

**NOTICE OF RELEASE
OF
BAYOU LAFOURCHE GERMPLASM
CALIFORNIA BULRUSH**

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UNITED STATES DEPARTMENT OF AGRICULTURE
NATURAL RESOURCES CONSERVATION SERVICE
GALLIANO, LA

NOTICE OF RELEASE OF BAYOU LAFOURCHE GERMPLOSM
CALIFORNIA BULRUSH

SELECTED CLASS OF NATURAL GERMPLOSM

The U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) announce the release of a select ecotype of California bulrush [*Schoenoplectus californicus* (C.A. Mey.) Palla]. Bayou Lafourche Germplasm was tested under the NRCS accession number 9068287.

This plant will be referred to as Bayou Lafourche Germplasm California bulrush and is released as a select class of plant materials (natural track).

Bayou Lafourche Germplasm will provide a commercially available ecotype of California bulrush for use in fresh to intermediate coastal wetlands, marsh shorelines, and open waterways of the north central Gulf of Mexico basin.

Collection Site Information: Accession 9068287 was collected in 1998 from a native stand located near the town of Golden Meadow, Louisiana. Vegetative plant materials were collected from a site off of Hwy LA 1 along Bayou Lafourche in Lafourche Parish (MLRA 150). It was growing on Schriever clay (Sk) soil type where the average depth of water is 12" with inter-tidal influence.

Description: California bulrush is an herbaceous, native rhizomatous perennial that forms dense vegetative colonies along shorelines, in open water, or on mudflats. California bulrush is an emergent wetland plant that spreads primarily by vegetative propagation, producing new stems from an extensive system of underground rhizomes, or, to a limited extent, through seed dispersal. Plant stems are obtusely triangular and generally will range from 5 to 10 feet in height; taller in nutrient-rich environments. California bulrush leaves are inconspicuous, slender, v-shaped, and at maturity consist of brown sheaths located at the base of the stem. Flowers are branched terminal clusters of brownish, drooping, and erect spikelets that are located 1 to 3 inches from what appears to be the tip of the stem (Godfrey and Wooten) (Correll and Johnston). An important characteristic of California bulrush is that it can grow in relatively deep water. It is not uncommon for extensive colonies to grow in 36 inches or more of water. California bulrush colonies tend to grow parallel to and continuous along shorelines or in unobstructed habitats, in solid somewhat circular stands of an acre or larger. Bayou Lafourche Germplasm has a fair tolerance to intermediate marsh habitats (salinity 0.5 to 3.5 ppt.) and a low tolerance to brackish marsh habitats (salinity 3.5 to 10.0 ppt.) (Urbatsch, 2002) (Hammer, 1992).

Conservation Uses: Bayou Lafourche Germplasm is recommended for erosion control along shorelines, canal banks, levee banks, and other areas of soil-water interface. When planted as vegetative barriers across open water, California bulrush has significantly reduced ponds fetch and wave energy permitting other aquatic plants to grow in an otherwise unfavorable environment (NRCS, LSU 2000). California bulrush maybe used in the creation and restoration of wetlands, to improve water quality, and reduce suspended sediments. It is not known to cause navigation problems (Tarver, 1988) along watercourses. Plantings provide habitat for mammals, birds and fish that visit the sites and promote establishment zones for many submerged aquatic plants

Method of Selection: Bayou Lafourche Germplasm was initially evaluated at the USDA-NRCS Golden Meadow Plant Materials Center (PMC), Galliano, Louisiana and at an off-center site near Grand Lake, Louisiana, from 2000 to 2004. A total of 48 accessions collected from Louisiana and Southeast Texas and a released variety from Georgia ('Restorer') made up the assembly. From initial evaluations at two locations, accession 9068287 was determined to be the best accession based on vigor, height, stem density, and stem width (Table 1 and 2), ranking above average in all categories. Bayou Lafourche demonstrated superior performance when compared to the commercial variety 'Restorer'.

Table 1. Initial Evaluation Summary of California bulrush at the USDA-NRCS Golden Meadow Plant Materials Center (2000-2004)

Accession	Height (cm)	Stem Width (mm)	Vigor*	Stem Density*
	Average	Average	Average	Average
9068287	280.60	16.29	2.80	4.40
Restorer	205.00	11.12	5.40	4.80
9068313	264.00	14.64	2.40	3.40
9068326	259.60	13.18	3.00	2.80
9068283	275.20	13.91	3.00	3.80
9068274	257.00	14.20	3.20	3.80
9068278	287.40	16.26	3.40	3.20
9068372	275.80	14.78	3.60	3.60
9068273	258.80	13.31	3.60	5.00
9068330	266.60	12.64	3.80	3.40
9068325	256.80	15.02	3.80	3.40
9068310	264.80	15.13	3.80	4.80
9068281	263.40	14.13	3.80	4.40
9068309	244.40	14.13	4.00	4.40
9068335	236.20	12.66	4.20	4.20
9068284	232.00	14.64	4.20	4.60
9068280	267.20	13.58	4.20	5.80
9068370	248.60	15.08	4.20	5.80
9068272	245.00	16.37	4.40	4.80
9068371	239.80	13.22	4.40	5.00

9068282	256.80	16.41	4.40	5.00
9068268	260.60	12.92	4.80	4.20
9068336	239.20	15.08	4.80	5.00
9068328	248.80	12.39	4.80	5.00
9068293	243.20	13.71	5.00	4.80
9068333	242.80	14.63	5.00	5.40
9068295	238.60	15.77	5.00	5.60
9068277	236.00	12.28	5.00	6.20
9068324	272.00	12.31	5.20	4.80
9068267	258.20	14.36	5.40	4.80
9068270	230.80	13.05	5.40	5.20
9068294	242.20	13.53	5.40	5.80
9068265	240.00	14.29	5.60	6.00
9068269	233.40	13.14	5.80	6.00
9068329	197.00	11.00	6.00	4.80
9068312	236.80	12.40	6.00	6.60
9068286	209.60	14.73	6.00	7.60
9068279	249.80	14.02	6.20	5.20
9068327	235.00	13.84	6.20	7.40
9068299	235.60	12.79	6.40	6.80
9068275	242.60	11.81	6.60	6.20
9068332	151.00	10.48	6.60	7.60
9068323	228.00	11.26	6.80	5.60
9068298	223.20	13.30	6.80	7.40
9068301	230.60	12.20	7.00	5.40
9068296	224.00	13.77	7.40	8.00
9068337	239.60	14.49	7.60	7.60
9068271	203.40	15.90	7.60	8.20
9068276	222.60	12.01	7.80	8.00
MEAN	242.60	13.77	5.40	5.00

* Ocular rating, 1 best - 9 worst

Table 2. Initial Evaluation Summary of California bulrush at Grand Lake, Louisiana (2004)

Accession	Height cm	Stem Width mm	Vigor* 1-9	Stand Density* 1-9
9068287	280	19.03	1	1
Restorer	220	16.79	4	6
9068272	260	19.41	1	4
9068327	270	21.36	1	5.5
9068309	230	23.35	2	6.5
9068282	240	22.01	3	6
9068294	240	20.75	3	4
9068298	230	21.79	3	2.5
9068337	250	20.99	3	3.5
9068267	250	22.92	4	7.5
9068271	230	22.80	4	5
9068336	260	12.42	4	5

9068269	220	18.79	5	7.5
9068273	250	21.77	5	6
9068278	240	15.53	5	6
9068281	230	20.72	5	7
9068283	220	17.69	5	6.5
9068293	220	20.40	5	5
9068311	220	12.38	5	6
9068323	220	14.10	5	4
9068326	210	16.57	5	6.5
9068333	220	15.84	5	7
9068280	200	19.71	6	8
9068284	240	20.54	6	7
9068295	250	22.24	6	6.5
9068301	220	14.55	6	7.5
9068323	210	24.69	6	6
9068325	190	16.50	6	7
9068330	210	20.97	6	6
9068265	199	20.62	7	8.5
9068268	190	16.56	7	8
9068268	210	14.86	7	8
9068270	200	20.34	7	6.5
9068274	210	17.03	7	7.5
9068275	230	17.14	7	8.5
9068277	170	11.12	7	7
9068299	220	20.78	7	8
9068310	210	19.74	7	6
9068326	180	17.72	7	8.5
9068328	220	24.40	7	7.5
9068276	160	13.54	8	8.5
9068279	180	15.46	8	8.5
9068312	193	22.71	8	7.5
9068329	120	13.37	8	8.5
9068335	205	12.54	8	8.5
9068370	170	16.87	8	8.5
9068332	0	0	9	9
MEAN	220	19.22	6	7

* Ocular rating, 1 best - 9 worst

Ecological Considerations and Evaluation: An Environmental Evaluation of Plant Materials Releases (attachment 1) was completed using guidelines established by NRCS (USDA-NRCS, 2000), and the best available information for this species. Results of this evaluation determined that Bayou Lafourche Germplasm California bulrush was suitable for release based on the criterion contained in this document. This conclusion is mainly due to the fact that California bulrush is a naturally occurring species in Louisiana and adjoining states and therefore, would not constitute an introduction of an exotic species into local ecosystems. Any negative impacts on other native plant species would likely be minimal to non-existent.

Area of Adaptation: Bayou Lafourche Germplasm California bulrush is well adapted for freshwater and slight to moderate levels of salinity (Everett, 1994). This selection has performed well in field test and is anticipated to be broadly adapted for use in the southern and central portions of Louisiana, southeast Texas and southern Mississippi coinciding with MLRA 131A (Southern Mississippi River Alluvium), MLRA 131C (Red River Alluvium), MLRA 134 (Southern Mississippi Valley Loess), MLRA 150A (Gulf Coast Prairies), MLRA 150B (Gulf Coast Saline Prairie), MLRA 151 (Gulf Coast Marsh), MLRA 152A (Eastern Gulf Coast Flatwoods), and MLRA 152B (Western Gulf Coast Flatwoods). Current testing has not verified the northern range of its adaptation.

Availability of Plant Materials: Generation 1 (G1) plants materials for commercial nursery production are available from the USDA-NRCS, Golden Meadow Plant Materials Center, Galliano, Louisiana. Bayou Lafourche Germplasm California bulrush is a clonal release and must be propagated by vegetative means. Seeds of Bayou Lafourche are not available and seeds are not to be used for plant increase or establishment of this selected release.

References:

- Correll, D. S. and M. C. Johnston. 1970. Manual of Vascular Plants of Texas. Texas Research Foundation. Dallas, Texas. p.1881.
- Everett, W. H. 1994. Species Guides for Wetland Plantings in the Southeast United States. USDA-NRCS.
- Godfrey, M. C. and J. W. Wooten. 1979. Aquatic and Wetland Plants of Southeastern United States, Monocotyledons.
- Hammer, D. A., 1992. Creating Freshwater Wetlands. Lewis Publishers, Inc. Chelsea, MI. p. 199.
- Tarver, D. P., J. A. Rodgers, M. J. Mahler, and R. L. Lazor. 1988. Aquatic and Wetland Plants of Florida.
- Urbatsch, L. E., 2002. Plants of the Southwestern Coastal Region of Louisiana (Plant Lists), Louisiana State University. Baton Rouge, LA.
- USDA-NRCS and LSU Ag Center, 2000. Plant Guide, *Schoenoplectus californicus*, California Bulrush, Golden Meadow Plant Materials Center, Galliano, LA.
- USDA-Natural Resources Conservation Service. 2000. National Plant Materials Manual, Title 190 (Washington, D.C., U.S. Government Printing Office, June, 2000).

Prepared by:

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Morris Houck
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Signatures for release of:
Bayou Lafourche Germplasm California bulrush
[*Schoenoplectus californicus* (C.A. Mey.) Palla]

Dorothy S. Harris
Acting State Conservationist
United States Department of Agriculture
Natural Resources Conservation Service
Alexandria, LA

Date

Diane Gelburd, Ph.D.
Director
Ecological Science Division
United States Department of Agriculture
Natural Resources Conservation Service
Washington, D.C.

Date

**ATTACHMENT 1:
Environmental Evaluation of Plant Materials Releases**

Name of person scoring: Garret Thomassie **Date of scoring:** 7-12-2007

Scientific Name: *Schoenoplectus californicus* **Common Name:** California bulrush

Release Name: Bayou Lafourche
Germplasm

Is the plant native to the US? Yes

Is the plant native to the area of intended use? Yes

Authority used to determine native status: USDA/NRCS Plants Database

What is the intended area of use for this plant? LA Central Gulf of Mexico

What is the intended use for this plant? Coastal restoration and conservation

Areas in which the release is known to be invasive or has a high probability of being invasive: none

<u>Summary of Criteria from Section A</u>	<u>Score</u>
Part 1. Impact on Habitats, Ecosystems, and Land Use	<u>0</u>
Part 2. Ease of Management	<u>20</u>
Part 3. Conservation Need and Plant Use	<u>13</u>
Part 4. Biological Characteristics	<u>31</u>

Final Determination of Release Based on the Environmental Evaluation:

- OK to Release**
- OK to Release but qualify use and intended area of use***
- Do Not Release - NPL determines if release is made***
- Do Not Release - document and destroy materials**

I certify that this Environmental Evaluation was conducted with the most accurate and current information possible.

/s/ Garret Thomassie
Signature of Person Scoring Date 7-12-2007

Signature of NPL indicating that it is OK to make the release:

National Program Leader, PM **Date**

* An Environmental Assessment (EA) and/or Environmental Impact Statement (EIS) may be required prior to release. If required, attach the EA and/or EIS to this worksheet and to the release notice.

Section A. Scoring of Criteria for Impact, Management, Need and Biological Characteristics

Circle the appropriate number for each of the following criteria. Add up the scores for each part and record at the end of each part. Comments which clarify answers or provide supporting information may be included in the right margin of the worksheet or attached on a separate sheet of paper.

Part 1: Impact on Habitats, Ecosystems, and Land Use

This section assesses the ability of the species or release to adversely affect habitats, ecosystems, and agricultural areas.

- 1) Ability to invade natural systems where the species does not naturally occur**
 - a) Species not known to spread into natural areas on its own 0 ✓
 - b) Establishes only in areas where major disturbance has occurred in the last 20 years (e.g., natural disasters, highway corridors) 3
 - c) Often establishes in mid- to late-successional natural areas where minor disturbances occur (e.g., tree falls, streambank erosion), but no major disturbance in last 20-75 years 6
 - d) Often establishes in intact or otherwise healthy natural areas with no major disturbance for at least 75 years 10

- 2) Negative impacts on ecosystem processes (e.g., altering fire occurrence, rapid growth may alter hydrology)**
 - a) No perceivable negative impacts 0 ✓
 - b) Minor negative impacts to ecosystem processes 2
 - c) Known significant negative impacts to ecosystems processes 6
 - d) Major, potentially irreversible, alteration or disruption of ecosystem processes 10

- 3) Impacts on the composition of plant communities where the species does not naturally occur**
 - a) No negative impact; causes no perceivable changes in native populations 0 ✓
 - b) Noticeable negative influences on community composition 5
 - c) Causes major negative alterations in community composition 10

- 4) Allelopathy**
 - a) No known allelopathic effects on other plants 0 ✓
 - b) Demonstrates allelopathic effects on seed germination of other plants 3
 - c) Demonstrates allelopathic effects to mature stages of other plants 5

5) Impact on habitat for wildlife or domestic animals (aquatic and terrestrial), including threatened and endangered species (coordinate with USFWS and state Heritage Programs as appropriate)	
a) No negative impact on habitat, or this criteria not applicable based on intended use for the plant	0 ✓
b) Minor negative impact on habitat (e.g., decreased palatability; lower wildlife value; decreased value for undesirable animal species)	2
c) Significant negative impact on habitat (e.g., foliage toxic to animals; significantly lower value for wildlife; excludes desirable animal species from an area)	5
6) Impact on other land use	
a) No negative impacts on other land uses	0 ✓
b) Minor impacts (plant could invade adjacent areas and decrease its value)	3
c) Significant impacts (plant may alter the system or adjacent lands significantly enough to prevent certain uses)	5
Total Possible Points 45	
Total Points for Part 1 <u>0</u>	

Part 2. Ease of Management

This part evaluates the degree of management which might be needed to control the species or release if it becomes a problem, or eradicate the species or release if it is no longer desirable.

1) Level of effort required for control	
a) Effective control can be achieved with mechanical treatment	0
b) Can be controlled with one chemical treatment	2
c) One or two chemical or mechanical treatments required or biological control is available or practical	5 ✓
d) Repeated chemical or mechanical control measures required	10
2) Effectiveness of community management to potentially control the plant release	
a) No management is needed, the plant release is short-lived and will significantly decrease or disappear within 5 years under normal conditions without human intervention	0
b) Routine management of a community or restoration/preservation practices (e.g., prescribed burning, flooding, controlled disturbance, pasture renovation) effectively controls the release	2
c) Cultural techniques beyond routine management can be used to control the release	4 ✓
d) The previous options are not effective for managing or controlling the release	10

- 3) **Side effects of chemical or mechanical control measures**
- a) Control measures used on release will have little or no effect on other plants 0
 - b) Control measures used on release will cause moderate effects on other plants 3 ✓
 - c) Control measures used on release will cause major effects on other plants 5

**If spreads by seed, or both seed and vegetative means, go to #4

**If spreads by vegetative means only, go to #5

- 4) **Seed banks**
- a) Seeds viable in the soil for 1 year or less 0 ✓
 - b) Seeds remain viable in the soil for 2-3 years 1
 - c) Seeds remain viable in the soil for 4-5 years 3
 - d) Seeds remain viable in the soil for more than 5 years 5

- 5) **Vegetative regeneration under natural conditions**
- a) Regeneration from resprouting of cut stumps 1
 - b) Regeneration from pieces of the root left in the soil 3 ✓
 - c) Regeneration from root or stem parts left in the soil 5

- 6) **Resprouts after cutting above-ground parts**
- a) Does not resprout or resprouts but the release is sterile and does not produce seed 0
 - b) Resprouts and produces seed in future years 3
 - c) Resprouts and produces seed in same year 5 ✓

Total Possible Points 40

Total Points for Part 2 20

Part 3. Conservation Need and Plant Use

This part evaluates the importance of the species or release to meet a conservation need.

- 1) **Potential Use(s) of the Plant Release**
- a) Used for low-priority issues or single use 1
 - b) Has several uses within conservation 2
 - c) Has many uses within conservation as well as outside of conservation 4
 - d) Has high-priority use within conservation 5 ✓

- 2) **Availability of Other Plants to Solve the Same Need**
- a) Many other plants available 1
 - b) Few other plants available 3 ✓
 - c) No other plants available 5

3) Consequences of <u>Not</u> Releasing This Plant	
a) No impact to conservation practices	0
b) Minor impact on one or more conservation practice	1
c) Serious impact on one conservation practice	3
d) Serious impact on more than one conservation practices	5 ✓
Total Possible Points	15
Total Points for Part 3	13

Part 4. Biological Characteristics

This part evaluates the biological properties which indicate the natural ability of the species or release to propagate and maintain itself under natural conditions. Note: these criteria relate to the species under natural conditions, as opposed to the species under managed conditions used to increase the species, i.e. seed increase programs, or specific propagation methods which do not normally occur in nature.

1) Typical mode of reproduction under natural conditions	
a) Plant does not increase by seed or vegetative means (<u>skip to #11</u>)	0
b) Reproduces almost entirely by vegetative means	1 ✓
c) Reproduces only by seeds	3
d) Reproduces vegetatively and by seed	5
2) Reproduction (by seed or vegetative) in geographic area of intended use	
a) Reproduces only outside the geographic area of intended use	1
b) Reproduces within the geographic area of intended use	3 ✓
c) Reproduces in all areas of the United States where plant can be grown	5
3) Time required to reach reproductive maturity by seed or vegetative methods	
a) Requires more than 10 years	1
b) Requires 5-10 years	2
c) Requires 2-5 years	3 ✓
d) Requires 1 year	5

** If reproduces only by seed, skip to #5

4) Vegetative reproduction (by rhizomes, suckering, or self-layering)	
a) Vegetative reproduction rate maintains population (plant spreads but older parts die out)	1
b) Vegetative reproduction rate results in moderate increase in population size (plant spreads <3' per year)	3 ✓
c) Vegetative reproduction rate results in rapid increase in population size (plant spreads >3' per year)	5

** If reproduces only vegetatively, skip to #11

- 5) Ability to complete sexual reproductive cycle in area of intended use**
- a) Not observed to complete sexual reproductive cycle in the geographic area of intended use, but completes sexual reproduction in distant areas of the United States 1
 - b) Not observed to complete sexual reproductive cycle in the geographic area of intended use, but completes sexual reproduction in adjoining geographic areas 3
 - c) Observed to complete the sexual reproductive cycle in the geographic area of intended use 5 ✓
- 6) Frequency of sexual reproduction for mature plant**
- a) Almost never reproduces sexually 0
 - b) Once every five or more years 1
 - c) Every other year 3
 - d) One or more times a year 5 ✓
- 7) Number of viable seeds per mature plant each reproductive cycle**
- a) None (does not produce viable seed) 0
 - b) Few (1-10) 1
 - c) Moderate (11-1,000) 3 ✓
 - d) Many-seeded (>1,000) 5
- 8) Dispersal ability**
- a) Limited dispersal (<20') and few plants produced (<100) 1
 - b) Limited dispersal (<20') and many plants produced (>100) 3
 - c) Greater dispersal (>20') and few plants produced (<100) 7 ✓
 - d) Greater dispersal (>20') and many plants produced (>100) 10
- 9) Germination requirements**
- a) Requires open soil and disturbance to germinate 1 ✓
 - b) Can germinate in vegetated areas but in a narrow range or in special conditions 5
 - c) Can germinate in existing vegetation in a wide range of conditions 10
- 10) Hybridization**
- a) Has not been observed to hybridize outside the species 0 ✓
 - b) Hybridizes with other species in the same genera 3
 - c) Hybridizes with other genera 5

11) Competitive ability (of established plants)

- | | |
|--|-----|
| a) Poor competitor for limiting factors | 0 ✓ |
| b) Moderately competitive for limiting factors | 5 |
| c) Highly competitive for limiting factors | 10 |

Total Possible Points 70

Total Points for Part 4 31

References

Many of the criteria used in this rating system were adapted from the following sources:

Hiebert, Ron D. and James Stubbendieck. 1993. Handbook for Ranking Exotic Plants for Management and Control. US Department of the Interior, National Park Service, Denver, CO.

Randall, John M., Nancy Benton, Larry E. Morse, and Gwendolyn A. Thornhurst. 1999. Criteria for Ranking Alien Wildland Weeds. The Nature Conservancy, Arlington, VA.

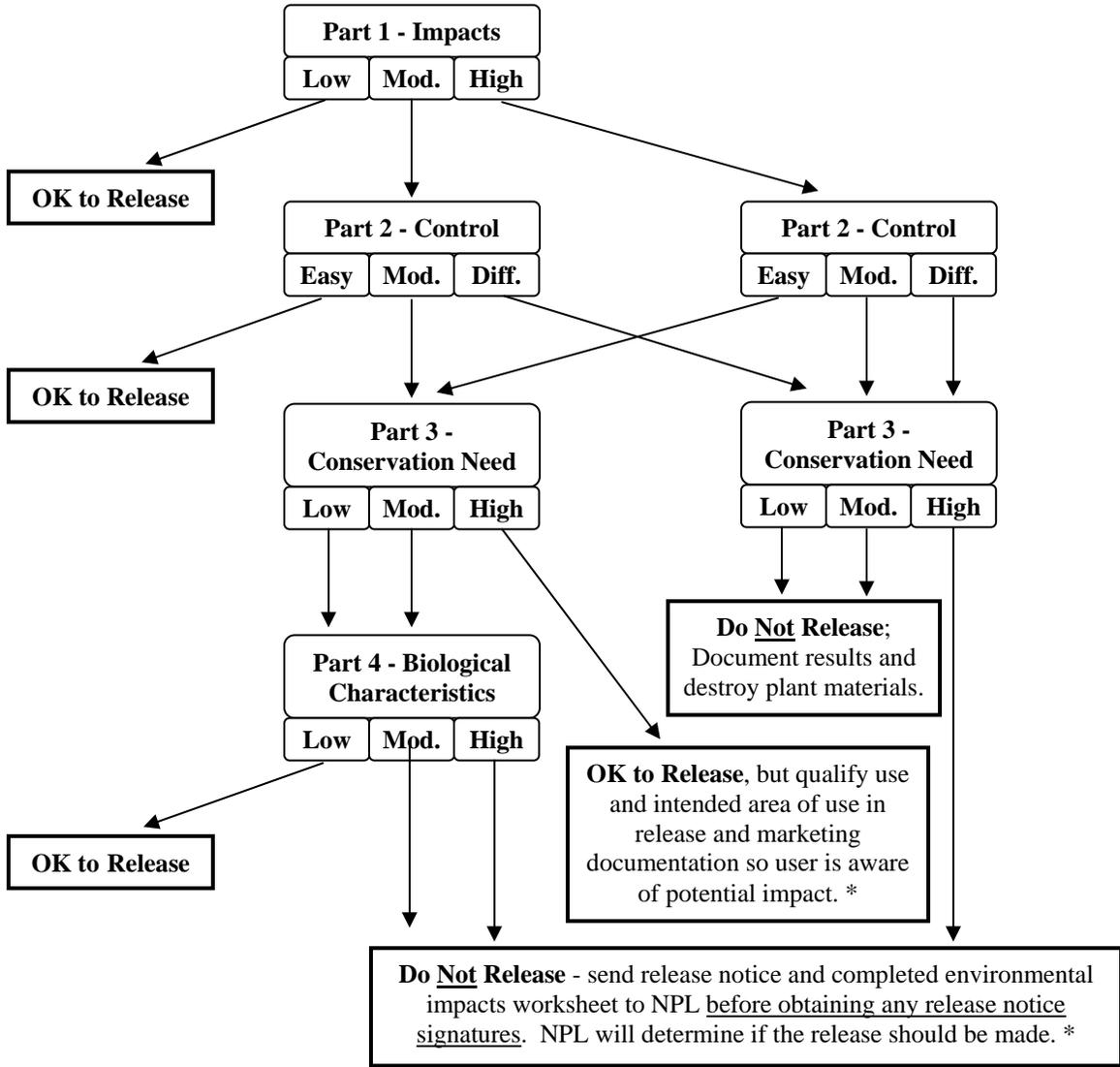
Section B. Scoring and Interpretation

Based on the scores from above, circle the points range you scored to determine the appropriate interpretation. The interpretation will be used to determine the course of action for the release.

Part	Points Scored	Interpretation
Part 1. Impacts on Habitats, Ecosystems, and Land Use	0-15 ✓	Low chance plant is going to affect the environment
	16-25	Moderate chance plant is going to affect the environment
	26-45	High chance plant is going to affect the environment
Part 2. Ease of Management	0-20 ✓	Easy to control
	21-30	Moderate to control
	31-40	Difficult to control
Part 3. Conservation Need and Plant Use	0-5	Low need
	6-9	Moderate need
	10-15 ✓	High need
Part 4. Biological Characteristics	0-25	Low chance plant is going to propagate and increase itself
	26-40 ✓	Moderate chance plant is going to propagate and increase itself
	41-70	High chance plant is going to propagate and increase itself

Section C. Action to Take for Releasing Plants

Based on the interpretation above, follow the decision tree below. Start with your interpretation rating for Part 1 (Low, Moderate, or High) and follow the appropriate arrow to the next level until you reach a decision box. Once you reach a decision box you may stop and record the decision on the first page of this worksheet.



* Indicates that an Environmental Assessment or Environmental Impact Statement may need to be prepared prior to release (see NPMM Part 540.73(a)(3)).

**ATTACHMENT 2:
Name Clearance**

August 7, 2005

TO: Morris Houck, Plant Materials
Specialist
Louisiana

FROM: Shawn Belt, Horticulturist

SUBJECT: **Name Clearance for Release**

The following release has received name clearance:

Schoenoplectus californicus Bayou Lafourche Germplasm (California bulrush)
There were no known conflicts with the name in the National Plant Germplasm System's GRIN database. The name conforms to the rules of the *International Code of Nomenclature for Cultivated Plants* and AOSCA and Plant Materials Program guidelines.

Additionally, at the time of release you will need to do the following:

- 1) Send to the National PMC a seed sample (5000-7500 live seeds) for long term preservation in the National Plant Germplasm System (NPGS). We will send the sample to NPGS.
- 2) Prepare one mounted botanical specimen for each release with appropriate labels and send it to the National PMC. We will submit the sample to the National Arboretum herbarium as a permanent record of the release. Please refer to NPMM sections 540.74(g)(3) and 542.4 for guidelines and preparation of botanical specimens.
- 3) Register the name of each release with the Crop Science Society of America (CSSA). I have attached the forms and directions for this process. Please copy the National PMC on submissions to CSSA.

Please let me know if you have questions or if we can provide assistance.

Sincerely,

Shawn Belt,
Horticulturist

**ATTACHMENT 3:
Germplasm availability and commercial production potential worksheet**

Species	<u>Schoenoplectus californicus</u>
Common name	<u>California bulrush</u>
Release name	<u>Bayou Lafourche Germplasm</u>
Plant symbol	<u>SCCA11</u>
Accession number(s)	<u>9068287</u>
Lead PMC	<u>GMPMC</u>
Lead PMS	<u>LAPMS</u>

Plant habit (circle)	<input checked="" type="checkbox"/> Grass	<input type="checkbox"/> forb	<input type="checkbox"/> shrub
	<input type="checkbox"/> Tree	<input type="checkbox"/> other (specify) _____	

Purpose of release _____

Material available as (circle)	<input type="checkbox"/> Seed	<input checked="" type="checkbox"/> plants	<input type="checkbox"/> cuttings
	<input type="checkbox"/> Culms	<input type="checkbox"/> other (specify) _____	<input checked="" type="checkbox"/> rhizomes

Foundation Seed or Plant Production (PMC)

Current field size	<u>30' x 30'</u>	<u>.25 acre</u>
	<u>(2007)</u>	<u>(2008)</u>
Annual production	<u>10000 stems</u>	<u>100,000 stems</u>

If seed produced

Field seeding rate	<u>N/A</u>
PLS pounds available for distribution	<u>N/A</u>

If plants or other types of propagules produced

Field planting rate	<u>1 plant per</u> <u>5' x 5' spacing</u>
Number available for distribution	<u>500</u>

Field/demonstration plantings

Number of plantings conducted	<u>4</u>
Number of plantings anticipated	<u>2</u>

Release Distribution

Number of potential growers	<u>6</u>
Anticipated distribution amount per grower	<u>200 plugs</u>
Method of distribution	<u>Grower pickup at center</u>

Provide brief narrative regarding interest of seed and plant producers to grow and market this new release and how this interest was determined (are materials already in commercial production, are growers requesting this material, etc.):

There has been many request from commercial grows, state, and federal agencies over the past several years for a selection of California bulrush for coastal restoration. Noting this demand, the Golden Meadow Plant Materials Center began in 1998 collecting material and testing for a bulrush selection to meet wetland restoration demands.

Currently there are 4 commercial growers producing common California bulrush for wetland restoration projects. Having a proven selection for commercial production to help satisfy the demands for California bulrush will increase the success of restoration projects.

Four phone calls were made to commercial grows on 7-25-2007 to ask if available would they be interested in requesting this material for commercial production. In all four phone conversations the answer was yes and how soon could they obtain material.

**ATTACHMENT 4:
Botanical Identification**

August 07, 2007

TO: Morris Houck File Code:
FROM: Gary Fine
SUBJECT: Botanical Identification

Reference: Plant Materials Collection, Accession 9068287, Collected November 5, 1998 by Gary Fine and Garret Thomassie

Vegetative plant materials were collected from a natural stand of California bulrush [*Schoenoplectus californicus* (C.A. Mey.) Palla] by Gary Fine and Garret Thomassie November 5, 1998. The plant collection was assigned NRCS Accession No. 9068287. Plant identification for species was obtained by reference (Godfrey and Wooten, Aquatic and Wetland Plants of Southeastern United States, Monocotyledons) using taxonomic descriptions of stem and flower structure.

ATTACHMENT 5

Draft - Press Release

The U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) Plant Materials Center in Galliano, Louisiana announces the naming and release of a select ecotype of California bulrush (*Schoenoplectus californicus*) for use in fresh to intermediate coastal wetlands, marsh shorelines, and open waterways of the north central Gulf of Mexico basin.

This new plant release will be referred to as Bayou Lafourche Germplasm California bulrush, and will provide a commercially available ecotype of California bulrush for restoration projects along the central gulf coast.

Bayou Lafourche Germplasm was originally collected from a native stand in Lafourche Parish near the town of Golden Meadow, Louisiana and was evaluated along with 48 other collections from across Louisiana and southeast Texas. It was selected based on vigor, height, stem density, and stem width, ranking above average in all categories. Bayou Lafourche demonstrated superior performance when compared to the only other commercial variety released out of Georgia (i.e. 'Restorer').

Bayou Lafourche Germplasm is recommended for erosion control along shorelines, canal banks, levee banks, and other areas of soil-water interface. When planted as a vegetative barrier across open water, Bayou Lafourche Germplasm has shown to significantly reduced ponds fetch and wave energy permitting other aquatic plants to grow in an otherwise unfavorable environment.

Bayou Lafourche Germplasm California bulrush can be used for streambank and shoreline stabilization, controlling shoreline erosion, wetland restoration and creation, and improving water quality. Plantings provide habitat for mammals, birds and fish that visit the sites and promote establishment zones for many submerged aquatic plants.

Bayou Lafourche Germplasm California bulrush is well adapted for freshwater and other areas with slight levels of salinity (less than 3.5 ppt.). This selection has performed well in field test and is anticipated to be broadly adapted for use in the southern and central portions of Louisiana, southeast Texas and southern Mississippi. Current testing has not verified the northern range of its adaptation.

Generation 1 (G1) plants materials for commercial nursery production are available from the USDA-NRCS, Golden Meadow Plant Materials Center, located near Galliano, Louisiana. Bayou Lafourche Germplasm California bulrush is a clonal release and must be propagated by vegetative means. Seeds of Bayou Lafourche are not available and seeds are not to be used for plant increase or establishment of this selected release.

For additional information on this and other USDA-NRCS Plant Materials Program releases contact the Golden Meadow Plant Materials Center at (985) 475-5280.

Prepared by:

Morris J. Houck, USDA-NRCS Plant Materials Specialist, Alexandria, LA

ATTACHMENT 6
Draft Release Registration – American Nurseryman

***Schoenoplectus californicus*, Bayou Lafourche Germplasm**

Common name: Bayou Lafourche Germplasm
California bulrush

Introduced by: USDA National Resources
Conservation Service, Galliano, LA

Hardiness: Zone 8

Origin: Native plants from Lafourche Parish, LA

Ornamental features: Size, color, texture, wildlife
habitat



Habit and growth rate: Fairly fast growth and spread; 5 - 10 feet tall, can tolerate 36”
or more water depth

Culture: Open, sunny areas in fresh and intermediate wetlands, water gardens

How plant differs from species/other cultivars: Larger erect stems, medium to large
stem diameter, and good vigor as compared to the released variety ‘Restorer’

Landscape value: Designed for conservation-type plantings along shorelines, canal
banks, levee banks, and other areas of soil-water interfaces, constructed wetlands,
ornamental water gardens

Propagation methods: Vegetative, rooted plugs, rhizomes

Pest/disease information: Nutria (*Myocaster coypus*) damage in some areas

Patent/royalties: None

Availability/distribution: Rooted plugs

*For more information: Garret Thomassie, USDA National Resources Conservation
Service, Golden Meadow Plant Materials Center, 438 Airport Rd., Galliano, LA 70354*

ATTACHMENT 7
Draft Notice Transmitting Information to PLANTS Database

August 07, 2007

TO: Scott Peterson File Code:
FROM: Richard Neill
SUBJECT: Update Information for PLANTS

Reference: Plant Materials Release – Bayou Lafourche Germplasm California bulrush

Upon final approval of the referenced plant release from the Golden Meadow Plant Materials Center, the following items will be transmitted to you for use when updating the PLANTS database.

- Plant images (minimum 6)
- New Plant Fact Sheet - California bulrush