Taxon: Regelia megacephala C.A.Gardner **Family:** Myrtaceae

Common Name(s): purple flowered Regelia **Synonym(s):**

Assessor: Chuck Chimera **Status:** Assessor Approved **End Date:** 31 Aug 2020

WRA Score: **-3.0** **Designation:** L **Rating:** Low Risk

Keywords: Shrub, Unarmed, Non-toxic, Ornamental, Serotinous

Qsn #	Question	Answer Option	Answer
101	Is the species highly domesticated?	y=-3, n=0	n
102	Has the species become naturalized where grown?		
103	Does the species have weedy races?		
201	Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical"	(0-low; 1-intermediate; 2-high) (See Appendix 2)	Intermediate
202	Quality of climate match data	(0-low; 1-intermediate; 2-high) (See Appendix 2)	High
203	Broad climate suitability (environmental versatility)	y=1, n=0	n
204	Native or naturalized in regions with tropical or subtropical climates	y=1, n=0	n
205	Does the species have a history of repeated introductions outside its natural range?	y=-2, ?=-1, n=0	n
301	Naturalized beyond native range	y = 1*multiplier (see Appendix 2), n= question 205	n
302	Garden/amenity/disturbance weed	n=0, y = 1*multiplier (see Appendix 2)	n
303	Agricultural/forestry/horticultural weed	n=0, y = 2*multiplier (see Appendix 2)	n
304	Environmental weed	n=0, y = 2*multiplier (see Appendix 2)	n
305	Congeneric weed	n=0, y = 1*multiplier (see Appendix 2)	n
401	Produces spines, thorns or burrs	y=1, n=0	n
402	Allelopathic		
403	Parasitic	y=1, n=0	n
404	Unpalatable to grazing animals		
405	Toxic to animals	y=1, n=0	n
406	Host for recognized pests and pathogens		
407	Causes allergies or is otherwise toxic to humans	y=1, n=0	n
408	Creates a fire hazard in natural ecosystems		
409	Is a shade tolerant plant at some stage of its life cycle		
410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	y=1, n=0	n

Qsn #	Question	Answer Option	Answer
411	Climbing or smothering growth habit	y=1, n=0	n
412	Forms dense thickets		
501	Aquatic	y=5, n=0	n
502	Grass	y=1, n=0	n
503	Nitrogen fixing woody plant	y=1, n=0	n
504	Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)	y=1, n=0	n
601	Evidence of substantial reproductive failure in native habitat	y=1, n=0	n
602	Produces viable seed	y=1, n=-1	y
603	Hybridizes naturally		
604	Self-compatible or apomictic		
605	Requires specialist pollinators		
606	Reproduction by vegetative fragmentation	y=1, n=-1	n
607	Minimum generative time (years)		
701	Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)	y=1, n=-1	n
702	Propagules dispersed intentionally by people	y=1, n=-1	y
703	Propagules likely to disperse as a produce contaminant		
704	Propagules adapted to wind dispersal	y=1, n=-1	y
705	Propagules water dispersed	y=1, n=-1	n
706	Propagules bird dispersed	y=1, n=-1	n
707	Propagules dispersed by other animals (externally)	y=1, n=-1	n
708	Propagules survive passage through the gut	y=1, n=-1	n
801	Prolific seed production (>1000/m2)		
802	Evidence that a persistent propagule bank is formed (>1 yr)		
803	Well controlled by herbicides		
804	Tolerates, or benefits from, mutilation, cultivation, or fire		
805	Effective natural enemies present locally (e.g. introduced biocontrol agents)		

Supporting Data:

Qsn #	Question	Answer
101	**Is the species highly domesticated?**	**n**
	Source(s)	**Notes**
	Western Australian Herbarium (1998–2020). FloraBase—the Western Australian Flora. Department of Parks and Wildlife. https://florabase.dpaw.wa.gov.au/. [Accessed 28 Aug 2020]	No evidence

102	**Has the species become naturalized where grown?**	
	Source(s)	**Notes**
	WRA Specialist. (2020). Personal Communication	NA

103	**Does the species have weedy races?**	
	Source(s)	**Notes**
	WRA Specialist. (2020). Personal Communication	NA

201	**Species suited to tropical or subtropical climate(s) - If island is primarily wet habitat, then substitute "wet tropical" for "tropical or subtropical"**	**Intermediate**
	Source(s)	**Notes**
	Western Australian Herbarium (1998–2020). FloraBase—the Western Australian Flora. Department of Parks and Wildlife. https://florabase.dpaw.wa.gov.au/. [Accessed 28 Aug 2020]	"Naturalised Status: Native to Western Australia Distribution Beard's Provinces: South-West Province. IBRA Regions: Avon Wheatbelt, Swan Coastal Plain. IBRA Subregions: Avon Wheatbelt P2, Dandaragan Plateau. Local Government Areas (LGAs): Moora, Victoria Plains." [Mediterranean climate]

202	**Quality of climate match data**	**High**
	Source(s)	**Notes**
	Western Australian Herbarium (1998–2020). FloraBase—the Western Australian Flora. Department of Parks and Wildlife. https://florabase.dpaw.wa.gov.au/. [Accessed]	

Qsn #	Question	Answer
203	**Broad climate suitability (environmental versatility)**	**n**
	Source(s)	**Notes**
	Western Australian Herbarium (1998–2020). FloraBase—the Western Australian Flora. Department of Parks and Wildlife. https://florabase.dpaw.wa.gov.au/. [Accessed 28 Aug 2020]	"Distribution Beard's Provinces: South-West Province. IBRA Regions: Avon Wheatbelt, Swan Coastal Plain. IBRA Subregions: Avon Wheatbelt P2, Dandaragan Plateau. Local Government Areas (LGAs): Moora, Victoria Plains."
	Australian Native Plants. (2020). Regelia megacephala. https://www.australianplants.com/plants.aspx?id=1434. [Accessed 28 Aug 2020]	"Exposure: Full Sun to Partial Shade Irrigation: Drought tolerant once established Frost: Frost Tolerant25F-18F (-8C)"

204	**Native or naturalized in regions with tropical or subtropical climates**	**n**
	Source(s)	**Notes**
	Western Australian Herbarium (1998–2020). FloraBase—the Western Australian Flora. Department of Parks and Wildlife. https://florabase.dpaw.wa.gov.au/. [Accessed 28 Aug 2020]	"Naturalised Status: Native to Western Australia Distribution Beard's Provinces: South-West Province. IBRA Regions: Avon Wheatbelt, Swan Coastal Plain. IBRA Subregions: Avon Wheatbelt P2, Dandaragan Plateau. Local Government Areas (LGAs): Moora, Victoria Plains." [Mediterranean climate]
	Imada, C. (2019). Hawaiian Naturalized Vascular Plants Checklist (February 2019 update). Bishop Museum Technical Report 69. Bishop Museum, Honolulu, HI	No evidence
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence

205	**Does the species have a history of repeated introductions outside its natural range?**	**n**
	Source(s)	**Notes**
	Plant Selector + (2020). Regelia megacephala. http://plantselector.botanicgardens.sa.gov.au/Plants/Details/276. [Accessed 28 Aug 2020]	"Note: Rare in cultivation but outstanding specimen plant."
	WRA Specialist. (2020). Personal Communication	Limited cultivation on Maui, Hawaiian Islands

301	**Naturalized beyond native range**	**n**
	Source(s)	**Notes**
	Imada, C. (2019). Hawaiian Naturalized Vascular Plants Checklist (February 2019 update). Bishop Museum Technical Report 69. Bishop Museum, Honolulu, HI	No evidence
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence

302	**Garden/amenity/disturbance weed**	**n**

Qsn #	Question	Answer
	Source(s)	**Notes**
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence

303	Agricultural/forestry/horticultural weed	n
	Source(s)	**Notes**
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence

304	Environmental weed	n
	Source(s)	**Notes**
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence

305	Congeneric weed	n
	Source(s)	**Notes**
	Kubitzki, K. (ed.). 2011. The Families and Genera of Vascular Plants. Vol. X. Flowering Plants. Eudicots: Sapindales, Cucurbitales, Myrtaceae. Springer, New York	"A genus of 5 species from south-western Australia." [No evidence]
	Randall, R.P. (2017). A Global Compendium of Weeds. 3rd Edition. Perth, Western Australia. R.P. Randall	No evidence

401	Produces spines, thorns or burrs	n
	Source(s)	**Notes**
	Western Australian Herbarium (1998–2020). FloraBase—the Western Australian Flora. Department of Parks and Wildlife. https://florabase.dpaw.wa.gov.au/. [Accessed 27 Aug 2020]	"Shrub, 2-5 m high. Fl. purple-red" [No evidence]
	Kubitzki, K. (ed.). 2011. The Families and Genera of Vascular Plants. Vol. X. Flowering Plants. Eudicots: Sapindales, Cucurbitales, Myrtaceae. Springer, New York	[Generic description] "Shrubs, often andromonoecious; branchlets glabrous or hairy. Leaves often distinctly 5-veined; peltately attached or shortly petiolate. Inflorescences at the apex of the shoot; the flowers axillary triads, in dense, head- or spike-like clusters. Flowers 5-merous, pink-purple, rarely red; sepals and petals free; stamens numerous, fused into bundles opposite the petals, the distinct filaments terminal on slender claws; anthers basifixed, opening by terminal slits or pores; ovary half-inferior, 3-locular; ovules usually 4 per loculus, collateral in 2 pairs on a peltate placenta; style slender, stigma small. Fruit a woody, loculicidal capsule, the valves included in the fruiting hypanthium. Seeds ovoid-angular; embryo straight, cotyledons flat."

Qsn #	Question	Answer
402	**Allelopathic**	
	Source(s)	**Notes**
	WRA Specialist. (2020). Personal Communication	Unknown. No evidence found

403	Parasitic	n
	Source(s)	**Notes**
	Western Australian Herbarium (1998–2020). FloraBase—the Western Australian Flora. Department of Parks and Wildlife. https://florabase.dpaw.wa.gov.au/. [Accessed 28 Aug 2020]	"Shrub, 2-5 m high. Fl. purple-red," [Myrtaceae. No evidence]

404	Unpalatable to grazing animals	
	Source(s)	**Notes**
	Jones, A. S., Lamont, B. B., Fairbanks, M. M., & Rafferty, C. M. (2003). Kangaroos avoid eating seedlings with or near others with volatile essential oils. Journal of Chemical Ecology, 29(12), 2621-2635	[Unknown. Essential oils may make a related species, Regelia inops, unpalatable to kangaroos] "Preliminary studies indicate that western grey kangaroos browse seedlings of non-Myrtaceae species rather than Myrtaceae. Seven morphologically- matched species pairs of Myrtaceae/non-Myrtaceae placed at three field sites showed that kangaroos avoided the essential-oil-containing Myrtaceae, but readily consumed the matched essential-oil-lacking non-Myrtaceae. The one exception (Pittosporaceae) had limited herbivory and was later found to possess two essential oils in its leaves. Gas chromatography and mass-spectra showed the seven Myrtaceae plants contain between 2 and 9 essential oils in their leaves, particularly the highly volatile monoterpene, 2,5-dimethyl-3-methylene-1,5-heptadine. Three of the above species pairs were used to gauge their effectiveness as nurse plants for a highly palatable legume. Plants placed beside Myrtaceae nurse plants were less browsed than those placed beside non- Myrtaceae nurse plants.We conclude that western grey kangaroos use olfactory cues to avoid foliage containing potentially toxic essential oils, and that this also has implications for seedling recruitment patterns in regenerating communities."
	Department of Parks and Wildlife (2013). Interim Recovery Plan 2013-2018 for Heath dominated by one or more of Regelia megacephala, Kunzea praestans and Allocasuarina campestris on ridges and slopes of the chert hills of the Coomberdale Floristic Region (update). Interim Recovery Plan No. 338. Department of Parks and Wildlife, Perth	[Unknown. Possibly palatable, but unclear if location, or lack of palatability, are key factors in minimal grazing impacts] "Observations on-ground also suggest that areas dominated by Allocasuarina campestris are more heavily affected by grazing than areas dominated by Kunzea praestans (Trudgen et al. 2006). The least affected areas were generally those dominated by Regelia megacephala as they are mostly dense vegetation and very rocky, making access more difficult for livestock."

405	Toxic to animals	n
	Source(s)	**Notes**
	Quattrocchi, U. 2012. CRC World Dictionary of Medicinal and Poisonous Plants: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press, Boca Raton, FL	No evidence

Qsn #	Question	Answer
	Wagstaff, D.J. 2008. International poisonous plants checklist: an evidence-based reference. CRC Press, Boca Raton, FL	No evidence

406	Host for recognized pests and pathogens	
	Source(s)	**Notes**
	Shearer, B. L., & Crane, C. E. (2012). Phytophthora cinnamomic visible necrotic lesion-colonisation relationships in native flora. Australasian Plant Pathology, 41(6), 633-644	"Table 2" [Regelia megacephala - Susceptibilitya = R resistant]
	WRA Specialist. (2020). Personal Communication	Unknown. Identified as resistant to the introduced soilborne multihost plant pathogen Phytophthora cinnamomi

407	Causes allergies or is otherwise toxic to humans	n
	Source(s)	**Notes**
	Quattrocchi, U. 2012. CRC World Dictionary of Medicinal and Poisonous Plants: Common Names, Scientific Names, Eponyms, Synonyms, and Etymology. CRC Press, Boca Raton, FL	No evidence
	Wagstaff, D.J. 2008. International poisonous plants checklist: an evidence-based reference. CRC Press, Boca Raton, FL	No evidence

408	Creates a fire hazard in natural ecosystems	
	Source(s)	**Notes**
	Hamilton-Brown, S. (2000). Heath dominated by one or more of Regelia megacephala, Kunzea praestans and Allocasuarina campestris on ridges and slopes of the chert hills of the Coomberdale Floristic Region. Interim Recovery Plan NO. 65. 2000-2003. Department of Conservation and Land Management, Wanneroo, WA	[Regelia megacephala killed by fire. Flammability unknown] "Fire can cause alterations to the species composition by increasing the number of weeds. As well, an increase in the frequency of fire can prevent species from completing growth and reproductive cycles. The risk of frequent fire to all occurrences is increased by the presence of grassy weeds in the understorey, as they are likely to be more flammable than many of the original native species in the understorey. A fire swept through Occurrence 5 in 1981 seemingly damaging the community such that some of the species have still not recovered, including the Regelia megacephala (G. Ridgeway, personal communication3). No post fire assessment, however, has been carried out to confirm and determine the factors responsible for the apparent loss of species."

409	Is a shade tolerant plant at some stage of its life cycle	
	Source(s)	**Notes**
	Plant Selector + (2020). Regelia megacephala. http://plantselector.botanicgardens.sa.gov.au/Plants/Details/276. [Accessed 28 Aug 2020]	"Position - Part Shade - Full Sun"

Qsn #	Question	Answer
	Australian Native Plants. (2020). Regelia megacephala. https://www.australianplants.com/plants.aspx?id=1434. [Accessed 28 Aug 2020]	"Tolerates heavy frost, full sun or partial shade."

410	Tolerates a wide range of soil conditions (or limestone conditions if not a volcanic island)	n
	Source(s)	**Notes**
	Australian Seed. (2020). Regelia megacephala - Purple Flowered Regelia. https://www.australianseed.com/shop/item/regelia-megacephala-. [Accessed 31 Aug 2020]	"Prefers a light well-drained soil in an open sunny position, drought resistant but frost tender."
	Plant Selector + (2020). Regelia megacephala. http://plantselector.botanicgardens.sa.gov.au/Plants/Details/276. [Accessed 28 Aug 2020]	"Soil Texture Clay, Loam, Rock, Sand pH Acidic, Neutral Tolerates Drought, Moderate frost"
	Australian Native Plants. (2020). Regelia megacephala. https://www.australianplants.com/plants.aspx?id=1434. [Accessed 28 Aug 2020]	"Soil: Well-drained, sandy"
	Department of Parks and Wildlife (2013). Interim Recovery Plan 2013-2018 for Heath dominated by one or more of Regelia megacephala, Kunzea praestans and Allocasuarina campestris on ridges and slopes of the chert hills of the Coomberdale Floristic Region (update). Interim Recovery Plan No. 338. Department of Parks and Wildlife, Perth	[Does best on chert rock] "On the occasions where Regelia megacephala has been successfully regenerated in waste rock material, after a number of years R. megacephala has been out-competed by Allocasuarina species. This is because Regelia megacephala is specifically adapted to growing in the very fine joints of the unmined chert rock and can send its roots for a long distance into very fine spaces. When grown on waste rock, other plants that are not able to grow on the undisturbed rock, can grow more rapidly and out compete the Regelia megacephala. It is believed however, that the regeneration of Regelia megacephala is still valuable as it generates an ongoing source of seed and maximises maintenance of genetic diversity within Regelia populations (Robinson 2001)."

411	Climbing or smothering growth habit	n
	Source(s)	**Notes**
	Western Australian Herbarium (1998–2020). FloraBase—the Western Australian Flora. Department of Parks and Wildlife. https://florabase.dpaw.wa.gov.au/. [Accessed 28 Aug 2020]	"Shrub, 2-5 m high. Fl. purple-red,"

412	Forms dense thickets	
	Source(s)	**Notes**

Qsn #	Question	Answer
	Hamilton-Brown, S. (2000). Heath dominated by one or more of Regelia megacephala, Kunzea praestans and Allocasuarina campestris on ridges and slopes of the chert hills of the Coomberdale Floristic Region. Interim Recovery Plan NO. 65. 2000-2003. Department of Conservation and Land Management, Wanneroo, WA	[A dominant component of heath vegetation in SW Australia. Ability to exclude other vegetation unknown] "Name: Heath dominated by one or more of Regelia megacephala, Kunzea praestans and Allocasuarina campestris on ridges and slopes of the chert hills of the Coomberdale Floristic Region. Description: This community consists of tall, dense heath dominated by either Regelia megacephala or Allocasuarina campestris on exposed chert ridges; tall, dense heath or open low woodland over dense to mid-dense heath dominated by Kunzea praestans or Allocasuarina campestris on shallow loamy rocky soil over chert on the slopes and ridges of chert hills."
	Department of Parks and Wildlife (2013). Interim Recovery Plan 2013-2018 for Heath dominated by one or more of Regelia megacephala, Kunzea praestans and Allocasuarina campestris on ridges and slopes of the chert hills of the Coomberdale Floristic Region (update). Interim Recovery Plan No. 338. Department of Parks and Wildlife, Perth	[Forms stands over a specific substrate type] "The particular floristic composition of the heath community is assumed to relate to the soil/substrate types and depths. For example, "...Regelia megacephala stands are present only over massive chert...it is a highly habitat specific species and that habitat is not replicated on the waste dumps..." (Trudgen and Adam 2011, p. 29)."

501	Aquatic	n
	Source(s)	**Notes**
	Western Australian Herbarium (1998–2020). FloraBase—the Western Australian Flora. Department of Parks and Wildlife. https://florabase.dpaw.wa.gov.au/. [Accessed 28 Aug 2020]	[Terrestrial] "Shrub, 2-5 m high. Fl. purple-red, Oct to Dec. Red sand. Quartzite hills."

502	Grass	n
	Source(s)	**Notes**
	USDA, Agricultural Research Service, National Plant Germplasm System. (2020). Germplasm Resources Information Network (GRIN-Taxonomy). National Germplasm Resources Laboratory, Beltsville, Maryland. https://npgsweb.ars-grin.gov/. [Accessed 28 Aug 2020]	Family: Myrtaceae Subfamily: Myrtoideae Tribe: Melaleuceae

503	Nitrogen fixing woody plant	n
	Source(s)	**Notes**
	USDA, Agricultural Research Service, National Plant Germplasm System. (2020). Germplasm Resources Information Network (GRIN-Taxonomy). National Germplasm Resources Laboratory, Beltsville, Maryland. https://npgsweb.ars-grin.gov/. [Accessed 28 Aug 2020]	Family: Myrtaceae Subfamily: Myrtoideae Tribe: Melaleuceae

Qsn #	Question	Answer
504	**Geophyte (herbaceous with underground storage organs -- bulbs, corms, or tubers)**	**n**
	Source(s)	**Notes**
	Western Australian Herbarium (1998–2020). FloraBase—the Western Australian Flora. Department of Parks and Wildlife. https://florabase.dpaw.wa.gov.au/. [Accessed 28 Aug 2020]	"Shrub, 2-5 m high. Fl. purple-red, Oct to Dec. Red sand. Quartzite hills."

601	**Evidence of substantial reproductive failure in native habitat**	**n**
	Source(s)	**Notes**
	Alderman, A, & Clarke, M, Natural Heritage Trust (Australia), and Moore River Catchment Support Team (WA). (2003), Moore river : catchment appraisal 2003. Department of Agriculture and Food, Perth, Western Australia. Report 263	"Appendix 1: Vegetation types and priority flora" … "P4 Priority Four – Rare Taxa. Taxa which are considered to have been adequately surveyed and which, while being rare (in Australia), are not currently threatened by any identifiable factors. These taxa require monitoring every 5–10 years." [Regelia megacephala classified as Priority Four]

602	**Produces viable seed**	**y**
	Source(s)	**Notes**
	Australian Native Plants. (2020). Regelia megacephala. https://www.australianplants.com/plants.aspx?id=1434. [Accessed 31 Aug 2020]	"Propagation Information: Seed germinates readily. No pre-treaments required. Also grown by cuttings."
	Sweedman, L. & Merritt, D. 2006. Australian seeds: a guide to their collection, identification and biology. Csiro Publishing, Collingwood, Australia	Appendix 1: Seed germination records Regelia megacephala M Mean time to germinate.= 33 days Q Quickest time to germinate.= 19 days L Longest time to germinate.= 46 days T Times sown.= 2 days

603	**Hybridizes naturally**	
	Source(s)	**Notes**
	Kubitzki, K. (ed.). 2011. The Families and Genera of Vascular Plants. Vol. X. Flowering Plants. Eudicots: Sapindales, Cucurbitales, Myrtaceae. Springer, New York	"A genus of 5 species from south-western Australia." [Unknown]

604	**Self-compatible or apomictic**	
	Source(s)	**Notes**
	Kubitzki, K. (ed.). 2011. The Families and Genera of Vascular Plants. Vol. X. Flowering Plants. Eudicots: Sapindales, Cucurbitales, Myrtaceae. Springer, New York	"Andromonoecy has arisen in a number of genera: Leptospermum, Melaleuca, Phymatocarpus, Regelia, Beaufortia, Conothamnus, Lysicarpus and a few eucalypts, as well as in the rainforest genera Sphaerantia, Mitrantia (Wilson and Hyland 1988)"
	Keighery, G. J. (1982). Bird-pollinated plants in western Australia. In Pollination and Evolution (eds. J. A. Armstrong, J. M. Powell and A. J. Richards), pp. 77–89. Royal Botanic Garden, Sydney	[Possibly. Self-compatible species not identified] "Table 6. Pollination syndromes: South Western Myrtaceae" [Regelia - Self-comp - present in several species]

Qsn #	Question	Answer
605	**Requires specialist pollinators**	
	Source(s)	**Notes**
	Plant Selector + (2020). Regelia megacephala. http://plantselector.botanicgardens.sa.gov.au/Plants/Details/276. [Accessed 28 Aug 2020]	"Bird and butterfly attracting."
	Keighery, G. J. (1982). Bird-pollinated plants in western Australia. In Pollination and Evolution (eds. J. A. Armstrong, J. M. Powell and A. J. Richards), pp. 77–89. Royal Botanic Garden, Sydney	"TABLE 6 Pollination syndromes: South Western Myrtaceae" [Regelia species pollinated by Beetles, Flies, Bees, Moths, and Birds]

606	**Reproduction by vegetative fragmentation**	**n**
	Source(s)	**Notes**
	Australian Native Plants. (2020). Regelia megacephala. https://www.australianplants.com/plants.aspx?id=1434. [Accessed 31 Aug 2020]	"Propagation Information: Seed germinates readily. No pre-treaments required. Also grown by cuttings." [No evidence]

607	**Minimum generative time (years)**	
	Source(s)	**Notes**
	WRA Specialist. (2020). Personal Communication	Unknown

701	**Propagules likely to be dispersed unintentionally (plants growing in heavily trafficked areas)**	**n**
	Source(s)	**Notes**
	Kubitzki, K. (ed.). 2011. The Families and Genera of Vascular Plants. Vol. X. Flowering Plants. Eudicots: Sapindales, Cucurbitales, Myrtaceae. Springer, New York	"Fruit a woody, loculicidal capsule, the valves included in the fruiting hypanthium. Seeds ovoid-angular; embryo straight, cotyledons flat." [Generic description. No evidence]
	Groom, P. K., & Lamont, B. (2015). Plant life of southwestern Australia: adaptations for survival. De Gruyter Open Ltd, Warsaw/Berlin	"The term serotiny refers to the retention of seeds within the crown of the plant for an extended time (hence canopy seed storage)" … "Table 11.2: SouthWest plant groups that contain serotinous genera" [Includes Regelia]

702	**Propagules dispersed intentionally by people**	**y**
	Source(s)	**Notes**
	Plant Selector + (2020). Regelia megacephala. http://plantselector.botanicgardens.sa.gov.au/Plants/Details/276. [Accessed 28 Aug 2020]	"Note: Rare in cultivation but outstanding specimen plant."
	WRA Specialist. (2020). Personal Communication	Limited cultivation on Maui, Hawaiian Islands

Qsn #	Question	Answer
703	**Propagules likely to disperse as a produce contaminant**	
	Source(s)	**Notes**
	WRA Specialist. (2020). Personal Communication	No evidence found, but use in cut flower and foliage trade could possibly result in accidental dispersal of seeds as a "contaminant" of dried flower arrangements.

704	Propagules adapted to wind dispersal	y
	Source(s)	**Notes**
	Kubitzki, K. (ed.). 2011. The Families and Genera of Vascular Plants. Vol. X. Flowering Plants. Eudicots: Sapindales, Cucurbitales, Myrtaceae. Springer, New York	"Fruit a woody, loculicidal capsule, the valves included in the fruiting hypanthium. Seeds ovoid-angular; embryo straight, cotyledons flat." [Likely wind-dispersed]
	Sweedman, L. & Merritt, D. 2006. Australian seeds: a guide to their collection, identification and biology. Csiro Publishing, Collingwood, Australia	Regelia megacephala seeds are 3 mm long. Their small size likely facilitates dispersal by wind upon release from capsules

705	Propagules water dispersed	n
	Source(s)	**Notes**
	Groom, P. K., & Lamont, B. (2015). Plant life of southwestern Australia: adaptations for survival. De Gruyter Open Ltd, Warsaw/Berlin	"The term serotiny refers to the retention of seeds within the crown of the plant for an extended time (hence canopy seed storage)" … "Table 11.2: SouthWest plant groups that contain serotinous genera" [Includes Regelia]
	WRA Specialist. (2020). Personal Communication	No evidence. Not identified as a riparian species. Seeds may be retained in capsules until fire triggers their release, minimizing possibilities for dispersal by water or other dispersal modes.

706	Propagules bird dispersed	n
	Source(s)	**Notes**
	Kubitzki, K. (ed.). 2011. The Families and Genera of Vascular Plants. Vol. X. Flowering Plants. Eudicots: Sapindales, Cucurbitales, Myrtaceae. Springer, New York	"Fruit a woody, loculicidal capsule, the valves included in the fruiting hypanthium. Seeds ovoid-angular; embryo straight, cotyledons flat." [Generic description. No evidence]

707	Propagules dispersed by other animals (externally)	n
	Source(s)	**Notes**
	Kubitzki, K. (ed.). 2011. The Families and Genera of Vascular Plants. Vol. X. Flowering Plants. Eudicots: Sapindales, Cucurbitales, Myrtaceae. Springer, New York	"Fruit a woody, loculicidal capsule, the valves included in the fruiting hypanthium. Seeds ovoid-angular; embryo straight, cotyledons flat." [Generic description. No means of external attachment]

708	Propagules survive passage through the gut	n
	Source(s)	**Notes**
	Kubitzki, K. (ed.). 2011. The Families and Genera of Vascular Plants. Vol. X. Flowering Plants. Eudicots: Sapindales, Cucurbitales, Myrtaceae. Springer, New York	"Fruit a woody, loculicidal capsule, the valves included in the fruiting hypanthium. Seeds ovoid-angular; embryo straight, cotyledons flat." [Generic description. No evidence]

Qsn #	Question	Answer
801	**Prolific seed production (>1000/m2)**	
	Source(s)	**Notes**
	Sweedman, L. & Merritt, D. 2006. Australian seeds: a guide to their collection, identification and biology. Csiro Publishing, Collingwood, Australia	Unknown. Regelia megacephala seeds are small (3 mm), and could be produced in large numbers.

Qsn #	Question	Answer
802	**Evidence that a persistent propagule bank is formed (>1 yr)**	
	Source(s)	**Notes**
	Royal Botanic Gardens Kew. (2020) Seed Information Database (SID). Version 7.1. Available from: http://data.kew.org/sid/. [Accessed 31 Aug 2020]	"Storage Behaviour: Orthodox"
	Groom, P. K., & Lamont, B. (2015). Plant life of southwestern Australia: adaptations for survival. De Gruyter Open Ltd, Warsaw/Berlin	[Possibly forms a canopy seed bank] "The term serotiny refers to the retention of seeds within the crown of the plant for an extended time (hence canopy seed storage)" … "Table 11.2: SouthWest plant groups that contain serotinous genera" [Includes Regelia]

Qsn #	Question	Answer
803	**Well controlled by herbicides**	
	Source(s)	**Notes**
	WRA Specialist. (2020). Personal Communication	Unknown. No information on herbicide efficacy or chemical control of this species

Qsn #	Question	Answer
804	**Tolerates, or benefits from, mutilation, cultivation, or fire**	
	Source(s)	**Notes**
	Australian Native Plants. (2020). Regelia megacephala. https://www.australianplants.com/plants.aspx?id=1434. [Accessed 28 Aug 2020]	"Prune for bushier growth. Good speciman plant & with good pruning is very architectural."
	Plant Selector + (2020). Regelia megacephala. http://plantselector.botanicgardens.sa.gov.au/Plants/Details/276. [Accessed 28 Aug 2020]	"Responds well to pruning"
	Hamilton-Brown, S. (2000). Heath dominated by one or more of Regelia megacephala, Kunzea praestans and Allocasuarina campestris on ridges and slopes of the chert hills of the Coomberdale Floristic Region. Interim Recovery Plan NO. 65. 2000-2003. Department of Conservation and Land Management, Wanneroo, WA	[Regelia megacephala killed by fire. Flammability unknown] "Fire can cause alterations to the species composition by increasing the number of weeds. As well, an increase in the frequency of fire can prevent species from completing growth and reproductive cycles. The risk of frequent fire to all occurrences is increased by the presence of grassy weeds in the understorey, as they are likely to be more flammable than many of the original native species in the understorey. A fire swept through Occurrence 5 in 1981 seemingly damaging the community such that some of the species have still not recovered, including the Regelia megacephala (G. Ridgeway, personal communication3). No post fire assessment, however, has been carried out to confirm and determine the factors responsible for the apparent loss of species."

Qsn #	Question	Answer
805	**Effective natural enemies present locally (e.g. introduced biocontrol agents)**	

Qsn #	Question	Answer
	Source(s)	**Notes**
	WRA Specialist. (2020). Personal Communication	Unknown

Summary of Risk Traits:

High Risk / Undesirable Traits
• Reproduces by tiny seeds
• Several members of the genus are self-compatible
• Serotinous; may form a persistent “canopy seed bank” until capsules dehisce following fire
• Gaps in biological and ecological information may reduce accuracy of risk prediction

Low Risk Traits
• No reports of invasiveness or naturalization, but no evidence of widespread introduction outside native range
• Unarmed (no spines, thorns, or burrs)
• Non-toxic
• Not reported to spread vegetatively