

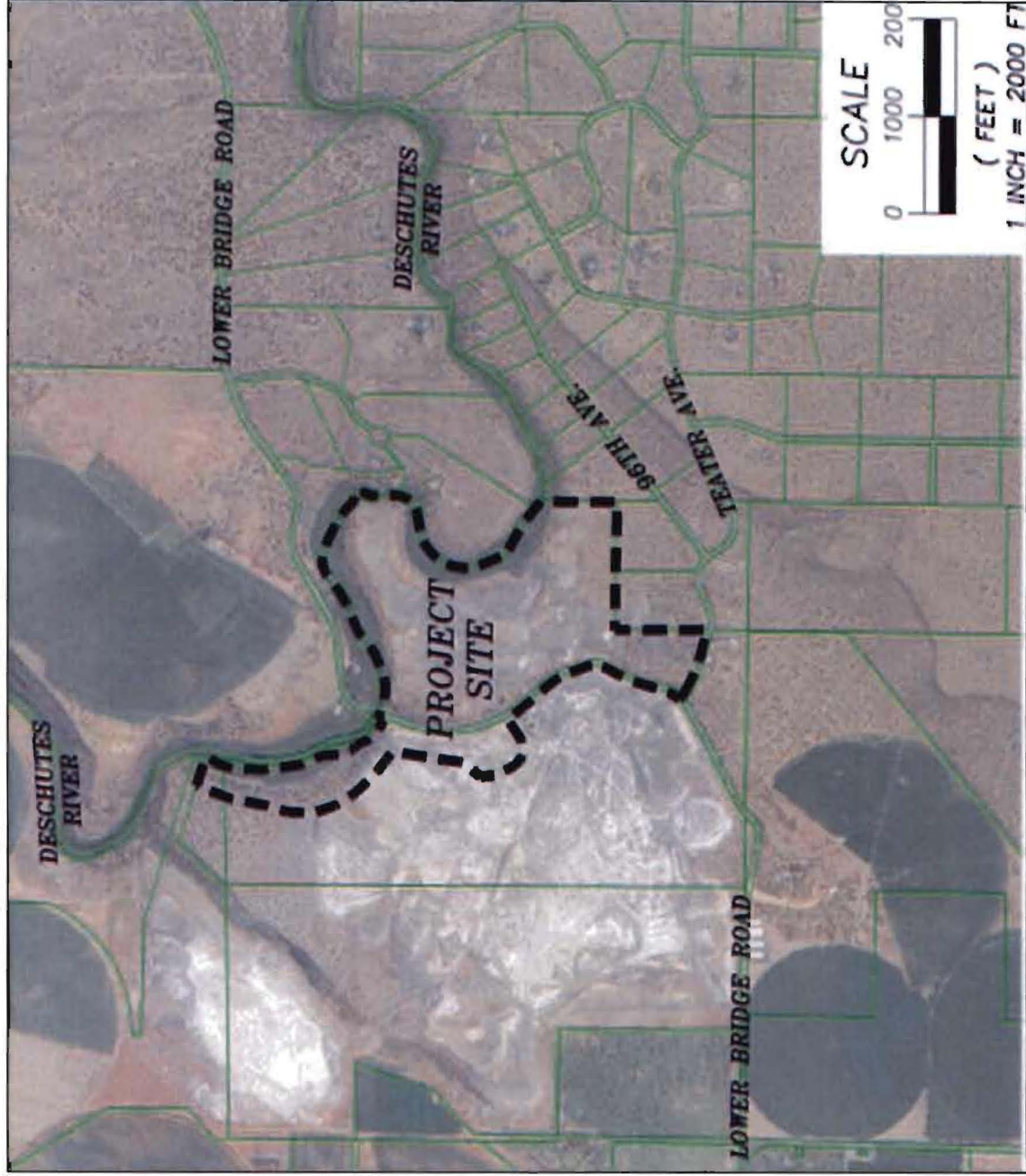
Lower Bridge Planned Development

Presented by: Lower Bridge, LLC



Bend, OR | Eugene, OR | Portland, OR | Salem, OR | Seattle, WA | Vancouver, WA | Washington D.C.

Project Site



2008 Concept Plan



SUBDIVISION

JOHN TO SUGGE

Intro

exit disc

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
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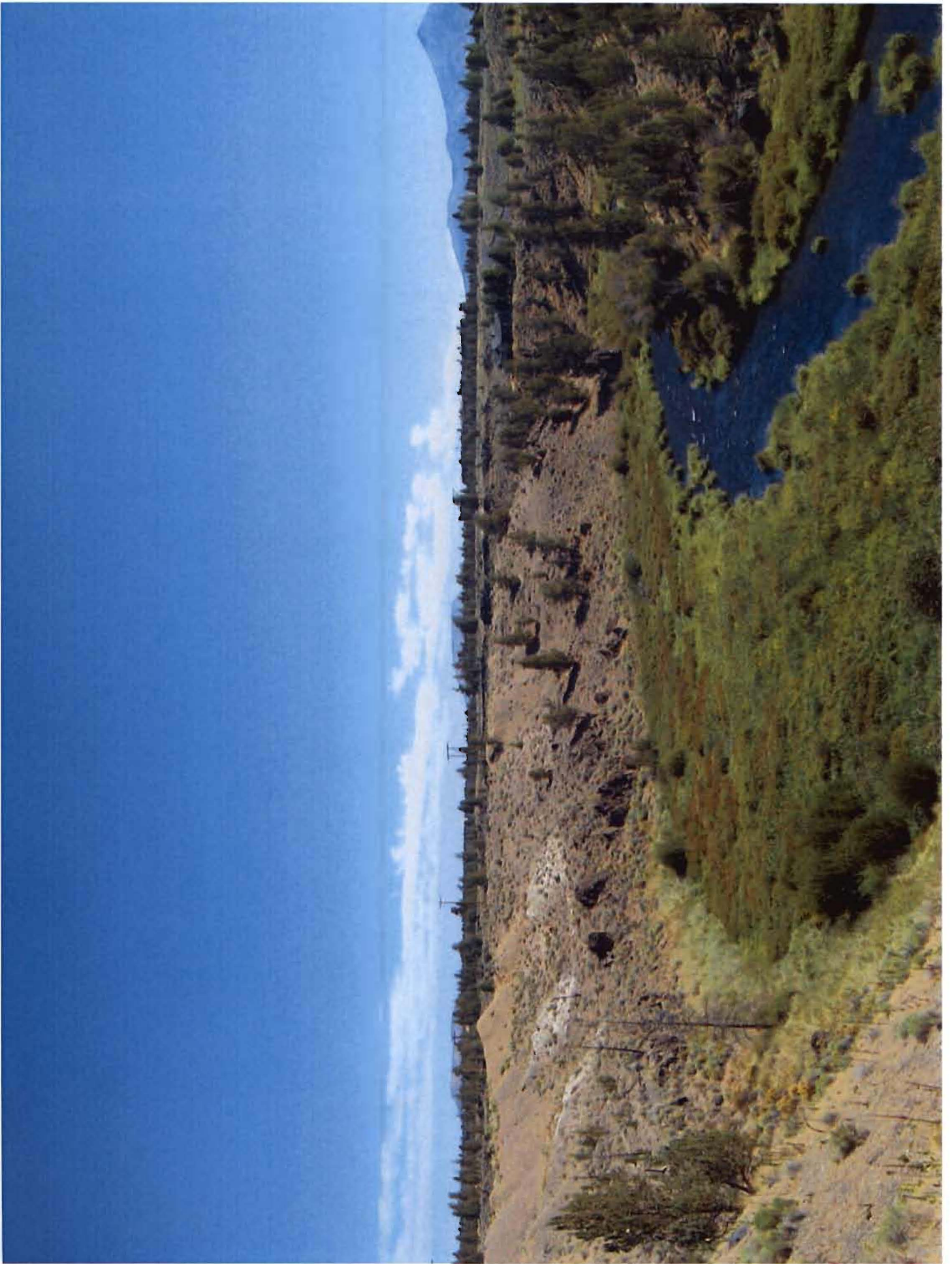
3 Issues:

- 1) Split Zoning
 - a) EFU
 - b) Flood Plain
- 2) Rimrock Setback
- 3) Environmental / Suitability for Residential Use

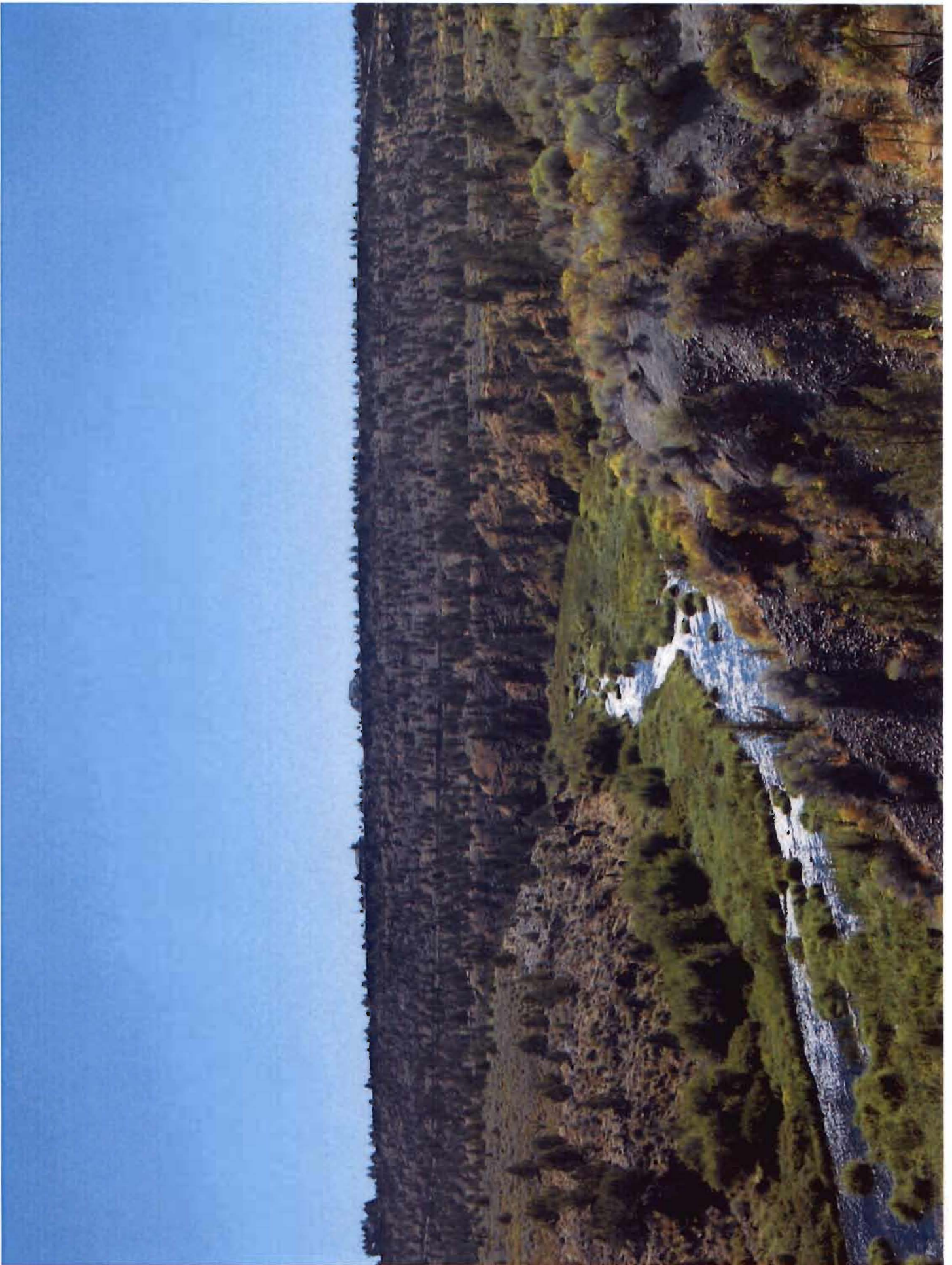
Split Zoning

1

[illegible]







Chapter 18.96. FLOOD PLAIN ZONE – FP

18.96.20. Designated Areas

The areas of special flood hazard identified by the Federal Insurance Administration in a scientific and engineering report entitled “Flood Insurance Study for Deschutes County, Oregon and Incorporated Areas” revised September 28, 2007, with accompanying Flood Insurance Rate Maps is hereby adopted by reference and incorporated herein by this reference. The Flood Insurance Study is on file at the Deschutes County Community Development Department. **The Flood Plain Zone shall include all areas designated as “Special Flood Hazard Areas” by the Flood Insurance Study** for Deschutes County. When base flood elevation data has not been provided in the Flood Insurance Study, the Planning Director will obtain, review and reasonably utilize any base flood elevation or floodway data available from federal, state or other sources, in determining the location of a flood plain or floodway.

FLOOD INSURANCE STUDY



DESCHUTES COUNTY, OREGON AND INCORPORATED AREAS



COMMUNITY NAME

BEND, CITY OF
LA PINE, CITY OF
DESCHUTES COUNTY
UNINCORPORATED AREAS
*REDMOND, CITY OF
SISTERS CITY OF

COMMUNITY NUMBER

410056
410057
410055
410055
410058

* NON-FLOOD PRONE

REVISED
SEPTEMBER 28, 2007



Federal Emergency Management Agency
Flood Insurance Study Number
41017CV000A

2.0 AREA STUDIED

2.1 Scope of Study

This FIS covers the geographic area of Deschutes County, Oregon, including the incorporated communities listed in Section 1.1. The following streams were studied by detailed methods and were selected with priority given to all known flood hazard areas and areas of projected development or proposed construction through July 1990:

1. Deschutes River in four separate reaches (25.27 miles)
 - a. Vicinity of Tumalo, River Mile (RM) 156 to 158 (2 miles)
 - b. Vicinity of Bend, RM 162 to 169.5 (7.5 miles)
 - c. Vicinity of Sunriver, RM 185.57 to 195.24 (9.67 miles)
 - d. Vicinity of D.R. Recreational Homesites, RM 201 to 207.1 (6.1 miles)
2. Little Deschutes River (45.2 miles)

From its confluence with Deschutes River to the Klamath County line.
3. Whychus Creek (18.6 miles)

From the Jefferson County Line upstream to the USGS stream gage at RM 26.6.

Portions of some of the above-mentioned reaches lie within the corporate limits of Bend and Sisters.

6.0 FLOOD INSURANCE RATE MAP

The FIRM is designed for flood insurance and floodplain management applications.

For flood insurance applications, the map designates flood insurance rate zones as described in Section 5.0 and, in the 1-percent-annual-chance floodplains that were studied by detailed methods, shows selected whole-foot base flood elevations or average depths. Insurance agents use the zones and base flood elevations in conjunction with information on structures and their contents to assign premium rates for flood insurance policies.

For floodplain management applications, the map shows by tints, screens, and symbols the 1- and 0.2-percent-annual-chance floodplains, floodways, and the locations of selected cross sections used in the hydraulic analyses and floodway computations.

The countywide FIRM presents flooding information for the entire geographic area of Deschutes County. Previously, FIRMs were prepared for each incorporated community and the unincorporated areas of the County identified as flood-prone. This countywide FIRM also includes flood-hazard information that was presented separately on Flood Boundary and Floodway Maps (FBFMs), where applicable. Historical data relating to the maps prepared for each community are presented in Table 5, "Community Map History."

FIRM Map

LEGEND

SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V and VE. The Base Flood Elevation is the water surface elevation of the 1% annual chance flood.

ZONE A No Base Flood Elevations determined.

ZONE AE Base Flood Elevations determined.

ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE AR Areas of special hazard formerly protected from the 1% annual chance flood event by a flood control system that was subsequently derelict. Zone AR indicates that the former flood control system is being retained to provide protection from the 1% annual chance of greater flood event.

ZONE A99 Areas to be protected from 1% annual chance flood event by a federal flood protection system under construction; no Base Flood Elevations determined.

ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

ZONE VE Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

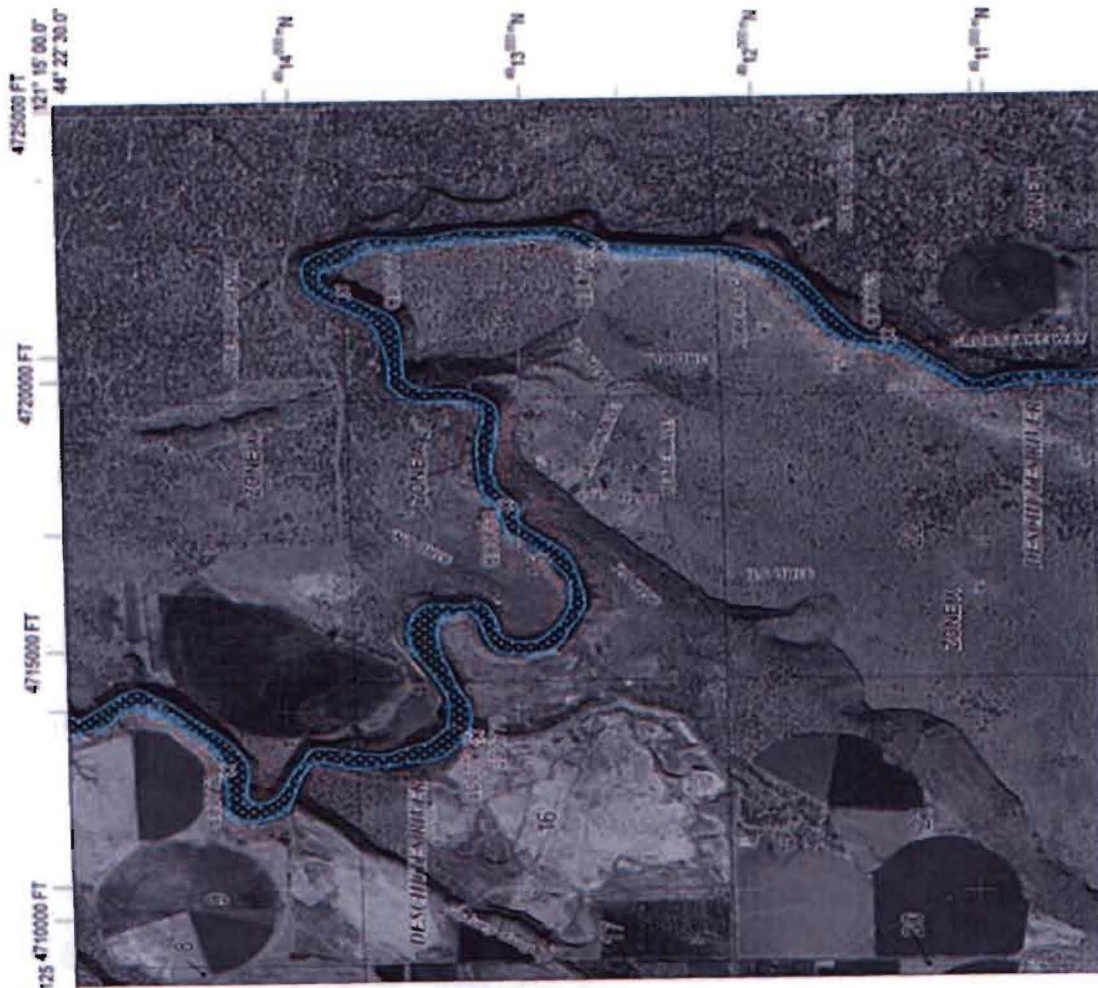
ZONE X Areas determined to be outside the 0.2% annual chance floodplain.

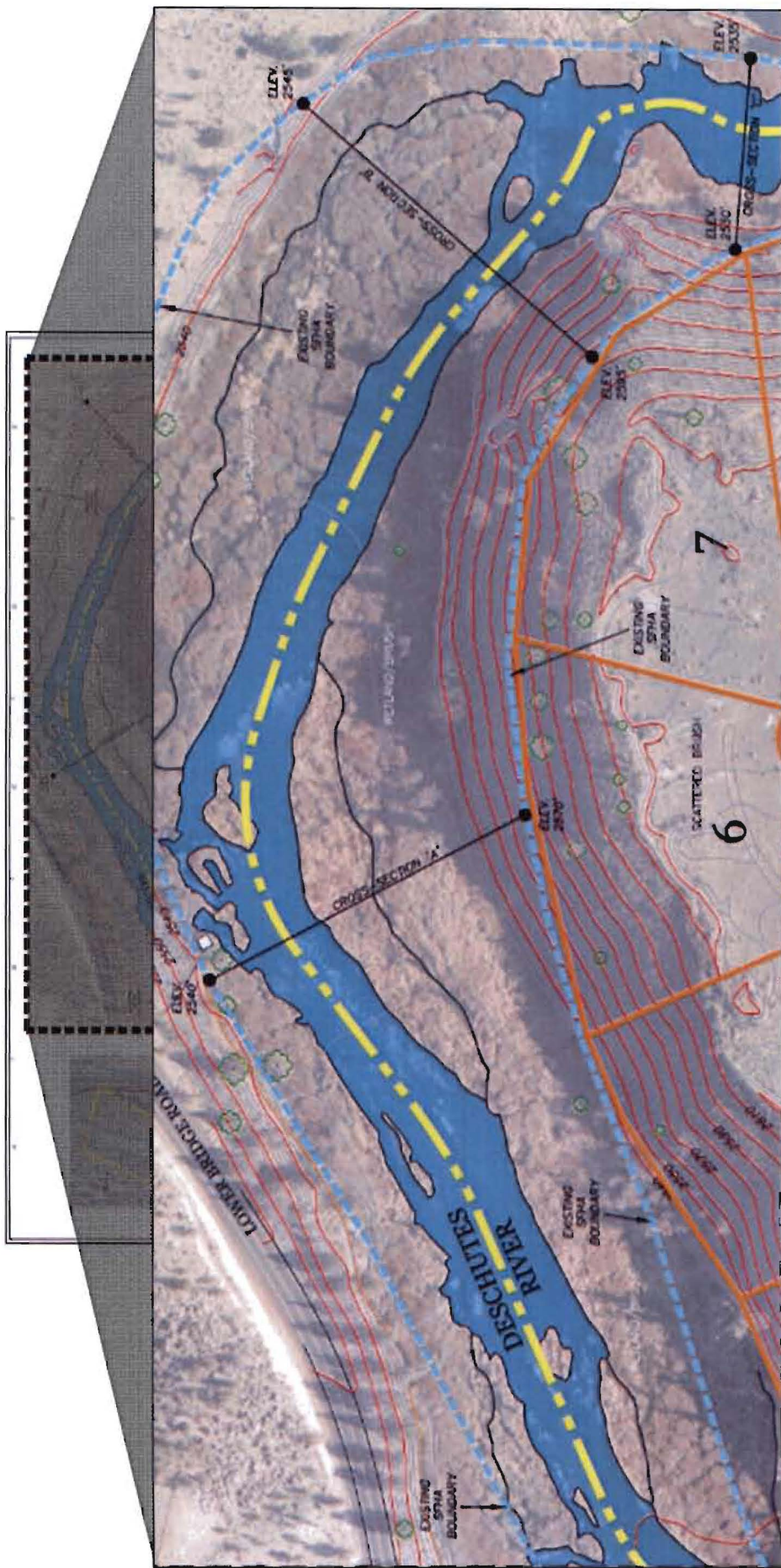
ZONE D Areas in which flood hazards are undetermined, but possible.

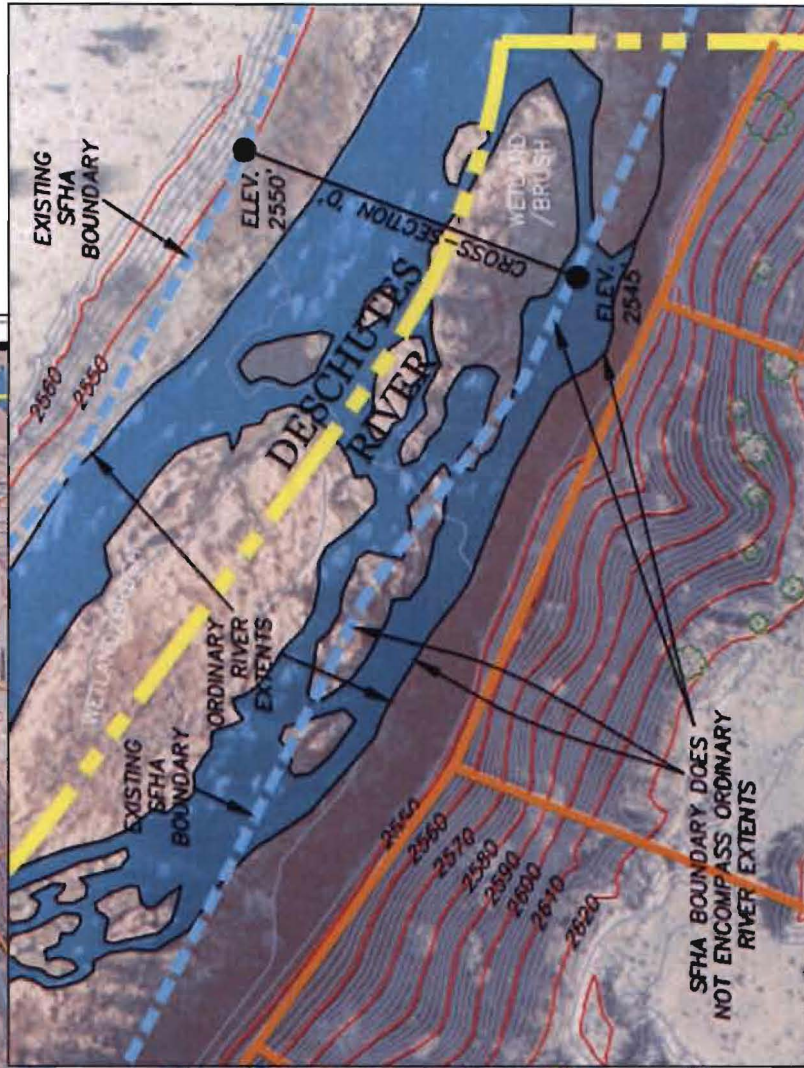
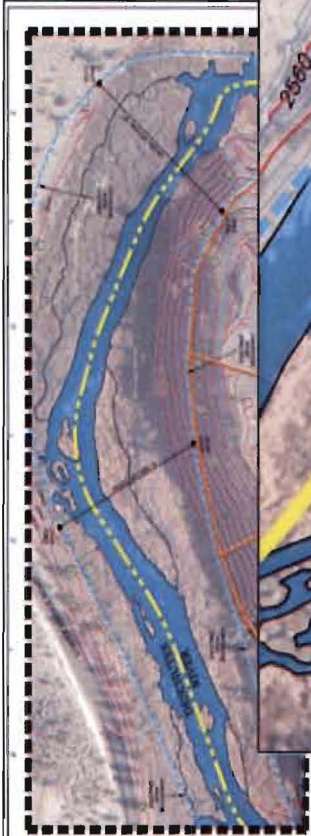
COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.







- LEGEND**
- EXISTING SFHA BOUNDARY
 - ORDINARY RIVER EXTENTS
 - WETLAND / BRUSH
 - CROSS-SECTION 'D'
 - DESCHUTES RIVER
 - ELEV. 2550'
 - ELEV. 2545'
 - 2560 2550 2540 2530 2520 2510 2500

- NOTES**
1. ALL ELEVATIONS ARE IN FEET UNLESS OTHERWISE NOTED.
 2. THE SFHA BOUNDARY DOES NOT ENCOMPASS THE ORDINARY RIVER EXTENTS.
 3. THE WETLAND / BRUSH AREAS ARE SHOWN FOR INFORMATION ONLY.
 4. THE CROSS-SECTION 'D' IS SHOWN FOR INFORMATION ONLY.

SCALE: 1" = 100'

LOWER BRIDGE ROAD LLC
LOWER BRIDGE PLANNED DEVELOPMENT
EXHIBIT OF DESCHUTES COUNTY FLOOD PLAIN ZONE

DATE: 10/1/2010
BY: [Signature]
CHECKED BY: [Signature]
APPROVED BY: [Signature]

DESCHUTES COUNTY ENGINEERING & SURVEYING, INC.
1000 N. 1ST AVE., SUITE 100
COVINGTON, NE 68423
PHONE: (402) 835-1111
FAX: (402) 835-1112
WWW.DESCHUTESCOUNTYENGINEERING.COM

PROJECT: LOWER BRIDGE ROAD LLC
SHEET: EX-3

Chapter 18.96. FLOOD PLAIN ZONE – FP

18.96.130. Interpretation of FIRM Boundaries

The Planning Director shall make interpretations where needed, as to exact location of the boundaries of the areas of special flood hazards (for example, where there appears to be a conflict between a mapped boundary and actual field conditions). Such interpretations shall be processed as a development action pursuant to Chapter 22.16.

MANAGING FLOODPLAIN DEVELOPMENT

IN

APPROXIMATE ZONE A AREAS

A GUIDE FOR OBTAINING AND DEVELOPING
BASE (100-YEAR) FLOOD ELEVATIONS

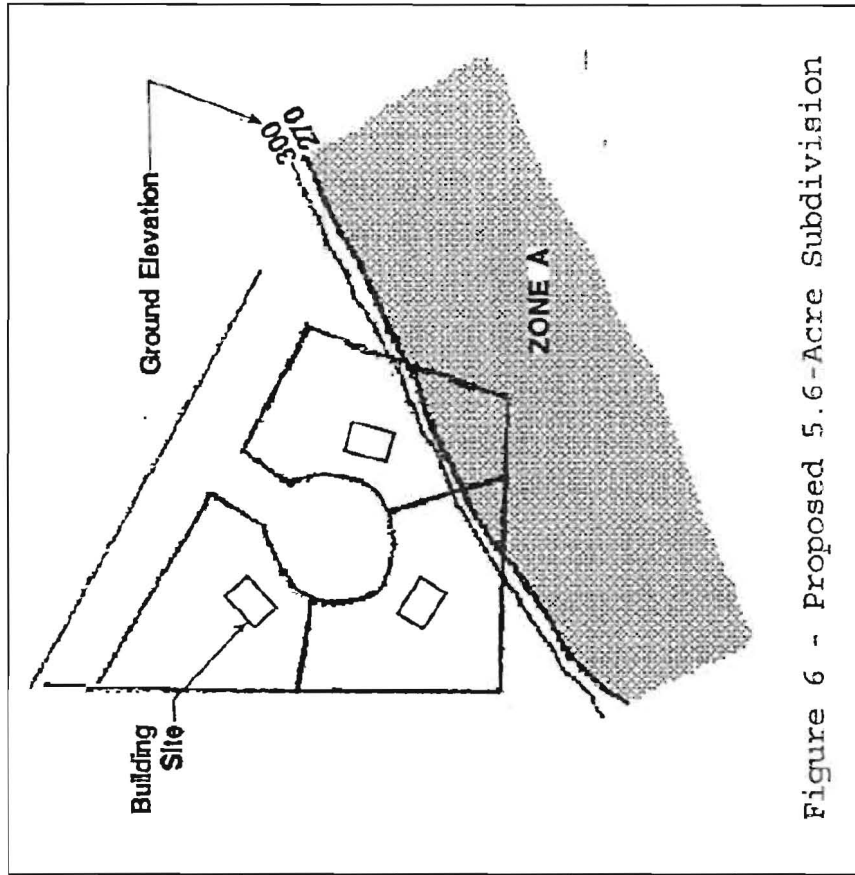
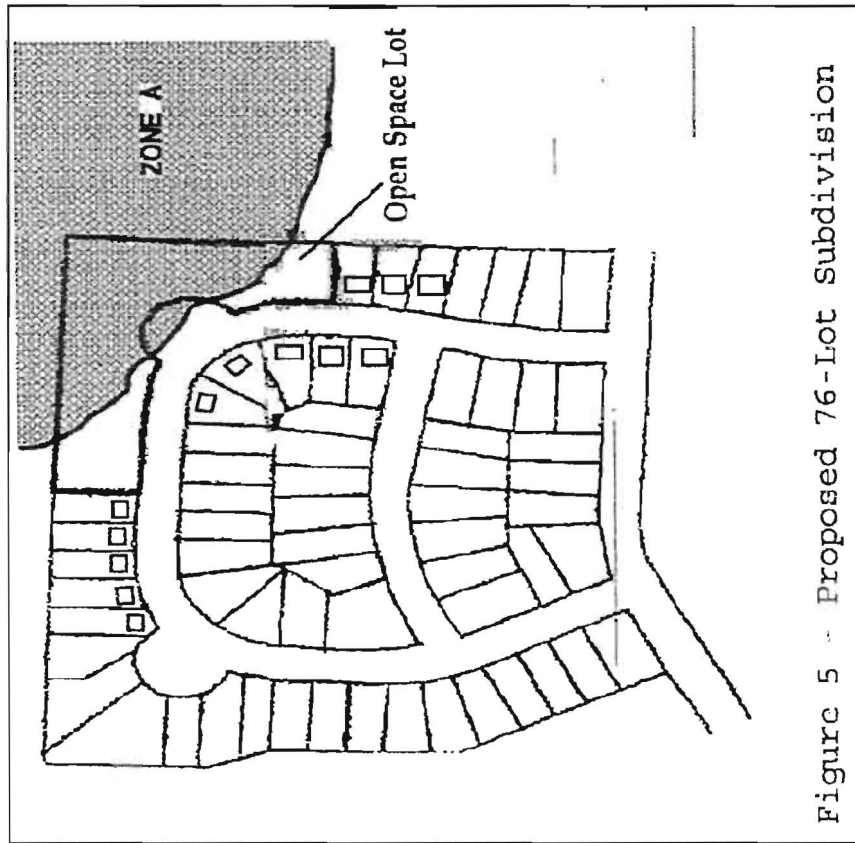
APRIL 1995

Requirements for Developing BFE Data

Communities are encouraged to address the flood hazards at the earliest stages of subdivision planning rather than at the actual placement of individual structures. If a community can work with the developer and others when land is being subdivided, many long-term floodplain management benefits can be achieved, particularly if the floodplain is avoided altogether.

In Figure 5, "Proposed 76-Lot Subdivision," the entire approximate Zone A area is to be dedicated as open space. If the planned subdivision shows the floodplain is contained entirely within an open space lot, it may not be necessary to conduct a detailed engineering analysis to develop BFE data.

Also, it may not be necessary to develop detailed BFE data in large-lot subdivisions or single-lot subdivisions that are within the thresholds under Subparagraph 60.3(b)(3) of the NFIP regulations when the actual building sites are clearly outside of the Zone A area. In Figure 6, "Proposed 5.6-Acre Subdivision," it is evident from the topographic features of this 5.6-acre subdivision that the building sites would be clearly out of the floodplain since the proposal indicates a steep grade between the approximate Zone A area and the building sites which are located on natural high ground.



Chapter 18.96. FLOOD PLAIN ZONE – FP

18.96.010. **Purposes**

The purposes of the Flood Plain Zone are: To implement the Comprehensive Plan Flooding Section; to **protect the public from the hazards associated with flood plains**; to **conserve important riparian areas along rivers** and streams for the maintenance of the fish and wildlife resources; and to preserve significant scenic and natural resources while **balancing the public interests with those of individual property owners in the designated areas.**

Chapter 18.96. **FLOOD PLAIN ZONE** – FP

18.96.030. Uses Permitted Outright

C. Open space.

D. Portions of a residential use that do not contain structures, such as lawn, garden or play areas.

18.96.040. Uses Permitted Conditionally

H. Subdividing or partitioning of land, any portion of which is located in the flood plain, subject to the provisions of DCC Title 18 and DCC Title 17, the Subdivision/Partition Ordinance.

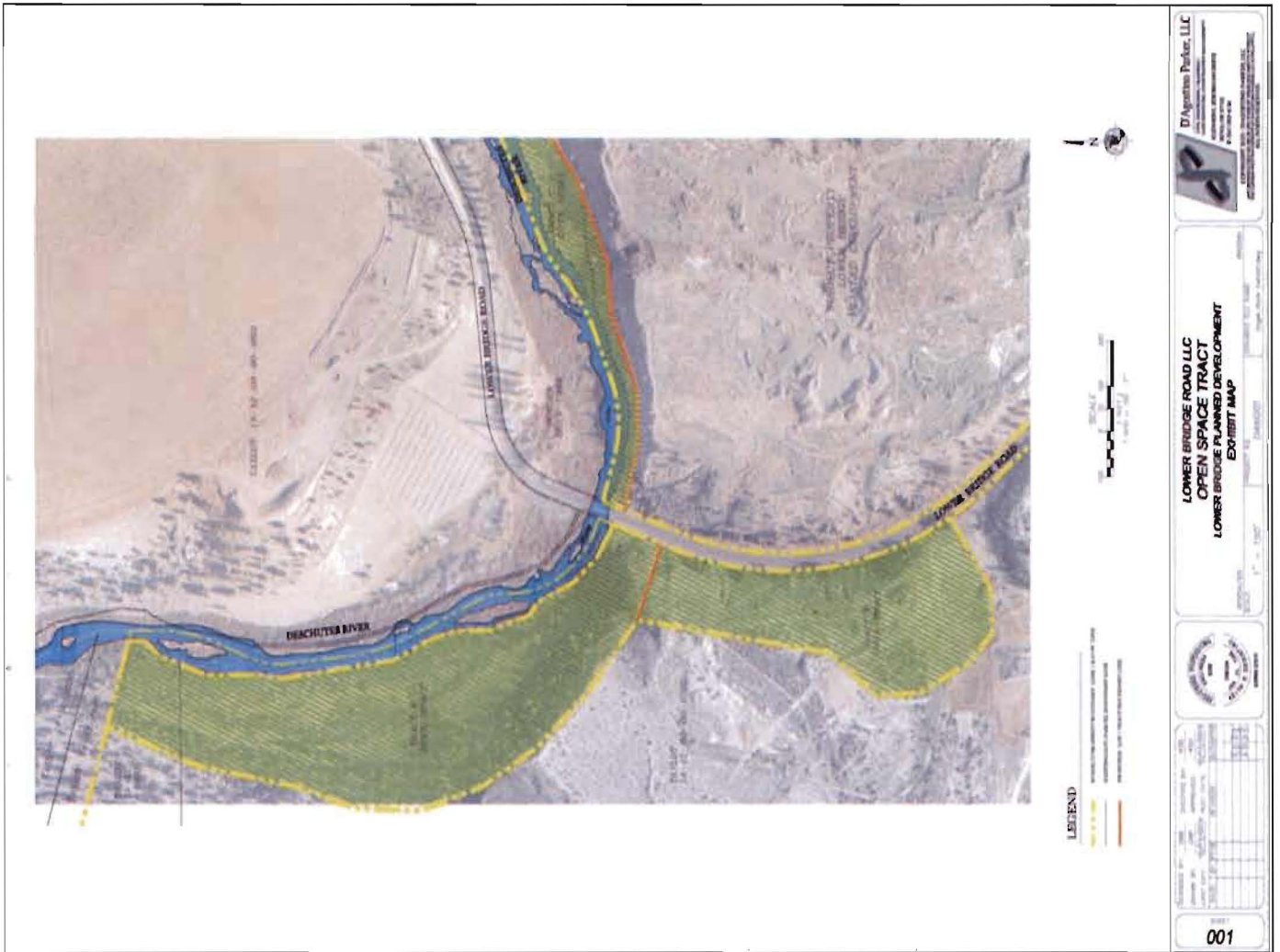
Hearings Officer Decision

Neither “cluster development” nor “planned development” is a use permitted outright or conditionally in the FP Zone. * * * The drafters of the FP Zone standards may have intended to preclude clustered residential development on FP-zoned land, **but may not have intended to preclude the scenario contemplated by the applicant’s proposal in which the clustered residential development would occur on land in another adjacent zone and the FP-zoned land would be used for the required open space.** If this decision is appealed to the board and the board agrees to hear the appeal, the board will have an opportunity to address this question.

Proposed Open Space



Proposed Open Space



2

Rimrock Setback

Chapter 18.04. TITLE, PURPOSE AND DEFINITION

18.04.030. Definition

“Rimrock” means any **ledge, outcropping or top or overlying stratum of rock**, which forms a face **in excess of 45 degrees**, and which creates or is within the canyon of the following rivers and streams: (1) Deschutes River, (2) Crooked River, (3) Fall River, (4) Little Deschutes River, (5) Spring River, (6) Paulina Creek, (7) Whychus Creek, and (8) Tumalo Creek. For the purposes of DCC Title 18, the edge of the rimrock is the uppermost rock ledge or outcrop of rimrock.

Chapter 18.84. LANDSCAPE MANAGEMENT COMBINING – LM ZONE

18.04.090. Setbacks

Rimrock Setback. **New structures** (including decks or additions to existing structures) shall be set back 50 feet from the rimrock in an LM Zone. An exception to this setback may be granted pursuant to the provision of DCC 18.84.090(E).

Setback Exhibit to Hearings Officer

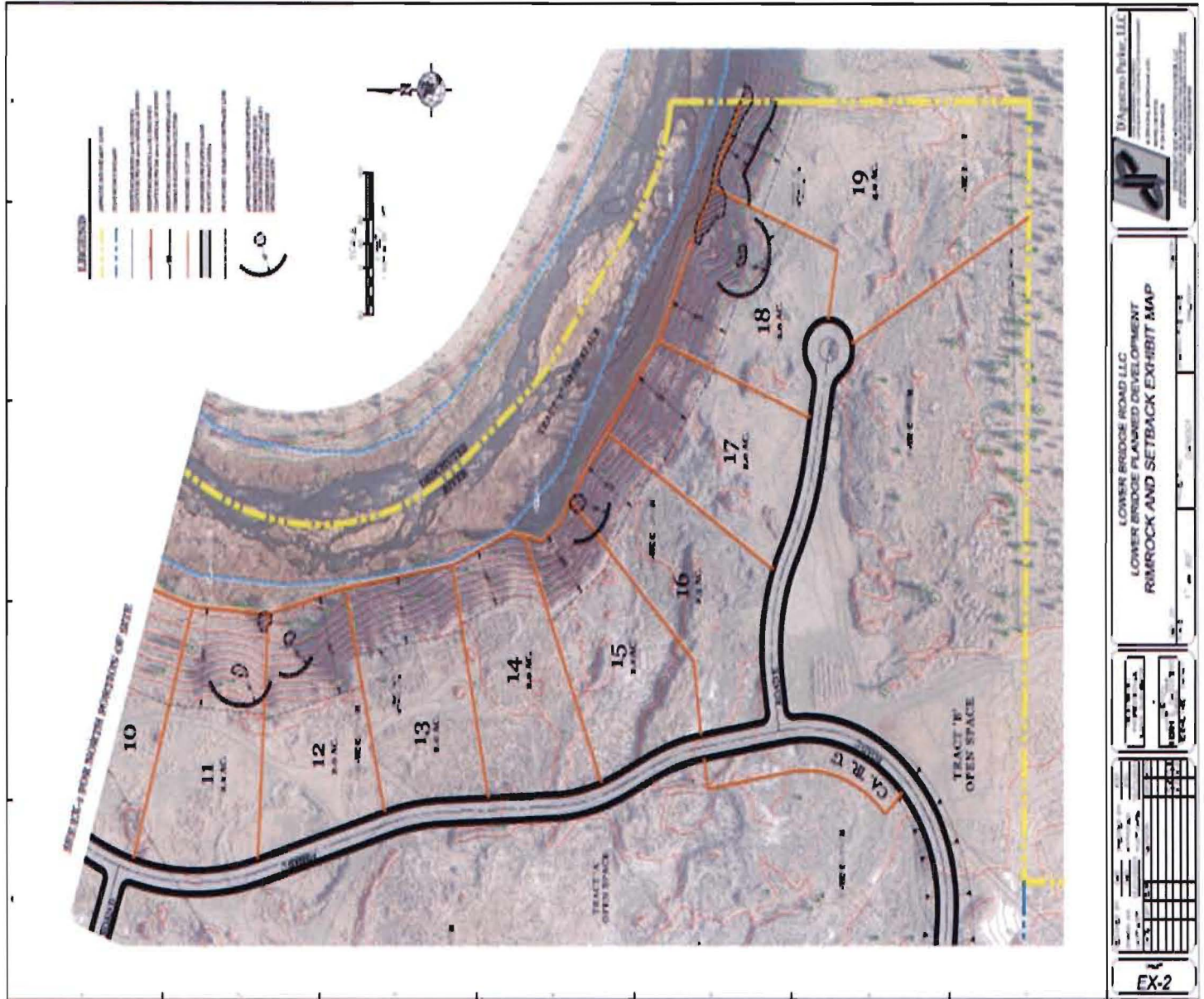
In accordance with your request we have compiled the following proposed setbacks for lots/yard setbacks related to lot boundaries that abut the Deschutes River/open space tracts within the planned development. The proposed setbacks are based on the Tentative Subdivision Plan, April 2, 2015, and are generally coincident with the location of the existing top of slope, relative to the particular lot lines.

Note for lots 2-18, the subject setback is likely to be clearly recognized as a REAR yard setback. On lots 1 and 19 the subject setback to the "River" may be viewed as a SIDE or REAR year setback

LOT	SETBACK
-----	---------

1	70 feet
2	85 feet
3	100 feet
4	100 feet
5	130 feet
6	110 feet
7	65 feet
8	150 feet
9	190 feet
10	165 feet
11	150 feet
12	160 feet
13	100 feet
14	90 feet
15	110 feet
16	100 feet
17	110 feet
18	110 feet
19	100 feet

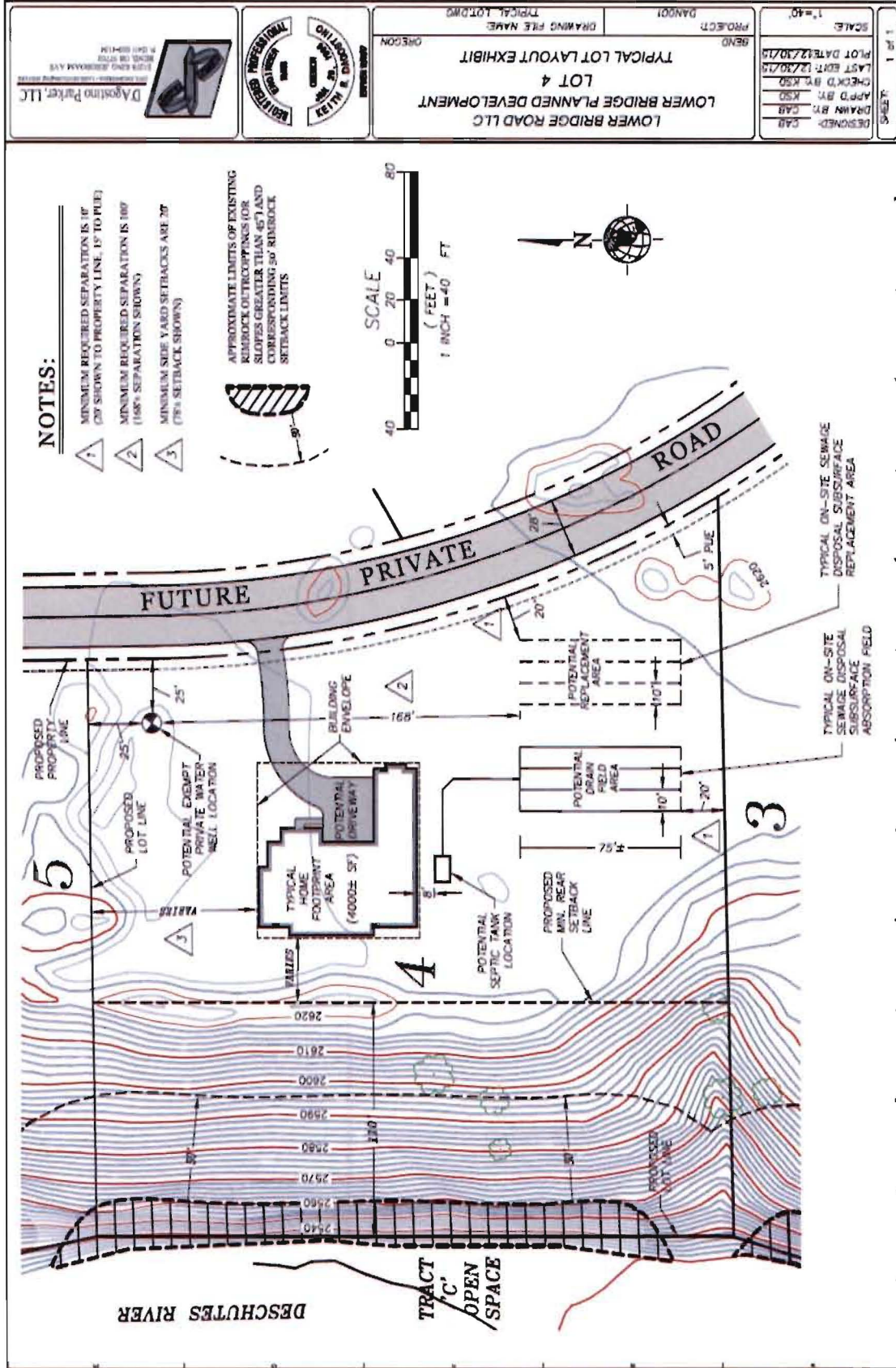
Rimrock Setback



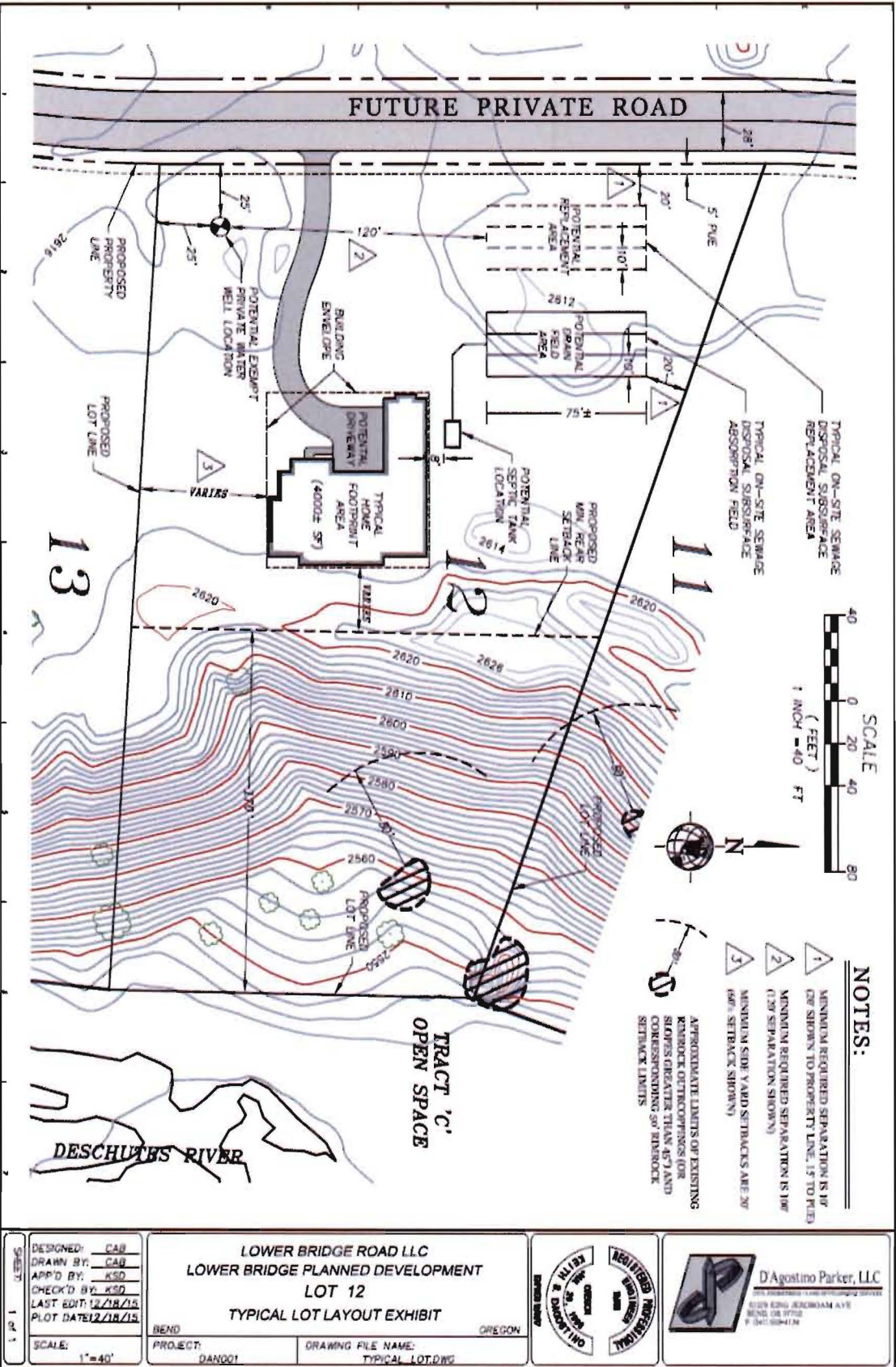
Revised Setback Proposal Based on Rimrock Location

	<u>6/30/15 Memo</u>	<u>Rim Rock Exhibits</u>	<u>Increase Amount</u>
Lot 1:	70'	85'	15'
Lot 2:	85'	100'	15'
Lot 3:	100'	115'	15'
Lot 4:	100'	110'	10'
Lot 5:	130'	145'	15'
Lot 6:	110'	120'	10'
Lot 7:	65'	80'	15'
Lot 8:	150'	165'	15'
Lot 9:	190'	200'	10'
Lot 10:	165'	175'	10'
Lot 11:	150'	170'	20'
Lot 12:	160'	170'	10'
Lot 13:	100'	115'	15'
Lot 14:	90'	100'	10'
Lot 15:	110'	120'	10'
Lot 16:	100'	115'	15'
Lot 17:	110'	125'	15'
Lot 18:	110'	125' (except as shown)	15'
Lot 19:	100'	115'	15'

Typical Lot Layout



Typical Lot Layout



3

Environmental / Suitability for Residential Use

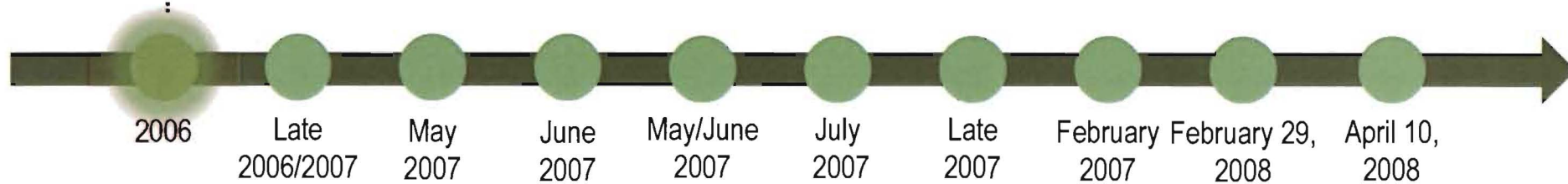
2008 - Zone Change Decision

I. East Area:

The Board **APPROVES** the request for a comprehensive plan text and map amendment and zone change from Surface Mining to Rural Residential on the area East of Lower Bridge Way, together with approximately 30 acres along the river west of Lower Bridge Way (approximately 160 acres) subject to the following conditions of approval:

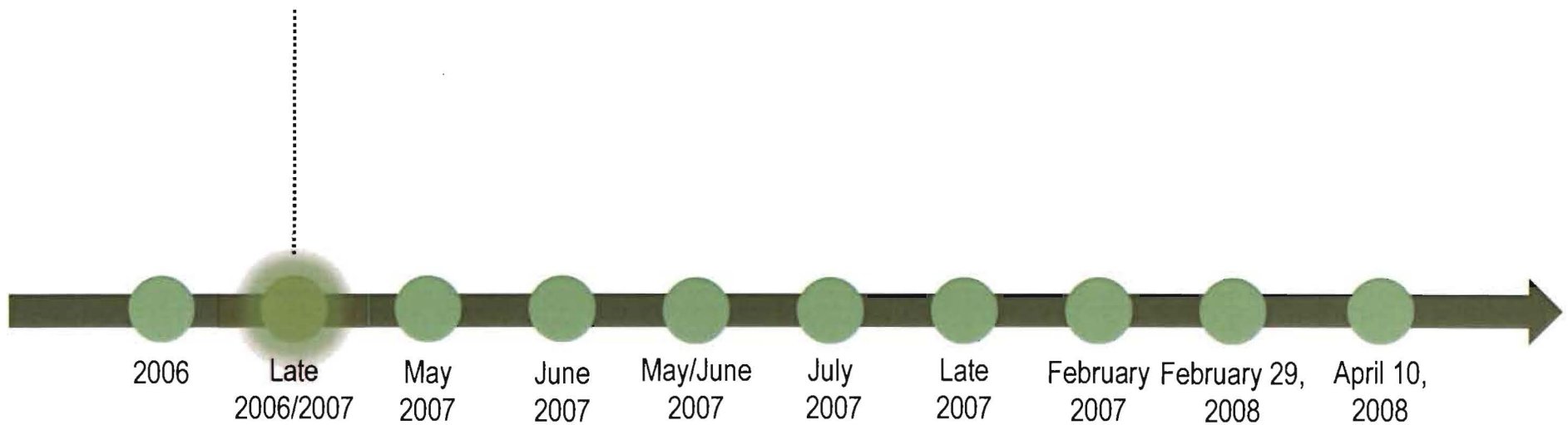
1. Prior to final plat approval for any residential subdivision, the applicant shall obtain from the Department of Environmental (DEQ) a "No Further Action" (NFA) determination or the equivalent for a residential use designation for the 160 acres.
2. Prior to final plat approval for any residential subdivision, the applicant shall obtain from the Department of Human Services (DHS) a determination of "no apparent public health hazard" for a residential use designation for the 160 acres.

Development
Agreement with
Lower Bridge
Property Owners



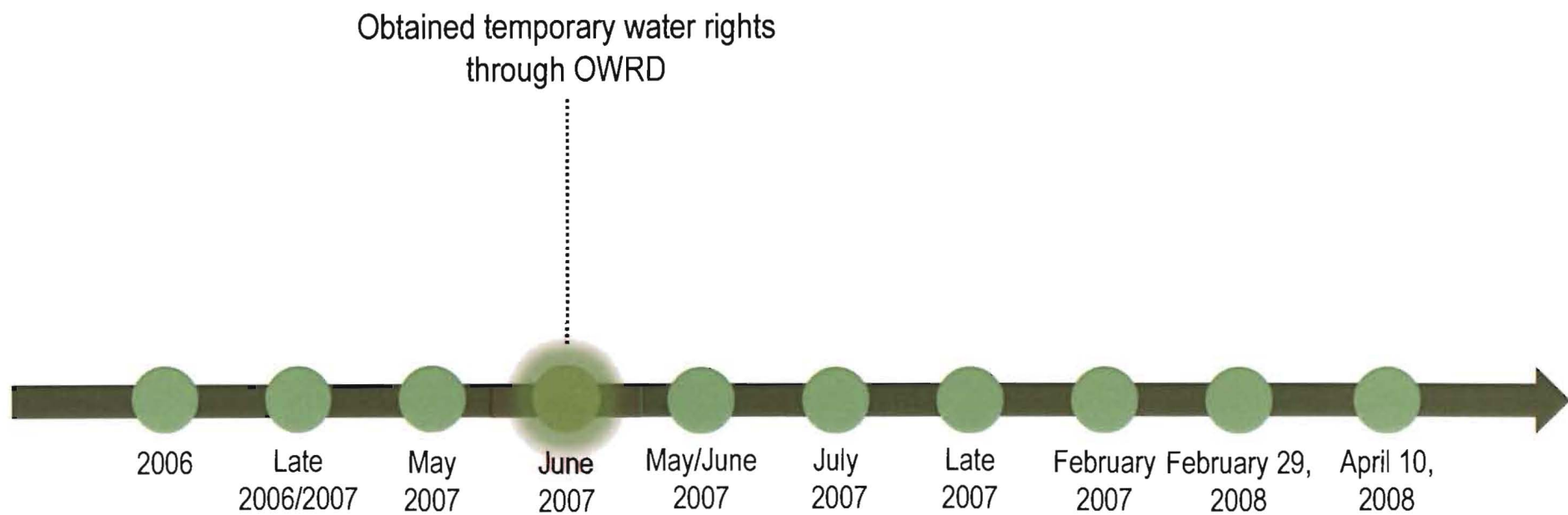
Begin Planning / Hiring Consultants for Environmental Investigation:

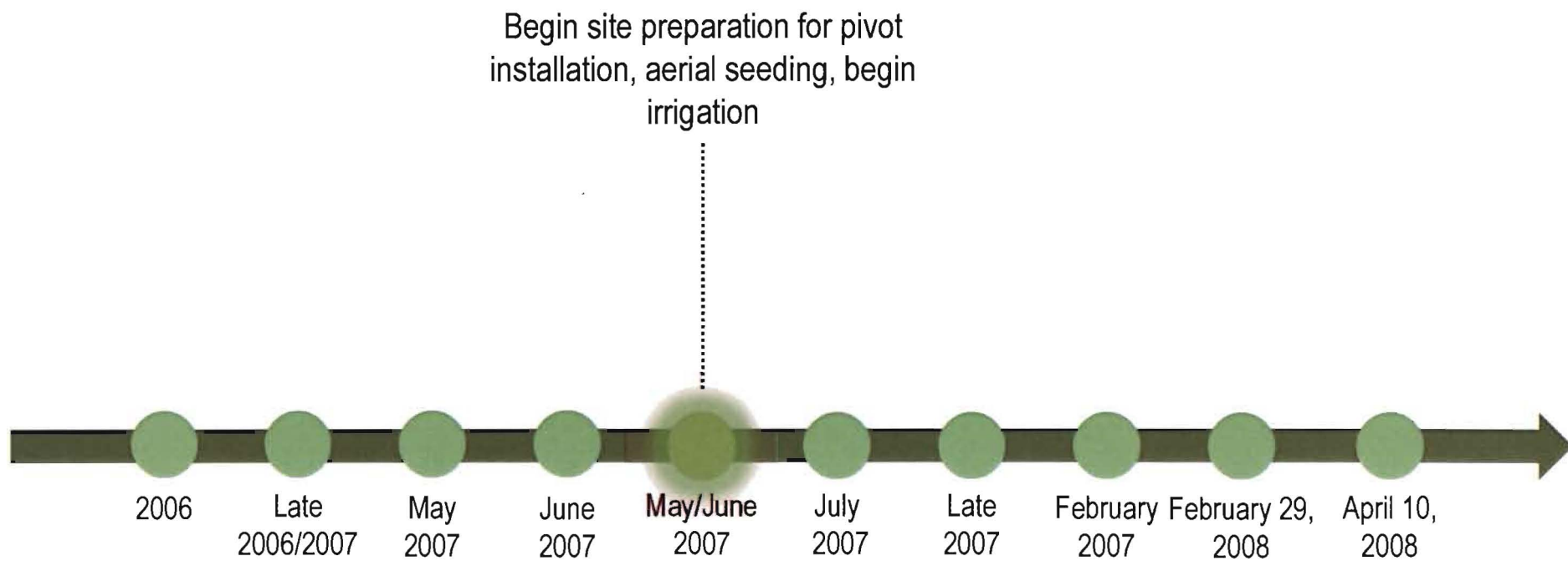
- 1) Geo Design – Planning and Environmental Consultants
- 2) Newton – Water Consultant
- 3) Gene Hickman – Agricultural / Range Specialist
- 4) Kittleson Transportation – Engineers
- 5) Maul Foster – Environmental Consultant

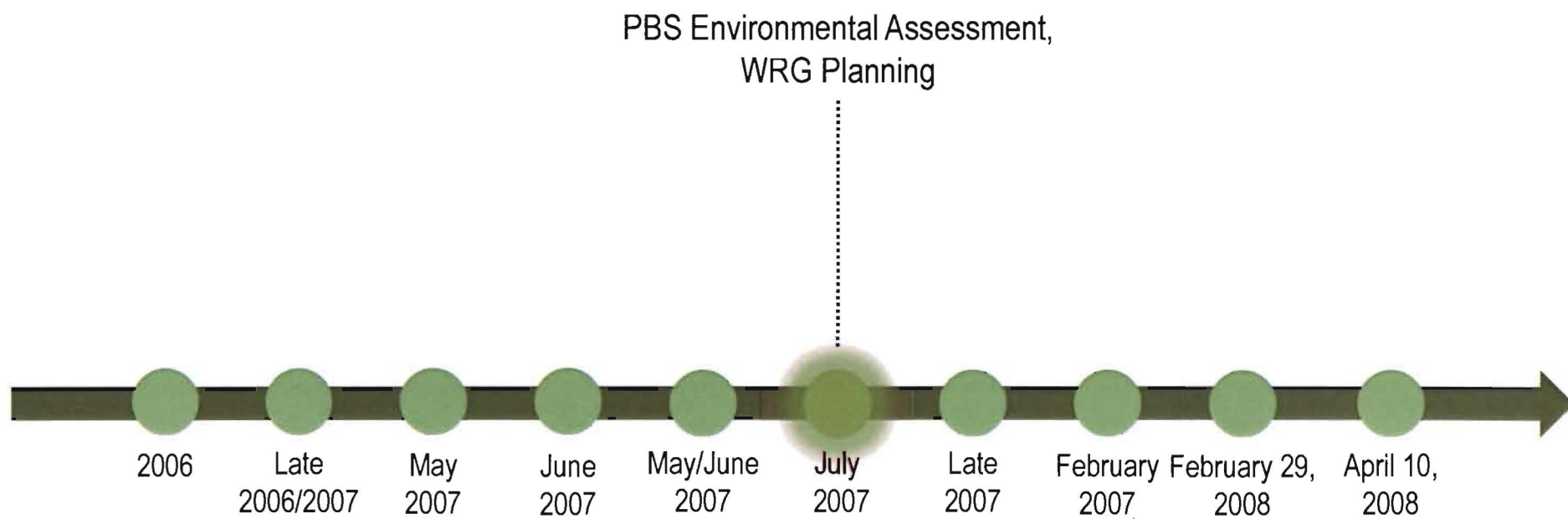


Deschutes Irrigation purchased Pivot -
\$123,000

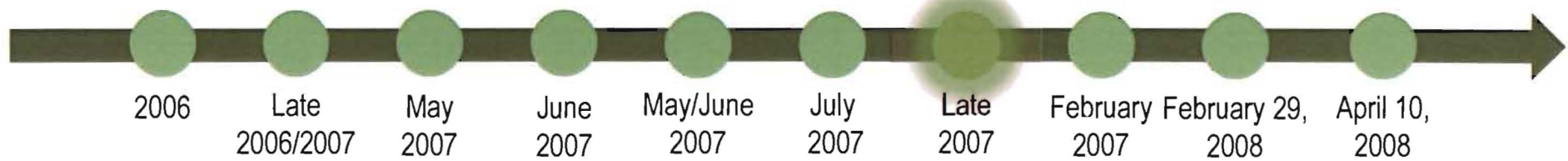


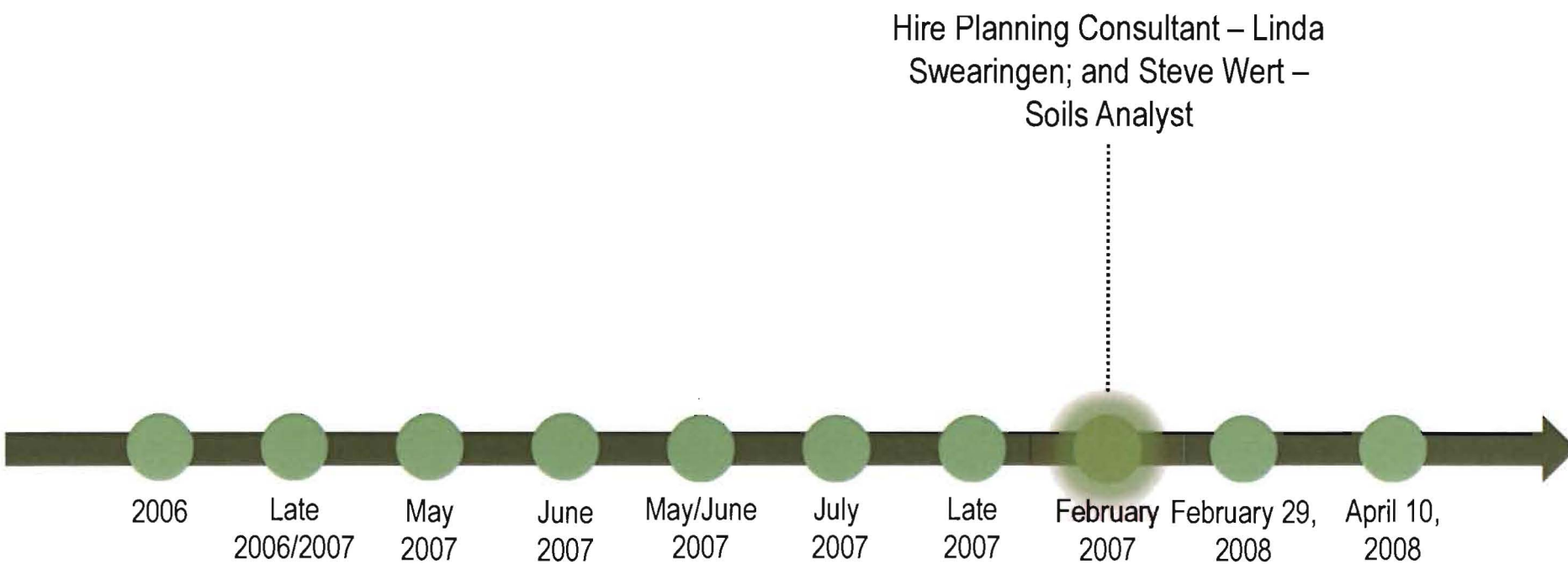


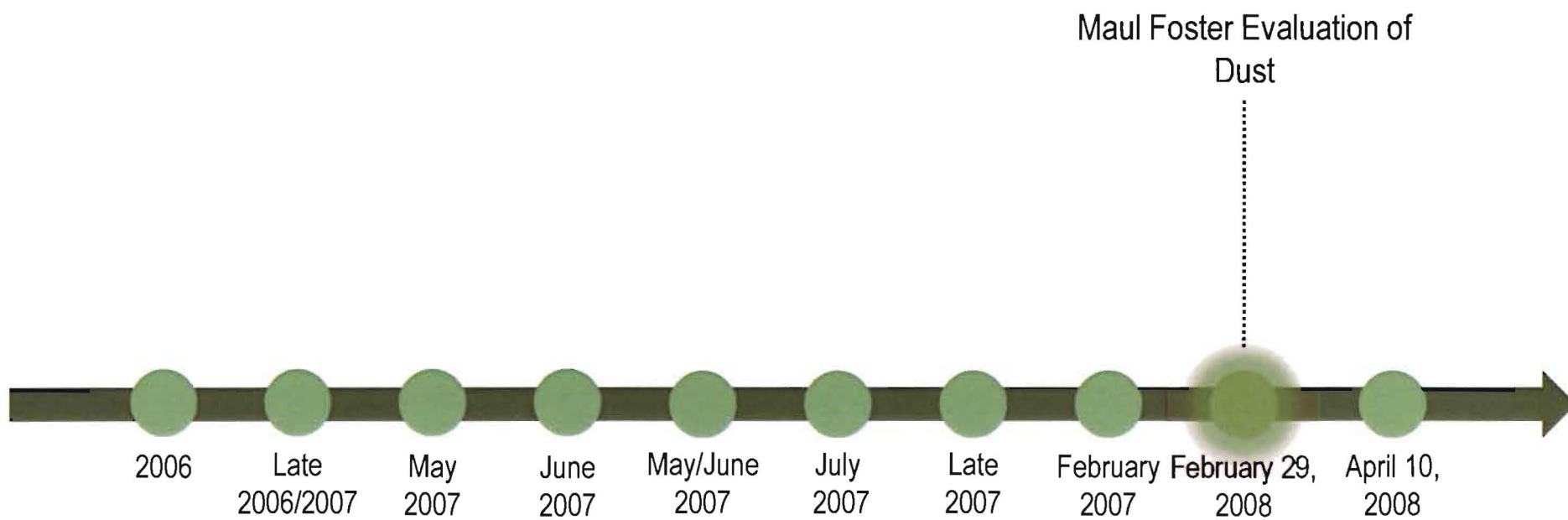


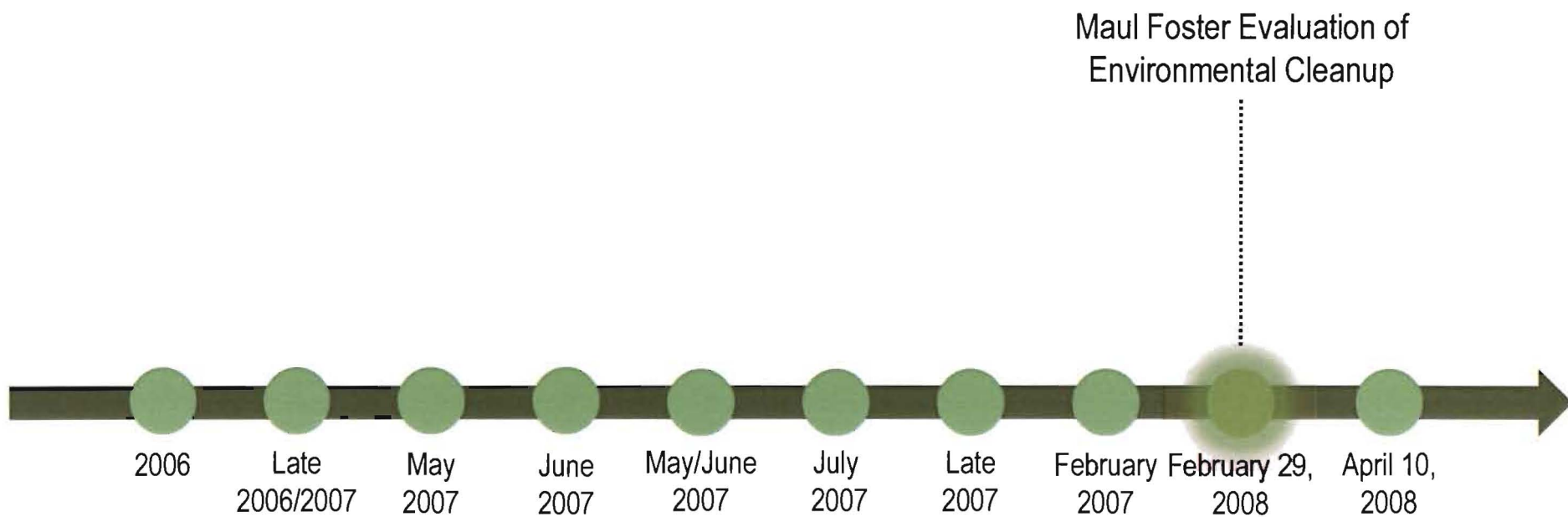


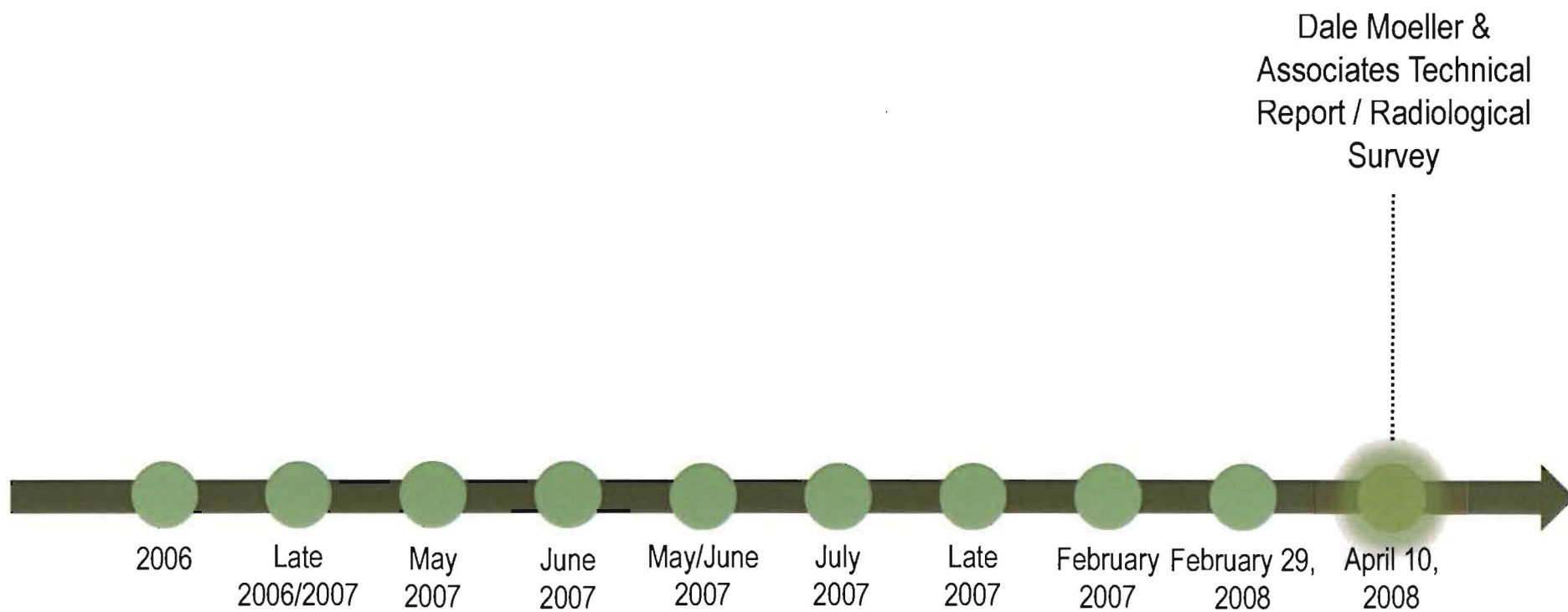
File for Zone Change / Plan
Amendment



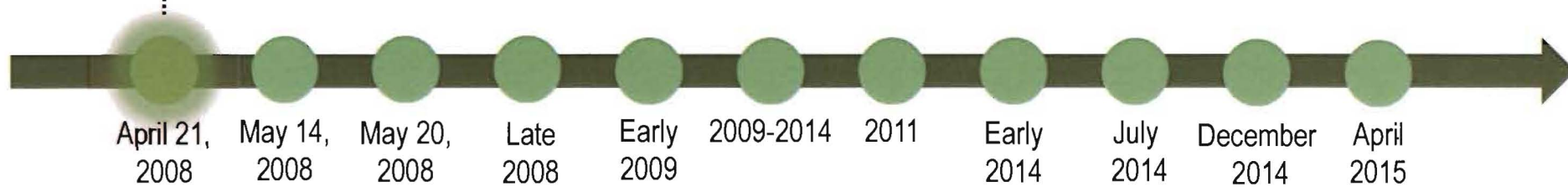




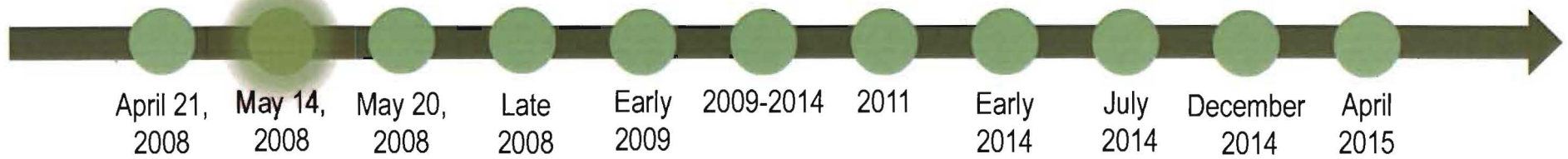




Newton Consultants
Water Supply
Development
Feasibility Report

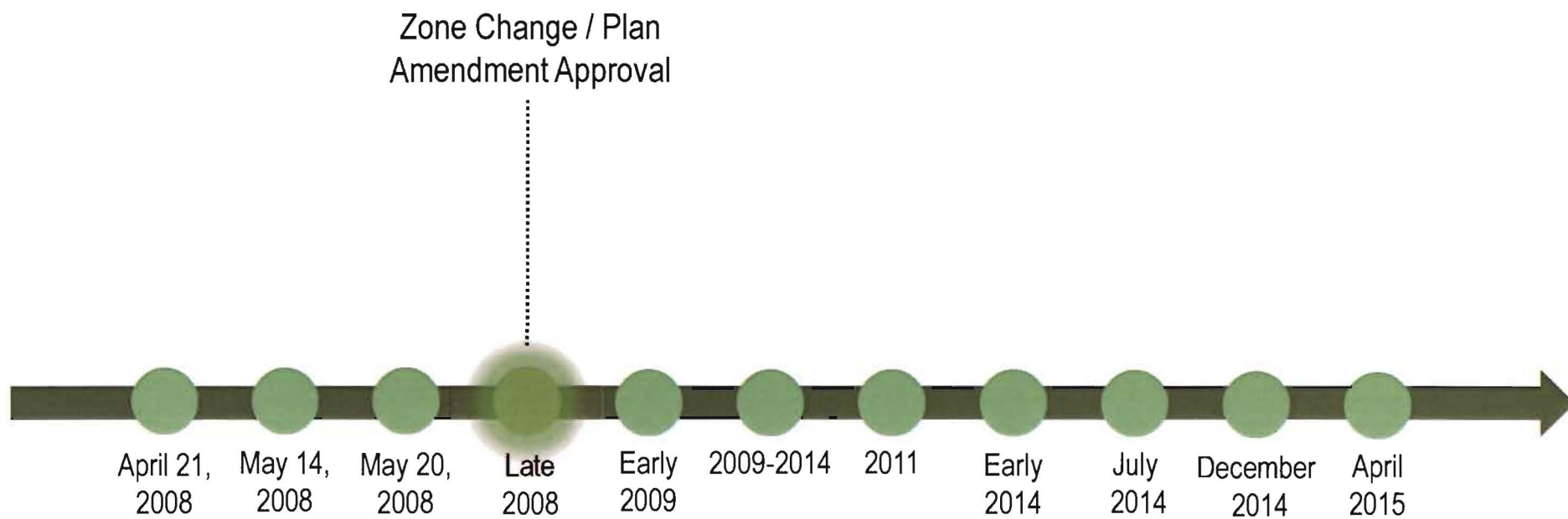


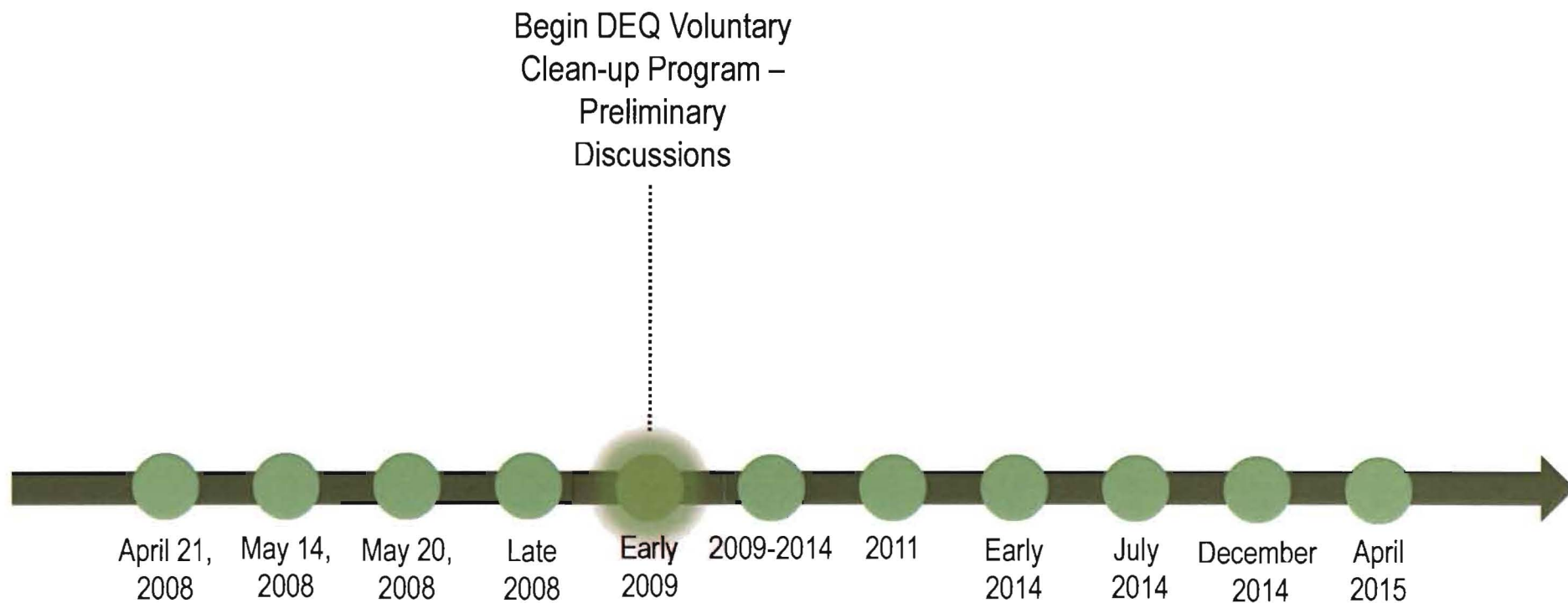
DEQ Voluntary
Cleanup process,
preliminary analysis

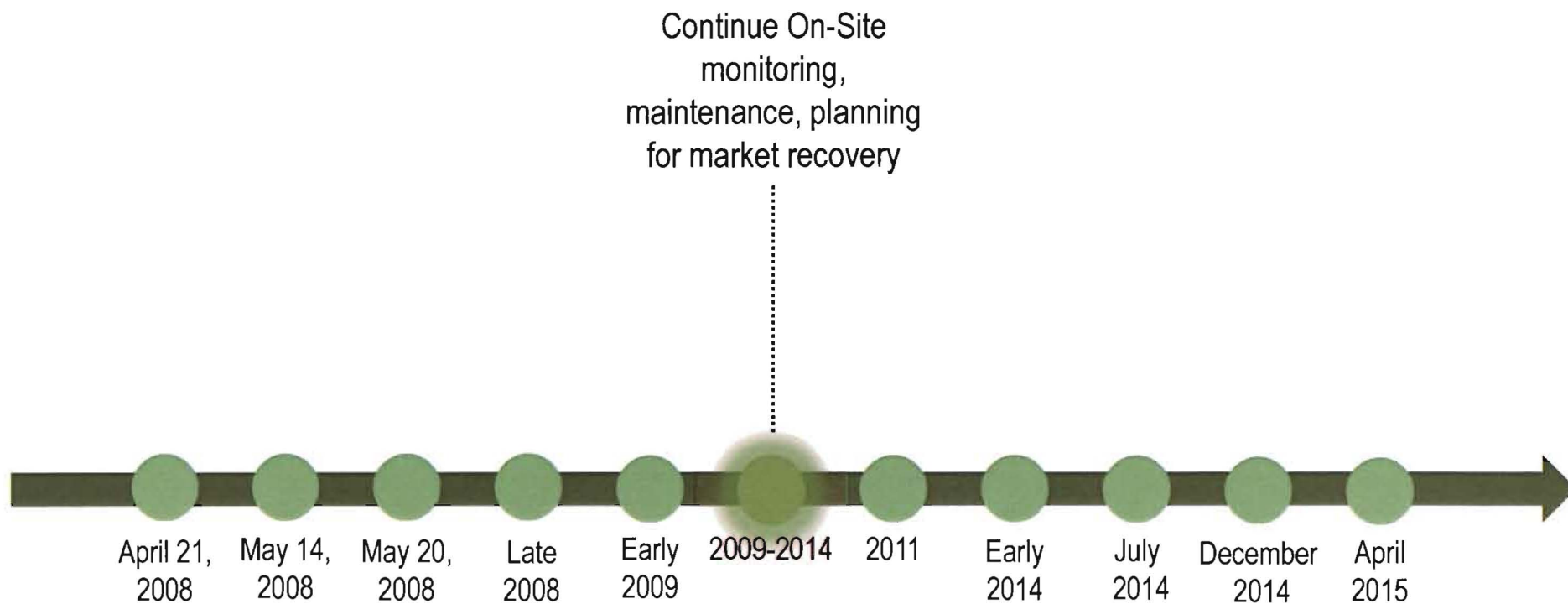


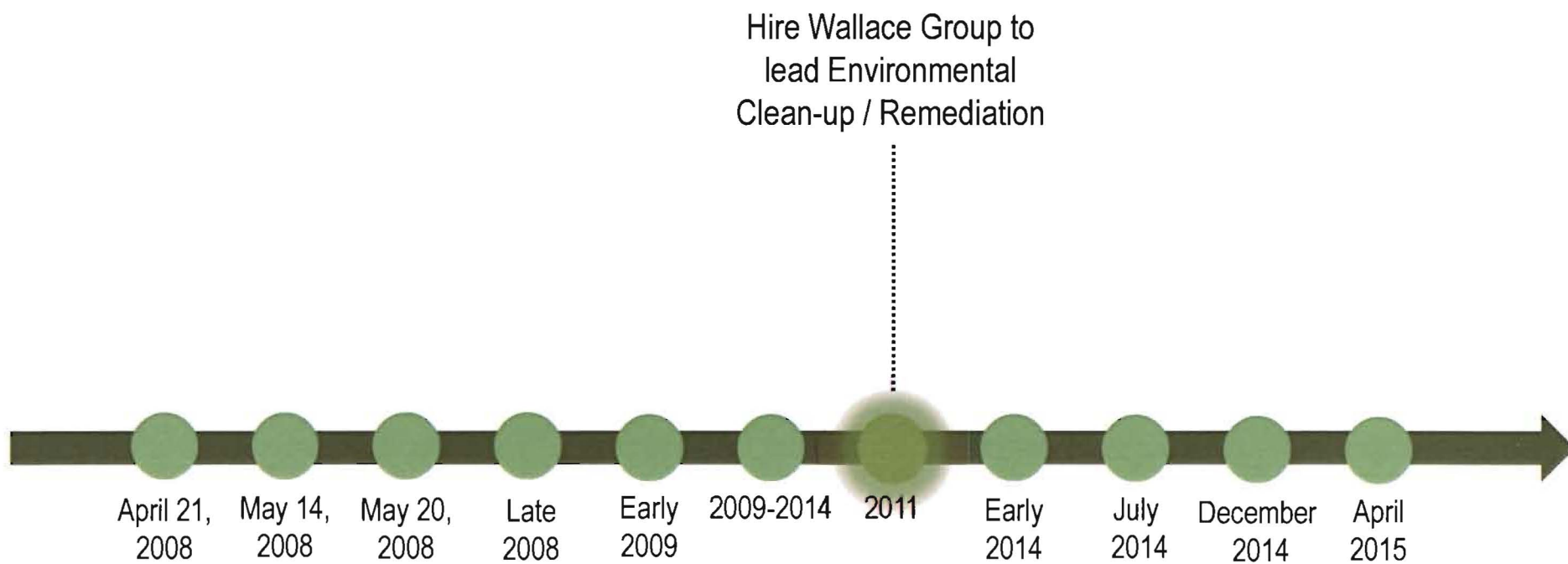
Maul Foster
Environmental Hazards
Report

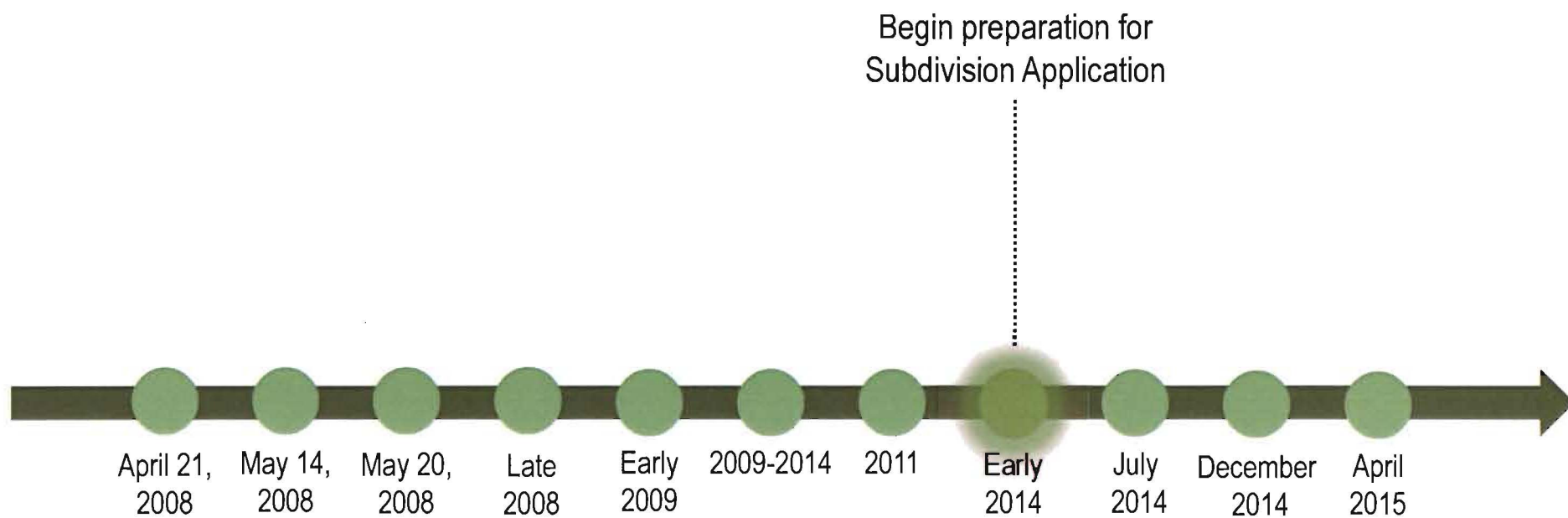


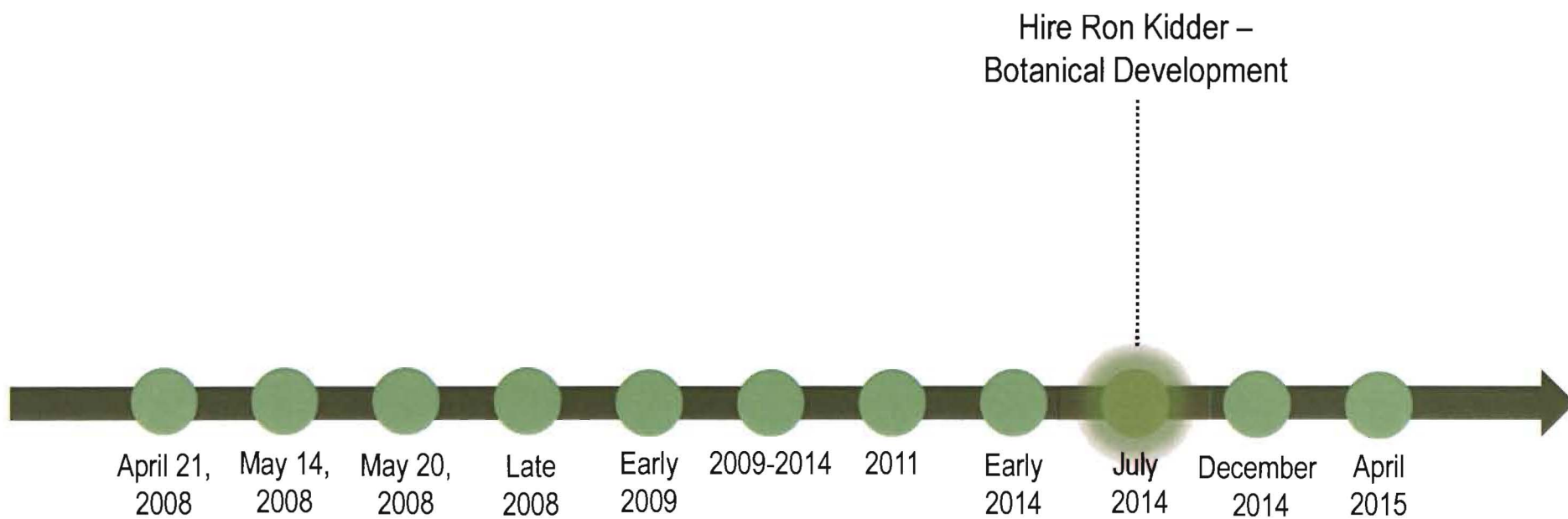


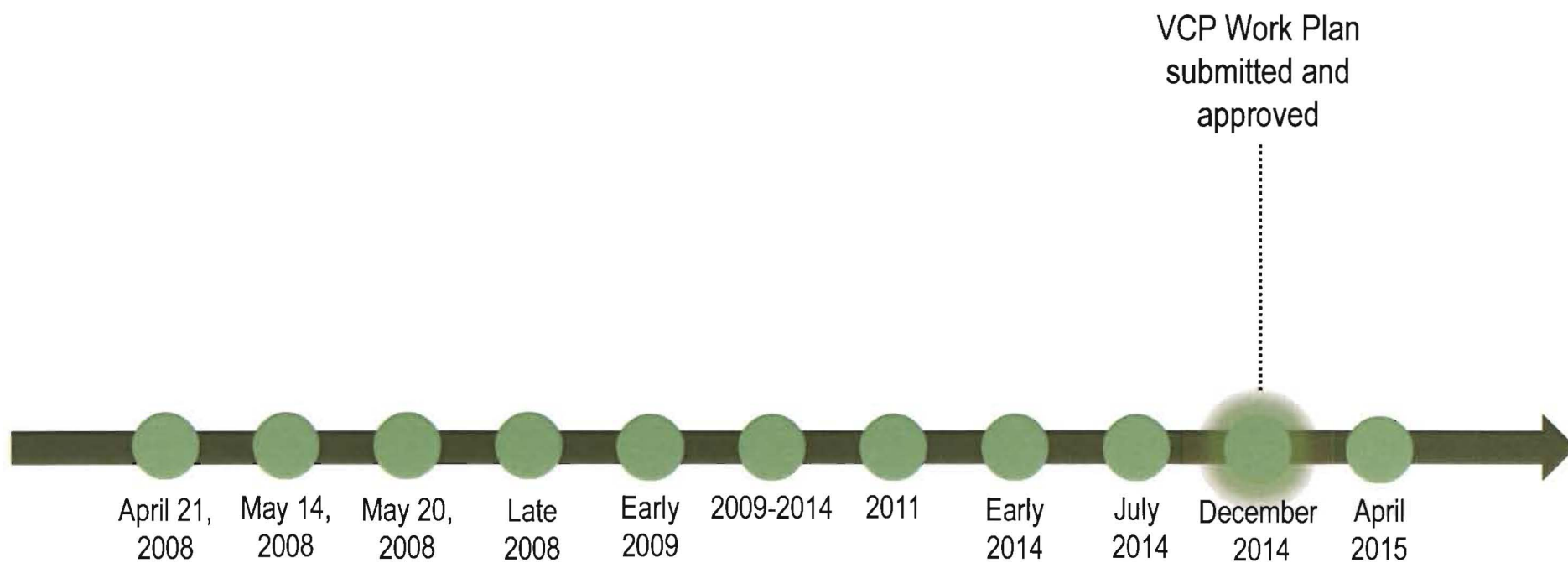


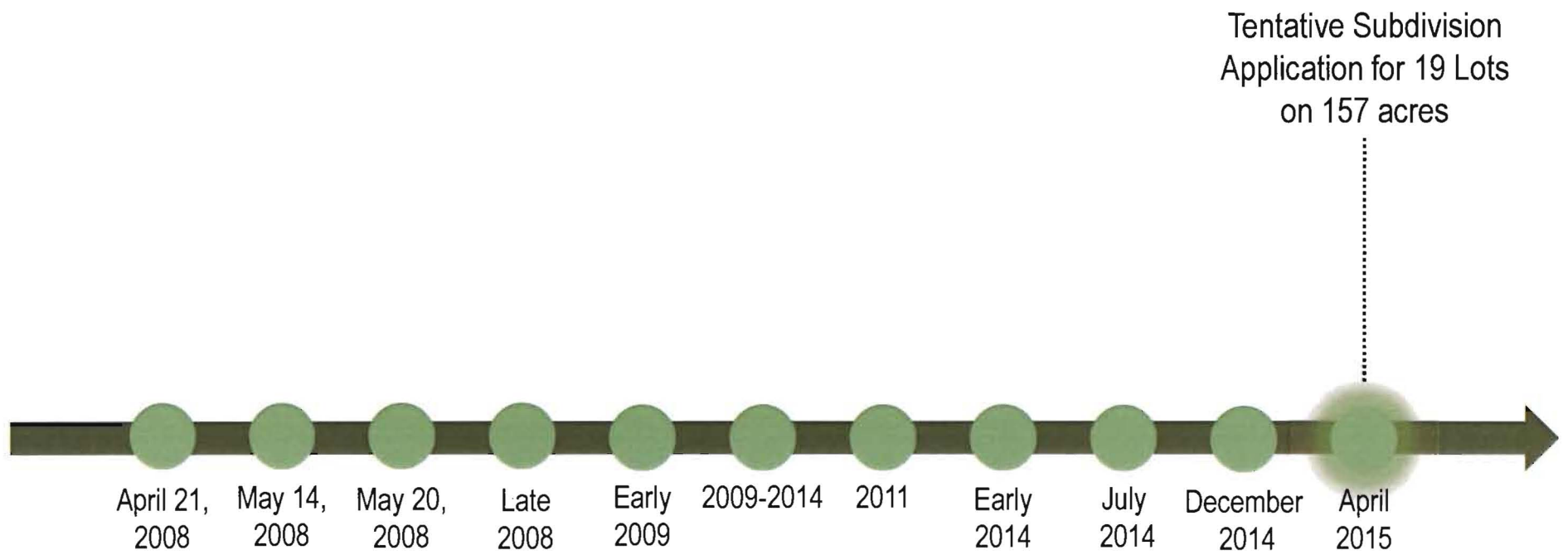












Expenses incurred at Lower Bridge Project through April 2015

Provider	Service	Total
Green & Markley	Legal	\$ 16,652.25
Schwabe	Legal	\$ 383,866.04
Swearingen	Planning Consultant	\$ 24,763.60
Wert & Associates	Environmental/Soil Consultant	\$ 642.00
Geo Design	Design	\$ 28,536.87
Newton	Water Consultant	\$ 83,506.89
WRG Design	Design/Planning	\$ 17,129.43
Maul Foster	Environmental	\$ 9,094.85
Gene Hickman	Forage Study	\$ 9,712.79
Deschutes Irrigation	Pivot	
D'Agostino	Civil Engineer	\$ 65,010.10
Kittleson & Assoicates	Transportation Engineer	\$ 54,396.19
PBS Engineering	Civil Engineer	\$ 9,500.00
Rapid Rendering	Design	\$ 9,620.50
Division 2	Construction Consultant	\$ 17,090.00
Groth	Planning	\$ 62,011.80
Dade Moeller	Environmental - Radiation	\$ 3,719.00
Deschutes County Taxes	Property Taxes	\$ 20,778.66
Wallace Group	Environmental Consulting	\$ 30,529.68
DEQ	VCP Program	
Botanical Development	Environmental - Riparian	\$ 2,400.00
Deschutes County Application Fees	(na)	\$ 43,660.60
	Total	\$ 892,621.25
	Pivot Installation & Seeding Costs	\$ 313,348.78
	(attached itemization)	
	Grand Total	\$ 1,205,970.03

Voluntary Cleanup Program

The Voluntary Cleanup Pathway is available for sites of low, medium or high environmental priority and cooperative participants. DEQ provides oversight throughout the investigation and selects or approves the remedial action through a collaborative process.

Involves:

1. Remedial Investigation
2. Site Risk Assessment
3. Explanation of Rationale of Remedial Actions
4. Removal or Remedial Action Report

If a cleanup is completed to a level that is protective of human health and the environment consistent with Oregon's cleanup law, DEQ will issue a No Further Action (NFA) letter to the responsible party when the cleanup activities are completed, reviewed and approved following the public comment period.

Oregon Department of Environmental Quality
HUMAN HEALTH RISK ASSESSMENT GUIDANCE

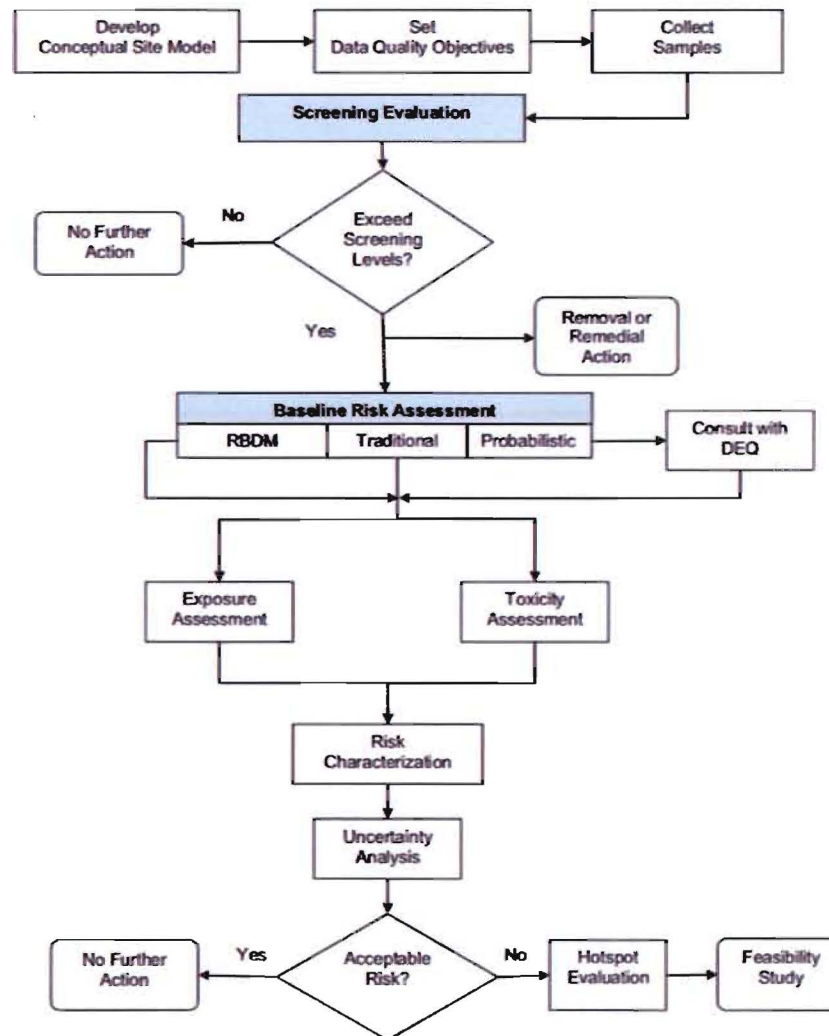


Figure 1. Overview of Human Health Risk Assessment Process



LEGEND

- 1 FORMER SCALE HOUSE AREA & SOLID WASTE DEBRIS
- 2 SOIL/ROCK STOCKPILES & CONSTRUCTION/ORGANIC DEBRIS
- 3 TACK DRUM & SOLID WASTE DEBRIS
- 4 SOIL/ROCK STOCKPILE & MINING EQUIPMENT DEBRIS
- APPROX. SITE PERIMETER
- EXISTING MAJOR (10-ft) GROUND CONTOUR FROM 2011 AERIAL SURVEY
- PROPOSED LOT LINE
- MW-1 = PROPOSED GROUNDWATER MONITORING WELL

NOTE:
BASE MAP PROVIDED BY D'AGOSTINO PARKER, LLC

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REMEDIAL INVESTIGATION MAP
135-ACRE LOWER BRIDGE MINE SITE
LOWER BRIDGE ROAD
TERREBONNE, OREGON

PROJECT NO.: 10446 (1)
DATE: OCT. 16, 2014
DRAWN BY: [initials]
CHECKED BY: KSW
FILE NAME: 10446 (1)_FIGURE_3.DWG

FIGURE
3

Thank You.