

# Framework for the John Day Basin Joint Interpretive Strategy



October 2016



## ABSTRACT

### ***Framework for the John Day Basin Joint Interpretive Strategy***

The John Day Basin is home to outstanding natural, cultural and recreational resources, set in a region of stunning scenic beauty, ecological diversity and a *globally significant* 50-million-year fossil record. The Basin tells an unfolding story of paleontology and provides unique opportunities to interpret the history of Native Americans and early Euro-American and Chinese settlers. There are current Basin stories, as well, including the environmental restoration of streams, forests and rangeland.

A variety of interpretive venues in and near the John Day Basin offer learning experiences for visitors. Some, such as the three units of the John Day Fossil Beds National Monument, attract hundreds of thousands of visitors each year, while other less prominent venues draw smaller numbers.

An initial partnership has been formed among several state and federal agencies and non-profit interpretive organizations active in and near the Basin to explore the unrealized potential for education, tourism and economic benefits to local communities. The goal of the John Day Basin Joint Interpretive Strategy is to enhance educational and marketing benefits for all partners by combining today's interpretive offerings with new ones, to tell a more complete, more compelling story of the Basin's unique natural and cultural legacy. It also would provide opportunities for diverse groups to share perspectives in a non-political, non-advocacy setting.

This Joint Strategy Framework proposes overarching interpretive storylines for the region; describes current program offerings; and suggests new, near-term and longer-term joint initiatives that could be implemented over time. Subsequent work will address K-12 programs for telling the Basin story. The potential for future shared use of the Oregon Paleo Lands Center in Fossil, Oregon, also is explored.

The Interpretive Strategy Framework points to great opportunities to engage larger numbers of visitors in more fully understanding and caring about the past, present and future of Oregon's deep history, as well as that of the wider world. Formidable challenges exist as well – the region's remoteness, distance between sites and lack of lodging and visitor amenities – but they can be met with commitment from all partners. Solutions are proposed to help meet challenges, along with methods for measuring outcomes.





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## Framework for the John Day Basin Joint Interpretive Strategy

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### I. Introduction

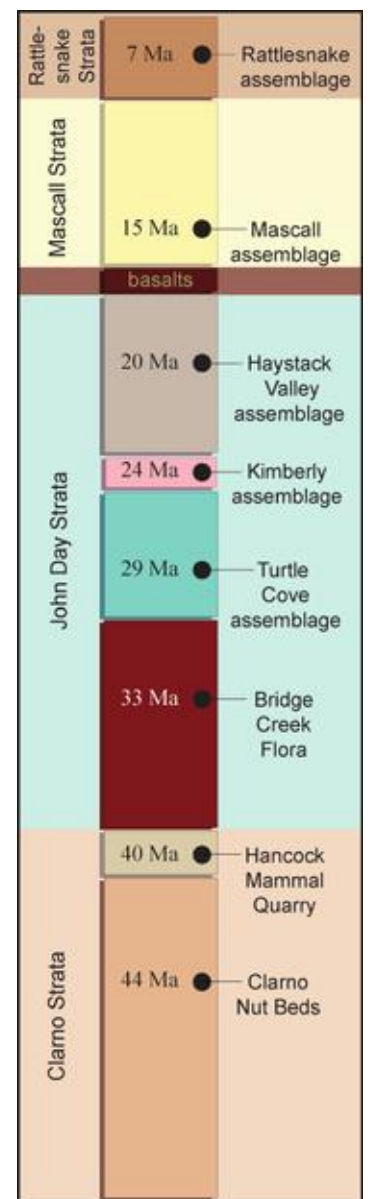
The John Day Basin is home to outstanding natural, cultural and recreational resources, set in a region of stunning scenic beauty. Without doubt, the Basin is *globally significant* for its paleontological record, giving witness to over 50 million years of climatic upheaval and its effect on habitat, species development and extinction. Few other regions in the world preserve such a diverse record, spanning such a long time interval with “dateable” volcanic tuffs during significant periods of the Earth’s geologic history. The fossil record also provides hints about where Oregon’s ecosystems might be headed in a warmer world, providing opportunities to link the past to pressing modern concerns.

Fossils found in the John Day region were described initially by the internationally acclaimed Oregon paleontologist Thomas Condon, and many others since then have added to the story. Ongoing research at the John Day Fossil Beds National Monument and elsewhere continues to make new discoveries.

There are diverse opportunities to interpret the roles of Native Americans in the John Day landscape over time, as well as early Euro-American and Chinese settlers and their roles in ranching, mining and forestry. Management of natural resources and efforts to restore and enhance the Basin’s environment are ongoing challenges.

Opportunities for outdoor recreation – hiking, camping, rafting, fishing, star gazing, bird watching, photography, riding the new Painted Hills and Old West Scenic Bikeways – abound. There also are state and federal parks and forests to explore. The region includes a variety of museums and parks that interpret natural and cultural history.

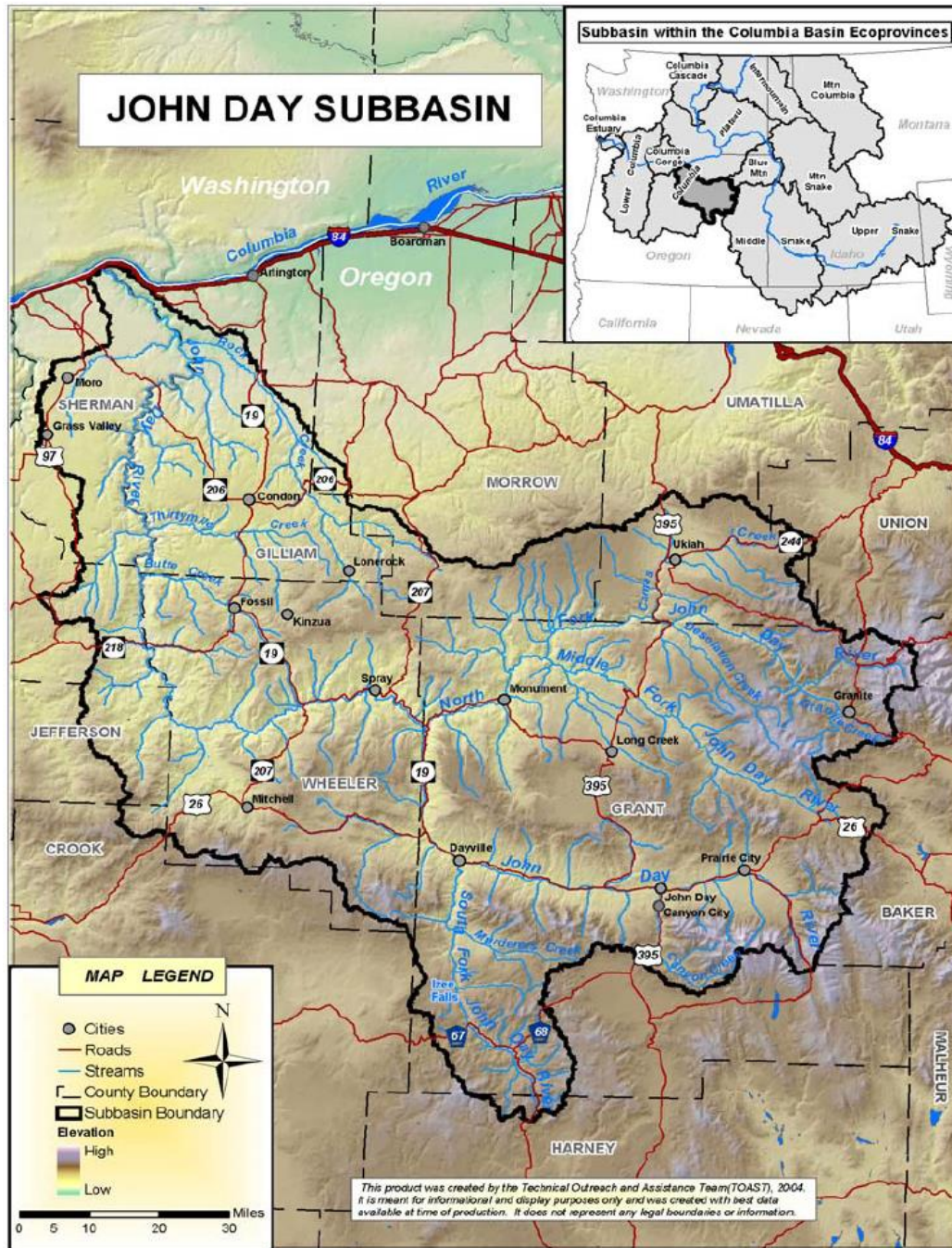
Some of the interpretive venues in and near the John Day Basin attract substantial numbers of visitors. For example, the John Day Fossil Beds National Monument, recently included in Travel Oregon’s “Seven Wonders” tourism campaign, now draws almost 200,000 visitors yearly. This rapid increase in short-term visitors poses challenges for the National Park Service and local governments as their budgets have not increased to serve larger numbers of visitors. The High Desert



**Timeline showing major rock strata and fossil groups in the John Day Fossil Beds National Monument (“Ma” stands for “million years ago”)**



Museum in Bend also attracts large numbers (over 160,000/year), as do state parks in the area. Other less prominent venues do not attract large numbers, and struggle as a result. Their remoteness, distance between sites and a dearth of tourism infrastructure – such as lodging – fuel stops, and internet access – greatly limit overnight/multi-site visits and the potential economic benefits of tourism to local communities.



Northwest Power and Conservation Council, 2004



## **Project Background**

In 2015, the Oregon Paleo Lands Institute (OPLI), Fossil, Oregon, launched a “Partner Project” supported by the Oregon Community Foundation and Meyer Trust. The goal was to “develop a formal partnership with selected partners to share, operate and enhance the Oregon Paleo Lands Center as an active regional . . . natural history and visitor information center” about the John Day region. This Partner Project eventually led to the concept of a Joint Interpretive Strategy for the John Day Basin that would “boost education and marketing benefits for all Joint Strategy partners”. Joint Strategy objectives were identified as:

- Develop a common interpretive strategy for the Basin that combines, shares and enhances existing and new partner efforts to tell the full story of the Basin’s unique natural and cultural history, and
- Provide a richer and more integrated visitor experience within and about the John Day Basin for the public and schools at all partner venues.

As an addendum, the Joint Strategy scope of work called for description of a conceptual “Shared Framework for future operations and programs at the Oregon Paleo Lands Center in Fossil, Oregon, using shared interpretive themes, educational programs, exhibits, visitor and marketing services and other resources”. The resulting Framework for a John Day Basin Joint Interpretive Strategy envisions that the Paleo Center in Fossil would provide staff and other support for coordinating Joint Strategy activities and programs among the multiple partners.

## **Initial Partnership**

In early 2016, an initial partnership formed to begin work on the Joint Interpretive Strategy. A facilitator (Barney & Worth, Inc.) was hired to help identify common approaches to interpretative strategies, marketing and program opportunities that leverage the respective resources of partner organizations. These early collaborators included:

- Confederated Tribes of Warm Springs/The Museum at Warm Springs, Warm Springs, Oregon
- University of Oregon Museum of Natural and Cultural History (MNCH), Eugene, Oregon
- High Desert Museum (HDM), Bend, Oregon
- Oregon Parks and Recreation Department (State Parks), Salem, Oregon
- National Park Service/John Day Fossil Beds National Monument (NPS), Kimberly, Oregon
- Oregon Paleo Lands Institute (OPLI), Fossil, Oregon

These partners – some public agencies, some non-profits – have a range of related missions: public education about the fossil record, geology, natural history and/or



early settler history; interpretation of Native American culture, history and arts; research and curatorial services; wildlife, fish and plant management and viewing; stream habitat restoration; camping and outdoor recreation. All agencies and organizations have current programs in K-12 education and an interest in expanding/improving those offerings.

Other prospective partners will be recruited as the Joint Strategy Framework is further developed and implemented. For example, *The Bureau of Land Management* (BLM) manages just under half a million acres in the John Day Basin, while three *National Forests* – Malheur, Umatilla, Ochoco and Wallowa-Whitman (totaling over 5 million acres primarily in Eastern Oregon) manage portions of the Basin, including wilderness areas. These agencies play major roles in resource management and recreational opportunities in the John Day Basin. The *U.S. Geological Survey*; *Oregon Dept. of Geology and Mineral Industries*; *Oregon Museum of Science and Industry*; *Oregon Dept. of Transportation*; *Travel Oregon*, *John Day River Territory*; *local counties*; *educational agencies including Eastern Oregon University*, *additional Native American tribes* (including the Burns-Paiute and Umatilla Tribes), and other organizations with similar interests all are desirable partners and will be invited to join. Long term goals could include developing relationships with institutions that have significant collections derived from the John Day Basin, including Yale University and UC Berkeley. *Both BLM and the Oregon Museum of Science and Industry (OMSI) already have expressed interest in potential partnership and participated in developing the final Joint Strategy Framework.*

Partners believe successful implementation of the Joint Strategy will deliver both intangible, but real, benefits in public perception of active interest in John Day Basin attractions and resources, along with specific, measurable positive impacts at partner venues and neighboring communities.

#### **Strategy Statement**

*The John Day Basin Joint Interpretive Strategy will enhance and focus current and future interpretive efforts to tell a more complete, compelling story of the Basin's unique paleontological, natural and cultural history, and link it to modern concerns such as climate change, loss of habitat and human effects on the environment.*



## II. John Day Basin Storylines

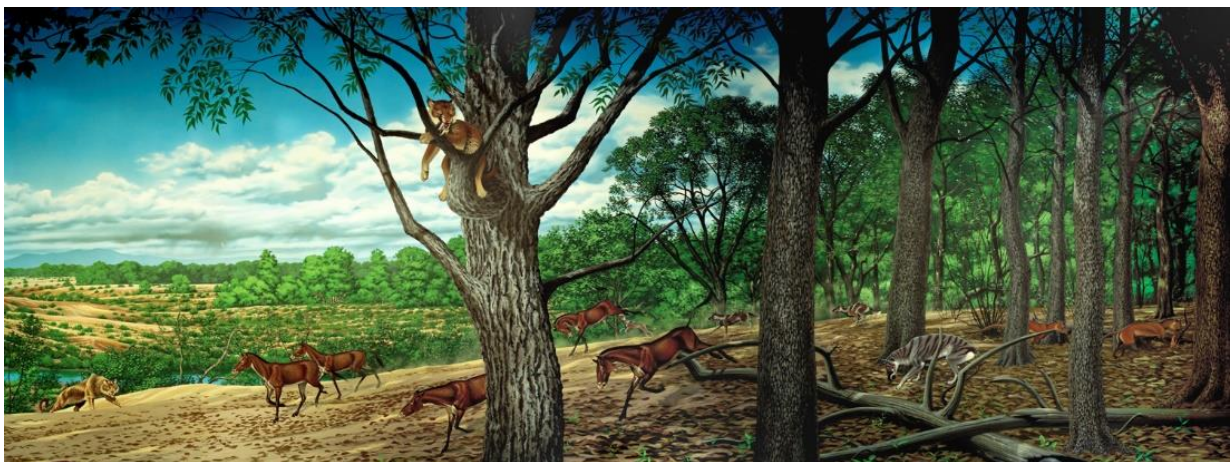
The foundation of an interpretive strategy is an overarching story and related storylines that connect the resources to be interpreted in a unified, compelling manner. While not really a “brand”, the overarching story of the Joint Interpretive Strategy should serve a similar purpose: narrow the focus for marketing purposes; point to what sets the John Day Basin apart; project a unique, appealing image, etc. The overarching story shouldn’t attempt to be comprehensive, but be relevant to Basin resources and to the interpretive themes of partner organizations.

- Overarching Story: *The Story of Horses*

“*The Story of Horses*” (see addendum) offers outstanding potential as the overarching theme linking the Basin’s natural and cultural interpretive resources. The John Day Basin – called the “cradle of horses” – has the world’s most complete fossil records of horse evolution. This story encompasses key natural history themes: species introduction and development; spread to other continents and local extinction; links to related flora and fauna, and intervals of dramatic climate change.

The horse also is central to the region’s cultural history – the horse’s reintroduction to its native lands by explorers and colonists, and its importance to Native Americans, early ranchers, miners, buckaroos and military troops, as well as to modern working ranches and rodeos in Eastern Oregon today. The horse is a beloved, “iconic” animal very much present in the modern John Day landscape, including herds of wild mustangs and feral horses on public, private and tribal lands.

*The Story of Horses* could be utilized at various John Day Basin venues in different ways to resonate with members of the public, including K-12 students.



**Mural depicting three-toed horses (Miohippus) being pursued by ancient canids and other predators (Thomas Condon Paleontology Center)**

- Other Storylines

“*The Story of Horses*” sheds a unifying light on a host of other storylines for interpreting John Day Basin resources, and is compatible with “Journey through Time” Scenic Byway signage.

**Priority storylines include:**

1. *Linking Past, Present and Future* through the lens of the John Day fossil record:

What can we learn that will give us wisdom for the future? Prepare us for change?

*The effects of major climate and habitat change* on species and ecosystems; what will Oregon’s ecosystems look like in a warmer world?

*Human effects on the environment*, the rate of change and implications for biodiversity (e.g., speciation took millions of years; extinctions are sudden)

- ✓ *Ancient flora and fauna* associated with the *evolution of horses*
  - ✓ Opportunities to explore worlds of plants and animals that no longer exist. How do these ancient species relate to plants and animals on the landscape today? Current biota and landforms can be viewed as a thin veneer overlying a preserved deep ancestry of all life
  - ✓ *Ancient marine life* in the John Day Basin (e.g., the misnamed “saber-tooth salmon”; enormous, sea-dwelling reptiles, etc.)
  - ✓ “*Ancient and Living Arboretum*”: a side-by-side look at plants in the John Day country today compared with their ancestors 30-40 million years ago (locations include Painted Hills Unit picnic area; Wheeler County Courthouse/Paleo Center grounds in Fossil; and, sites near the Bridge Creek Flora deposit)
  - ✓ “*The Story of Dogs*”, another well-developed John Day Basin fossil record that parallels horse evolution
2. *The geology of the John Day Basin* and how it helped preserve the fossil record
    - ✓ *Oregon volcanoes* then and now
    - ✓ *Thomas Condon and the history of paleontology* (discoveries across 8,000 square miles in the Basin and beyond)

3. *Ancient and modern John Day Basin landscapes* and how humans have shaped what we see today

- ✓ *Chinese presence in the American West*
- ✓ *Native Americans, Euro-American settlers, discovery of gold/mining in the Basin*
- ✓ *The Dalles Military Road and 19<sup>th</sup> Century military camps*
- ✓ *Early and current logging and mill towns*
- ✓ *Sheep and cattle ranching*
- ✓ *Environmental damage and restoration of stream, range and forest habitat*
- ✓ *Natural resources management*
- ✓ *“Ghost Towns of Eastern Oregon” (a human story of origin, change and extinction)*
- ✓ *Public land management and its relationship to local communities/economies*



**Exhibit illustrating Native American “wild harvest” practices (The Museum at Warm Springs)**

4. *Science in action: “How do we know what we know?” “What are we still learning?”*

5. *Story of the John Day River* (origins, geomorphology, human use, value to region and the Northwest)

- ✓ *Third longest, undammed river in the contiguous U.S. with no fish hatcheries; diversions screened to keep fish in river*
- ✓ *One of world’s best producers of wild salmon; “salmon stronghold” for Columbia Basin and North Pacific watersheds*
- ✓ *Hundreds of miles of state/federal protections for wildness and scenery*
- ✓ *Watershed and riparian restoration*
- ✓ *Water management for fisheries and agriculture (conflicts; cooperation)*

The John Day Basin has many venues and programs that interpret these storylines today, as well as ample opportunities to enhance current offerings with new or combined efforts.



### III. Assessment

#### **Sites, Facilities and Programs where Key Themes and Stories are Interpreted for Visitors**

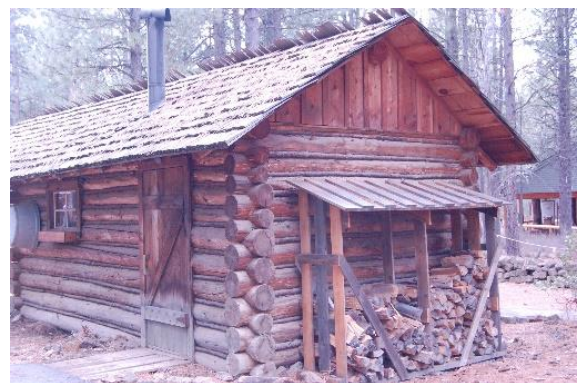
*The NPS is the leader in interpreting the John Day Basin fossil record and current science in action, providing interpretation at the Clarno, Sheep Rock and Painted Hills Units of the National Monument. Monument programs and exhibits also interpret ranching history and current cultural/natural resources in the Basin. On-site interpretation includes films, K-12 learning experiences, educational programs for the general public, exhibits, trails, brochures, one-on-one explanations, etc. There also is an “Ancient Arboretum” at the Painted Hills Unit, featuring living relatives of fossilized tree species.*

Different audiences and different messages require different approaches. Interpretive centers currently exist at both Painted Hills and Sheep Rock, and NPS is building a new ranger station at the Clarno Unit. Interpretation reaches remote audiences via social media, podcasts and the web. One very successful K-12 teaching tool used by the NPS is fossil kits, including horse fossil kits. These are loaned to schools with lesson plans included.

*The University of Oregon MNCH has a recent exhibit in which some of these same storylines are presented (e.g., the evolution of horses and dogs, as well as the story of paleontological research in the John Day Basin and methods of exploration). The MNCH also has statewide educational outreach programs, where senior staff (archaeologists, paleontologists and educators) give presentations around the state about John Day Basin and other Oregon natural and cultural history.*

*HDM interprets a variety of themes at its site near Bend, including Oregon natural and cultural history, Native American culture and history, and natural resources management. This venue offers opportunities for bird and wildlife viewing, and works with BLM to interpret the current story of wild horses at its 1904 “living history” ranch. HDM also partners with several groups in the region on K-12 programs and field trips addressing natural history topics.*

*State Parks offers geologic, ecological and cultural interpretive displays and programs at Cottonwood Canyon State Park (lower John Day River heritage and ranching), as well as mining history and the Chinese presence in the American*



**Cabin at 1904 Miller Family Ranch (High Desert Museum)**



West at Kam Wah Chung. Euro-American settler history is the focus at Bates (company town and logging), while Clyde Holliday State Park features river and natural history.

*The Museum at Warm Springs interprets Native American history and culture* focusing on the Confederated Tribes of Warm Springs. The Warm Springs tribes also are leaders in important stream habitat and forest restoration work that could be part of the Joint Interpretive Strategy.

*The Oregon Paleo Lands Center (OPLC) in Fossil features the mid-Basin's natural and cultural history.* The Center, built in 2009, has an extensive bookstore and visitor information, an exhibit on Oregon high desert geology and links to interpretive services and speakers for local and visiting schools and other groups. OPLC features a one-half size scale replica of a 100-million-year old Plesiosaur marine reptile, one of Oregon's few dinosaur era fossils, found near Mitchell. Fossil's long time attraction is the public fossil collecting bed at Wheeler High School, where visitors can dig leaf fossils from the Bridge Creek Flora, including Oregon's State Fossil, the metasequoia "Dawn Redwood". The Fossil Museum features mining, ranching and timber era history, and the "tale of two cities" – Fossil and its lost twin Kinzua, a timber company town (1927 – 78).



**Interior exhibit hall, The Museum at Warm Springs**

## **Prescriptions**

Many options are available for interpreting resources in the John Day Basin, almost all of them employed by one or more partners in the Joint Interpretive Strategy. Partners were asked to identify interpretive media best suited to convey meaning and significance as part of a combined, Basin-wide interpretive effort, while encouraging multi-site visits.

### **1. Interpretive Media Best Suited for Joint Interpretive Strategy**

- *Self-guided and strategically scheduled field/venue presentations* (considering staff limitations, cost and remote locations)
- *Regional orientation panels* placed at strategic venues that could guide visitors to sites within the Basin

- *Traveling exhibits* and videos
- *Integrated toolkits* for the Basin including web, print, interactive and video tools
- Cell phone/laptop/tablet *Wi-Fi hotspot network* that allows visitors and students to access toolkits at key visitor destinations in the Basin, staffed or unstaffed
- Static exhibits are suitable, but limited. A *portable “heritage” road log or interpretive guide* in print and application formats, both analog and digital, would be an excellent new tool. Given the sparse cell phone coverage and radio reception at present, the printed road guide and an application that could be downloaded at Wi-Fi hotspots would have the most bang for the buck in the short term.
- *Distance learning programs*

## 2. Seasonal Considerations

Partners indicate that some interpretive programs are better suited for certain seasons of the year than others, given weather and other considerations.

- Traveling exhibits, K-12 programs, lectures/presentations, field trips, curated, supervised digs, are all possible year-round.
- Spring and fall weather is conducive to active group travel, field-based storytelling, special events or activities, and cycle or auto tours. It is well suited to ornithology, botany (wildflowers and shrubs), fish and wildlife viewing, studies of insects, butterflies and dragonflies, habitat/ range restoration projects and lower elevation archaeology and natural sciences. Spring is the best time for floating the main stem and North Fork of the John Day River.
- Summer can be pleasant or prohibitively hot, suitable for visits inside museum spaces, coupled with early morning/late afternoon hikes and field trips or studies of edible plants and ethnobotany. Higher elevation activities including forestry, archaeology and natural science interpretation are appropriate for summer programs.
- Winter can be a good time for programmatic focus on wildlife and astronomy.

## All Partners Have Resources to Share in a Joint Interpretive Strategy

All partners have resources and expertise that could contribute to effective implementation of a joint, Basin-wide interpretive strategy:

*The following resources are identified by partners as potentially available for sharing:*

- Staff expertise in exhibit design, program development and interpretation
- Curators of western history; natural history; wildlife and living history
- Curators of education; expertise in developing/implementing programs for K-12 students, teachers and schools
- Traveling exhibit programs; museum collections that help tell the story
- Participation in speaker/activity exchange program
- Assistance with joint promotions and marketing
- Help facilitating inter-related projects, functions and activities
- Logistics
- An annual (?) Horse Special Event at Cottonwood Canyon State Park and/or other venues where the many facets of the “Overarching Story” could be presented
- On-line film on paleontology
- Publicly available resources such as horse and general fossil kits with teacher packets for schools (*NOTE: Users are asked that these resources not be modified in any way that might inadvertently change meaning or content*).
- Future development of dog fossil kit for school use
- Interpretation of Native American history and culture focusing on Warm Springs tribes
- Interpretation of stream and habitat restoration
- Production of high quality casts of fossils by one or more UO Graduate Teaching Fellows, for cost of materials and personal services
- Curators, researchers and expert speakers with knowledge of geology, paleontology, archaeology and history of the region
- Paleontological and archeological collections available for loan/display
- Ongoing paleontological research in the Basin



**Natural history lecture (on rattlesnakes!) for visitors at High Desert Museum**

- Access to graduate/undergraduate programs in geology, history, anthropology, education and museum studies with potential for collaborative internships

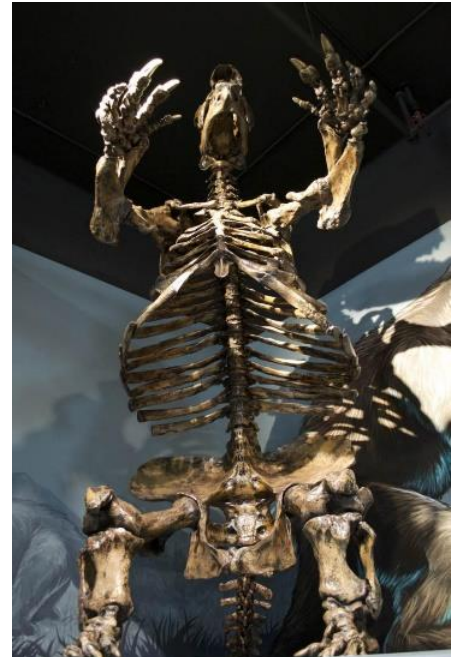
### Constraints that Could Prevent or Discourage Sharing

Staff limitations and insufficient funding affect Joint Strategy participation by all partners to some degree. *But this could be mitigated by an infusion of outside funds.* Other questions, including how to *ensure quality, accuracy, and consistency with diverse organizational missions, avoid program duplication and protect fossils and other field specimens, could be addressed by developing appropriate implementation protocols.*

Following adoption of a final Joint Strategy, ***protocols will be developed to ensure quality/accuracy of interpretive messages/ programs and consistency with organizational missions; to protect field specimens; and, to prevent unnecessary duplication. Protocols also will ensure that visitors understand the distinct roles/missions of partner organizations, and are not confused by joint efforts and shared resources.*** There also are regional/local considerations to be addressed such as distances between sites, lack of internet service and inadequate visitor infrastructure.

Specific factors cited by partners include:

- Staff is often “at capacity” in partner institutions and has other organizational priorities.
- Existing funding is inadequate, given the challenges.
- Distances between venues make joint activities (and visitor/student travel) difficult.
- Joint strategy projects must be consistent with/advance the organizational missions of partner institutions and be complementary, not duplicative.
- NPS must adhere to its federally mandated mission to protect paleontological resources and maintain scientific integrity. It prefers to use its own expertise to interpret the fossil record on Monument lands in the Basin. Also, it needs to be inclusive in its approach, and can’t be perceived as interpreting the history of one Native American tribe over another, the interests of one university over



Harlan's ground sloth, one of Oregon's giant ice Age mammals (Oregon Museum of Natural and Cultural History)

another, etc.

- Control of quality, interpretive messages and outcomes could be compromised when partner organizations are delivering collaboratively developed programs.
- Any fossil or archaeological dig open to the public would need to address how collected fossils and artifacts would be conserved and curated, along with concerns about public distribution of sensitive information regarding the location of field specimens.
- Questions about different program delivery mechanisms need to be addressed – some venues may offer the same collaboratively developed program for free, while others may charge admission.
- Joint Strategy programs should avoid taking or implying positions on controversial issues outside the interpretive storylines, including government management of wild mustangs and range lands in the West.
- The partnership should be expanded: U.S. Forest Service, USGS, Oregon Dept. of Geology and Minerals, BLM, OMSI, John Day River Territory, additional Native American Tribes, and several other organizations are candidates for recruitment by initial partners.
- OPLI needs additional staff and resources to fully support a Joint Interpretive Strategy and shared programming in the John Day Basin.
- Partners have varied in their level of commitment to prior joint efforts. For example, there have been past delays in plans and commitments to share OPLC facilities.

#### IV. Challenges and Solutions

Beyond organizational constraints that affect each partner differently, challenges related to remoteness, sparsely populated rural towns and lack of tourism infrastructure in the John Day Basin need to be met for a regional interpretive strategy to be effective. These challenges can be met, but the effort will require partner commitment and an expansion of the partnership:

1. Key Challenges to Developing and Implementing the John Day Basin Joint Interpretive Strategy
  - *Inadequate visitor infrastructure*, especially lodging, for multi-day/multi-site trips
  - *Inadequate housing* for staff and workers
  - Uncertainty about *where visitors can get gas or eat*





- *Lack of cell/ internet service*
- *Insufficient funding/staffing* for Basin-wide coordination of interpretive programs
- Perception of *remoteness*
- *Distances and navigation* between sites
- *Difficult geography* for city dwellers
- *Perception* of dying towns/region (e.g., recent article on Fossil in *The Atlantic*)

## 2. Solutions to Best Meet Challenges

- State and federal government assistance in developing additional lodging and other amenities for multi-day visitors in the Basin
- Housing for National Monument and other workers/staff at John Day Basin interpretive venues.
- Improved cell/internet service
- Funding for additional staffing and programs
- Distance learning capability (*partner with Eastern Oregon, other university or Education Service District networks*)
- Federal/state/private funding for major lodge near National Monument
- Additional partners willing to provide support, including universities and state/federal agencies willing to share staff and program expertise
- Clear mutual plan/timeline for shared facilities, exhibits, programs
- New (OPLI?) staff resources and leadership to develop, coordinate and implement Joint Interpretive Strategy over a 3-year period, including shared/traveling programs and exhibits and coordination of marketing efforts



**Thomas Condon Paleontology Center, John Day Fossil Beds National Monument**



## V. Implementation

*Implementation of the Joint Strategy Framework will begin immediately, focused on partnership structure and organizational priorities:*

- Staffing and funding for joint programs/coordination (OPLI ?)
- Recruiting additional partners
- Finalizing partnership structure

<b><u>Priorities</u></b>	<b><u>Staffing/Lead</u></b>	<b><u>Funding</u></b>
<i>Organizational</i>		
• Obtain resources for Interpretive Program Coordinator position (IPC)	OPLI, partners (OPLI supervise IPC; partners oversee work plan)	\$80-100 k/yr. for 3 yrs  1 FTE/ provide shared program support
• Recruit additional partners	Partners	
• Decide/finalize partnership structure	Partners, with PARC Resources	
• Develop protocols for quality, etc.	Partners, with PARC Resources	
• Develop sustainable business plan for future	Partners, with PARC Resources	

*As partnership structure and organizational issues are resolved, partners will choose programs for implementation. The following menu of potential Joint Strategy programs has been proposed:*

### Potential Program Menu

- Programs to help visitors understand the relationship between the extinct horses revealed in the Basin fossil record to those living in the region today:
  - ✓ Field trips (self-guided/strategically scheduled) to Basin sites where horse themes can be interpreted
  - ✓ Lectures at partner institutions
  - ✓ Traveling exhibit on “the horse” for display at partner venues
  - ✓ Publications/brochures/website information on horse evolution
  - ✓ Focus of a student thesis or dissertation
- Planned itineraries for “The Story of Horses” allowing visitors to experience all aspects of the story: early origins to extinction; return to North America; use by Native Americans and early pioneers; modern Eastern Oregon ranching, recreation (rodeo?) and range conservation practices, and wild mustangs
- Guest speakers/resource sharing among partner organizations
- K-12, multi-site field trips accompanied by experts
- Scenic Byways and Bikeways Learning Guides (develop jointly with John Day River Territory and Travel Oregon, similar to those produced in other Oregon regions)
- Wi-Fi hotspots at key destinations
- Linked partner websites to help market all John Day Basin interpretive sites and programs, consistent with organizational policies
- Access to an online library of each partner’s interpretive plans and programs
- Traveling exhibits telling entire story of the John Day Basin, with various venues focusing on selected parts of the story. Encourage movement/visits to other venues.
- Regional orientation panels in strategic locations
- Interpretive road guide for visitors featuring all venues and resources within the John Day Basin

### Potential Program Menu *(continued)*

- K-12 curriculum and field trips focusing on “horse” theme for students and teachers
- Possible inclusion of John Day River Watershed Restoration Strategy (led by Warm Springs tribes and other partners) in the Joint Interpretive Strategy
- Integrated, interpretive toolkit (web/print/interactive)
- Distance learning programs provided by the National Monument
- Additional federal, state, county, private campgrounds, lodging and housing nearer the Monument to support growing tourism and workforce
- Funding and construction of major lodge near Painted Hills unit on Hwy. 26 (public/private partnership)
- Educational archaeological digs in the Basin supervised by university or agency experts, modeled after USFS Malheur National Forest “Passports in Time” digs. *(Protocols would be developed to protect sensitive information.)*
- Curated fossil research sites open to the public at locations in the Basin (public or private lands) – modeled after Ichthyosaur State Park, Nevada
- Network of three natural history centers/state Environmental Literacy Plan “hub” close to major units of the Monument, with coordinated programs
- Formation of John Day Basin Learning Consortium to support a Basin, Range and Forest Literacy Initiative for all age groups. Use John Day Associates of the 1920s as a model, reaching out to schools, visitors, rural residents and landowners. Additional partner organizations could include OWEB, Soil and Water Districts, Dept. of Forestry, OSU and others. Topics could include stream and habitat restoration
- Federally designated “Ancient Oregon” interpretive trail (similar to proposed Ice Age Flood Interpretive Trail) to connect Portland, Eugene and Bend to Basin venues

Emphasis will be placed on coordination of existing programs and new interpretive efforts selected by Joint Strategy partners, building in sufficient time for cross-



training between venues, as needed, and “shadowing” experts at key Basin facilities (e.g., use of fossil horse kits by National Monument staff).

## **VI. Measuring Outcomes**

After implementation, Joint Interpretive Strategy outcomes should be monitored and adjustments made as necessary to correct problems and improve delivery. This will require development of survey instruments for use by all partner organizations and visitors to John Day Basin Interpretive sites.

### Proposed measurements include:

- Existing interpretive plans and experience leveraged to benefit all Partners in the John Day Basin Joint Interpretive Strategy, without blurring distinct organizational roles/missions
- Interpretive themes developed telling the story of the John Day Basin as a whole
- Increased number of school visits, outdoor learning experiences and other K-12 programs at each venue
- Increased number of adult learning groups/visits at each venue
- Increased numbers of collaborative programs/shared staff and other resources create education and marketing benefits for all partners
- Student/teacher/ visitor surveys conducted at each venue demonstrate learning/grasp of interpretive themes and concepts
- Additional organizations join the John Day Basin Partnership
- Improved funding potential for John Day Basin projects
- Enhanced regional economic benefits
- Intangible, positive public perception of interest in/attention to the John Day Basin

## **VII. Conclusion**

The John Day Basin has phenomenal, globally significant interpretive resources. There is unrealized potential to attract and engage growing numbers of visitors in more fully understanding and caring about our world’s past, present and future.

The John Day Basin Joint Interpretive Strategy points to exciting opportunities for developing this potential, but formidable challenges exist as well. These challenges – inadequate lodging, in particular—greatly limit the economic benefits of tourism to the region. With commitment from all partners, this and other challenges can be successfully met.



## ***Addenda***

### **A. The Story of Horses: Oregon Origins, Extinction, and Return of the Natives**

#### **Interpretive Concept for the Oregon Paleo Lands Institute DRAFT 8-7-15 Revision**

Oregon's John Day Fossil Beds could be called the cradle of horses. Its rocks hold the world's most complete fossil record of horses. The horse evolved in North America over 50 million years, expanded to other continents, and went extinct in its native territory around 10,000 years ago. Then, in cooperation with humans, the horse returned to its native American lands, to become an important part of both Euro- American and Native American cultures.

The Story of Horses will become a primary interpretive theme for the Oregon Paleo Lands Center in Fossil, together with a unique set of educational exhibits, programs, and activities. The Oregon Paleo Lands Center and participating partners will cooperate to tell the complete story, from 50 million years ago to this year's rodeo.

Throughout the Cenozoic era, the geography of North America favored the evolution of a variety of far-ranging browsers. Consider the grasslands and plains that extend centrally from the Arctic to the Caribbean without interruption and the variety of seasonal influences over that large area. As new forms of lush grasses evolved during this time and spread everywhere, conditions were ripe for expanding ecologic niches for new foraging species. The John Day area, because of its unique geology, provided ideal conditions for preserving parts of this record. Accordingly, the evolution of horse species and genera is better preserved here than anywhere else on the planet.

Telling the Story of Horses, with a focus on their ancient central Oregon homelands, promotes broad public understanding and appreciation of horses as a special Oregon and American heritage. The Story of Horses will be an authentic tribute to this remarkable animal, by bringing together its origins, human-horse history, and modern horse culture. This is a great story. Oregon is uniquely positioned geologically and historically to tell it.

#### **Potential Interpretive Elements**

##### **1. Interpretive Elements of the Horse Story can include:**

- Cenozoic evolution of the horse in Oregon and North America. Potential to use molds or casts of the Yale material (acquired from Thomas Condon 140 years ago) to enlarge the display.
- Migration of the horse over a land bridge to Eurasia in the Pleistocene.
- Extinction of the horse in North America owing to natural factors but also Clovis activity (hunting). There were 50 species of horse in the Cenozoic, 8 species in the US as late as 10,000 years ago, and none 8,000 years ago. Horses especially flourished in the mid Tertiary owing to the evolution of high plains grasses, a product of climate change, and a development no doubt recorded in the soils of the John Day fossil beds.
- Productive use of the horse in Eurasia, owing to preconditioning of cultures to the use of animals for societal benefit. The horse was a gift of evolution from the new world to the old world owing to the Bering Land Bridge or Bridges. The use of the horse in Eurasia began about 4,000 BC in the Ukraine area and thereafter served all civilizations. It was the basis of homogenization of cultures and spreading of discoveries through the activities of Mongols, Huns, Egyptians, Chinese, Moors, Marco Polo, and so forth.
- Return of the horse to North America
- Re-introduction by explorers, colonists (a development that greatly influenced the opening of the west). Horses from Native Americans made possible the return of Lewis and Clark.
- Value to Native Americans, ranching and agricultural settlement, transportation, military.

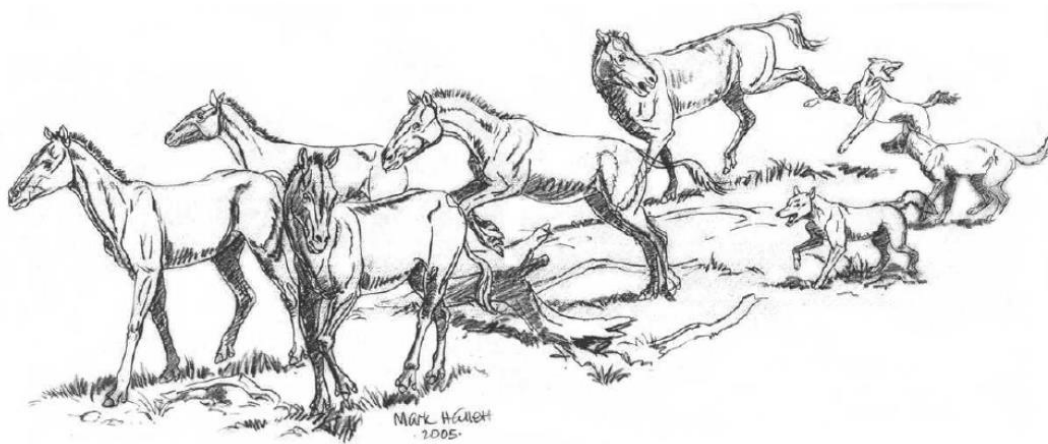
- Horses in contemporary North American culture (domestic and wild)

**2. Potential Joint Horse Story Project:** The Paleo Lands Center, University of Oregon Museum and other partners. With Condon Collection fossils and a horse display now part of the UO museum's public offerings, it is timely to wrap the whole story into one saga, of benefit to participating institutions through cooperation, since each holds a part of this larger story. UO Collections can be merged with field locations in the John Day Basin, which the Paleo Center and other partners can coordinate.

**3. Partner programs, exhibits, publications, brochures and web site information**

Concept from John Beaulieu, past Oregon State Geologist, U of O Museum Advisory Council  
Attachment: Horse History Links

A behavioral sketch for mural of a herd of *Miohippus* being shadowed by borophagine canids. The equid delivering a kick to the canid is suggested by the traumatized skull of JODA 3366, on display in the TCPC. Mark Hallett illustration.



Source: Thomas Condon Paleontology Center



## **Horse History Links**

**The Story of the Horse: How its unique role in human culture transformed history**

<http://www.archaeology.org/issues/180-1507/features/3345-the-horse-through-history>

**Wild Horses an American Romance, Nebraska Public Broadcasting**

<http://netnebraska.org/basic-page/television/wild-horses-american-romance>

<http://netnebraska.org/basic-page/television/wild-horses-evolution-timeline>

**Horse, American Museum of Natural History**

<http://www.amnh.org/exhibitions/past-exhibitions/horse>

**Buckaroo, The Hispanic Heritage of the High Desert, Western Folklife Center, High Desert Museum**

<https://www.westernfolklife.org/Past-Exhibitions/buckaroo-the-hispanic-heritage-of-the-high-desert.html>

**The Horse and the Plateau Indians**

<http://nativeamericannetroots.net/diary/1846>

**Horses Trade and Travel (NW Tribes)**

<http://trailtribes.org/umatilla/horses-trade-and-travel.htm>

**Wild at Heart, A brief history of the horse in America**

<http://www.canadiangeographic.ca/magazine/ma05/indepth/>

**Paleo Lab, Horses and Grasslands**

<http://natural-history.uoregon.edu/exhibits/paleolab-horses-and-grasslands>

## **B. K-12 Programs in the Basin**

Educational programs for K-12 students and teachers are a key component of the Joint Interpretive Strategy. All partner organizations offer on-site instruction, field trips, curricula, school programs, publications and/or hands-on activities that serve the K-12 community.

### **1. Meeting criteria of the Oregon Environmental Literacy Plan**

Several partner organizations, including State Parks, HDM and the NPS, have extensive experience developing K-12 educational programs that meet both state curriculum standards and the specific criteria of the Oregon Environmental Literacy Plan. As time allows, these partners have the expertise to help develop or advise on existing and new Joint Strategy-related programs that may qualify for funding under the Plan.

The state Plan envisions creating hubs and coordinators to help regions (watersheds, counties or Education Districts) “organize themselves around resources to ensure that Plan activities are locally accessible”. To date, there are no designated Environmental Literacy hubs serving the Basin.

Providing venues for outdoor, placed-based, inquiry-driven educational experiences and teacher training is at the heart of the Environmental Literacy Plan. The legislation implementing the Plan emphasizes understanding climate change and healthy lifestyles, goals that are consistent with Basin interpretive themes.

Once the Joint Strategy is developed, representatives of partner organizations with K-12 expertise could provide an internal critique of how the strategy aligns with criteria of the Environmental Literacy Plan (see summary of content/educator/program requirements and alignment with Oregon academic standards, especially pp. 5- 8 and 16 -31 of the Plan).



**Student in Mid-Basin outdoor learning environment**

### **2. Joint Strategy Themes, Programs and Other Considerations for Educator Focus Groups**

*Proposed Joint Strategy storylines and programs will be discussed in K-12 educator focus groups conducted in the Basin in Fall, 2016. The following questions may be posed:*

- Which K-12 groups currently use the John Day Basin as an outdoor classroom? How do they arrange learning materials, transportation, logistics, multi-site visits, and tour/speaker coordination? What constraints affect K-12 use of the area?
- How could Joint Strategy partners better coordinate efforts to assist K-12 education activities?
- Would educators find it useful for partners to jointly post, publish and distribute an annual directory of K-12 education opportunities available in the Basin?
- Do proposed Joint Interpretive Strategy programs and curricula fit educators' needs? How could these be improved?
- Do proposed themes and curricula meet schools' standards and priorities?
- How likely are educators to use these programs? Are there sufficient funds?
- What are the barriers to using these programs/curricula?
- How comfortable/knowledgeable are educators+ about concepts proposed by the Joint Strategy? How could comfort levels be improved?
- Are there resources currently used or field trips taken that address concepts proposed in the Joint Strategy? Or, would these be new resources?

A near-term Joint Interpretive Strategy implementation step could include sending a letter to all schools informing them of interpretive opportunities available throughout the Basin: prehistory; Native American and early Euro-American history; geology; natural resources, etc., possibly involving multi-venue visits.

### **C. Proposed Shared Framework for the Oregon Paleo Lands Center**

*The Oregon Paleo Lands Center in Fossil has offered use of its building and grounds to Joint Strategy partners interested in presenting interpretive programs in the mid-Basin region. While the Center in Fossil needs additional staff to fully realize its mission and goals, additional resources would enable it to play an important coordinating role in support of Joint Interpretive Strategy implementation.*

#### **Oregon Paleo Lands Institute Mission**

The OPLI works with the Gateway Communities of the John Day Fossil Beds National Monument (Condon, Antelope, Fossil, Service Creek, Spray, Mitchell, Kimberly, Dayville and Monument) to build social and economic vitality through efforts:

- To conserve and promote the region's ancient and living landscapes, including the Earth's most complete record of the Age of Mammals (past 65 million years)
- To develop and connect with partners, the region's visitor services, recreational services and natural history education opportunities *in support of* Eastern Oregon's top destination (the John Day Fossil Beds National Monument)
- To welcome visitors and area residents at the Oregon Paleo Lands Center



**Oregon Paleo Lands Center in Fossil, Oregon**

#### **Partner Project**

Oregon Paleo Lands Institute initiated a Partner Project in 2015, which led to the John Day Basin Joint Interpretive Strategy effort. The purpose of the Partner Project, in part, is to:

***“Develop a formal partnership with selected partners to share, operate and enhance the Oregon Paleo Lands Center as an active regional hub for natural history education and visitor information about the John Day Fossil Beds area.”***

OPLI's Mission and vision is to serve visitors and schools, build natural history education opportunities, and tell a story connecting ancient and living landscapes to benefit a region in dire need of economic revitalization. Since 2014, OPLI's expert speakers program has served local and visiting schools with presentations on local history, geology, birds, landscape art, forests and wildlife opportunities include:

- The OPLC can do a much better job of serving mid-Basin communities, partner organizations and area visitors, using a collaborative, creative approach to its future programs, operations and use.
- Created in 2009 by County, Federal, State, foundation, donor and community stakeholders, the OPLC is an underused public asset. It was intended, under its 2005 Oregon Solutions Agreement, to enhance visitor support, educational experiences and longer stays in Gateway communities. The Oregon Solutions Agreement proposed better coordination of educational programs among the many public agencies working in these communities. The new Joint Strategy project follows the 2005 Agreement's intent, with the related goal of creating working partnerships to better use the OPLC and to create a Basin-wide Interpretive Strategy.
- OPLC, with its modest facility and focus on Gateway communities, could become one of several regional natural history "hubs" as articulated by the state Environmental Literacy Program.

*OPLI plans to revamp the OPLC with high-quality, professionally staffed, collaborative programs.* OPLC cannot continue to operate as a stand-alone facility with limited services, and no current development program or interpretive plan/programs. As a shared resource among several partners, it can become one of several complementary education "hubs" in the Basin. The OPLC, as a shared facility, would complement and supplement programs by its partners, *not* duplicate programs that are better presented in different venues or led by others.

*OPLI would like to see the Paleo Lands Center play a robust role in the Joint Interpretive Strategy, enhancing educational and marketing opportunities for all John Day partners.* The OPLI Board is open to new modes of operation that may be needed to turn the OPLC into an attractive shared facility, such as changing the non-profit mission to become a "Friends" group of another organization.

- Professional staffing
  - ✓ In concert with partner staff, new OPLI professional staff could coordinate programs for a regional Basin-wide interpretive strategy, for a Fossil-Clarno sub-area strategy, and for the Fossil Heritage Site and OPLC makeover.
- Fossil Heritage Site
  - ✓ The OPLC and its programs could assist the Fossil School District to support and interpret public fossil collection beds at Wheeler High School. OPLC also could facilitate potential curated fossil research and learning sites on nearby private, county or state lands.
  - ✓ OPLC could partner with Fossil School District and others to jointly market and interpret the Wheeler High Fossil Beds and other known cultural and natural resource sites in Fossil.

- ✓ The Heritage Site could include the Fossil Museum that holds extensive Basin photo archives and exhibits on Fossil area and Kinzua/lower John Day Basin mill history.
- Future Development of Integrated Fossil/Clarno Sub-area interpretive strategy
  - ✓ Upland and highland ecoregions; transition from the Columbia Plateau to Blue Mts.
  - ✓ Improved interpretation of fossil beds in City of Fossil
  - ✓ Three-part Fossil Heritage Site(s) (Paleo Lands Center; Fossil Museum; fossil beds in City of Fossil)
  - ✓ John Day River and environmental restoration at Pine Creek
  - ✓ History of Native and Euro-American settlement in the region
  - ✓ Development of ranching and timber mills
- OPLC makeover
  - ✓ Interpret region and sub-region holistically, while taking a new focus on the story of horses, other familiar fossil fauna and the living relatives of fossil trees; history of mid-Basin communities and industries; current plants and wildlife of the Basin, and climate change.
  - ✓ Serve as visitor orientation and information center for mid-Basin.
- Ancient Oregon Arboretum on Courthouse and Center grounds for living relatives of Bridge Creek flora (complementing existing Arboretum at Painted Hills)
- Paleo Sculpture Garden on the Center grounds or town tour of paleo creatures (charismatic fauna) found in the Basin (e.g., smilodon; terminator pigs; bear dogs; horses; hippos; camels, etc.)
- With other partners, market availability of three Wheeler County Campgrounds near Fossil: Fairgrounds; Bear Hollow; Shelton Wayside

The OPLC could become an important spoke in the Joint Strategy wheel, both physically and conceptually, creating collaborative programs and products that enhance, not duplicate, the regional interpretive mission and attract visitors to something unique and different. With appropriate agreements, funding and in kind contributions of partner time, expertise and materials, *OPLC also could take the lead in coordinating the sharing of partner exhibits, speakers, publications and programs; linking partner websites and keeping an online library of partner resources and programs up to date; developing education kits and the Basin heritage road guide; planning multi-site visits for visitors and schools groups; planning and implementing regional signage; organizing joint fundraising efforts for new opportunities – in short, serving as a clearinghouse for collaborative efforts.*

Senator Wyden's office also proposed to OPLI and University of Oregon in 2013 that



the Paleo Center in Fossil could become an “outpost” for programs, publications, exhibits, research and activities of the MNCH in the Basin. This same concept could apply to the High Desert Museum and other potential partners not located in the Basin (e.g., DOGAMI).

State Parks has offered to help OPLC with logistics, traveling interpretive exhibits, speakers, Park Hosts and interns. Parks also would help facilitate related projects, functions and activities.

The National Monument’s three units and state-of-the-art paleontological center already serve as the primary hub for cultural and natural history education in the Basin, attracting visitors from across the U.S. and the world. NPS could participate in special events in Fossil as time and money allow, but on-going/ long-term sharing of resources would spread resources too thin.



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