



# **Taseko Prosperity Gold-Copper Project**

## **Appendix 5-5-J**

**Master Plant List: Minesite, Access Road and Transmission Corridor**

	Scientific Name	Common Name	Minesite
<b>Trees</b>	<i>Abies lasiocarpa</i>	Subalpine Fir	
	<i>Betula papyrifera</i>	Paper birch	
	<i>Picea engelmannii</i>	Englemen Spruce	
<b>10 total</b>	<i>Picea glauca</i>	White spruce	x
	<i>Picea mariana</i>	Black spruce	x
	<i>Picea X</i>	Hybrid spruce	x
	<i>Pinus contorta</i>	Lodgepole Pine	x
	<i>Populus balsamifera ssp. Trichocarpa</i>	Black cottonwood	
	<i>Populus tremuloides</i>	Trembling aspen	
	<i>Pseudotsuga menziesii</i>	Douglas-fir	
<b>Shrubs and dwarf shrubs</b>	<i>Alnus incana</i>	Mountain alder	
	<i>Alnus viridus</i>	Green alder	
	<i>Amelanchier alnifolia</i>	Saskatoon berry	x
	<i>Artemesia tridentata</i>	Big Sagebrush	
	<i>Betula glandulosa</i>	Scrub birch	x
<b>39 total</b>	<i>Elaeagans commutata</i>	Wolf willow	
	<i>Ericameria nauseosus</i>	Common rabbit-brush	
	<i>Juniperus communis</i>	Common juniper	x
	<i>Juniperus horizontalis</i>	Creeping juniper	x
	<i>Juniperus scopulorum</i>	Rocky Mtn juniper	
	<i>Ledum glandulosum</i>	Trapper's tea	
	<i>Ledum groenlandicum</i>	Labrador tea	
	<i>Lonicera involucrata</i>	Black twinberry	x
	<i>Menziesia ferruginea</i>	False azalea	x
	<i>Pachistima myrsinites</i>	Falsebox	
	<i>Prunus virginiana</i>	Chokecherry	
	<i>Ribes hudsonianum</i>	Northern black currant	
	<i>Ribes lacustre</i>	Black gooseberry	x
	<i>Rosa acicularis</i>	Prickly rose	x
	<i>Rubus arcticus</i>	Nagoonberry	x
	<i>Rubus idaeus</i>	Red raspberry	x
	<i>Rubus pedatus</i>	Five-leaved bramble	x
	<i>Rubus sp.</i>	Rubus	x
	<i>Salix barclayi</i>	Barclay's willow	x
	<i>Salix bebbiana</i>	Bebb's willow	
	<i>Salix brachycarpa</i>	Short-fruited willow	x
	<i>Salix drummondiana</i>	Drummond's willow	
	<i>Salix glauca</i>	Grey-leaved willow	x
	<i>Salix myrtillofolia</i>	Bilberry willow	
	<i>Salix planifolia</i>	Plane-leaved willow	
	<i>Salix scouleriana</i>	Scouler's willow	
	<i>Salix sp.</i>	Willow	x
	<i>Shepherdia canadensis</i>	Soopolallie	x
	<i>Spirea betulifolia</i>	Birch-leaved spirea	x
	<i>Symphocarpus albus</i>	Snowberry	
	<i>Symphocarpus occidentalis</i>	Western snowberry	
	<i>Vaccinium caespitosum</i>	Dwarf blueberry	x
	<i>Vaccinium scoparium</i>	Grouseberry	

	<i>Vaccinium uliginosum</i>	Bog blueberry	
	<i>Viburnum edule</i>	High-brush cranberry	x
<b>Vascular Plants</b>	<i>Achillea millefolium</i>	Yarrow	x
	<i>Achnatherum nelsonii</i>	Columbia needlegrass	
	<i>Achnatherum richardsonii</i>	Spreading needlegrass	x
<b>263 total</b>	<i>Actaea rubra</i>	Baneberry	
	<i>Agoseris aurantiaca</i>	Orange Agoseris	
	<i>Agoseris glauca</i>	Short-beaked agoseris	
	<i>Agropyron spicatum</i>	Bluebunch wheat grass	
	<i>Agrostid scabra</i>	Hair bentgrass	
	<i>Agrostis sp</i>	Grass	x
	<i>Allium cernuum</i>	Nodding onion	x
	<i>Alopecurus aequalis</i>	Little meadow foxtail	
	<i>Amerorchis rotundifolia</i>	Round-leaved orchid	
	<i>Androsace occidentalis</i>	Fairy candelabra	x
	<i>Androsace septentrionalis</i>	Northern fairy candleabra	
	<i>Anemone multifida</i>	Cut-leafed anemone	x
	<i>Antennaria dimorpha</i>	Low pussytoes	
	<i>Antennaria microphylla</i>	White pussytoes	x
	<i>Antennaria neglecta</i>	Field pussytoes	x
	<i>Antennaria pulcherrima</i>	Showy pussytoes	x
	<i>Antennaria racemosa</i>	Racemose pussytoes	
	<i>Antennaria rosea</i>	Rosy pussytoes	x
	<i>Antennaria sp</i>	Pussytoes	x
	<i>Antennaria umbrinella</i>	Umber pussytoes	x
	<i>Apocynum androsaesomifolium</i>	Spreading dogbane	
	<i>Aquilegia formosa</i>	Sitka (red) columbine	x
	<i>Arabis drummondii</i>	Drummond's rockcress	x
	<i>Arabis holboellii</i>	Holboell's rockcress	x
	<i>Arabis holboellii x(hybrid)</i>	hybrid - not rare	x
	<i>Arabis lyalii</i>	Lyall's rockcress	
	<i>Arabis sp</i>	Arabis	x
	<i>Arctostaphylos uva-ursi</i>	Kinnikinnick	x
	<i>Arenaria lateriflora</i>	Blunt-leaved sandwort	x
	<i>Arigeron sp.</i>	Arigeron	
	<i>Arnica chamissonis</i>	Meadow arnica	x
	<i>Arnica cordifolia</i>	Heart-leaved arnica	x
	<i>Arnica latifolia</i>	Mountain arnica	
	<i>Artemisia campestris</i>	Northern wormwood	
	<i>Artemisia frigida</i>	Pasture sage	x
	<i>Artemisia tripartita</i>	Threetip sage brush	
	<i>Aster alpinus</i>	Alpine aster	
	<i>Aster borealis</i>	Rush aster	
	<i>Aster ericoides</i>	Tufted white prairie aster	
	<i>Aster foliaceus</i>	Leafy aster	x
	<i>Aster sp</i>	Aster	x
	<i>Astragalus agrestis</i>	Field milk-vetch	
	<i>Astragalus miser</i>	Timber milk-vetch	x
	<i>Astragalus tenellus</i>	Pulse Milk-vetch	
	<i>Balsamorhiza sagittata</i>	Arrow-leaved balsamroot	
	<i>Beckmannia sp.</i>	American sloughgrass	

	<i>Bromus inermis</i>	Smooth brome	
	<i>Bromus sp</i>	Bromus	x
	<i>Calamagrostis canadensis</i>	Bluejoint	x
	<i>Calamagrostis purpurascens</i>	Purple reedgrass	x
	<i>Calamagrostis rubescens</i>	Pinegrass	
	<i>Calamagrostis stricta</i>	Slimstem reed grass	x
	<i>Calochortus macrocarpus</i>	Sagebrush mariposa lily	
	<i>Calypso bulbosa</i>	Fairyslipper	
	<i>Carex aquatilis</i>	Water sedge	x
	<i>Carex aurea</i>	Golden sedge	
	<i>Carex canescens</i>	Grey sedge	x
	<i>Carex capillaris</i>	Hairlike sedge	x
	<i>Carex concinna</i>	Low Northern Sedge	
	<i>Carex concinnoides</i>	Northwestern Sedge	x
	<i>Carex disperma</i>	Soft-leaved sedge	x
	<i>Carex gynocrates</i>	Yellow bog sedge	x
	<i>Carex leptalea</i>	Bristle-stalked sedge	
	<i>Carex limosa</i>	Shore sedge	x
	<i>Carex media</i>	Scandinavian sedge	x
	<i>Carex nardina</i>	Spikenard sedge	x
	<i>Carex nigricans</i>	Black alpine sedge	
	<i>Carex paregracilis</i>	Field sedge	
	<i>Carex petasata</i>	Pasture sedge	x
	<i>Carex praticola</i>	Meadow sedge	x
	<i>Carex preslii</i>	Presl's sedge	x
	<i>Carex pyrenaica</i>	Pyrenean sedge	x
	<i>Carex rossii</i>	Ross' sedge	
	<i>Carex saxatilis</i>	Russet sedge	x
	<i>Carex sp.</i>	Sedge	x
	<i>Carex utriculata</i>	Beaked sedge	x
	<i>Carex viridula</i>	Green sedge	
	<i>Castilleja miniata</i>	Common paintbrush	x
	<i>Cerastium arvens</i>	Field chickweed	x
	<i>Chrysothamnus nauseosus</i>	Common rabbit-brush	
	<i>Cinna latifolia</i>	Nodding wood-reed	
	<i>Cirsium arvens</i>	Canada thistle	x
	<i>Cirsium sp</i>	Thistle	x
	<i>Cirsium vulgare</i>	Bull thistle	x
	<i>Comandra umbellata</i>	Pale comandra	
	<i>Componema sp</i>	Componema	
	<i>Cornus canadensis</i>	Bunchberry	x
	<i>Crepis atrabarba</i>	Slender hawksbeard	
	<i>Danthonia intermedia</i>	Timber oatgrass	x
	<i>Delphinium nuttallianum</i>	Upland larkspur	
	<i>Distichlis stricta</i>	Alkali saltgrass	
	<i>Dodecatheon pulchellum</i>	Few-flowered shooting star	
	<i>Draba borealis</i>	Northern draba	x
	<i>Draba nemorosa</i>	Wood draba	
	<i>Eleocharis acicularis</i>	Needle spike-rush	x
	<i>Eleocharis palustris</i>	Common spike-rush	x
	<i>Eleocharis sp</i>	Rush	x
	<i>Elymus glaucus</i>	Blue wildrye	

	<i>Elymus sp.</i>	Grass	x
	<i>Elymus trachycaulus</i>	slender wheatgrass	x
	<i>Empetrum nigrum</i>	crow berry	x
	<i>Epilobioum angustifolium</i>	Fireweed	x
	<i>Epilobium sp.</i>	Epilobium	x
	<i>Equisetum arvens</i>	common horsetail	x
	<i>Equisetum hyemale</i>	Scouring rush	x
	<i>Equisetum scirpoides</i>	Dwarf scouring-rush	x
	<i>Erigeron compositus</i>	Cut-leaved daisy	x
	<i>Erigeron flagellaris</i>	Trailing daisy	
	<i>Erigeron linearis</i>	Linear-leaved daisy	
	<i>Erysimum inconspicuum</i>	Small wallflower	
	<i>Festuca campestris</i>	Rough fescue	
	<i>Festuca occidentalis</i>	Western fescue	
	<i>Festuca saximontana</i>	Rocky mountain fescue	x
	<i>Fragaria virginiana</i>	Wild stawberry	x
	<i>Gaillardia aristata</i>	Brown-eyed susan	
	<i>Galium boreale</i>	Northern bedstraw	x
	<i>Galium sp</i>	Galium	x
	<i>Galium triflorum</i>	Sweet-scented bedstraw	x
	<i>Gentian sp.</i>	Gentian	x
	<i>Gentianella amarella</i>	Northern gentian	x
	<i>Geocaulon lividum</i>	Bastard toad flax	
	<i>Geranium viscosissimum</i>	Sticky purple geranium	
	<i>Geum macrophyllum</i>	Large-leaved avens	x
	<i>Geum rivale</i>	Water avens	
	<i>Geum sp.</i>	Geum	
	<i>Geum triflorum</i>	Old man's whiskers	x
	<i>Glyceria sp</i>	Glyceria	x
	<i>Hedysarum boreale</i>	Northern hedysarum	
	<i>Hedysarum sp.</i>	Hedysarum	
	<i>Heracleum maximus</i>	Cow parsnip	x
	<i>Hesperostipa comata</i>	Needle and thread grass	x
	<i>Hesperostipa spartea</i>	Porcupine grass	
	<i>Hieracium aurantiacum</i>	Orange-red king devil	
	<i>Hieracium sp</i>	Hawkweed	x
	<i>Hierochloe hirta ssp. Arctica</i>	Arctic sweet grass	
	<i>Hippuris vulgaris</i>	Common mare's tale	
	<i>Hordeum jubatum</i>	Foxtail barley	
	<i>Hypochaeris sp</i>	Hypochaeris	
	<i>Juncus balticus</i>	Baltic rush	x
	<i>Juncus sp.</i>	Rush	x
	<i>Kobresia myosuroides</i>	Bellard's kobresia	x
	<i>Koeleria macrantha</i>	Junegrass	x
	<i>Lathyrus nevadensis</i>	Purple peavine	
	<i>Lathyrus ochroleucus</i>	Creamy peavine	
	<i>Linnaea borealis</i>	Twinflower	x
	<i>Linum perenne ssp lewisii</i>	Wild blue flax	
	<i>Lithospermum ruderale</i>	Lemonweed	
	<i>Lomatium macrocarpum</i>	Large-fruited desert-parsley	
	<i>Luzula sp</i>	Luzula	x
	<i>Maianthemum stellatum</i>	Star-flowered false solomon's seal	x

	<i>Medicago sativa</i>	Alfalfa	
	<i>Melilotus officinalis</i>	Yellow sweet-clover	
	<i>Mentha arvens</i>	Field mint	
	<i>Mentha sp.</i>	Mint	
	<i>Mitella nuda</i>	Common mitrewort	x
	<i>Moehringia lateriflora</i>	Blunt-leaved sandwort	
	<i>Muhlenbergia richardsonis</i>	Mat muhly	x
	<i>Myriophyllum sp.</i>	Myriophyllum	
	<i>Nuphar polysepalum</i>	Yellow pond lily	x
	<i>Opuntia fragilis</i>	Brittle prickly-pear cactus	
	<i>Orchid sp</i>	Orchid	x
	<i>Orthilia secunda</i>	One-sided wintergreen	
	<i>Orthocarpus luteus</i>	Yellow owl clover	
	<i>Oryzopsis asperifolia</i>	Rough-leaved ricegrass	
	<i>Osmorhiza berteroi</i>	Mountain sweet-cicley	
	<i>Oxytropis campestris</i>	Field locoweed	x
	<i>Parnassia fimbriata</i>	Fringed grass-of-parnassius	x
	<i>Parnassia palustris</i>	Northern grass-of-parnassus	
	<i>Parnassia sp</i>	Parnassus	
	<i>Pedicularis bracteosa</i>	Bracted lousewort	x
	<i>Pedicularis ornithorhyncha</i>	Bird's beak lousewort	
	<i>Penstemon fruticosus</i>	Shrubby penstemon	x
	<i>Penstemon procerus</i>	Small flowered penstemon	x
	<i>Petasites frigidus var. palmatus</i>	Palmate coltsfoot	x
	<i>Petasites sagittatus</i>	Arrow-leaved coltsfoot	x
	<i>Petasites sp.</i>	Coltsfoot	x
	<i>Phalaris arundinacea</i>	Reed canarygrass	
	<i>Phleum sp.</i>	Phleum	
	<i>Piptathera pungens</i>	Short-awned ricegrass	
	<i>Plantago major</i>	Common plantain	x
	<i>Platanthera obtusata</i>	Round-leaved rein-orchid	
	<i>Platanthera dilatata</i>	One-leaved rein-orchid	x
	<i>Platanthera sp</i>	Orchid	
	<i>Poa cusickii</i>	Cusick's bluegrass	
	<i>Poa nemoralis</i>	Wood bluegrass	
	<i>Poa palustris</i>	Fowl bluegrass	x
	<i>Poa pratensis</i>	Kentucky bluegrass	x
	<i>Poa secunda</i>	Nevada bluegrass	
	<i>Poa sp.</i>	Grass	x
	<i>Polemonium micranthum</i>	Littlebells polemonium	
	<i>Polemonium pulcherrimum</i>	Showy jacob's ladder	x
	<i>Polygonum sp</i>	Polygonum	
	<i>Potentilla aserina</i>	Silverweed	x
	<i>Potentilla agrentea</i>	Silvery cinquefoil	
	<i>Potentilla arguta</i>	White cinquefoil	x
	<i>Potentilla diversifolia</i>	Diverse-leaved cinquefoil	x
	<i>Potentilla gracilis</i>	Graceful cinquefoil	x
	<i>Potentilla palustris</i>	Marsh cinquefoil	x
	<i>Potentilla recta</i>	Sulpher cinqofoil	
	<i>Potentilla sp</i>	Cinqofoil	x
	<i>Pseudoroegneria spicatum</i>	Bluebench wheatgrass	x
	<i>Puccinellia nutkaensis</i>	Pacific alkalai-grass	

	<i>Pyrola asarifolia</i>	Pink wintergreen	
	<i>Pyrola minor</i>	Lesser wintergreen	
	<i>Pyrola secunda</i>	One-sided wintergreen	
	<i>Pyrola sp</i>	Wintergreen	
	<i>Ranunculus cymbalaria</i>	Shore buttercup	
	<i>Ranunculus aquatilis</i>	White water buttercup	x
	<i>Ranunculus gmelinii</i>	Small yellow water-buttercup	x
	<i>Ranunculus pedatifidus var. Affinis</i>	Birdsfoot buttercup	x
	<i>Ranunculus sceleratus</i>	Cursed crowsfoot	
	<i>Rhinanthus minor</i>	Yellow rattle	
	<i>Rumex sp.</i>	Rumex	x
	<i>Salsola kali</i>	Russian thistle/tumbleweed	
	<i>Sanguisorba canadensis</i>	Sitka burnet	x
	<i>Saxifraga bronchialis</i>	Spotted saxifrage	
	<i>Saxifraga occidentalis</i>	Western saxifrage	x
	<i>Schoenoplectus tabernaemontani</i>	Soft-stemmed bulrush	
	<i>Scirpus validus</i>	Soft-stemmed bulrush	
	<i>Sedum lanceolatum</i>	Lance-leaved stonecrop	x
	<i>Selaginella densa</i>	Compact selaginella	x
	<i>Senecio pauciflorus</i>	Rayless alpine butterweed	
	<i>Senecio sp</i>	Senecio	x
	<i>Senecio streptanthifolius</i>	Rocky mountain butterweed	x
	<i>Senecio triangularis</i>	Arrow-leaved groundsel	x
	<i>Sibbaldia procumbens</i>	Sibbaldia	
	<i>Sisyrinchium idahoens</i>	Idaho blue-eyed grass	
	<i>Sisyrinchium idahoense</i>	Idaho blue-eyed grass	
	<i>Sisyrinchium montanum</i>	Mountain blue-eyed grass	
	<i>Sisyrinchium sp.</i>	Sisyrinchium	
	<i>Solidago canadensis</i>	Canada goldenrod	
	<i>Solidago sp.</i>	Solidago	x
	<i>Solidago spathulata</i>	Spike-like goldenrod	x
	<i>Sparganium sp</i>	Sparganium	
	<i>Spartina gracilis</i>	Alkali cordgrass	
	<i>Spiranthes romanzoffiana</i>	Lady's tresses	x
	<i>Stellaria calycantha</i>	Northern starwort	
	<i>Stellaria longipes</i>	Long-stalked starwort	x
	<i>Stellaria sp</i>	Stellaria	x
	<i>Taraxacum officinale</i>	Common dandelion	x
	<i>Thalictrum dasycarpum</i>	Purple meadowrue	x
	<i>Thalictrum occidentale</i>	Western meadowrue	x
	<i>Tiarella unifoliata</i>	One-leaved foamflower	
	<i>Tragopogon dubious</i>	Yellow salsify	
	<i>Tragopogon pratensis</i>	Meadow salsify	
	<i>Trifolium borealis</i>	Broad-leaved starflower	
	<i>Trifolium pratense</i>	Red clover	
	<i>Triglochin maritima</i>	Seaside arrowgrass	
	<i>Triphysaria versicolor</i>	Owl clover	
	<i>Trisetum spicatum</i>	Spike trisetum	
	<i>Trollius albiflorus</i>	Globeflower	
	<i>Typha latifolia</i>	Bullrush	
	<i>Valeriana dioica</i>	Marsh valerian	x
	<i>Veronica americana</i>	American brooklime	x

	<i>Veronica sp.</i>	Veronica	
	<i>Vicia americana</i>	American vetch	x
	<i>Viola adunca</i>	Early blue violet	x
	<i>Viola canadensis</i>	Canada violet	
	<i>Viola renifolia</i>	Kidney leaved violet	x
	<i>Viola sp</i>	Violet	x
	<i>Zigadenus venenosus</i>	Meadow death camas	
<b>Non-Vascular</b>	<i>Aceraceae sp.</i>		
	<i>Aulacomnium palustre</i>	Glow moss	x
	<i>Brachythecium albicans</i>	Common lawn moss	x
<b>39 total</b>	<i>Bryoria</i>	Horsetail Lichens	
	<i>Bryum caespiticium</i>		
	<i>Bryum spp</i>		x
	<i>Calliergonella cuspidata</i>	Pointed spear moss	
	<i>Campylium sp</i>		x
	<i>Campylium stellatum</i>		x
	<i>Ceratodon purpureus</i>		x
	<i>Cladina rangiferina</i>	Grey riendeer lichen	
	<i>Cladina sp.</i>		x
	<i>Cladonia sp</i>		x
	<i>Dicranum scoparium</i>	Broom moss	
	<i>Diploschistes muscorum</i>	Cow pie lichen	x
	<i>Distichum capillaceum</i>		
	<i>Drepanocladus sp</i>		x
	<i>Drepanocladus vernicorus</i>		x
	<i>Fontinalis sp.</i>		x
	<i>Funaria hygrometrica</i>		x
	<i>Hylocomium splendens</i>	Step moss	x
	<i>Letharia vulgare</i>	Wolf lichen	x
	<i>Lycopodium annotinum</i>	Stiff clubmoss	
	<i>Marchantia polymorpha</i>		x
	<i>Mnium sp</i>	Leafy moss	
	<i>moss spp</i>		x
	<i>Peltigera aphthosa</i>	Freckle pelt	x
	<i>Plagiothecium sp.</i>		
	<i>Pleurozium schreberi</i>	Schreber's red-stem feathermoss	
	<i>Polytrichum juniperinum</i>	Juniper haircap moss	
	<i>Polytrichum sp.</i>		
	<i>Polytrichum sp.</i>		x
	<i>Rhytidelphus triquetrus</i>	Electrified cats-tail moss	
	<i>Rizocarpon geographicum</i>	Map lichen	
	<i>Sphagnum capillifolium</i>	Common red peat moss	x
	<i>Sphagnum fuscum</i>	Common brown peat moss	x
	<i>Stereocaulon sp</i>		
	<i>Tomenthypnum nitens</i>	Fuzzy hypnum moss	x
	<i>Tortula ruralis</i>	Rusty-steppe moss	
	<i>Xanthoparmelia wyomingica</i>	Variable rockfrog	



Transmission	
Corridor	Access Road
X	
X	X
X	
X	X
X	X
X	X
X	X
X	
X	X
X	X
X	X
	X
X	X
X	
X	X
	X
X	
X	X
X	X
X	
X	X
X	
	X
	X
	X
X	X
X	X
X	X
X	X
X	X
X	X
X	X
X	X
	X
X	X
X	X
X	X
	X
	X
	X
X	X
X	X
X	X
X	
X	
X	X
X	X

X	
X	
X	X
X	
X	X
X	
X	X
X	X
X	X
	X
X	X
X	X
	X
X	X
	X
X	X
X	X
X	X
X	X
	X
X	X
X	X
X	X
	X
X	X
X	X
X	X
X	X
X	X
X	X
X	X
X	X
X	
	X
X	
	X
X	X
X	X
X	
X	X
X	
X	
X	

X	X
X	X
X	X
X	X
X	
X	X
X	X
X	
X	X
X	X
	X
X	X
X	
	X
	X
X	
X	X
X	X
	X
X	
X	X
X	
	X
X	
X	X
X	
X	
X	
	X
X	
X	
X	X
X	
X	
	X
X	
X	
X	X

X	X
X	X
X	X
X	X
X	X
X	X
X	X
X	X
X	X
X	X
X	
	X
	X
	X
X	X
X	X
X	X
X	
X	X
X	X
X	X
X	
X	
X	X
X	
X	X
	X
X	
X	X
X	
	X
X	X
	X
	X
	X
X	X
	X
X	X
X	X
X	X
X	X
X	X
X	X
X	
X	
X	X

X	X
X	
X	X
	X
X	X
X	
X	
X	
X	
X	
X	X
X	
X	
X	X
X	X
X	
X	
X	
X	X
	X
X	X
X	X
X	X
X	X
X	X
X	
X	
	X
X	X
X	X
X	
	X
	X
X	X
X	X
X	X
X	X
X	X
X	X
X	
X	X
X	
X	X
X	X
X	X
	X
X	
X	X
X	X

X	X
	X
X	
X	
X	
X	X
X	
X	X
X	X
X	
X	X
X	X
X	
X	X
X	
	X
	X
X	X
	X
X	
	X
X	
X	X
X	
X	
X	
X	
X	
X	
X	X
X	X
X	
X	X
X	
	X
X	X
X	
X	
X	
X	
X	
X	
X	X
X	X

X	
X	X
X	X
	X
X	
X	X
X	X
	X
X	X
X	X
X	
	X
X	
X	X
X	X
X	X
X	
X	
X	X
	X
X	
X	X
X	X
	X
X	
X	X
X	X
	X
X	X
X	
	X
X	X
X	
X	
X	