



New Mexico Riparian Habitat Map Version 2.0 Plus *Annotated Legend*

An annotated legend for the New Mexico Riparian Habitat Map follows with descriptions of each map unit that include a general concept statement, the rule set that defines the unit in terms of structure and composition, and a list of the main indicator species for each unit. In addition, there are links to the New Mexico [State Wildlife Action Plan \(SWAP\)](#) and the [U.S. National Vegetation Classification \(USNVC\)](#) that provide more details on the species composition and ecology of the vegetation communities included on the map unit. On occasion, modifiers to the map unit designation were added for a polygon to provide additional information on composition and status. A table of modifier definitions follows the main legend table.

The New Mexico Riparian Habitat Map Legend has three hierarchical levels:

Level 1. General vegetation types characterized by major lifeforms and strata—forest and woodlands, shrublands, and herbaceous vegetation— plus a category of non-vegetated Miscellaneous Land Types.

Forests and woodlands: polygons dominated by stands of closed-canopied forest or open-canopied woodlands (>10% canopy cover) that are generally taller than 5 m (some stands are dominated by short-statured species such as junipers that are < 5 m). Shrub patches or herbaceous vegetation may be present under trees and in openings.

Shrublands: polygons dominated by dense to open stands (> 25% canopy cover) of woody shrubs or sapling trees between 0.5 and 5 m. Scattered mature trees or small open areas dominated by herbaceous vegetation may be present.


Herbaceous Vegetation: polygons dominated by stands of grass-like species (graminoids) and/or forbs. Trees and shrubs may be present as scattered patches or individuals. Some open areas may be predominantly bare ground.


Level 2. Mid-level units with broad categories of elevation zones (Montane > 6,500 ft and Lowland <6,500 ft), native versus non-native woody species, natural and semi-natural vegetation, riparian versus upland vegetation, and specific elements of Miscellaneous Land Types (e.g., roads, built-up areas, agriculture, etc.).

Level 3. Fine-scale units that reflect leaf retention (Deciduous versus Evergreen), specific species composition based on origin (native, Russian olive, or tamarisk), or site characteristics (wet, dry, or alkaline).





New Mexico Riparian Habitat Map Annotated Legend Version 2.0

I	Forest & Woodland		
	Tree-dominated communities (riparian and upland)	Tree canopy (> 5m tall) > 10% canopy cover	
IA	Montane Riparian Forest & Woodlands		
	Forest and woodlands of mountain valley floodplains and canyons	Generally above 6,500 ft (1,980 m) elevation	
IA1	Montane Native Evergreen Riparian Forest	Map Unit ID	12
<p>Concept: Riparian forests dominated by evergreen conifer trees (blue spruce, Engelmann spruce, white fir, corkbark fir, Douglas-fir, and ponderosa pine). Deciduous shrubs such as thinleaf alder, Wood’s rose, or redberry dogwood can occur in the understory adjacent to the channel, or the understory can be herbaceous-dominated. Most commonly occurs in confined canyons in mountains throughout the state.</p> <p>Rules: Conifers > 75% of the total tree canopy cover.</p> <p>Indicator Species: Trees—<i>Abies concolor</i>, <i>Abies lasiocarpa</i> var. <i>arizonica</i>, <i>Picea engelmannii</i>, <i>Picea pungens</i>, <i>Pinus ponderosa</i>, and <i>Pseudotsuga menziesii</i>.</p> <p>Other common species: Shrubs—<i>Alnus incana</i> ssp. <i>tenuifolia</i>, <i>Salix irrorata</i>, <i>Rosa woodsii</i>, <i>Cornus sericea</i> ssp. <i>sericea</i>.</p> <p>Links: NM SWAP: Rocky Mountain Montane Riparian Forest USNVC Group: Rocky Mountain-Great Basin Montane Riparian & Swamp Forest (G506)</p>			
		<p>Figure 1. Montane Native Evergreen Riparian Forest along Manueles Creek near Ocate, NM.</p>	

IA2	Montane Native Evergreen-Deciduous Riparian Forest	Map Unit ID	23
<p>Concept: Riparian forests dominated by both evergreen conifers (blue spruce, Engelmann spruce, white fir, corkbark fir Douglas-fir, and ponderosa pine) and deciduous trees (narrow-leaf cottonwood, and Arizona alder), with understories of deciduous shrubs (e.g., redberry dogwood, dewystem willow, thinleaf alder among others) and/or herbaceous species. Occurs primarily on floodplains in mountain valleys throughout the state.</p> <p>Rules: Broadleaf deciduous trees >25% to <75% of the total tree canopy cover with evergreen trees >25% to <75% of the total tree canopy.</p> <p>Indicator Species: Trees—<i>Abies concolor</i>, <i>Abies lasiocarpa</i> var. <i>arizonica</i>, <i>Picea engelmannii</i>, <i>Picea pungens</i>, <i>Pinus ponderosa</i>, <i>Pseudotsuga menziesii</i>, <i>Juniperus scopulorum</i>, <i>Acer negundo</i>, <i>Alnus oblongifolia</i>, and <i>Populus angustifolia</i>.</p> <p>Other common species: Shrubs—<i>Cornus sericea</i>, <i>Salix irrorata</i>, <i>Salix exigua</i> (lower elevations), and <i>Alnus incana</i> ssp. <i>tenuifolia</i>.</p> <p>Links: NM SWAP: Rocky Mountain Montane Riparian Forest USNVC Group: Rocky Mountain-Great Basin Montane Riparian & Swamp Forest (G506)</p>			
		<p>Figure 2. Montane Native Evergreen-Deciduous Riparian Forest along Rio Santa Barbara.</p>	

New Mexico Riparian Habitat Map Annotated Legend Version 2.0 Plus

IA3	Montane Native Deciduous Riparian Forest	Map Unit ID	11
<p>Concept: Riparian forests dominated by broad-leaved deciduous riparian trees (narrow-leaf cottonwood and Arizona alder), with understories of deciduous shrubs (e.g., dewystem willow, thinleaf alder) and/or herbaceous species. Occurs primarily on floodplains in mountain valleys throughout the state.</p> <p>Rules: Broadleaf deciduous trees >75% of the total tree canopy cover; evergreen conifers subordinate or absent.</p> <p>Indicator Species: Trees—<i>Populus angustifolia</i> and <i>Alnus oblongifolia</i> (southwest NM), at high elevations <i>Populus tremuloides</i>.</p> <p>Other common species: Shrubs—<i>Cornus sericea</i>, <i>Salix irrota</i>, <i>Salix exigua</i> (lower elevations), and <i>Alnus incana</i> ssp. <i>tenuifolia</i>.</p> <p>Links: NM SWAP: Rocky Mountain Montane Riparian Forest USNVC Group: Rocky Mountain-Great Basin Montane Riparian & Swamp Forest (G506)</p>			
		<p>Figure 3. Montane Native Deciduous Riparian Forest along Cabresto Creek in the northern Sangre de Cristo Mountains.</p>	

IB	Lowland Riparian Forest & Woodlands		
	Gallery forest of lowland valley floodplains	Generally below 6,500 ft (1,980 m) elevation	
IB1	Western Lowland Native Deciduous Riparian Forest	Map Unit ID	6
<p>Concept: Gallery forests and woodlands dominated by Rio Grande cottonwood (and occasionally Fremont cottonwood). Stands can have other lowland riparian trees in the sub-canopy (e.g., Goodding’s willow or peachleaf willow). Understories can be shrubby (coyote willow, New Mexico olive, or silver buffaloberry are common) or herbaceous-dominated (e.g., salt grass, scratchgrass). Occurs throughout New Mexico along lowland rivers except the northeastern Great Plains and southwestern Gila regions.</p> <p>Rules: Native trees >75% of the total tree canopy cover.</p> <p>Indicator Species: Trees—<i>Populus deltoides</i> ssp. <i>wislizeni</i> (mostly in the Rio Grande valley), <i>Populus fremontii</i> (western NM), <i>Salix gooddingii</i>, and occasionally <i>Salix amygdaloides</i> (northern NM).</p> <p>Other common species: Shrubs—<i>Salix exigua</i>, <i>Forestiera pubescens</i> var. <i>pubescens</i>, and <i>Shepherdia argentea</i>. Forbs and grasses—<i>Distichlis spicata</i>, <i>Muhlenbergia asperifolia</i>, and <i>Anemopsis californica</i>.</p> <p>Links: NM SWAP: Southwest Riparian Forest USNVC Group: Western Interior Riparian Forest & Woodland (G797)</p>			
		<p>Figure 4. Western Lowland Native Deciduous Riparian Forest along the Rio Grande near Belen, NM.</p>	

New Mexico Riparian Habitat Map Annotated Legend Version 2.0 Plus


IB2	Great Plains Lowland Native Deciduous Riparian Forest	Map Unit ID	36
<p>Concept: Gallery forests and woodlands dominated by plains cottonwood with peach-leaf willow in the sub-canopy. Understories can be shrubby (coyote willow and willow baccharis) along with a wide variety of forbs and grasses. Occurs on the high plains of northeastern New Mexico extending out from the eastern flank of the Sangre de Cristo Mountains.</p>			
<p>Rules: Native trees >75% of the total tree canopy cover.</p>			
<p>Indicator Species: Trees—<i>Populus deltoides</i> ssp. <i>monilifera</i>, <i>Salix amygdaloides</i>, and <i>Acer negundo</i></p>			
<p>Other common species: Shrubs—<i>Salix exigua</i>, <i>Baccharis salicina</i>.</p>			
<p>Links: NM SWAP: Great Plains Floodplain Forest USNVC Group: Great Plains Cottonwood - Green Ash Floodplain Forest (G147)</p>			

Figure 5. Great Plains Lowland Native Deciduous Riparian Forest along the left side bank of the Dry Cimmaron in northeastern New Mexico (Lowland Wet Riparian Shrubland dominated by coyote willow is on the right side).


IB3	Lowland Native-Introduced Russian Olive Deciduous Riparian Forest	Map Unit ID	24
<p>Concept: Gallery forests dominated by a mix of native cottonwood in the overstory and introduced Russian olive in the sub-canopy primarily as a tall shrub and along the margins of the stands. Native shrubs such as New Mexico olive may still be common, and the grass and forb component can be diverse (dense-canopied stands tend to have sparse understories).</p>			
<p>Rules: Native trees with > 25% to <75% of the total tree canopy cover, codominant with Russian olive as sub-canopy trees or shrubs with >25% to <75% of the total tree canopy cover.</p>			
<p>Indicator Species: Trees—<i>Populus deltoides</i>, <i>Populus fremontii</i>, and <i>Elaeagnus angustifolia</i> (I).</p>			
<p>Other common species: Shrubs—<i>Salix exigua</i>, <i>Forestiera pubescens</i> var. <i>pubescens</i>, <i>Shepherdia argentea</i>, <i>Baccharis salicifolia</i>, and <i>Amorpha fruticosa</i>.</p>			
<p>Links: NM SWAP: Southwest Riparian Forest USNVC Group: Western Interior Riparian Forest & Woodland (G797)</p>			

Figure 6. Lowland Native-Introduced Russian Olive Deciduous Riparian Forest along the Rio Grande south of Pilar in northern New Mexico.

New Mexico Riparian Habitat Map Annotated Legend Version 2.0 Plus


IB4	Lowland Native-Introduced Tamarisk Deciduous Riparian Forest	Map Unit ID	25
<p>Concept: Gallery forests dominated by a mix of native cottonwood in the overstory and introduced tamarisk in the understory as short trees or tall shrubs. Native shrubs may still be present (e.g., coyote willow and seepwillows), but overall plant diversity is often low. Stands are most prevalent along the lower, regulated reaches of rivers throughout the state.</p>			
<p>Rules: Native trees with >25% to <75% of the total tree canopy cover codominant with tamarisk with >25% to <75% of total tree canopy cover.</p>			
<p>Indicator Species: Trees—<i>Populus deltoides</i>, <i>Populus fremontii</i>. Shrubs—<i>Tamarix</i> spp. (I).</p>			
<p>Other common species: Shrubs—<i>Salix exigua</i> and <i>Baccharis salicina</i>.</p>			
<p>Links: NM SWAP: Southwest Riparian Forest USNVC Group: Western Interior Riparian Forest & Woodland (G797)</p>			

Figure 7. Lowland Native-Introduced Tamarisk Deciduous Riparian Forest near San Acacia dam on the Middle Rio Grande.




IB5	Lowland Native-Introduced Russian Olive-Tamarisk Deciduous Riparian Forest	Map Unit ID	42
<p>Concept: Gallery forests dominated by a mix of native cottonwood in the overstory and introduced tamarisk and Russian olive in the understory as short trees or tall shrubs. Native shrubs may still be present (e.g., coyote willow and seepwillows), but overall plant diversity is often low.</p>			
<p>Rules: Native trees are codominant with Russian olive and tamarisk, all with >25% of the total tree canopy cover; tamarisk can occur as short trees or tall shrubs.</p>			
<p>Indicator Species: Trees—<i>Populus deltoides</i>, <i>Populus fremontii</i>, <i>Elaeagnus angustifolia</i> (I), and <i>Tamarix</i> spp. (I).</p>			
<p>Other common species: Shrubs—<i>Salix exigua</i> and <i>Baccharis salicifolia</i>.</p>			
<p>Links: NM SWAP: Southwest Riparian Forest USNVC Group: Western Interior Riparian Forest & Woodland (G797)</p>			

Figure 8. Lowland Native-Introduced Russian Olive-Tamarisk Deciduous Riparian Forest near Bernalillo, New Mexico.

New Mexico Riparian Habitat Map Annotated Legend Version 2.0 Plus

IB6	Lowland Native Evergreen Dry Riparian Forest	Map Unit ID	7
<p>Concept: Woodlands dominated by upland junipers (oneseed and Rocky Mountain junipers) and pines (pinyon and ponderosa) on now dry floodplain terraces. These are open-canopied woodlands with grassy understories and scattered shrubs that are also commonly upland species. Sites typically occur along entrenched channels or at the back of the floodplain.</p>			
<p>Rules: Junipers or pines dominate the tree canopy with at least 10% of total tree cover.</p>			
<p>Indicator Species: Trees—<i>Juniperus monosperma</i>, <i>Juniperus scopulorum</i>, <i>Pinus edulis</i>, and occasionally <i>Pinus ponderosa</i>.</p>			
<p>Other common species: Shrubs—<i>Rhus trilobata</i> and <i>Brickellia californica</i>. Grasses—<i>Bouteloua gracilis</i>, <i>Bouteloua curtipendula</i>, and <i>Sporobolus cryptandrus</i>.</p>			
<p>Links: NM SWAP: Southwest Riparian Forest USNVC Group: Southern Rocky Mountain Juniper Open Woodland (G252)</p>			
<p style="text-align: center;">Figure 9. Lowland Native Evergreen Dry Riparian Forest along the Rio del Oso in north-central New Mexico.</p>			

IB7	Lowland Native Evergreen-Deciduous Riparian Forest	Map Unit ID	41
<p>Concept: Cottonwood, pine, and juniper woodlands of floodplain terraces, typically with grassy understories and scattered shrubs. Sites typically occur along entrenched channels or at the back of the floodplain.</p>			
<p>Rules: Native trees (cottonwood) with >25% to <75% of the total tree canopy cover codominant with understory of junipers with >25% to <75% of total tree cover.</p>			
<p>Indicator Species: Trees—<i>Populus deltoides</i>, <i>Populus fremontii</i>, <i>Juniperus monosperma</i>, and <i>Juniperus scopulorum</i>.</p>			
<p>Other common species: Shrubs—<i>Rhus trilobata</i>, <i>Forestiera pubescens</i> var. <i>pubescens</i>, and <i>Brickellia californica</i>. Grasses—<i>Bouteloua gracilis</i>, <i>Bouteloua curtipendula</i>, and <i>Sporobolus cryptandrus</i>.</p>			
<p>Links: NM SWAP: Southwest Riparian Forest USNVC Group: Western Interior Riparian Forest & Woodland (G797)</p>			
<p style="text-align: center;">Figure 10. Lowland Native Evergreen-Deciduous Riparian Forest along the Canadian River in northeastern New Mexico.</p>			

New Mexico Riparian Habitat Map Annotated Legend Version 2.0 Plus


IB8	Southwest Warm Desert Native Deciduous Riparian Forest	Map Unit ID	45
<p>Concept: Gallery forests and woodlands dominated by a rich diversity of trees including Fremont cottonwood (and occasionally Rio Grande cottonwood), Arizona sycamore, Arizona walnut, velvet ash, and netleaf hackberry, among others. Common understory shrubs include seepwillow, coyote willow, and desert indigobush. It occurs along lowland rivers of southwest New Mexico (e.g., Gila, Mimbres, and San Francisco Rivers), extending into the lower Rio Grande south of Elephant Butte Reservoir.</p>			
<p>Rules: Native trees >75% of the total tree canopy cover.</p>			
<p>Indicator Species: Trees—<i>Populus fremontii</i>, <i>Platanus wrightii</i>, <i>Juglans major</i>, <i>Fraxinus velutina</i>, <i>Salix gooddingii</i>, and occasionally <i>Populus deltoides</i> ssp. <i>wislizeni</i>.</p>			
<p>Other common species: Shrubs—<i>Baccharis salicifolia</i>, <i>Salix exigua</i>, and <i>Amorpha fruticosa</i>.</p>			
<p>Links: NM SWAP: Southwest Riparian Forest USNVC Group: Western Interior Riparian Forest & Woodland (G797)</p>			

Figure 11. Southwest Warm Desert Native Deciduous Riparian Forest along the Mimbres River in southwestern New Mexico.




IB9	Southwest Desert Native Dry Deciduous Riparian Woodland	Map Unit ID	50
<p>Concept: Woodlands on dry riparian terraces dominated by Arizona walnut, netleaf hackberry, honey mesquite, and occasionally Fremont cottonwood. Understories vary, but are often characterized by drier shrubs (e.g., California brickellbush, river walnut, and skunkbush sumac). It occurs along lowland rivers of southwest New Mexico (e.g., Gila, Mimbres, and San Francisco Rivers), extending into the lower Rio Grande, south of Elephant Butte Reservoir.</p>			
<p>Rules: Native trees >75% of the total tree canopy cover.</p>			
<p>Indicator Species: Trees—<i>Juglans major</i>, <i>Celtis laevigata</i> var. <i>reticulata</i>, <i>Prosopis glandulosa</i>, and occasionally <i>Populus fremontii</i>.</p>			
<p>Other common species: Shrubs—<i>Brickellia californica</i>, <i>Juglans microcarpa</i>, and <i>Rhus trilobata</i>.</p>			
<p>Links: NM SWAP: Southwest Riparian Forest USNVC Group: Western Interior Riparian Forest & Woodland (G797)</p>			



Figure 12. Southwest Lowland Dry Deciduous Riparian Woodland dominated by netleaf hackberry along the Gila River in the Red Rock Wildlife Area near Lordsburg, NM.

New Mexico Riparian Habitat Map Annotated Legend Version 2.0 Plus

IC	Lowland Introduced Riparian Woodland and Scrub		
	Woodlands and shrublands of lowland valley floodplains dominated by non-native woody species	Native Trees <25% of the total tree canopy cover; Stands generally below 6,500 ft (1,980 m) elevation	
IC1	Russian Olive Introduced Riparian Woodland and Scrub	Map Unit ID	16
<p>Concept: Non-native Russian olive-dominated woodlands and scrub on lowland floodplains with grassy or shrubby understories. Remnant native shrubs may still be present (e.g., coyote willow, New Mexico olive). Some sites are relatively mesic with wetland herbaceous species such as horsetails and sedges. Others are drier and dominated by grasses (e.g., inland saltgrass and alkali muhly).</p> <p>Rules: Native Trees <25% of the total tree canopy cover; Russian olive usually as a small tree or tall shrub.</p> <p>Indicator Species: Trees—<i>Elaeagnus angustifolia</i> (I).</p> <p>Other common species: Herbs—<i>Equisetum</i> spp., <i>Distichlis spicata</i>, and <i>Muhlenbergia asperifolia</i>.</p> <p>Links: NM SWAP: Southwest Riparian Forest USNVC Group: Interior West Ruderal Riparian Forest, Woodland & Scrub (G510)</p>			
		<p>Figure 13. Russian Olive Introduced Riparian Woodland and Scrub Rio Grande near Albuquerque, NM.</p>	

IC2	Tamarisk Introduced Riparian Woodland and Scrub	Map Unit ID	15
<p>Concept: Non-native tamarisk-dominated woodlands and scrub on floodplains. Remnant native shrubs may still be present (e.g., coyote willow, New Mexico olive) and sites can be grassy with salt tolerant species (e.g., saltgrass, alkali muhly, and alkali sacaton), but more commonly stands are sparse and low in diversity.</p> <p>Rules: Native Trees <25% and Russian olive < 25% of the total tree canopy cover.</p> <p>Indicator Species: Trees—<i>Tamarix chinensis</i> (I) or <i>T. ramosissima</i> (I).</p> <p>Other common species: Shrubs—<i>Salix exigua</i> and <i>Forestiera pubescens</i> var. <i>pubescens</i>. Grasses—<i>Distichlis spicata</i>, <i>Muhlenbergia asperifolia</i>, and <i>Sporobolus airoides</i>.</p> <p>Links: NM SWAP: Introduced Riparian Vegetation USNVC Group: Interior West Ruderal Riparian Forest, Woodland & Scrub (G510)</p>			
		<p>Figure 14. Tamarisk Introduced Riparian Woodland and Scrub along the Rio San Jose in northwestern New Mexico.</p>	

New Mexico Riparian Habitat Map Annotated Legend Version 2.0 Plus

IC3	Russian Olive-Tamarisk Introduced Riparian Woodland and Scrub	Map Unit ID	26
<p>Concept: Non-native Russian olive and tamarisk are codominant in woodlands and scrub with shrubby, grassy, or sparse understories.</p>			
<p>Rules: Native Trees <25% of the total tree canopy cover; Russian olive and tamarisk each >25% and < 75% of the total tree and tall shrub cover.</p>			
<p>Indicator Species: <i>Elaeagnus angustifolia</i> (I) and <i>Tamarix chinensis</i> (I) or <i>T. ramosissima</i> (I).</p>			
<p>Other common species: Shrubs—<i>Salix exigua</i> and <i>Forestiera pubescens</i> var. <i>pubescens</i>. Grasses—<i>Distichlis spicata</i>, <i>Muhlenbergia asperifolia</i>, and <i>Sporobolus airoides</i>.</p>			
<p>Links: NM SWAP: Introduced Riparian Vegetation USNVC Group: Interior West Ruderal Riparian Forest, Woodland & Scrub (G510)</p>			
<p>Figure 15. Russian Olive-Tamarisk Introduced Riparian Woodland and Scrub along the Rio Chama in north-central New Mexico.</p>			
IC4	Mixed Introduced Forest and Scrub	Map Unit ID	27
<p>Concept: A mix of other non-native woody species are dominant (elm, tree of heaven, etc.) and can include Russian olive and tamarisk.</p>			
<p>Rules: Native Trees <25% of the total tree canopy cover with non-native tree species >25% of the total tree cover and predominantly species other than Russian olive or tamarisk.</p>			
<p>Indicator Species: <i>Ulmus pumila</i>, <i>Ailanthus altissima</i>, and <i>Morus alba</i>.</p>			
<p>Other common species: Various ruderal herbs, e.g., <i>Marrubium vulgare</i> (I), <i>Ambrosia psilostachya</i>, and <i>Setaria viridis</i> (I).</p>			
<p>Links: NM SWAP: Introduced Riparian Vegetation USNVC Group: Interior West Ruderal Riparian Forest, Woodland & Scrub (G510)</p>			
<p>Figure 16. Mixed Introduced Forest and Scrub dominated by white mulberry (<i>Morus alba</i>) Rio Grande near Los Lunas, NM.</p>			

New Mexico Riparian Habitat Map Annotated Legend Version 2.0 Plus


ID	Upland Forest and Woodland		
ID1	Upland Forest and Woodland	Map Unit ID	20
<p>Concept: Adjacent upland, non-floodplain forest and woodlands.</p>			
<p>Rules: Wetland/riparian species poorly represented or absent; upland dominant (e.g., conifers, aspen, oak, juniper).</p>			
<p>Indicator Species: <i>Abies</i>, <i>Picea</i>, <i>Pinus</i>, <i>Juniperus</i>, <i>Pseudotsuga</i>, <i>Quercus</i>, and <i>Populus tremuloides</i>.</p>			
<p>Other common species: Various upland species.</p>			
<p>Links: NM SWAP: N/A USNVC Group: N/A</p>			

Figure 17. Upland Forest and Woodland occur along the upper slopes out of the riparian zone as shown here in the background along the Red River in northern New Mexico.




IE	Semi-Natural Riparian Woodland and Scrub		
	Relict and non-native woodland and shrublands outside core natural area riparian zones adjacent to channels	Excludes vegetation of relatively intact riparian and wetland natural areas along stream and river channels	
IE1	Semi-Natural Riparian Woodland and Scrub	Map Unit ID	34
<p>Concept: Relict woodlands and shrublands in agricultural and urban areas that are disconnected from the natural riparian corridor. Includes patches within agricultural fields, hedgerows, and stands along irrigation ditches. These are commonly dominated by a mix of native riparian species such cottonwoods along with non-native, often upland species such as Siberian elm. The understories also tend to be dominated by weedy (ruderal) species.</p>			
<p>Rules: Includes herbaceous or barren irrigation ditches but excludes Built-Up Areas (IVE1); modifier if non-native tamarisk and Russian olive present.</p>			
<p>Indicator Species: Trees—a mix of native riparian species (e.g., <i>Populus</i>) and non-native, often upland species (e.g., <i>Ulmus pumila</i>).</p>			
<p>Other common species: Often includes native shrubs such as coyote willow (<i>Salix exigua</i>), along with non-native shrubs and various ruderal forbs and grasses.</p>			
<p>Links: NM SWAP: Southwest Riparian Forest USNVC Group: Interior West Ruderal Riparian Forest, Woodland & Scrub (G510)</p>			

Figure 18. Semi-Natural Riparian Woodland and Scrub represented by Siberian Elms along a ditch in Albuquerque's north valley.

New Mexico Riparian Habitat Map Annotated Legend Version 2.0 Plus

II	Shrubland		
	Shrubland dominated by shrubs and short trees (saplings and seedlings)	Shrubs (0.5-5 m tall) >25% canopy cover; trees (> 5m tall) < 10% canopy cover	
IIA	Montane Riparian Shrubland		
	Riparian shrublands of mountain valleys and canyons	Stands generally above 6,500 ft (1,980 m) elevation	
IIA1	Subalpine-Montane Riparian Shrubland	Map Unit ID	18
<p>Concept: High-elevation shrublands dominated by thinleaf alder and willows (bluestem willow, Bebb willow, Drummond's willow, and strapleaf willow). Understories are mesic and can be rich and diverse in grasses and forbs including native and introduced species. Occurs along mountain streams and rivers throughout NM.</p> <p>Rules: Native facultative-wet or obligate wetland shrubs with >75% of the total shrub canopy cover.</p> <p>Indicator Species: <i>Alnus incana</i> ssp. <i>tenuifolia</i>, <i>Salix irrorata</i>, <i>Salix bebbiana</i>, <i>Salix drummondiana</i>, and <i>Salix ligulifolia</i>.</p> <p>Other common species: Shrubs—<i>Rosa woodsii</i> and <i>Salix exigua</i>. Herbs—<i>Agrostis gigantea</i> (l), <i>Glyceria striata</i>, <i>Juncus arcticus</i> var. <i>balticus</i>, <i>Mentha arvensis</i>, and <i>Heracleum maximum</i>.</p> <p>Links: NM SWAP: Montane-Subalpine Wet Shrubland & Wet Meadow USNVC Group: Western Montane-Subalpine Riparian & Seep Shrubland (G527)</p>			
		<p>Figure 19. Subalpine-Montane Riparian Shrubland along Polvadera Creek in north-central New Mexico.</p>	
IIA2	Montane Dry Riparian Shrubland	Map Unit ID	35
<p>Concept: Shrublands dominated by mesic upland shrubs of mountain canyons; occurs on stream terraces or slopes immediately adjacent to stream channels in confined canyons.</p> <p>Rules: Native facultative-wet or obligate wetland shrubs <25% of the total shrub canopy cover.</p> <p>Indicator Species: <i>Rhus trilobata</i>, <i>Quercus gambelii</i>, <i>Ericameria</i> spp., and <i>Symphoricarpos</i> spp.</p> <p>Other common species: N/A</p> <p>Links: NM SWAP: Rocky Mountain Montane Shrubland USNVC Group: Southern Rocky Mountain Mixed Montane-Foothill Shrubland (G276)</p>			
		<p>Figure 20. Montane Dry Riparian Shrubland along the Rio Guadalupe in the Jemez Mountains.</p>	

New Mexico Riparian Habitat Map Annotated Legend Version 2.0 Plus


IIB	Lowland Riparian Shrubland		
	Riparian shrublands of lowland valleys and canyons	Stands generally below 6,500 ft (1,980 m) elevation	
IIB1	Lowland Wet Riparian Shrubland		Map Unit ID
			4
<p>Concept: Shrubland dominated by native riparian shrubs (e.g., willow, seep willows) with typically mesic and diverse herbaceous understories with mix of native and introduced species. Among graminoids, Canada wildrye, redtop (I), Kentucky bluegrass (I), alkali sacaton, Baltic rush, and tall fescue (I) are the most common. Some stands on river bars can have sparse herbaceous cover. Stands occur on river bars and in back channels of lowland river floodplains throughout New Mexico.</p>			
<p>Rules: Native facultative-wet or obligate wetland shrubs with >75% of the total shrub canopy; upland shrubs poorly represented or absent.</p>			
<p>Indicator Species: Shrubs—<i>Salix exigua</i>, <i>Baccharis emoryi</i>, and <i>Baccharis salicifolia</i>.</p>			
<p>Other common species: Graminoids—<i>Elymus canadensis</i>, <i>Agrostis gigantea</i>, <i>Poa pratensis</i>, <i>Sporobolus airoides</i>, <i>Juncus arcticus</i> var. <i>balticus</i>, and <i>Festuca arundinacea</i></p>			
<p>Links: NM SWAP: Southwest Riparian Forest USNVC Group: North American Warm Desert Riparian Low Bosque & Shrubland (G533)</p>			

Figure 21. Coyote willow shrub stand along the Rio Grande near Corrales, NM.


IIB2	Lowland Dry Riparian Shrubland		Map Unit ID
			3
<p>Concept: Shrublands of ephemeral desert washes (arroyo riparian) or dry river benches and terraces. Dominated by facultative and upland shrub species tolerant of occasional high-velocity stream flows. Common indicator shrubs are Apache plume, desert willow, rabbitbrush, and singlewhorl burrobrush. Also common are littleleaf sumac, brickellbush, sagebrush, and mesquite among others.</p>			
<p>Rules: Native facultative-wet or obligate wetland shrubs >25% of the total shrub canopy cover; non-native shrubs <25% of the total shrub canopy cover.</p>			
<p>Indicator Species: Shrubs—<i>Fallugia paradoxa</i>, <i>Chilopsis linearis</i>, <i>Ericameria nauseosa</i>, and <i>Hymenoclea monogyra</i></p>			
<p>Other common species: Shrubs— <i>Rhus microphylla</i>, <i>Brickellia laciniata</i>, <i>Artemisia tridentata</i>, and <i>Prosopis glandulosa</i>. Grasses—<i>Sporobolus airoides</i> and <i>Sporobolus wrightii</i>.</p>			
<p>Links: NM SWAP: Warm-Desert Arroyo Riparian Scrub USNVC Group: Warm Semi-desert Dry Wash Shrubland (G541)</p>			

Figure 22. Lowland Dry Riparian Shrubland along the Rio Guadalupe in the Jemez Mountains of north-central New Mexico.

New Mexico Riparian Habitat Map Annotated Legend Version 2.0 Plus


IIB3	Desert Alkaline-Saline Wet Shrubland	Map Unit ID	40
<p>Concept: Shrublands of saline terraces of lowland river valleys and desert playas.</p>			
<p>Rules: Dominated by native salt-tolerant facultative-wet or obligate wetland shrubs and scattered grasses and forbs.</p>			
<p>Indicator Species: <i>Allenrolfea occidentalis</i>, <i>Suaeda moquinii</i>, <i>Atriplex</i> spp., <i>Salicornia</i> spp., and <i>Sarcobatus vermiculatus</i></p>			
<p>Other common species: Grasses—<i>Sporobolus wrightii</i>, <i>Sporobolus. airoides</i>, and <i>Distichlis spicata</i>.</p>			
<p>Links: NM SWAP: Warm & Cool Desert Alkali-Saline Wetland USNVC Group: North American Desert Alkaline-Saline Wet Scrub (G537)</p>			

Figure 23. Desert Alkaline-Saline Wet Shrubland on White Sands National Monument in southern New Mexico.


IIB4	Lowland Mixed Native-Russian Olive Riparian Scrub	Map Unit ID	29
<p>Concept: Mixed shrublands of native riparian shrubs (e.g., coyote willow, seep willow) and non-native Russian olive.</p>			
<p>Rules: Native facultative-wet or obligate wetland shrub with >25% and <75% of the total shrub canopy cover and codominant with non-native Russian olive shrubs and trees.</p>			
<p>Indicator Species: <i>Salix exigua</i>, <i>Baccharis emoryi</i>, <i>Baccharis salicifolia</i>, and <i>Elaeagnus angustifolia</i> (I).</p>			
<p>Other common species: Miscellaneous herbs.</p>			
<p>Links: NM SWAP: Warm Desert Lowland Riparian Shrubland USNVC Group: North American Warm Desert Riparian Low Bosque & Shrubland (G533)</p>			

Figure 24. Lowland Mixed Native-Russian Olive Riparian Scrub Rio Grande near Belen, NM,

New Mexico Riparian Habitat Map Annotated Legend Version 2.0 Plus


IIB5	Lowland Mixed Native-Introduced Tamarisk Riparian Scrub	Map Unit ID	30
<p>Concept: Mixed shrublands of native riparian shrubs (e.g., coyote willow, seep willow) and non-native tamarisk. Grasses can be well-represented to abundant.</p>			
<p>Rules: Native facultative-wet or obligate wetland shrub with >25% and <75% of the total shrub canopy cover and codominant with non-native tamarisk shrubs and trees.</p>			
<p>Indicator Species: <i>Salix exigua</i>, <i>Baccharis emoryi</i>, <i>Baccharis salicifolia</i>, and <i>Tamarix</i> spp. (I).</p>			
<p>Other common species: Grasses—<i>Distichlis spicata</i> and <i>Sporobolus airoides</i>,</p>			
<p>Links: NM SWAP: Warm Desert Lowland Riparian Shrubland USNVC Group: North American Warm Desert Riparian Low Bosque & Shrubland (G533)</p>			

Figure 25. Mixed coyote willow-tamarisk stand on the Rio San Jose in northwestern New Mexico.


IIB6	Lowland Mixed Native-Russian Olive-Tamarisk Riparian Woodland and Scrub	Map Unit ID	31
<p>Concept: Mixed shrublands of native riparian shrubs (e.g., coyote willow, seep willow) and non-native tamarisk and Russian olive.</p>			
<p>Rules: Native facultative-wet or obligate wetland shrubs are codominant with non-native tamarisk and Russian olive shrubs and trees, all with >25% of the total shrub cover.</p>			
<p>Indicator Species: <i>Salix exigua</i>, <i>Baccharis emoryi</i>, <i>Baccharis salicifolia</i>, <i>Baccharis salicina</i>, <i>Elaeagnus angustifolia</i> (I), and <i>Tamarix</i> spp. (I).</p>			
<p>Other common species: Grasses—<i>Distichlis spicata</i> and <i>Sporobolus airoides</i>.</p>			
<p>Links: NM SWAP: Warm Desert Lowland Riparian Shrubland USNVC Group: North American Warm Desert Riparian Low Bosque & Shrubland (G533)</p>			

Figure 26. Mixed coyote willow-Russian olive-tamarisk shrub stand on Arroyo Chico in northwestern NM.

New Mexico Riparian Habitat Map Annotated Legend Version 2.0 Plus


IIC	Upland Shrubland		
IIC1	Upland Shrubland	Map Unit ID	28
Concept: Adjacent upland, non-floodplain shrubland.			
Rules: Obligate or facultative wetland shrubs poorly represented or absent.			
Indicator Species: Various upland shrubs.			
Other common species: A mix of upland forbs and grasses.			
Links: NM SWAP: N/A USNVC Group: N/A			

Figure 27. Upland shrubland along the Rio Pueblo de Taos in northern New Mexico.


III	Herbaceous Vegetation		
	Grassland and meadows dominated by herbaceous species (graminoids and forbs)	Shrubs (0.5-5 m tall) <25% canopy cover; trees (> 5m tall) < 10% canopy cover	
IIIA	Montane Marshes and Wet Meadows		
	Wetlands and wet meadows of mountain valleys	Generally above 6,500 ft (1,980 m) elevation	
IIIA1	Subalpine and Montane Marsh	Map Unit ID	19
Concept: Wetlands of mountain river valley bottoms commonly adjacent to river or stream channels or in slope wetlands.			
Rules: Herbaceous facultative wet and obligate wetland species dominant.			
Indicator Species: Graminoids— <i>Calamagrostis canadensis</i> , <i>Deschampsia cespitosa</i> , <i>Carex aquatilis</i> , <i>Carex nebrascensis</i> , <i>Carex utriculata</i> , and <i>Carex pellita</i> .			
Other common species: Graminoids— <i>Agrostis gigantea</i> (l) and <i>Cinna latifolia</i> .			
Links: NM SWAP: Montane-Subalpine Wet Shrubland & Wet Meadow USNVC Group: Vancouverian-Rocky Mountain Montane Wet Meadow & Marsh (G521)			

Figure 28. Subalpine and Montane Marsh on Valles Caldera National Preserve in northern New Mexico.

New Mexico Riparian Habitat Map Annotated Legend Version 2.0 Plus


IIIA2	Montane Wet Meadow	Map Unit ID	13
<p>Concept: Wet meadows of mountain river valleys, commonly occurring along the margins of the riparian zone or slope wetlands.</p>			
<p>Rules: Herbaceous facultative and facultative-wet species dominant.</p>			
<p>Indicator Species: <i>Juncus arcticus</i> var. <i>balticus</i>, <i>Poa pratensis</i> (I), and <i>Carex microptera</i>.</p>			
<p>Other common species: Herbs—<i>Agrostis gigantea</i> (I), <i>Achillea millefolium</i>, and <i>Iris missouriensis</i>.</p>			
<p>Links: NM SWAP: Montane-Subalpine Wet Shrubland & Wet Meadow USNVC Group: Vancouverian-Rocky Mountain Montane Wet Meadow & Marsh (G521)</p>			

Figure 29. Montane Wet Meadow in Valle Vidal in north-central New Mexico.


IIIB	Lowland Marshes and Wet Meadows		
	Wetlands and wet meadows of lowland river valleys	Stands generally below 6,500 ft (1,980 m) elevation	
IIIB1	Western Lowland Marsh	Map Unit ID	5
<p>Concept: Wetlands of lowland river valleys west of the Southern Great Plains region of northeastern New Mexico. Dominated by obligate wetland herbaceous species (e.g., sedges, flat sedges, spike rushes, threesquare, and monkey flowers). Commonly found adjacent to rivers, in back channels or other depressions in the floodplain, or as slope wetlands.</p>			
<p>Rules: Obligate and facultative-wet species with western U.S. affinities dominant.</p>			
<p>Indicator Species: Graminoids—<i>Schoenoplectus pungens</i>, <i>Eleocharis palustris</i>, <i>Carex pellita</i>, <i>Carex emoryi</i>, and <i>Cyperus</i> spp. Forbs—<i>Typha</i> spp.</p>			
<p>Other common species: Graminoids—<i>Juncus arcticus</i> var. <i>balticus</i>. Forbs—<i>Mimulus</i> spp.</p>			
<p>Links: NM SWAP: Arid West Interior Freshwater Emergent Marsh USNVC Group: Arid West Interior Freshwater Marsh (G531)</p>			

Figure 30. Western Lowland Marsh along Crystal Creek in northwestern NM.

New Mexico Riparian Habitat Map Annotated Legend Version 2.0 Plus




IIIB2	Great Plains Lowland Marsh	Map Unit ID	37
<p>Concept: Wetlands of lowland river valleys of the Southern Great Plains region of northeastern New Mexico. Dominated by obligate wetland herbaceous species (e.g., sedges, and spike rushes). Commonly found adjacent to rivers, in back channels or other depressions in the floodplain, or as slope wetlands.</p>			
<p>Rules: Dominated by obligate and facultative-wet species with Great Plains U.S. affinities dominant.</p>			
<p>Indicator Species: Graminoids—<i>Schoenoplectus americanus</i>, <i>Eleocharis palustris</i>, <i>Carex pellita</i>, and <i>Carex nebrascensis</i>. Forbs—<i>Typha</i> spp.</p>			
<p>Other common species: Graminoids—<i>Juncus arcticus</i> var. <i>balticus</i>.</p>			
<p>Links: NM SWAP: Great Plains Wet Meadow, Marsh & Playa USNVC Group: Great Plains Freshwater Marsh (G325)</p>			
<p>Concept: Wet meadows of lowland river valleys of New Mexico except the northeast Southern Great Plains region. Dominated by facultative wetland herbaceous species (e.g., mesic forbs and grasses). Commonly found adjacent to rivers or in other mesic parts of the floodplain.</p>			
<p>Rules: Facultative-wet and facultative species with western U.S. affinities dominant.</p>			
<p>Indicator Species: Grasses—<i>Muhlenbergia asperifolia</i>, <i>Panicum obtusum</i>, <i>Juncus arcticus</i> var. <i>balticus</i>, <i>Cynodon dactylon</i> (I), and <i>Festuca arundinacea</i> (I). Forbs—<i>Anemopsis californica</i>.</p>			
<p>Other common species: Often a rich mix of grasses and forbs including <i>Distichlis spicata</i> and <i>Sporobolus airoides</i>.</p>			
<p>Links: NM SWAP: Arid West Interior Freshwater Emergent Marsh USNVC Group: North American Desert Alkaline-Saline Marsh & Playa (G538)</p>			
<p>Concept: Wet meadows of lowland river valleys of New Mexico except the northeast Southern Great Plains region. Dominated by facultative wetland herbaceous species (e.g., mesic forbs and grasses). Commonly found adjacent to rivers or in other mesic parts of the floodplain.</p>			
<p>Rules: Facultative-wet and facultative species with western U.S. affinities dominant.</p>			
<p>Indicator Species: Grasses—<i>Muhlenbergia asperifolia</i>, <i>Panicum obtusum</i>, <i>Juncus arcticus</i> var. <i>balticus</i>, <i>Cynodon dactylon</i> (I), and <i>Festuca arundinacea</i> (I). Forbs—<i>Anemopsis californica</i>.</p>			
<p>Other common species: Often a rich mix of grasses and forbs including <i>Distichlis spicata</i> and <i>Sporobolus airoides</i>.</p>			
<p>Links: NM SWAP: Arid West Interior Freshwater Emergent Marsh USNVC Group: North American Desert Alkaline-Saline Marsh & Playa (G538)</p>			





Figure 31. Great Plains Lowland Marsh along Ponil Creek in northeastern New Mexico.



Figure 32. Arid West Lowland Wet Meadow along the Rio Grande in the Albuquerque reach.

New Mexico Riparian Habitat Map Annotated Legend Version 2.0 Plus

IIIB4	Great Plains Lowland Wet Meadow	Map Unit ID	38
<p>Concept: Wet meadows of lowland river valleys of the Southern Great Plains region of northeastern New Mexico.</p> <p>Rules: Facultative-wet and facultative species with Great Plains U.S. affinities dominant.</p> <p>Indicator Species: Grasses—<i>Pascopyrum smithii</i>, <i>Juncus arcticus</i> var. <i>balticus</i>, <i>Panicum obtusum</i>, and <i>Festuca arundinacea</i> (l).</p> <p>Other common species: Often a rich mix of grasses and fobs including <i>Distichlis spicata</i> and <i>Sporobolus airoides</i>..</p> <p>Links: NM SWAP: Great Plains Wet Meadow, Marsh & Playa USNVC Group: Great Plains Wet Prairie, Wet Meadow & Seepage Fen (G336)</p>			
		<p>Figure 33. Great Plains Lowland Wet Meadow along the Canadian River in Mills Canyon in northeastern New Mexico.</p>	

IIIC	Montane Dry Meadow and Grassland		
	Dry grasslands and meadows of montane valleys	Stands generally above 6,500 ft (1,980 m) elevation	
IIIC1	Montane Dry Riparian Meadow and Grassland	Map Unit ID	10
<p>Concept: Dry grasslands and meadows within the riparian corridor of mountain valleys.</p> <p>Rules: Facultative and upland grasses and forbs dominant; inclusions of facultative-wet species.</p> <p>Indicator Species: Grasses and forbs—<i>Festuca idahoensis</i>, <i>Potentilla hippiana</i>, and <i>Achillea millefolium</i>.</p> <p>Other common species: A mix of facultative-upland and upland forbs and grasses.</p> <p>Links: NM SWAP: Rocky Mountain Subalpine-High Montane Meadow USNVC Group: Southern Rocky Mountain Montane-Subalpine Grassland (G268)</p>			
		<p>Figure 34. Montane Dry Riparian Meadow and Grassland along the east fork of the Rio Brazos in north-central New Mexico.</p>	

New Mexico Riparian Habitat Map Annotated Legend Version 2.0 Plus


IIID	Lowland Dry Meadow and Grassland		
	Dry grasslands and meadows of lowland river valleys	Stands Generally below 6,500 ft (1,980 m) elevation	
IIID1	Western Lowland Salt Meadow and Dry Grassland	Map Unit ID	8
<p>Concept: Saltgrass meadows and dry grasslands of lowland river valleys except in the Southern Great Plains region of northeastern New Mexico.</p>			
<p>Rules: Facultative and upland grasses dominant; inclusions of facultative-wet species.</p>			
<p>Indicator Species: Grasses—<i>Distichlis spicata</i> and <i>Sporobolus airoides</i>.</p>			
<p>Other common species: A mix of facultative-upland and upland forbs and grasses.</p>			
<p>Links: NM SWAP: Warm & Cool Desert Alkali-Saline Wetland USNVC Group: North American Desert Alkaline-Saline Marsh & Playa (G538)</p>			

Figure 35. Western Lowland Salt Meadow and Dry Grassland along the Pecos River at Bitter Lakes National Wildlife Refuge near Roswell, NM.


IIID2	Great Plains Lowland Salt Meadow and Dry Grassland	Map Unit ID	39
<p>Concept: Saltgrass meadows and dry grasslands of lowland river valleys of the Southern Great Plains region of northeastern New Mexico.</p>			
<p>Rules: Facultative and upland grasses dominant; inclusions of facultative-wet species.</p>			
<p>Indicator Species: Grasses—<i>Distichlis spicata</i>, <i>Hordeum jubatum</i>, <i>Sporobolus airoides</i>.</p>			
<p>Other common species: A mix of facultative-upland and upland forbs and grasses.</p>			
<p>Links: NM SWAP: Great Plains Wet Meadow, Marsh & Playa USNVC Group: Great Plains Saline Wet Meadow & Marsh (G324)</p>			

Figure 36. Great Plains Lowland Salt Meadow and Dry Grassland occurs on higher terraces along streams as seen here along Wolf Creek in northeastern New Mexico.

New Mexico Riparian Habitat Map Annotated Legend Version 2.0 Plus



IIIE Semi-Natural Herbaceous Vegetation			
IIIE1	Ruderal Herbaceous Meadow	Map Unit ID	47
<p>Concept: Strongly dominated by non-native or sometimes generalist native forb species in areas of past or present disturbance—post fire and restoration.</p>			
<p>Rules: Non-native and weedy native forb species dominant over inclusions of other native riparian species.</p>			
<p>Indicator Species: Forbs—<i>Bassia scoparia</i>, <i>Salsola</i> spp., <i>Carduus nutans</i>, <i>Cirsium arvense</i>, <i>Chenopodium album</i>, <i>Suaeda nigra</i>, and <i>Xanthium strumarium</i>.</p>			
<p>Other common species: Sometimes grasses such as <i>Echinochloa crus-galli</i>, <i>Cynodon dactylon</i>, and <i>Bromus tectorum</i> are common</p>			
<p>Links: NM SWAP: Introduced Riparian Vegetation USNVC Group: Western North American Ruderal Marsh, Wet Meadow & Shrubland (M301)</p>			
<p>Concept: Wetland patches within pastures, or pasture areas that are predominantly wetland.</p>			
<p>Rules: Wetlands (including springs or saturated soil areas) within pastures that are separated from the active floodplain and likely have significant disturbance due to grazing or mowing. They are dominated by wetland obligate species and are usually fenced.</p>			
<p>Indicator Species: Graminoids—<i>Schoenoplectus americanus</i>, <i>Eleocharis palustris</i>, <i>Carex pellita</i>, and <i>Carex nebrascensis</i>. Forbs—<i>Typha</i> spp. and <i>Dipsacus fullonum</i> (l).</p>			
<p>Other common species: N/A</p>			
<p>Links: NM SWAP: N/A USNVC Group: Anthropomorphic Vegetation Cultural Class (CCL01)</p>			
IIIE2	Pasture Wetlands	Map Unit ID	48



Figure 37. Ruderal Forb Meadow dominated by *Bassia scoparia* at a burn site along the Rio Grande in Belen, NM.



Figure 38. Pasture wetland along the Rio Hondo in northern New Mexico.

New Mexico Riparian Habitat Map Annotated Legend Version 2.0 Plus


IIIF	Upland Grassland		
IIIF1	Upland Grassland	Map Unit ID	32
<p>Concept: Upland slope grassland.</p>			
<p>Rules: Dominated by upland grass species; obligate or facultative-wet wetland herbaceous species poorly represented or absent.</p>			
<p>Indicator Species: N/A</p>			
<p>Other common species: N/A</p>			
<p>Links: NM SWAP: N/A USNVC Group: N/A</p>			

Figure 39. Upland Grassland outside the floodplain and on the slope leading to the forest edge along Placer Creek in northern New Mexico.




IV	Miscellaneous Land Types		
IVA	Bare Unvegetated		
IVA1	Riparian Bare Ground/Rockland [non-channel]	Map Unit ID	2
<p>Concept: Bare ground and rock-land outside river channels.</p>			
<p>Rules: Exposed, naturally non-vegetated within the floodplain. Excludes water and exposed soils of channels (see IVB1; MU 22) and heavily disturbed ground or developed areas (see IVE; MU21).</p>			
<p>Indicator Species: N/A</p>			
<p>Other common species: N/A</p>			
<p>Links: NM SWAP: N/A USNVC Group: N/A</p>			


Figure 40. Riparian Bare Ground/Rockland [non-channel] along the San Juan River in northwestern New Mexico.


New Mexico Riparian Habitat Map Annotated Legend Version 2.0 Plus

IVB	Water/Channel		
		Map Unit ID	22
IVB1	Open Channel Riverwash/Water/Non-vegetated bars	Map Unit ID	22
<p>Concept: Bare ground and water within river channels.</p> <p>Rules: Includes water in channels, side channels and ponds along with mudflats, sandy shoals, boulder, cobble and gravel bar surfaces. Excludes non-channel Riparian Bare Ground/Rockland (see IVA; MU 2).</p> <p>Indicator Species: N/A</p> <p>Other common species: N/A</p> <p>Links: NM SWAP: N/A USNVC Group: N/A</p>			
		<p>Figure 41. Open Channel Riverwash/Water/Non-vegetated bars in the Rio Grande near Belen, NM.</p>	


IVC	Agriculture		
		Map Unit ID	1
IVC1	Agriculture—cultivated crops	Map Unit ID	1
<p>Concept: Developed agricultural areas.</p> <p>Rules: Active and fallow fields; orchards, vineyards.</p> <p>Indicator Species: N/A</p> <p>Other common species: N/A</p> <p>Links: NM SWAP: N/A USNVC Group: Anthropomorphic Vegetation Cultural Class (CCL01)</p>			
		<p>Figure 42. Agriculture—all types along the Animas River near Aztec, NM.</p>	


New Mexico Riparian Habitat Map Annotated Legend Version 2.0 Plus

IVC2	Agriculture – hay/pasture	Map Unit ID	49
<p>Concept: Grassy pasture areas with intensive livestock use but without regular tilling.</p> <p>Rules: These pasture areas are generally dominated by grasses and may have significant disturbance due to grazing. They are usually fenced, and many are also irrigated. Dominated by native facultative or facultative-wet grasses, non-native planted pastures grasses, or a mix of both.</p> <p>Indicator Species: N/A</p> <p>Other common species: N/A</p> <p>Links: NM SWAP: N/A USNVC Group: Anthropomorphic Vegetation Cultural Class (CCL01)</p>			
		<p>Figure 43. Cattle pasture along the Rio Quemado in Chimayo, NM.</p>	

IVD	Urban/Built-Up Areas	Map Unit ID	21
IVD1	Development/Disturbed ground	Map Unit ID	21
<p>Concept: Built-up areas and human-disturbed ground.</p> <p>Rules: Includes urban, exurban, mines, golf-courses, ski areas and agricultural facilities. Agricultural lands may be included when surrounded by other urban features.</p> <p>Indicator Species: N/A</p> <p>Other common species: N/A</p> <p>Links: NM SWAP: N/A USNVC Group: N/A</p>			
		<p>Figure 44. Development/Disturbed ground adjacent to Rio Grande in Albuquerque, NM.</p>	

New Mexico Riparian Habitat Map Annotated Legend Version 2.0 Plus

IVE	Roads		
IVE1	Roads	Map Unit ID	14
<p>Concept: Roads and bridges.</p> <p>Rules: Developed, graded roads or high-use two-tracks.</p> <p>Indicator Species: N/A</p> <p>Other common species: N/A</p> <p>Links: NM SWAP: N/A USNVC Group: N/A</p>			
		<p>Figure 45. Roads including bridges like this crossing one the Canadian River in Mills Canyon in northeastern New Mexico.</p>	

IVF	Upland Non-Veg		
IVF1	Upland Bare Ground/Rockland	Map Unit ID	33
<p>Concept: Natural area bare ground and rockland on upland slopes.</p> <p>Rules: No detectable vegetation response.</p> <p>Indicator Species: N/A</p> <p>Other common species: N/A</p> <p>Links: NM SWAP: N/A USNVC Group: N/A</p>			
		<p>Figure 46. Upland Bare Ground/Rockland along the Canadian River in Mills Canyon in northeastern New Mexico.</p>	

New Mexico Riparian Habitat Map Annotated Legend Version 2.0 Plus

Map Unit Modifiers

Table 1. Map unit modifiers assigned as needed to polygons of the New Mexico Riparian Habitat Map. MU_ID_mod refers to the attribute name in the geodatabase for the map.

Modifier	MU_ID_mod	Rules
Agriculture	1	This can include herbaceous vegetation, shrublands, and woodlands that occur in an agricultural setting, outside of the current floodplain.
Treatment/Disturbed	2	Assigned where there is high confidence that mapped polygons have evidence of either vegetation treatment (mechanically or by herbicide) or other disturbances such as a fires or floods that have recently altered the site. Based on NAIP imagery used in a given mapping domain.
Russian olive	3	Assigned when considered a major inclusion in stands but usually <25% of the polygon area (may be more in Semi-Natural woodland and scrub or Agriculture)
Tamarisk	4	Assigned when considered a major inclusion in stands but usually <25% of the polygon area (may be more in Semi-natural woodland and scrub or Agriculture)
Russian Olive-Tamarisk	5	Assigned when considered a major inclusion in stands but usually <25% of the polygon area (may be more in Semi-natural woodland and scrub or Agriculture)
Ditch Bank	6	This modifier was used to indicate Semi-Natural Riparian Woodland and Scrub growing along a ditch bank outside the current active floodplain or when stands of natural vegetation were growing along a ditch bank (levies) inside the floodplain.
Native Vegetation	7	Assigned to indicate >25% cover within stands classified as Semi-natural woodland and scrub or Agriculture, or as major inclusion in non-native-dominated polygons (i.e., Russian olive and/or tamarisk).
Mixed native-exotic	8	Used as a modifier to indicate >25% cover within stands classified as Semi-natural woodland and scrub or Agriculture, or as major inclusion in native polygons (e.g., willow or cottonwood).
Marsh/Wetland	9	Assigned when considered a major inclusion in stands but usually <25% of the polygon area (may be more in Semi-natural woodland and scrub or Agriculture)
Treatment/Disturbed field verified	10	Used to indicate stands that had been significantly modified by treatment, insects, or fire after the image date of the mapping domain based on field data.

New Mexico Riparian Habitat Map Annotated Legend Version 2.0 Plus

Modifier	MU_ID_mod	Rules
Dead Overstory	11	Used to indicate herbaceous stands with a dead overstory, which include cottonwoods, willows, or other shrubs and trees with the exception of tamarisk.
Alkali Flat	13	Modifier for Alkali flats that are bare or grassland but without obvious shrub cover and thus not assigned to "Desert Alkaline-Saline Wet Shrubland" (MU_ID: 40).
Burned 2022	22	Burned in 2022, Hermits Peak/Calf Canyon Fires. Added opportunistically.
Fen	66	Wetland that might be a Fen. Added opportunistically.
Dead Tamarisk Overstory	99	Used to indicate stands that have >90% dead tamarisk in them. Many tamarisk dominated stands have died by chemical treatment and have changed in community type but still have the structure of the dead trees/shrubs in them.
Managed for Natural Habitat	34	Used on areas like Bosque Del Apache and Sevilletta NWR or other public lands (BOR, MRGCD, etc.) that are on the opposite side of levees from the river or otherwise hydrologically disconnected from the river but being managed for wildlife habitat or natural vegetation. The MU_ID (Level 3 Vegetation Type) is assigned based on composition and this modifier is added to indicate it is hydrologically separated from the current floodplain. These areas were identified based on public lands where management is known, or on large swaths of naturally established vegetation directly adjacent to levees that have not been converted to ag/urban. This applies only to riparian vegetation that is inside a managed land-use area. It does NOT apply to any riparian vegetation that is clearly within a developed area, or vegetation along ditch banks or within agricultural areas and old fields; those areas are mapped as "Semi-Natural Riparian Woodland and Scrub" (MU_ID: 34).
Sporobolus wrightii	30	Used only in the Animas Creek in the bootheel of New Mexico to distinguish large stands dominated by <i>Sporobolus wrightii</i> .