Warrumbungle Shire Council Improvement Plan

No Locatio Proce Catego	ory Action	ADWG No ADWG Element	Source Haz ID / Source	Date added Pr	riority Action Owner	Date Funding reviewed	Due date Due date notes	Status	Comments Comments 29/08/18 Comments 1/3/19	Comments 27/6/19 & 30/7/2019 & Short term actions 27/8/2019; 27/09/2019; 13/12/19;	Resource requirements
328 All Instru	Process monitoring, automation and instrumentation project.		27 June 2019 A4	Ve	ery high			In progress		Funding granted from Safe and Receive audit report from	
mentati	*Council should strongly consider investing in online monitoring at all CCPs (A124& A258)		Improvement	i i	Manage	r		iii piograda		Secure for scoping study of consultant	
on	*Consider implementing online monitoring of critical water quality parameters including		Plan review	27-Jun	_	bun 28-Feb-20	31-Mar-20 Interim			automation. Covers action 212	
	(A212):		meeting	27 5411	gle Wate		or mar 20 million			13/12/19: Consultant engaged and is	
	· Raw water pH				9					coming on site next week	
78 Baradin Filtratio Critical	Reduce CCP limits for turbidity AND initiate backwashes based on water quality	3.2 CCPs	Bligh Tanner	Ve	ery high			In progress	2016-10: CCP target got reduced to <0.2	Limits previously reduced. Review report results,	
e n control		0.2 00/3	report Feb-16	***	Sry mgn			in progress	NTU (from <0.8) 2018-05: Safe and	Current iron and manganese issues develop plan and seek	
point			Topolit Tob To				Interim		Secure EOI submitted for 'Automation and	(long term issue in winter) funding for	
,							deadline		Process Instrumentation Upgrade',	Limit of 0.2 NTU difficult to meet in recommendations	
				Feb-2016	Supervis	sor 28-Feb-20	31/03/2020 (review		including online instrumentation. Lab	winter. Started dosing chlorine	
				1 05 2010	Treatme		report and		turbidity meter included in FY2018/19	dosing prior to clarifier, impact not yet	
							develop		capital budget. 2018-11: NTU meter	seen.	Project
							plan)		purchased and in use	27/9/19: HH2O will do filter inspection	management
										and trouble-shoot (Health project);	•
65 Binnaw Reser Minor	Ensure that the reservoir is adequately sealed from vermin and rainwater ingress.	3.1 Preventive	Bligh Tanner	M	on, high			In progress	2018-05: Obtained quote to upgrade	Last inspected Feb 2019. Covered Chase contractor and	resource needed
ay voirs works	Ensure that the reservoir is adequately sealed from verniin and rainwater ingress.	Measures and	report Feb-16	Ve	ery high			In progress	reservoir to comply with Circular 18 +	by action 333. organise site visit	
ay voirs works		Multiple Barriers			Manage	г			included in FY2018/19 capital budget.	13/12/19: Have a quote for works to	
		marapio Barrioro		Feb-2016	Warrum	bun 28-Feb-20 19/20	31-Mar-20 interim		induded in 1 12016, to deplie bedge.	fix integrity. Contractor to be	
					gle Wate	er				engaged	
										28/2/20: Purchase order given to	
172 Pinney Fluorid Minor	Arrange for elegating of fluoride enturator (considering hazardeus nature of material)	4.4 Equipment	Pligh Toppor	V/e	on, high			In progress	2019 AE: Poing arranged for by I MM/IIA		
173 Binnaw Fluorid Minor ay ation works	Arrange for cleaning of fluoride saturator (considering hazardous nature of material).	4.4 Equipment Capability &	Bligh Tanner report Feb-16	Ve	ery high			In progress	2018-05: Being arranged for by LMWUA	Covered by action 332 (NSW Health To be included as part of project) action 332 (replace	
ay ation works		Maintenance	rehour Len-10							13/12/19: HunterH2O project (Task fluoridation systems)	
		iviaii itel lal ite								4a) 80% complete, waiting for	
										approval from DPIE to complete	
										works	
										28/2/20: Internal meeting today with	
				F-1-0040		00 5-1-00	wait for			Health on design. Scheduled a	
				Feb-2016	Manage	r 28-Feb-20	31-Mar-20 HH2O			workshop in March to present	
										desing	
											Consultant (NSW
											Health)
77 Coona Filtratio Critical	Review filtration CCP target and limits to be in line with ADWG recommendation (<0.2 NTU).	0.0	OMET								
	Teview intuition our target and initial to be in the with 75 Vol Teconimendation (30.2 1410).	3.2 CCPs	CWT report		ery high Supervis	sor		In progress	2016-10: (Section 2.1, p.4 of CWT report); filter inspection? NSW	Currently using emergency back up Filter upgrade	
barabr n control		3.2 CCPs	May-15	May-2015	Supervis	28-Feb-20 19/20	30-Jun-20	In progress	CCP assessed by Bligh Tanner (Jan-16) Health, Mark Nave to follow	bores.	
an point	l .		May-15		Supervis Treatme	28-Feb-20 19/20	30-Jun-20	In progress		bores. Filter media inspection undertaken	
an point 125 Coona Filtratio Minor		4.2 Operational	May-15 Bligh Tanner	May-2015	Supervis	28-Feb-20 19/20	30-Jun-20	In progress	CCP assessed by Bligh Tanner (Jan-16) Health, Mark Nave to follow	bores. Filter media inspection undertaken Part of WTP upgrades To be included as	
an point 125 Coona Filtratio Minor barabr n works	l .		May-15	May-2015	Supervis	28-Feb-20 19/20	30-Jun-20		CCP assessed by Bligh Tanner (Jan-16) Health, Mark Nave to follow	bores. Filter media inspection undertaken Part of WTP upgrades 27/9/19: received HH2O quote, need treatment plant upgrades.	
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No Locatio Proce Category n ss	r Action	ADWG No ADWG Element	Source	Haz ID / Source	Date added Pr			Date Funding reviewed	Due date Due date	Status	Comments Comments 29/08/18 Comments 1/3/19	Comments 27/6/19 & 30/7/2019 & 27/8/2019; 27/09/2019; 13/12/19;	Short term actions	Resource requirements
17 Coolah Disinfe Operation ction s	Access to the safety shower/eye wash should remain unimpeded at all times. The safety shower eye/wash should be maintained in good working order. Breathing Apparatus should be immediately available on site but external to the chlorine	2.3 Hazard ID and Risk Assessment	DPI Inspections	DPI COH001	Hi	igh	Supervisor			In progress		Breathing apparatus to be included as part of FY19/20 (replace chlorine room). Tender to be developed.	•	
	room.				Jan-2019		Treatment	28-Feb-20	13-Mar-20			Checklist has been developed for safety showers/eyewash. 27/9/19: GR to get prices on	Upgrade project also to include.	Project management resource sought
23 Baradin Disinfe Minor e ction works	Ensure the dosing room has adequate ventilation and install a chlorine gas leak detector	2.3 Hazard ID and Risk Assessment	Hunter H2O Audit 2014	BAR008	Hi	igh				In progress	The chlorine dosing room is well laid out, clean and kept in an excellent condition.	Alarm has been installed (incl. gas detector). Works still to be completed		s
											However, there currently is not a chlorine gas leak detector installed	on chlorine room (FY19/20) 13/12/19: Dependent on outcomes of		
					2014		Supervisor	28-Feb-20 19/20	30/05/2020			review of need for plant		
							Treatment					upgrade/replacement 28/2/20 Quotes to undertake work		
												are being reviewed		
24 Binnaw Enviro Minor	Redirect the drain flow from the soda ash/alum dosing room to the external alum bulk	2.3 Hazard ID and	Hunter H2O		Hi	igh				In progress	Any spilled chemical in the soda ash	Investigation still needed	To be included as	
ay nment works al	storage bund · Take measurements of the bund wall, the tank and determine the angle from the top of the	Risk Assessment	Audit 2014	BIN013, BIN014							dosing and storage area can potentially drain to the stormwater drainage system	To be included in treatment plant upgrades	treatment plant upgrades	5
	tank to the bund wall and ensure the bund complies with Australian Standard AS3780 Ensure the chlorine room ventilation complies with the requirements of Australian										The alum bulk storage bunded area may potentially not comply with Australian	Chlorine room items covered under action 324		
	Standard AS2927										Standard AS with regard to appropriate	13/12/19: Have received quotes,		
	· Investigate if the forced ventilation fan needs to be larger to provide adequate ventilation				2014		Supervisor Treatment	28-Feb-20 19/20	30/03/2020 had no due date		angle from the top of the storage tank to the top of the bund wall	sizing to be confirmed. HunterH20 audit to be undertaken next week,		
							rreatment		uate		· There is limited ventilation in the chlorine	HunterH20 to confirm requirements		
											dosing room which is a potential safety hazard	28/2/20- see update action 23		
														Project
														management resource needed
26 Coolah Disinfe Minor	· Organise for chains to be installed to secure the cylinders in place and reduce the risk of	2.3 Hazard ID and	Hunter H2O		Hi	igh				In progress	· The chlorine gas cylinders are currently	Chains have been installed	To be included as	
ction works	the cylinders falling over Investigate ventilation requirements as outlined in Australian Standard AS2927. Implement	Risk Assessment	Audit 2014	COH007, COH008							not stored in a secure manner. Gas cylinders should be stored securely on	All other items to be addressed FY19/20 (replace chlorine room).	treatment plant upgrades	S
	ventilation modification if required to comply with the Australian Standard. This may be										the site to reduce the risk of damage to the	Tender to be developed.		
	achieved through improved forced ventilation or modification to the vents for cross ventilation				2014		Manager	28-Feb-20	28/02/2020		cylinder or other equipment dosing lines should a cylinder topple over.	27/9/19 & 13/12/19: need info of equipment to be reused (alarming		
	· Chlorine gas is an oxidising agent and sources of fuel should not be stored in the same										There is currently no forced ventilation in the chlorine dosing room.	system + scales) + drone pictures (Coolah)		
	room. Items stored on the ground in the room poses a trip hazard and should be removed or										Redundant equipment and boxes are	28/2/20 - See action 77		
20 DAD Cafety Operation	store in a more tidy manner.	2.3 Hazard ID and	Hunter H2O	BAR014,	111	i arba				In	contained in the chlorine dosing room	Manage cont. and I MILIC	MILIC representative to	
CBN s	n Organise routine tagging of portable electrical equipment to reduce safety risks	Risk Assessment		COO015		igii	Supervisor Treatment;			In progress	No schedule for electrical equipment tagging is currently in place	Manger sent email WHS representative - waiting for reply.	WHS representative to table at next committee	
					2014		Director Environeme	28-Feb-20	31/03/2020			13/12/19: Baradine tagging has been complete. CBN still to be done	meeting. Organise tagging for CBN	N
							nt Services					28/2/20: CBN still to be done. All	Director to raise at senior	
32 Kenebri Safety Minor	Ensure the water tank support structure integrity is inspected and repair as required	2.3 Hazard ID and	Hunter H2O	KEN008	Hi	igh				In progress	There are several site hazards that need	New reservoir to be established on		
works	Remove redundant materials from the site shed and maintain housekeeping Install signage on the access gate and chlorine dosing room indicating that hypochlorite	Risk Assessment	Audit 2014								to be controlled to reduce the potential for injury to personnel	,	demolished. Install signage and	
	is stored and in use Install a fire extinguisher on site and appropriate signage, including a contact list in case of				2014		Supervisor Treatment	28-Feb-20 19/20	30/06/2020				extinguisher. Extingushers to be	
	an incident or emergency						rreatment					arranged	installed at all sites.	
												28/2/20: Getting quotes for removal o old reservoir. Signage is being	f	
34 Bugaldi Safety Minor	Ensure the water tank support structure integrity is checked and repaired as required	2.3 Hazard ID and	Hunter H2O	BUG008	Hi	igh				In progress	The reservoir ladder and support		Get quote to replace tank	k
e works	Install a fall arrest or ladder cage to reduce the chance of a fall when accessing the reservoir	Risk Assessment	Audit 2014				0				structure does not contain any of the following:	Structural integrity to be investigated further.	with back up generator and demolishement of	
	Install a lockable cover at the base of the ladder to prevent unauthorised access				2014		Supervisor Treatment	28-Feb-20	31/03/2020 Interim (quote)		· Fall arrest system	Rest of action covered by action 333	=	
	Install a handrail around the tank platform										Cage Lockable cover	WHS access upgrades (does not include structural integrity of support		
27 DWV Signed Miner	Install signings on the front entrance to indicate Plant contact details and begandaries	2.3 Hazard ID and	Hunter H2O	BIN008,	U	ioh				In progress	· Handrail around the outside edge	structure)	program.Include site	
37 BWY, Signag Minor BUG, e works	Install signage on the front entrance to indicate Plant contact details and hazardous materials are stored on site.	2.3 Hazard ID and Risk Assessment		BIN008, BIN015,	HI	igir	Supervisor			In progress	Insufficient signage on site entrance and/or chemical dosing and storage	MND, CLH entrances have signage; 27/9/19: SS not heard from	Safety site audit to determine what signage	
CLH, MDN,	Install appropriate signage displayed that indicates the following information: Chemical contained within the room			BIN016, BUG010,	2014		Supervisor Treatment;	28-Feb-20	31/03/2020		rooms The front entrance gate currently has no	supervisors; GR to advise on BWY;	is needed	
KBI	· Chemical UN no.			COH011,	2014		Technical officer		5.753/E020		signs installed indicating that there are	added KBI; BUG/KBI have liquid		
	Chemical category/classification with appropriate symbol Install a fire extinguisher with appropriate signage on site and include an emergency			MEN013							hazardous materials stored on site There is insufficient signage on the alum	chlorine only; HAZCHEM signs at most places (BUG/KBI) + need SDS		WHS Committee
	til Bore investigations (integrity, capping, geology, exclusion zones - fencing)	3.1 Preventive	Risk	1.03	Hi	igh				In progress	integrity/capping being looked at; BUG no	Contractor to inspect first week of		
BAR, ment & ons KEN Abstra		Measures and Multiple Barriers	assessment								fence around bore (allocate budget); KBI/BUG septic on bore side of house>	September 19, and provide quote to address integrity issues at bores	Operators to install fence at Bugaldie.	
ction											septic tank register/inspection (regulatory	(BUG, BAR, KEN)	Review report and	
											services); NSW Health testing should start; BUG deep/KBI a bit shallower	13/12/19: Inspections have been carried.	engage contractor to supply quote to fix bore	
					Mar-2015		Supervisor	28-Feb-20	31-Mar-20 Interim		31/10/2018: Supervisor North; quotes for	28/2/20: Works still to be	integrity issues	
							North				BUG fencing; Manager talk to regulatory services	undertaken.Oriana project to review and fix bore casings.		
														Project
								Page 2	of 11					management
														resource needed

N. Landia Bana Catanani Asti		ADMC No ADMC Flores	Source Haz ID /	Detected Bries		Data Sunding	Due data Due data	Chatria	Comments	Comments 29/08/18	Comments 1/3/19	C	Chart towns actions	D
No Locatio Proce Category Action n ss		ADWG No ADWG Element	Source Source	Date added Prior	Owner	Date Funding reviewed	Due date Due date notes	Status	Comments	Comments 29/06/18	Comments 1/3/19	Comments 27/6/19 & 30/7/2019 & 27/8/2019; 27/09/2019; 13/12/19;	Short term actions	Resource requirements
50 BUG, Catch Investigati Priva	ate water bore inspections, bore register	3.1 Preventive	Risk 1.03	High	Manager			Not started	Can we obtain a list of private bores from			13/12/19: Discussion at Oriana	Consider Media / comms	S
BAR, ment & ons KEN Abstra		Measures and Multiple Barriers	assessment		Warrumbur		Interim (Tech		DPI? Bruce Lamont to advise if DOI can give u	aquifer		meeting and with NSW Health advised against providing any such	for residents on	
ction		wulupie barriers		Mar-2015	gle Water; Technical	28-Feb-20	20-Mar-20 officer)		a list (Dough Moorby did similar exercise)			communication due to perceived	security and	
					Officer							risk.	contamination of bores,	
53 All Distrib Investigati Iden	ntify high risk areas for backflow prevention (i.e. STP)	3.1 Preventive	Risk 10.01	High				In progress	Need backflow prevention policy	consultant to develop? Get		Policy and register and inspection	Tech Officer liasise with	
ution ons		Measures and	assessment						Regulatory services police (that they do it	proposals (e.g. Key		program still to be developed	consultant and investiage	е
		Multiple Barriers							properly); need RPZ register (including	environmental) Supervisor		13/12/19: Engaged consultant, to	setuping register in	
					Manager				inspection intervals) STPs, SPSs, dump points, parks/gardens	North to get proposals//funding (SS follow	v	review documents produced 28/2/20: Policy and procedure	council systems (Authority)	
					Warrumbur	1	Interim (Tech		(chemicals) - standards? Hospitals,	up with Mark Nave)? Check		produced and reviewed. Council to	(carriery)	
				Mar-2015	gle Water;	28-Feb-20	30-Apr-20 officer)		dentists,	with regulatory services if		adopt. Consultant also developing		
					Technical Officer					this is done		register, which should identify high risk areas.		
					Ollicci							risk dieds.		
														Consultant
68 Baradin Clear Major Seal	the clear water tank against vermin and contaminants. Install bunds around the	3.1 Preventative	Hunter H2O BAR010	High				In progress	The clear water tank is not			CWT sealed. Bund has been	Bund to be installed,	
	nical dosing systems.	Measures and	Audit 2014						sealed/protected and is potentially			purchased, waiting to be installed.	=	
tank		Multiple Barriers							exposed to chemical spills or vermin			13/12/19 & 28/2/20: Bund installation waiting on recommendations for	n be complete prior to installation.	
												WTP upgrades/replacements	installation.	
												(related to action 78)		
				2014	Supervisor Treatment	28-Feb-20	30/04/2020							
					I reatment									
136 Mendo Reser Document That	WSC review all reservoir inspection reports (2014 and 2017) to develop an Action	4.3 Corrective Action	Mendooran MBWA2017	7 High				In progress				Reservoir upgrades undertaken in	Liaise with WEARS to	
	and urgently implement any outstanding recommendations. This Action Plan		Boil Water		Manager							May 2019 for integrity.	undertake reservoir	
Protocol inform	mation should also be regularly reported back to DPI-Water.		Alert 2017	2017	-	28-Feb-20	See data for action 61			Obtaining quotes an confirming contractor	d	WHS and Internal works still to be undertaken.	inspections works at remaining 6 reservoirs.	Project
					gle Water		action or			comming contractor		Captured in annual report in DPIW	romaning o rodorrono.	management
												Circular 18 (Contractor engaged)		resource needed
-	relevant staff in these procedures (rapid communication incident response) and	4.3 Corrective Action		High				Not started				Training once new plans are		
barabr maini an	tain a record of training.				Manager		Within 2					developed 13/12/19: Confirmed that		
all				Mar-2015	-	n 28-Feb-20	months of					development of ERP is to be		
					gle Water		finalisation					undertaken as part of Hunter H20		
												NSW Health project.		
152 Mendo Reser Major A rec	circulation/rechlorination system should be considered to maintain a set concentration	4.4 Equipment	DPI DPI MEN0	04 High	Supervisor		шеш	In progress		to be made permanent, foan	1	20/2/20- Training to be developed Vermin/bird proofing - complete (Ma	v Recirculation to be	Project
	ee chlorine throughout the reservoirs.	Capability and	Inspections	Jan-2019	Treatment;	28-Feb-20	31-Oct-19 deadline			fill is a temporary measure	'	2019)	covered by Mendooran	-
	nin/bird proofing to be made permanent, access covers bought up to standard,	Maintenance			Project		(engage			that has already been		Site has been cleaned up and	Plant upgrade project	resource needed
	orm appropriate scheduled maintenance and calibration of lab equipment according to	4.4 Equipment	Hunter H2O BAR013,	High				In progress	Minimal or no maintenance is carried out			Annual maintenance and calibration		d
BIN, atory s the e	equipment manufacturer/supplier's recommendations	Capability and Maintenance	Audit 2014 COO014, BIN011		Technical				by the operators			is being carried of instruments and lab equipment, undertaken by	and date scheduled for works.	
ment				2014	officer;	28-Feb-20	30/04/2020 To undertake					contractors (last done in May - due		
					Supervisor Treatment		calibrations					to be completed)	InfoXpert (for future	
												27/9/19: AM had sent new bores equipment to SS but still need mode	calibrations) (Tech	of
192 Baradin Clarific The o	council is in the process of engaging contractors to identify and implement an	4.4 Equipment	Hunter H2O BAR005	High				In progress	The clarifier is showing signs of			Approval for funding for clarifier.	- Officer to do when date of	01
	opriate repair or upgrade	Capability and	Audit 2014	2014	Manager Warrumbur	n 28-Feb-20 19/20	30/06/2020		deterioration and the wall thickness at			Waiting for s60 endorsement and		
		Maintenance		2014	gle Water	. 20.00-20 10/20	55.55.2020		various points is low due to corrosion.			funding endorsement by Dol Water.		
205 ALL Document That	WSC develop and implement a "Drinking Water Quality Monitoring Plan" which	5.1 Drinking Water	Mendooran MBWA2017	7 High				In progress				13/12/19: Dependent on outcomes of 13/12/19: Consultant has provided		
	alise staff/role responsibilities, authorities reporting and communication protocols and	Quality Monitoring			Manager			1 . 5 2				proposal to develop verification	206	
	ew existing procedures for sampling and testing. The monitoring plan should be built		Alert 2017	2017		28-Feb-20	31-Jan-20			DWQ Monitoring Plan		proposal	Engage consultant to	
base	ed on the NSW Health Drinking Monitoring Plan (available on the NSW Health website).				gle Water								develop verification monitoring plan	
000 All								To accompany				Information 6 - 1 - 1 - 1		Consultant
	nally document all drinking water quality monitoring protocols and combine into a al Water Quality Verification Plan.	5.1 Drinking Water Quality Monitoring		High	Technical		Interim (was	In progress				Information for plan is in process of being collected.	Develop draft Water Quality Verification Plan	
Protocol		Quality Worldonly		Mar-2015	Officer	28-Feb-20	28-Feb-20 31/10/19)					27/9/19: info needs to go on T-drive		
												some photos still need to be taken;	photos).	Consultant
	ement routine monitoring of daily and instantaneous chlorine gas usage and plant flow	5.1 Drinking Water	Hunter H2O COH004	High				In progress	Chlorine gas and treated water			Scales have been installed.	Dose to be recorded on	
	 Perform calculations to determine instantaneous and daily chlorine dose rate. Illing scales for the chlorine cylinders to stand on will allow for daily chlorine usage to 	Quality Monitoring	Audit 2014		Supervisor		Interim		instantaneous flow rate measurements are not being recorded when operators			Daily monitoring in reticulation. 28/2/20: Flow is being recorded	sheet and calcualtion added. Supervisor and	
	neasured.			2014	Treatment;	28-Feb-20	13/03/2020 (review and		are onsite. Measuring and monitoring of			when operators are onsite (has	Tech Officer to review	
					Technical officer		update sheet)		instantaneous chlorine dose rate and			been for some time). Coolah flow is	and update sheet.	
									plant flow can provide confirmation of chlorine dose rate			not variable unless change bore source (diff pump).		
214 BUG, Routin Monitoring Initiat	te daily sampling and testing of the town distribution system. Tests should include free	5.1 Drinking Water	Hunter H2O BUG005,	High				In progress	To ensure treated water quality complies			Currently being undertaken 2-	Review how to link	1
KEN e chlori	rine residual, pH and turbidity. This will improve response times to water quality issues.	Quality Monitoring		2014	Supervisor Treatment	28-Feb-20	6/03/2020	-	with the Australian Drinking Water			3/week.	analyser to shut pump	
testing Data	collected can also be used for future planning and adjustments to the daily operating				rreaument	Page 3	of 11		Guidelines (ADWG), water quality			Chlorine analysers are installed, to	down	Contractor

No Locatio Proce Category n ss	Action	ADWG No ADWG Element	Source Haz ID / Source	Date added Pr	iority Action Owner	Date Fundin reviewed	g Due date Due date notes	Status	Comments Comments 29/08/18 Comments 1/3/19	Comments 27/6/19 & 30/7/2019 & 27/8/2019; 27/09/2019; 13/12/19;	Short term actions	Resource requirements
186 Coolah Reser Minor voirs works	Wentworth Ave Reservoir requires sealing	4.4 Equipment Capability & Maintenance	Risk 9.01 assessment	Hi	gh			In progress	, i	28/2/20 - Wentworth Ave has been sealed, one spot still to be fixed (WEARS are coming back to be fixed)	•	
				Mar-2015	Manager Warrumb gle Wate	oun 28-Feb-20	30-Jun-20					Project
												management resource sought
236 All Training	Employees should be trained and protocols regularly tested in the emergency response plans. The requirement for this should be included in the ERP.	6.2 Incident & Emergency Response		Mar-2015	gh Manager Warrumb gle Wate	oun 28-Feb-20	31-Mar-20	Not started			To be included as part of ERP update (action 8)	f Consultant (NSW
		Protocols			gie vvate	1						Health)
	Arrange for operators to undertake appropriate training	7.2 Employee Trainin	g Hunter H2O COH001,	Hi	gh			In progress	Operators have not yet completed their	Confined space and working at	Gaps from NCF review.	
or trainin			Audit 2014 DUN001		Supervis				fluoridation certification and/or require further training in WTP operations	heights undertaken 2019. Other training gaps to be reviewed.	Then review with HR and supervisor WTP operator	
g				2014	s/Manage	er 28-Feb-20	30/03/2020 Interim		· ·	Manager has requested training	training plans.	
					/HR					schedule from HR.		
										13/12/2019 Currently reviewing	Review training	
259 DDO Catch ment &	DDO to be tested prior to new bore installation. Results to be followed up.	9.1 Investigative Studies &	Risk 1.12 assessment	Hig	gh			In progress		13/12/19: Bore is being used. Raw water quality assurance plan	Supervisors to take samples for the bore	
Abstra		Research	assessment		Supervis	or				includes bore testing. Have NSW	baseline sampling	
ction		Monitoring		Mar-2015	Treatmer		31-Mar-20			Health funding to take baseline	program. SS to assist w	ith
				IVIAI-2013	Technica	20-1 eb-20 Il	31-Wai-20			sampling, some still to be taken,	arranging samples.	
					officer					(Health officer has since left) 28/2/20; Schedule to be developed	CC to greate ashedula	
										20/2/20, Scriedule to be developed	(baseline and ongoing)	
271 BDN, Inform	Display the pressure vessel calibration certificates nearby the pressure vessels.	10.1 Management of	Hunter H2O MEN003,	Hip	gh			Not started	Calibration certificates for pressure	27/9/19: check new bore sites for	Compile list and get quot	te
CLH ation		Documentation	Audit 2014 KEN004		Supervis		interim (MDN		vessels are not stored on site;	pressure vessels; no progress on	(Supervisor Treatment)	
(MDN/ Syste		and Records		2014	Treatmer Technica	28-Feb-20	13/03/2020 certificates + check new		Plant pressure vessels currently do not	MDN (see ID 272)		
KBI?), ms BUG					officer		bores)		have calibration certificates displayed	current pressure tanks are for water (bores) + compressor vessels at		
										DDN CDN MDN		
oran n s	online combined filtered water turbidity meter was reading consistently and significantly lower than the bench unit. WSC will require ongoing investigations, which may include		July 2018 WarrumSCJu ORANA 18.4	Hi	gn			In progress		Has been externally calibrated. 27/9/19: confirm range of instrument	To be investigated furthe Get calibration kit (low)	er ·
oran n	external calibration of both the online and bench unit to confirm what the true turbidity values	S	meeting							confirm bypass is not an issue	Ring supplier	
	are and to resolve the discrepancy between the units.									(should be inline?); cleaned		
										regularly?		
					Curaria					13/12/19: Issue not resolved 28/02/20: Issue not resolved. Test		
				Jul-2018	Supervis	28-Feb-20	6-Mar-20 was 13/9/19			against hand held unit. Similar issue	s	
										at other plant.		
316 Mendo Sedim Plant	Questions were also raised on the Mendooran sedimentation lagoons and short circuiting		ORANA WarrumSCS	h Hi	gh			In progress		13/12/19: Consultant engaged to	Included as part of	
	and increased risk of slug return of backwash water. This will be raised at the next		meetings pre pt16.6					F9. 000		undertake concept design (site visit		
n n	DWCQM, Dec 2016		October 2017		Manager					has already been undertaken - Nov		
				Oct-2017		oun 28-Feb-20	31-Dec-19			2019)		Project
					gle Wate	r				28/2/20 Quotes to undertake work are being reviewed		Project management
										a.o somy to violed		resource sought
323 Coona Raw Document	Coonabarabran WTP- Water sourced from the Pound Yard weir and bores has not been		ORANA WarrumSCM	a Hi	gh			In progress		All the raw water from the bores has	Risk assessment to	1 22 2-23.1
barabr water ation /	through a raw water risk assessment process for each separate source (it has been		meetings pre r17.6		Manager					been tested (some radiological	include Pound Yard weir	
an Protocol	assessed as a combined source). A risk assessment of each source needs to be		October 2017	Oct-2017	Warrumb gle Wate	oun 28-Feb-20	31-Mar-20			results outstanding).	and bores	Consultant (NSW
	undertaken and any changes documented in the Drinking Water Management Plan				gie vvale	1				To be included as part of risk assessments (Hunter H20 NSW		Health)
325 Baradin Disinfe Critical	Increase contact time for first customer (John Featherby), relocate service.		27 June 2019 A1	Hi	gh			In progress		To be undertaken with mains		
e ction control			Improvement		Supervis	or				replacement works (take off rising		
point			Plan review meeting	27-Jun	Reticulat	28-Feb-20	6-Mar-20 was 30/9/19			main) 13/12/19: Works are being		
			incomg							undertaken currently		
326 All Disinfe Critical	Review CT for all systems		27 June 2019 A2	Hig	gh			In progress		Refer to related actions 44, 46, 51,	Review CWT report and	
ction control			Improvement	27-Jun	Warrumb	28-Feb-20	13-Mar-20			60, 262, 309, 322	revise chlorination CCPs	
point			Plan review		Supervis	or or	interim			27/9/19: engaged CWT to review		
329 Binnaw Disinfe Major	Chlorine room upgrade		27 June 2019 A5	27-Jun	gn	or nt; 28-Feb-20 19/20	28-Feb-20 (HunterH2O	In progress		Quotes received, to include chlorine		management
ay ction works			Improvement		Project		advice)			room upgrade	treatment plant upgrades	
330 Binnaw entati Major	Investigate restoring bank integrity of sedimentation lagoons (e.g. relining lagoons)		30 July 2019 A6	27-Jun	gh Supervis	or 28-Feb-20	31-Mar-20 interim	In progress		Requested advice from HunterH20 27/9/19: asked CWT for advice, who		
ay on works Lagoo			Improvement Plan review	Zr-Juli	Treatmer	20-reb-20 nt	31-Wai-20 III(eIIII)			provided advice - next stage: ?	and consider options	
Lagoo										,		

No Locatio Proce Categor	ry Action	ADWG No ADWG Element Source	ce Haz ID / D Source	Priority		Date Funding reviewed	Due date Due date notes	Status	Comments Comments 29/08/18	Comments 1/3/19	Comments 27/6/19 & 30/7/2019 & Sh- 27/8/2019; 27/09/2019; 13/12/19;	nort term actions	Resource requirements
332 All Fluorid ation	Replace fluoridation systems and staff training			High 27-Jun	Manager Warrumbun gle Water	28-Feb-20 19/20	31-Dec-20	In progress			13/12/19: Confirmed to be undertaken as part of Hunter H20 NSW Health project. 28/2/20: Internal meeting today with Health on design. Scheduled a workshop in March to present desing		
333 All Reser voirs	WHS upgrades and fencing of reservoirs, circular 18			High 27-Jun	Manager Warrumbun gle Water	28-Feb-20 19/20	28-Feb-20	In progress			13/12/2019: Circular 18 not yet WE submitted. 6 reservoirs still to be res	o arrange quote to get EARS to undertake servoir spections/cleans for maining 6 reservoirs.	Consultant (NSW Health)
334 All DWMS 335 Coona Disinfe	Review and update DWMS *Develop, document and implement a process for reviewing formal requirements every 12 months or where there are any changes to Council's activities or formal requirements (A4) *Formally document and communicate roles and responsibilities of staff relating to management of drinking water quality. (A6) Review location and replace safety shower and eyewash for chlorine room	Improv Plan ru meetir		High 27-Jun High	gle Water	28-Feb-20	30-Jun-20	Not started			13/12/19: Consultant has provided rev	eview proposal to view and update WMS	Project management resource needed
barabr ction an 336 All	Develop a process to regularly monitor and test safety showers and eye washes, include developing a register Ensure appropriate confined space signage is in place	Pian r 27 Jur Improv Pian r 27 Jur	ne 2019 A12 vement	27-Jun High 27-Jun High 27-Jun	Supervisor North Technical Officer Supervisor	28-Feb-20 28-Feb-20 28-Feb-20	6-Mar-20 was 30/9/19 20-Mar-20 Interim (register)	In progress				S to add remaining cations and check with upervisors	
338 Duned Reser oo voirs 339 All	Replace Rhodes Street reservoir roofs (reservoir rehabilitation project) Develop system wide SOPs * Formally document any procedure related to existing control measures identified in the risk assessment that are not currently documented. Involve relevant staff in the	Improv Plan ru 30 Jul	ne 2019 A14 vement veview ly 2019 A15 vement	27-Jun High High Jul-2019	Treatment Warrumbun gle Water; Supposition Manager Warrumbun gle Water;	28-Feb-20 19/20	interim 4-Oct-20 (engage WEARS)	In progress			86,103,104, 105, 107, 108, 109, 110, Co	ompile existing SWMS	Contractor
199a Baradin Safety/ Minor e Signag works e	systems	Chemicals Audit 2	er H2O BAR009, 2014 BAR012	High 2014	Supervisor Supervisor Treatment; Technical Officer	28-Feb-20	31/01/2020 Interim was 31/08/19	In progress	Chemical signage on the Soda Ash and PACL dosing systems is not installed on either the dosing systems or access to the compound The dosing tanks and equipment are not		27/9/19: AM check BDN for signage (PACI needed) and SDSs 13/12/19: Supervisor to progress		Consultant
40a BDN Catch Minor ment & works Abstra ction	Concrete capping of bores	3.1 Preventive Risk Measures and asses: Multiple Barriers	1.03 ssment	High Mar-2015	Supervisor North	28-Feb-20	was 30/9/19 31-Jan-20 (new 15/10/19 DDO)	In progress	DDO bore has been sealed; BDN being capped; Note: no concrete was used to cap		Baradine to be capped (ID 4 of project plan) Other bores have already been capped/covered. 13/12/19 - contractor has been engaged to cap bore at Baradine 28/2/20: Works still to be undertaken.Oriana project to review and fix bore casings.		

No Locatio Proce Category Action	ADWG No ADWG Element	Source Haz ID /	Date added F	Priority A	ction Date	Funding	Due date Due date	Status	Comments Comments 29/08/18	Comments 1/3/19	Comments 27/6/19 & 30/7/2019 & Short term actions Resource
n ss		Source			wner review		notes				27/8/2019; 27/09/2019; 13/12/19; requirements
40b Duned Catch Minor Sealing well at Dunedoo	3.1 Preventive F	Risk 1.03	· ·	High				In progress		•	13/12/19 - Engage WEARs to seal Engage WEARS to seal
oo ment & works		assessment									well well at Dunedoo
Abstra	Multiple Barriers										28/20/20: Final desing needed to
ction											confirm costing
			Mar-2015		upervisor 28-F reatment	eb-20	28-Feb-20				
				"	reaurient						
											Contractor
341 All Document Develop Emergency Response Plan (ERP), including:			•	High M	lanager			In progress			28/2/20: Confirmed that development To be included as part of
ation / *Review and finalise ERP in DWMS Implementation Report (2016)(A232)			Feb-2020		/arrumbun 28-F	eb-20	31-Mar-20				of ERP is to be undertaken as part of ERP update (action 341)
Protocol * Establish a rapid communication system to deal with unexpected events (A138 & 223)				gl	le Water						Hunter H20 NSW Health project.
342 Undertake an exercise of the incident response plan with PHU following finalisation of ERP (A232)				ligh				Not started			28/2/20: New action created, to be undertaken following completion of
(ALGZ)											341 (ERP)
											··· \—·· ,
					lanager						
			Feb-2020		/arrumbun 28-F	eb-20	30-Jun-20				
				gl	le Water						
343 All Development of document to undertake regular reservoir inspections: *develop reservoir SOP (specific Specific to individual reservoir requirements((A334 &				ligh				In progress			28/2/20: New action created to Follow up with WEARS compile a number of related actions
develop reservoir 30-r (specific 3pecific to intrividual reservoir requirements) (κ33+ α 107)											(A334, 107, 310, 273, 84)
*develop reservoir inspection checklists for the operators (A310)											Visuals inspections are currently
*Train operators in resrvoir inspections (A310)											recorded in diaries.
*Develop regular (weekly/monthly/annual) reservoir integrity inspection and reporting											Engaging contractor (WEARS) to
program (A273)											develop reservoir integrity checklist
* Assess compliance regarding reservoir access with Australian Standards and common											to undertake inspections.
sense (A84)											Including assessing WHS issues that are limiting inspections currently.
				м	lanager						that are infilling inspections currently.
			28-Feb-20		/arrumbun 28-F	eb-20					
				gl	le Water						
											Project
											managemen
F. All Training Books and the state of the s	10 5 1: :			1				La con			resource nee
5 All Training Develop and implement a staff awareness program for relevant water quality obligations	1.2 Regulatory and		•	Medium M	lanager			In progress			Quarterly review meeting to cover Re-implement quarterly water quality obligations, alternate meetings (after finalisation
relating to their areas of responsibility.	Formal Requirements				/arrumbun						water quality obligations, alternate meetings (after finalisation staff attendance at meetings. of improvement plan).
	r toqui omonto		Sep-2015			eb-20	31/4				28/2/20: To consider scheudle of to Process to be formalised
					echnical						er-implement water quality meetings in updated DWMS (Action
				O	fficer						334)
13 Binnaw Backw Operation Perform regular testing of the following:	2.1 Water Supply	Hunter H2O BIN009	N	Medium				Not started	Currently, water quality testing only		Media replaced, reduced priority to
ay ashing s · Filtered water turbidity immediately after a backwash	System Analysis								occurs two hours after the backwash has		medium.
· Wash water turbidity during a backwash			2011	Sı	upervisor	Eab 20 20/04	30/06/2021		completed. No testing is carried out on the		Covered by scoping study.
· Filter headloss immediately after a backwash			2014	Tr	reatment 28-F	Feb-20 20/21	3U/UU/ZUZ I		filtered water after a backwash or wash		Part of water treatment plant
									water during the backwash sequence		upgrades (FY19/20)
				KA	lanager						28/2/20: Consider online turbidty
20 All Document The hazard identification and risk assessment should be internally reviewed 12 months.	2.3 Hazard		Sep-2015	vieuluiii	iariager /arrumbun 28-F	eb-20	TBC	In progress			Review of risk assessment to be Consultant (I
ation / Every five years (or upon any significant changes to any of the water supply systems)	Identification & Risk			al	le Water	-					undertaken as part of NSW Health Health)
22 Coolah Safety Minor Relocate the safety shower/eyewash station to outside of the dosing room. The safety	2.3 Hazard ID and		N	/ledium				In progress	· The chlorine		Evacuation assembly point to be Signs to be installed
works shower must be:	Risk Assessment I	Audit 2014 COH010		Q ₁	upervisor				shower/eyewash stat currently located insi		allocated and sign posted. following delivery
 Located within 10 seconds reach of the hazard Located on the same level as the hazard and free from obstructions 			2014		28-F reatment	Eeb-20	6/03/2020		chlorine dosing room.		13/12/19: Still to confirm if eye wash Investigate portable station has been installed. Signs eyewash station
 Located on the same level as the nazaro and free from obstructions The location and installation of the safety shower eyewash must comply with Australian 									event of a chlorine lea		station has been installed. Signs eyewash station have been ordered (evacuation and
Standard ASA77E 2007									unit would not be able t	be	masting point) and waiting to be
74 BWY, Sedim Document Establish an Operational Control Point (OCP) for the settling lagoon		Bligh Tanner	1		lanager (a		,	In progress	2016-10: Undertake jar		27/9/19: turbidity; pH (e.g. should be Technical officer to
CBN, entatio ation / MDN n Protocol	r	report Feb-16	Feb-2016		/arrumbun 28-F le Water;	eb-20	31-Mar 13/3 (long		and confirm the approp	iate	6-7 if alum is used) prepare long term trends.
MDR II FIOLOGI					echnical		term trends)		coagulant dose; base change over between		28/2/20: Supervisor to propose OCP Supervisor to propose (>3 NTU, pH dependent on OCP
				16					Griange over between		(= 1110, pri dopondoni oli OOI

88 Mendo Distrib Document Implement a pro-active mains flushing program. oran ution attor / Procedures May-15 89 Mendo Distrib Document Implement a pro-active mains flushing program. oran ution attor / Procedures May-15 98 All Reser Investigati Consider reviewing mixing options for reservoirs with common inlet/outlet 4.1 Operational Procedures Assessment 99 Coona Distrib Monitoring Consider reviewing mixing options for reservoirs with common inlet/outlet 4.1 Operational Procedures assessment 99 Coona Distrib Monitoring Consider sampling and testing program following mains repairs 4.1 Operational Procedures assessment 112 Coona Distrib Document Consider scouring program, including prioritisation of mains to be scoured 4.1 Operational Risk 10.03 Procedures assessment 116 Coona Monito Document Develop formal monitoring protocols which identify target criteria for each of the preventive assessment Monitoring measures being monitored (including CCPs), monitoring records to be kept. 117 Coona Coona Monito Document Develop formal monitoring protocols which identify target criteria for each of the preventive assessment Monitoring May-15 118 Coona Coona Monito Document Develop formal monitoring protocols which identify target criteria for each of the preventive barabr ution measures being monitored (including CCPs), monitoring records to be kept. 119 Coona Coona Monitor Quantification Monitor and Monitoring May-15 120 Coona Coona Monitor Monitoring Monitor algae concentrations in the raw water and sedimentation lagoon. 121 Coona Coona United Monitoring Monitor algae concentrations in the raw water and sedimentation lagoon. 122 Coona Coona United Monitoring Monitor algae concentrations in the raw water and sedimentation lagoon. 123 Coona Coona United Monitoring May-15	2014 May-2015 May-2015 Mar-2015	Medium Medium Medium Medium	Manager Warrumbun gle Water Supervisor Treatment; Project Engineer Manager Warrumbun gle Water Supervisor Reticulation Technical Manager Warrumbun gle Water; Supervisor Treatment Treatment Manager Warrumbun	30-Jul-19	Interim (fini 31-Mar-20 concept design) 31-Oct-19 Interim (fini 31-Mar-20 concept design) 31-Oct-19 Interim (priority an options) 31/12/2016	Not started In progress sh Not started Not started	Wash water is directed to the sedimentation ponds for recovery. A concentration of contaminants unable to be removed in the sedimentation process may occur increasing the load on the filters (Section 4.2.3, p.11)	Covered by Mendooran water supply modification upgrade. Currently at concept design stage. Further funding will be needed for construction. 13/12/19: Consultant engaged to undertake concept design (site visit has already been undertaken - Nov 2019) To be investigated Included as part of Mendooran upgrade 13/12/19: Consultant engaged to undertake concept design (site visit has already been undertaken - Nov 2019) Schedules for Dunedoo still be developed. 27/9/19: waiting on Graham (flushing	Refer to action 88 and 171 Refer to other action 171. Include pH and settled water investigations (action 87) Find funding following concept design finalisation (liaise with DPIE) Develop Dunedoo mains flushing schedules.	
87 Mendo Sectim Investigate investigate pH increase between raw and settled water. 88 Mendo Darie Investigate Consider switching to chlorine gas disinfection. 89 Mendo Darie Investigate Consider switching to chlorine gas disinfection. 80 Mendo Darie Investigate Consider switching to chlorine gas disinfection. 80 Mendo Darie Investigate Consider switching to chlorine gas disinfection. 80 Mendo Darie Investigate Consider switching to chlorine gas disinfection. 80 Mendo Darie Investigate Consider switching to chlorine gas disinfection. 80 Mendo Darie Investigate Consider switching program. 80 Mendo Darie Investigate Consider switching program. 80 Mendo Darie Investigate Consider switching program investigate consider switching program. 80 Mendo Darie Investigate Consider switching program investigate consider switching for security program investigate consideration of the preventive based in proceedures assessment 80 Coons Dento Document Consider souring program, including profitsion of mains to be sourced 4.1 Operational Risk 10.01 packages assessment 80 Coons Dento Document Consider souring program, including profitsion of mains to be sourced 4.1 Operational Risk 10.01 procedures assessment 80 Coons Dento Document Consider switching for profitsion of mains to be sourced 4.1 Operational Risk 10.01 procedures assessment 80 Coons Dento Document Consider switching for profitsion of mains to be sourced 4.1 Operational Risk 10.01 procedures assessment 80 Coons Dento Document Consider switching for profitsion of mains to be sourced 4.1 Operational Risk 10.01 procedures assessment 80 Coons Dento Document Consider switching for profitsion of mains to be sourced 4.1 Operational Risk 10.01 procedures assessment 80 Coons Dento Document Consider switching for profitsion of the preventive based of the preventive based of the preventive based of the prevent	May-2015 May-2015 Mar-2015	Medium Medium Medium Medium	Warrumbun gle Water Supervisor Treatment; Project Engineer Manager Warrumbun gle Water Supervisor Reticulation Technical Officare Manager Warrumbun gle Water; Supervisor Treatment Manager	30-Jul-19 30-Jul-19 27-Sep-19	31-Mar-20 concept design) 31-Oct-19 Interim (fini 31-Mar-20 concept design) 31-Oct-19 Interim (priority an options)	Not started In progress sh Not started Not started	recovery. A concentration of contaminants unable to be removed in the sedimentation process may occur increasing the load on the filters (Section 4.2.3, p.11)	Currently at concept design stage. Further funding will be needed for construction. 13/12/19: Consultant engaged to undertake concept design (site visit has already been undertaken - Nov 2019) To be investigated Included as part of Mendooran upgrade 13/12/19: Consultant engaged to undertake concept design (site visit has already been undertaken - Nov 2019) Schedules for Dunedoo still be developed.	Refer to action 88 and 171 Refer to other action 171. Include pH and settled water investigations (action 87) Find funding following concept design finalisation (liaise with DPIE) Develop Dunedoo mains flushing schedules.	
27 Mento Sedim Investigati investigate pri increase between raw and settled water: 4.1 Operatorial CWT report Procedures May-15 89 Mento Distrib Investigati Consider switching to chiorine gas distribution oran ofton ons Way-15 89 Mento Distrib Document implement a pro-active mains flushing program. 4.1 Operatorial CWT report Procedures May-15 89 Mento Distrib Document implement a pro-active mains flushing program. 4.1 Operatorial Procedures May-15 89 All Reser Investigati Consider reviewing mixing options for reservoirs with common historidet 4.1 Operatorial Procedures May-15 89 All Reser Investigati Consider reviewing mixing options for reservoirs with common historidet 4.1 Operatorial Procedures Sessional Risk 9.01 Procedures Sessional Risk 10.01 Procedures Sessional Risk 10.01 Procedures Sessional Risk 10.03 Sessional Procedures Active Operatorial Risk 10.03 Procedures Sessional Risk 10.03 Sessional Risk 10.03 Sessional Risk 10.03 Sessional Risk 10.03 Procedures Sessional Active Operatorial Active	May-2015 May-2015 Mar-2015	Medium Medium Medium Medium	Warrumbun gle Water Supervisor Treatment; Project Engineer Manager Warrumbun gle Water Supervisor Reticulation Technical Officare Manager Warrumbun gle Water; Supervisor Treatment Manager	30-Jul-19 30-Jul-19 27-Sep-19	31-Mar-20 concept design) 31-Oct-19 Interim (fini 31-Mar-20 concept design) 31-Oct-19 Interim (priority an options)	Not started In progress sh Not started Not started	recovery. A concentration of contaminants unable to be removed in the sedimentation process may occur increasing the load on the filters (Section 4.2.3, p.11)	Further funding will be needed for construction. 13/12/19: Consultant engaged to undertake concept design (site visit has already been undertaken - Nov 2019) To be investigated Included as part of Mendooran upgrade 13/12/19: Consultant engaged to undertake concept design (site visit has already been undertaken - Nov 2019) Schedules for Dunedoo still be developed.	Refer to action 88 and 171 Refer to other action 171. Include pH and settled water investigations (action 87) Find funding following concept design finalisation (liaise with DPIE) Develop Dunedoo mains flushing schedules.	
See Mendo Distrito Investigati Consider switching to chlorine gas disinfection. 4.1 Operational Op	May-2015 May-2015 Mar-2015	Medium Medium Medium Medium	Warrumbun gle Water Supervisor Treatment; Project Engineer Manager Warrumbun gle Water Supervisor Reticulation Technical Officare Manager Warrumbun gle Water; Supervisor Treatment Manager	30-Jul-19 30-Jul-19 27-Sep-19	31-Mar-20 concept design) 31-Oct-19 Interim (fini 31-Mar-20 concept design) 31-Oct-19 Interim (priority an options)	Not started In progress sh Not started Not started	removed in the sedimentation process may occur increasing the load on the filters (Section 4.2.3, p.11)	construction. 13/12/19: Consultant engaged to undertake concept design (site visit has already been undertaken - Nov 2019) To be investigated Included as part of Mendooran upgrade 13/12/19: Consultant engaged to undertake concept design (site visit has already been undertaken - Nov 2019) Schedules for Dunedoo still be developed.	Refer to action 88 and 171 Refer to other action 171. Include pH and settled water investigations (action 87) Find funding following concept design finalisation (liaise with DPIE) Develop Dunedoo mains flushing schedules.	
Big Mends Distrits Investigati Consider switching to chlorine gas disinfection. 4.1 Operational Op	May-2015 May-2015 Mar-2015	Medium Medium Medium Medium	Supervisor Treatment; Project Engineer Manager Warrumbun gle Water Supervisor Reticulation Technical Officate Manager Warrumbun gle Water; Supervisor Treatment Manager	30-Jul-19 30-Jul-19 27-Sep-19	design) 31-Oct-19 Interim (finition of the state of the	In progress Sh Not started Not started	sedimentation process may occur increasing the load on the filters (Section 4.2.3, p.11)	13/12/19: Consultant engaged to undertake concept design (site visit has already been undertaken - Nov 2019) To be investigated Included as part of Mendooran upgrade 13/12/19: Consultant engaged to undertake concept design (site visit has already been undertaken - Nov 2019) Schedules for Dunedoo still be developed.	Refer to other action 171. Include pH and settled water investigations (action 87) Find funding following concept design finalisation (liaise with DPIE) Develop Dunedoo mains flushing schedules.	
Beal Mendo Destric Investigati Consider switching to chorine gas distriction. 4.1 Operational Operational Own Operational	May-2015 May-2015 Mar-2015	Medium Medium Medium	Supervisor Treatment; Project Engineer Manager Warrumbun gle Water Supervisor Reticulation Technical Manager Warrumbun gle Water; Supervisor Treatment Manager	30-Jul-19 27-Sep-19	31-Oct-19 Interim (fini 31-Mar-20 concept design) 31-Oct-19 Interim (priority an options)	In progress Sh Not started Not started	occur increasing the load on the filters (Section 4.2.3, p.11)	undertake concept design (site visit has already been undertaken - Nov 2019) To be investigated Included as part of Mendooran upgrade 13/12/19: Consultant engaged to undertake concept design (site visit has already been undertaken - Nov 2019) Schedules for Dunedoo still be developed.	Refer to other action 171. Include pH and settled water investigations (action 87) Find funding following concept design finalisation (liaise with DPIE) Develop Dunedoo mains flushing schedules.	
Bell Mendo Distrib Document Implement a pro-active mains flushing program. 4.1 Operational Operati	May-2015 May-2015 Mar-2015	Medium Medium Medium	Treatment; Project Engineer Manager Warrumbun gle Water Supervisor Reticulation Technical Manager Warrumbun gle Water; Supervisor Treatment Manager	30-Jul-19 27-Sep-19	Interim (fin 31-Mar-20 concept design) 31-Oct-19 Interim (priority an options)	In progress Sh Not started Not started	the filters (Section 4.2.3, p.11) (Section 4.2.5, p.16)	has already been undertaken - Nov 2019) To be investigated Included as part of Mendooran upgrade 13/12/19: Consultant engaged to undertake concept design (site visit has already been undertaken - Nov 2019) Schedules for Dunedoo still be developed.	Refer to other action 171. Include pH and settled water investigations (action 87) Find funding following concept design finalisation (liaise with DPIE) Develop Dunedoo mains flushing schedules.	
Big Mends Distrits Investigati Consider switching to chlorine gas disinfection. 4.1 Operational Op	May-2015 May-2015 Mar-2015	Medium Medium Medium	Treatment; Project Engineer Manager Warrumbun gle Water Supervisor Reticulation Technical Manager Warrumbun gle Water; Supervisor Treatment Manager	30-Jul-19 27-Sep-19	Interim (fin 31-Mar-20 concept design) 31-Oct-19 Interim (priority an options)	In progress Sh Not started Not started	(Section 4.2.3, p.11) (Section 4.2.5, p.16)	2019) To be investigated Included as part of Mendooran upgrade 13/12/19: Consultant engaged to undertake concept design (site visit has already been undertaken - Nov 2019) Schedules for Dunedoo still be developed.	Refer to other action 171. Include pH and settled water investigations (action 87) Find funding following concept design finalisation (liaise with DPIE) Develop Dunedoo mains flushing schedules.	
Big Mends Distrits Investigati Consider switching to chlorine gas disinfection. 4.1 Operational Op	May-2015 May-2015 Mar-2015	Medium Medium Medium	Treatment; Project Engineer Manager Warrumbun gle Water Supervisor Reticulation Technical Manager Warrumbun gle Water; Supervisor Treatment Manager	30-Jul-19 27-Sep-19	Interim (fin 31-Mar-20 concept design) 31-Oct-19 Interim (priority an options)	In progress Sh Not started Not started	(Section 4.2.5, p.16)	Included as part of Mendooran upgrade 13/12/19: Consultant engaged to undertake concept design (site visit has already been undertaken - Nov 2019) Schedules for Dunedoo still be developed.	Refer to other action 171. Include pH and settled water investigations (action 87) Find funding following concept design finalisation (liaise with DPIE) Develop Dunedoo mains flushing schedules.	
Big Mends Distrits Investigati Consider switching to chlorine gas disinfection. 4.1 Operational Op	May-2015 May-2015 Mar-2015	Medium Medium Medium Medium	Treatment; Project Engineer Manager Warrumbun gle Water Supervisor Reticulation Technical Manager Warrumbun gle Water; Supervisor Treatment Manager	30-Jul-19 27-Sep-19	Interim (fin 31-Mar-20 concept design) 31-Oct-19 Interim (priority an options)	Not started Not started	(Section 4.2.5, p.16)	upgrade 13/12/19: Consultant engaged to undertake concept design (site visit has already been undertaken - Nov 2019) Schedules for Dunedoo still be developed.	Refer to other action 171. Include pH and settled water investigations (action 87) Find funding following concept design finalisation (liaise with DPIE) Develop Dunedoo mains flushing schedules. Identify reservoirs where this is required.	
88 Mendo Destric Investigate Consider switching to chlorine gas disinfection. 4.1 Operational CMT report Procedures May-15	May-2015 May-2015 Mar-2015	Medium Medium Medium Medium	Project Engineer Manager Warrumbun gle Water Supervisor Reticulation Technical Manager Warrumbun gle Water; Supervisor Treatment Manager	30-Jul-19 27-Sep-19	Interim (fin 31-Mar-20 concept design) 31-Oct-19 Interim (priority an options)	Not started Not started	(Section 4.2.5, p.16)	upgrade 13/12/19: Consultant engaged to undertake concept design (site visit has already been undertaken - Nov 2019) Schedules for Dunedoo still be developed.	Include pH and settled water investigations (action 87) Find funding following concept design finalisation (liaise with DPIE) Develop Dunedoo mains flushing schedules.	
Second Colon Col	May-2015 May-2015 Mar-2015	Medium Medium	Manager Warrumbun gle Water Supervisor Reticulation Technical Manager Warrumbun gle Water; Supervisor Treatment Manager	27-Sep-19	31-Mar-20 concept design) 31-Oct-19 Interim (priority an options)	Not started Not started	(Section 4.2.5, p.16)	upgrade 13/12/19: Consultant engaged to undertake concept design (site visit has already been undertaken - Nov 2019) Schedules for Dunedoo still be developed.	Include pH and settled water investigations (action 87) Find funding following concept design finalisation (liaise with DPIE) Develop Dunedoo mains flushing schedules.	
Second Colon Col	May-2015 May-2015 Mar-2015	Medium Medium	Manager Warrumbun gle Water Supervisor Reticulation Technical Office Manager Warrumbun gle Water; Supervisor Treatment Manager	27-Sep-19	31-Mar-20 concept design) 31-Oct-19 Interim (priority an options)	Not started Not started		upgrade 13/12/19: Consultant engaged to undertake concept design (site visit has already been undertaken - Nov 2019) Schedules for Dunedoo still be developed.	Include pH and settled water investigations (action 87) Find funding following concept design finalisation (liaise with DPIE) Develop Dunedoo mains flushing schedules.	
oran clion os Sistrib Document Implement a pro-active mains flushing program. 98 Mendo Distrib Document Implement a pro-active mains flushing program. 99 Protocol 98 All Reser Investigati Consider reviewing mixing options for reservoirs with common inlet/outlet 99 Cona Distrib Monitoring Consider sampling and testing program following mains repairs 4.1 Operational Assessment 99 Cona Distrib Monitoring Consider sampling and testing program following mains repairs 90 barabr ution 5 Consider sampling and testing program following mains repairs 4.1 Operational Assessment 90 Cona Distrib Document Consider scouring program, including prioritisation of mains to be scoured 4.1 Operational Assessment 91 Cona Distrib Document Consider scouring program, including prioritisation of mains to be scoured 4.1 Operational Assessment 91 Cona Distrib Document Consider scouring program, including prioritisation of mains to be scoured 4.1 Operational Assessment 92 Cona Distrib Document Consider scouring program, including prioritisation of mains to be scoured 4.1 Operational Assessment 93 Cona Distrib Document Consider sampling protocols which identify target criteria for each of the preventive 4.2 Operational Consider Scouring Program including College Co	May-2015 May-2015 Mar-2015	Medium Medium	Warrumbun gle Water Supervisor Reticulation Technical Office Manager Warrumbun gle Water; Supervisor Treatment Manager	27-Sep-19	31-Mar-20 concept design) 31-Oct-19 Interim (priority an options)	Not started Not started		upgrade 13/12/19: Consultant engaged to undertake concept design (site visit has already been undertaken - Nov 2019) Schedules for Dunedoo still be developed.	Include pH and settled water investigations (action 87) Find funding following concept design finalisation (liaise with DPIE) Develop Dunedoo mains flushing schedules.	
89 Mendo Distrib Document Implement a pro-active mains flushing program. vicin ation / Procedures May-15 88 All Reser Investigati Consider reviewing mixing options for reservoirs with common interfoutet 4.1 Operational Risk 9.01 89 Cons Distrib Monitoring Consider sampling and testing program following mains repairs 4.1 Operational Risk 9.01 89 Locus Distrib Monitoring Consider sampling and testing program following mains repairs 4.1 Operational Risk 9.01 89 Locus Distrib Monitoring Consider sampling and testing program following mains repairs 4.1 Operational Risk 9.01 89 Locus Distrib Document Consider scouring program, including prioritisation of mains to be scoured 4.1 Operational Risk 10.03 89 Locus Distrib Document Consider scouring program, including prioritisation of mains to be scoured 4.1 Operational Risk 10.03 80 Locus Distrib Document Develop formal monitoring producols which identify target criteria for each of the preventive Activity Monitoring Monitoring Monitor assessment Monitoring Monitoring Monitoring Monitor assessment S and Abstra 100 Locus Activity Monitoring Monitor algae concentrations in the raw water and sedimentation lagoon. 42 Operational Monitoring Monitoring May-15 80 Locus Distrib Monitoring Monitor algae concentrations in the raw water and sedimentation lagoon. 42 Operational Monitoring May-15 80 Locus Distrib Monitoring Monitor algae concentrations in the raw water and sedimentation lagoon. 42 Operational Monitoring May-15 80 Locus Distrib Monitoring Monitor algae concentrations in the raw water and sedimentation lagoon. 42 Operational Monitoring May-15 80 Locus Distrib Monitoring Monitor algae concentrations in the raw water and sedimentation afteriduring clarifier upgrade). 42 Operational Monitoring Monitori	May-2015 Mar-2015 Mar-2015	Medium Medium Medium	Warrumbun gle Water Supervisor Reticulation Technical Office Manager Warrumbun gle Water; Supervisor Treatment Manager	27-Sep-19	31-Mar-20 concept design) 31-Oct-19 Interim (priority an options)	Not started Not started		upgrade 13/12/19: Consultant engaged to undertake concept design (site visit has already been undertaken - Nov 2019) Schedules for Dunedoo still be developed.	water investigations (action 87) Find funding following concept design finalisation (liaise with DPIE) Develop Dunedoo mains flushing schedules. Identify reservoirs where this is required.	
Mendo Distrit Document Implement a pro-active mains flushing program. 4.1 Operational Procedures May-15 Ma	May-2015 Mar-2015 Mar-2015	Medium Medium Medium	Warrumbun gle Water Supervisor Reticulation Technical Office Manager Warrumbun gle Water; Supervisor Treatment Manager	27-Sep-19	31-Mar-20 concept design) 31-Oct-19 Interim (priority an options)	Not started Not started		13/12/19: Consultant engaged to undertake concept design (site visit has already been undertaken - Nov 2019) Schedules for Dunedoo still be developed.	(action 87) Find funding following concept design finalisation (liaise with DPIE) Develop Dunedoo mains flushing schedules.	
Mendo Distrit Document Implement a pro-active mains flushing program. 4.1 Operational Procedures May-15 Ma	May-2015 Mar-2015 Mar-2015	Medium Medium Medium	Warrumbun gle Water Supervisor Reticulation Technical Office Manager Warrumbun gle Water; Supervisor Treatment Manager	27-Sep-19	31-Mar-20 concept design) 31-Oct-19 Interim (priority an options)	Not started Not started		has already been undertaken - Nov 2019) Schedules for Dunedoo still be developed.	Find funding following concept design finalisation (liaise with DPIE) Develop Dunedoo mains flushing schedules. Identify reservoirs where this is required.	
Mendo Distrib Document Implement a pro-active mains flushing program. 4.1 Operational Procedures May-15	May-2015 Mar-2015 Mar-2015	Medium Medium Medium	Supervisor Reticulation Technical Office Manager Warrumbun gle Water; Supervisor Treatment Manager	27-Sep-19	design) 31-Oct-19 Interim (priority an options)	Not started		2019) Schedules for Dunedoo still be developed.	concept design finalisation (liaise with DPIE) Develop Dunedoo mains flushing schedules. Identify reservoirs where this is required.	
Procedures May-15 Procedures Proce	May-2015 Mar-2015	Medium	Supervisor Reticulation Technical Office Manager Warrumbun gle Water; Supervisor Treatment Manager	· · · · · · · · · · · · · · · · · · ·	31-Oct-19 Interim (priority an options)	Not started	(Section 4.3, p.17)	Schedules for Dunedoo still be developed.	finalisation (liaise with DPIE) Develop Dunedoo mains flushing schedules. Identify reservoirs where this is required.	
oran uton atlon / Protectors 8 All Reser Investigat Consider reviewing mixing options for reservoirs with common inlet/outlet 4.1 Operational Risk 9.01 assessment vitro on S S S S S S S S S S S S S S S S S S	May-2015 Mar-2015	Medium	Reticulation Technical Office Manager Warrumbun gle Water; Supervisor Treatment	· · · · · · · · · · · · · · · · · · ·	Interim 31-Dec-19 (priority an options)	Not started	(Section 4.3, p.17)	developed.	DPIE) Develop Dunedoo mains flushing schedules. Identify reservoirs where this is required.	
Procedures May-15	May-2015 Mar-2015	Medium	Reticulation Technical Office Manager Warrumbun gle Water; Supervisor Treatment	· · · · · · · · · · · · · · · · · · ·	Interim 31-Dec-19 (priority an options)	Not started	(Section 4.3, p.17)	developed.	Develop Dunedoo mains flushing schedules. Identify reservoirs where this is required.	
oran uton atlon / Protectors 8 All Reser Investigat Consider reviewing mixing options for reservoirs with common inlet/outlet 4.1 Operational Risk 9.01 assessment vitro on S S S S S S S S S S S S S S S S S S	May-2015 Mar-2015	Medium	Reticulation Technical Office Manager Warrumbun gle Water; Supervisor Treatment	· · · · · · · · · · · · · · · · · · ·	Interim 31-Dec-19 (priority an options)	Not started	(Section 4.3, p.17)	developed.	flushing schedules. Identify reservoirs where this is required.	ı
Protocol Protocol Protocol Protocol Protocol Procedures	Mar-2015 Mar-2015	Medium	Manager Warrumbun gle Water; Supervisor Treatment Manager	· · · · · · · · · · · · · · · · · · ·	Interim 31-Dec-19 (priority an options)	t	(Section 4.3, p.17)		Identify reservoirs where this is required.	1
Part Reser Investigati Consider reviewing mixing options for reservoirs with common inlet/outlet Procedures Risk Procedures Assessment Procedures Procedures Assessment Procedures Procedures Procedures Assessment Procedures Procedur	Mar-2015 Mar-2015	Medium	Warrumbun gle Water; Supervisor Treatment	30-Jul-19	31-Dec-19 (priority and options)	t		2/19/19: watting on Graham (flushing	Identify reservoirs where this is required.	
Procedures Procedures Sasesment	Mar-2015 Mar-2015	Medium	Warrumbun gle Water; Supervisor Treatment	30-Jul-19	31-Dec-19 (priority and options)	t			this is required.	
99 Coona Distrib Monitoring Consider sampling and testing program following mains repairs 112 Coona Monito Document Develop formal monitoring protocols which identify target criteria for each of the preventive baraby ring atton / measures being monitored (including CCPs), monitoring records to be kept, 120 Coona Catch Operation Monitor raw water organics and nutrient loading. 121 Coona Cagu Monitoring Monitoring Monitor raw water organics and nutrient loading. 122 Coona Catch Operation Monitor raw water organics and nutrient loading. 123 Coona Catch Operation Monitoring Procedures 124 Coona Cagu Monitoring Monitoring Monitor raw water organics and nutrient loading. 125 Coona Cagu Monitoring Monitoring Monitor raw water organics and nutrient loading. 126 Coona Cagu Monitoring Monitoring May-15 127 Coona Cagu Monitoring Monitoring Monitor algae concentrations in the raw water and sedimentation lagoon. 128 Coona Cagu Monitoring Monitoring Monitor algae concentrations in the raw water and sedimentation lagoon. 129 Coola Cagu Monitoring Monitoring May-15 120 Coola Cagu Monitoring Monitoring May-16 120 Coola Cagu Monitoring Monitoring May-16 121 Coola Cagu Monitoring Monitoring May-16 122 Coola Cagu Monitoring Monitoring Consider implementing sampling regime for CBN, BDN for chlorine residual in the Again Monitoring assessment Monitoring assessment 128 Reser Monitoring Consider implementing sampling regime for CBN, BDN for chlorine residual in the Again Filtratio Minor assessment Monitoring assessment 129 Baradin Filtratio Minor or works 120 Operational Monitoring Monitoring assessment 120 Operational Monitoring May-16	Mar-2015	Medium	Warrumbun gle Water; Supervisor Treatment	30-Jul-19	31-Dec-19 (priority and options)					
barabr ution Coona Distrib Document Consider scouring program, including prioritisation of mains to be scoured 4.1 Operational Risk assessment 10.03	Mar-2015	Medium	Supervisor Treatment Manager	30-Jul-19	31-Dec-19 options)				Prioritise reservoirs (e.g.	
Barabr Ution Consider Con	Mar-2015		Treatment						· -	
Barabr Ution Consider Con	Mar-2015		Manager		31/12/2019				CT/population). Develop options for mixing.	
Sarabr Ution Procedures Assessment Procedures Assessment Incident Incide	Mar-2015								Reference Action 262	
Barabr Ution Procedures Assessment Procedures Assessment Incident Incide	Mar-2015						I his should be covered in			
112 Coona Distrib Document Consider scouring program, including prioritisation of mains to be scoured 4.1 Operational Procedures assessment				13-Dec-19	Interim 31-Dec-19	In progress	relevant SOPs (Repair a	SWMS has been developed for main repairs.		
barabr ution ation / Document Develop formal monitoring protocols which identify target criteria for each of the preventive barabr ining ation / measures being monitored (including CCPs), monitoring records to be kept, 120 Coona Catch Operation Monitor raw water organics and nutrient loading. 121 Coona Coagu Monitor algae concentrations in the raw water and sedimentation lagoon. 122 CBN, Reser Monitoring Consider implementing sampling regime for CBN, BDN for chlorine residual in the BDN voirs reservoirs reservoirs assessment 125 Paradin Filtratio Minor Install online turbidity meters for filtration (AND sedimentation after/during clarifier upgrade). 126 Paradin Filtratio Minor report Feb-16			gle Water Manager		deadline		water main break. Replace a	<u> </u>	pipe break repairs (and	
116 Coona Monito Document Develop formal monitoring protocols which identify target criteria for each of the preventive barabr ring ation / measures being monitored (including CCPs), monitoring records to be kept, Monitoring Monitoring May-15	a. 2010	Medium	Warrumbun	13-Dec-19	31-Dec-19	In progress		Scouring types investigated.	Need for scouring to be	
barabr ring ation / measures being monitored (including CCPs), monitoring records to be kept, 20			de Water Manager	10 200 10	01 500 10			Need for scouring to be evaluated.	evaluated.	
Coona Catch Operation Monitor raw water organics and nutrient loading. 4.2 Operational Monitoring May-15	00045	Medium	•	00 1140	04.040	Not started		Schedules are captured currently	Develop operational	
barabr an Abstra 121 Coona Coagu Monitoring Monitor algae concentrations in the raw water and sedimentation lagoon. 122 CBN, Reser Monitoring Consider implementing sampling regime for CBN, BDN for chlorine residual in the BDN voirs reservoirs Paradian Filtratio Minor Install online turbidity meters for filtration (AND sedimentation after/during clarifier upgrade). 123 Baradin Filtratio Minor Install online turbidity meters for filtration (AND sedimentation after/during clarifier upgrade). 124 Bornal Filtratio Minor Install online turbidity meters for filtration (AND sedimentation after/during clarifier upgrade). 125 Baradin Filtratio Minor Install online turbidity meters for filtration (AND sedimentation after/during clarifier upgrade). 126 Monitoring May-15 Monitoring May-15 Monitoring Alsa Session May-15 Mon	Sep-2015	1	Warrumbun	30-Jul-19	31-Dec-19			on operational carbon copy books	monitoring plan	
an Abstra 121 Coona Coagu Monitoring Monitor algae concentrations in the raw water and sedimentation lagoon. 122 CBN, Reser Monitoring Consider implementing sampling regime for CBN, BDN for chlorine residual in the BDN voirs reservoirs reservoirs 128 Baradin Filtratio Minor Install online turbidity meters for filtration (AND sedimentation after/during clarifier upgrade). 129 Baradin Filtratio Minor works 120 Operational Monitoring Assessment Monitoring report Feb-16		Medium			ıntenin	In progress	(Section 4. 1, p.o), note.	Raw water quality assurance	Review raw water	
121 Coona Coagu Monitoring Monitor algae concentrations in the raw water and sedimentation lagoon. 122 CBN, Reser Monitoring Consider implementing sampling regime for CBN, BDN for chlorine residual in the BDN voirs reservoirs reservoirs Annual Filtratio Minor en Monitoring assessment 127 Baradin Filtratio Minor en Monitoring Nonitoring Consider implementing sampling regime for CBN, BDN for chlorine residual in the Monitoring assessment Monitoring assessment 128 Baradin Filtratio Minor Install online turbidity meters for filtration (AND sedimentation after/during clarifier upgrade). 129 Baradin Filtratio Minor en Monitoring Install online turbidity meters for filtration (AND sedimentation after/during clarifier upgrade). 120 Poperational Monitoring Alse Poperational Monitoring Poperational Monitoring Report Feb-16	May-2015		Technical Officer	13-Dec-19	28-Feb-20 deadline w 30/9/19	as	additional treatment	program in place (micro, chemicals)	assurance program	'
barabr lation 8 an Floccu lation 122 CBN, Reser Monitoring Consider implementing sampling regime for CBN, BDN for chlorine residual in the BDN voirs reservoirs reservoirs 127 Baradin Filtratio Minor Install online turbidity meters for filtration (AND sedimentation after/during clarifier upgrade). 4.2 Operational Monitoring Assessment Monitoring report Feb-16			Officer		30/9/19		processes may be required	for all bores as part of NSW Health	against this requirement	<u> </u>
an Flocculation 122 CBN, Reser Monitoring Consider implementing sampling regime for CBN, BDN for chlorine residual in the BDN voirs reservoirs reservoirs Anonitoring assessment 127 Baradin Filtratio Minor Install online turbidity meters for filtration (AND sedimentation after/during clarifier upgrade). Proportional Monitoring assessment Monitoring report Feb-16		Medium			was 30/9/1	9, In progress		BGA testing during summer period in	Consider testing in the	
lation 122 CBN, Reser BDN voirs reservoirs 125 Baradin Filtratio Minor Install online turbidity meters for filtration (AND sedimentation after/during clarifier upgrade). 126 Baradin Filtratio Minor Install online turbidity meters for filtration (AND sedimentation after/during clarifier upgrade). 127 Baradin Filtratio Minor Install online turbidity meters for filtration (AND sedimentation after/during clarifier upgrade). 128 Baradin Filtratio Minor Install online turbidity meters for filtration (AND sedimentation after/during clarifier upgrade). 129 Baradin Filtratio Minor Install online turbidity meters for filtration (AND sedimentation after/during clarifier upgrade). 120 Derational Risk 9.02 121 Another Monitoring report Feb-16			Supervisor		start testing			raw water.	sedimentation lagoon	
122 CBN, Reser BDN voirs reservoirs Consider implementing sampling regime for CBN, BDN for chlorine residual in the BDN voirs reservoirs Another in the BDN voirs reservoirs assessment assessment assessment and the Baradin Filtratio Minor Install online turbidity meters for filtration (AND sedimentation after/during clarifier upgrade). 4.2 Operational Monitoring Bligh Tanner report Feb-16	May-2015		North	13-Dec-19	5-Nov-19 first week		(Section 4.2.2, p.10)	27/9/19: will test monthly in lagoons		
BDN voirs reservoirs Monitoring assessment 127 Baradin Filtratio Minor Install online turbidity meters for filtration (AND sedimentation after/during clarifier upgrade). 4.2 Operational Bligh Tanner e n works report Feb-16					Nov			over summer		
BDN voirs reservoirs Monitoring assessment 127 Baradin Filtratio Minor Install online turbidity meters for filtration (AND sedimentation after/during clarifier upgrade). 4.2 Operational Bligh Tanner e n works report Feb-16		Medium	Technical		interim	In progress		13/12/19: Have been using PAC. Coonabarabran now (August 2019)	Baradine monitoring	
Baradin Filtratio Minor Install online turbidity meters for filtration (AND sedimentation after/during clarifier upgrade). 4.2 Operational Bligh Tanner e n works Monitoring report Feb-16	Mar-2015		Officer	13-Dec-19	31-Jan-20 deadline w	as		recording chlorine residual testing of		
e n works Monitoring report Feb-16		N. C. C.	Officer		13/9/19		2018-05: Safe and Secure			
		Medium				In progress	2018-05: Sate and Secure EOI submitted for 'Automation	Location changed to BDN	To be included as part clarifier upgrade or	,
140 BUG, Enviro Minor Install an appropriate containment bund around the dosing tank to capture any chemical 4.3 Corrective Action Hunter H2O BUG006,	Feb-2016		Supervisor	27-Aug-19	30-May-20		and Process	Covered part of automation project (scoping study).	treatment plant upgrade	,
140 BUG, Enviro Minor Install an appropriate containment bund around the dosing tank to capture any chemical 4.3 Corrective Action Hunter H2O BUG006,	. 35 2010		North	g .0	-5 may 20		Instrumentation'. 2019-05:	(Scoping Study).	acauncia piani apyraue	,
140 BUG, Enviro Minor Install an appropriate containment bund around the dosing tank to capture any chemical 4.3 Corrective Action Hunter H2O BUG006,							Automation Upgrade			'
		Medium				Not started		Dunedoo - 19/20 FY chlorine	Investigate installing self	
DUN, nment works leaks or spills during pump operation or transfer of hypo Audit 2014 DUN009,							There is no chemical bund in the chlorine dosing/bore	upgrade to gas	bunded tanks (DUN,	
KEN al KEN006			Supervisor				room. Chemical leaks and	27/9/19: BUG/KBI: 200L mix tanks	BUG, KEN)	
	2014		Treatment	27-Aug-19	31/12/2019		spills will not be contained	(diluted 20:1, 10:1 in summer with		
							and increases the risk of	20L 13% drums)		
							release to the environment.			
			wanager				(Section 4.2.2, p. ro), remove			
162 Mendo Coagu Operation Remove algae from flocculator chamber and aerator surface. 4.4 Equipment CWT report		Medium	Warrumbun	40 D	confirm wit	In progress	by skimming and application	Cleaned on an annual basis (lagoon		Consultant (10)
	May-2015		gle Water;	13-Dec-19	31-Mar-20 HH2O		of NaOCI liquid when	changeover)	as part of maintenance	,
Floccu Maintenance 455 Coard Divide Micro Legislands and State and Associate SCARA 445 Francisco CMT coards	<u>.</u>	Mari	Cupaninar			la accessor	required to prevent release	13/12/19: Confirmed that	schedules (Hunter H20	nealtn)
165 Coona Disinfe Minor Install scales for chlorine gas cylinders and connect to SCADA. 4.4 Equipment CWT report		Medium				In progress		Scales are installed, not connected		'
barabr ction works Capability & May-15								to SCADA	treatment plant upgrade	
an Maintenance			Supervisor						(PLC replacement).	'
			Supervisor	13-Dec-19	31-Mar-20		(Section 4.2.5, p.15)			'
	May-2015									'
			North							1
			North							ı

No Locatio Proce Category Action n ss	ADWG No ADWG Element	Source Haz ID /		Priority		Date Fu	nding Due date Due date	Status	Comments	Comments 29/08/18	Comments 27/6/19 & 30/7/2019 & 27/8/2019; 27/09/2019; 13/12/19;	Short term actions	Resource requirements
166 Coona Fluorid Operation Check service water for fluoride system is within required quality limits and softener in barabr ation s working effectively.	4.4 Equipment Capability &	CWT report May-15		Medium		101101100		In progress			=:/0.12010; =:/00/12010; 10/12/10;	To be included as part of task 4 Hunter H2O NSW	
an	Maintenance	Way 15										Health project	
					Manager								
			May-2018		Warrumbun gle Water	27-Aug-19	30-Jun-20			(Section 4.2.6, p.16)			
167 Coona Fluorid Minor Modify fluoride saturator outlet pipework. barabr ation works	4.4 Equipment Capability &	CWT report May-15	May-2015	Medium	Manager Warrumbun	27-Aug-19	30-Jun-20	In progress		(Section 4.2.6, p.16)		To be included as part of task 4 Hunter H2O NSW	
168 BAR, Filtratio Operation Consider maintenance program for the filters	4.4 Equipment	Risk 5.01		Medium	ole Water			In progress			13/12/19: Confirmed that	To be included as part of	
BIN, n s CBN,	Capability & Maintenance	assessment	Mar-2018		Manager Warrumbun	13 Dec 10	confirm with				maintenance schedules is to be undertaken as part of Hunter H20	task 4 Hunter H2O NSW Health project	
MDN			Wai-201		gle Water	13-260-19	HH2O				NSW Health project (Task 4)		Consultant (NSW
171 Mendo Disinfe Investigati Investigate installation of chlorine mixer for batching or replacement with chlorine gas	4.4 Equipment	Risk 7.01		Medium	Supervisor			In progress			Considering changing to chlorine	Part of Mendooran	Health)
oran ction ons	Capability &	assessment	Mar-2018	5	Supervisor Treatment Manager	30-Jul-19	30-Sep-19				gas.	upgrade project (action	
172 Mendo Document That WSC investigate and implement a formalised preventative maintenance program for all oran ation / the WTP, reticulation and reservoir assets.	Capability and	Mendooran MBWA2 Boil Water	2017	Medium	Warrumbun		Following	In progress		NSW Health has advised	Maintenance schedules to be developed for WTP by Hunter H2O	Preventative maintenance program to	
Protocol	Maintenance	Alert 2017	2017		gle Water; Supervisor	27-Aug-19	H2O project to develop			their intention to engage a consultant to develop a WTP	(NSW Health project).	be formalised for reticulation and reservoir.	
					North; Supervisor		schedules			Maintenance Schedule.			
189 Binnaw Filtratio Operation Ensure DP cells are functional and reading correctly. Modify PLC code to allow filter	4.4 Equipment	Hunter H2O BIN006	2014	Medium	South Supervisor	27-Aug-19	30/03/2020	Not started		Filter backwashes are only initiated by the filter run time		To be included as part of	
ay n s backwashes to be initiated by either filter run time, filter headloss or filtered water turbidity 190 BAR, Inform Document Identify critical equipment and develop procedures to maintain, repair and replace	Capability and 4.4 Equipment	Audit 2014 Hunter H2O BAR003	3,	Medium	Treatment Manager		interim (list o	In progress	No current asset maintenance plan	setnoint regardless of the	NSW Health project to include	Identify current spares /	Proiect
BIN, ation ation / equipment as necessary 196 All Document Confirm whether Council's supplier contracts include chemical quality compliance.	Capability and 4.5 Materials &	Audit 2014 BIN003,	2014	Medium	Water; Supervisor Manager	28-Feb-20	1/01/2021 spares South):		exists.		operation and maintenance	replacement equipment a	
196 All Document Confirm whether Council's supplier contracts include chemical quality compliance. ation /	Chemicals		Sep-201		Warrumbun	13-Dec-19	30-Jun-20	Not started			13/12/19: Contracts to be investigate	person to get a copy of	
202 Minor Install a larger calibration tube to allow for the volumes required over a three minute test Binnaw Disinfe works (based on current dose rates).	5.1 Drinking Water Quality Monitorin		N008	Medium				Not started			27-9-19: GR to order equipment as required (SS can help if required)		
ay ction It is estimated that a five hundred or thousand millilitre calibration tube would be appropriate. Whilst the current calibration tube allows for a very quick snapshot of dose rates a larger													
tube would facilitate more accurate setting of dose rates and data recording.					Our ser from		had as dis						
			Jan-2019		Supervisor Treatment	27-Sep-19	had no due date			A drop test was carried out to			
										check the alum dosage. The calibration tube should			
										be sized to allow for three			
										minute drop tests to facilitate accuracy of measurement.			
225 All Document Define communication protocols with the involvement of relevant agencies and include in ation / the protocols a contact list of relevant agencies and businesses and their relevant key	6.1 Communication			Medium				Not started				Include as part of DWMS review and update	
Protocol people.			Sep-201	,	Manager Warrumbun	30-Jul-19						(action 334)	
			OCP 2011	, and the second	gle Water	30-041-13							
226 All Document Review and update contact details listed in Table 10.	6.1 Communication		Jun-2015	Medium	Manager Warrumbun	30-Jul-19		Not started				Include as part of DWMS review and update	
227 All Document Develop a comprehensive public and media communications strategy and include draft	6.1 Communication		Jun-2015	Medium	de Water Manager Warrumbun	30-Jul-19		Not started				Include as part of DWMS	
ation / public and media notifications. 240 All Training All water management stakeholders must read and agree to abide by the principles of this	7.1 Employee			Medium	gle Water Manager			Not started			13/12/19: Previous quarterly water	review and update Confirm if position	
DWMS. This includes adding this requirement to the role descriptions for Council	Awareness and		Jun-2015		Warrumbun	27-Aug-19	31-Dec-19 Interim	Not storted			quality meeting have discussed	descriptions now include	
241 All Document Consider developing operators communication strategy ation /	7.1 Employee Awareness and			Medium				Not started				Include as part of DWMS review and update	
Protocol	Involvement		Jun-2015			30-Jul-19						(action 334)	
					gle Water								
243 Mendo Training That WSC investigate and implements a process of its WTP operators to be certified under	7.2 Employee Traini	ing Mendooran MBWA2	2017	Medium				In progress			Ongoing with HR	Gaps from NCF review.	
oran the National Certification Framework.	, ,	Boil Water Alert 2017			Manager						13/12/19: Currently reviewing competencies and aligning with	Then review with HR and supervisor WTP operator	
		rugit 2017	2017		Warrumbun gle Water;	13-Dec-20	30/03/2020 Interim			Referred to HR	national certification framework,	training plans	
					HR						processes to identify any shortfalls in training		
245 All Training Formalise internal on-the-job training processes, documenting the training content,	7.2 Employee Traini	ing		Medium	Manager	27.A P	age 8 of 11 31-Jan-20	In progress			Process not yet formalised. Informal	Formalise process	
processes and attendance.			Jun-2015		vvarrumbun	27-Aug-19	31-Jan-20				current process includes on the job	following induction	

No Locatio Proce Category Action n ss		laz ID / Date added	Priority Action		nding Due date Due date notes	Status	Comments Comments 29/08/18 Comments 1/3/19	Comments 27/6/19 & 30/7/2019 & Short term actions Resource 27/8/2019; 27/09/2019; 13/12/19; requirement
247 BIN, Whole Document Review staff structure of water services team, PHU and NOW to provide support	7.2 Employee Training Risk 1	1.06	Medium			In progress		Review on staff structure has been
BAR, of ation /	assessment							undertaken and revised structure is
MDN Syste Protocol								being implemented.
""		Mar-2015	Manag Warrur		20-Jun-20			
		Wai-2015	gle Wa		20-3011-20			
248 CBN, Organi Training Operators to re-familiarise themselves with BGA Management Protocols and related BIN, cs response actions.	7.2 Employee Training CWT report May-15		Medium			In progress	(Section 4.1, p.6)	Action changed to cover CBN, BWY, Supervisors to review MDN systems (from just CBN) BGA plan onsite with
MDN Remo	May-15		Superv	visor				27/9/19: SS printed and laminated operators
val		May-2015	Treatm	13-Dec-19	31-Dec-19			(A3) and distributed to CBN, BWY,
(catch								MDN(?); CW to check with
ment)								Supervisors if operators have
251 All Document Develop a consumer information program providing details on the DWMS, Emergency ation / Response Plan, consumer responsibilities, how drinking water quality may be affected in	8.2 Communication		Medium			In progress		Include as part of DWMS review and update
Protocol household distribution and drinking water uses etc.		Sep-2015	Manag	ger mbun 30-Jul-19				(action 334)
-		ОСР 2010	gle Wa					
267 All Document Develop a procedure that manages document control for all DWMS documentation (i.e.	10.1 Management of		Medium			Not started		Include as part of DWMS
ation / ensure the currency, accessibility and appropriate review DWMS documents).	Documentation &		Manag	ger				review and update
Protocol	Records	Sep-2015						(action 334)
			gle Wa	ater				
268 All Document Develop a records management process to ensure appropriate storage and accessibility	10.1 Management of		Medium			Not started		Include as part of DWMS
ation / of DWMS related records.	Documentation &		Manag	ger		140t Started		review and update
Protocol	Records	Sep-2015	Warrur	mbun 30-Jul-19				(action 334)
			gle Wa	ater				
269 All Document Update details for existing documentation in the DWMS document register.	10.1 Management of		Medium			Not started		Include as part of DWMS
ation /	Documentation &	Sep-2015	Manag Warrur					review and update
Protocol	Records	ОСР 2010	gle Wa					(action 334)
270 ALL Inform Operation · Generate a list of equipment contained on site and store equipment operation and	10.1 Management of Hunter H2O B	BIN004,	Medium			In progress	· Instantaneous chemical	Development of schedules covered Calculations to be
ation s maintenance manuals on site.	_	BUG002,	odidiii			iii progress	dose rates, daily chemical	under action 340. undertaken for chemical
Syste · Routinely (daily) measure the instantaneous chemical dose rate and daily chemical	and Records C	COH002,	Superv	visor	24/40/2040		usage, instantaneous and	dose and usage rate
ms usage. Also record instantaneous and daily plant flow rates to determine actual chemical		DUN003, 2014	Treatm	27-Aug-19 nent	31/10/2019		daily plant flow rate data is currently not being	Calculations to be undertaken for
dose rates. This is useful for chemical and plant optimisation and future troubleshooting a operations.	and K	ŒN002,					recorded. This data is	chemical dose and usage rate (In MDN calibration tube to conjunction with action 213) be replaced
287 All Bores Monitoring Monitoring of ALL WSC bores be increased which includes:	July 2018 W	VarrumSCJul	Medium		Interim	In progress	important for plant operation	Raw water quality assurance Review raw water
Turbidity	·	8.1		inal	deadline wa			program has been developed. To be assurance program
рН	meeting	Jul-2018	Techni	13-Dec-19	28-Feb-20 13/9/19			implemented. against this requirement
Microbiological					(review RWQ			27-9-19: similar to ID 120 see items 120, 253, 287,
Temperature 291 Mendo WTP Document Within the new package of works planned for this plant it is recommended that a new set	of July 2018 W	VarrumSCJul	Medium		RWQ	Not started		13/12/19: RWQ plan still to be 313. 315) To be included as
oran ation / P&IDs be created and the current plant along with upgrades go through the HAZOP	ORANA 1	8.5						treatment plant upgrades
Protocol process.	meeting		Project	t				
		Jul-2018	Engine	27-Aug-19 eer	31/12/2019			
292 Coona Monito Operation Due to an increasing taste and odour issue, it was recommended that WSC look at	· · · · · · · · · · · · · · · · · · ·	VarrumSCJul	Medium			In progress		27/9/19: PAC has been dosed at Confirm if tests were
barabr ring s additional testing in the sedimentation lagoons including MIB and Geosmin, chlorophyll-a an, (algae), pH, organic loadings and nutrient levels. It was noted that WSC had used PAC in		8.6 Jul-2018	Superv	13-Dec-19	30-9-19; 31-Jan-20 now: 31/1/2			Coonabarabran to control taste and undertaken. Refer to odour issues; PAC dosing also action 121.
Mendo the past, however it is not currently in use. This could be re-established if required,	meenig		Trodui	- 15	for algae			improved filtered water NTU;
294 ALL Reticul Document There was discussion around who collects the reticulation samples and analyses them	March 2018 W		Medium		-	In progress	July 18: Ongoing, This was discussed	Information for plan is in process of Undertaken in
ation ation / before they are sent to FASS. The Councils Environmental Health Office collects and te		18.1					and the newly appointed EHO is	being collected. conjunction with action
Protocol the samples. There have been some issues with samples being collected at the wrong location. It was recommended that Council develop a procedure that includes photos an	meeting d		Manag				managing this project.	27/9/19 & 13/9/19: info needs to go on 205, 206 and 296. T-drive; some photos still need to be
GPS locations to ensure that samples are always collected at the correct location.		Mar-2018		mbun 27-Aug-19	31-Dec-19			taken; sample sites require updating
			gle Wa	ner				(+photos added) + incident
								flowcharts added
313 Coolah Raw Monitoring Coolah has a new bore "Back Bore" which is located 50m upstream of a previous dump	ORANA W	VarrumSCSe	Medium			In progress		Confirm if current testing (NSW Review raw water
water site (near Pound yard and tip) in depth water quality testing should be considered, this	meetings pre pi			ical	Interim			Health project) is sufficient; what else assurance program
could be requested from NSW Health	October 2017		Techni Officer		deadline wa 13/9/19	•		should be tested for if not? against this requirement
		Oct-2017			28-Feb-20 (review			13/12/19: RWQ plan still to be see items 120, 253, 287,
			Warrur	mbun	RWQ			reviewed 313, 315)
			gle Wa	ater	assurance			
					program)			
315 CLH, Investigati Coolah and Dunedoo bores may have a risk due to flooding and local land use this should be a risk due to flooding and local land use the risk due to flooding and local land use the risk due to flooding and local land use the risk due to flooding and local land use the risk due to flooding and local land use the risk due to flooding and local land use the risk due to flooding and local land use the risk due to flooding and local land use the risk due to flooding and local land use the risk due to flooding and local land use the risk due to flooding and local land use the risk due to flooding and local land use the risk due to flooding and local land use the risk due to flooding and local land use the risk due to flooding and local land use the risk due to flooding and local land use the risk due to flooding and local land use the risk due to flooding and local land use the risk due to flooding and local land use the risk due to f		VarrumSCSe	Medium		Interim deadline wa	In progress		13/12/19: RWQ plan still to be Review raw water
MDN ons be reviewed and additional monitoring could be requested from NSW Health during high rainfall/flood periods. It was recommended that a memo be created.	meetings pre pri October 2017		Techni	ical ,	30/9/19			reviewed for this requirement assurance program against this requirement
таннавилоси реноиз. и was recommended that a memo be created.	October 2017	Oct-2017	Officer	13-Dec-19	28-Feb-20 (review			against this requirement see items 120, 253, 287,
					RWQ			313, 315)
					assurance			

No Locatio Proce Category Action n ss	ADWG No ADWG Element	Source Haz ID / Da	ate added I			Date Fund	ding Due date Due date	Status	Comments 29/08/18 Con	nments 1/3/19	Comments 27/6/19 & 30/7/2019 & 27/8/2019; 27/09/2019; 13/12/19;	Short term actions	Resource requirements
319 Binnaw Plant Review the pH target for Binnaway and set based on optimum for pH and calcium		ORANA WarrumSCMa		Medium				In progress			To be further investigated	Request advice as part of	<u> </u>
ay optimisatio carbonate precipitation potential. n		meetings pre r17.4 October 2017	Oct-2017		Supervisor Treatment	27-Aug-19	1-Feb-21					upgrade project. Potentially using RO treatment for partial stream	
340 All Development of WTP maintenance schedules		30 July 2019 A16		Medium				In progress			Operation and maintenance	To be included as part of	
		Improvement Plan review		ı	Manager						schedules to be prepared by HunterH20 as part of NSW Health	Hunter H2O NSW health	
		meeting	Jul-2019		Warrumbun gle Water;	13-Dec-19	confirm with 31-Mar-20				DWMS project.	r Toject.	
			0di 2013		Supervisor	10 000 10	HH2O				13/12/19: Confirmed that maintenance schedules are to be		
					Treatment						undertaken as part of Hunter H20		Consultant (NSV
39 All Document The identification and evaluation of preventive measures should be internally reviewed 12	3.1 Preventive			Low				Not started			NSW Health project. Risk assessment review to be	Schedule to be reviewed	Health)
ation / months. Every five years (or upon any significant changes to any of the water supply	Measures and		ľ	LOW				Not started				as part of DWMS review	
Protocol systems) Council should undertake a comprehensive review. The review should also	Multiple Barriers										DWMS project (Hunter H2)	and update (action 334)	
consider whether existing control measures are being undertaken, their effectiveness and whether they are appropriately documented and formalised. The review process and													
records of the outcomes of these reviews should be documented.													
			Sep-2016		Manager Warrumbun	27 Aug 10	24 Dec 10						
			Зер-2010		gle Water	21-Aug-19	31-Dec-19						
145 Coona Document Continue developing the existing asset registers to develop an electronic database that	4.4 Equipment			Low				In progress			Asset register is updated annually	asset management plan	
barabr ation / includes details such as; age of infrastructure; expected life; last service date; maintenance				ı	Manager						following completed capital projects.		
an Protocol frequency; manufacturer; recorded failures; responsibility for maintenance; operational procedures; and records for maintenance of equipment (including calibration). This should	Maintenance		Sep-2016		Warrumbun gle Water	27-Aug-19	31-Dec-19				5 yearly evaluation of asset evaluations (last FY16/17)	IWCM finalisation and update of strategic	
include any monitoring instrumentation.				ì	gic vvaici							business plan. Interim	
146 Coona Filtratio Investigati Review current filter bed depth against design depth and consider increasing media	4.4 Equipment	CWT report	· ·	Low				In progress			Filter inspection undertaken.	To be included as part of	
barabr n ons layers for better size to depth ratio. an	Capability & Maintenance	May-15										filter media replacement	
			May-2015		Supervisor	27-Aug-19	30-Jun-20		(Section 4.2.4, p.13)				
				'	North								
147 Mendo Disinfe Investigati Consider insulating the chemical storage shed to lesson chlorine degradation.	4.4 Equipment	CWT report	-	Low				In progress			To be upgraded to gas		
oran ction ons	Capability & Maintenance	May-15											
			May-2015		Project	27-Aug-19	Interim 31-Oct-19		(Section 4.2.5, p.16)				
					Engineer		deadline						
149 Coona Fluorid Investigati Analyse scale forming in fluoride system and on dosing spear.	4.4 Equipment	CWT report	ı	Low				In progress				Included as part of task 4	
barabr ation ons an	Capability & Maintenance	May-15			Manager							Hunter H20 NSW Health	
dii	iviairiteriarice		May-2015		Warrumbun gle Water	27-Aug-19	31-Dec-19		(Section 4.2.6, p.16)			project	
194 Coona pH Investigati Investigate the need for raw water softening and possible alternate chemicals for pH	4.5 Materials & Chemicals	CWT report	-	Low				Not started	2016-10: (Section 4.2.1.2, p.10 of CWT			Check CWT for action	
barabr correc ons correction. an tion	Grierriicais	May-15							report)		use, which is very soft; however most dosing problems overcome	details; get costs for soda ash to compare +	
(pre-											(maintenance, different pumps);	investigate	
coagul ation)											investigate changing to soda ash from lime (lime cheaper but soda ash	cost/requirements for change over	
			May-2015		Supervisor North	27-Jun-19	31-Dec-19 interim				dissolves in water); changed priority		
											to LOW		
224 All Document Consider implementing a procedure in consultation with local hospitals to ensure dialysis	6.1 Communication		<u> </u>	Low				In progress			Finalisation of ERP to be included as		
ation / patient details remain uptodate. Protocol					Manager		_				part of NSW Health project. List of dialysis patient previously	(obtain list of patients) Develop process for	
			Jun-2016		Warrumbun gle Water	28-Feb-20	31-Mar-19 Interim				investigated.	distribution and allocate	
											28/2/20: List developed in liasion with Dubbo Hospital (A229). Process still		
						Dag	e 10 of 11						

No Locatio Pro	ce Category Action	ADWG No ADWG Element Source	Haz ID / Source	Date added	Priority	Action Owner	Date reviewed	Funding Due o	ate Due da notes	te Status	Comments	Comments 29/08/18	Comments 1/3/19	Comments 27/6/19 & 30/7/2019 & 27/8/2019; 27/09/2019; 13/12/19;	Short term actions	Resource requirements
263 All	Document Develop a policy on validation of new or upgraded water supply infrastructure. This ation / should include witness, demonstration and commissioning requirements that are designed Protocol to ensure the infrastructure delivers the expected water quality results.	9.3 Design of Equipment		Sep-2015	Low	Manager Warrumbui gle Water	n 27-Aug-19	30-	Sep-19	In progress				In progress, no documents yet developed	Draft document	
264 All	Document Review existing documentation on the water supply systems and ensure all are captured ation / on Council's document management system. Verify documents are uptodate. Protocol	10.1 Management of Documentation & Records		Sep-2015	Low	All	27-Sep-19	31	was 30 Oct-19 revise r month					InfoXpert used as document management system. Incoming correspondents are documented. Staff have received training. Implementation still ongoing.	Water project information to be put on InfoXpert (al	
278 All	Investigati Identify appropriate personal to undertake the internal audit and provide training in auditing. ons	11.2 Audit of Drinking Water Quality Management		Sep-2015	Low	Manager Warrumbui gle Water	n 27-Aug-19	1	TBC	Not started				Wait until NSW Health audit guidanc is audits	e	