

Guide to marking a waypoint on the Garmin GPSmap60CSx

1. Power on Unit (button on top), unit will begin acquiring satellites
2. When the top display changes from “Acquiring satellites” to you position location you can begin to take a point
3. Press the “Mark” button
4. Using the arrow buttons scroll to the Waypoint Name (a 3 digit number)
5. When the name field is highlighted press “Enter”
6. A keyboard will display, use the arrows to name the Waypoint according to the directions below
7. When you are finished entering the name, highlight OK and press “Enter” your point is now named
8. Using the arrow, highlight the OK in the bottom right of the display
9. Press “Enter”, your point has now been saved
10. Write down all of the data collected at your point on your data sheet as well.

Naming your Waypoint:

For each GPS position collected, record a unique twelve digit number in the GPS unit for each point as follows: “XXYYZZ00141U” where “XX” is the location code, “YY” is the observers initials, “ZZ” is the species code, 001 is the waypoint number (make sure each number is consecutive, ascending and non-repeating), “4” is the Area, “1” is the density and “U” is the treatment status. The codes for each category are listed below:

Top 20 Invasive Species		
Amur honeysuckle	AH	<i>Lonicera maackii</i>
Autumn olive	AO	<i>Elaeagnus umbellata</i>
Baby's breath	BB	<i>Gypsophila paniculata</i>
buckthorn, Common	CB	<i>Rhamnus cathartica</i>
buckthorn, Glossy	GB	<i>Rhamnus frangula</i>
Bull thistle	BT	<i>Cirsium vulgare</i>
Canada thistle	CT	<i>Cirsium arvense</i>
Dame's rocket	DR	<i>Hesperis matronalis</i>
European swamp thistle	ST	<i>Cirsium palustre</i>
Garlic mustard	GM	<i>Alliaria petiolata</i>
honeysuckle, Bell's	BH	<i>Lonicera xbella</i>
honeysuckle, European fly	LX	<i>Lonicera xylosteum</i>
honeysuckle, Japanese	LJ	<i>Lonicera japonica</i>
honeysuckle, Morrow's	MH	<i>Lonicera morrowii</i>
honeysuckle, Tatarian	LT	<i>Lonicera tatarica</i>
Japanese barberry	JB	<i>Berberis thunbergii</i>
knotweed, Giant	GK	<i>Polygonum sachalinense</i>
knotweed, Japanese	JK	<i>Polygonum cuspidatum</i>
Leafy spurge	LS	<i>Euphorbia esula</i>
Lymegrass	LG	<i>Leymus arenarius</i>
Multiflora rose	MR	<i>Rosa multiflora</i>
Narrowleaf cattail	NC	<i>Typha angustifolia</i>
Oriental bittersweet	OB	<i>Celastrus orbiculatus</i>
Phragmites (non-native)	PH	<i>Phragmites australis</i>
Purple loosestrife	PL	<i>Lythrum salicaria</i>
Reed canarygrass	RC	<i>Phalaris arundinacea</i>
Russian olive	RO	<i>Elaeagnus angustifolia</i>
Wild parsnip	WP	<i>Pastinaca sativa</i>

Early Detection and Response Species		
African oxygen weed	LM	<i>Lagarosiphon major</i>
Amur corktree	AC	<i>Phellodendron amurense</i>
Black alder	BA	<i>Alnus glutinosa</i>
Black swallow-wort	VN	<i>Vincetoxicum nigrum</i>
Brazilian elodea	BW	<i>Egeria densa</i>
Brittle water-nymph	WN	<i>Najas minor</i>
Coltsfoot	TF	<i>Tussilago farfara</i>
Cotton thistle	OA	<i>Onopordon acanthium</i>
Dotted duck-weed	DD	<i>Landoltia punctata</i>
European frog-bit	FB	<i>Hydrocharis morsus-ranae</i>
European waterclover	WC	<i>Marsilea quadrifolia</i>
Flowering rush	FR	<i>Butomus umbellatus</i>
Giant hogweed	GH	<i>Heracleum mantegazzianum</i>
Giant salvinia	GS	<i>Salvinia molesta</i>
Hydrilla	HD	<i>Hydrilla verticillata</i>
Japanese hop	HJ	<i>Humulus japonicas</i>
Kudzu	KZ	<i>Pueraria montana</i>
Moneywort	LN	<i>Lysimachia nummularia</i>
Pale swallow-wort	VR	<i>Vincetoxicum rossicum</i>
Parrot feather watermilfoil	PF	<i>Myriophyllum aquaticum</i>
Reed mannagrass	RM	<i>Glyceria maxima</i>
Sacred lotus	NN	<i>Nelumbo nucifera</i>
Water hyacinth	WH	<i>Eichhornia crassipes</i>
Water lettuce	TS	<i>Pistea stratioides</i>
Yellow floating heart	FH	<i>Nymphoides peltata</i>

Location Codes- County

Leelanau	LC
Grand Traverse	GT
Benzie	BC
Manistee	MC

Location Codes- GTCD

Brown Bridge	BB
Commons	CN
East Creek	EC
Grand Traverse Natural Education Reserve	NE
Hickory Meadows	HM
Kids Creek	KC
Miller Creek	MC
Silver Lake	SL
Canterbury Woods	CW

Treatment Status Code

Untreated	U
Consecutive yrs treated	#
Nonconsecutive yrs treated	N
Don't know	D

Area Code

None	0
Individual/Few/Several	1
<1,000 sq ft (1/2 tennis court)	2
1,000 sq ft - .5 acre	3
.5 acre – 1 acre (football field)	4
>1 acre	5

Density Code

Sparse (scattered/small stands)	1
Patchy (mix of sparse and dense)	2
Dense (40% of area)	3
Monoculture (nearly 100% of area)	4

Species of Concern		
Asiatic sand sedge	CK	<i>Carex kobomugi</i>
Austrian pine	AP	<i>Pinus nigra</i>
Barnyardgrass	BY	<i>Echinochloa crus-galli</i>
Bigleaf lupine	BLL	<i>Lupinus polyphyllus</i>
Bigleaf periwinkle	BP	<i>Vinca major</i>
Birdfoot trefoil	LC	<i>Lotus corniculata</i>
Bishops goutweed	BG	<i>Aegopodium podagraria</i>
Bittersweet nightshade	BN	<i>Solanum dulcamara</i>
Black jetbead	BJ	<i>Rhodotypos scandens</i>
Black locust	BL	<i>Robinia pseudoacacia</i>
Bladder campion	BC	<i>Silene vulgaris</i>
Bouncingbet	SO	<i>Saponaria officinalis</i>
Bristly locust	RH	<i>Robinia hispida</i>
Brittle water-nymph	WN	<i>Najas minor</i>
Butter and eggs	BE	<i>Linaria vulgaris</i>
Butterbur	BU	<i>Petasites hybridus</i>
Callery pear	CP	<i>Pyrus calleryana</i>
Canada bluegrass	CBG	<i>Poa compressa</i>
Carolina fanwort	FW	<i>Cabomba caroliniana</i>
Cheatgrass	CG	<i>Bromus tectorum</i>
Chinese silvergrass	MS	<i>Miscanthus sinensis</i>
Chinese wisteria	CW	<i>Wisteria sinensis</i>
Chinese yam	CY	<i>Dioscorea oppositifolia</i>
Chocolate vine	AQ	<i>Akebia quinata</i>
Coltsfoot	TF	<i>Tussilago farfara</i>
Common barberry	BV	<i>Berberis vulgaris</i>
Common bugle	AR	<i>Ajuga reptans</i>
Common chickweed	SM	<i>Stellaria media</i>
Common gypsyweed	GW	<i>Veronica officinalis</i>
Common lilac	SV	<i>Syringa vulgaris</i>
Common motherwort	MO	<i>Leonurus cardiaca</i>
Common mullein	MN	<i>Verbascum thapsus</i>
Common periwinkle	VM	<i>Vinca minor</i>
Common St. Johnswort	SJ	<i>Hypericum perforatum</i>
Common tansy	TV	<i>Tanacetum vulgare</i>
Cotton thistle	OA	<i>Onopordum acanthium</i>
Cow vetch	VV	<i>Vicia cracca</i>
Crack willow	SF	<i>Salix fragilis</i>
Creeping buttercup	RR	<i>Ranunculus repens</i>
Creeping charlie	PN	<i>Pilea nummulariifolia</i>
Crown vetch	CV	<i>Coronilla varia</i>
Curly plumeless thistle	PT	<i>Carduus crispus</i>
Curly pondweed	PW	<i>Potamogeton crispus</i>
Cutleaf teasel	DL	<i>Dipsacus laciniatus</i>
Cypress spurge	EC	<i>Euphorbia cyparissias</i>

Species of Concern (cont.)		
Dalmatian toadflax	DT	<i>Linaria dalmatica</i>
Didymo	DG	<i>Didymosphenia geminata</i>
Dotted duck-weed	DD	<i>Landoltia punctata</i>
English ivy	EI	<i>Hedera helix</i>
Eurasian watermilfoil	EW	<i>Myriophyllum spicatum</i>
European cranberrybush	VO	<i>Viburnum opulus</i>
European fireweed	EH	<i>Epiobium hirsutum</i>
European lily of the valley	LV	<i>Convallaria majalis</i>
European privet	PR	<i>Ligustrum vulgare</i>
European waterclover	WC	<i>Marsilea quadrifolia</i>
Fall phlox	FP	<i>Phlox paniculata</i>
Field hedge parsley	TA	<i>Torilis arvensis</i>
Five leaf aralia	ES	<i>Eleutherococcus sieboldianus</i>
Flat pea	PE	<i>Lathyrus sylvestris</i>
Floating marsh pennywort	HR	<i>Hydrocotyle ranunculoides</i>
Fuller's teasel	DF	<i>Dipsacus fullonum</i>
Garden yellow loosestrife	YL	<i>Lysimachia vulgaris</i>
Garden yellowrocket	YR	<i>Barbarea vulgaris</i>
Germander speedwell	VC	<i>Veronica chamaedrys</i>
Giant bellflower	BF	<i>Campanula latifolia</i>
Giant reed	GR	<i>Arundo donax</i>
Giantchickweed	GCW	<i>Myosoton aquaticum</i>
Gingermint	MG	<i>Mentha x gracilis</i>
Goldmoss stonecrop	GO	<i>Sedum acre</i>
Himalayan balsam	HB	<i>Impatiens glandulifera</i>
Himalayan knotweed	HK	<i>Polygonum polystachyum</i>
Hoary alyssum	BI	<i>Berteroa incana</i>
Houndstongue	HT	<i>Cynoglossum officinale</i>
Hybrid cattail	HC	<i>Typha x glauca</i>
Hybrid crack willow	SR	<i>Salix x rubens</i>
Indian swampweed	IS	<i>Hygrophila polysperma</i>
Japanese hedge parsley	HP	<i>Torilis japonica</i>
Japanese stilt grass	JS	<i>Microstegium vimineum</i>
Japanese tree lilac	TL	<i>Syringa reticulata</i>
Japanese wineberry	RP	<i>Rubus</i>
Japanese wisteria	JW	<i>Wisteria floribunda</i>
Java waterdropwort	OJ	<i>Oenanthe javanica</i>
Jimsonweed	DS	<i>Datura stramonium</i>
Johnsongrass	JG	<i>Sorghum halepense</i>
Kentucky bluegrass	KB	<i>Poa pratensis</i>
Laurel willow	LW	<i>Salix pentandra</i>
Lesser burdock	LB	<i>Arctium minus</i>
Lesser celandine	FV	<i>Ficaria verna</i>
Lombardy poplar	LP	<i>Populus nigra var. italica</i>
Medusahead	TC	<i>Taeniatherum caput-medusae</i>

Species of Concern (cont.)		
Mile-a-Minute weed	MW	<i>Polygonum perfoliatum</i>
Money plant	MP	<i>Lunaria annua</i>
Moneywort	LN	<i>Lysimachia nummularia</i>
Mudmat	MM	<i>Glossostigma cleistanthum</i>
Musk mallow	MU	<i>Malva moschata</i>
Nodding thistle	NT	<i>Carduus nutans</i>
Norway maple	NM	<i>Acer platanoides</i>
Nutria	MC	<i>Myocastor coypus</i>
Onerow yellowcress	OY	<i>Nasturtium microphyllum</i>
Orange day lily	OD	<i>Hemerocallis fulva</i>
Orange hawkweed	OH	<i>Hieracium aurantiacum</i>
Orchardgrass	OG	<i>Dactylis glomerata</i>
Oregon grape	MA	<i>Mahonia aquifolium</i>
Oxeye daisy	OX	<i>Leucanthemum vulgare</i>
Paradise plant	PP	<i>Daphne mezereum</i>
Parrot feather watermilfoil	PF	<i>Myriophyllum aquaticum</i>
Perennial cornflower	CM	<i>Centaurea montana</i>
Perennial pea	LL	<i>Lathyrus latifolius</i>
Perfumed cherry	PC	<i>Prunus mahaleb</i>
Pond water-starwort	PWS	<i>Callitriche stagnalis</i>
Porcelainberry	PB	<i>Ampelopsis brevipedunculata</i>
Purple foxglove	DP	<i>Digitalis purpurea</i>
Quackgrass	QG	<i>Elymus repens</i>
Queen Anne's lace	DC	<i>Daucus carota</i>
Queen of the meadow	FU	<i>Filipendula ulmaria</i>
Rabbitfoot clover	RF	<i>Trifolium arvense</i>
Rampion bellflower	RB	<i>Campanula rapunculoides</i>
Rugosa rose	RU	<i>Rosa rugosa</i>
Sacred lotus	NN	<i>Nelumbo nucifera</i>
Sawtooth oak	QA	<i>Quercus acutissima</i>
Scotch thistle	SH	<i>Onopordum acanthium</i>
Scots pine	SP	<i>Pinus sylvestris</i>
Seaside goldenrod	SG	<i>Solidago sempervirens</i>
Shasta daisy	SD	<i>Leucanthemum x superbum</i>
Siberian elm	UP	<i>Ulmus pumila</i>
Siberian peashrub	SI	<i>Caragana arborescens</i>
Siberian squill	SS	<i>Scilla sibirica</i>
Smooth brome	SB	<i>Bromus inermis</i>
Southern cattail	TD	<i>Typha domingensis</i>
Spiny plumeless thistle	CA	<i>Carduus acanthoides</i>
Spotted knapweed	SK	<i>Centaurea maculosa</i>
Starry stonewort	NO	<i>Nitellopsis obtusa</i>
Stinking willie	JV	<i>Senecio jacobaea stagnalis</i>
Sulphur cinquefoil	CQ	<i>Potentilla recta</i>
Sweet woodruff	SW	<i>Galium odoratum</i>

Species of Concern (cont.)		
Sweetbriar rose	RE	<i>Rosa eglanteria</i>
Sweetwilliam	DB	<i>Dianthus barbatus</i>
Swordleaf rush	JE	<i>Juncus ensifolius</i>
Tall buttercup	TB	<i>Ranunculus acris</i>
Tall hawkweed	HF	<i>Hieracium piloselloides</i>
Timothy	TM	<i>Phleum pratense</i>
Tree of Heaven	TH	<i>Ailanthus altissima</i>
True forget-me-not	FM	<i>Myosotis scorpioides</i>
Vanhoutte spirea	VS	<i>Spiraea x vanhouttei</i>
Vervain mallow	VE	<i>Malva alcea</i>
Wall hawkweed	HW	<i>Hieracium murorum</i>
Water chestnut	TN	<i>Trapa natans</i>
Water soldier	SA	<i>Stratiotes aloides</i>
Watercress	CR	<i>Nasturtium officinale</i>
Wavyleaf basketgrass	OU	<i>Opismenus undulatifolius</i>
Wayfaring-tree	VL	<i>Viburnum lantana</i>
White campion	SL	<i>Silene latifolia</i>
White mulberry	MB	<i>Morus alba</i>
White poplar	PA	<i>Populus alba</i>
White stonecrop	SC	<i>Sedum album</i>
White sweet clover	WS	<i>Melilotus alba</i>
White willow	WW	<i>Salix alba</i>
Wild chervil	AS	<i>Anthriscus</i>
Wild garlic	WG	<i>Allium vineale</i>
Wild mint	WM	<i>Mentha x gentilis</i>
Willowleaf meadowsweet	WI	<i>Spiraea salicifolia</i>
Winged burningbush	EA	<i>Euonymus alatus</i>
Winged sumac	SU	<i>Rhus copallinum</i>
Winter creeper	EF	<i>Euonymus fortunei</i>
Witch's moneybags	WT	<i>Hylotelephium telephium</i>
Wood bluegrass	WD	<i>Poa nemoralis</i>
Yellow archangel	YA	<i>Lamium galeobdolon</i>
Yellow floating heart	FH	<i>Nymphoides peltata</i>
Yellow foxglove	YF	<i>Digitalis grandiflora</i>
Yellow iris	IP	<i>Iris pseudacorus</i>