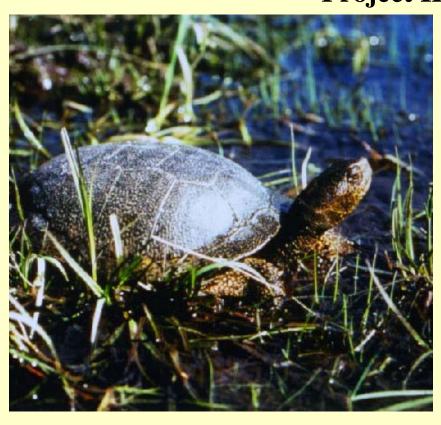
# Western Pond Turtle Recovery in the Columbia Gorge

**Project ID 200102700** 



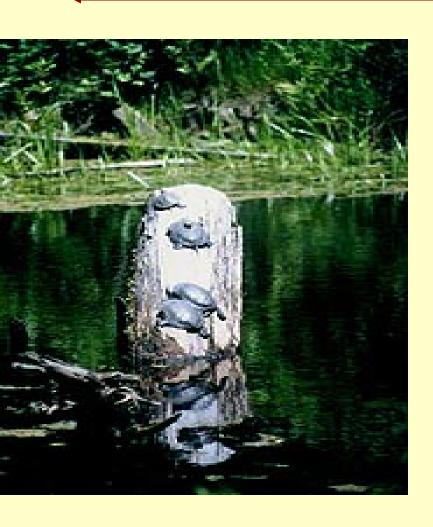
#### Submitted by:



4 March 2009



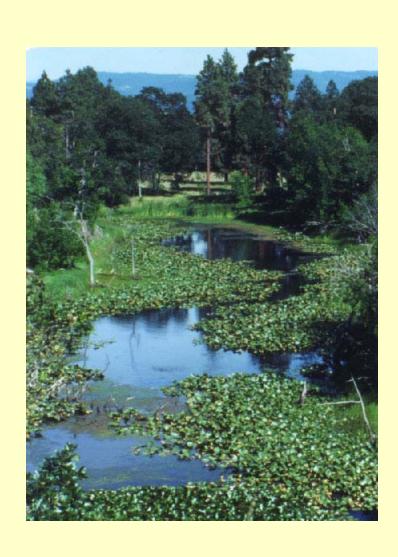
# Western Pond Turtle Washington Status



- State endangered species
  - Continuation of conservation efforts per the Recovery Plan
- Federal species of concern



#### Columbia Mainstem Goals

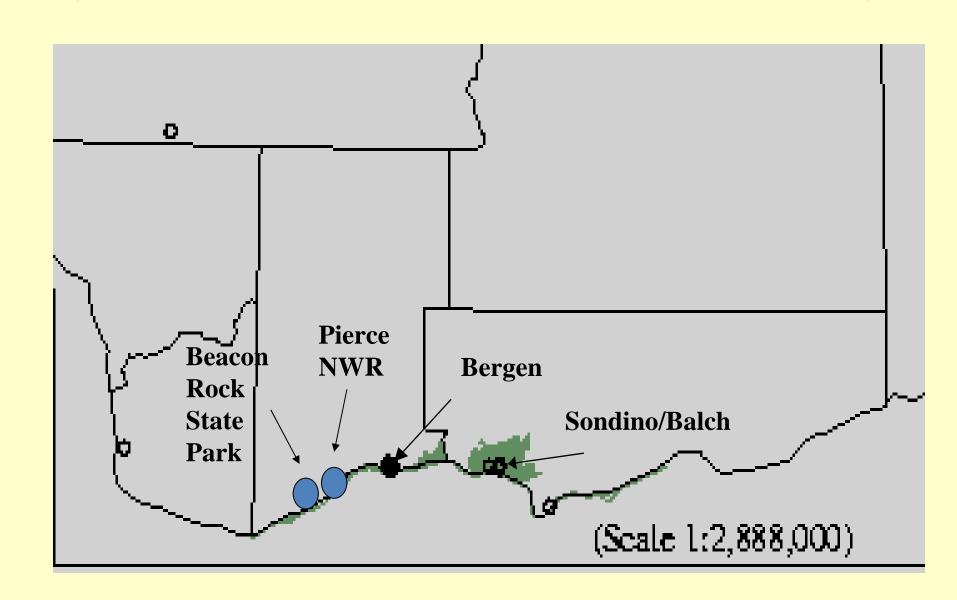


- Maintain and restore priority habitats and species (BPA)
- Objectives (WDFW)
  - 4 subpopulations
  - 200 or more at each site and < 70% adults</li>





#### **Distribution**





#### Western Pond Turtle Recovery Current Efforts



- Head Start
- Population Reintroduction
- Predator Control
- Habitat Management
- Population Monitoring



#### **Head Start**



Increases turtle
 population
 through capture
 and augmentation



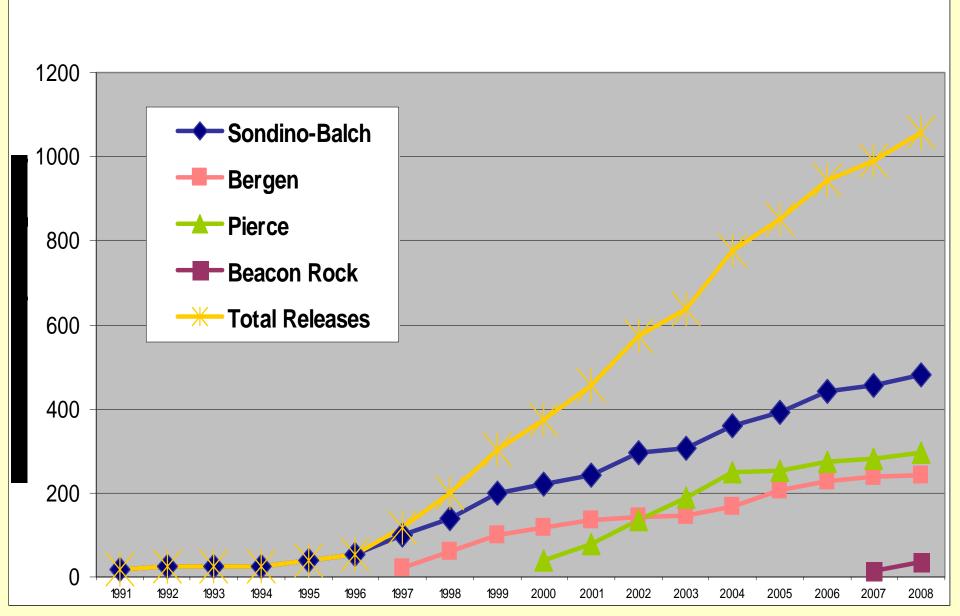


#### Western Pond Turtle Head Start Releases - Columbia River Gorge

Release Location	Sondino	Balch	Bergen	Pierce	Beacon Rock	TOTAL
Year						
1991	14	3				17
1992	9					9
1995	10	4				14
1996	12					12
1997	46		21			67
1998	26	15	39			80
1999	46	16	41			103
2000	12	6	15	40		73
2001	5	19	18	38		80
2002	24	29	7	59		119
2003	7	3	5	50		65
2004	34	19	21	62		136
2005	11	22	39	5		77
2006	28	22	21	19		90
2007	10	5	10	8	16	49
2008	8	16	5	15	21	65
TOTAL	302	179	242	296	37	1056



### Western Pond Turtle Head-Start Releases in the Columbia River Gorge 1991-2008





#### Population Reintroduction Pierce NWR - 2000



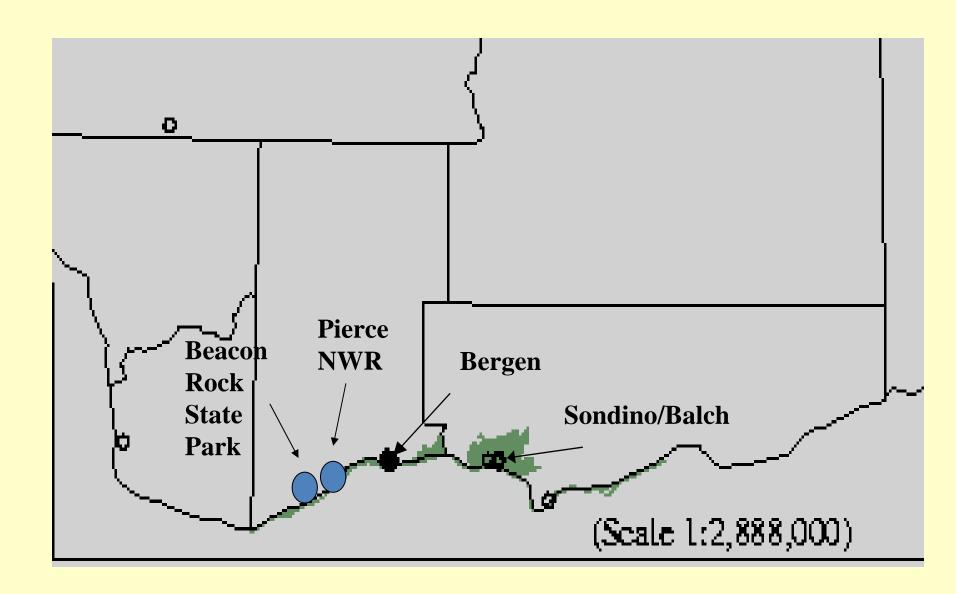


## Reintroduction Beacon Rock State Park - 2007





#### **Distribution**





#### **Predator Control**



- Bullfrogs
- Non-Native Fish
- Nest Site Exclosure





#### **Restoration of Nesting Habitat**





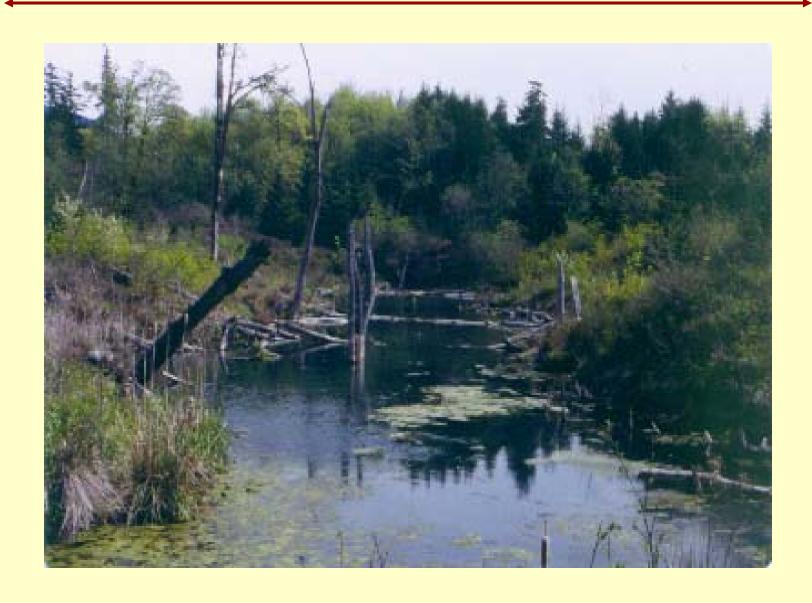
#### **Nesting Habitat**

MeadowEnhancement





#### **Restoration of Breeding Habitat**





#### **Breeding Habitat**





#### Western Pond Turtle Habitat Enhancement – 2002-2008

Year	Location	Acres Treated	Activity
2002	Bergen Rd	7	mowing & removal of Scotch broom
2003	Bergen Rd	7	mowing & removal of Scotch broom
2004	Bergen Rd	10	mowing
2004	Sondino	5	mowing
2005	Bergen	5	mowing
2005	Bergen	.25	pond development
2006	Bergen	10	mowing & removal of Scotch broom
2006	Bergen	10	tree thinning around ponds
2007	Bergen	20	tree thinning, meadow enhancement
2008	Bergen	34	access, thinning, and meadow enhancement
2008	Pierce NWR	15	meadow enhancement



#### **Population Monitoring**





#### Methods

- Visual Surveys
- Trapping
- Mark Recapture
- Telemetry
- Modeling
- Vital Rates
- Nesting Success
- Data Management



### Achievement of Recovery Plan Goals



individual number of captures

Binomial

Signature of captures

Binomial

Aggregation of the state of the sta

- Status of Existing Populations
- Status of Introduced Populations
- Age Distributions
- Reproductive Success
- Distribution of Populations



#### **Proposed Work**

Objective 1: Develop and implement methods to conduct long-term population monitoring.

- Developed by WDFW Research Scientists
- Statistically Sound
- Repeatable
- Realistic for field application
- Useful at all sites
- Relevant to goals set forth in Recovery Plan





#### **Proposed Work**

### **Objective 2:** Supplement Existing Populations When Needed.

- Evaluate natural reproduction
- Monitor survival
- Continue to augment newest population
- Maintain cooperative status with zoos
- Conduct limited Head-Start effort
- Supplement populations only when needed





#### **Proposed Work**

Objective 3: Manage habitat to maximize western pond turtle survival and productivity. Enhance, restore, maintain, and manage western pond turtle habitats.

- Habitat Management & improvement at all 4 sites
- Upland nesting habitat
- Wetland enhancement
- Acquisitions
- Cooperation with landowners





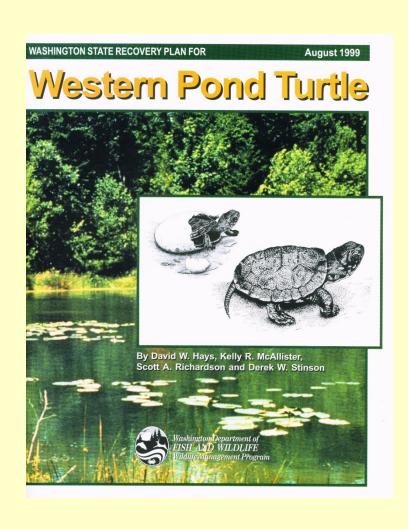
#### Western Pond Turtle Project Cooperators



- Bonneville Power Administration
- Woodland ParkZoo
- Oregon Zoo
- USFWS
- USFS
- WDFW



#### The Western Pond Turtle Proposal: BPA 200102700



Meets subbasin objectives

 Consistent with state recovery plan

Proven Success

