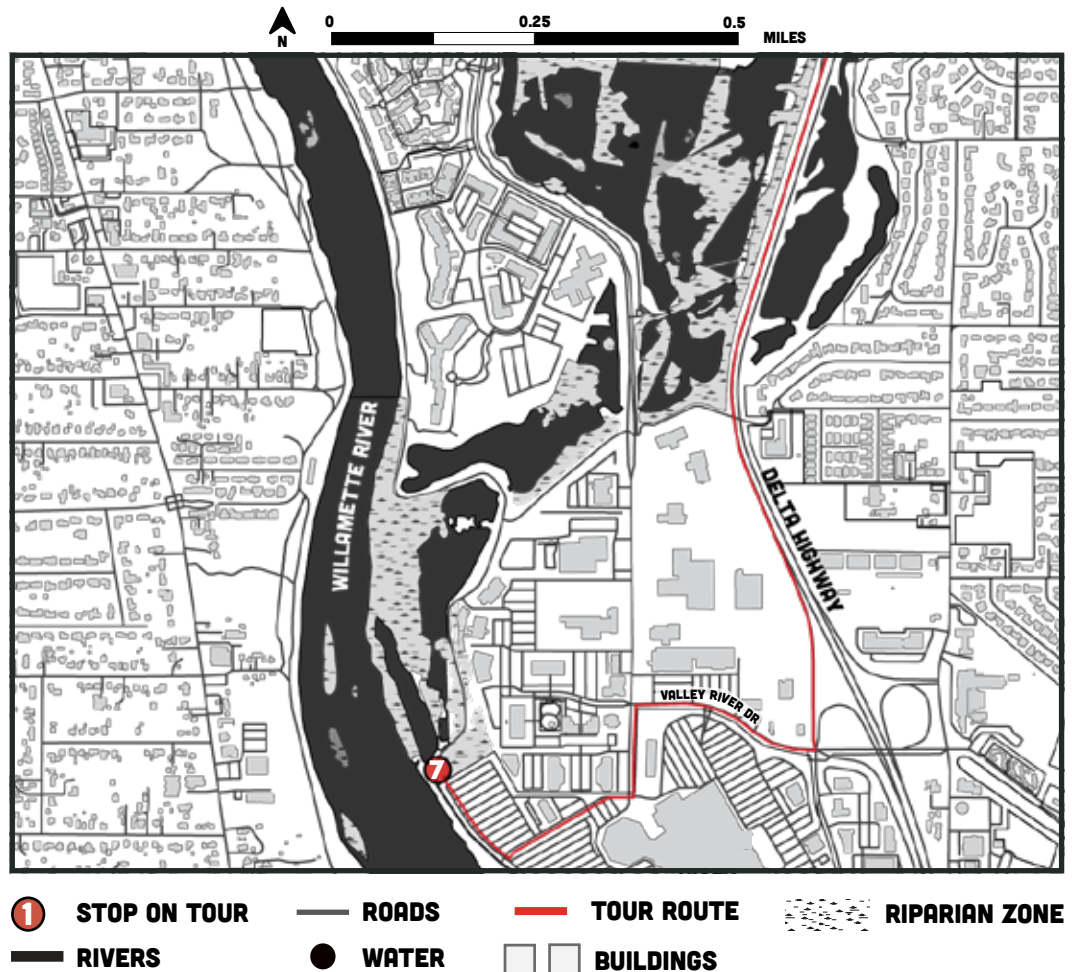


NATIVE TURTLES



FARMERS

SITE TYPE: RESTORED SOURCE



FACTS!

[SITE FACTS]

- » 20 yrs. of extraction, abandoned in 1960's, restored in 2012.
- » Gravel was used to develop Eugene infrastructure, Delta Highway (HWY 132), and the Beltline (HWY 569).
- » Estimated 2,000,000 cy of gravel extracted.⁶

[GENERAL FACTS]

- » Restored sites often improve quality of life and create wealth⁴
- » Several hundred active or former sand and gravel mines in Willamette Valley.

SOURCES

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2. Bates, Doug. "Quarry Critics Deliver Clear Message to Lane County on Proposed Gravel Mining: 'Please Do Not Do This.'" *Highway 58 Herald*. April 20, 2021. <https://highway58herald.org/community-of-oakridge-to-lane-county-on-proposed-rock-quarry-please-do-not-do-this/>.
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5. Kreidler, Helmut. Aggregate Use by USFS in Lane County, Oregon. Email, 2022.
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7. Matthews, Kevin. Stephen Lorber Interviews Kevin Matthews about TV Butte. Phone, April 27, 2022.
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9. Morris, Robert. "Notes on Art as/and Land Reclamation." *October* 12, no. Spring (1980): 87–102.
10. Portland State University Population Research Center, "Population Reports," Accessed 2022, <https://www.pdx.edu/population-research/>
11. Reed, Mark. "Gravel Mining on Willamette Valley Prime Farmland," Testimony to the Oregon House Land Use Committee: Re: HB 2201 and HB2202, (2013) (Mark H. Reed, Professor of Geology, University of Oregon).
12. US Army Corps of Engineers, "Hills Creek Dam & Reservoir," US Army Corps of Engineers Portland District Website, Accessed 2022, <https://www.nwp.usace.army.mil/Locations/Willamette-Valley/Hills-Creekb705a090e103d41a517fe525aee9ae59?AccessKeyId=89C2CFCB915E75E9CBF1&disposition=0&alloworigin=1>.

FURTHER RESOURCES

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An appeal to landscape architects to explore how mines can become a cultural landscape.

Favela, Justin, and Emmanuel Ortega. *New Monuments for a Future Generation*. Video, January 19, 2022. https://www.youtube.com/watch?v=Bb6z_Pxd_0o.

A discussion about the influence of land art traditions, their connection with colonialism, and thoughts on the future of these installations.

Kanouse, Sarah. "Critical Day Trips: Tourism and Land-Based Practice." In *Critical Landscapes: Art, Space, Politics*, edited by Emily Eliza Scott and Kristen Swenson, 43–56. Berkeley, CA: University of California Press, 2015.

An introduction to critical tours and how others have developed the tradition.

Kaiser, Philip, and Miwon Kwon. "Introduction: Ends of the Earth and Back." In *Ends of the Earth: Art of the Land to 1974*, 17–35. Los Angeles and New York: Museum of Contemporary Art and Prestel, 2012.

An introduction to early land art and its influence on expanding art audiences.

Lippard, Lucy. *Undermining: A Wild Ride Through Land Use, Politics, and Art in the Changing West*. New York, NY: The New Press, 2014.

A meditation, inspired by gravel pits, on the relationship between land and culture in the Southwest.

"Margins in Our Midst: A Journey into Irwindale." *The Center for Land Use Interpretation*, 2003, <https://clui.org/newsletter/winter-2003/margins-our-midst-journey-irwindale>.

A canonical critical tour by the Center for Land Use Interpretation.

Morris, Robert. "Notes on Art as/and Land Reclamation." *October* 12, no. Spring (1980): 87–102.

A meditation on extraction art and art in extracted landscapes.

Merrifield, Andy. "The Right to the City and Beyond: Notes on a Lefebvrian Reconceptualization." In *Implosions / Explosions: Towards a Study of Planetary Urbanization*, edited by Neil Brenner, 523–32. Berlin: Jovis Verlag GmbH, 2014.

A meditation on expanding urban influence over landscapes and how to form a new relationship to contributing processes.

The Center for Land Use Interpretation. "About the Center." *The Center for Land Use Interpretation*, <https://clui.org/section/about-center>.

An influential organization that organizes critical tours and documents unique landscapes.