

► Yakima Bluffs

Environmental Learning Park

Richland, Washington

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Assistance Provided by Partners
of the Open Space Coalition
Benton & Franklin Counties, WA

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Yakima Bluffs

Environmental Learning Park

Yakima Bluffs is located in the City View business complex in Richland, Washington, an area of rapidly increasing urban development with a combination of retail and commercial businesses and family residences. The undeveloped, approximately 8-acre¹ parcel at the north-eastern end of the City View area is an ideal location for a park devoted to environmental education and outdoor recreation that is compatible with preserving the land as natural open space.

Early in 2008, the City of Richland started the “Request for Proposals” (RFP) process to solicit input from interested parties regarding development of this parcel. A grass-roots initiative was launched to delay release of the RFP. The basis for requesting delay was to allow a regional open-space planning effort to first determine the importance of this location.

The public was invited to tour the site and alerted to pending release of the RFP. The response was considerable, with many citizens requesting City Staff and Council to delay the RFP and further, to consider making this location into a park.

Presented here is our proposed vision for establishing the Yakima Bluffs Environmental Learning Park at this location and features of this area that pertain to making this decision.

We propose to work with the City of Richland to establish this location as the Yakima Bluffs Environmental Learning Park.

¹ The entire parcel is 10.6 acres. The City plans to set aside the south end for a proposed fire station. The remaining approximately 8 acres is assumed in this report to be dedicated to the park.

Our appreciation goes to the partners of the Open Space Coalition of Benton and Franklin Counties who provided direction, prepared letters of support and have provided their technical assistance.

We especially wish to thank City Staff who helped us understand and work with the RFP process, and the Economic Development Committee and the City Council who discussed the issues with open minds and determined that delay of the RFP was in order.



Overlooking the Yakima River and City of Richland, Yakima Bluffs Park is a place for all to enjoy.

“When we see land as a community to which we belong, we may begin to use it with love and respect”

-Aldo Leopold

Overview

Located on a ridge overlooking the Yakima River, Yakima Bluffs Park provides a rare combination of features.

- ▶ Unique Geological Display
- ▶ Quality Shrub-Steppe Habitat
- ▶ Access to Riparian Habitat
- ▶ Breathtaking Views
- ▶ Proximity to Business and Residential Areas
- ▶ “Hub” Connecting Multiple Open Spaces

Location

The bluffs run along the west side of the Yakima River starting at Duportail Street and running northwest for several hundred yards (Figure 1).

The park is centrally located, serving as a hub connecting natural open space along the west side of the Yakima River (Figure 2). Construction of the Duportail Bridge will allow access to the Tapteal Greenway on the east side of the river and to the remainder of the Yakima Delta Habitat Management Unit (HMU), with connectivity to the Chamna Preserve, W.E. Johnson Park and beyond.

The Columbia Irrigation District operates an open canal that limits access to the river for miles in both directions. Below the park, however, the canal is contained in a buried pipe, allowing safe public access to the bluff and river.



Figure 1. Yakima Bluffs in Richland, WA



Figure 2. Yakima Bluffs Park - Hub Connecting More Than 800 Acres of Natural Open Space

Uses and Benefits

The majority of the park will be maintained as natural open space and will be operated as an environmental learning park and recreation area.

The park will have multiple interrelated uses including education, habitat restoration, hiking, birding, horseback riding, interpretation, and scientific study and research. In particular, education programs for elementary through high school students will provide opportunities for hands-on, experiential and inquiry-based learning in an accessible natural setting. These and related activities will help educate the community about the bio-diverse habitats and unique landforms and geologic history of the Columbia Basin. The park will help citizens enjoy and appreciate the aesthetic, recreational, and ecological benefits of natural open space.

Proposed Features

- ▶ Shrub-steppe preserve with access to a riparian preserve
- ▶ Designated pedestrian, bicycle and horse trails
- ▶ Visitor shelters and seating areas
- ▶ Delineated, protected areas of high-quality native habitat for research and educational opportunities
- ▶ Indoor and outdoor laboratories for visiting researchers and school groups
- ▶ Outdoor interpretive displays for natural, cultural and geological features
- ▶ Xeriscape demonstration gardens

Other Potential Elements

- ▶ Picnic facilities
- ▶ Amphitheater for community events and weddings
- ▶ Play areas

Benefits of the Park

- ▶ Provides outdoor educational and recreational opportunities
- ▶ Preserves quality native habitat and open space within the urban boundary
- ▶ Mitigates the visual and aesthetic impacts of other developments in the City View area

- ▶ Buffers the river against pollutant entry via storm water runoff from adjacent streets and developments
- ▶ Maintains public access to the Yakima River corridor
- ▶ Is a natural area within walking distance of residential neighborhoods

Park Design

The Yakima Bluffs Park will include trails, shelters, and, eventually if funding permits, an education center (Figure 3).



Figure 3. One Possible Park Design

The Environmental Learning Park

Location and features make the Yakima Bluffs an ideal environmental learning park.

The following excerpts were taken from: Environmental Learning Parks, by Garrett Devier.

Environmental learning parks are a developing and widely defined type of open space. From pristine untouched wilderness areas, to damaged natural sites and small urban lots, environmental learning parks cover a wide variety of subjects and sizes. The primary focus of environmental learning parks is to connect people to the natural environment. Issues such as plant diversity, animal habitat, sustainable building, wetlands, stream ecology, macro invertebrates and much more can all be related to

issues of water, soil and air quality and in return can be related to our own lives.

Environmental parks should cater to everyone. Most often school children are the primary focus of environmental learning parks. However it is important to provide opportunities for people to connect with the natural environment. All ages, genders, ethnicity, and economic backgrounds should be addressed.

In developing an environmental learning park it is important to keep in mind the location of the park in relation to where people live. Parks closer to a person's home have a greater chance of connecting a person to that place. Environmental learning parks are also very effective on or near school grounds.

Context of an Environmental Learning Park

Environmental learning parks can fit into a wide variety of spaces. There are however several important factors that should be considered.

Connection to the natural environment

This can involve a wide variety of elements such as, ponds, wetlands, forests, creeks, lakes, rivers, ecosystems, and watersheds.

Links to the community

It is important to have some environmental learning parks closely linked to the community. While some parks may involve a whole watershed or ecosystem, smaller more local parks create a personal connection for people.

Variety of sizes and uses

Environmental learning parks should work together to provide a wide variety of sites and uses. Instead of repeating or competing curriculums and topics, environmental parks can work more effectively strung together to form a web of environments, users and opportunities.

Elements of an Environmental Learning Park

An environmental learning park should connect people to the natural environment. Streams, wetlands, ponds, lakes, shorelines, beaches, and forests are some of the elements that can be used to connect people to the natural environment.

Learning Center

The learning center has become a common element for environmental learning parks. A center can be a small shelter or an overnight facility. They can serve as classrooms, places to get out of the weather, equipment storage and other functions.

Modeling of Sustainable Development

One of the goals of environmental learning parks is to make a connection between a person's life and the natural environment. By modeling sustainable development practices, participants can better understand how these techniques can be applied to their own lives. Some examples are: sustainable building, green roofs, rain water harvesting, organic gardening, solar power, and composting.

Recreation Opportunities

Environmental learning parks should promote a healthy lifestyle. A range of compatible site activities helps promote physical activity. Some of the activities can be walking, biking, canoeing, bird watching, and gardening.

Stewardship

Opportunities for stewardship are an important part of an environmental learning park. Creating a sense of ownership among users and community members strengthens the connection between people and place.



Partnership

Many environmental learning parks develop partnerships. These partnerships are developed with like-minded, non-profit organizations that help with maintenance, facilitation and providing programs at the site.

Educators

Environmental learning parks offer a wide variety of programs and courses. These can be facilitated by paid staff, interns or volunteers.

Yakima Bluffs Learning Center

Yakima Bluff’s Learning Center will be fashioned after similar, successful facilities. Two examples are presented, one in Seattle, WA, the other in Milwaukee, WI.

Carkeek Park Environmental Learning Center in Seattle

The Carkeek Park Environmental Learning Center was built to provide additional space for environmental education and stewardship activities and to create additional community gathering and meeting space.



Carkeek Park Environmental Learning Center in Seattle

This community-driven endeavor is supported by eleven funding sources, including Seattle Departments of Parks & Recreation, Neighborhoods, City Light, Public Utilities as well as King County, local businesses and private foundations. The combined efforts of community advocates, Parks staff and the project team are making the Carkeek

Environmental Learning Center a model for resource efficiency and protection of human health and the environment.

Urban Ecology Center in Milwaukee

The Urban Ecology Center is located in Milwaukee’s Central Park Wildlife Corridor along the Milwaukee River. This nationally-recognized Neighborhood Environmental Education Project works exclusively with urban schools within two miles of the Ecology Center. This project is based on research demonstrating the importance of repeated access to green spaces with a mentor in developing an environmental ethic at a young age.

Do we preserve this “urban wilderness” for the public trust and develop it as park land for all to enjoy?

Or does it get turned over to private interests and become a corridor of condominiums?

The Urban Ecology Center is a neighborhood-based, non-profit community center located in Milwaukee County’s historic Riverside Park. This "outdoor laboratory" includes 12 acres of wooded land and riparian habitat on the east bank of the Milwaukee River plus an imaginative, habitat-themed playground. The green building houses resource areas and classrooms, informational exhibits and user-friendly resource materials about the environment.

Connecting Children with Nature



Yakima Bluffs Environmental Learning Park will provide opportunities for people of all ages to play, learn, explore, and encounter nature in

proximity to residential areas and business development in City View, a subdivision of Richland. This accessible natural open space will allow people to connect with nature through outdoor recreation such as hiking, bird-watching, and horseback riding, as well as through environmental education that exposes them to diverse native plants, wildlife, habitats, and landforms. The park will also enable children to experience free play and exploration in a natural setting, an important aspect of healthy childhood development. Free play and exploration

in the natural world allows children to connect with nature and promotes physical and psychological health and well-being.



“To keep alive his inborn sense of wonder [a child] needs the companionship of at least one adult who can share it, rediscovering with him the joy, excitement and mystery of the world we live in.” - Rachel Carson

Sense of Place

Our connections with nature are vital in shaping our sense of place and belonging in the world. In particular, a child’s experience of nature is, according to Stephen Kellert, “an essential, critical, and irreplaceable dimension of healthy maturation and development.” Robert Michael Pyle (2002) claims that a lack of contact with diverse aspects of the natural world, what he calls the extinction of experience, leads to “disaffection, alienation, and apathy.” These social conditions do not inspire a desire to conserve or care for the environment.



They lead instead to an attitude of indifference to the natural world, which results in neglect and abuse of the environment. Furthermore, he explains that “nature-deprived children suffer intellectually,”

especially in their “breadth of awareness, facility of reasoning, acuity of observation, and the kinds of associative skills that enhance cerebration.”

Research reveals students at schools that use outdoor classrooms have higher test scores and grades, greater problem-solving, critical thinking and decision-making skills, and are more creative.

Immersion in nature, with its manifold textures, sights, sounds, and smells, stimulates and enhances a child’s senses, and promotes the healthy emotional development of the child. Robin Moore (Louv, 2005) states, “Children live through their senses. Sensory experiences link the child’s exterior world with their interior, hidden, affective world. Since the natural environment is the principal source of sensory stimulation, freedom to explore and play with the outdoor environment through the senses in their own space and time is essential for healthy development of an interior life.”



The richness and diversity of nature in our environment and our daily contact with it also influences our appreciation of the natural world and our desire to conserve and care for it.

The De-naturing of Childhood

In recent decades, opportunities for children to connect with nature have radically declined. Richard Louv describes this phenomenon as the *de-naturing* of childhood, marked by an increase in rules and regulations that restrict free play, children’s overly-structured and scheduled lifestyles, a rising fear of strangers, and a preoccupation with computer games and television. Increasing urbanization also greatly limits children’s connection with nature due to a lack of accessible parks and natural open spaces in many cities. Louv claims that these factors have adversely affected the emotional and physical health, and cognitive abilities of an entire generation. Attention deficit disorder, depression, childhood obesity, and diabetes are some of the conditions that are on the rise and may be attributed, in part, to the *de-naturing*

of childhood. He names the collective phenomenon that results from the *de-naturing* of childhood *nature-deficit disorder*. In response to the growing national concern over nature-deficit disorder, the Children and Nature movement has emerged. Public health is a central issue of this movement.

“Nature-deficit disorder is not an official diagnosis but a way of viewing the problem, and describes the human costs of alienation from nature, among them: diminished use of the senses, attention difficulties, and higher rates of physical and emotional illnesses. The disorder can be detected in individuals, families, and communities.” -Richard Louv, Last Child in the Woods



Yakima Bluffs Environmental Learning Park will be a source of health and well-being for people of all ages as well as a resource for local schools that will enhance their environmental education with real, hands-on experiences in nature.

This park and other natural open spaces in our rapidly developing city will help fulfill the need of children to connect with nature and will create a healthier, more environmentally aware and conscientious community.

“The decline in children’s experience of nature will not change until a fundamental shift occurs in the attitudes and practices of developers, designers, educators, political leaders, and ordinary citizens.

The enormous challenge facing us is how to minimize and mitigate the adverse environmental impacts of the modern built environment and how to provide more positive opportunities for contact with nature among children and adults as an integral part of everyday life.” -Stephen Kellert, Building For Life

Geology

By G. V. Last, K. R. Fecht and B. N. Bjornstad (April 4, 2008)

“The Yakima Bluffs provide the best exposure of these ancient Yakima River deposits within the Columbia Basin.”

The ten-acre City View parcel sits atop a vertical bluff overlooking the Yakima River. Well drilling records and outcrop exposures along the bluffs provide evidence of the unique geologic history of this region. “Like nowhere else on Earth, repeated cataclysmic floods - first of molten lava, then of water from Ice Age floods - decimated southeastern Washington” (Bjornstad et al. 2007).

Columbia River Basalt Volcanism

The bedrock underlying the Yakima Bluffs consists of tholeiitic basalt flows (having similar chemistry to oceanic basalts) of the Columbia River Basalt Group. The molten lava that formed these massive basalt flows erupted between 17.5 and 6 million years ago, from large fissures (volcanic vents) located in southeastern Washington, west-central Idaho, and eastern Oregon (Reidel et al. 1989). Successive outpourings of these highly fluid cataclysmic basalt flows spread for hundreds of kilometers, eventually covering over 63,200 square miles (163,700 km²) in Washington, Oregon and Idaho (Tolan et al. 1989). Some of these lava flows had volumes estimated at over 700 cubic miles (3,000 km³), making them the largest documented individual lava flows on Earth (Tolan et al. 1989). Up to 300 hundred separate basalt flows have been identified that extend to a depth of over 16,000 ft (5 km), with a combined estimated volume of 67,300 cubic miles (174,300 km³) (Tolan et al. 1989). Subsidence during and since the Columbia River basalt volcanism formed the Pasco Basin, while other tectonic forces folded the basalt flows into narrow anticlinal ridges and broad synclinal valleys (Reidel et al. 1989).

The Yakima Bluffs lie along a series of small doubly plunging anticlines (branchyanticlines) (e.g. Flat Top Hill) that parallel the major Olympic-Wallowa Lineament (OWL), a linear alignment of topographic and geomorphic features that runs from the Olympic

Mountains to the Wallowa Mountains. **Exposures (outcrops) of one of the youngest basalt flows, that of the Ice Harbor Member of the Saddle Mountains Formation, can be seen along the bluffs in the southeastern portion of the City View parcel** lying at an elevation up to about 435 ft (Figure 4).

This is consistent with well drilling records that indicate that the uppermost basalt flow beneath the southern portion of the City View parcel may lie at an elevation of about 450 ft (Brown 1981) (Figure 5). However, the basalt surface appears to drop rapidly toward the river, attesting to deformation and possible erosion of the basalt surface. The steep attitude of the basalt surface is typical of other

anticlinal folds in the Yakima Fold Belt, with steep northern limbs often associated with thrust faults.



Figure 4. Outcrop of Ice Harbor basalt along the City View portion of Yakima Bluffs.

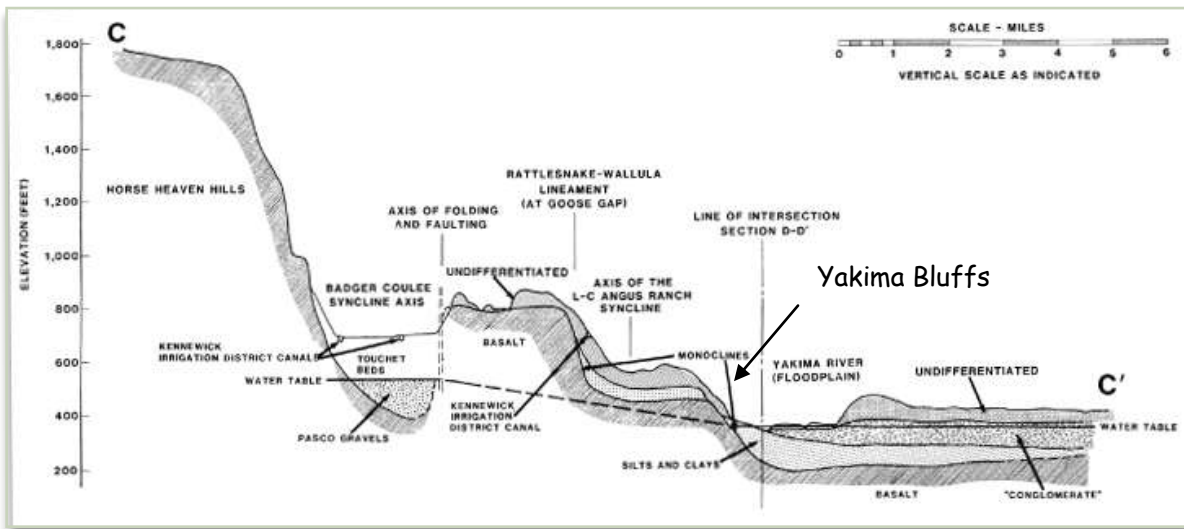


Figure 5. Geologic cross section located just to the northwest of the City View parcel (from Brown 1981).

Deposition of the Ringold Formation

Ancestral rivers draining south-central Washington were diverted by the rising anticlines and subsiding basins. Rivers, progressively shifted courses into the structural and topographic lows of the Columbia Basin, eventually converging on the Pasco Basin (Swanson and Wright 1979; Fecht et. al. 1987).

The rivers deposited their sediment load of gravel, sand, silt and clay in and adjacent to the major channelways (Newcomb et al. 1972; Tallman et al. 1981; Waitt and Swanson 1987; and Lindsey 1996).

These alluvial (river deposited) sediments, together with volcanic ash, sidestream, and colluvial (landslide) debris are interbedded with and overlie basalt flows of the Columbia River Basalt Group. The sedimentary sequence overlying the basalts are collectively referred to as the Ringold Formation (Newcomb and others, 1972). A diverse assemblage of fossil mammals (including camels, small horses, saber tooth cats, and small rodents), paleomagnetic data, and reconstruction of the Columbia River indicate that the Ringold Formation was deposited between 3.4 and 10.5 million years ago (Gustofson

1978; Tallman et al., 1981; Fecht et al. 1987). The coarse-grained sediments of the Ringold Formation were deposited in a fluvial environment associated with a through flowing Columbia River system; whereas, the fine-grained sediments represent a sluggish or impounded river system of a lacustrine (lake) environment. These Ringold sediments were deposited within a subsiding Pasco Basin, where the rivers' hydraulic base levels were controlled by rising structural ridges or possibly temporary dams of lava in the Columbia River Gorge (Waitt and Swanson 1987, Fecht et al 1987). Ringold sediments are not exposed in this section of the Yakima Bluffs, but have been observed in excavations south and north of the City View land parcel and in well drilling cuttings. To the south, Ringold sediments were observed in roadbeds along Interstate I-182 during construction of interchanges with Highway 240 and Queensgate. The sediments observed in the roadbeds were fine-grained silt and clay and represent overbank or lacustrine deposits from lower portion of the formation. To the north, Ringold sediments were observed in foundation excavations for a bridge constructed across the Yakima River near West Richland. These sediments are also fine grained and have similar characteristics to those observed at the Interstate I-182 interchanges. Well drilling records from nearby wells describe silts and clays, consistent with these fine-grained Ringold sediments, extending up to an elevation of about 500 feet (Figure 5). Fluvial gravel units of the basal Ringold have not been observed nor are they described in well records southwest of the Yakima Bluffs (Brown 1981).

Incision of the Ringold Formation and Deposition of Isolated Cold Creek Unit Deposits

A major drop in hydraulic base level for the ancestral river systems, marked the end of deposition of Ringold sediments. The base level change resulted in regional erosion and downcutting causing the Columbia Basin ancestral rivers to incise deeply into the Ringold Formation. During and immediately following the downcutting period, the basin reached a temporary base level and alluvial sediments and wind blown loess began depositing in lower elevations of the basin. In addition, thick calcic

paleosols developed across extensive parts of the area due to the arid climate. The sediments and paleosols are superimposed disconformably on the erosional surface of the Ringold Formation. Alluvial gravel, sand and silt deposits accumulated along the channelways of the ancestral main trunk streams (Yakima, Snake, and Columbia rivers). In places these coarse grained clastic sediments are referred to as Pre-Missoula Gravels (PSPL 1982). On the basin margins, sidestreams were actively eroding rocks and sediments from the emerging ridges and depositing gravel (mainly basalt clasts), sand, and silt into ancestral sidestreams such as in Cold Creek and Dry Creek valleys. The deposits, sandwiched between the Ringold Formation and the overlying Hanford formation, are locally referred to on the Hanford Site as the Cold Creek Unit (DOE 2002).

The Yakima Bluffs provide the best exposure of these ancient Yakima River deposits within the Columbia Basin. From the base of the bluff to near the crest is an almost complete sedimentary sequence. At the base of the bluff a gravel unit (equivalent to the Pre-Missoula Gravels) is exposed above the irrigation canal. The gravel represents deposits of the main river channel. Gravel clasts are imbricated (inclined) indicating a northerly paleoflow direction or a direction opposite to flow of the modern Yakima River (Figure 6).



Figure 6. Imbrication of Pre-Missoula Gravels indicates deposition by a northern flowing river system (opposite to the modern flow of the Yakima River).

This flow direction is consistent with the Yakima River flowing in a more southerly course through Badger Coulee and then northward into the Pasco Basin. Above the gravel unit, sediments fine rapidly upward, forming a thick section of overbank deposits. These deposits consist of fine sand and silt and represent a more sluggish river system or

overbank deposits from flooding when stream flow exceeded the channel capacity.

Ice Age Cataclysmic Flooding

With the onset of the last major Ice Age some 2.6 million years ago, another series of cataclysmic floods (this time of glacial meltwater) inundated this area (Bjornstad 2006). Huge outburst floods (some containing over 500 cubic miles of water) from ice marginal lakes (e.g. Glacial Lake Missoula) occurred repeatedly during regular glacial cycles. As many as 100 separate flood events have been postulated to have occurred during the last glacial cycle, 15,000 to 20,000 years ago (Waitt 1994). The largest of these

floods had flow rates up to about 17 million cubic meters per second, ten times the combined flow rate of all the modern rivers of the world. **These floods were arguably the largest recorded floods known to have occurred on Earth** (O'Conner and Costa 2004; Last 2007).

Based on reversed paleomagnetic signatures in the sediments, the oldest cataclysmic floods predate the last significant geomagnetic reversal some 780,000 years ago. **Some of these oldest flood deposits (early Pleistocene in age) are exposed near the top of the Yakima Bluffs** (Baker et al. 1991) (Figure 7).

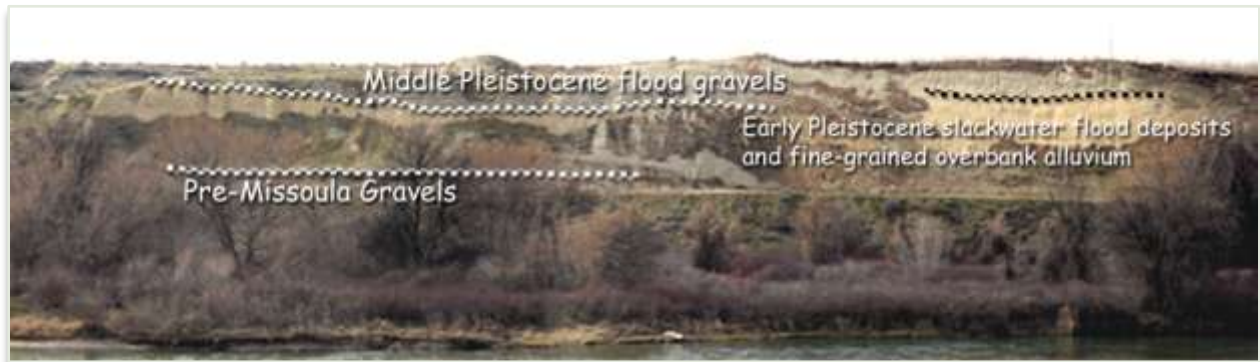


Figure 7. View of the Yakima Bluffs from across the Yakima River, showing outcrops of the Pre-Missoula Gravels (dark grey), overlain by old fine-grained overbank alluvium and slackwater Ice Age flood deposits (tan), which in turn are overlain by more recent Ice Age flood gravels (grey).

Radiometric age dating using Th/U has put other flood deposits at the top of the bluffs at 200,000 to 220,000 years old. These old flood deposits are often capped with a thick caliche or calcrete cap. These middle-Pleistocene aged flood gravel deposits are also found in a small quarry near Bombing Range Road, and well log records just southwest of the bluff indicate the presence of cemented flood gravels and large boulders. Flood deposits from the most recent episodes of cataclysmic flooding while not well exposed along this portion of the Yakima Bluffs, locally overlie these middle-Pleistocene flood deposits.

Deciphering the history of cataclysmic flooding in the Pasco Basin is complicated, not only because the floods came from multiple sources (e.g. Lake Missoula, Lake Columbia, Lake Bonneville), but also because they took multiple paths and scoured or

buried deposits left behind by previous floods. Evidence for cataclysmic flooding besides the sediments themselves includes abandoned spill over channels and ice-rafted erratic boulders, which record hydraulic damming of the Ice Age flood waters behind Wallula Gap that created a temporary lake (Lake Lewis). Lake Lewis rose to an elevation of up to 1250 feet, drowning the Pasco Basin and the Tri-City area beneath as much as 900 feet of turbid floodwater.

These catastrophic floods undoubtedly wiped out generations of animal populations living in the low lying areas, and many findings of mammoth fossils have been reported throughout eastern Washington (Barton 1999, Last and Winsor 2007).

One finding, believed to be that of a Columbian Mammoth (the official fossil of Washington State) was located along the Yakima Bluffs in

1995 (James Chatters, personal communication on 3/24/06). A partial humerus (upper arm bone) from this mammoth is archived in the CREHST museum (Figure 8).



Figure 8. Partial humerus from a mammoth recovered along the Yakima Bluffs.

Flora

Flora of Yakima Bluffs Environmental Learning Park consists of an assortment of shrub-steppe plants. Access to the Yakima River Habitat Management Unit provides an extensive riparian habitat.

“The view lot overlooking the Yakima River provides a unique shrub-steppe wildland adjacent to the natural river corridor through the urban areas of Richland and West Richland. This north-facing slope harbors many native plant and wildlife species. Ecotones, areas where two ecosystems come together, provide important habitat for many species and can be more diverse than either community alone. The native shrub-steppe habitats that border the Tapteal Greenway and the Yakima River corridor provide important habitat for migratory birds and wildlife that use the river corridor to travel through the urban areas.” -Janelle Downs, Plant Ecologist

Shrub-Steppe Plants

By Robert Fortman (March 17, 2008)

Native species presently growing on the site include those listed in the Table 1. These native plants are described in more detail in Table 2. A more extensive survey would likely find additional species. For example, there are other unidentified grasses growing at this site that can be identified later in the growing year. One of these may include needle and thread grass (*Stipa comata*).

Table 1. Plant Species Observed

Common Name	Scientific Name
Sandberg’s Bluegrass	<i>Poa secunda</i>
Bluebunch Wheatgrass	<i>Agropyron spicatum</i>
Indian Rice Grass	<i>Oryzopsis hymenioides</i>
Green Rabbitbrush	<i>Chrysothamnus viscidiflorus</i>
Grey Rabbitbrush	<i>Ericameria nauseosal</i>
Sagebrush	<i>Artemisia species</i>
Spiny Hopsage	<i>Grayia spinosa</i>
Yarrow	<i>Achillea millefolium</i>
Prickly Pear cactus	<i>Optuntia polyacantha</i>
Snow Buckwheat	<i>Eriogonum niveum</i>
Longleaf Phlox	<i>Phlox longifolia</i>
Hoary Aster	<i>Machaeranthera canescens</i>
Pale-stemmed Primrose	<i>Oenothera pallida</i>
Cryptogamic Crust	

The above mentioned crust is a collection of different primitive plants that cover the ground between larger individual species. They are an indication of a stable and mature community of plants that resist the invasion of non-native species.

Also of special interest at this site is the presence of a large community of likely very old Spiny Hopsage plants. This species is disappearing in the wild in the Columbia Basin area. Fire is responsible for its elimination as well as that of sagebrush in the wild. The presence of these very old Hopsage plants is probably related to the protection this site receives from the surrounding housing developments.

Table 2. Descriptions of Observed Native Plants

Spiny Hopsage



A semi-evergreen shrub with many stiff erect spiny branches. Older branches have shredding dark gray bark. The fleshy oval leaves are scurf-pubescent when young becoming shinier with age. The flower cluster a dense spike is not showy. It is followed by a cluster of reddish or whitish fruiting bracts.

Extremely drought tolerant thanks to a deep root system, this shrub serves as a good food source for browsers especially in the dry months when other plants have dropped their leaves.

Sagebrush



Sagebrush is a valuable forage plant for wildlife particularly during the winter. It also provides nesting sites for a variety of songbirds. Even more nutritious than alfalfa this shrub consists of 16 percent proteins 15 percent fats and 47 percent carbohydrates. Humans have used the plant primarily as firewood—the volatile oils responsible for its pungent aroma are so flammable that they can cause even green plants to burn.

Snow Buckwheat



Tolerates extremely droughty soils. It may grow to be as much as 1m tall and 1m wide. A very useful xeriscaping plant because it requires very little moisture and does not become weedy. It can be shaped by careful pruning to produce a more formal looking round-full plant. The bloom period is very long and the white flowers take on a pink blush in late fall. Animals use the canopy for cover. Bees and butterflies utilize snow buckwheat as a foodstuff.

Photo taken on Jack Rabbit Ridge near City View.

Gray (Rubber) Rabbitbrush



A shrub with erect slender flexible branches covered with dense felt-like matted hairs (often overlooked until one scrapes the surface lightly) very narrow leaves and small yellow heads in dense clusters at ends of stems.

Gray Rabbitbrush is a common and variable species in a genus found mainly in western North America. Some plants are light green others have silvery hairs. Navajo people obtained a yellow dye from the flower heads.

Green (Yellow) Rabbitbrush



Green rabbitbrush is a low native shrub with many brittle, erect stems branching from a compact base. The species has a large geographic range and wide ecological amplitude. Leaves are deciduous. The main taproot is at least 1.9 feet deep. Plants are relatively short lived. It is well adapted to drought and occurs in desert or semi-desert environments. Green rabbitbrush grows on open ridges and on slopes. It grows on dry, well-drained medium to coarse-textured soils.

Sandberg's Bluegrass



An erect, perennial bunchgrass, growing in small tufts, without rhizomes, commonly not over 12 inches tall. It is one of the first plants to start growth in early spring. Seeds mature in early summer. It produces from seeds and tillers. With adequate moisture, it will remain green throughout the summer.

Photo is a blanket of Sandberg's bluegrass growing at City View. There is little cheatgrass in these robust communities.

Bluebunch Wheatgrass



An erect bunchgrass, 1 to 2 ½ feet tall. Growth begins in April and the plant stays green well into the summer. Re-growth occurs following fall rains. The seed head is a slender spike up to 6 inches long. Adapted to a wide variety of soils, but is found mostly in well-drained, medium to coarse textures soils which vary in depth from shallow to very deep. It is found only in small quantities on fine-textured soils. It will tolerate moist soils, but is most abundant on dry soils. Photo taken atop Yakima Bluff at City View.

Indian Rice Grass



An erect bunchgrass, without rhizomes, growing 1 to 2 ½ feet tall. Starts growth in early spring, flowers in late spring, reproduces from seeds and tillers. Highly adapted to arid, sandy soil conditions.

Photo taken on Jack Rabbit Ridge.

Yarrow



Yarrow grows to 3 feet tall and has no branches except near the top. The compound leaves have a delicate fernlike lacy appearance. Flower heads are arranged in large compact clusters at the top of the stem each cluster consisting of 1 or more flower heads. The flower head has 20-25 yellowish-white (rarely pink) ray flowers and similarly colored disk flowers. Photo taken on Jack Rabbit Ridge.

Longleaf Phlox



A somewhat woody perennial with a dwarf compactly branched habit. Usually not taller than 6 in. Leaves are smooth and linear. Pink, pale lilac or white sweetly-scented flowers occur in loose clusters. Slender stems often grow in dense clumps and have bright pink pale lilac or chalky white flowers in loose clusters. Phloxes are beautiful and popular wildflowers found in nearly all western habitats. Photo taken on Jack Rabbit Ridge.

Hoary Aster



Biennial or short-lived perennial from a tap-root, 1-5 dm. tall, branched and several-stemmed, covered with fine, gray hairs. Flower heads are fairly numerous in an open inflorescence; bright bluish-purple.

Photo taken on Jack Rabbit Ridge.

Pale-Stemmed Primrose



The Pale Evening-primrose is a member of the evening-primrose family which includes mainly herbs rarely shrubs or trees with often showy flowers borne singly in racemes or spikes or in branched clusters.

Photo taken on Jack Rabbit Ridge.

Prickly Pear cactus



Low mound of spiny flat nearly oval joints has bright yellow or sometimes bright magenta flowers. This is a small cactus whose flattened jointed blue-green pads lie prostrate on the ground occasionally forming colonies several feet across. Overall height is less than 8 in. Bright yellow papery flowers open up to 3 1/2 in. wide. Flowers are often tinged apricot and may fade red. The fleshy reddish-purple fruit is covered with spines.

Photo taken on Jack Rabbit Ridge.

Cryptogamic Crust



Microbial communities play a pioneering role in soils, forming a surface layer. This crust helps to stabilize the soil and support other populations of life. The organisms which contribute to the formation of biological soil crusts include bacteria, lichens, mosses, liverworts, green algae, and micro-fungi. This crust can help to retain moisture in the upper layer of soil, help prevent erosion, and provide nutrients for plants. Soil crusts also inhibit seed germination of a number of weedy species including cheatgrass.

Photo taken at City View. Grasses are native bunchgrass.

“Spiny hopsage (*Grayia spinosa*) is a native shrub in the Columbia Basin, but is gradually disappearing from our ecosystems. It does not do well after fire. The primary problem with this shrub is that it is not reproducing. I have only heard of two naturally occurring seedlings in the last 20 years in the Columbia Basin... Another possible reason that few seedlings have been observed in natural conditions is that conditions for significant germination may only occur every 50 years or longer. Spiny hopsage can live for a very long time. I have heard it can live for 2000 years, but I have no evidence for this... Spiny hopsage should be made available for various ecological restoration uses and even for xeriscaping gardening in your yard. The plant is attractive. Spiny hopsage also has potential for wind erosion control. It, of course, is possible to grow hopsage, but it is not generally available commercially.” -Dr. Steven O. Link, Biology faculty at the Washington State University Tri-Cities Branch Campus.

Approximately half of the proposed area already exists as a stable and mature collection of species that reflect the true nature of this original landscape. The other half of the proposed area needs work to return it to a more natural condition.

Non-native Plant Community

There is one introduced grass species that is not native and not invasive. It could be eliminated to show a more complete native setting. That grass is crested wheatgrass. The non-native and invasive weed species, cheat grass (*Bromus tectorum*), is the most common plant that needs additional control measures in the disturbed areas. Also present to a lesser degree is tumble mustard (*Sisymbrium altissimum*). The plant commonly referred to as tumbleweed or Russian thistle (*Salsola iberica*) is generally absent, mostly occupying disturbed areas along the roadways.

Value

This site offers the possibility of showing many different aspects of our landscape. Restoration activities would be easily seen and inviting. Educational values include the opportunity to:

- ▶ View wide variety of native plant species
- ▶ Participate in restoration
- ▶ Introduce additional native species
- ▶ Study decline and propagation of spiny hopsage in its native habitat

Riparian Plants

Note: Review of riparian plants has not been completed. Below is a small sampling of observed plants.

Golden Current



Photo by J. Pisarowicz



Wood's Rose



Photo by J.D. Stein

Fauna

Yakima Bluffs Park is part of the Jackrabbit Ridge ecosystem. The combined shrub-steppe and riparian habitats support a variety of fauna that may be observed while hiking this area. **Note: Review of fauna has not been completed.**

Mammals



Notable in this ecosystem is the presence of a large population of black-tailed jackrabbit. This is a State-listed Species of Concern².

Other mammals observed in this area include the cotton tail rabbit, raccoon and skunk.

Deer trails (below) along the north end of the bluffs are used daily to travel between the orchard and the river.



River otter and beaver have been observed along the Yakima River.



² The *Species of Concern (SOC) List*, published by the Wildlife Management Program, includes only native Washington Fish and Wildlife species that are listed as Endangered, Threatened, or Sensitive, or as Candidates for these designations. Endangered, Threatened, and Sensitive species are legally established in Washington Administrative Codes. Candidate species are established by WDFW policy.

A special treat are the yips and howls of coyotes at night.



Birds

Birds observed at or near the Yakima Bluffs include meadow lark, long-billed curlew, pheasant, quail, flicker, redwing blackbird, orioles and white-crowned sparrows.

Commonly seen raptors include the northern harrier, sharp-shinned hawk, red-tailed hawk and the American kestrel. Bald eagles have also been spotted.



The riparian area is home to a pair of long-eared owls, who raised three youngsters there

last year.

The river is frequented by a variety of water fowl including ducks, great blue heron and the American coot.

Raptor Nest Pole

A raptor pole was erected north of City View near to where the bluffs end. It will be possible to view nesting birds from the Yakima Bluffs Park.



The raptor nesting pole near City View received Richland's 2007 Green Project of the Year Award.



Other

Much more could be listed including numerous butterflies and moths, reptiles and amphibians.

Land Use Considerations

Presented here are considerations pertinent to development of City View’s northeast parcel. Based on these considerations, it is concluded:

- ▶ City View Northeast has unique assets related to public recreation and education.
- ▶ City View Northeast includes habitat sensitive to use and development.
- ▶ Aspects of City View Northeast limit its economic value for development.
- ▶ A combination of commercial, limited business and natural open space zoning may best suit the attributes of this property.
- ▶ Local studies and data indicate high use of and desire for public open spaces, especially with trails and river access.
- ▶ Local consumer spending associated with the use of open spaces appears substantial.

Three Regions

To best accommodate its attributes and limitations, City View Northeast may be viewed as three regions: the shrub-steppe preserve, limited development and the unstable bluff (Figure 9).



Figure 9. Three Regions of City View Northeast

The southwest portion of the parcel, along City View Drive, is best suited for development. The northern region (approx. 5 acres) is quality shrub-steppe habitat ideally suited for preservation and use as natural urban open space that is of recreational and educational value. This also is where the majority of the utility easements are located, making the shrub-steppe portion less desirable for

development. The northeast side of the parcel, facing the Yakima River, runs atop the unstable Yakima Bluffs, making it unsuitable for construction or the use of irrigation.

The geologic materials making up this bluff consist of unconsolidated sedimentary sequences of coarse sandy gravel to well bedded silt and clay deposited by mega-floods during the last Ice Age. These sediments are susceptible to mass wasting (e.g. landslides), particularly as perched water tables form along the bedding planes between low and high permeable sediments. Large blocks of silt and clay that broke free from this bluff within the last two years, and other areas of erosion are visible all along the bluff (Figure 10).



Figure 10. Recent Erosion of the Yakima Bluffs

Historically, a large area of the cliff within this parcel was lost due to leakage of a water tank. Terracing of this area was necessary to prevent further mass erosion of the cliff side (Figure 11).



Figure 11. Terracing (Yellow Circle) to Mitigate Continued Erosion of Bluff

Figure 12 presents a side view of the bluff running the length of the City View parcel.

An engineering study is needed to establish the allowed proximity of structures to the edge of the bluffs. Additionally, water usage should be assessed. It may be necessary to restrict irrigation of landscaping on this parcel to prevent further

sloughing as a result of soil saturation from routine irrigation as well as what could result from accidental saturation.

Utility Easements

There are utility easements throughout this parcel (Figure 13). These will restrict development and add to costs.

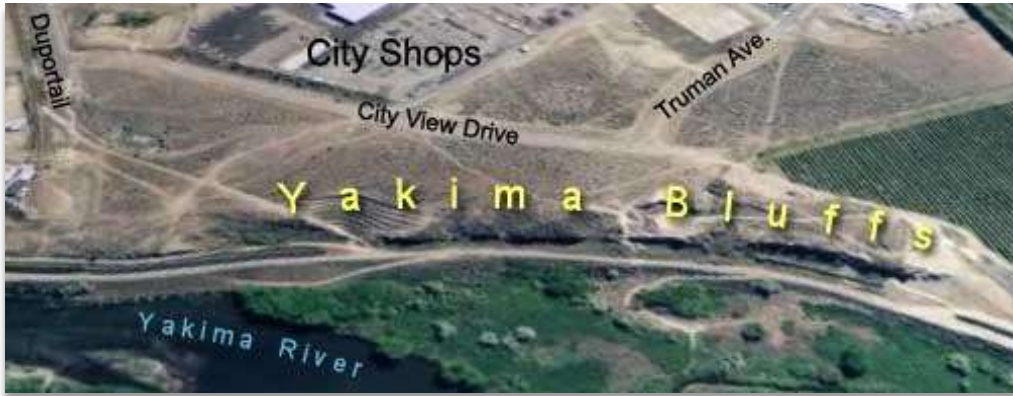


Figure 12. Bluffs Extending Along Edge of City View Northeast



Figure 13. Utility Easements

Open-Space Planning and Quality-of-Life

The City of Richland has taken a progressive position on open-space planning and made a commitment to quality-of-life issues. These positions are especially pertinent to City View Northeast where features make it an ideal location for the proposed Yakima Bluffs Environmental Learning Park.

2008 Community Priorities

Richland 2008 Community Priorities include the following:

Improve Our Quality of Life

Provide safe and attractive parks, public spaces and trails. Assess long-term open space needs.

Be Careful Stewards of Our Public Resources

Pursue new funding sources and grants that support community priorities. Collaborate with community partners and other agencies.

Regional Open Space Planning

“Assess long-term open space needs.”

Regional open space planning is taking place this year through a process with the National Parks Service and through Benton County’s comprehensive parks planning. City View Northeast has attributes making it an important aspect of both planning processes. Keeping it open for consideration in these processes is consistent the City’s commitment to open space planning.

Rivers, Trails, and Conservation Assistance Program (RTCA)

In 2007, the City of Richland provided to the National Park Service written support of Tapteal Greenway’s application for a grant to assist in regional open space planning. The City’s position on the RTCA planning process is consistent with their “2008 Community Priorities”, in particular the priority to “assess long-term open space needs”.

The grant was approved. Open space planning will take place this year.

The RTCA program implements the natural resource conservation and outdoor recreation mission of the National Park Service by providing assistance to community and government entities so they can conserve rivers, preserve open space, and develop trails and greenways. A network of public and private lands across the study area will be identified for the purposes of *conservation*, because of the *natural and aesthetic values* they possess; and *recreation*, because of the *access, linkages, and opportunities* they provide. **City View Northeast’s attributes fit all of these features of the RTCA planning process.**

Stewardship

“Pursue new funding sources; Collaborate...”

City View Northeast is a unique public resource as an urban wildland. Funding opportunities are available to support establishing and maintaining urban wildland parks and associated education facilities. Opportunities for collaboration with community partners and other agencies are numerous. Likely community partners include the Columbia Basin Native Plant Society, the Lower Columbia Basin Audubon Society, the Tapteal Greenway Association, the Fun, Fit and Over Fifty Club, equestrian clubs, educators, master gardeners, local nurseries that feature low-water landscaping, and general contractors promoting sustainability and green building construction.

Benton County is considering a natural area immediately to the north, with trails that would connect to City View Northeast. Benton County’s Comprehensive Park planning process is underway and will create a policy baseline to lead and define the parks system. The County’s parks plan relates to the City View location in that the proposed Jack Rabbit Ridge Natural Area (JRR), an extensive shrub-steppe corridor to the north that follows the Yakima River into West Richland, would connect via trails.

Tourism and Community Use

“Provide safe and attractive parks, public spaces and trails.”

“Pursue new funding sources and grants that support community priorities.”

The popularity of Badger Mountain and results of surveys of users of this resource as well as input from Benton County residents indicate a high potential for visitors to the Yakima Bluffs Environmental Learning Park to bring a substantial consumer base to City View businesses.

Benton County Parks Plan

[Draft Park Plan](#) (2.0 Mb, Acrobat® file)

<http://www.studiocascade.com/bentoncountyparks/documents/DRAFT-parkplan-080207.pdf>

Benton County administered an online questionnaire to county residents in 2007 as part of the public participation program to engage the public in the parks planning process.

The results were consistent with the responses from public meetings and other opportunities for public comment. Respondents to the questionnaire were mostly from Richland (47 percent) and Kennewick (25 percent) and were between 45 and 59 years of age. Key findings:

- ▶ Hiking and walking were the activities the majority of respondents participated in most frequently... Bicycling and nature activities were also frequent activities for respondents. The responses show a high need for facilities to support these activities...
- ▶ Trails topped the list of needed parks facilities. Trails were closely followed by preserves and waterfront parks. All facility types, except athletic play fields, showed high level of support. Coupled with the activities that people do most in their free time, these questions show an increased need for trails, preserves, and waterfront parks.
- ▶ Desires of residents to have parks that are safe and that were designed, funded, built and maintained through a process of collaboration.
- ▶ An overwhelming 90 percent of respondents said they believed land should be set aside in new developments for future parks facilities.

People are busy and have to weigh the time available for work, live, and play. Key trends to consider include:

- ▶ Urban areas are being filled in and higher density housing development is increasing demand for more urban facilities and connectivity to rural opportunities
- ▶ People are getting busier and costs for travel are increasing interest in recreating closer to the home and work
- ▶ An increase in trail activity and an emerging interest in activities like community gardens...

Economics

An undeniable benefit of open space is improved quality of life through opportunities for outdoor recreation, leisure, and education in a natural setting. These opportunities may lead to enhanced physical and psychological health and well-being and greater environmental awareness.

Beyond its quality of life value, open space may benefit native plants and wildlife and may inspire in people an appreciation of natural beauty and biodiversity. Parks, greenways, and preserves are examples of open space that are incorporated into urban planning in order to provide these qualitative benefits (amenities) to the community-at-large. Views, lakes, rivers, streams, and wetlands are features that are, likewise, highly valued for their recreation, conservation, and aesthetic benefits.

However, the economic value of open space is not always apparent. Land preserved as open space is often perceived as a monetary loss to municipal governments. This common perception does not take into account the economic disadvantages of developing open space, such as negative impacts on local tax revenues through a decline in nearby property values, and municipal spending on public infrastructure and services. Conversely, these disadvantages serve to illustrate the benefits of preserving open space, which include positive impacts on local tax revenues through an increase in the value of homes in proximity to open space, and the absence of development and infrastructure costs

associated with the installation and continued maintenance and management of utilities and roads.

Cost-benefit analyses should carefully weigh projected monetary losses and gains of preserving open space. Monetary gains of preserving open space may include such factors as the cost savings of not providing public infrastructure and services, an increase in property taxes of nearby homes, and lowered water management and treatment costs. Monetary losses may include the cost of obtaining open space in cases when private land is purchased by the municipality, and may include the cost of improving the land for recreational purposes.

Preserving open space may also enhance the local economy through revenue generated by consumers who use open space for recreation. Consumers purchase hiking, biking, bird watching, horseback riding, and fishing equipment for use in open space. Additional revenue generated through these uses include the cost of transportation, fuel, food, and beverages. Furthermore, access to natural areas in an urban development can positively impact businesses that are in proximity to open space. Exposure to natural areas may relieve stress, lower sick leave, and increase job satisfaction of employees. These benefits may impact the cost of health care, job retention, and productivity of local businesses.

Badger Mountain Centennial Preserve

The popularity of Badger Mountain with over 2000 people a week hiking the mountain show the need for and economic value of our open spaces. These areas also attract funding sources such as Recreational Equipment Inc., as witnessed by their third grant to Friends of Badger Mountain. (REI has also provided grants to the Columbia Basin Native Plant Society in support of community restoration efforts at our parks and open spaces.)

Read an article on the value of Badger Mountain to our area, from the Summer 2007 issue of *Mid-Columbian* magazine. “*Explore Nature’s Playground Rising Above the Tri-Cities*”, Sarah Olberding.

<http://www.friendsofbadger.org/MC02-03BadgerMt.pdf>

Friends of Badger Mountain Honored as Tourism Champion of the Year

The Tri-Cities Visitors and Convention Bureau honored Friends of Badger Mountain as “Tourism Champion of the Year”. The meeting and trade show held at the Tri-Cities Convention Center was attended by over 600 people from the local business and tourism industry. [Read the article](#) from *Tri-Cities Area Journal of Business* November, 2007.

http://www.tcajob.com/issues/current/pages/page_3.html

Trail Use Survey

Friends of Badger Mountain have initiated a study of the economic benefits of trail use. Initial projections of data collected applied to total annual visits suggest that up to \$1,000,000 annually may be spent from Badger trail use. This is based on a survey that indicated average money spent per visit is about \$10. The economic benefit of such resources appears substantial. (Note: Data and statistical analyses are incomplete at this time. These results should be taken only as initial indicators of the potential economic benefit of open space resources in our community.)

Funding Opportunities

“Environmental Learning Parks”, by **Garrett Devier**

Grants

Environmental Learning Parks use grants for part of their funding. There are several different approaches that they can use for acquiring grants. First, environmental learning parks can apply for grants related to; environmental education, environmental restoration and protection, sustainable building and landscape practices, and grants targeting specific populations such as inner city youth. Second, there are several different organizations that environmental learning parks can look towards for contributing grants. These are: philanthropic foundations, corporate foundations, and city, county, state and federal agencies.

Program Fees

Many environmental learning parks rely on program fees for funding. These fees can be applied as an

entrance / user fee. They can also be applied towards specific programs offered at the site.

City, County, State and Federal Funding

Environmental learning parks often are located on city, county, state or federal land. These agencies contribute to the budget or acquisition of environmental learning parks.

Donations

Donations are a common method of acquiring funds for environmental learning parks. They can be in the form of individual donations or businesses and corporate donations.

Partners of Yakima Bluffs

Supporting businesses and organizations are TBD. We will be seeking partners.



your organization
here

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In the News

Mid-Columbia nature lovers seeking to save Yakima Bluffs land

Tri-City Herald

Tuesday, Mar. 25, 2008

By Michelle Dupler, Herald staff writer



Shannon Hays-Truex of Richland, left, and Donna Lucas of Benton County hope about 10 acres of Richland land along the Yakima River will be preserved as open space rather than used for development. They envision a park with an educational center, playground and trails through the area's natural shrub-steppe habitat. See story below.

Donna Lucas stopped suddenly as she walked along a bluff overlooking the Yakima River on Monday.

"Oh, look at the raptor!" she said.

A grin lit up her face as she watched the bird soar through a spring sky the color of a robin's egg.

"I think it's a northern harrier," she said. "It's probably looking for a jack rabbit."

Lucas and a handful of local nature lovers hope the 10.7 acres of wild open space around the bluff will become the Yakima Bluffs Environmental Learning Park -- an undeveloped natural preserve with walking trails and an educational center with classrooms for kids.

But first they have to convince the Richland City Council not to sell the parcel.

The city has owned the land since 1994, when it bought 160 acres from the Department of Natural Resources to build the city shops. The city didn't need all of the land and has sold it off in pieces over the last decade or so.

Only two pieces remain, and the council has given the city staff approval to solicit development proposals for a 6.7-acre piece next to Benton County Emergency Services at the end of Truman Avenue.

Tonight, the council plans to discuss what to do with this piece at the dead end of Duportail Street in the City View area.

Gary Ballew, the city's business and economic development manager, said the land has been on the market for more than 10 years, but the question of development came to a head after someone asked in late 2007 about buying the parcel.

Ballew is recommending the city solicit proposals for the land, which allows the city to set its own terms for how and if the land will be developed.

"At the end of it, an RFP is always written so the city is not obligated to accept any proposal," Ballew said.

Or it could accept a proposal to make the land into a park, as Lucas's group, The Friends of Urban Wildlife, wants.

"It's an interesting proposal," Ballew said. "We just feel it should be evaluated with any other proposals out there."

Ballew said there are issues that could make the land a tough sell for development -- like major utility lines running under the loose, sandy soil.

There's also the slope of the ground and the instability of the bluff. Heaps of clay at the bottom are a telltale sign of landslides past.

"That adds to the cost of development," Ballew said.

Ballew said several people who support the Yakima Bluffs concept have written letters asking the council to delay soliciting development proposals until a regional open space plan can be done.

That's what Lucas and fellow open space advocate Shannon Hays-Truex are hoping for -- more time to sell their vision to the Richland council.

After spotting the raptor, Lucas continued her walk Monday and pointed out clumps of native plants such as Sandberg's bluegrass, Indian rice grass and spiny hopsage.

She pointed out spots along the river below where kids have built forts and hung ropes to swing over the water, and traced through the air the lines of a future trail that would link with other walking and biking paths.

"It's so cool it's right here in the middle of town," she said. "Our hope is that this can be for everybody."

<http://www.tri-cityherald.com/901/story/137208.html>

Richland Council delays City View development

Tri-City Herald
Wednesday, Mar. 26, 2008
By the Herald staff

The Richland City Council on Tuesday opted against developing a parcel of land overlooking the Yakima River in the City View area, at least for now.

The city's economic development staff had recommended soliciting proposals on the 10.7-acre parcel at the dead end of Duportail Street, but consensus among the council during a workshop discussion was to wait until more information is available.

In particular, the council wants to see the results of a regional discussion about open space planning to find out how this parcel might fit in.

That came as a relief to a handful of local nature lovers who hope the land will become the Yakima Bluffs Environmental Learning Park -- an undeveloped natural preserve with walking trails and an educational center with classrooms for kids.

The land sits next to the proposed route for the Duportail Bridge and contains about two acres earmarked for a future fire station.

The proposal for a park would include trails connecting Yakima Bluffs park to a proposed JackRabbit Ridge nature preserve to the north, and to the Chamna Natural Preserve across the river once the bridge is built.

Councilwoman Sheila Sullivan thought the land would be an ideal spot for a park, but Councilman Ed Revell said there may be better locations for environmental education. Revell walked through the area on Tuesday, and saw that much of the habitat already had been disturbed or used as a dump.

The city has owned the land since 1994, when it bought 160 acres from the Department of Natural Resources to build the city shops. The city didn't need all of the land and has sold it off in pieces over the last decade or so.

<http://www.tri-cityherald.com/901/story/138335.html>

Contributors

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Shannon Hays-Truex is a volunteer environmental educator at McNary National Wildlife Refuge. As a member of Friends of Mid-Columbia River Wildlife Refuges, she plans, develops and coordinates education programs that introduce students to the diverse plants, animals, and habitats of the Columbia Basin. Shannon is also part of the McMurray Park Environmental Partnership and partners with Oasis School to provide education programs in the city of Richland. These education programs introduce kindergarten through middle-school students to the biodiversity of urban wildlands and help them become stewards of the wildlands in their own backyard. She also helps lead the clean up and habitat restoration of McMurray Park, which involves people of all ages from the community-at-large. She aspires to create opportunities for young people to bond with the natural world and develop an ethic of caring for the earth. Shannon is also a member of the Columbia Basin Chapter of the Washington Native Plant Society and the Open Space Coalition of Benton and Franklin Counties. She has a B.S. in Environmental Studies from The Evergreen State College and an M.S. in Environmental Science from Washington State University.

Donna Lucas, coordinator(509) 967-5913 donna@jackrabbitridge.org

Donna is owner and operator of “Jack Rabbit Ridge Native Plants,” a nursery specializing in native plants on the lower Columbia Basin and supporter of local public restoration projects. She is on the board of the Columbia Basin Chapter of the Washington Native Plant Society (CBNPS) and active in the Open Space Coalition of Benton and Franklin counties (OSCBF). Donna is also affiliated with the Lower Columbia Basin Audubon Society, Taptal Greenway Association, Society for Ecological Restoration International, and The Nature Conservancy. Donna is a retired scientist/engineer from Battelle, Pacific Northwest National Laboratory (PNNL). She worked at the Hanford Site for nearly 30 years as a risk analyst and project manager in the safety analysis program for the 300 Area nuclear facilities. Donna has an M.S. degree in Bionucleonics and a B.S. in Environmental Health from Purdue University. Recently she completed WSU’s restoration ecology class.

George Last, geology

George is president of the Lewis Lake Chapter of the Ice-Age Flood Institute (IAFI), and a senior research scientist in the Applied Geology and Geochemistry Group at the Pacific Northwest National Laboratory. He received his B.S. degree in Geology and M.S. degree in Environmental Science and Regional Planning (Hydrogeology Option) from Washington State University. He is a registered professional geologist and hydrogeologist in the states of Washington and Oregon. Throughout his 32 year career, his research has focused on applied subsurface science aimed at improving our understanding of the geologic controls on contaminant fate and transport and methodologies for predicting the spatial distribution of hydrologic and geochemical properties.

Robert Fortman, plants

Bob is the President of the Columbia Basin Chapter of the Washington Native Plant Society. He worked several years on a volunteer field survey crew at Rattlesnake Mountain for The Nature Conservancy where the love of native plants was formed. He is also currently serving as a volunteer co-site steward for the Kahlotus Ridge Natural Area Preserve for the Washington State Department of Natural Resources. He is in the process of converting a two acre plot from horse pasture to native plants in the Finley area. He is also a Master Gardener with the Benton-Franklin Washington State University Extension program. He installed the Native Plant garden at the Demonstration Garden at the Mid-Columbia Library on Union Street in Kennewick.

Bob is a retired chemical engineer. He spent the last 25 years of his career working in the pulp and paper industry for Weyerhaeuser in Washington and Oregon. He earned a B.S. degree from Purdue University.

Traci Degerman, park designⁱ

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Traci is a plant ecologist, restoration planner, landscape designer and owner of “Ecosystem Aesthetics LLC”. She worked for the National Park Service at Mount Rainier in the park’s ecological restoration program in 2005-2006, and served as a restoration planner in 2007 for the park’s flood recovery effort. Prior to that, she assisted with botanical and ichthyological research at Battelle, PNNL, and performed botanical field surveys for the U.S. Forest Service in the Wenatchee National Forest, Naches Ranger District. She has received multiple service awards from Battelle and the National Park Service.

Traci has an M.S. degree in Landscape Architecture and a B.S. in Biological Sciences from Washington State University. Her affiliations include the Society for Ecological Restoration International, the Washington Native Plant Society and The Nature Conservancy.

ⁱ Note: Park design is under development and will be included in the next revision of this document.