COASTAL SD VERNAL POOL SPECIES LIST Compiled by E.T. Bauder, SDSU (6/93)

SPECIES	INDICATOR CATEGORYΔ	HABITAT DESCRIPTION (CITATION)
		PLANTS THAT IN COASTAL SAN DIEGO COUNTY OCCUR PRIMARILY IN VERNAL POOLS
Agrostis microphylla	FACW	vp (B); sometimes vp (J); vp (M); beds & margins of vp, around seepy places (W); common near vp, usually
		not in basin (Z)
Alopecurus howellii	FACW+	about drying mud flats (B); wet places, drying mud flats (M); wet ground (MA); vp (P);
		vernally wet pools & marshes (*T); grassy openings (W); vp (Z)
Anagallis minimus	FACW	moist places (A); vp & other moist spots (B); vp, moist places (J); vp & other moist spots (M) & (M&K); vp (P);
		vernally wet pools & marshes (T); moist or muddy habitats (W); vp (Z)
Boisduvalia glabella	OBL	vp & other ephemeral ponds (B); floodlands & beds of former vp (MA); mudflats & vp (M); vernally wet pools & marshes
		(*T); beds of vp on mesas, clay soil in valleys, wet sands of arroyos (W); vp (Z)
Brodiaea orcuttii	OBL	heavy adobe soil on mountains/mesas of SD (A); grass, near v streams & pools (B); grassland near streams, vp (J);
		streams, vp, seeps (M); vp but not restricted to (P); margins & beds of vp, margins of clenegas (W);
		vp & adjacent habitats (Z)
Callitriche marginata	OBL	borders of vp in mud or submerged shallow water (A); often vp (J); moist cool places, terrestrial (MA);
		drying mud of vp (M); vernally wet pools & marshes (*T); muddy margins of vp (W); vp (Z)
Callitriche longipedunculata	OBL	bottom of desiccated winter pools (A); vp (B); rooted aq (MA); water of vp & later on mud (M);
Considered same species		vernally wet pools & marshes (*T); vp (Z)
Crassula aquatica	OBL	vp, other moist places (B); salt marshes, vp, mudflats, ponds (J); wet ground or vp (MA); dry mud flats (M)
		vernally wet pools & marshes (T); vp (Z)
Deschampsia danthonioides	FACW	mud flats, vp (B); moist to drying open sites, meadows, streambanks, temporary ponds (J);
		vp, moist to wet meadows (MA); moist places (M); vp (P); grassy areas (W); vp (T); vp (Z)
Downingia cuspidata	OBL	vp (B); vp, lake margins, meadows (J); vp & wet soil (MA); vp (M); vernally wet pools & marshes (T*); margins of vp (W);
		vp (Z)
Elatine brachysperma	FACW	vp (B); muddy shores, shallow pools (J); shallow water or muddy shores of vp, ponds or ditches (MA); many plant
		communities (M); vp (P); vernally wet pools & marshes (T*); vp (Z)
Elatine californica	OBL	lake marg, vp (B); pools, ponds, stream banks (J); ponds, vp, rice fields, & margins of streams & ditches (MA); water
		borders, mudflats (M); vp (P)
Eryngium aristulatum ssp.	OBL	vp (B); vp (H); vp, marshes (J); vp & salt marshes (MA); vp (M); vp (P); vernally wet pools & marshes (*T); playas & beds
parishii		of vp (W); vp (Z)
Isoetes howellii	OBL	vp (B); vp, lake margins (J); ponds, streams or vp (MA); in water & on mud (M) & (M&K); vp (P); vernally wet
		pools & marshes (*T); along streams & in shallow pools (W); vp (Z)
Isoetes orcuttii	OBL	vp, ephemeral ponds (B); vp (J); margins of pools or along streams (MA); water of vp & on mud (M); water of vp (M&K);

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		vp on mesas & plateaus (W); vp (Z)
Juncus triformis	FACW	vp, ephemeral ponds (B); vp, granitic seeps (J); moist open places (M); vp (P); vp (T*); vp & other aquatic, marsh, or
		seepage areas (Z)
Lepidium latipes	OBL	ephemeral ponds (B); alkaline soils, fields, vp, grasslands (J); former beds of alkaline pools (MA); alkaline flats & beds of
		winter pools (M); vernally wet pools & marshes (*T); vp & adjacent habitats (Z)
Lilaea scilloides	OBL	shallow ponds, slow streams, vp (B); vp, ditches, streams, ponds, lake margins < 1700 m (J); wet soil around ponds, lakes,
		streams (MA); muddy & marshy places (M); vp (P); vp (T); mud around lakes, ponds & vp (W); vp (Z)
Lythrum hyssopifolia	FACW	vp, other moist places (B); marshes, drying pond edges (J); wet soil in marshes & at margins of streams
		& ponds (MA); moist places (M); vp (P); vernally wet pools & marshes (*T); vp (Z)
Marsilea vestita	OBL	ponds & reservoirs (B); creek beds, flood basins, vp (J); muddy banks, edges of ponds, esp about vp (M); ponds & ditches
		(MA); vernally wet pools & marshes (T); vp (Z)
Mimulus latidens	OBL	vp (B); vernally wet depressions < 900 m (J); drying mud flats in heavy soil (M); wet adobe & clay soil, margins of vp (W);
		vp (Z)
Myosurus minimus var.	OBL	vp (B); vp (H); wet places, vp, marshes (#J); vp & alkaline marshes (MA); vp (M); vp (P); vernally wet pools & marshes (#T);
apus		vp (#Z)
Myosurus minimus var.	OBL	vp (B); vp (H); wet places, vp, marshes (#J); vp & vernally wet meadows (MA); vp (M); vp (P); vernally wet pools &
filiformis		marshes (#T); grassy hillsides (W); vp (#Z)
Navarretia fossalis		vp & ditches (B); vp (H); vp & ditches (J); vernally wet pools & marshes (*T); vp & man-made depressions & pools (W);
		vp & adjacent habitats (Z)
Navarretia intertexta	OBL	wet meadows & muddy shorelines (B); open wet areas, meadows, vp (J); vps & moist places (M) & (M&K);
		drying vp (W); common near vp, usually not in basin (Z)
Navarretia prostrata	OBL	Kearny Mesa (B); alkaline floodplains, vp (J); vp & low places (MA); vp & moist places (M); vp (Z)
Orcuttia californica	OBL	vp & slump ponds (B); vp (H); vp (J); vp & mud flats (MA); drying mud flats (M); vernally wet pools & marshes (*T);
		drying beds of vp (W); vp (Z)
Phalaris lemmonii	FACW-	mud flats, vp (B); moist areas, shrublands, woodlands (J); low wet places, dried mud flats (MA); moist places < 2000 ft (M);
		vp (P); vernally wet pools & marshes (*T); creosote bush scrub (W); vp (Z)
Pilularia americana	OBL	vp, ephemeral ponds (B); vp, mud flats, lake margins, reservoirs (J); margins of ponds & vp (MA); occasional in heavy soil,
		largely of vp (M); vp (P); vernally wet pools & marshes (T); in water on mesas (W); vp (Z)
Plagiobothrys acanthocarpus	OBL	mesas & vp (B); vp, moist clay soils (J); vp & adobe flats (MA); moist flats, winter pools (M); vernally wet pools &
		marshes (*T); vp (Z)
Plagiobothrys bracteatus	OBL	vernally moist places (B); vp, wet places in grassland (J); wet places (MA); moist places or dried ditches (M); moist
		places or beds of pools & ditches, <5000 ft (M&K); vp (P); vp (Z)
Plagiobothrys undulatus		vp near Ramona (B); moist places & beds of vp (MA); mud flats, < 1200 ft (M&K); vp (Z)
Plantago bigelovii	OBL	vp (B); saline & alkaline places, beaches, vp (J); saline & alkaline places (M); vp (P); vp & adjacent habitat (Z)

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Pogogyne abramsii	OBL	vp (B); vp (H); vp coastal terraces (J); beds of dried pools (M) & (M&K); vernally wet pools & marshes (*T); vp (Z)
Pogogyne nudiuscula	OBL	vp (B); vp (H); vp (J); beds of vp (MA); moist flats (M) & (M&K); dry beds of vp (W); vp (Z)
Psilocarphus brevissimus	OBL	ponds (B); vp & flats (J); dried beds of vp (MA) & (M); vp (P); dried beds of vp (W); vernally wet pools &
		marshes (*T); vp (Z)
Psilocarphus tenellus	FAC	dried vp & dry open places (A); shores of drying ponds (B); dry disturbed soil, rarely vp (J); drier habitats (MA); dried
		vp (M) & (M&K); vp (P); foothills & mesas (W); vp (Z)
Sibara virginica	OBL*	ephemeral ponds (B); borders of vp, streambanks, open ground (J); about drying pools (M); vp (Z)
		PLANTS THAT ARE COMMON IN COASTAL SAN DIEGO VERNAL POOLS, BUT NOT RESTRICTED TO POOLS
Bergia texana	OBL	moist, disturbed soils, sand bars along rivers, margins of pools (J); margins of pools or floodplains (MA); occasional on mud
		flats (M); at margins of pools & on seeps (W)
Brodiaea jolonensis		grass (B); grassland, foothill woodland on clay (J); clay depressions (M); depressions in clay soil (W); vp & adjacent
		habitats (Z)
Cotula coronopifolia	FACW+	wet places (B); saline & freshwater marshes (J); marshy, often almost aquatic; freq salt marshes (MA); mud & moist banks,
		salt marshes (M); vp (P); wet places & water margins (W); vp & other aquatic, marsh & seepage areas (Z)
Cressa truxillensis	FACW	alkaline areas (B); saline & alkaline soils (J); lowland alkaline areas (MA); saline & alkaline places (M);
		alkaline or moderately saline soils (W); vp & other aquatic, marsh & seepage areas (Z)
Eleocharis acicularis	OBL	moist habitats (B); muddy river banks, meadows, vp & marshes (MA); marshes, meadows, riverbankds, vp (J); muddy banks,
		meadows, vp & marshes (M) & (M&K); widespread (W); vp & other aquatic, marsh & seepage areas (Z)
Eleocharis macrostachya	OBL	wet places (B); marshes, pond margins, vp, ditches (J); marshes, vp, ditches, flooded lands (MA); marshes & wet places (M);
		vp (P); along pools & intermittent streams (W); vp & other aquatic, marsh & seepage areas (Z)
Gastridium ventricosum	FACU	weed (B); open, generally dry, disturbed sites (J); dry ground, along streams, vp (MA); weed (M); around vp, on grassy
		slopes (W); vp & adjacent habitats (Z)
Juncus bufonius	FACW+	wet habitats (B); moist (sometimes saline) open or disturbed places (J); along streams or in dried pools (MA); moist,
		open places (M); vp but not restricted to (P); vp & other aquatic, marsh & seepage areas (Z)
Juncus dubius	FACW*	wet places < 1100 ft (B); wet places (J); moist places (M); wet places (M&K); vp (P); stream banks (W)
Lepidium nitidum		open places (B); meadows, alkaline flats, vp, < 1500 m (J); open places (M); vp but not restricted to (P); open grassy
		plains & hillsides (W); vp & adjacent habitats (Z)
Lolium perenne	FAC*	weed (B); disturbed sites, abandoned fields, lawns (J); scattered (M); weed (W); vp & adjacent habitats (Z)
Montia fontana	OBL	shaded slopes, pool margins, montane (B); ponds, streams, vp, seeps, ditches, <3200 m (J); muddy stream margins, pools
		(MA); rain pools (M); muddy stream margins, floating in pools (MA); vp & other aquatic, marsh & seepage areas (Z)
Nama stenocarpum	OBL	muddy shore of ponds & lakes, < 300 m (B); intermittently wet areas (J); occasional, muddy places < 1000 ft (M); moist
		sand in arroyos, canyons & valley floors, basins of vp, deltas (W)

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Navarretia hamata		coastal sage scrub, chaparral (B); dry, sandy, rocky places (J); dry, rocky places (M) vp but not restricted to (P);
		dry hillsides & ridges (W); near, but usually not in vp (Z)
Ophioglossum californicum	FACW	moist stony mesas (A); grass, around vp (B); vp (H); grassy pastures, chaparral, vp margins (J); vp (M) & (M&K);
		moist habitats, often margins of vp (W); near but not usually in vp (Z)
Plantago erecta		around vp (B); vp (P); dry open places (M) & (M&K); grassy hillsides (W); vp & adjacent habitats (Z)
Polypogon monspeliensis	FACW+	weed moist places (B); moist places, along streams, ditches (J); moist places (MA); weed low places (M); disturbed soil
		& other grassy areas (W); vp & other aquatic, marsh & seepage areas (Z)
Rotala ramosior	OBL	irrigated fields, lake & pond margins, streams (J); wet places, < 4000 ft (MA)
Trifolium amplectans		grass (B); wet meadows, ditches, grasslands, roadsides, open spring-moist heavy soils (J); grassy places (M); grassy areas
		(W); vp & adjacent habitats (Z)
Verbena bracteata	FACW	wet places, < 150 m (B); open, disturbed places, pond or lake margins (J); near water in marshes, floodlands (MA);
		occasional in waste places, < 5000 ft (M); waste areas (W)
Veronica peregrina	OBL	not given (B); moist places < 3100 m (J); wet places on margins of ditches & ponds (MA); moist places (M); vp (P);
		moist habitats (W); vp & other aquatic, marsh & seepage areas (Z)
Citations: A= Abrams (1960), B= Beauchamp (1986), H= Holland (1986), J= Jepson (1993), MA= Mason (1957), M= Munz (1974),		
M & K= Munz & Keck (1968), P= Purer (1937), T= Thorne (1976), W= Wiggins (1980) and Z= Zedler (1987)		
Δ US Fish and Wildlife Service (1988)		
*T when Thorne (76) gives genus only; # when no subspecies is given		