

Fatigue Management

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1. Purpose

The purpose of this Procedure is to identify Seqwater's risks around fatigue and establish a systematic process to manage these risks.

2. Scope

This Procedure applies to all workers. It does not apply to external contractors or principal contractors that are working under their own safety management system.

This Procedure addresses the management of risks associated with fatigue only. Refer to Seqwater's Enterprise Agreement for details of any entitlements.

3. What is the risk?

3.1. What is fatigue

Fatigue is a state of mental and/or physical exhaustion which reduces a person's ability to perform work safely and effectively, in particular impacting on their decision-making skills. It can occur because of prolonged mental or physical activity, sleep loss and/or disruption of the internal body clock. Fatigue can be caused by factors which may be work related, non-work related or a combination of both and can accumulate over time.

Studies have shown that being awake for:

- a 17 hour period is equivalent to 0.05 blood alcohol concentration
- a 24 hour period is equivalent to 0.10 blood alcohol concentration.

The more fatigued you are the less accurate you become in assessing your own level of impairment.

3.2. Assessing the risk

To understand and mitigate fatigue risks, leaders with workers potentially impaired by fatigue should utilise a risk assessment process in accordance with the Hazard Identification and Risk Management Procedure ([PRO-00657](#)) to identify and manage the risks associated with fatigue for their teams. This involves the following steps:

- **STEP 1 – Hazard identification**
Identify the factors which may cause fatigue for their team.
- **STEP 2 – Risk assessment:**
Consider the types of tasks being undertake. How serious would the consequence be and the likelihood of it happening?
- **STEP 3 – Control risks**
Control the risks by implementing the most effective risk control measures reasonably practicable in the circumstances. See section 4 of this procedure for guidance on available risk controls.
- **STEP 4 – Monitor and review control measures**
Review risk control measures to ensure they are working as planned.

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When undertaking the risk assessment, it is important for leaders to work with their team members during each step of the process. This encourages everyone to work together to identify fatigue risk factors and establish effective control measures. Consultation also helps to raise awareness about the risks associated with fatigue.

3.3. Seqwater specific fatigue risks

Hazard (potential to cause harm)	What's the risk
Driving (to, during or from work)	A worker impaired by fatigue may cause a car accident that injures or kills themselves or other people. Impairment by fatigue may cause poor decision making, slow/impaired reaction or falling asleep at the wheel.
Performing high risk work while fatigued	There is a risk that a person doesn't identify hazards, or effectively implement critical controls, which has the potential to cause a serious injury or fatality.
Making critical decisions while impaired by fatigue	There is a risk that a person makes a decision that results in an impact on Seqwater's ability to achieve our purpose or objectives (e.g. decision on how to manage an emergency response that results in damage to an asset).

4. Fatigue Risk Controls

When selecting risk controls to manage identified fatigue risks the hierarchy of controls must be used.

Where possible the risks associated with fatigue should be eliminated. This may be through removing a requirement for a worker to perform high risk work or make critical decisions.

Where the risks associated with fatigue cannot be eliminated, then consideration should be given to controls that minimize the risk such as rostering and job planning. Where risks associated with fatigue cannot be proactively eliminated or minimized, an assessment should be made to understand a workers level of fatigue, then additional controls implemented to mitigate these risks. This is considered a "working safely while fatigued" approach.

4.1. Hours of Work Principles

Normal Hours of Work

To minimize the likelihood of Seqwater workers being impaired by fatigue as a result of their normal hours of work the following principles should be applied when designing, implementing and managing rosters:

Hours of work principle	Rule
Maximum shift length (normal planned work)	12.5 hrs
Minimum rest period between shifts (excludes reasonable travel of up to one hour)	10 hrs
Minimum rest period after a block of night shifts	2 x nighttime sleep opportunities
Maximum consecutive night shifts	4

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Hours of work principle	Rule
Maximum consecutive day/afternoon shifts (less than 12 hr shifts)	7
Maximum consecutive 12 hr shifts (regardless of time of day)	4
Shift work – forward rotating shifts	Day – afternoon – night

Should leaders wish to vary these principles when designing, implementation and managing rosters a HSWMS Deviation Approval Form ([FRM-00795](#)) should be used. The HSW Team and HR Business Partners can provide input and support to leaders in the development of this form.

Unplanned or emergency circumstances

Emergency plans must consider how the risks of fatigue will be managed during the emergency, including the rostering requirements and the controls that will be implemented.

During an unplanned or emergency event the following variations to the hours of work principles shall be applied:

Hours of work principles	Rule
Maximum hours of work (unplanned work or responding to an emergency). Note – this includes any ordinary hours immediately preceding or following the unplanned work.	14 hrs (excluding travel)

Should an employee be required to work beyond 14 hrs Level 3 Manager approval will required. This may be either the employee’s Manager or the Duty Manager. Level 3 Managers or above will require approval from their line manager. This approval must consider:

- whether another person can perform the work
- the criticality of the work; can this be delayed until another person is available or until the employee has had an opportunity to rest
- duration of the work, including additional controls required to be implemented during this time.

Where possible, planning for an emergency should consider the development of a suite of emergency rosters that take into consideration:

- the type of emergency (e.g. flood, bush fire)
- the severity and potential duration of an emergency
- the time Seqwater become aware of emergency.

When developing a roster, individual preferences should be considered (i.e. night owl v early bird) as people will naturally cope better when working shifts at these times.

For complex scenarios consideration should be given to engaging a fatigue expert to support the development and/or review of emergency rosters.

4.2. Self-assessment Tool






Seqwater’s Fatigue Self-Assessment Tool is designed to support workers and their supervisors determine the risk of fatigue related error or incidents. It can be accessed at seq.fatiguefit.com or downloaded as an app on your mobile phone (Employer code: SEQ).

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The fatigue self-assessment tool should be used:

- when a worker is required to work, or has worked, for longer than 12.5 hrs
- when a worker has been awake for longer than 17 hrs (regardless of number of hours worked)
- prior to driving to and/or from a call out between 10pm and 5am
- when a worker has been required to respond to SCADA alarms or phone calls that may impact their fitness for work
- when requested by a supervisor
- anytime someone feels impaired by fatigue that may impact their fitness for work.

The fatigue self-assessment tool provides an assessment of your fatigue risks. The results determine whether additional controls are required, and any approvals needed as follows:

Self-assessment result	Approvals and additional controls needed
<p>GREEN</p> 	<p>No approvals required. No additional controls are required. Worker continues to monitor their own fatigue.</p>
<p>YELLOW</p> 	<p>No approvals required. Worker to consider any additional controls needed to manage fatigue risks.</p>
<p>AMBER</p> 	<p>Supervisor/Level 4 Coordinator approval required. Supervisor to consider type of work being undertaken and work with worker to agree on additional controls needed to safely perform work while fatigued. This should include agreement on when the workers fatigue levels will be reviewed with the supervisor.</p>
<p>RED</p> 	<p>Level 3 Manager approval required. Manager to consider type of work and whether work is required to be performed. If possible, no high-risk work or work requiring critical decisions should be performed. If possible, workers should not be permitted to drive. Note - Level 3 Managers or above with a self-assessment result of red will require approval from their line manager.</p>
<p>BLACK</p> 	<p>Level 3 Manager approval required. Manager to consider whether work is required to be performed. No high-risk work or work requiring critical decisions should be performed. Workers are not permitted to drive. Note - Level 3 Managers or above with a self-assessment result of black will require approval from their line manager.</p>

If a worker is unable to contact their supervisor/level 4 coordinator or level 3 Manager (e.g. responding to a 2am call out), then they should contact the on-call coordinator responsible for the site (for amber results) or the Duty Manager (for red/black results).

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4.3. Driving

Where a worker is impaired by fatigue (i.e. amber self-assessment result or above) they must discuss the requirement to drive with their supervisor or manager to consider whether any of the following controls need to be applied:

- Use of alternative transport options (taxi, ride share or another driver that is not impaired by fatigue)
- Temporary local accommodation (e.g. a hotel)
- Journey monitoring through the National Response Centre. Refer to the Worker Welfare Monitoring Work Instruction ([PRO-02076](#)) for further information.
- Other controls such as smart napping or caffeine use (must have completed training on use of these controls).

4.4. Call outs (including re-call and remote response etc.)

Requirement for call out

There is an elevated fatigue risk when a worker is required to respond to a call out during a period that the worker would ordinarily be asleep (e.g. between 11pm and 5am). Where possible, workers should only be requested to respond to a call out during these times if:

- there is immediate risk to the safety of Seqwater workers, or members of public
- there is an immediate risk to the continuous supply of water (or other critical services) to the local community
- there is an immediate risk to infrastructure, assets and operations
- there is a legislative requirement for the call out.

Responding to call outs – Attending site

Where a worker is required to respond to a call out between 11pm and 5am the following actions should be taken to assess and mitigate the fatigue risks:

- the worker should aim for a 15-30 minute delay after waking before driving or undertaking critical tasks to minimize the risks of sleep inertia.
- if the call out has been initiated by a person (i.e. not a SCADA alarm), a follow up phone call by the person initiating the call out should be made to the worker 15 minutes after the initial phone call to:
 - verify understanding of critical information
 - complete a fatigue self-assessment prior to the worker driving and agree on any additional controls required to manage the risks associated with working while fatigued.
- if an employee has decided to attend site in response to a SCADA alarm they need to:
 - verify the requirement to attend site aligns to the requirements for a call out detailed above
 - log their journey through the National Response Centre. Refer to the Worker Welfare Monitoring Work Instruction ([PRO-02076](#)) for further information.
 - complete a fatigue self-assessment prior to driving to site.
- the worker must complete a fatigue self-assessment prior to driving home.

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Responding to call outs – Respond from home

Where a worker has responded to consistent SCADA alarms for 2 or more hours, the worker should escalate the issue to the duty coordinator to consider an appropriate response to the alarms. Where the decision is made by the duty coordinator that the worker will continue to respond to SCADA alarms, a fatigue risk assessment must be completed.

When a worker’s fitness for work has been impacted by responding to SCADA alarms or phone calls they must complete a fatigue self-assessment prior to attending work the next day.

Post call out

If a worker is required to respond to a call out, the following business principles should be applied where possible:

- a break of at least 10 hrs (plus reasonable travel of up to one hour) between completing a call out and commencing work on the following day.
- if a call out impacts on a worker’s sleep, they should discuss with their supervisor (or on-call coordinator) their fitness for work to safely be on call for a consecutive night. A fatigue self-assessment should be utilised to inform this decision and additional controls implemented where required.
- if there were concerns around the safety of a worker driving home from a call out (i.e. has an amber, red or black fatigue risk rating) the worker should not be permitted to physically respond to a consecutive callout. They may answer the phone, but would need an alternative person to respond to site.

4.5. Other Risk Controls

The following additional controls may be implemented for workers impaired by fatigue. Workers should complete required fatigue risk management training to effectively apply these controls, in particular controls associated with smart napping and caffeine use.

Control	Further details
Second person	<ul style="list-style-type: none"> • Critical Control Verification – organise for a second person to verify that required critical controls are in place and working effectively (ideally this should be done in the field, however may be completed remotely if required). • Critical Decision Verification – organise for a second person to verify a complex, critical decision. • Second Person – organise for a second person to be present on site to monitor impacts of fatigue and application of controls or decisions.
Regular breaks from a work activity	Shorter more frequent breaks (up to 30 mins) are better than fewer longer breaks.
Increased supervision and communications	To monitor worker’s fatigue levels and verify fatigue controls are effective.
Physical activity	This is particularly important for desk bound workers. Aim for 3 minutes of activity every 30 minutes. If works are performing physically active work they should aim for regular short breaks. Frequency and duration will depend on the work being performed and the individual performing the work.

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Control	Further details
Remaining hydrated	Queensland Health recommend that men should drink 2.6 litres or ten cups of fluid each day. Women should drink 2.1 litres or 8 cups of fluid each day. If you are exercising, sweating a lot or are in a hot environment, you will need to drink extra water to make up for the water you are losing.
Smart napping	Utilise powernaps (short 10/20 minute nap when fatigued) Waking up from sleep can cause sleep inertia (i.e. grogginess upon waking with impaired performance) – physical activity can help move through this. Ideally should aim for 15-30 minutes after waking before driving or undertaking critical task.
Smart caffeine use	This will temporarily increase alertness but doesn't reduce fatigue. Will take 30-60 minutes for caffeine to take effect. May be combined with smart napping – i.e. having a coffee then having a short nap. This has double the impact or benefit from the nap as the impacts of coffee take effect as you wake up, also reducing your sleep inertia.
Smart eating	Low Glycemic Index (GI) and High Protein/Low Fat food is good for maintaining or increase alertness, while high GI and High Fat foods will increase sleepiness (so avoid ordering pizza for workers potentially impaired by fatigue). Workers working night shifts should aim to eat more prior to shift. During their shift they should aim to split food intake into smaller snacks; no big meals during night shift.

5. Definitions

Term	Definitions
Critical decision	Any decision that has a potential to adversely impact: <ul style="list-style-type: none"> the health, safety and wellbeing of a worker or a member of the public the environment water security, supply or quality infrastructure, assets and operations reputation and community relations
Emergency	A situation or occurrence that happens as a consequence of an incident and demands immediate action.
Fatigue	A state of mental and/or physical exhaustion which reduces a person's ability to perform work safely and effectively, in particular impacting on their decision-making skills.

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Term	Definitions
Fit(ness) for work	Fit for work or fitness for work means not being under the influence of alcohol or drugs, being well rested, and being physically and mentally fit to perform work safely
High risk work	Any work that requires the use of a generic SWMS, an isolation or a high-risk work permit.
Impaired by fatigue	Where a worker is showing signs and symptoms of fatigue that may impair their ability to perform work safely or make decisions. As a minimum, this includes any person with a fatigue self-assessment result of amber or above.
Leader	Means any Level 1, 2, 3, 4 and 5 worker with responsibility for managing a functional area of the business, including people management responsibilities within their functional area.
Shift	Period of rostered hours of work for a worker, including rostered overtime.
Sleep Inertia	The feeling of grogginess, disorientation, drowsiness and period of cognitive impairment that immediately follows waking.
Worker(s)	Includes all permanent, temporary, and casual employees of Seqwater, and: <ul style="list-style-type: none"> • vocational and work experience placements • volunteers.

6. Roles and Responsibilities

Role	Responsibility
HSW Team	<ul style="list-style-type: none"> • Provide advice and support on the application of this procedure. • Where requested, engage a fatigue expert to support the development and/or review of rosters including emergency rosters. • Provide support and advice on the development of a HSWMS Deviation Approval Form (FRM-00795), including support risk assessments. • Provide tools for self-assessment of fatigue risks. • Undertake assurance activities to verify that the requirements of this procedure have been fully implemented and are adequately controlling fatigue risks.

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Role	Responsibility
Leaders	<ul style="list-style-type: none"> • Utilise a risk assessment process to identify, control and monitor any risks associated with fatigue within their area of responsibility. • Establish mechanisms to monitor and review controls implemented to manage fatigue within their area of responsibility. • Apply the hours of work principles established by this procedure when developing, reviewing or monitoring rosters. • Monitor fatigue levels of workers within their area of responsibility, ensuring appropriate controls are implemented for any workers impaired by fatigue. • Provide direction on whether workers can continue to perform work where their fatigue self-assessment returns an amber or red result. • Request a worker complete a fatigue self-assessment if they are concerned the worker is impaired by fatigue. • Organise alternate transport or accommodation for workers who are not safe to drive as a result of fatigue. • Where leaders are responsible for the response to an emergency, establish a suite of emergency rosters that may be used in an emergency that consider the risks associated with fatigue. • Support a positive culture within Seqwater relating to fatigue risk management, including role modelling effective fatigue management practices.
Workers	<ul style="list-style-type: none"> • Take responsibility for the management of their own fatigue levels, ensuring they turn up fit for work in a state that enables them to conduct their work in a safe manner. • Complete fatigue self-assessments as required by this procedure, including obtaining any required approvals as a result of the outcomes of this self-assessment. • Do not perform any high-risk work or make any critical decisions when impaired by fatigue without obtaining the required approval (as established by this procedure) • Notify their leader if they believe their ability to safely undertake their duties is impaired due to fatigue.
Workplace Relations & Business Partnering Team	<ul style="list-style-type: none"> • Provide advice and support to leaders on the establishment of rosters to align with the hours of work principles established by this procedure.

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7. Training and Competency

Requirement	Description	Refresher Timeframe	Target Audience
Fatigue Awareness Training	Short online training course to increase knowledge around fatigue and sleep health, including awareness of strategies and tools to identify and manage the risks associated with fatigue.	Nil	All low-risk employees <i>(employees not required to work shifts, extended hours in an emergency or respond to call outs)</i>
General Fatigue Risk Management Training for Higher Risk Employees	Extended online training course to develop knowledge and skills to understand and minimise fatigue, to identify the early warning signs of fatigue, and to implement appropriate controls, thereby reducing the risk of fatigue-related incidents. It also provides an understanding of the importance of sleep and practical, evidence-based techniques to improve sleep health.	3 years	Any employees that: <ul style="list-style-type: none"> • Work in a 24/7 roster • May be required to respond to a call out • Are a member of a team that may be stood up in an emergency (e.g. Flood Operations Centre, Bush Fire Response).
Advance Fatigue Risk Management Training for senior leaders	1.5 – 2 hr workshop to provide specialist training on roles & responsibility relating to organisational fatigue risk management, identifying fatigue in others and the processes and controls for the active management of fatigue related risks. A pre-requisite to do this training is General Fatigue Risk Management Training for Higher Risk Employees	3 years	All leaders (level 5 and above) responsible for managing employees with a high risk of fatigue. Include operational leaders and leaders with teams that may be required to participate in an emergency response (e.g., Communication Education & Engagement and DTI – Service Delivery).

8. References and Related Materials

Description	Location
Fatigue Self-Assessment Tool	seq.fatiguefit.com
FRM-00795 Health, Safety and Wellbeing Management System Deviation Approval Form	REX & Waternet
Guide for managing the risks of fatigue at work (Safe Work Australia)	www.safeworkaustralia.gov.au

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Description	Location
PRO-00657 Hazard Identification and Risk Management Procedure	REX & Waternet
PRO-02076 Worker Welfare Monitoring Work Instruction	REX & Waternet

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