



# Revised Code of Practice Firefighting Water Supplies - Key Changes Log

This log provides a concise summary of material changes from the previous version of the Code and acts as a reference point for key amendments to concepts, provisions, and guidance. Refer to the definitions and abbreviations on pages 4–8 of the Code for the meaning of defined terms and abbreviations used in this document.

	Change Description	Reason / Change	Impact/ Intended outcomes	Reference	Impacted Parties (Level of Interest) Interest/Impact (H) High (M) Medium (L) Low
1	<b>Wildfire section</b> (new guidance)	Extend Code to support FENZ functions across built and natural environments, incl. rural/wildfire response.	Provides pre-incident planning tools and tactical options (water sources, aerial ops, temporary systems) for rural/wildfire contexts; improves community resilience.	Section 5 pp. 48-59, figs 14–20.	<ul style="list-style-type: none"> <li>Forestry and land management sector (H)</li> <li>Territorial Authority Planning &amp; Policy (RMA / District Plan teams) (H)</li> <li>WPS / Three Waters (M)</li> <li>Road Controlling Authorities (including Waka Kotahi) (M)</li> <li>Department of Conservation (M)</li> <li>Developers and consultants (rural and greenfield) (M)</li> <li>Insurers (M)</li> <li>Aviation Sector (L to M)</li> </ul>
2	<b>Firefighter Safety</b> (expanded) Clarify duty-of-care interfaces (Building Act s4(2)(h), HSWA 2015) and embed operational safety constraints (pressures/flows, access, water quality).	Clarify duty-of-care interfaces (Building Act s4(2)(h), HSWA 2015) and embed operational safety constraints (pressures/flows, access, water quality).	Better design-in safety (hardstands, protected connection points, acceptable water quality) and clearer expectations for designers/TA/WSP.	Cl 2.4 p. 13	<ul style="list-style-type: none"> <li>Fire and Emergency operational staff (H)</li> <li>Building Consent Authorities / Building Control (M)</li> <li>WSP / Three Waters (M)</li> <li>Territorial Authority Planning &amp; Policy (M)</li> <li>Developers and consultants (M)</li> <li>Central government (building system policy) (L to M)</li> </ul>
3	<b>Places of significance</b> (new guidance)	Recognise cultural/heritage/ecological sensitivities and lifelines; require engagement with iwi/TA.	Planning decisions reflect local values; reduces inadvertent harm and supports consenting.	Cl 2.5 p. 14	<ul style="list-style-type: none"> <li>Territorial Authority Planning &amp; Policy (H)</li> <li>Iwi / mana whenua (H)</li> <li>Department of Conservation (M)</li> <li>Heritage and environmental agencies (M)</li> <li>Developers and consultants (M)</li> </ul>
4	<b>Emergencies / times of extreme</b> (codified)	Clarify that CDEM or drinking water emergencies can override the Code; align roles (WSA/WSP/FENZ).	Predictable prioritisation during droughts/disasters; improved multi-agency coordination and notifications.	Cl 2.6 p. 14	<ul style="list-style-type: none"> <li>Civil Defence Emergency Management (H)</li> <li>WSP / Three Waters (H)</li> <li>WSA (Taumata Arowai) (H)</li> <li>Fire and Emergency operational staff (H)</li> </ul>
5	<b>Risk apportionment and planning tool</b> (document purpose)	Shift the Code to planning—resource consent/subdivision and early building design—so networks are right-sized by zone and activity.	Better TA/WSP adoption; more infrastructure-first conversations; reduced consenting friction.	Foreword pg. 3. Cl. 1.1 p. 4. Cl. 1.6–1.7 p. 9. Section 3 pp. 16-31	<ul style="list-style-type: none"> <li>Territorial Authority Planning &amp; Policy (H)</li> <li>WSP / Three Waters (M)</li> <li>Building Consent Authorities (M)</li> <li>Developers and consultants (M)</li> </ul>
6	<b>Coverage</b> (urban + rural)	2008 version focuses on urban fire districts; practice and legislation now require all environments (incl. rural).	One Code usable nationwide across reticulated and non-reticulated contexts.	Whole document	<ul style="list-style-type: none"> <li>Territorial Authority Planning &amp; Policy (H)</li> <li>WSP / Three Waters (H)</li> <li>Rural landowners and asset owners (M)</li> </ul>

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7	<b>Zoning approach</b> <i>(planning alignment)</i>	Align with District Plan zones and the National Planning Standards; simplify navigation for user .	Clear Appendix A tables for classification, reticulated flows, and non-reticulated volumes by activity/zone; easier to apply at subdivision stage.	Cl. 3.2–3.3 p. 17. Appendix A – Tables A1–A3 pp. 60-65	<ul style="list-style-type: none"> <li>• Territorial Authority Planning &amp; Policy (H)</li> <li>• WSP / Three Waters (M)</li> <li>• Developers and consultants (M)</li> </ul>
8	<b>Water Supply categories and classification</b> <i>(revised)</i>	Move beyond Fire Hazard Category (FHC) only framing; provide Residential 1/2 and Commercial 1–4 activity-based classifications for planning-level decisions.	More nuanced, zone-appropriate sizing; reduces misuse of FHC (no longer referenced in building legislation for this purpose).	Cl. 4.2. p. 33 Appendix A Table A1 p. 60	<ul style="list-style-type: none"> <li>• WSP / Three Waters (H)</li> <li>• Territorial Authority Planning &amp; Policy (H)</li> <li>• Building Consent Authorities (M)</li> <li>• Developers and consultants (M)</li> <li>• Insurers (L to M)</li> </ul>
9	<b>Calculation Methodology</b> <i>(clarified and re-located)</i>	Keep engineering pathway but modernise presentation; clarify ventilation sources, caps/limits, exposure protection, and duration steps.	More consistent bespoke calculations for outliers/special hazards; clearer peer-review/approval basis.	Cl. 4.10 pg. 42 Appendix D pp. 74-75	<ul style="list-style-type: none"> <li>• Developers and consultants (design and modelling) (H)</li> <li>• WSP / Three Waters (M)</li> <li>• Building Consent Authorities (M)</li> </ul>
10	<b>Changes to volumes &amp; flows</b> <i>(re-tuned)</i> Commercial use remains at similar volumes. Residential changes to two supply categories Low-density and High-density activities: <ul style="list-style-type: none"> <li>• Rural/Low Density with sprinkler 1,000 L/m or 5,000 to 10,000L, non-sprinklered 1,500 L/m or 20,000L</li> <li>• High density with sprinkler 1,000 L/m or 5,000 to 10,000L, non-sprinklered 3,600 L/m or 108,000L</li> </ul> <i>Note: 10,000L is the minimum for wildfire considerations in residential situations</i>	Reflect split between Residential 1 (low density / non-retic) and Residential 2 (higher density / retic); introduce minimum wildfire-related base volumes where relevant.	Sharper expectations for tanks/flows; fewer variances at consent stage.	Cl. 4.2.3 p. 33 Table 2 (Residential checklist) p. 40 Appendix A Tables A2–A3 pp. 62-63	<ul style="list-style-type: none"> <li>• WSP / Three Waters (H)</li> <li>• Building Consent Authorities (H)</li> <li>• Fire and Emergency operational staff (H)</li> <li>• Territorial Authority Planning &amp; Policy (M)</li> <li>• Developers (M)</li> <li>• Homeowners and property owners (M)</li> </ul>
11	<b>Changes to distances</b> <i>(clarified and aligned with operations)</i> <ul style="list-style-type: none"> <li>• Reticulated: 135 m (required) / 270 m (additional) to hydrants from the attendance point</li> <li>• Non-reticulated: 100 m total hose-lay to the furthest structure part (with 25 m allowance for relay from tank to attendance point using a portable pump when approved)</li> </ul>	Align with operational practice and Building Code access expectations; provide clarity on relay use.	More consistent site designs; reduced ambiguity in inspections and PDAs.	Cl. 3.6.7 p. 20 Fig 3–4 pg. 21-22 Cl. 4.9.5–4.9.9 pp. 36-39	<ul style="list-style-type: none"> <li>• Building Consent Authorities (H)</li> <li>• WSP / Three Waters (M)</li> <li>• Territorial Authority Planning &amp; Policy (M)</li> <li>• Developers and consultants (M)</li> </ul>

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	<ul style="list-style-type: none"> <li>Sitings consider attendance point and “as you would lay the hose” trafficable paths.</li> </ul>				
12	<b>Definitions</b> <i>(added/updated/retired)</i>	<b>New:</b> Access, Lay-flat hose, Outbuildings, Reticulated supply, Suction hose, Vehicle hardstand, Wildfire, Attendance point, WSP, WSA, Key fire hydrant, etc. <b>Updated:</b> Additional water, Alternative supply becomes non-reticulated firefighting water supply, Water supply classification, etc. <b>Removed:</b> Fire Hazard Category (operationally de-emphasised for planning tables), Roof vent, Urban Fire District (terminology modernised).	Clearer vocabulary for practitioners, TAs, and WSPs.	Cl. 1.3 pg. 4-8	<ul style="list-style-type: none"> <li>Territorial Authority Planning &amp; Policy (M)</li> <li>WSP / Three Waters (M)</li> </ul>
13	<b>Digital images</b>	Improve comprehension via remodelled diagrams (hydrant placement, ring-mains, rural signage, wildfire ops).	Faster uptake by practitioners; fewer interpretation queries.	Whole document	<ul style="list-style-type: none"> <li>Comms and engagement teams (M)</li> <li>Territorial Authority Planning &amp; Policy (L)</li> <li>WSP / Three Waters (L)</li> </ul>
14	<b>Couplings</b> <i>(Cam-lock pathway for Residential 1 non-reticulated)</i> Allow 75 mm cam-lock female couplings where appropriate for Residential 1 non-reticulated properties; specify CID A-A-59326D / EN 14420-7.	Reflect rural operations/user reality while keeping compatibility/adaptor risks visible.	Better rural usability; note adaptor implications for urban/rural appliances.	Cited Standards pg. 1 Cl. 4.9 pg. 35 Table 2 (Checklist) p. 40	<ul style="list-style-type: none"> <li>WSP / Three Waters (H)</li> <li>Fire and Emergency operational staff (H)</li> <li>Equipment suppliers (M)</li> <li>Developers (L)</li> <li>Building Consent Authorities (L)</li> </ul>
15	<b>Hydro- testing notifications</b> <i>(new expectation)</i>	WSP notification protocols for hydrant testing, especially during reduced pressure events.	Less service disruption; improved safety and customer communications.	Cl. 3.6.9 p. 25 Cl. 3.6.11 p. 26	<ul style="list-style-type: none"> <li>WSP / Three Waters (H)</li> <li>Civil Defence Emergency Management (M)</li> </ul>
16	<b>Hydrant lid markings for monitoring equipment</b> <i>(new)</i>	Distinct lid marking where equipment impedes swift use; expectations for re-install after use and time-to-remove thresholds.	Faster ops, fewer “surprises” at scene; protects WSP equipment.	Cl. 3.6.5 p. 19 Cl. 3.6.8.6 p.24	<ul style="list-style-type: none"> <li>WSP / Three Waters (H)</li> <li>Road Controlling Authorities (M)</li> <li>Fire and Emergency operational staff (L)</li> </ul>
17	<b>Maintenance &amp; testing framework</b> <i>(clarified)</i>	Moves to a risk-based testing cadence agreed by FENZ & WSP; retains pressure/flow testing methods and 1.85 graph.  <i>“A 1.85 graph is a hydrant-testing tool used to estimate residual pressure at higher flows based on the Hazen–Williams formula...”</i>	Aligns with contemporary asset management while retaining operational guarantees; clarifies coverage to private water mains.	Cl. 3.6.9–3.6.17 p. 25-30 Table 1 p. 27 Figure 7. p. 29	<ul style="list-style-type: none"> <li>WSP / Three Waters (H)</li> <li>Private network owners (M)</li> </ul>

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18	<b><u>Record Keeping</u></b> <i>(expanded)</i>	Change: Asset ID as the single source of truth, with GIS preferred; model results tied to asset IDs and date/area scope.	Cleaner national datasets; fewer mismatched records; better PDA planning.	Cl. 3.5 p. 18 Cl. 3.6.17 p. 31	<ul style="list-style-type: none"> <li>• WSP / Three Waters (H)</li> <li>• Information management &amp; GIS teams (H)</li> <li>• WSA (M)</li> </ul>
19	<b><u>Water supply signage</u></b> <i>(non-reticulated, standardised)</i>	Reflective signage (min dimensions) and wayfinding arrows for non-reticulated sources; recommended blue Raise Reflective Pavement Marker on approach.	Quicker night-time identification; better public/contractor understanding.	Cl. 3.6.8.4 p. 23 Figure 6 p. 24 Figure 20 p. 59	<ul style="list-style-type: none"> <li>• WSP / Three Waters (M)</li> <li>• Road Controlling Authorities (M)</li> <li>• Fire and Emergency operational staff (M)</li> <li>• Homeowners and property owners (M)</li> </ul>
20	<b><u>Asset ID Recording</u></b> <i>(explicit)</i>	Tests, inspections, and modelling results must be recorded against unique asset IDs (not only street addresses).	Enables accurate tracking, auditability, and integration with FENZ systems.	Cl. 3.5 p. 18 Cl 3.6.17 p. 30	<ul style="list-style-type: none"> <li>• WSP / Three Waters (H)</li> <li>• Information management &amp; GIS teams (H)</li> </ul>
21	<b><u>Flow Data conventions</u></b> <i>(clarified)</i>	Encourage L/s as primary unit with conversion as needed; align with PDAs and operational usage.	Consistency across WSP/FENZ datasets and forms.	Cl. 3.6.14–3.6.15 p. 27 Cl. 3.6.17 p. 31 Symbols p. 8-9	<ul style="list-style-type: none"> <li>• WSP / Three Waters (H)</li> <li>• Developers and hydraulic consultants (M)</li> </ul>
22	<b><u>Homeowner/property checklists</u></b> <i>(resources)</i>	Provide public-facing checklists (residential approvals, rural tanks, access, signage).	Actionable steps for homeowners; reduces FENZ case-by-case advisory burden.	Cl. 4.2.3.4 p. 34 Checklist p. 40 Appendix C Figures C1-C7 p.68-72	<ul style="list-style-type: none"> <li>• Homeowners and property owners (H)</li> <li>• Building Consent Authorities (M)</li> <li>• Territorial Authority Planning &amp; Policy (M)</li> <li>• Developers (M)</li> <li>• Insurers (L to M)</li> </ul>
23	<b><u>Hydrant testing tool</u></b> <i>(spreadsheet/graph)</i>	Operationalisation of the 1.85 graph method and data capture; reference tool for field teams.	Higher accuracy, defensible records; aligns with risk-based testing.	Cl. 3.6.14–3.6.15; Table 1; Figure 7 p. 27-30	<ul style="list-style-type: none"> <li>• WSP / Three Waters (H)</li> <li>• Private hydrant owners (M)</li> <li>• Consultants (M)</li> </ul>
24	<b><u>Approvals</u></b>	By nominated FENZ role (rather than generic “Region Commander” wording) for confirming bespoke calculations and non-reticulated solutions.	Clearer, scalable approvals pathway across districts.	Cl. 4.4 p. 34	<ul style="list-style-type: none"> <li>• Territorial Authority Planning &amp; Policy (M)</li> <li>• WSP / Three Waters (M)</li> <li>• Developers and consultants (M)</li> </ul>

## Stakeholder Groups Affected by the Code

Stakeholder	Who this includes	Typical organisations	Why they matter
Territorial Authority Planning & Policy (RMA / District Plan teams)	District and city council staff involved in district plans, regional plans, plan changes, structure plans, strategic planning, and resource consent policy (e.g. duty planners, senior planners, policy managers).	Auckland Council, Ashburton DC, Marlborough DC, Christchurch City Council, Dunedin City Council, Waikato DC, Tasman DC, Waitaki DC, Environment Southland, Otago Regional Council (and equivalent TA/regional council planning units).	This cohort applies PAS 4509 at the <b>planning and subdivision stage</b> , determines zoning, embeds water supply expectations into plans, and sets the policy context that drives long-term infrastructure outcomes supply- expectations into plans, and sets the policy context that drives long-term- infrastructure outcomes.
Water Services Providers (WSP) / Three Waters / Water Network teams	Council water units and water organisations responsible for potable networks, hydrants, modelling, maintenance, firefighting flows, and asset data (including three waters managers, network engineers, and asset lifecycle managers).	Watercare, Wellington Water, Tauranga City Council (water), Christchurch City Council (3 Waters), Gisborne DC, Thames Coromandel DC, South Waikato DC, Mackenzie DC, Taupō DC, Waitomo DC, Waipā DC.	They are responsible for <b>designing, operating, testing, and recording</b> firefighting water supplies and must demonstrate compliance with flow, pressure, storage, hydrant marking, notification, and data requirements.
Building Consent Authorities (BCA) / Building Control	Building consent officers, building control managers, regulatory services staff, and duty BCO functions within councils.	Christchurch City Council (BCO), Carterton DC, Hurunui DC, Invercargill City Council, Whanganui DC, Mackenzie DC, Waimakariri DC.	BCAs rely on PAS 4509 when assessing <b>means to deliver water for firefighting</b> , applying distance rules, reviewing alternative solutions, and using residential checklists in consent and compliance processes.
Civil Defence Emergency Management (CDEM) / Emergency Management	CDEM Group staff, council emergency management officers, lifeline utility coordinators, H&S/emergency management advisors.	Ashburton DC, Horowhenua DC, Ruapehu DC, South Wairarapa DC, Stratford DC, Timaru DC (and CDEM Group structures where applicable).	PAS 4509 now explicitly recognises that <b>emergencies and emergency powers can override the Code</b> , requiring alignment between water services, FENZ, and emergency response arrangements.
Road Controlling Authorities (RCA)	Council roading teams and Waka Kotahi staff responsible for road corridors, traffic control devices, marking approvals, and corridor access.	Waka Kotahi NZ Transport Agency and council roading units.	Hydrant markings, Raised Reflective Pavement Markers (RRPMs), and signage in road reserve require RCA approval and coordination to ensure responder visibility without compromising road safety.
Forestry, Rural Land Management, and Primary Sector	Commercial forestry organisations, farm forestry, and rural land management interests.	Forest Owners Association, New Zealand Farm Forestry Association, Farm Forestry NZ, Federated Farmers.	The new wildfire section and non-reticulated supply guidance directly affect <b>rural properties, forest estates, and wildfire-prone areas</b> , where water access and storage are critical for response reticulated- supply guidance directly affect <b>-prone areas</b>
Sector Bodies and Professional Associations	National organisations that provide policy, training, guidance, or professional standards to councils, engineers, building officials, or insurers.	Local Government New Zealand (LGNZ), Fire Protection Association NZ (FPA), Institution of Fire Engineers (IFE), SFPE NZ, BOINZ, BRANZ, Insurance Council of New Zealand.	These organisations <b>amplify guidance</b> , shape professional practice, support training and interpretation, and influence how consistently PAS 4509 is applied across the sector.
Central Government Agencies and Regulators	Government departments and statutory regulators with responsibility for the building system, water regulation, public assets, or emergency response.	Ministry of Business, Innovation and Employment (MBIE), Taumata Arowai (Water Services Regulator), Department of Conservation (DOC), Kāinga Ora, Ministry of Education, New Zealand Defence Force.	They oversee <b>system level compliance, regulation, and asset ownership</b> , and must align policy, facilities management, and emergency frameworks with PAS 4509 level- <b>compliance, regulation, and asset ownership</b>

Developers, Designers, and Technical Consultants	Developers, hydraulic engineers, planners, fire engineers, and infrastructure designers involved in greenfield, brownfield, and rural developments.	BECA and other engineering consultancies (with others implied via council engagement).	They translate PAS 4509 into <b>design solutions</b> , modelling, and consent documentation, and are often the first to encounter practical issues or unintended consequences.
Homeowners and Private Network Owners	Individuals or bodies responsible for <b>non-reticulated water supplies</b> , private hydrants, rural tanks, and onsite firefighting water storage. <b>-reticulated water supplies site-</b> firefighting water storage.	No organisations in the list, but end users affected through councils, BCAs, and sector bodies.-users affected through councils, BCAs, and sector bodies.	Changes to residential volumes, couplings, signage, and checklists directly affect <b>costs, responsibilities, and on-site infrastructure</b> for these owners.