2010 Washington State *Spartina Program* Update

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Program Background

- 1995 legislative declaration
  - *Spartina* an ecological disaster
  - WSDA identified as lead agency
  - Directs WSDA to lead eradication and restoration effort
- Cooperative effort between federal, state, local, tribal and private entities
  - USFWS, WDFW, DNR, WSDA, DOE, PSWQAT, UW, Snohomish, Island, Skagit, San Juan counties, Shoalwater, Swinomish, Suquamish, Tulalip Tribal Communities, Oyster Industry, Nature Conservancy, CRA, Audubon Society, Volunteer groups.

Spartina in Washington State

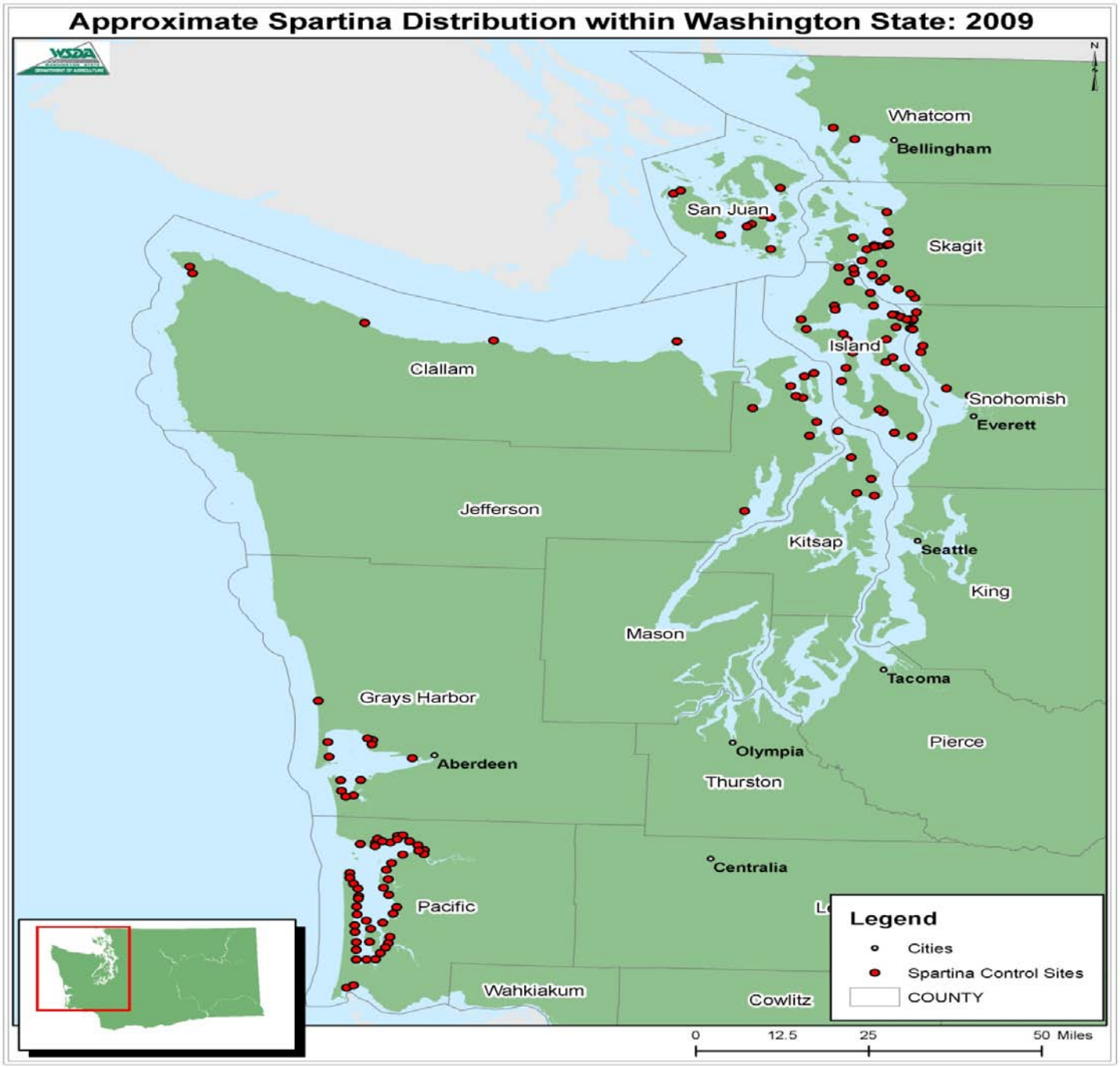
- 4 species of Spartina in Washington State
  - S. alterniflora
    - Willapa Bay, Puget Sound, Grays Harbor
  - S. anglica
    - Puget Sound
  - S. patens
    - Dosewallips State Park – Hood Canal
  - S. densiflora
    - Grays Harbor, Island County

Spartina alterniflora

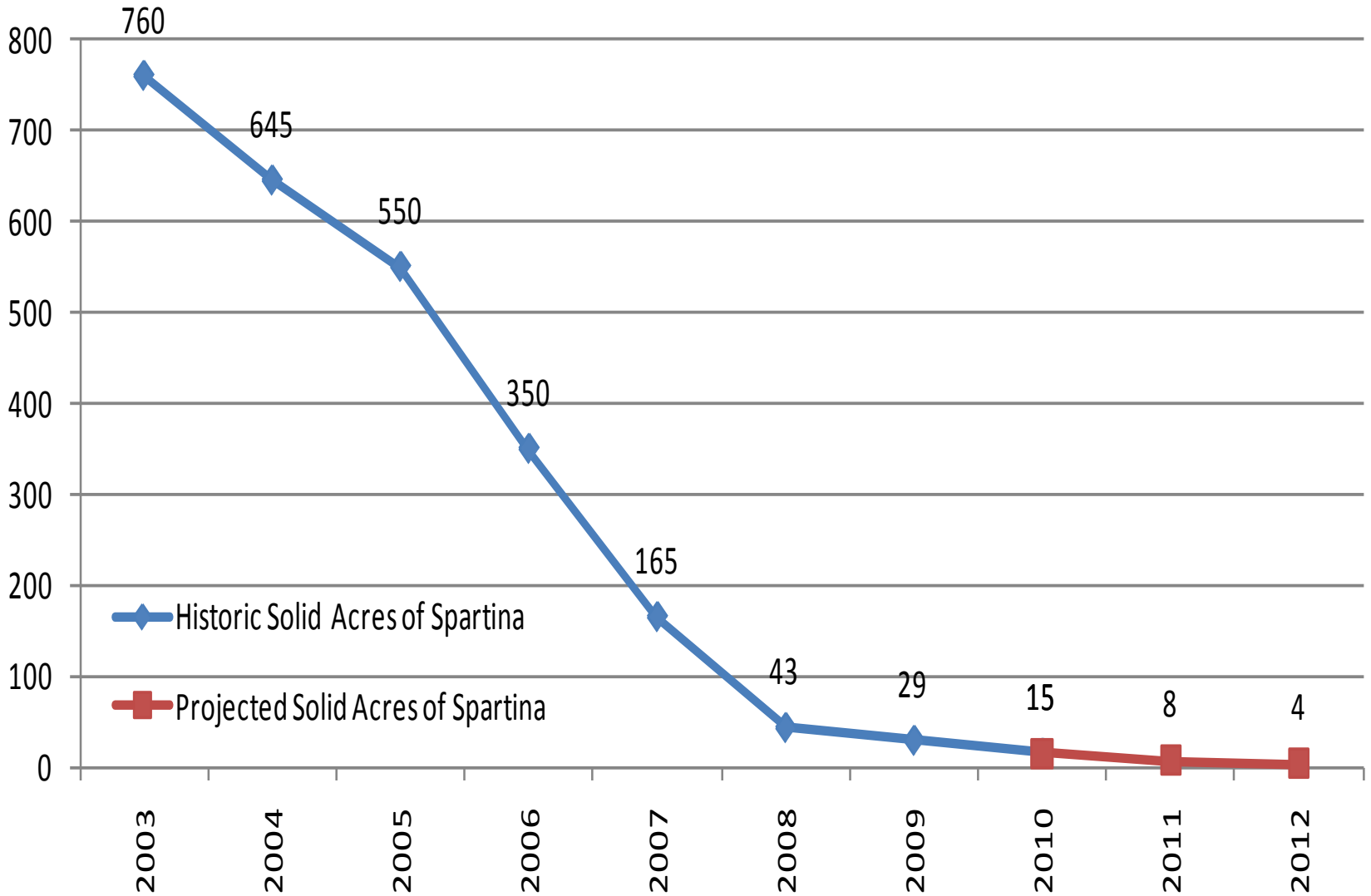
Spartina anglica

Spartina patens

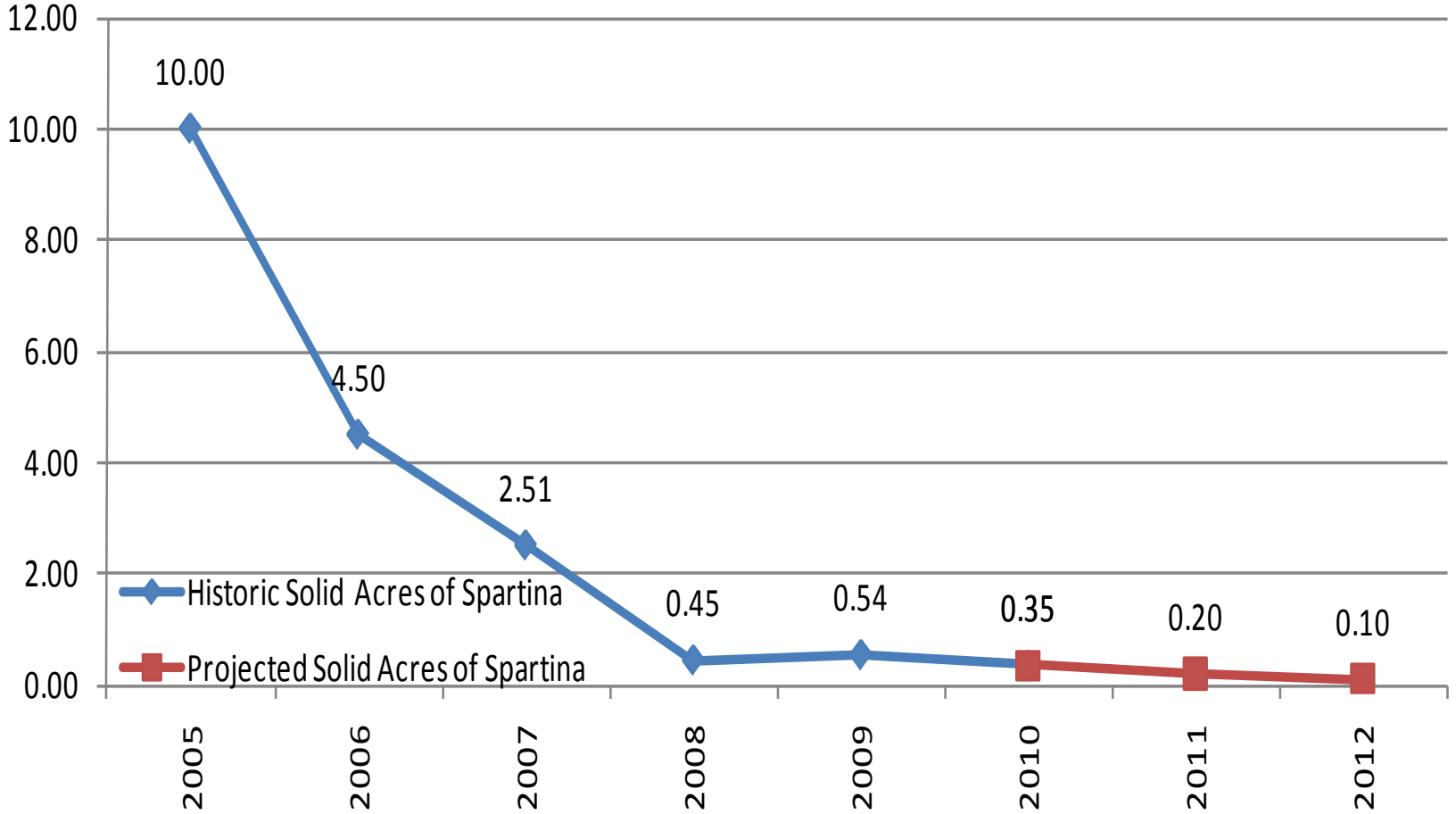
Spartina densiflora

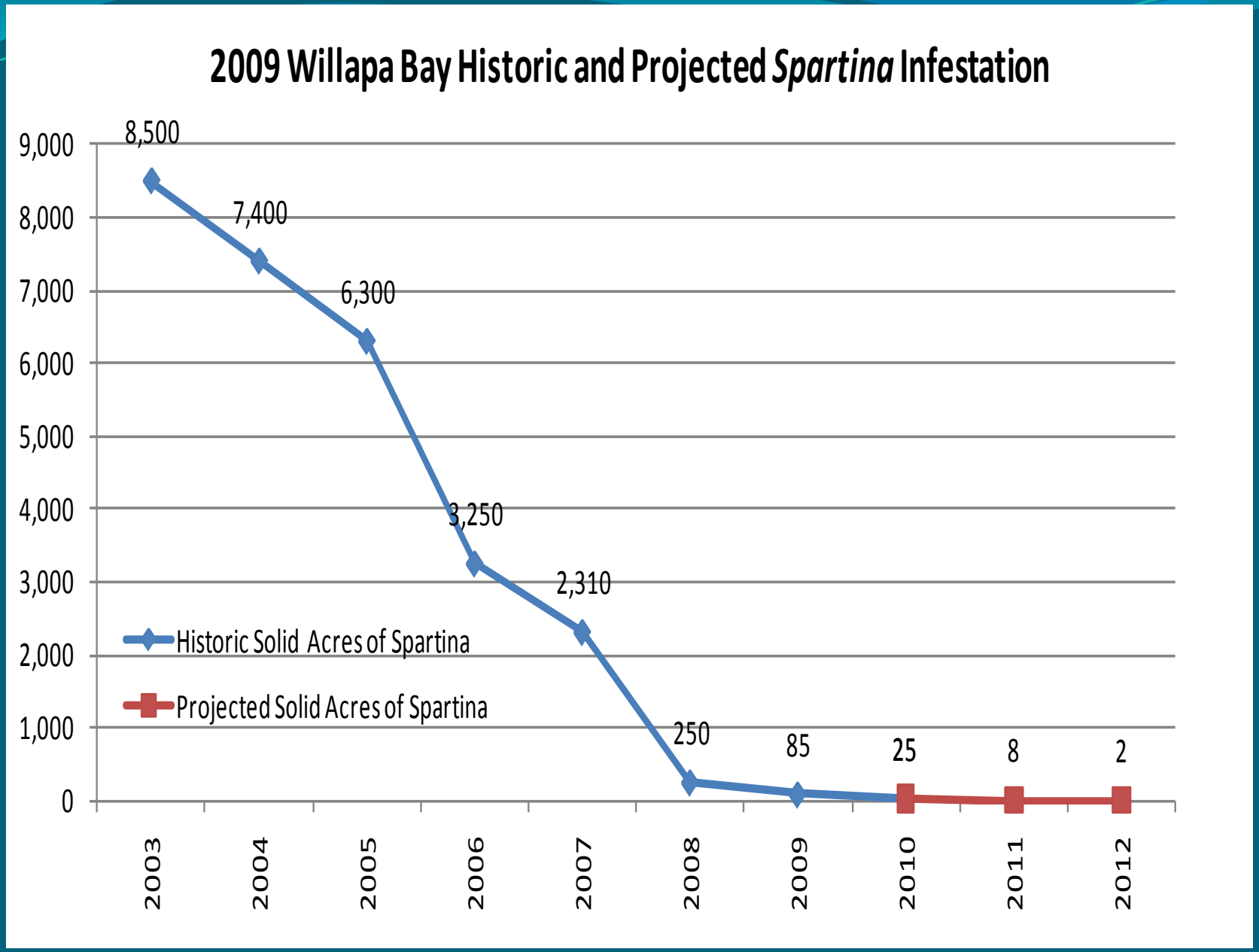

Approximate Spartina Distribution within Washington State: 2009
N
Whatcom
Bellingham
San Juan
Skagit
Island
Snohomish
Everett
Clallam
Jefferson
Kitsap
Seattle
King
Mason
Tacoma
Grays Harbor
Olympia
Pierce
Aberdeen
Thurston
Centralia
Pacific
Wahkiakum
Cowlitz
Legend
Cities
Spartina Control Sites
COUNTY
0
12.5
25
50 Miles

2009 Puget Sound Historic and Projected *Spartina* Infestation

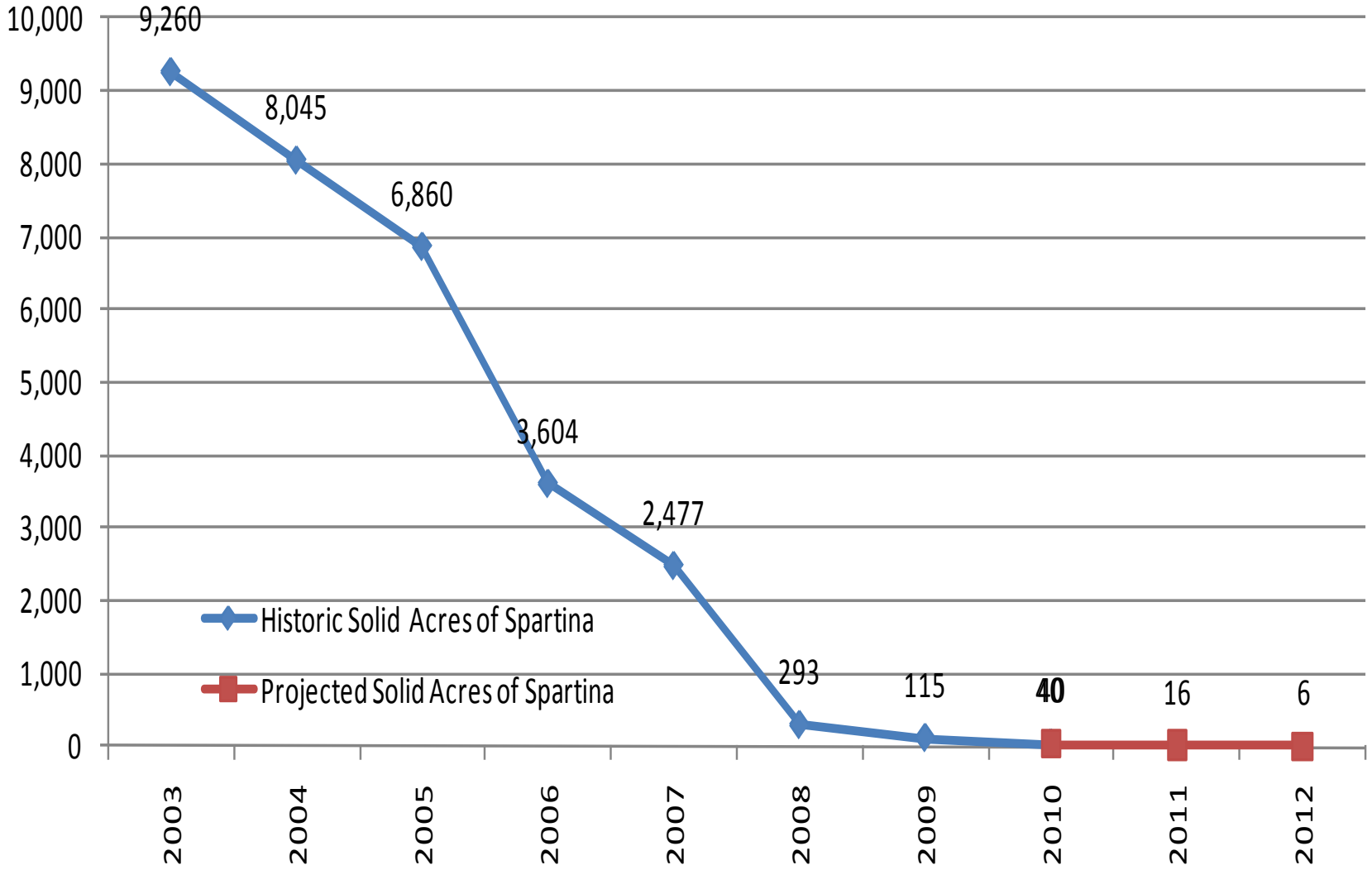


2009 Grays Harbor Historic and Projected *Spartina* Infestation

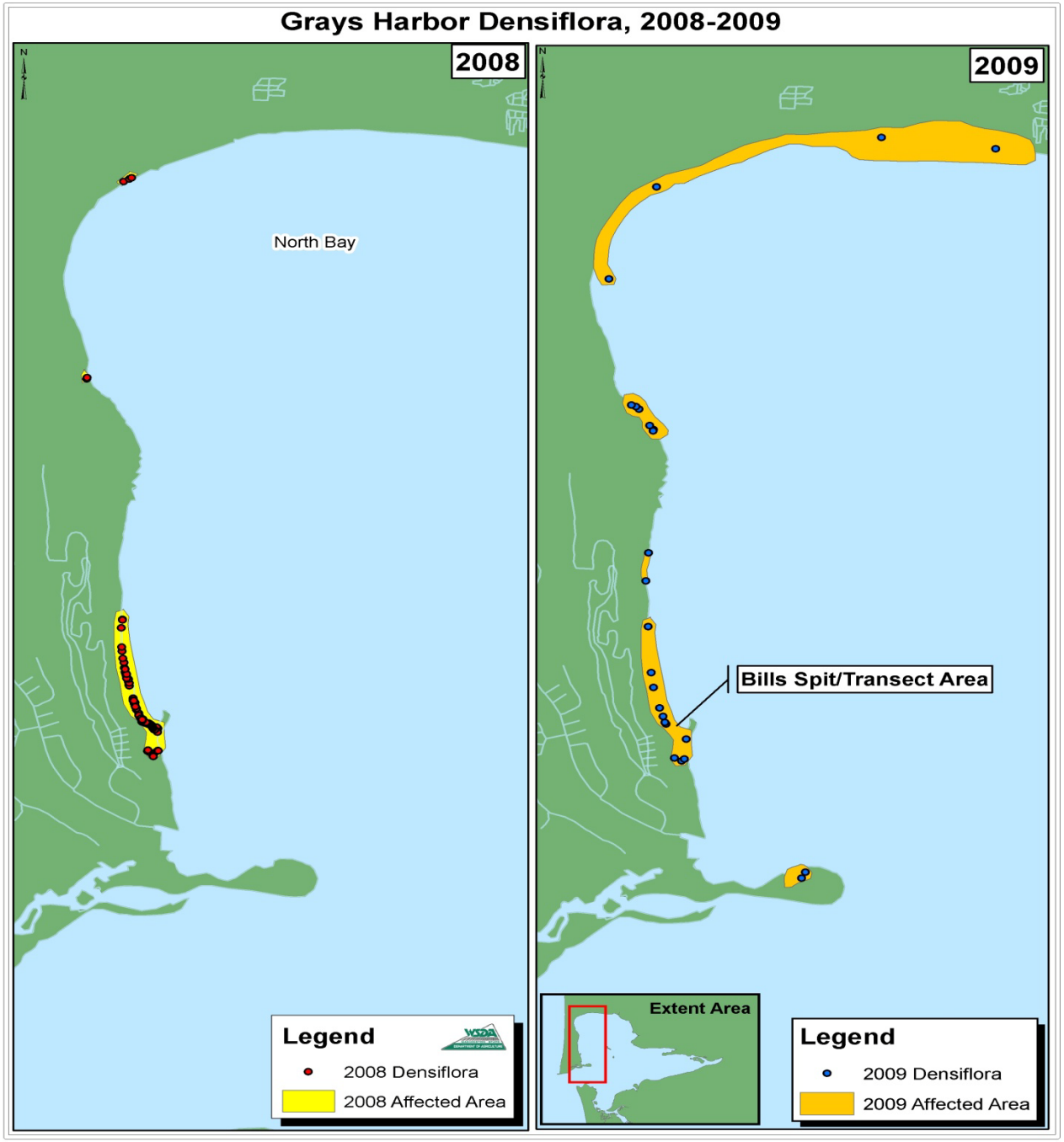



2009 Willapa Bay Historic and Projected *Spartina* Infestation
9,000
8,000
7,000
6,000
5,000
4,000
3,000
2,000
1,000
0
8,500
7,400
6,300
3,250
2,310
250
85
25
8
2
Historic Solid Acres of Spartina
Projected Solid Acres of Spartina
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012

2009 Historic and Projected Statewide *Spartina* Infestation



2009 Grays Harbor Spartina Affected Acres
N
Copalis River
North Bay
Grass Creek
Ocean Shores Airport
Densiflora Transect Area See Appendix: 3
Bowerman Basin
Hoquiam
Bills Spit
Grays Harbor
The "Sink"
Johns River
Westport
Bottle Beach
Elk River
0
1.25
2.5
5 Miles
Legend
Spartina Affected Acres
Species
Alterniflora, 3180 Acres
Densiflora, 720 Acres


Grays Harbor Densiflora, 2008-2009
2008
North Bay
Legend
2008 Densiflora
2008 Affected Area
2009
Bills Spit/Transect Area
Extent Area
Legend
2009 Densiflora
2009 Affected Area

Grays Harbor *Densiflora* Transect Area, 2009
Bills Spit
Legend
Densiflora Transect Area
Gray Harbor
Transect Area
0
100
200
400 Feet

Grays Harbor Transect Numbering Schema, 2010
N
A1
B1 A2
B2 A3
B3 A4
C3 B4 A5
C4 B5 A6
C5 B6 A7
D4 D5 C6 B7 A8
D6 C7 B8 A9
E5 E6 D7 C8 B9 A10
E7 D8 C9 B10 A11
E8 D9 C10 B11 A12
E9 D10 C11 B12 A13
E10 D11 C12 B13 A14
E11 D12 C13 B14 A15
E12 D13 C14 B15 A16
D14 C15 B16 A17
D15 C16 B17 A18
D16 C17 B18 A19
E16 D17 C18 B19 A20
E17 D18 C19 B20 A21
E18 D19 C20 B21 A22
E19 D20 C21 B22
E20 D21 C22
E21 D22
E22
0 75 150 300 Feet

Table 9. SAMPLE 2009 Grays Harbor *S. densiflora* Transect Data Sheet

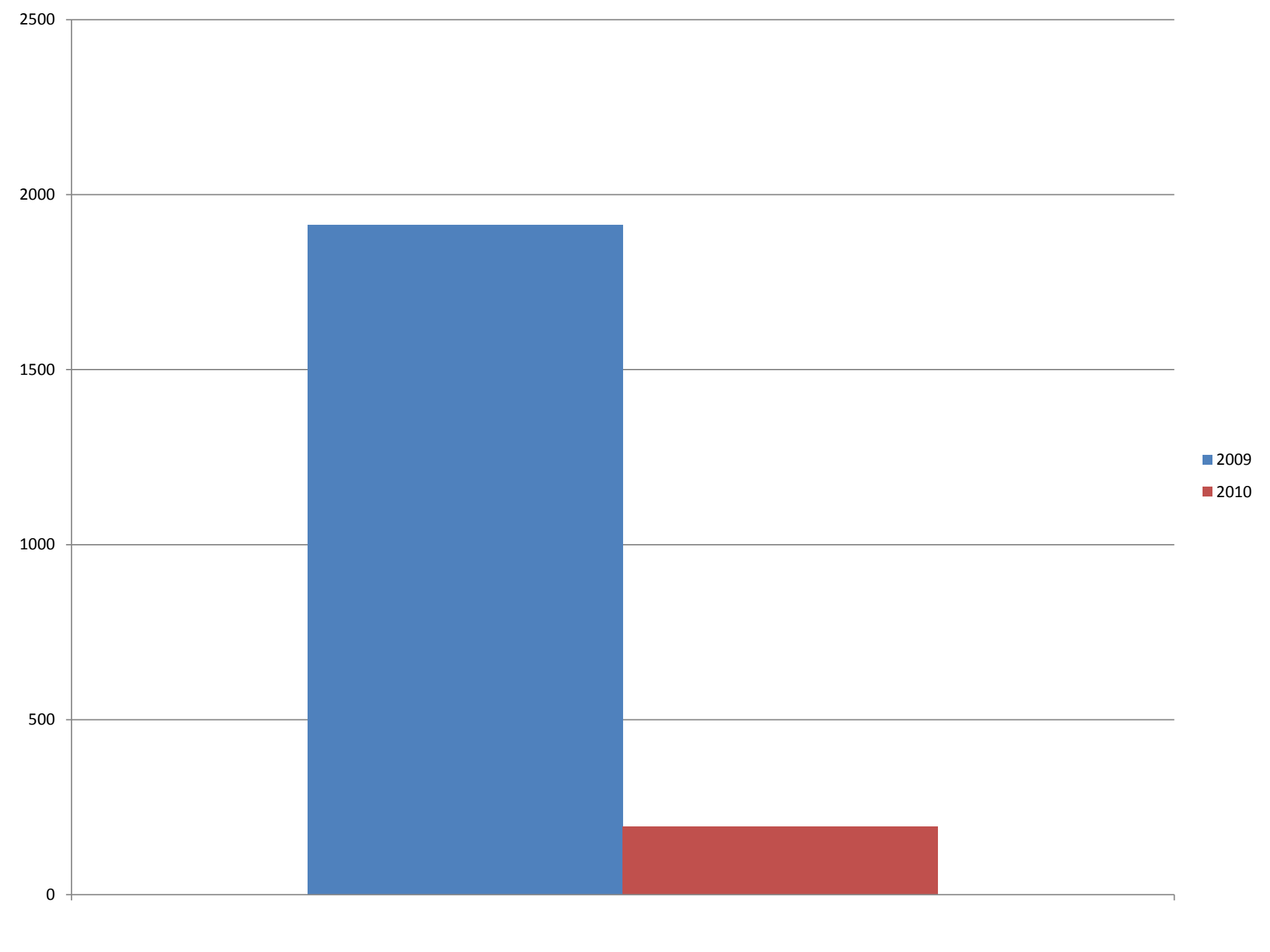
Transect	A area	A oz.	A#	B area	B oz.	B#	C area	C oz.	C#	D area	D oz.	D#	E area	E oz.	E#
1	1760	1	2	1320	3	2									
2	1760	6	5	1760	82	81									
3	1760	0	0	1760	70	72	1056	38	59						
4	1760	0	0	1760	28	34	1760	105	152	770	66	76			
5	1760	0	0	1760	10	13	1760	94	95	1452	99	102	330	8	8
6	1760	0	0	1760	0	0	1760	29	33	1760	86	122	880	32	23
7	1760	0	0	1760	0	0	1760	15	18	1760	190	136	1452	33	26
8	1760	0	0	1760	0	0	1760	2	3	1760	24	28	1386	0	0
9	1760	0	0	1760	2	2	1760	13	11	1760	52	36	1496	0	0
10	1760	0	0	1760	10	11	1760	84	67	1760	100	74	1408	0	0
11	1760	0	0	1760	4	4	1760	26	25	1760	10	8	1298	0	0
12	1760	0	0	1760	6	6	1760	58	66	1760	47	27	836	0	0
13	1760	0	0	1760	12	12	1760	8	10	1760	0	0	418	0	0
14	1760	0	0	1760	4	4	1760	1	1	1760	4	2	396	0	0
15	1760	0	0	1760	0	0	1760	17	12	1760	51	6	286	0	0
16	1760	0	0	1760	2	1	1760	60	33	1760	18	12	528	0	0
17	1760	1	1	1760	0	0	1760	16	8	1760	30	12	990	0	0
18	1760	0	0	1760	58	65	1760	17	9	1760	69	49	1100	0	0
19	1760	2	3	1760	3	1	1760	3	1	1760	101	64	1606	69	44
20	1760	3	3	1760	3	4	1760	0	0	1760	97	57	1760	34	27
21	1760	0	0	1760	0	0	1760	9	7	1760	16	13	1760	20	16
22	1760	0	0	1760	1	1	1760	0	0	1760	1	1	1760	10	8
Totals													19690	206	152

159,808 sq. ft.= 3.67 acres

2,173 oz.= 16.98 gallons

1,914 *densiflora* plants

Grays Harbor Densiflora Transect, 2009-2010 Comparison


2500
2000
1500
1000
500
0
2009
2010

WHAT NOW?

- Continued diligence
  - *Survey priority*
  - Importance of finding outlying infestations
- Continued cooperation between international, cross-state, federal, state, local, tribal and private entities
  - Track line mapping with GIS
  - Funding outlook
  - International and cross-state involvement

DOCUMENTED BENEFITS TO WILDLIFE?

-Positive indications of increased migratory bird use in Willapa Bay and Grays Harbor

-10,500 % increase in shorebird usage from 2005-2010

-Largest success story of aquatic weed eradication in the history of United States estuarial habitat

QUESTIONS