

Touch Point #3 - Draft Vision Plan for Warm Springs Preserve

Agenda

ACCESS

Neighborhood Connections

Trail Network

OPPORTUNITY AREAS

Floodplain Restoration

Parking/Entry

Middle Terrace

Fairway

Southern Floodplain

PHASING

Construction Timeline

PUBLIC FEEDBACK

Your questions, feedback, next steps...

Team

Project Partners



City of Ketchum



Wood River Land Trust



Friends of the Warm Spring Preserve Committee

Design Team





ECOSYSTEM SCIENCES, LLC

Superbloom

Denver, CO

Community Engagement,

Landscape Architecture

Rio Applied Science & Engineering

Boise, ID

Engineering,

Geomorphology,

Hydrology

Ecosystem Sciences

Boise, ID

Ecological Systems



North Fork Native Plants

Rexburg, ID

Native Plants for

Restoration

Timeline

Where we have been...

Property Acquisition

Deed Restrictions established

Community Commitments identified
including replacement of irrigation system,
restoration and Master Planning process.
\$ 9 million total: \$8 mil for the property
and \$ 1 mil in reserve for irrigation

Master Planning

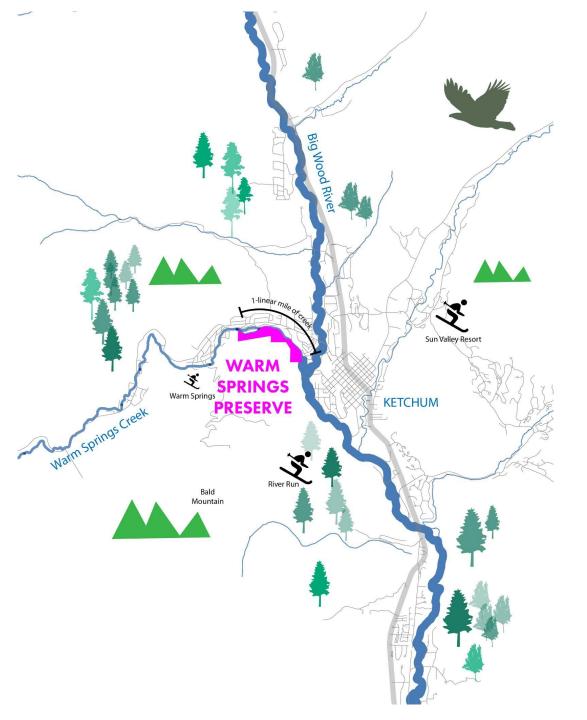
Master Planning Process begins

Opening Celebration

Community-wide celebration

Master Plan Process





A unique opportunity for large-scale creek restoration near the confluence of the Big Wood River

"Warm Springs is one of the few opportunities to restore the river through Ketchum so this should be a priority." Quote from community member in November 2022 Survey.

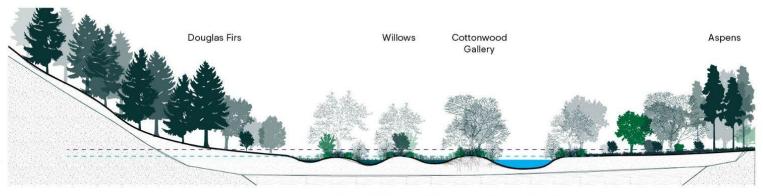
Big Wood River Watershed Map

A Dynamic Landscape

Alluvial Floodplain Pre-1800

In this condition, the area where Warm Springs Preserve currently exists acted as an alluvial floodplain containing multiple meandering streams and floodable areas.

> Flood Line Spring Flow

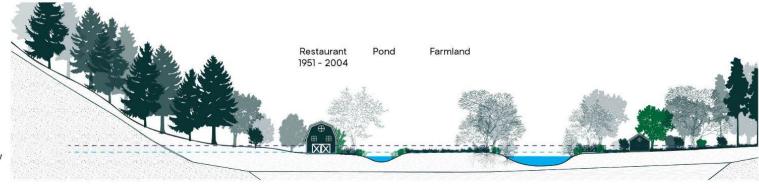


Perennial Streams + Wetlands W

Warm Springs Creek

Farm + Restaurant 1800 - 1950s

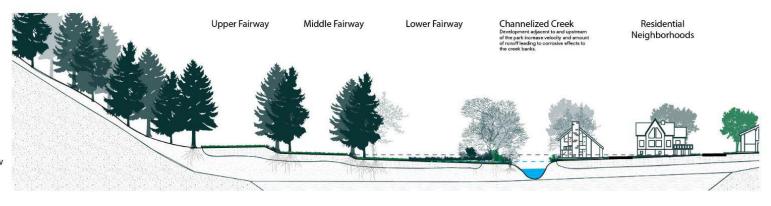
As people moved to the area and used the land for other purposes such as farming and recreation, the floodplain was lost.



Flood Line Spring Flow

Golf Course 1960 - 2009

Intensified development has limited the creek's natural ability to move and flood healthily. As the development and weather patterns change, the threat to residents and the creek itself will intensify.



Flood Line Spring Flow



What is the nature of Warm Springs Preserve?

A Plan Shaped by You

September 2022 Public Workshop at the Preserve

Public Meetings, Online Surveys, Website & Social Media, Stakeholder Meetings (disc golf, neighbors, Other Events

June 21 Summer Solstice Celebration

September Online Survey

September 13 Public Open House #1

September 14 Joint Council P&Z Meeting #1

November Online Survey

November 14 Public Open House #2

November 15 Joint Council P&Z Meeting #2

February 1 Neighborhood Access Worksession

February 13 Public Open House #3

February 14 Joint Council P&Z Meeting #3





10 public meetings (from Sept. - Feb.)



\$7-\$1M donation value range



\$9.5M+
donations raised
thus far



"I really appreciate how much community feedback is incorporated into the plan!"

"Thank you for taking community feedback excited for it to begin!"



900+

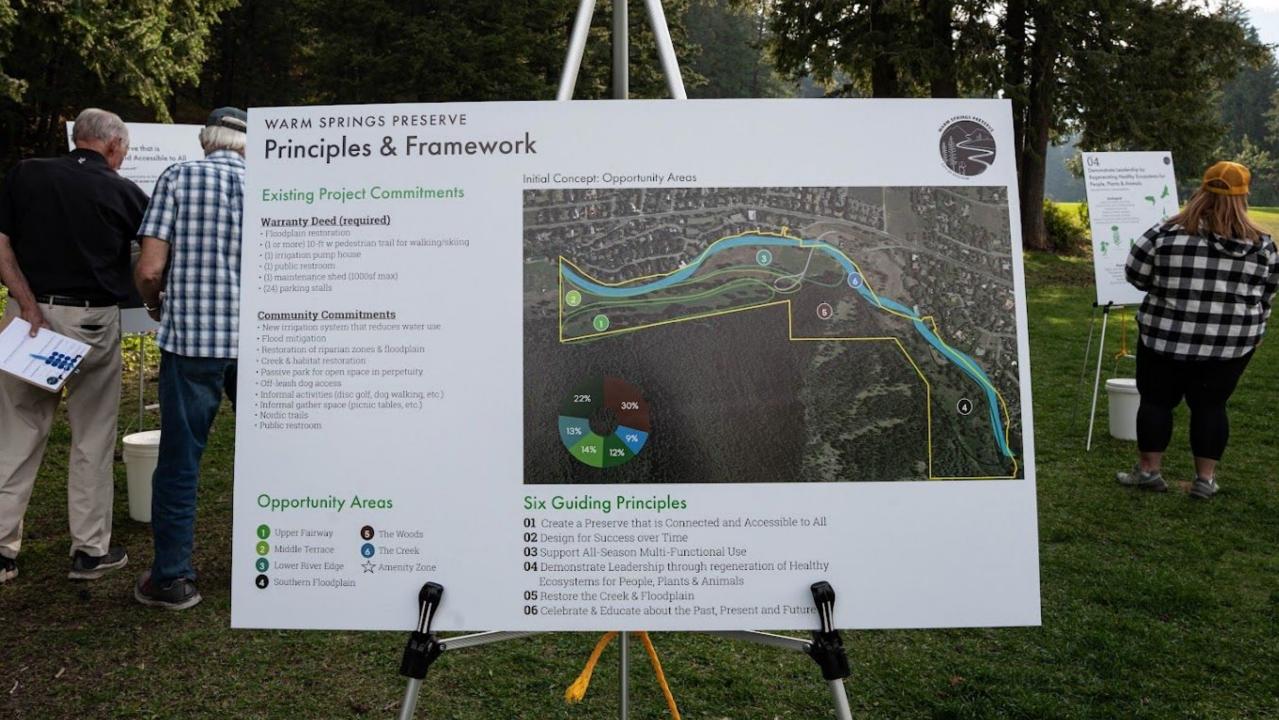


329 online + in-persor survey results



200+ estimated average daily visitors today





Existing Project Commitments

Warranty Deed

- (1) or more 10-ft w pedestrian trail for walking/skiing
- (1) pump house
- (1) public restroom
- (1) storage building (1000sf max)

Floodplain restoration

(24) parking stalls

Community Commitments

New Irrigation System that reduces water use

Flood mitigation

Restoration of riparian zone & floodplain

Creek & Habitat Restoration

Passive park for Open Space in Perpetuity

Off-Leash Dog Access

Informal Activities (disc golf, dog walking, etc.)

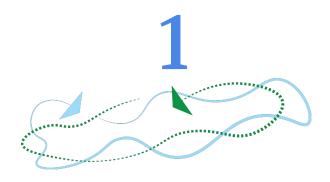
Informal gathering space (picnic tables, etc.)

Nordic Trails

Disc Golf

Public Restroom

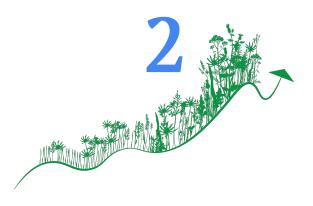
Project Principles



Create a Preserve that is Connected and Accessible to All.



Demonstrate Leadership through Regeneration of Healthy Ecosystems for People, Plants & Animals



Design for Success over Time



Restore the Creek and Floodplain

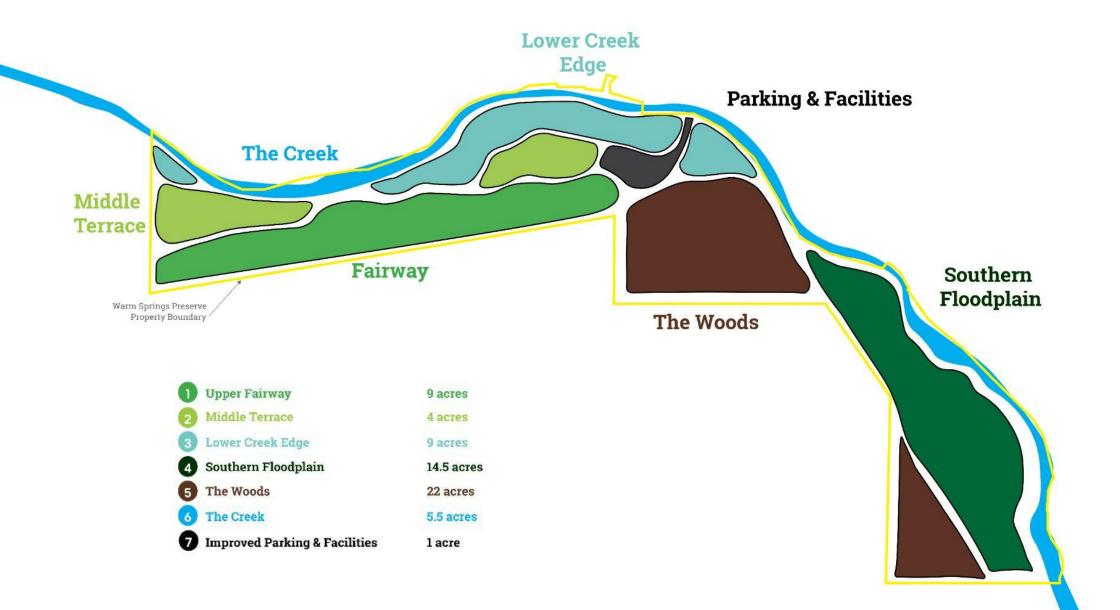


Support All-Season Multi-Functional Use



Celebrate & Educate about the Past, Present and Future of the Preserve

Opportunity Areas



Big Picture Feedback from November

ACCESS

Access improvements, and when that might occur

ENVIRONMENTAL PROTECTION

Habitat enhancement and protecting existing ecosystems

RESTORATION

Extensive support for creek restoration, native plant species, reduced irrigation

HOMEOWNERS

Creek homeowners are concerned about how this impacts their property & view

DOGS

Park management & relationship between dogs, people and wildlife, waste management

ACTIVITIES

Nordic skiing, bike racks, potential to consider bike through path or fat bike in winter?

HARDSCAPE/IMPROVEMENTS

Preserve the open space with minimal hardscape & built improvements, pave parking lot

SOUTHERN PROPERTY

Excitement for the expansion

FACILITIES

flush toilets, ADA and HC are important

PARKING

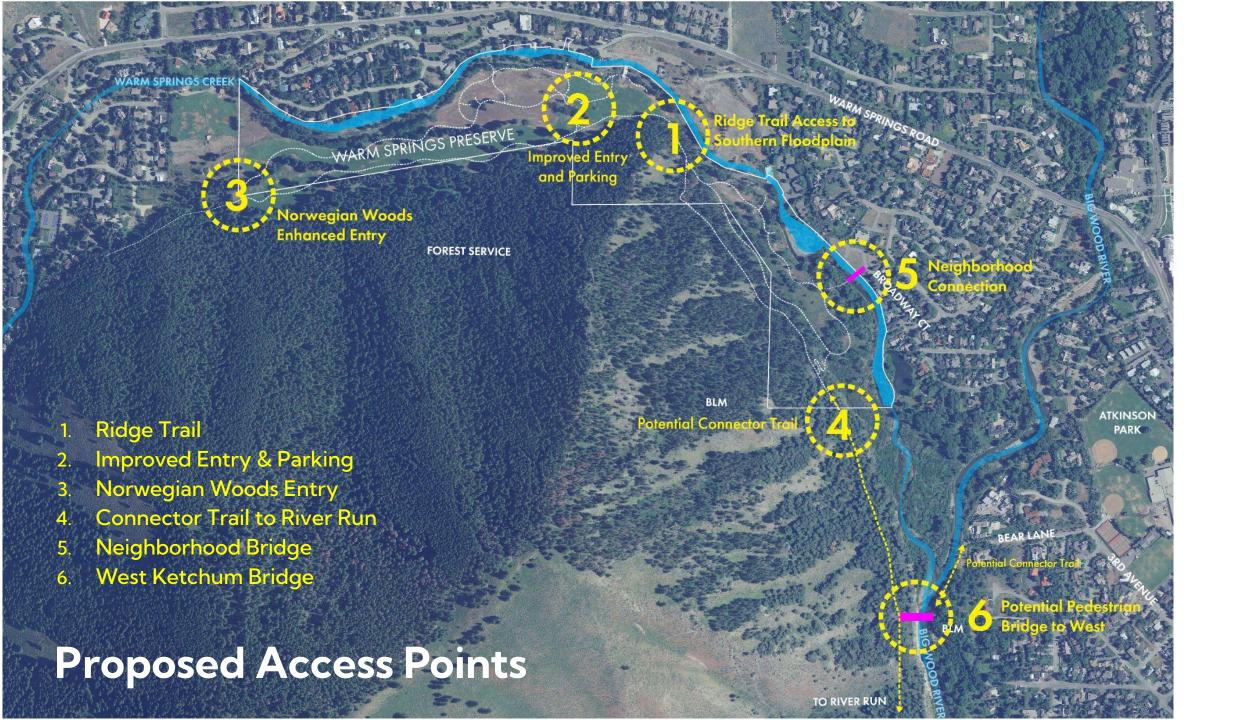
Plan for overflow parking or expansion of existing parking

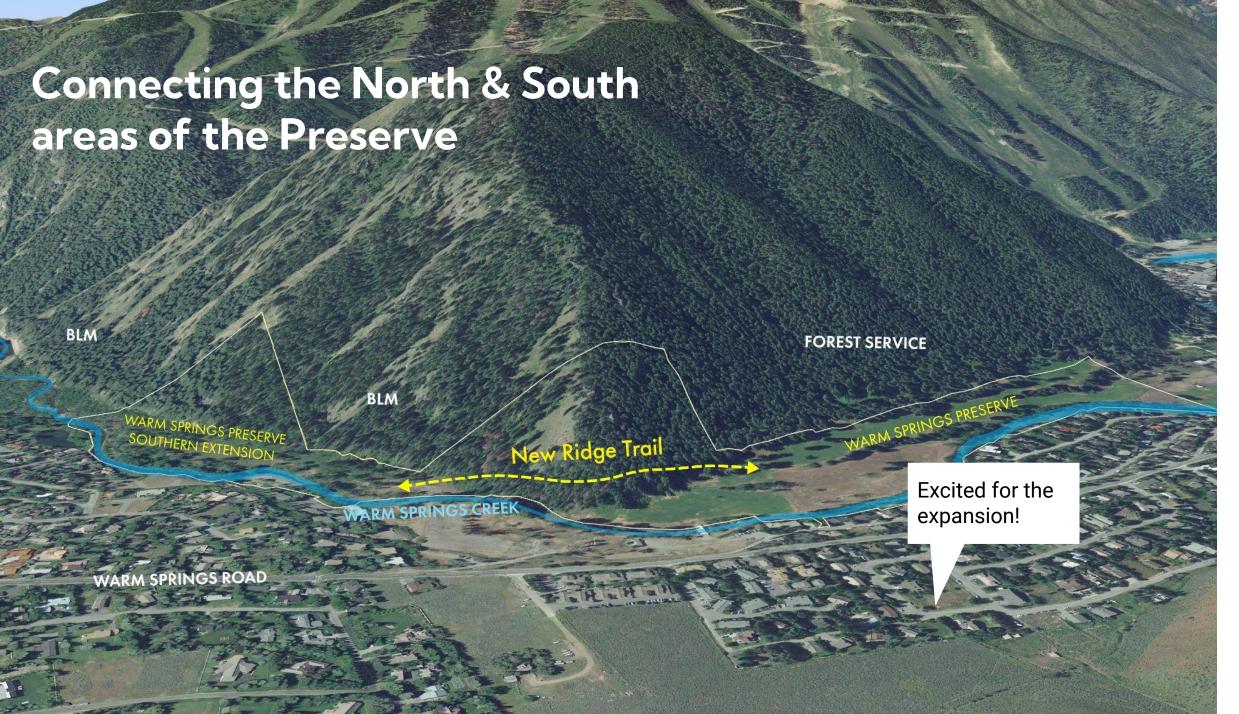
AMENITIES

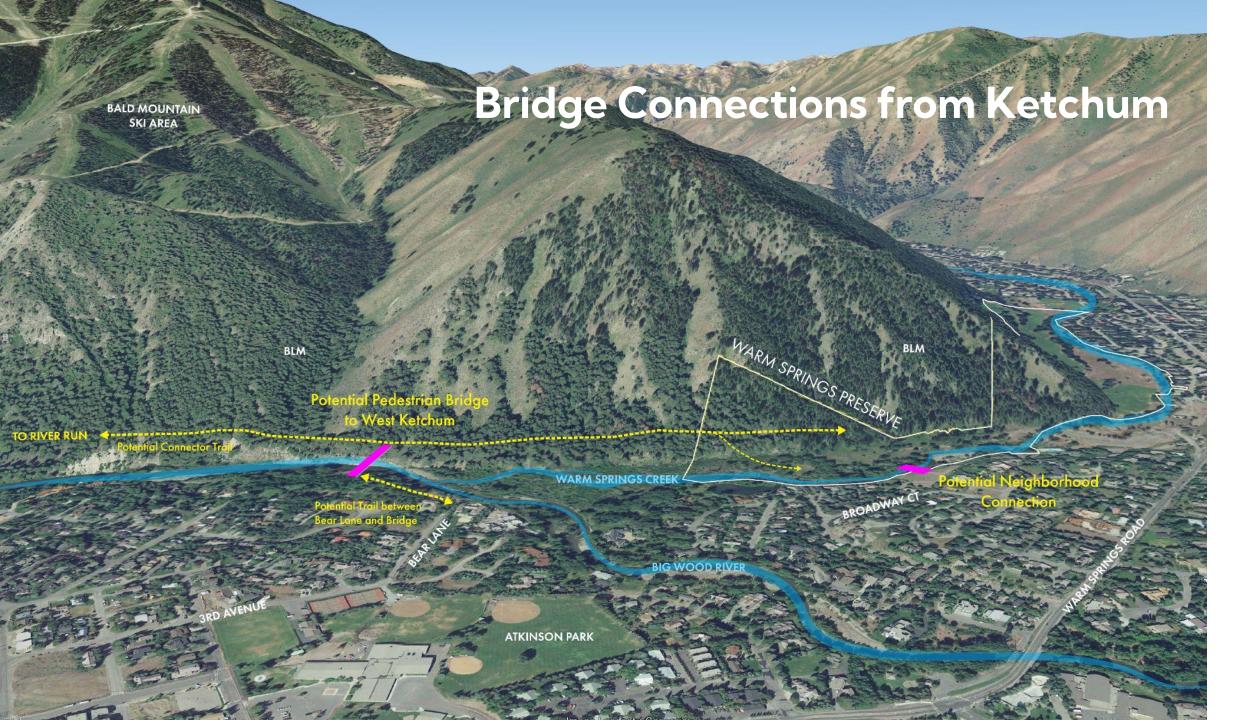
Subtle 'nature play' integrated with ecological restoration and educational opportunities





















Feedback on proposed connections

On February 1st, the City held two public worksessions (Noon and 5pm) to get feedback on these potential improved connections to Warm Springs Preserve.

West Ketchum Bridge

- Concern for increased visitors to the Preserve
- Impacts of bridges and construction on the environment and wildlife
- Parking at access trail
- Is a mountain bike connection possible?

Neighborhood Connection

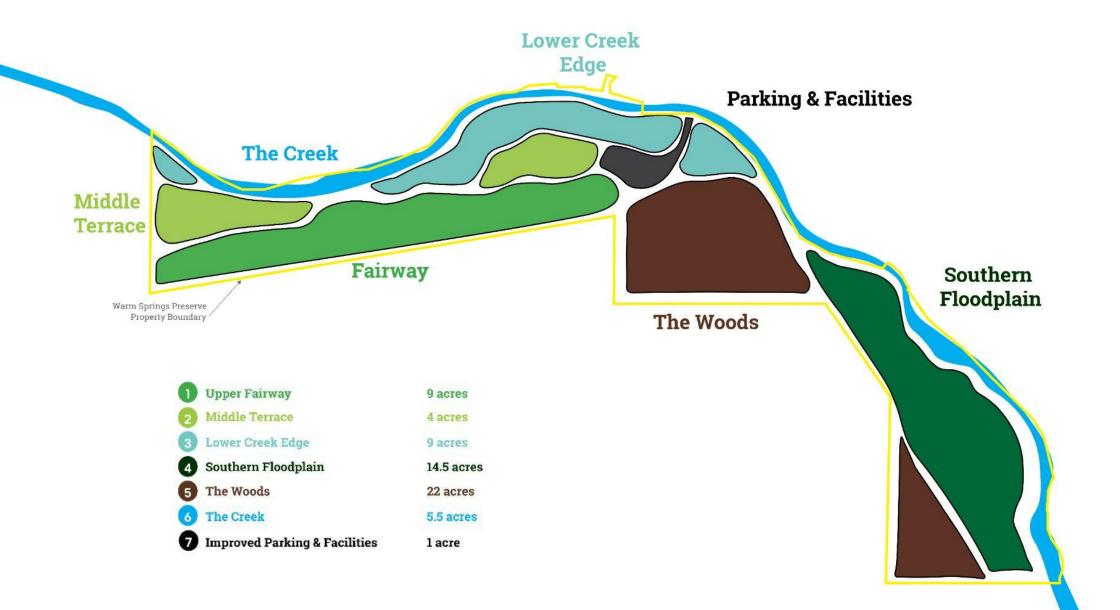
- Need to improve the access trails
- Parking at access trail
- Some didn't feel that a bridge was necessary, but that the access trail to the creek is important
- Design should consider natural materials

Norwegian Woods

- Issue today that needs to be solved
- Respect private property; public access should not cross private lands
- Lots of interest in this access point



Opportunity Areas



Opportunity Areas



Lower Creek Edge & Floodplain

- Possibly Extensive grading and earthworks
- 2-3 inlets connecting to Creek
- · Riparian woodland mosaic
- · Gravel islands and bars
- Low water crossings for ephemeral channels
- Small bridges for year-round flows



Middle Terrace

- Potential for seasonal Native wildflower meadow
- Enhanced biodiversity & pollinator species
- Non-irrigated
- Mown pathways



Upper Terrace (Fairway)

- Maintain upper terrace Fairway
- Replace inefficient irrigation system
- Opportunities for benches & picnic tables
- Maintain lawn with some restored edges
- Potential for dog waste receptacles



Southern Floodplain

- Light touch, surgical enhancements to Southern Reach
- Minor grading
- Pilot channel
- Soft surface pathways

Ecological Section



Residence

Private residences on Warm Springs Creek The Creek

Warm Springs Creek with new gravel point bars for people and dog access

Lower Floodplain & Creek Edge

Restored floadplain ecosystem with new back channel and irrigation pand.

Middle Terrace

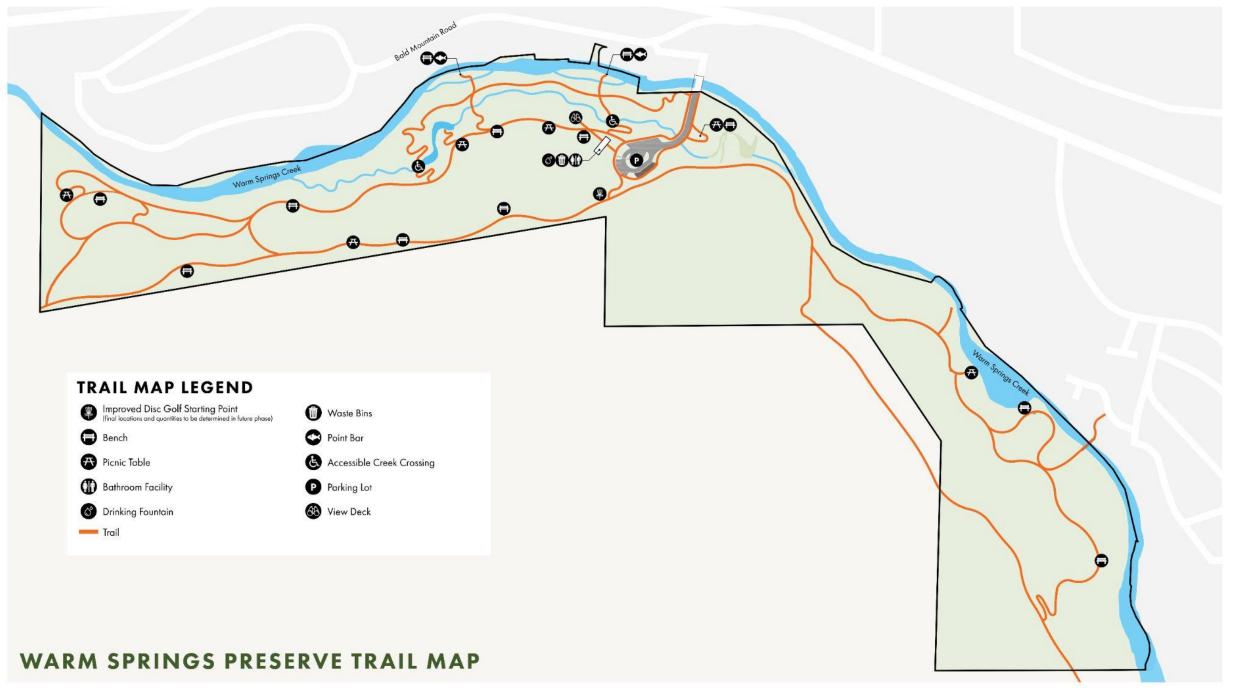
Earthworks and grading to receive the soil from the excavated floodplain, Planted with native meadow species and pockets of aspen groves.

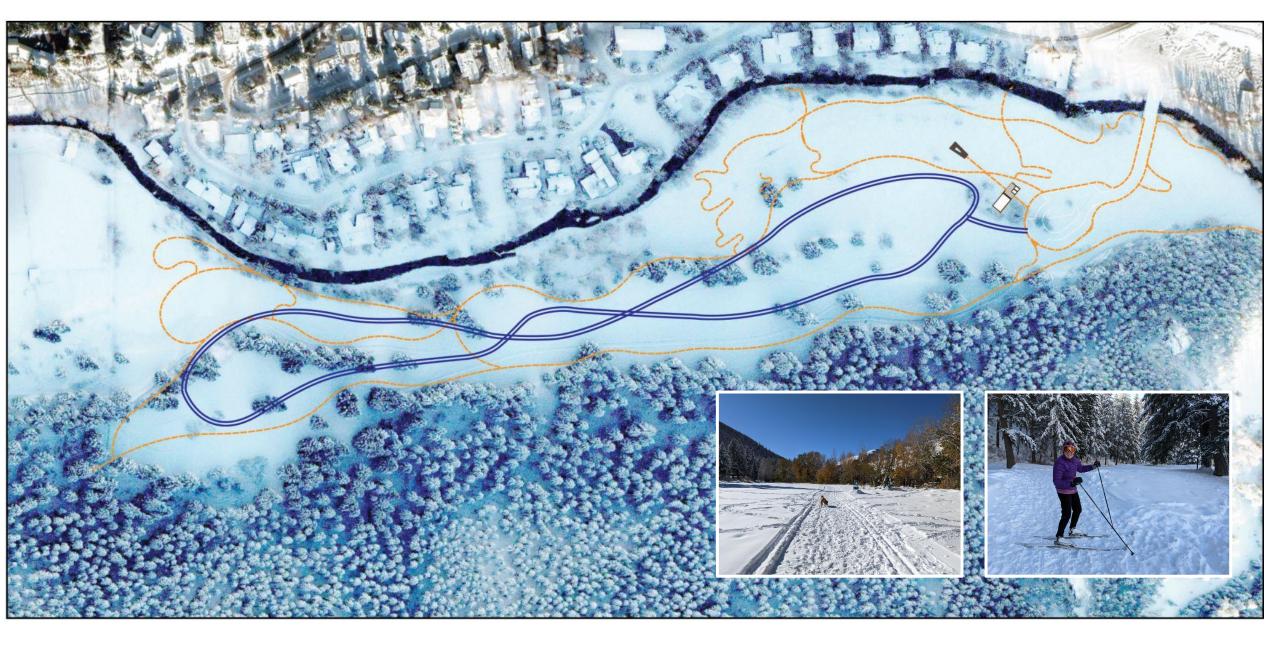
Fairway

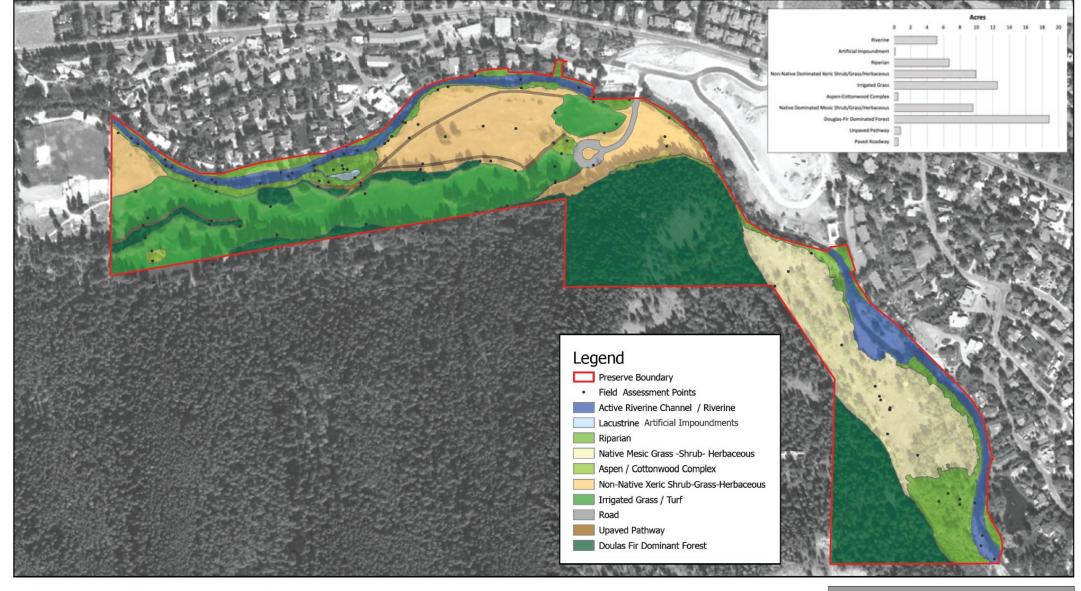
Preserved Upper Terrace Fairway with replaced irrigation system, new donor benches and picnic tables The Woods

U.S. Forest Service and Bureau of Land Management owned land



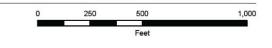






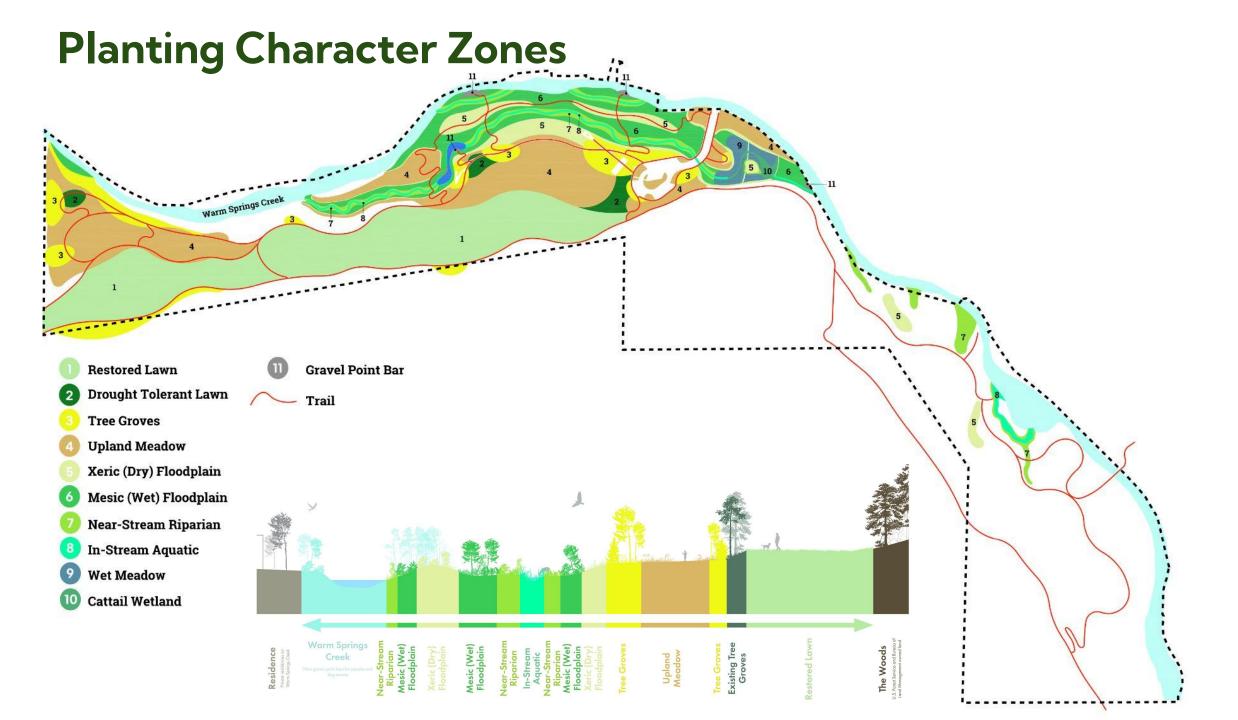
Warm Springs Preserve

Existing Ecological Units





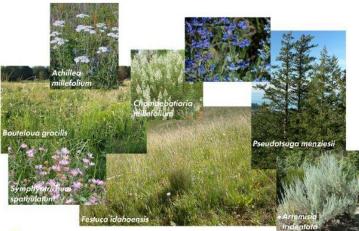
Disclaimers - This map (or data product) is for illustration purposes only. It is not intended to be used for description, conveyance, authoritative definition of legal boundary, or property title. This is not a survey product. Users are encouraged to examine the documentation or metadata associated with the data on which this map is based for information related to its accuracy, currentness, and limitations.





8 In-Stream Aquatic

This zone is closely associated with the spatial extent of the current active stream channel and is mostly composed of open water and/or scoured substrate. Located at or below the Ordinary High-Water Mark (OHWM) of the stream, occurrences of established riparian vegetation are uncommon. However, in low velocity areas of the stream and in the proposed wetland, emergent aquatic vegetation may include common cattail, bulrush, water sedge, and baltic rush.



Xeric (Dry) Floodplain

This zone occurs almost exclusively within the flat surfaces of the project area that are at a higher elevation than the mesic floodplain area. The surfaces that are inhabited by xeric species are disconnected from the hydrology of Warm Springs Creek. The xeric floodplain character zone is a mixed plant community, consisting of some native upland shrub species, wildflowers, grasses.



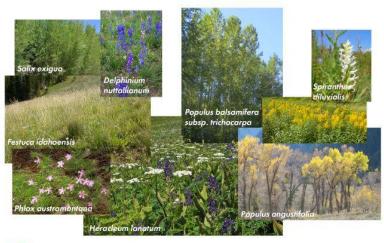
🕜 Near-Stream Riparian

This zone occurs directly adjacent to the active stream channel, proposed side channels, and low-lying portions of the restored floodplain that has access to Warm Springs Creek's hydrology. Currently only a narrow strip of riparian habitat is present. The restoration strategy envisions a restored and enhanced riparian zone. Common species that occur within this class are: Black cottonwood, narrowleaf cottonwood, coyote willow, peachleaf willow, booth's willow, pacific willow, bittercherry, Red-osier dogwood, Wood's rose, Canada goldenrod, baltic rush, Larkspur.



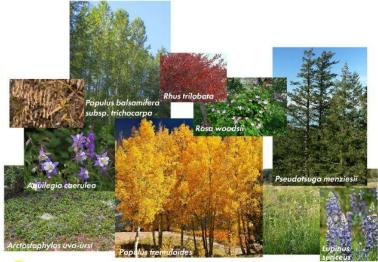
🔼 Upland Meadow

This zone occurs in upland portions of the site above the floodplains, particularly in areas of fill and adjacent to the restored lawn. The paintings here focus on drought tolerant grass, forb and shrub species that are attractive to pollinator insects and birds.



🚹 Mesic (Wet) Floodplain

A mesic habitat is a type of habitat that has access to a moderate or well-balanced supply of moisture. The elevation of the mesic floodplain area is generally lower and more connected to the hydrology of Warm Springs Creek than portions of the xeric floodplain. Healthy mesic habitats function like a sponge; they effectively store water, which can be utilized by neighboring, drier habitats. Healthy mesic habitats also provide a higher density of herbaceous plants and insects that can be used as cover and forage by organisms belonging to higher trophic levels, such as grouse.



Tree Groves

The tree groves connect to existing evergreen planted areas on the site or positioned as islands throughout the upland areas. In time, the shade created by the deciduous and evergreen trees in this zone creates a microclimate for unique native shrub and perennials that provide diversity within the landscape for visitors to experience.

Lower Creek Edge & Floodplain

Your Responses to the November Survey How On Track Was the Previous Design for this Opportunity Area?



NOVEMBER FEEDBACK

- Habitat enhancement and protecting existing ecosystems is important
- Extensive support for creek restoration and the integration of native species
- Consider subtle 'nature play' integrated with restored areas
 Creekside owners concerned
- Creekside owners concerned about views and creek access points



Lower Creek Edge & Floodplain

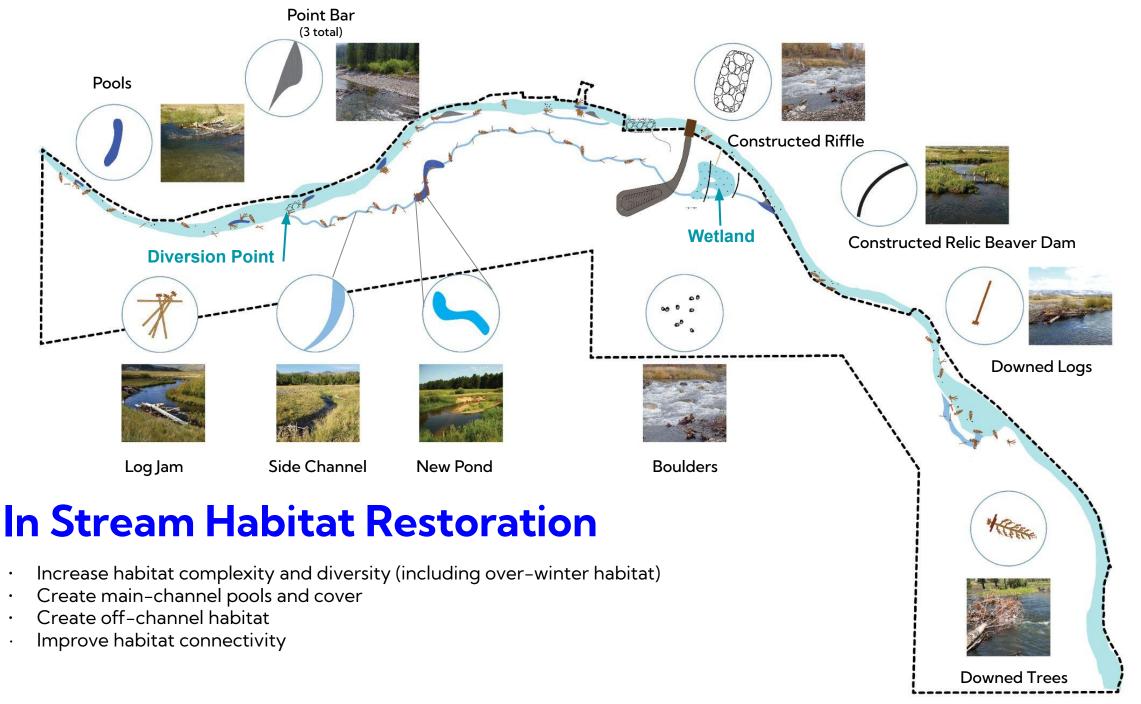
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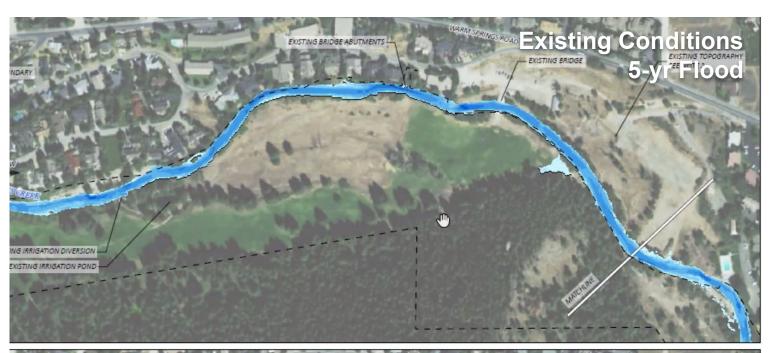




Floodplain Restoration

Win - Win

- Reduce flood water depth & velocity
- Reduce irrigation water need
- Provide space for flood water and sediment storage
- Improve riparian habitat quality and quantity
- Greater habitat and ecological diversity
- Increased nutrient cycling
- Create off-channel habitat



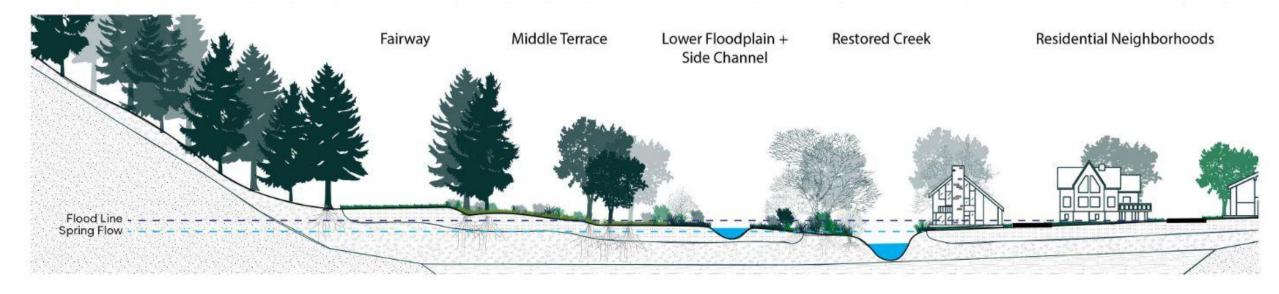




Floodplain Section

Future / Post-Restoration

The restoration would reverse the bad land use practices of the past to the greatest extent possible while maintaining access to the Preserve. Creek restoration would add channel complexity and reverse the creek from a single-channel form back to a multi-channel form. The middle terrace will resemble a landscape that is outside of the floodplain with native meadow plant species. The Upper Fairway would be unchanged.



Adults

Adult trout

have a territory that gives them

a good supply of food and a place to hide from predators,

in early to late spring.

preferring deeper pools. In winter, they

migrate, perhaps miles upriver, to spawn

Trout Life Stages and Preferred Habitat

Trout need cool, clear water and plenty of food to eat. They also need cover from predators and room to travel upstream and down at different times of the year when feeding, overwintering and spawning.

Spawning Female trout dig a nest or redd in clean gravel shallows. As she releases her eggs, they are fertilized by the male and then covered with gravel. The gravels must be 10-40mm in size, loose and free of silt with plenty of oxygen rich water flowing through them. Spawning occurs in the spring.

> Eggs At 2-5mm in diameter, eggs incubate in clean gravels and hatch into alevins. Female rainbow trout usually produce 2000 to 3000 eggs. The eggs usually hatch in about four to seven weeks, depending on stream temperature.

Alevins Newly hatched trout are called sac fry or alevin. Alevins stay in the gravel, living off the yolk sac. In approximately two weeks, the yolk sac is completely consumed, and fry commence feeding mainly on zooplankton. They then emerge as fry, set up territories and grow into parr. Alevins develop into parr in early summer, depnding on stream conditions.

Parr Fry and parr are territorial and solitary. They need plenty of cover in the stream from rocks, emergent and trailing bankside plants, and shallow water that is not too fast flowing. Side channels are incredibly important for native trout. They provide vital habitat and often allow these juveniles to escape high velocity flows during flood events, escape predators and offer a food resource.

Insects + Plants = Fish Food

Aquatic invertebrates like insects, are integral to the trout food web. Insects feed on aquatic plants, decaying matter and microscopic animals. In turn, they become food for fish.



Riparian vegetation helps stabilize banks while providing shade and cover for fish. Juvenile fish need slow water and cover generally near the bank and in side channels.



Deep Pools and Cover Adult fish need deep pools and cover often associated with instream wood and boulders.



Riparian zones are the areas bordering the stream channel and provide many environmental and recreational benefits. The Warm Springs Preserve Master Plan includes natural space near the creek for riparian forest, and meadows that transition to more manicured and park like upland terraces. The most sensitive riparian areas of the Preserve are being restored to a natural condition.

Cottonwod - Willow

Riparian Forest This community occurs at low elevations, along the stream channel, where the water table is high and/or there is year-round water flow. Frequent spring flows provide areas of scour and sedimentation within the channel; this dynamic hydrologic regime contributes to the habitat's structural diversity and high wildlife value.

Botanical Resources

Vegetation within this community is predominantly composed of deciduous species. The tall riparian trees and dense understory result in almost full canopy cover. Typical tree species include cottonwood. willow, bittercherry, rosewood, dogwood, herbaceous shrubs and grasses.

Wildlife Resources This habitat type is noted for its very high bird species diversity and abundance. Deciduous trees and shrubs are used by nesting migrants for foraging during migration. Mature trees provide numerous cavities for cavity-dependent wildlife such as woodpeckers. Tall trees are used by nesting raptors; stream banks provide nesting for belted kingfishers. A variety of mammals utilize the dense forest for cover, shade and food.

Side Channels Side channel habitats (built specifically for aquatic species and juvenile fish) and riparian habitat are small watered remnants of major river meanders across the floodplain. On the Preserve these sites are constructed channels connecting ponds built specifically for aquatic habitat. These areas provide off-channel habitat for aquatic species and riparian habitat for terrestrial species and increases the diversity of habitat available within the stream corridor.

Fisheries Resources

Vegetation rooted at the water's edge provides cover, shade and food for fish. This is especially critical along intermittent streams where remnant summer pools provide refugia for fish. Large wood embedded in the stream bank provides cover and refuge for fish.

Dynamic + Continually Changing

Channel

Riparian forests grow within an alluvial environment that is continually changing due to the ebb and flow of the stream. Riparian vegetation is constantly being reset by flooding disturbance.

Mature cottonwood stands do not regenerate in place, but regenerate by "moving" up and down a river reach. Over time, a healthy riparian area supports all stages of cottonwood communities.

Channel

Meadow

Periodic flooding events are needed for Cottonwood seedlings to germinate and become established on newly-deposited, moist sand and gravel bars. This cottonwood community can grow into a mature riparian forest.

Streams and rivers are much wider than the channels we associate them with. The areas next to streams, which are only covered by water during floods, are also part of the river system. Known as floodplains, in their natural condition they are an important ecological part of the landscape. The floodplain in the Preserve is made up of mesic (wet) and xeric (dry) meadows. Floodplains filter and store water, secure both natural flood protection and the healthy functioning of the stream ecosystems, and help sustain high biological diversity.

Wet Meadow/Wetland

The elevation of the wet meadow or wetland is generally lower and more connected to the hydrology of Warm Springs Creek than portions of the dry meadow. Wet meadow habitats effectively provide drought insurance as land at higher elevations warms due to seasonal or other changes. Wet meadows may include some trees and larger shrubs. The Warm Springs Preserve wet meadow is intended to emulate a beaver wetland; beaver often create or influence wet meadows.

Dry Meadow Dry meadows occur almost exclusively within the flat surfaces of the project area Floodplair that are at a higher elevation then the wet meadow and are disconnected from the annual hydrology of Warm Springs Creek. The dry meadow character zone is arid and mixed with some native upland shrub species, wildflowers, and grasses and relatively few trees. Wet Meadow Dry Meadow Channel

Wildlife Resources

Floodplains provide essential habitat for wildlife. Floodplains are an important source of nutrients and provide multiple habitat niches. A new floodplain will provide offchannel habitat for aquatic species and riparian habitat for terrestrial species.

Disconnected Floodplain

Floodplains store water and dissipate flood energy from the stream. On the Warm Springs Preserve large portions of the floodplain were filled in to create

Stream

Channel

5-Yr Flood

2-Yr Flood

the old golf course. Currently the 100-year flood is largely contained within the channel resulting in deep, high-velocity water increasing erosion and flood risk, and limiting the plant types and diversity that could be found in a healthy, functioning floodplain.

Floodplain Function

Excavation of a new floodplain in the Preserve will reduce the erosive force of the stream and lower the risk of flood damage to neighboring homes and lands. A new floodplain will include side channels, a pond, and a wetland, all surrounded by native riparian vegetation. Semi-annual flooding of the land areas helps to support a diverse array of plant species.



Connected Stream Floodplains

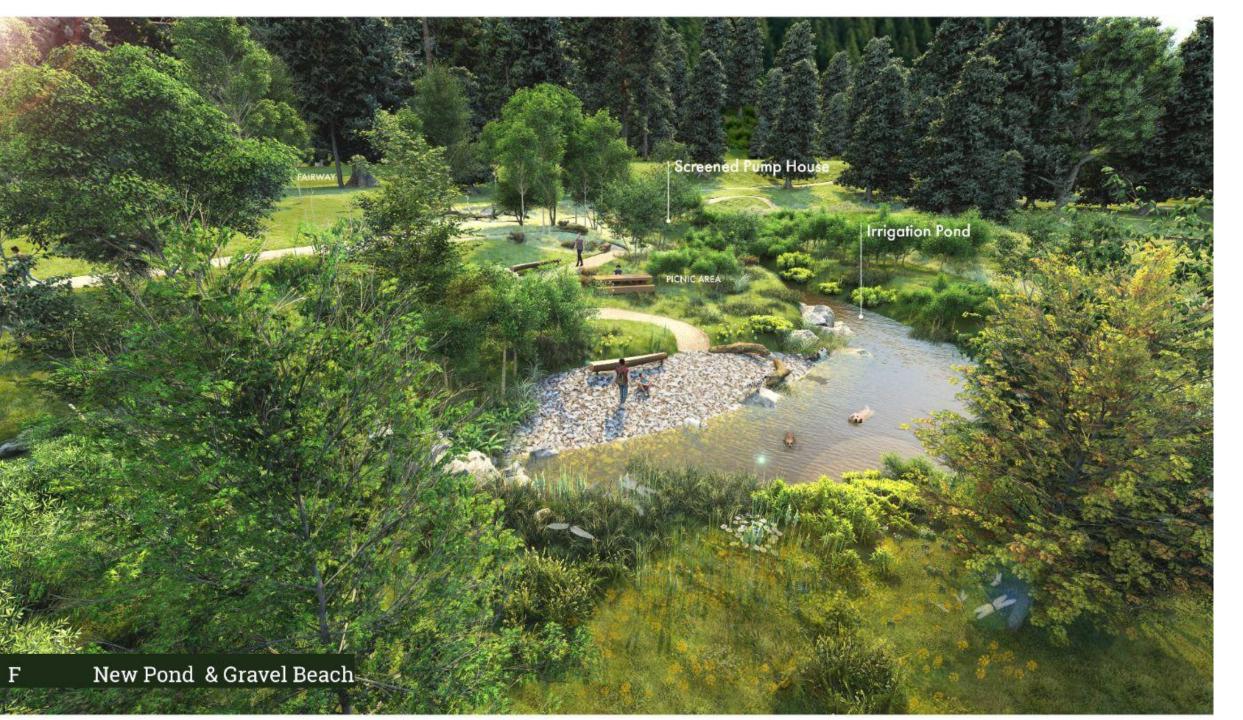
Channel

The importance of the hydrologic and ecological functions of floodplains is well understood and there are many benefits to restoring connectivity of floodplains so that they actively flood. This not only supports native

riparian and aquatic species, but it also accommodates floodwaters, thereby reducing flood peaks downstream. The Warms Spring Preserve plan recognizes the ecological benefits of floodplain inundation and is planned in a way to provide multiple benefits, such as combining flood risk reduction, ecosystem restoration,

and adaptability to climate change. The plan highlights the challenges, opportunities and the many benefits of a reconnected floodplain that include habitat for fish and wildlife, groundwater recharge, carbon sequestration, open space and recreation.







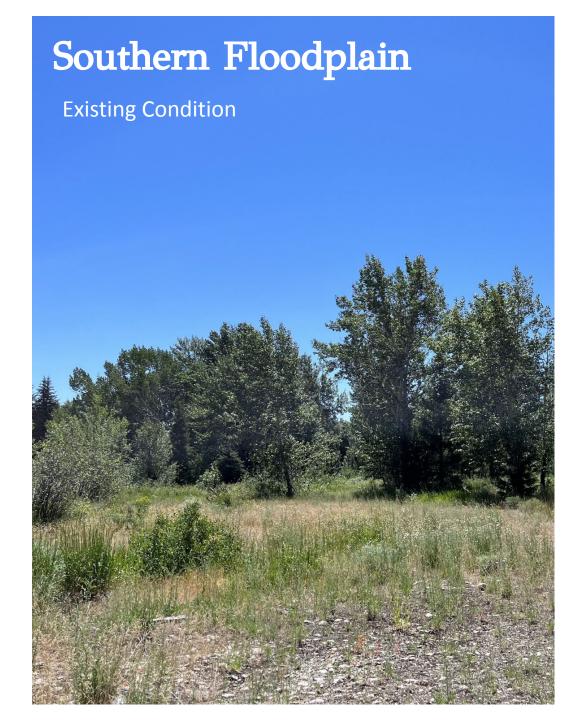


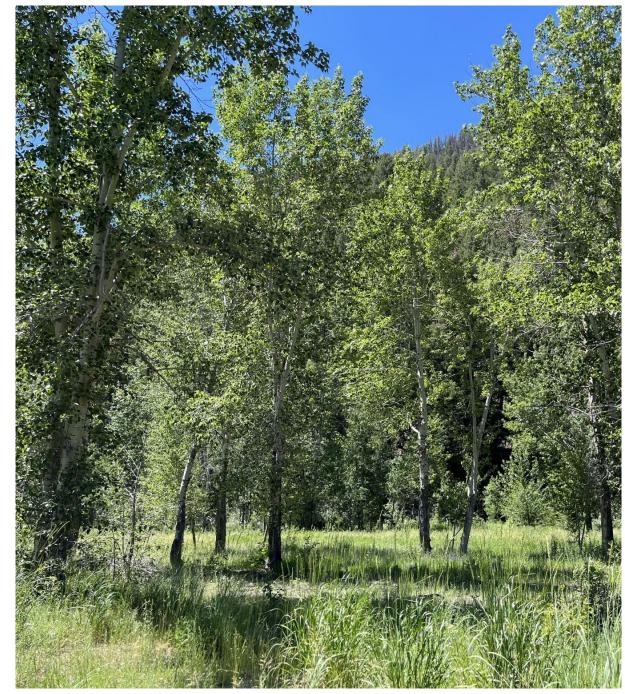


Natural Beaver Dam, made from rock, soil and willow branches



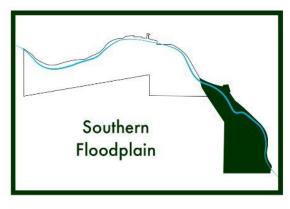


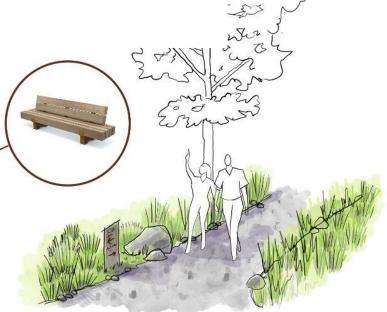






Southern Floodplain





NOVEMBER FEEDBACK

- Desire to keep the southern property as natural and untouched as possible
- Excited about the expansion and making access easier and safer
- Some want to restrict access to minimize impacts

Your Responses to the November Survey How On Track Was the Previous Design for this Opportunity Area?



Illustration of Proposed Soft Surface Path through Existing Native Landscape



Your Responses to the November Survey. How On Track Was the Previous Design for this Opportunity Area?













Middle Terrace

Your Responses to the November Survey How On Track Was the Previous Design for this Opportunity Area?



NOVEMBER FEEDBACK

- Excited about native species, restoration and increased biodiversity
- Want to ensure success of native meadow restoration while keeping water use low
- Concern for dog waste in nonlawn areas







Fairway

Your Responses to the November Survey How On Track Was the Previous Design for this Opportunity Area?



NOVEMBER FEEDBACK

- Preserve and enhance the Fairway
- Reduce irrigation use for lawn
- Park management issues and maintenance
- Manage relationship between people, dogs, wildlife
 Include disc golf in master plan
 Excited about nordic skiing trails in
- the winter

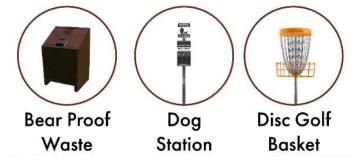


Donor Benches





Other Amenities



Donor Benches @ The Fairway

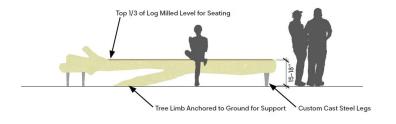


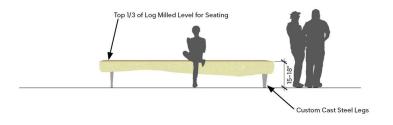




Manufacturer: Streetlife

Floodplain & Overlook Benches







Benches





Existing Fairway Lawn

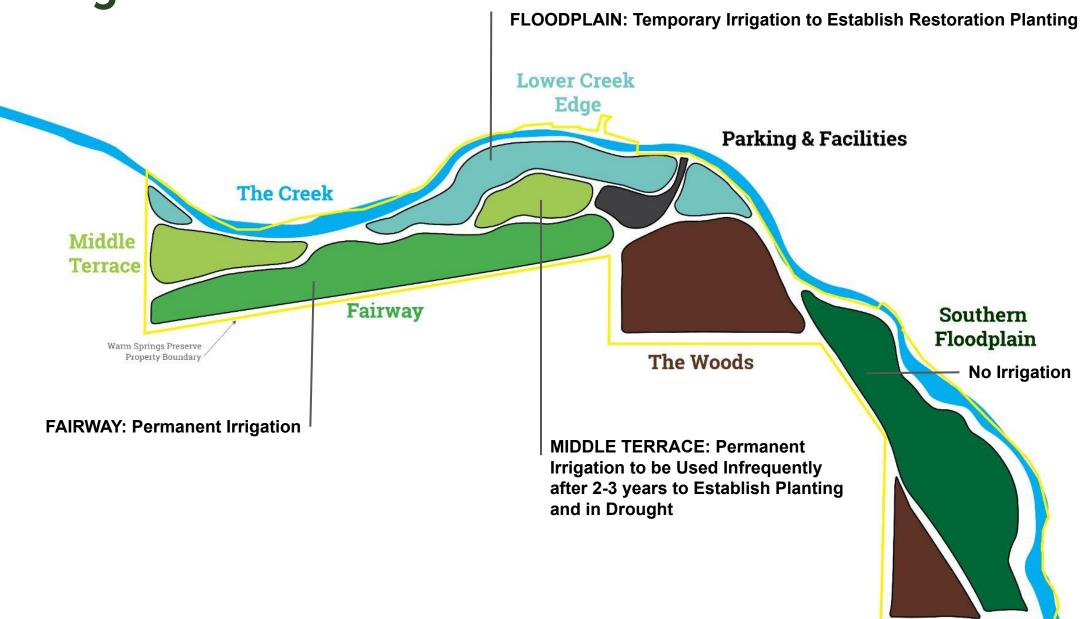


Clover Grass Blend

Potential Fairway Replacement

TBD Cost/Timeline

Irrigation Zones











WARM SPRINGS PRESERVE

Draft Construction Phasing Class 3 Estimate -20% to +30%

Date: February 06, 2023

2024 2025 AUG SEPT OCT DEC MAR APR JUNE JULY AUG NOV JAN FEB MAY SEPT PHASE 1A FLOODPLAIN RESTORATION \$2,254,000 1. Floodplain Excavation No access to trails, creek or bridges 2. Temporary Fencing November and/or April 3. Planting PHASE 1B NON-FLOODPLAIN RESTORATION \$1,600,000 4. New Fairway Irrigation 5. Middle Terrace Planting & Irrigation No access to trails, creek or bridges 6. Utilities for Future Building 7. Committed Donor Recognition Elements (Benches, main trail, welcome sign) 8. Minimum Amenities (Dog bag & waste receptacles) 9. Trails & Footbridges PHASE 2 BUILDING/ROAD \$630,000 TBD 10. Paving the Road 11. Storage Building/Restroom w/Donor Sign No access to trails, creek or bridges **PHASE 3 AMENITIES** \$750,000 TBD 12. Overlooks & Additional Seating Areas PHASE 4 SOUTHERN FLOODPLAIN \$100,000 TBD 13. Trails & Restoration Areas



Big Picture Feedback from November

RESTORATION

Extensive support for creek restoration, native plant species, reduced irrigation

Reduced area of floodplain and increased area of the Fairway.

HOMEOWNERS

Reduced the number of creek access points Increased vegetation and decreased size of gravel point bars point due to concerns from creek homeowners about their property & view

SOUTHERN PROPERTY

Excitement for the expansion Reduced amenities and trails in the Southern Floodplain

ACCESS

Added potential access points Prioritized ADA access improvements

PARKING

Revised parking design based on feedback

DOGS

Created safe access and water features designed for dog safety and play.

Added wetland feature downstream to manage pollution and improve habitat

ACTIVITIES

Enthusiasm for nordic skiing, bike racks, and maintaining disc golf

MIDDLE TERRACE

More terraced, smaller meadow

HARDSCAPE/IMPROVEMENTS

Preserve the open space with minimal hardscape & built improvements, pave parking lot

FACILITIES

flush toilets, ADA and HC are important

Public Open House #3 February 13, 2023

Most people are in general alignment with the big picture, overall vision and master plan. Some people have individual nuanced concerns, thematically grouped below.

Online survey launches tomorrow.

FAIRWAY ACCESS

Proximity of lawn to the parking lot & potential to expand fairway at most accessible point

SOUTHERN FLOODPLAIN

Trails and amenities (too many/too few?)

RIPARIAN SENSITIVITY

How to protect restored, sensitive habitat?

PHASING

Continued thought on reasonable phased approach

PRIVACY

Adjacent property owners express privacy concerns

DOG PARK v NATURE PRESERVE

What will management of dogs be at the site? How does management affect ability to apply for grant funding?

Timeline

What is next?

2024 **Summer 2023 Feb-May 2023** Feb/March 2023 **Construction Begins** Phasing & Funding Final Master Start Technical & Planning Permitting Drawings Plan Review Incorporate comments from Conversations with current Design team will refine design and Shovels in the ground! Council/P&Z, Final revisions, and potential donors & submit for required approvals, and compilation in report for exploration of Federal & State prepare construction ready **Grant Opportunities to** approval. drawing. determine the phasing of the

master plan.

Public Comment

Question for Council



Master Plan Process

