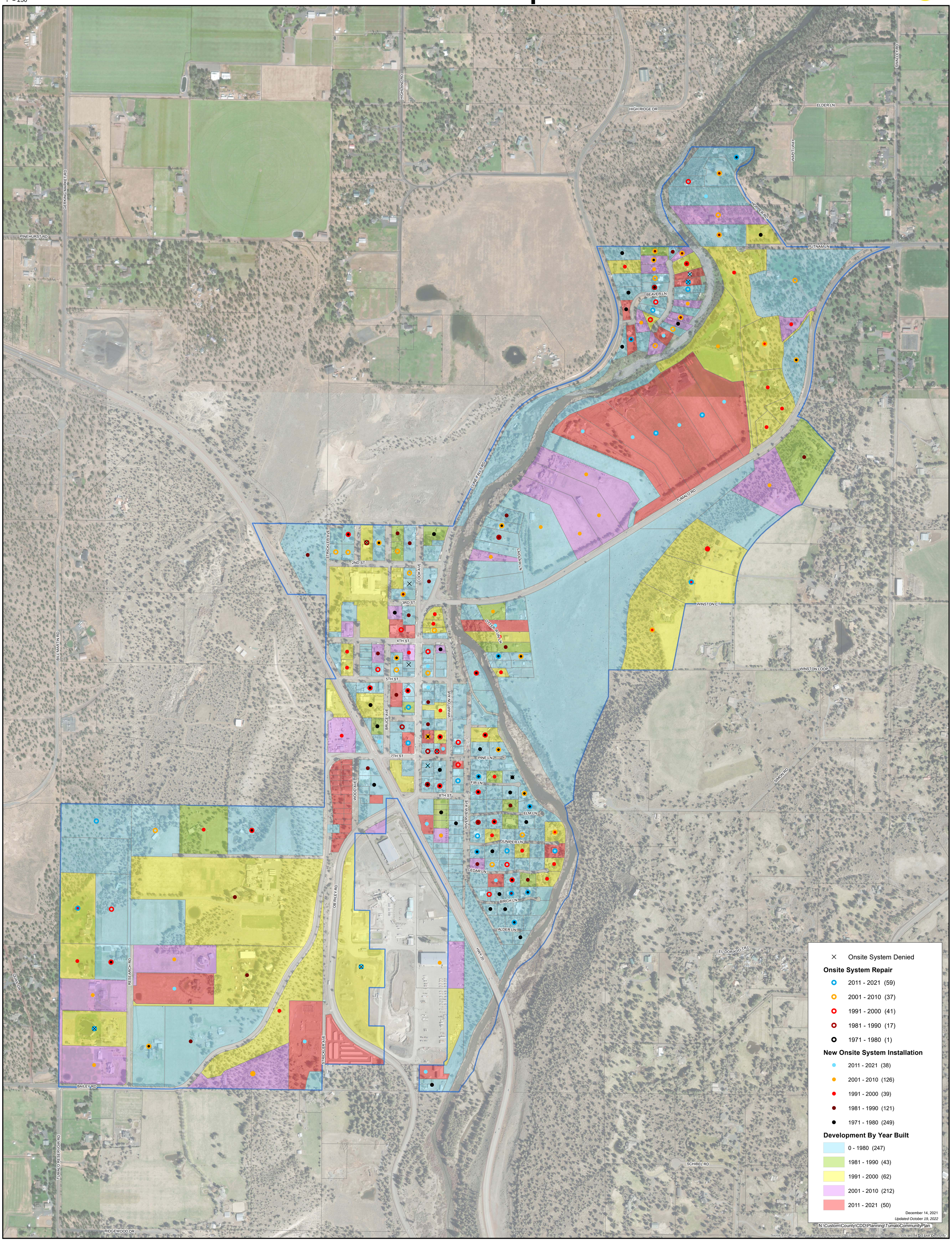
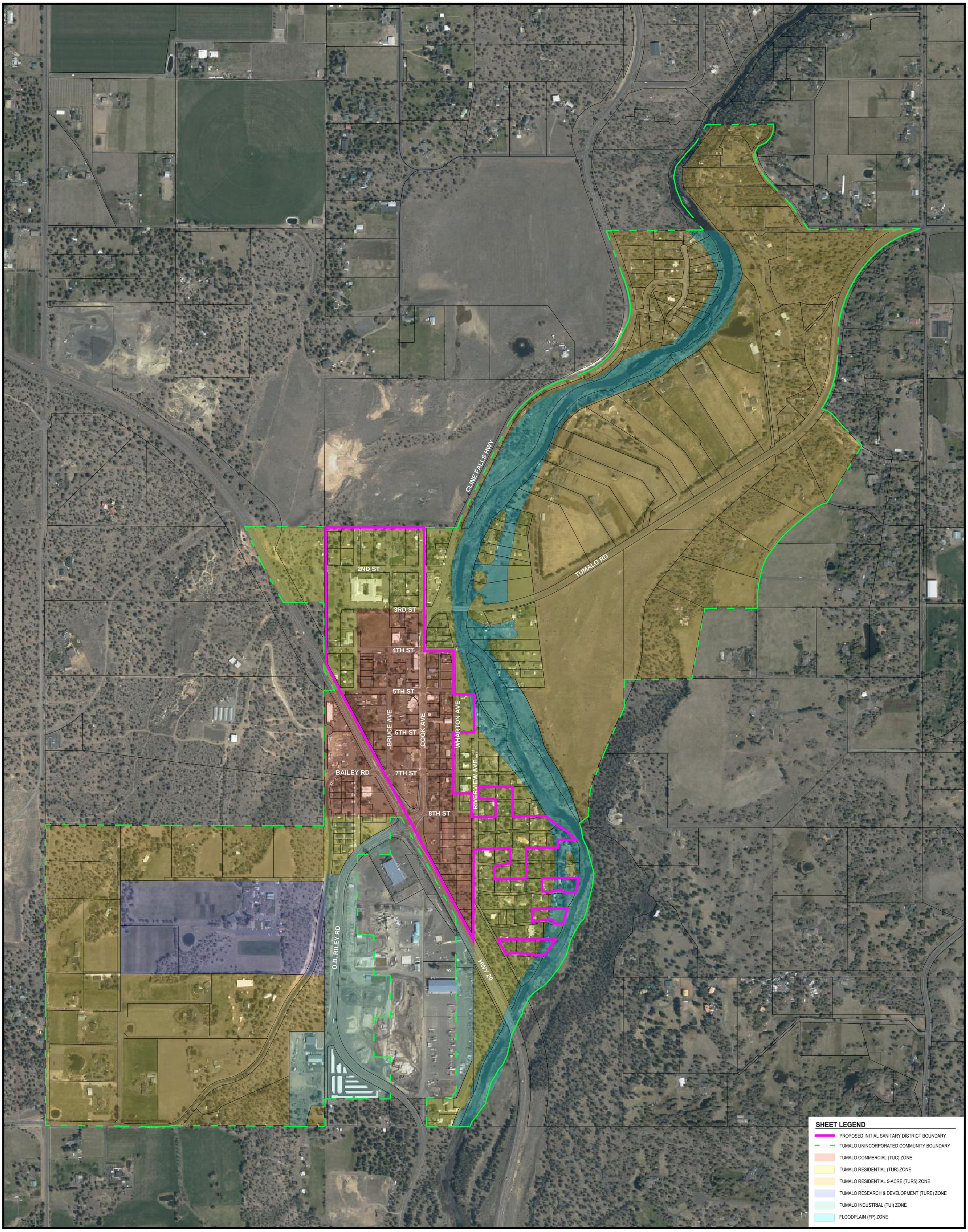
1" = 250'

Tumalo Development





Parametrix

DATE: January 23, 2024

FILE: 20240123-EXH-TUMALO-MAP

N

1 INCH

TUMALO COMMUNITY BOUNDARY AND SANITARY DISTRICT MAP

What are the benefits of a Community Sewer System?



Better public health and water resource protection

With a community sewer system, wastewater is directed to a wastewater plant for centralized treatment and disposal. This protects people and the Deschutes River from the negative effects of wastewater pollution. Wastewater treatment facilities are professionally managed and held to strict treatment requirements that protect humans and the environment.

Managable system costs

When onsite septic systems fail, residents and businesses are faced with unforeseen pumping and repair costs. While pumping septic tanks may only cost a few hundred dollars each occurrence, this can get expensive if frequently required. If onsite systems fail, system repairs and replacements can cost homeowners between $4k-$35k, depending on size and complexity (e.g. ATT systems). Some commercial septic system repairs have cost businesses well over $100k. Some businesses in Tumalo have been forced to close as a result. With a community sewer system, customers will be charged an upfront connection fee and a regular monthly sewer rate (subject to minimal annual increases, subject to District board approval). The predictable costs of a community sewer system would eliminate the risk of massive unexpected costs from onsite septic systems failing.

Reliable system operation and maintainance by professionals

Residences and businesses in Tumalo will no longer have to worry about their onsite septic system failing. Owners will have a minimal responsibility for keeping their onsite sewer service connection operational. In general, most people prefer to be on a shared sewer system if they have a choice, as the burden of keeping the system running smoothly falls on the local sanitary district, which has the resources and expertise to ensure that wastewater is properly treated in the service area. Also, in a shared sewer system, wastewater is conveyed away to a centralized treatment facility; anyone who has ever experienced a septic system backup on their property can appreciate what a benefit off-site wastewater treatment can be.

Reclaim drainfield areas for other uses

The space occupied by drainfields or reserve areas can be re-purposed for other uses. After properly abandoning drainfields, these areas could be used to build another structure or expand a business. Some larger lots may be able to partition or subdivide to create additional lots that can be developed.

Many vacant lots will become buildable

In 1904 the 'Townsite of Laidlaw' plat was approved, which laid out the community in a rectangular urban grid of streets, blocks, and small lots, each just 2500 square feet (25’x100’) or 5000 square feet (50'x100'). Over time these small lots have been purchased in groups and consolidated, resulting in a variety of odd lot shapes and sizes. Septic systems typically require lot sizes of at least 10,000 square feet to fit a dwelling, septic tank, drainfield, and reserve area within required setbacks and clearance requirements. As a result, the smaller “leftover” lots under 10,000 square feet have been unable to install a septic system and develop. Deschutes County reports that there are approximately 105 undeveloped parcels within the Tumalo unincorporated community boundary. Many of these lots are currently unbuildable because the lot sizes and soil conditions are not sufficient for an onsite septic system. A community sewer system would enable development of vacant lots that were denied septic approval, which could benefit property owners and help address the housing shortage seen throughout Central Oregon.

New Local Economic Opportunities

A community sewer system would facilitate the development and continued existence of residential, commercial, industrial, and mixed use developments, previously precluded due to onsite septic system limitations. Examples of such developments include food processing plants, hotels, and breweries. This could lead to the creation of new commerce and jobs in Tumalo, strengthening local economic vitality.

NOTE: These figures are preliminary illustrations of various potential wastewater system concepts and no agreements have been made with owners of property where potential sites are shown.

HIGHLAND RD

GERKING MARKET RD

BEAVER LN

DESCHUTES RIVER

EVAPORATION PONDS

8 EVAPORATOR UNITS
(only 4 needed for Phase A)

SUBSURFACE FLOW WETLANDS

0.17 ac

0.17 ac

4.5 ac

4.5 ac

CLINE FALLS HWY

TUMALO RD

US HWY 20

BILL MARTIN RD

CORE
CURRENT: 130 EDU
BUILDOUT: 223 EDU

NE TUR LOTS
CURRENT: 18 EDU
BUILDOUT: 36 EDU

STUDY AREA BOUNDARY

EXISTING DISTRICT SERVICE AREA BOUNDARY

COOK AVE

7TH ST

TPOA SERVICE AREA
CURRENT: 36 EDU
BUILDOUT: 41 EDU
(STEP COLLECTION)

O.B. RILEY RD

Alternative 1 – Treatment Wetlands and Evaporation Ponds

How it works	Planted gravel beds treat the wastewater. The treated water then flows to lined ponds and evaporates.
Benefits	Simple, mostly natural treatment; uses an existing pit, reducing excavation.
Challenges	Requires a large site near town; evaporators may be noisy and visible; salts and solids must be managed.
Phase A cost	**About $6.9 million**
Full-buildout cost	**About $8.8 million**

Planning-level costs: *Phase A assumes approximately 4,200 feet of collection piping. Costs include land, piping, treatment and disposal facilities, design, permitting, and contingencies. These early estimates could be approximately 30% lower to 50% higher as the design is refined.*

Parametrix

DATE: June 30, 2026

FILE: TBSD–PER–BASEMAPS

N

0 800

1 INCH = 800 FT.

Alternative 1
Subsurface Flow Wetlands & Evaporation Pond
Tumalo Basin Sewer District PER

NOTE: These figures are preliminary illustrations of various potential wastewater system concepts and no agreements have been made with owners of property where potential sites are shown.

HIGHLAND RD

GERKING MARKET RD

24 ac
LAND APPLICATION

BEAVER LN

BAFFLES, TYP

2 ac

IRRIGATION PUMP STATION

FACULTATIVE PONDS

2 ac

DESCHUTES RIVER

CLINE FALLS HWY

TUMALO RD

CORE
CURRENT: 130 EDU
BUILDOUT: 223 EDU

US HWY 20

NE TUR LOTS
CURRENT: 18 EDU
BUILDOUT: 36 EDU

STUDY AREA BOUNDARY

BILL MARTIN RD

COOK AVE

7TH ST

EXISTING DISTRICT SERVICE AREA BOUNDARY

TPOA SERVICE AREA
CURRENT: 36 EDU
BUILDOUT: 41 EDU
(STEP COLLECTION)

O.B. RILEY RD

Alternative 2 – Treatment Lagoons and Irrigation

How it works	Lagoons treat the wastewater. Treated water is stored during winter and used to irrigate pasture or hay fields.	
Benefits	Simple, proven treatment; commonly used in Central Oregon; puts treated water to beneficial use.	
Challenges	Requires substantial land and winter storage; possible odors and mosquitoes; major ponds are difficult to build in phases.	
Phase A cost	About $6.2–$6.3 million	***Planning-level costs:*** *Phase A assumes approximately 4,200 feet of collection piping. Costs include land, piping, treatment and disposal facilities, design, permitting, and contingencies. These early estimates could be approximately 30% lower to 50% higher as the design is refined.*
Full-buildout cost	About $8.3 million	

Parametrix

DATE: June 30, 2026

FILE: TBSD–PER–BASEMAPS

0 N 800

1 INCH = 800 FT.

Alternative 2

Treatment Lagoon & Land Application (Highland CLR Field)

Tumalo Basin Sewer District PER

NOTE: These figures are preliminary illustrations of various potential wastewater system concepts and no agreements have been made with owners of property where potential sites are shown.

HIGHLAND RD
GERKING MARKET RD
BEAVER LN
DESCHUTES RIVER
CLINE FALLS HWY
TUMALO RD
US HWY 20
BILL MARTIN RD
COOK AVE
7TH ST
O.B. RILEY RD

AX-MAX TEXTILE MEDIA FILTRATION TREATMENT EXPANSION

CORE
CURRENT: 130 EDU
BUILDOUT: 223 EDU

NE TUR LOTS
CURRENT: 18 EDU
BUILDOUT: 36 EDU

STUDY AREA BOUNDARY

EXISTING DISTRICT SERVICE AREA BOUNDARY

TPOA SERVICE AREA
CURRENT: 36 EDU
BUILDOUT: 41 EDU
(STEP COLLECTION)

3.5 ac
2.5 ac
DRAINFIELD EXPANSION AREAS
6 ac DRAINFIELD EXPANSION RESERVE AREA
FUTURE ADDITIONAL 4" FM OR UPSIZE TO 6" FM

Alternative 3a – Expand the Existing TPOA System with Drainfields

How it works	The District would acquire and expand the existing TPOA treatment system and add new drainfields.
Benefits	Builds on an existing facility and customer base; requires less new construction; uses proven local technology.
Challenges	Purchase terms and existing equipment condition are uncertain; nearby land with suitable soils is needed; service must continue during construction.
Phase A cost	**About $5.1 million**
Full-buildout cost	**About $8.6 million**

Planning-level costs: *Phase A assumes approximately 4,200 feet of collection piping. Costs include land, piping, treatment and disposal facilities, design, permitting, and contingencies. These early estimates could be approximately 30% lower to 50% higher as the design is refined.*

Parametrix

DATE: June 30, 2026

FILE: TBSD–PER–BASEMAPS

0 N 800

1 INCH = 800 FT.

Alternative 3a

Alternative 3a - TPOA Acquisition + Drainfield Expansion

Tumalo Basin Sewer District PER

NOTE: These figures are preliminary illustrations of various potential wastewater system concepts and no agreements have been made with owners of property where potential sites are shown.

HIGHLAND RD
GERKING MARKET RD
BEAVER LN
DESCHUTES RIVER
CLINE FALLS HWY
TUMALO RD
US HWY 20
BILL MARTIN RD
COOK AVE
7TH ST
O.B. RILEY RD

AX-MAX TEXTILE MEDIA FILTRATION TREATMENT EXPANSION

WINTER STORAGE PONDS

1.5 ac

1.5 ac

27 ac
LAND APPLICATION

FUTURE ADDITIONAL 4" FM OR UPSIZE TO 6" FM

CORE
CURRENT: 130 EDU
BUILDOUT: 223 EDU

NE TUR LOTS
CURRENT: 18 EDU
BUILDOUT: 36 EDU

STUDY AREA BOUNDARY

EXISTING DISTRICT SERVICE AREA BOUNDARY

TPOA SERVICE AREA
CURRENT: 36 EDU
BUILDOUT: 41 EDU
(STEP COLLECTION)

Alternative 3b – Expand the Existing TPOA System with Irrigation

How it works	The existing TPOA system would be acquired and expanded. Treated water would be stored in winter and used for irrigation.
Benefits	Builds on an existing facility and customer base; may reduce the amount of new treatment construction.
Challenges	Uneven terrain makes irrigation more difficult; requires storage ponds, private-property agreements, and a state permit; existing equipment condition is uncertain.
Phase A cost	About $5.7–$6.6 million
Full-buildout cost	About $9.5 million

Planning-level costs: *Phase A assumes approximately 4,200 feet of collection piping. Costs include land, piping, treatment and disposal facilities, design, permitting, and contingencies. These early estimates could be approximately 30% lower to 50% higher as the design is refined.*

Parametrix

DATE: June 30, 2026

FILE: TBSD–PER–BASEMAPS

N

0 800

1 INCH = 800 FT.

Alternative 3b

Alternative 3b - TPOA Acquisition + Land Application

Tumalo Basin Sewer District PER

NOTE: These figures are preliminary illustrations of various potential wastewater system concepts and no agreements have been made with owners of property where potential sites are shown.

HIGHLAND RD

GERKING MARKET RD

BEAVER LN

DESCHUTES RIVER

6 ac RESERVE AREA

6 ac DRAINFIELD AREA

AX-MAX TEXTILE MEDIA FILTRATION

CLINE FALLS HWY

TUMALO RD

US HWY 20

CORE
CURRENT: 130 EDU
BUILDOUT: 223 EDU

NE TUR LOTS
CURRENT: 18 EDU
BUILDOUT: 36 EDU

STUDY AREA BOUNDARY

EXISTING DISTRICT SERVICE AREA BOUNDARY

BILL MARTIN RD

COOK AVE

7TH ST

TPOA SERVICE AREA
CURRENT: 36 EDU
BUILDOUT: 41 EDU
(STEP COLLECTION)

O.B. RILEY RD

Alternative 4 – New Modular Treatment System and Drainfields

How it works	A new modular treatment plant and drainfields would be built on Tumalo Irrigation District property.
Benefits	Creates a separate public facility; compact and expandable treatment system; uses proven local technology.
Challenges	Requires new land, access, power, and permits; depends on specialized equipment; suitable soils and groundwater separation must be confirmed.
Phase A cost	About $5.1 million
Full-buildout cost	About $8.5 million

Planning-level costs: *Phase A assumes approximately 4,200 feet of collection piping. Costs include land, piping, treatment and disposal facilities, design, permitting, and contingencies. These early estimates could be approximately 30% lower to 50% higher as the design is refined.*

Parametrix

DATE: June 30, 2026

FILE: TBSD–PER–BASEMAPS

N

0 800

1 INCH = 800 FT.

Alternative 4
AX-Max + Drainfield on TID Property
Tumalo Basin Sewer District PER