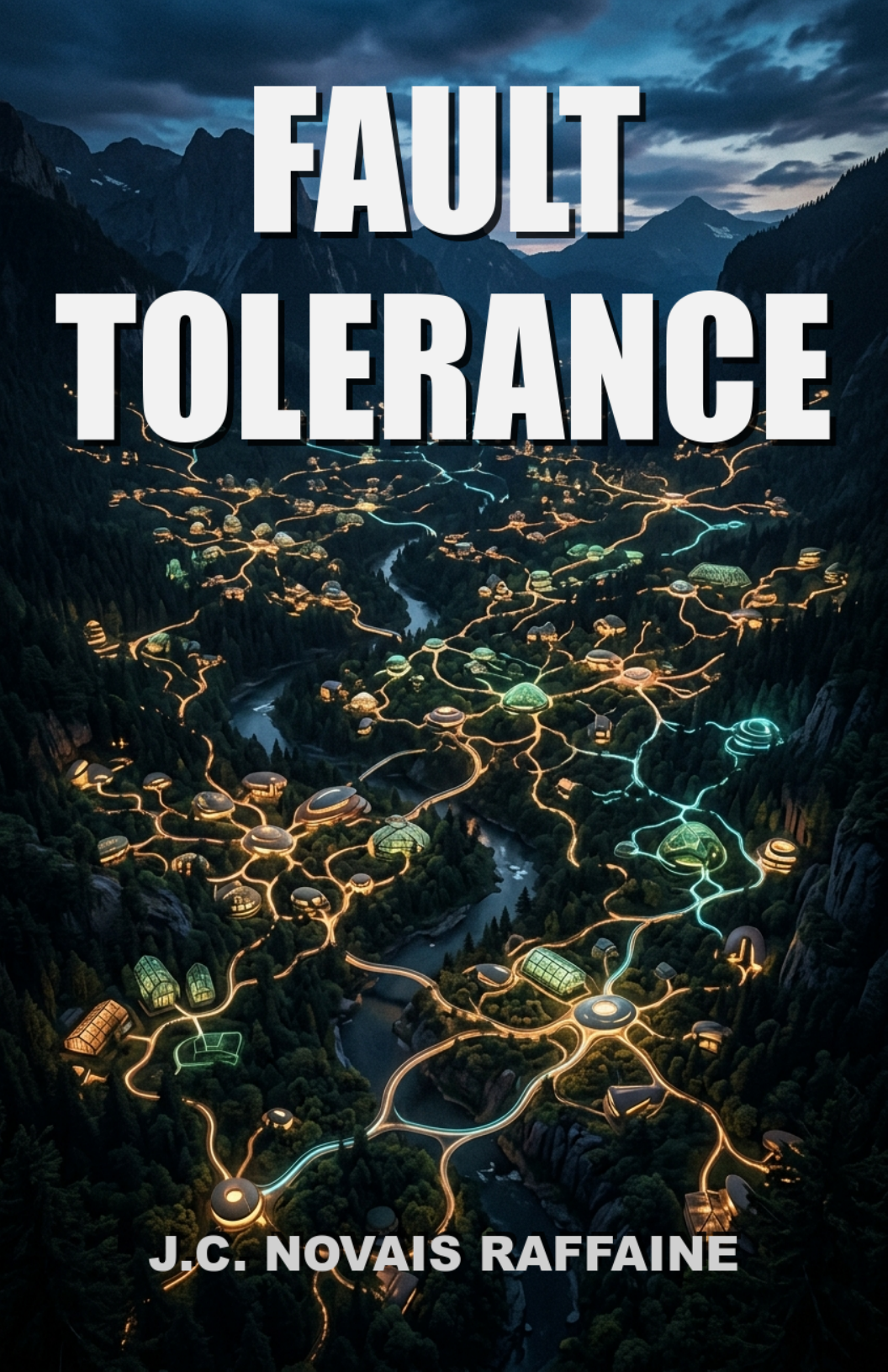
# FAULT TOLERANCE



J.C. NOVAIS RAFFAINE

**FAULT TOLERANCE**

A Solarpunk Epic of the Polycentric Bioregional Commonwealth

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1

# The Dream and the Weight

The morning broke without a siren, without the frantic, artificial urgency of the world outside. For Gabe, dawn was simply a shift in warmth, a gentle gradient of amber light slipping through the wooden shutters, and the soft *click* of the wall heater cycling down as the first rays of sun struck the solar canopy above his cabin.

He was sixteen now, his limbs long and clumsy with recent growth, but the room accommodated him effortlessly. He

stretched, kicking off the heavy cotton quilt. The air inside was crisp and still, hushed by the thick insulation packed into the timber walls. It was a deep, physical quiet, sheltered under the community's shared promise of peace and stillness. He breathed in deeply, tasting the faint, clean scent of cedar and the morning dew that clung to the outer siding.

But as Gabe rolled over to check the small e-ink display set into the wooden headboard, his eyes caught the ugly, beige intrusion mounted just outside his window. It was the legacy utility meter, courtesy of the regional power monopoly, Pacific Gas & Electric. They generated ninety-five percent of their own electricity here, sharing the surplus across the microgrids of the Polycentric Bioregional Commonwealth, storing the rest in massive repurposed battery banks buried beneath the central commons. But the county building code demanded an active grid connection. The meter sat there like a persistent tick on the side of a healthy animal, its digital readout blinking a string of zeroes, a mandated, parasitic tether to the failing systems of the old world.

Gabe stared at it for a moment, tracing the stark, plastic casing with his eyes. It was a seam in the sanctuary, a reminder that they hadn't actually escaped the world; they were merely floating on top of it, wrapped in bureaucratic camouflage.

He dressed quickly in a pair of durable hemp trousers and a soft, undyed shirt he'd pulled from the local textile commons the week prior. He grabbed his worn canvas satchel, his fingers brushing against the smooth wood of the door frame. A hidden reader, tucked seamlessly behind the timber grain, recognized the chip in his ring. The deadbolt retracted with a satisfying, heavy *thunk*, welcoming him out into the morning.

Stepping outside, the visual quiet of the settlement hit him. It was a sensation he took for granted, a native reality, but one his mother, Elara, constantly remarked upon with a reverence he couldn't quite fathom. There were no billboards here. No flashing neon demanding his attention, no glaring

screens engineered to manufacture anxiety and want. The buildings around him were low, warm, and built to a human scale. Vine-draped trellises arched over the pedestrian pathways, heavy with clusters of kiwi and passionfruit, shading the crushed-granite gravel that drank in the morning dew and fed the underground cisterns.

He walked down the gentle slope toward the center of the hub, his boots crunching softly. To his left lay the childcare yard, the shared nursery where he had spent his own early years. He paused by the low, cedar-slat fence, resting his forearms on the smoothed wood, letting the morning sun warm his shoulders.

Inside the shaded yard, a dozen toddlers were already engaged in chaotic, joyful excavation of a massive dirt pile, routing water from a hand pump through miniature wooden channels into the mud. A pair of elders sat on a shaded bench under a sprawling oak, weaving baskets from soaked willow branches and keeping an unhurried eye on the children.

Yet, bolted to the very fence he leaned against was a stark, legally mandated aluminum sign. Its sharp corners and blocky, authoritarian font clashed violently with the organic curves of the settlement: **PROPERTY OF GENESIS SOCIAL PURPOSE CORPORATION. LIABILITY LIMITS APPLY. PRIVATE PROPERTY. NO TRESPASSING.**

Gabe traced the raised lettering with his finger, feeling the cold metal. *Genesis Social Purpose Corp.* It was the shell, the legal fiction his mother and the founders had spun to protect this node. To the kids inside, this was the Cultural Commons, a vibrant routing hub in the Polycentric Bioregional Commonwealth. They weren't an isolated experiment; they were networked deeply, exchanging heirloom seed stocks, firmware patches, and mutual aid with the highland hubs to the east and the riverine enclaves down in the delta. To the county tax assessor, the fire marshal, and the zoning board, however, this was merely a corporate retreat facility running a quirky agricultural research project. The sign was the mask

they wore to survive the old world's predatory gaze.

A low, mechanical rumble vibrated through the soles of his boots, disrupting the pastoral calm. Gabe looked up toward the main access road that snaked out toward the state highway. An idling diesel engine broke the morning quiet, throwing a plume of acrid gray exhaust into the clean air. It was an old commercial delivery truck with faded corporate logos and dented side panels, coughing out the last breaths of the fossil fuel era.

The driver, a woman with deep, exhaustion-bruised eyes and a frayed fluorescent safety vest, was scanning a barcode on a heavy, plastic-wrapped pallet. She looked miserable, tethered to a routing algorithm that dictated her every bathroom break, punishing her wages for a suboptimal steering wheel turn or a minute spent idle. She existed in a state of continuous extraction.

Gabe watched as one of the perimeter wardens, a tall man named Silas, approached the truck. Silas was smiling warmly, signing the digital clipboard. He offered the driver a steaming thermos of hot herbal tea and a fresh, warm pastry from the bakehouse. The driver accepted it with a bewildered, grateful nod, her shoulders dropping a fraction of an inch before she climbed back into the noisy cab.

The delivery was necessary. They could trade cold-hardy wheat and software updates with the highland hubs all day, but they couldn't yet manufacture their own microchips or weave the fine membranes needed for the water filtration plant. They still had to buy things from the dying beast, paying in dollars drawn from their carefully managed reserves. The boundary between the old world and the new was porous, and the price was steep.

His stomach grumbled, pulling him away from the complex layering of their reality. He continued down the path, the smell of wet soil and diesel exhaust giving way to the rich, savory aromas of the Commons Kitchen.

The hearth was the beating heart of the settlement. As Gabe pushed through the heavy, reclaimed-wood swing doors,

a wave of comfortable heat washed over him. The kitchen was a cavernous, warmly retrofitted space. Wide electric cooktops hummed quietly without the choking fumes of gas burners. Massive copper pots bubbled with bone broth, and tiers of fresh herbs and greens lined the sunlit far wall.

Fifty people were already gathered at the long, polished oak tables, passing heavy ceramic bowls family-style. The air was thick with the scent of toasted sesame, fermented chili paste, and fresh sourdough.

"Gabe! Over here!"

He spotted a few of the other apprentices waving him over from a corner table. Before joining them, he detoured to the warming cubbies along the counter. He tapped his ring against the wooden panel, and a small door clicked open on a heavy stainless-steel lunchbox, logging his breakfast against yesterday's afternoon shift in the repair bay.

He slid into the wooden bench beside his friends, flipping the latches on the tin. Inside was a hearty breakfast: blistered garden tomatoes, a thick slice of sourdough, and a scramble of pasture-raised eggs.

"Did you hear the perimeter alerts last night?" asked Leo, a younger apprentice, his mouth full of bread. He had dark potting soil under his fingernails from the morning greenhouse shift.

Gabe shook his head, scraping his fork against the steel. "No. I was out cold. Once my shutters are closed, I don't hear a thing. Why? Was it coyotes by the fence again?"

"I wish it was coyotes," Leo muttered, his voice dropping below the ambient clatter of dishes and morning laughter. "Something probed the outer municipal firewall. My dad was on the cyber-rotation last night. He said it wasn't a script kiddie or a random botnet. Looked like a coordinated municipal code-enforcement sweep. They were trying to find a gap in our Transient Occupancy tax shielding."

"Transient Occupancy?" Gabe echoed, frowning. "We live here. We aren't transient. I've lived in this valley my entire life."

Next to Leo, an older apprentice named Lyra sighed, pushing her glasses up her nose. "Yeah, but Genesis SPC is legally zoned as a short-term agricultural retreat to avoid the county's single-family density restrictions," she explained, her tone dry and precise, parroting the administrative reality she'd learned in the bureaucratic defense seminars. "If the county algorithm detects that we've been residing in the timber cabins for more than two hundred and ninety days consecutively without 'rotating' out to one of the other Commonwealth nodes, the zoning board can legally reclassify us."

"And if they reclassify us?" Gabe asked, suddenly feeling a cold draft that had nothing to do with the ambient temperature.

"They trigger retroactive code compliance for residential subdivisions," Lyra said flatly. "Which means they demand paved roads, grid-tied sewer connections we don't have, and property tax reassessments at suburban development rates. It would bankrupt the settlement in six months."

Gabe looked down at his tin. If the legal wrapper tore, the state wouldn't send tanks or riot police first; they would send building inspectors, tax liens, and foreclosure notices. The valley wouldn't burn; it would be drowned in assessments and auctioned off by a county clerk.

A mile away, in the subterranean cooling hum of the central routing hub, Elara rubbed two fingers against the bridge of her nose, trying to push back a headache that had started before dawn.

She stared at the wall of monitors, the living map of the settlement pulsing in quiet waves across the screens. She was forty-two now, gray threading her dark hair at the temples.

The room was bathed in the pale blue light of the terminals. Kept at a brisk sixty-five degrees for the server racks, the basement smelled of warm dust and stale coffee. Up above, people went days without thinking about county statutes; down here, tax rolls, zoning dockets, and commercial bank balances were a fence line Elara walked every morn-

ing.

Unlike Gabe, Elara remembered the Before in suffocating detail. She remembered the afternoon Gabe was two years old with a raging ear infection, sitting in her car in the parking lot of a corporate urgent-care clinic and staring at an insurance deductible portal on her phone, calculating which utility bill would bounce if she carried him through the sliding glass doors.

She remembered Kael, her old mentor, finding her in that era. Kael had seen the structural collapse coming years ahead and offered her a way out of the maze. And Jax, sharp-tongued and restless, had written the mesh routing protocols that linked the highland timber camps to the river enclaves without touching a corporate telecom line.

Kael and Jax had moved on across the continent years ago to seed new basins, leaving Elara and the local stewards with the unglamorous work of keeping the roof from caving in. Every morning, Elara spent four hours acting as the Chief Operating Officer of *Genesis Social Purpose Corporation*, maintaining the dull paper trail of a marginally profitable agricultural retreat.

On the screen to her left, a commercial banking portal sat open. Elara watched the progress bar crawl across the window as she wired tens of thousands of dollars, raised through external specialty timber and seed sales, into the county treasurer's account to cover quarterly property taxes.

*Transaction Approved. Funds Transferred.*

"Elara," a voice crackled over the wired radio channel. It was Marcus, calling from the outer watchtower. "Are you seeing this activity on the outer gate?"

Elara minimized the banking portal and pulled the gateway log to the center screen.

"I see it," she said. "They're trying to spoof a member credential to read our occupancy ledger."

"County?" Marcus asked, the static popping lightly.

"County Assessor's office, routed through a private audit contractor," she said, scanning the scrolling requests. "Dis-

guising the biodigesters as grain silos kept their aerial drones happy last quarter. Now they're trying to prove our cabins are occupied year-round."

A cluster of red markers flared across the screen as the outer filter dropped another query.

A soft chime came from the weather monitor in the coppice woods: the barometer was falling fast, an early cold front pushing in off the coast.

She opened a terminal window and routed the contractor's query into a shadow directory she kept updated for audits: seasonal worker rotations below the 290-day cap, orchard irrigation schedules matching their water draw, temporary agricultural housing permits signed and dated.

"I've patched the gate, Marcus," she said into the mic. "I fed them the decoy directory. That should satisfy their automated sweep for today, but keep your eyes on the county road. When software comes up empty, they send somebody with a clipboard."

"Copy that," Marcus replied. "We'll check the exterior conduit lines and make sure the 'Agricultural Use Only' placards are bolted up on the cabins and schoolhouse before first shift."

Elara closed the channel and stood up, her knees popping in the cool air. She took her wool coat off the back of her chair, checked the charge on her wrist slate, and pushed open the heavy steel door to the stairs. Outside, she had delivery invoices to sign and three miles of fence line to walk before noon.



2

# Genesis

The perimeter of the local node was not a wall. Walls were legacy architecture, brittle and authoritarian, demanding constant armed defense. The perimeter was a living boundary of crushed gravel, dense blackberry brambles, and small cameras tucked into the canopy of the oak trees. It breathed, it filtered, and today, it was choking on the exhaust of the old world. This sanctuary was merely one cell in the sprawl-

ing Polycentric Bioregional Commonwealth, a vast network of mutual aid that stretched across the fractured continent.

Elara stood at the edge of the access road, the afternoon sun beating down on her shoulders, heat shimmering off the cracked asphalt. Beside her, Marcus lowered a pair of dented field glasses.

"Five of them," Marcus muttered. "A family, maybe, or neighbors who stuck together. Looks like they walked the last ten miles from the state highway. Their car is dead on the shoulder."

Elara adjusted the canvas strap of her satchel, checking the onboarding kit against her hip. "Did the lookouts spot any county cruisers following them?"

"None," Marcus said, wiping his forehead with the back of his glove. "No drones, no patrol cars. Just them. Neighboring nodes sent word they might be heading our way."

As the group crested the rise of the access road, they were dragging their belongings in split duffel bags and a rattling utility wagon. The man in front was hollow-cheeked, his shoes bound at the soles with gray duct tape. Beside him, a woman clutched a sleeping toddler against her chest, her eyes darting along the tree line as if looking for pole cameras. Two teenagers trailed behind with their heads down.

Elara stepped forward on the gravel, carrying a clipboard and a steel thermos of cold well water.

"Stop there, please," Elara said.

The man flinched, dropping the handle of the wagon. He reached into his pocket with shaking fingers and pulled out a cracked smartphone and a plastic wallet. "We have the forms," he stammered, his voice dry. "I have my credit score, it's not great, but I can work. I have my background check from the county. We just need... we just need a place to stay. A lease. Anything."

"Put that away," Elara said, closing the distance between them. She unscrewed the cup of the thermos, filled it with water, and handed it to the woman holding the child. "We don't use credit scores here, and we don't care about county

background checks. Drink first."

The woman took the cup in both hands and drank fast, water spilling down her dusty chin. The toddler stirred, letting out a thin whimper.

Elara glanced at the dark motor oil ground permanently into the creases of the man's knuckles. "What kind of work do you do?" she asked.

"Mechanic," he said, swallowing hard. "Small engines. Pumps. My wife, Sarah, runs industrial sewing machines."

Elara nodded once. Pumps and heavy canvas stitching were both backlogged three weeks.

"My name is Elara," she said, tapping the small screen on her wrist to log their arrival. "We don't do leases here, and we don't do debt. To come inside, though, you leave the county's tracking at this gate."

She pulled a weatherproof case from her bag and popped the latches on an offline circuit board and two blank keycards. The man stared at the electronics and took half a step back.

"What is that?" he asked. "Is that a scanner? I told you, I have my ID—"

"It's a local key maker," Elara interrupted evenly. "It doesn't connect to the internet or report to any agency. It stays on our wires. I can't hand you workshop access automatically, though. Somebody inside has to vouch for you in person."

Watching Sarah pass the tin cup to her older boy, Elara smelled the hot road dust and remembered standing in November mud seven years earlier, when the settlement was fifty frightened people and a leaking warehouse roof.

*They had called that first winter the System Call, and their own software had nearly killed them.*

*Jax had designed an automated ledger to track every chore, kilowatt, and blanket ration, convinced that clean math would keep fifty desperate strangers fair. Then an early freeze hit. A bug in the heating priority script routed night power to cool the server racks instead of warming the nursery.*

*At three in the morning, with frost forming on the cribs, a carpenter named Jonas took a steel pry-bar to the main server cabinet, screaming that the machine was freezing his daughter. Elara still remembered kneeling in icy mud outside the kitchen with numb fingers, splicing torn cable by flashlight while people shouted in the rain.*

*Around a burn barrel before dawn, Kael had thrown Jax's automated ration scripts out altogether. From that morning on, no card unlocked a heavy tool or drew workshop power unless a living neighbor stood beside you, looked you in the eye, and staked their own workshop standing on yours. Kael had gone first, ladling out the bottom of the pot of rice and beans, handing Elara a tin bowl in the rain, and signing his name beside hers.*

The snap of the plastic latch brought Elara back to the sunny road.

The mechanic, who had given his name as David, was watching her hands.

"We need your phones," Elara said, holding out a shielded Faraday pouch. "Phones, watches, anything cellular. The county uses tower pings to estimate headcount out here."

David hesitated, thumb resting on the cracked glass of his phone, then dropped it into the bag. Sarah added hers, and the two teenagers handed theirs over without a word.

"Marcus?" Elara said, sealing the pouch and tossing it into the utility cart.

Marcus stepped up to the wagon with a handheld inventory reader, tagging the oil-stained steel toolbox and the canvas-wrapped machine behind it.

"Metric socket and wrench set for the repair bay," Marcus read off. "Industrial serger for the textile loft."

"Those tools go into the shop pool, though you have first use of them," Elara told David. "We have a four-bed timber cabin open near the west orchard. Heater, running water, lock on the door."

"On what terms?" David asked, wiping his mouth. "A

loan? What's the interest rate? Because if it's like the payday places—"

"No interest and no rent," Elara said. "You get power, groceries, and a roof. Once you've slept, you help keep the pumps and sewing machines running. When our valley grows extra, it goes down the road to neighboring settlements; when we're short, they send us what we lack."

They loaded the bags and the wagon onto the electric cart and drove slowly up the shaded gravel lane past the willow coppice and solar-roofed cabins, rolling to a stop outside the open timber doors of the Commons Kitchen. Inside, the evening crew was chopping onions and scraping carrots at long prep tables while soup kettles steamed on the electric ranges.

"Food and a roof are unconditional here," Elara said, stopping beside the heavy oak table in the center of the room, where a small brass-rimmed card reader sat flush in the wood. "Even if you never lifted a wrench, nobody here gets evicted or goes hungry. Running high-voltage lathes and shop equipment is different. That takes a co-signer."

"A background check," David said, his shoulders dropping. "Look, my credit is shot. I had a dispute with a landlord, they put an eviction on my record—"

"Nobody here cares about your landlord," Elara said, setting two blank wood-veneered cards on the oak table. "To unlock the machine bays, a steward here has to tie their own workshop key to yours."

"Who's going to do that?" David asked, glancing at the cooks watching quietly from the prep counters. "Nobody knows us."

"I will," Elara said.

Marcus set down the crate of tomatoes he was carrying. "Elara, hold on. You're carrying the administrative keys for the whole hub. If he wrecks a lathe or hurts someone, your own clearance freezes during review."

"I know the rule, Marcus," Elara said. She looked straight at David and Sarah. "If you strip parts from the shop or hurt

a neighbor, my access gets suspended right alongside yours. That's the deal."

David looked down at the wooden card on the table, then back up at her. "Why?"

"Because somebody signed for me when I walked in off the highway," Elara said. She tapped the brass rim of the table reader to wake it. "Put your cards beside my ring."

David and Sarah stepped up and pressed their cards against the oak next to Elara's hand. The indicator blinked blue once and went dark, logging the co-signature locally.

Elara reached for a stack of stoneware bowls, ladled three full from the nearest stockpot, and pushed a basket of sliced bread across the wood.

"Paperwork's done," Elara said, setting a spoon beside David's bowl. "Sit down and feed the little one before the soup cools."



3

# Friction and Threads

The walking-foot sewing machine hammered a steady beat through the oak floorboards of the Textile Commons. The loft smelled of warm machine oil, damp wool, and the sharp mineral tang of plant-dye vats simmering in the corner.

Silas sat bent over a wide wooden cutting table near the center of the room, working a heavy steel needle through the stiff collar of a canvas jacket. With each pull, he drew white

hemp thread across the indigo fabric in tight Sashiko stitches, reinforcing the shoulder seams where logging chains chewed through the weave.

Elara pushed through the double doors, still chilled from four hours in the basement server room. Her satchel strap cut into her collarbone.

Silas glanced up at the sound of the latch and set his needle down on the waxed paper.

"You look like you've been arguing with the ghost of a city planner all morning," Silas said over the clatter of the looms.

Elara crossed the floor toward the warmth of the steam irons. "Close. County property-tax portal changed its schema overnight without notice. If I hadn't caught the rejection code before noon, our payment would have bounced into an automatic lien."

Silas traced the raised hemp stitching with his thumb. "Who's next on their list?"

"Anyone still solvent," Elara said, looking down at the jacket. "Marcus's coat?"

"Tore the shoulder hauling fence posts yesterday. Cheaper in wool and hours to double-stitch the yoke than weave three yards of new canvas."

"How did Sarah's industrial serger check out?" Elara asked.

"Runs cleaner than ours," Riya called over from the sorting bins.

Riya walked up wiping oil from her palms onto a linen rag, her dark hair pinned up with a wooden bodkin. She and Silas had come up together on the salvage crews during the settlement's third year. She squinted critically at Silas's collar work. "Your tension's pulling tight on the left seam, Silas. We timed the serger before breakfast, Elara. Sarah's sleeping off the road now, but she spent an hour showing the apprentices how to keep the differential feed from puckering heavy hemp. Cotton trimmings went out to the worm bins, and we bagged the nylon scraps for printer stock."

"Good," Elara said.

Riya tapped the table edge. "Let me check the mordant pot before the fleece goes brittle."

Once Riya turned back to the vats, Silas studied Elara's face. "Get away from the terminals for an hour. Walk over to the garage with me while I print a mount for the west gate camera."

Elara glanced instinctively toward her satchel, then let out a breath and nodded. "Half an hour."

The Fabrication Commons occupied an old tractor shed across the lane, smelling of cutting fluid and hot thermoplastics. Along the north wall, enclosed 3D printers hummed behind glass doors alongside a CNC mill shaving aluminum bar stock under a milky stream of coolant.

Silas wiped an open print bed with isopropyl alcohol and held his wrist slate to the frame reader. The display loaded a bracket schematic drafted two winters back by a machinist up in the northern timber settlements.

"Forty-minute print," Silas said as the steppers whined and the brass nozzle laid down its first skirt of melted nylon. He leaned against the bench beside her. "Put half the county filings on Marta and Tobin next quarter, Elara. Nobody's sharp after six days straight in the cellar."

"Marta and Tobin aren't listed as corporate officers on the state charter," Elara said, watching the print head shuttle back and forth. "If the zoning shield cracks, the sheriff serves the person on the incorporation deed."

"Still doesn't mean you do all the night watches alone."

Before she could answer, the slate on her wrist buzzed twice and lit red.

Silas straightened up. "Gate?"

Elara pulled up the alert log. "Code enforcement again. Not housing records this time. They're querying the utility meter bus directly: transformer load, line harmonics, and thermal draw."

Silas swore softly. "Looking for machine tools."

"If they log three-phase motor draw from that mill on an

agricultural parcel, they issue an immediate cease-and-desist with daily fines," Elara said, already kneeling beside the wall patch panel and pulling a rugged tablet and patch cord from her bag. "Kill the mill and drop the bay doors. If the meter numbers don't match what they expect, they'll fly an infrared drone over the ridge to check roof heat."

Silas crossed the shop in four strides and slapped the red mushroom switch on the CNC mill. As the spindle whined down, he hauled on the chain hoist until the heavy steel roll-up door clanged shut against the concrete sill, leaving the room lit only by amber emergency strips.

Without the exhaust fans, the trapped heat from the mill and printer casings pressed in fast. Elara jacked hardline Ethernet into the wall port and routed the incoming county meter poll into a pre-recorded telemetry loop mimicking halide seedling lamps and an orchard drip pump.

For twenty seconds neither of them spoke. Sweat ran down Elara's ribs under her shirt while Silas stood by the side door, ear cocked toward the corrugated tin roof for the high buzz of quadcopter rotors.

On the tablet, the polling indicator stalled, polled a second checksum, and turned gray.

*Audit Complete. Status: Agricultural Compliance Verified.*

Elara rested the back of her head against the cinderblock wall while the little printer beside them kept laying down nylon thread.

Silas walked back through the hot dimness, shirt stuck to his back. "Clean?"

"For this afternoon," Elara said.

Silas held out a hand and pulled her up from the concrete.

"Twice in twenty-four hours," he said, looking at the dark screen.

"Municipal bonds defaulted in two neighboring counties last month," Elara said, coiling her patch cord. "They're hunting anything that still has copper in the walls and grain in the bins. Paperwork won't buy us another five years, Silas.

Sooner or later we either fight them on the road or cut the trunk lines altogether."

Silas rested one palm on the iron latch of the bay door, waiting another minute before cracking it to the cool air outside.



4

# Nourishing the Resistance

The heat off the steel cone kiln warped the air across the clearing, turning the Douglas firs behind it into a wavering blur. Silas drove an iron pitchfork into a tangle of green alder slash and heaved it over the rim.

Deep in the cone, the wood baked at over a thousand degrees in starved air while rising wood-gas burned across the top lip in a clean, smokeless crown of flame, reducing the

timber underneath to black char. Let too much draft in at the bottom and the whole load burned to useless gray ash; choke it too tight and yellow smoke poured across the hillside.

Twenty feet downslope by the compost windrows, Jace tipped a heavy steel wheelbarrow of wet kitchen scraps and woodchips onto the curing pile. His linen sleeves were rolled past his elbows over faded prison tattoos and old venipuncture scars, a canvas bandanna tied low across his forehead against the heat. "Save some slash for the second burn, Silas," Jace called up, scraping his shovel clean against the barrow lip. "Orchard crew wants another forty barrows of charged mulch before the rain hits Friday."

"Tell the orchard crew to come swing a fork," Silas called back, nudging the lower draft damper half an inch shut with the toe of his boot. He tapped the dark refractory collar with a tine. "These cast vents from the Rust Corridor haven't warped a millimeter. Our mild-steel welds would've buckled an hour ago."

Elara wiped soot from her temple with her sleeve, checking the thermocouple trace on her field slate. "Core's steady at five- eighty. Forty more minutes and we quench."

The refractory vents had come in on the morning freight relay from an old mill town three hundred miles east, swapped against the valley's autumn seed garlic and dried medicinal herbs without an invoice changing hands.

"We'll need a second cone before first frost," Silas said, squinting into the shimmer. "The alder coppice grew back thicker than last year."

"Northern sheet-metal shop already has plate rolled for us," Elara said, logging it on her slate.

Forty minutes later, the timer chimed.

"Shut her down!" Elara called.

Silas kicked the base dampers closed, snuffing the crown of flame, then dragged over the two-inch canvas hose from the hillside gravity tank and cracked the brass valve. Cold creek water hit the glowing bed with an explosive hiss. White steam boiled straight up into the fir boughs, carrying the

sharp, alkaline tang of wet charcoal and hot iron.

Halfway through the quench, the air-raid horn on the timber watchtower tore across the hollow, followed an instant later by the red emergency strobe on their wrist slates.

Elara looked down at her arm. "Medical alert. Sector Four, down by the drying cribs."

Silas twisted the hose valve shut, dropped the nozzle in the mud, and grabbed the orange trauma canvas off the shelter post while Jace dropped his shovel and vaulted the low stone wall to join them.

"Who's on the wood stack today?" Jace asked as the three of them ran hard down the needle-slick trail through the firs.

"David," Elara panted, reading the telemetry updates flashing across her wrist. "The mechanic who came in Tuesday. Hard-fall trigger and manual panic press. Somebody wrote *log slip, heavy arterial*."

They burst out of the timber into the drying yard. At the foot of the highest Douglas fir crib, two teenage apprentices were straining on cant hooks to keep a green, three-hundred-pound alder log from rolling back onto the man pinned against the concrete pier beneath it.

Jace didn't break stride. He threw his lean weight onto the tail of the wet log beside the boys, muscles cording in his tattooed forearms as he levered the trunk clear off the pier and kicked a wooden wedge underneath to lock it.

David lay in a widening dark stain of sawdust, chalk-white, his right trouser leg split open above the knee where the broken femur pressed against torn muscle. Bright red blood pulsed out with every heartbeat.

Silas dropped onto both knees in the red woodchips and drove his overlapped palms straight into David's right groin crease, leaning all his upper-body weight onto the femoral artery against the pelvic rim.

David arched off the dirt with a ragged cry.

"Jace, hold his shoulders down!" Silas snapped. "Elara, windlass. High as it goes."

Jace knelt behind David's head, gripping the mechanic's

shaking shoulders firmly while talking low and steady near his ear: "Stay right here, brother. Eyes on the trees. Don't fight him."

Elara ripped open the trauma pack, slid the black webbing under the top of David's thigh, pulled the slack tight, and handed Silas the aluminum rod. Silas twisted it once, twice, three times, locking the windlass into the catch as David's scream thinned into a dry rattle. Below the strap, the bright spurting stopped, slowing to a dark seep.

"He's crashing," Silas said, checking the weak radial pulse at David's wrist. "Check contraindications. I need volume expander and coagulant in him now."

Elara held her slate two inches from David's wristband, querying the encrypted medical intake record he had entered the day before against *saline dextran, yarrow hemostatic, concentrated salicin.* Three green indicators cleared the screen.

"Clear across the board," Elara said. She pulled a liter IV bag and two wax-sealed amber vials from the padded inner sleeve, noticing the tiny mountain-peak stamp of the Timberline Apothecary high in the Cascades pressed into the foil caps as she thumbed them open.

Silas slid an eighteen-gauge cannula into David's left antecubital vein and taped it down with red fingers. Elara spiked the bag, hung it from Jace's outstretched hand, and pushed the vials into the port.

Over the next ninety seconds, David's violent shivering eased a fraction. His pupils tracked up toward Jace's face.

"Ninety-four over sixty and climbing," Silas said, letting out a breath. "Boys, grab the wheeled litter out of the saw shed. Tell Lin at the clinic to prep the trauma table and call the orthopedic surgeon up from the river hub."

By dusk, the clinic lamps had been turned down low. Lin had irrigated the compound fracture and pinned it in an external traction splint until the river enclave's bone surgeon arrived, and Sarah sat pulled right up against the cot with

her forehead resting on David's good arm.

Outside under the eaves, Silas, Elara, and Jace scrubbed dried blood and kiln ash off their arms at the deep stainless wash trough. Jace dried his hands on his shirt hem, gave Elara a brief nod, and headed back down the hill to bank the neglected charcoal cone before dark.

Silas shut off the brass tap. Now that the work was over, a fine tremor ran through his fingers on the rim of the sink.

Elara leaned against the timber wall beside him, watching the pink rinse water swirl down the drain into the gravel sump. Down on the steel tray lay the two empty amber vials from the mountain stills, alongside a forged hose clamp from the eastern Rust Corridor.

"Close thing," Silas said quietly.

"Too close," Elara said, looking out past the orchard lights toward the dark county road beyond the ridge. "Make sure the wood crew re-wedges every crib in Sector Four before morning. Next time we might not be five minutes up the hill."



5

# Re-architecting the Space

Under the tin roof of the abandoned freight depot in Sector Seven, the afternoon heat sat close to ninety-five degrees. Elara stood near the center chalk line with a canvas tool belt riding low on her hips, squinting through a haze of concrete dust and hot steel sparks. Around her, sledgehammers broke up frost-heaved floor slabs while two crews on rolling scaffolds cut rusted pallet racks down with angle grinders. For

twenty years the tilt-up concrete shell had stood empty behind broken skylights and weeds; before the autumn rains arrived next week, it had to hold a tight roof over their new community hall, kitchen annex, and study rooms.

High above the floor, balanced on the top scaffold plank, Silas guided a cured black locust arch into its ceiling pocket. Harvested from the coppice woods two winters back, the round timber weighed close to four hundred pounds. His shirt was dark with sweat between his shoulder blades as he payed out the chain hoist link by link.

"Ease it down, Silas!" Elara shouted through cupped hands, her throat dry with lime grit. "You’re an inch shy of the pocket!"

Silas kept his eyes on the joint. "I see it!" he called back over the shriek of a grinder. "The old steel roof girder has a twist in the flange. It’s fighting the angle."

"Can we muscle it in?" Elara asked, stepping sideways to sight along the plumb bob.

"No," Silas grunted, pulling a heavy rubber dead-blow mallet from his belt loop. "Force it and the twist will split the printed collar. Let the wood find its own seat."

He swung the mallet in a short arc, striking the locust trunk squarely at its balance mark. With a low creak, the timber dropped half an inch and settled flush into the recycled-polymer socket bolted to the steel girder.

"Plumb on the south mark!" a rigger shouted from the opposite tower.

"Drive the bolts!" Silas called.

Three battery impact drivers clattered at once, running heavy galvanized lag bolts through the pre-drilled plates until the arch locked tight.

Elara wiped sweat out of her eyebrows with her wrist and checked the small slate strapped to her forearm. A single green check appeared beside Arch Seven. Tucked inside the collar, tiny strain gauges had just compared the settled load against the laser scan of the roof truss and logged the snow-load margin to the local server. Once it passed, the screen

went dark again, leaving her eyes free for the floor.

Silas climbed down the scaffold ladder, his boots thudding onto the swept concrete. He pulled off his leather work gloves, tucked them under his belt, and shook wood shavings out of his hair.

"Last of the main ribs," he said, tipping his chin back toward the ceiling. Against the flaking gray oxide of the old steel girders, the seven curved locust arches gave the cavernous bay the look of a boat hull turned upside down.

"It'll outlast the concrete," Elara said.

Silas looked down at the gray dust caked around her eyes. His hand came up an inch off his hip, hesitated, and settled back onto the buckle of his tool belt.

"You've been running supply tallies and floor rigging since five this morning," he said quietly. "Go sit in the shade for twenty minutes."

"We're racing a cold front," Elara replied, glancing toward the open loading bay where heat shimmered off the cracked asphalt. "Six of the newest families are still sleeping in canvas wall tents by the orchard. Once the October rain sets in, canvas turns miserable fast. We need the study rooms framed and the annex stove piped before Friday."

"We'll beat the rain," Silas said. "Road crew called in on the ridge repeater five minutes ago. Bryn's bringing three electric vans through the gate right now with the pressed charcoal blocks and the wool sound-baffles from the looms."

Elara nodded, relief loosening the tight band across her neck. When the textile mill finished a batch and the kiln yard had blocks cured on pallets, the valley route board paired the loads with whatever charged vans were heading uphill, splitting battery draw and driver hours across the neighborhoods automatically.

"Let's snap the chalk lines for the interior partitions before she backs in," Elara said, hooking her tape measure off her belt. "Keep the quiet rooms along the east wall, away from the soup kettles."

For the next three hours, crews framed out curved stud

walls of rough-sawn fir that broke up the echoing rectangle of the freight floor. Along the east side, carpenters hung heavy solid-core doors salvaged from an old municipal library on small reading nooks, packing the stud cavities with loose wool scrap so a person could shut the door and read for an hour without hearing a single saw or cookpot.

Along the bright south wall, beneath newly glazed skylights, the greenhouse crew bolted tiered cedar troughs to the concrete and fed rainwater lines down from the roof cisterns. Gabe knelt on an overturned bucket near the corner drain, his fingers black with wet peat as he showed one of David and Sarah's teenage boys how to seat brass compression fittings on the drip manifold. When Gabe cracked the main valve, clear water ticked steadily down through the fern roots and sheet moss. The new boy, who had spent his first two days in the valley staring at his shoes whenever an adult walked past, grinned and reached up to adjust a mister nozzle himself.

Two short blasts of an air horn echoed through the bay doors.

Three dented electric cargo vans rolled over the threshold in single file, their old delivery decals sanded down to bare aluminum and stenciled with the pine-and-river mark of the valley transport pool. Tires crunching over concrete grit, they backed cleanly up to the chalked unloading zone.

Bryn hopped down from the lead cab, dusted her palms on her overalls, and slapped the rear fender.

"Hot off the kilns and the felting tables!" she shouted across the floor. "Three tons of biochar-clay block and forty rolls of heavy wool baffle! Point me at a wall, Elara!"

"Charcoal blocks along the north concrete," Elara called back, waving toward the shaded side of the depot that caught the winter wind down the gorge. "Felt rolls right down the middle so the scaffold crew can hang them from the purlins."

Thirty people lined up from the open tailgates to the north wall. One block at a time, they passed the dense black bricks of pressed charcoal bound with slip-clay and chopped straw. Each block weighed fifteen pounds, smelled faintly

of woodsmoke and river mud, and left black smudges across forearms and shirts. Silas worked the tailgate of the middle van, lifting blocks two at a time onto the staging plank, while Elara took the corner turn beside him, pivoting left and right until her triceps burned.

By five o'clock, the entire north wall stood packed floor-to-plate with black carbon brick and sheathed behind tongue-and-groove cedar planks. Halfway through the final course, Elara noticed the room had gone quiet. Even with people talking at the far end of the floor, the hard metallic slap of voices off bare concrete had vanished, swallowed by the porous charcoal walls and the thick gray wool clouds hanging between the roof beams.

Elara leaned back against the nearest locust arch and tipped her plastic water bottle upside down. Two warm drops hit her tongue. Charcoal dust coated her wrists and streaked her jaw where she had wiped sweat away.

Silas walked over and held out his dented aluminum canteen. Sweat had cut pale channels through the black dust in his beard.

"Drink," he said.

Elara unscrewed the cap, drank three long swallows of cold well water, and handed it back, her thumb brushing the grit on his fingers.

"Listen to the room," Silas said, looking down the length of the bay. Late sun slanted through the high south glass, lighting the wet green ferns on the living wall and throwing amber bars across the swept sawdust.

"Doesn't sound like a warehouse anymore," Elara said. "Tomorrow we can roll the trestle tables in and wire the reading lamps."

She looked up at him in the slanting light, catching the crow's-feet at the corners of his eyes and the gray streak at his temple that hadn't been there two summers ago.

"You're staring," Silas said, one corner of his mouth lifting.

"Checking if you're upright," Elara said, pushing an inch

off the post.

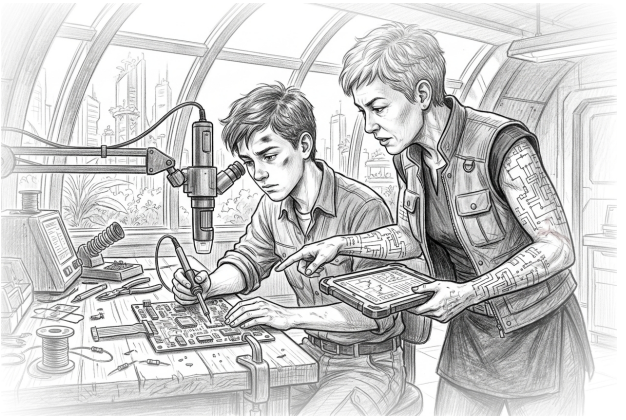
Silas took a drink from the canteen and screwed the cap back on. "County assessor's truck parked by the cattle guard again this afternoon," he said quietly. "Sat there twenty minutes with binoculars, took pictures of the solar ridge, and turned around. And Meridian's regional office sent another certified letter about the substation tie-line."

"I saw the scan on the clerk board," Elara said. "We'll answer the letter Monday. Let them photograph the panels all they want."

Silas didn't answer right away. Keeping the careful half-step they always left between them in the workshops, he leaned back against the locust arch beside her so their sleeves touched.

For a minute neither of them spoke. Down at the far bay, Bryn slammed the last van doors shut, and Gabe laughed at something the new boy said while coiling up spare drip tubing.

Elara pushed off the timber and pulled her leather gloves from her belt. "Come on," she said. "Six more felt baffles on the west truss and we make first sitting at supper."



6

# Learning and Unlearning

The diagnostic bay in Duvall Hall smelled of pine rosin, hot copper, and stale coffee. At sixteen, Gabe was all long wrists and restless knees, hunched over a wooden teaching bench with one eye pressed to a stereo microscope. Beneath the ring light sat a fingernail-sized current-monitoring board for the Foundry's main induction coil.

He wiped a smear of flux off his forehead with his sleeve, leaving a shiny streak above his eyebrow.

"Your ground joint is cold, Gabe," a dry voice said behind his left ear.

Gabe jumped half an inch, pulling the soldering pencil clear before the tip touched the trace. Master Vera stood over his stool with a ceramic mug in one hand. Vera was fifty-four, crop-haired, with reading glasses hung on a braided cord around her neck and tiny pale solder burns freckling the backs of both wrists.

"I was trying not to cook the security chip," Gabe said, setting the iron in its wire cradle. "Run the iron too hot and the tamper fuse blows and wipes the signing keys."

"And leave a dull, grainy joint like that and the contact resistance climbs," Vera said, tapping the schematic on her slate with a fingernail. "Resistance climbs, voltage drops. Voltage drops, the controller reads twenty percent less current than the furnace is actually pulling, assumes a ground fault, and dumps the main breakers in the middle of a three-ton steel melt. Re-flow it. Quick in, quick out."

Gabe dabbed a speck of fresh rosin onto the pad, waited two breaths for the iron tip to come back to temperature, and touched the joint. Dull gray tin slumped instantly into a bright, concave fillet around the pin.

At the next bench over, Gabe's friends Sam and Leo had the cracked white shell of a salvaged county traffic drone spread across a rubber mat. Sam was probing the flight-controller pins with a logic analyzer while Leo sorted machine screws into muffin tins. Like Gabe, they split their weeks hauling slag carts at the kilns and sweeping woodchips in exchange for bench hours with Vera.

"Clean?" Gabe asked, sliding off the stool so she could look.

Vera bent to the eyepieces, turned the focus knob a quarter-turn, and straightened up.

"Passable," she said. "Pot it in epoxy and flash the board. I want it bolted onto the Foundry feeder before noon."

Gabe grinned at the bench mat and reached for the ribbon cable.

"Utility sweep again?" Sam asked from the next table, looking up from the gutted drone. "I thought the legal filings stalled them last Tuesday."

"Filings stall county clerks," Vera said, walking over to the wall monitor where local radio relays glowed across a contour map of the creek basin. "Someone higher up hired outside network contractors this week. Yesterday afternoon the Foundry gateway dropped fifty thousand fake work requests in forty seconds."

"Trying to lock up the job queue?" Sam asked.

"Trying," Vera said. "Every outside packet has to post a small power-credit bond before the router even reads the header. Their dummy key burned through its bond on request number four, and the outer gate blackholed the other forty-nine thousand nine hundred and ninety-six. Still, whoever ran it was probing response times. Gabe, leave the epoxy to cure and bring your slate into the rack room."

Gabe followed her through the heavy insulated door into the server corridor. Built from welded bed-frame angle iron bolted straight to the concrete slab, the racks held rows of stripped municipal blades, open-board routers, and printed drive cages cooled by salvaged radiator fans.

"Sit," Vera said, pointing at a steel desk with a battered mechanical keyboard. "Today you run your final qualification drills. First problem: suppose an outside contractor splices hardline into an orchard repeater box tonight and spins up two thousand phantom member keys to stuff tomorrow's watershed vote. Run the flood script in the sandbox."

Gabe pulled the keyboard closer, opened the isolated test environment, and fired the script. On the right-hand screen, two thousand freshly generated cryptographic identities began casting simultaneous ballots to shut down the irrigation pumps.

"Watch the tally column," Vera said.

Gabe leaned forward. Although every phantom key carried valid math, none of them had ever co-signed a work shift with an existing neighbor, eaten at a kitchen terminal, or

received an in-person voucher from two stewards in different guilds. On the graph, all two thousand accounts clustered together on an isolated branch with zero path weight back to living residents.

"Weight reads zero point zero," Gabe said as the status bar flashed amber, then green. "Quarantined the whole batch. Ballot total didn't move."

"Math is cheap; years of showing up for dish duty aren't," Vera said. "Second drill. Suppose they stop trying to vote and instead slip a malformed orchard-survey file into the shared repair queue to crash the parser. Pull file seven from the red folder and throw it at the test gate."

Gabe inspected the dummy file first: nested inside the elevation table was a recursive loop meant to eat every megabyte of memory on whatever server opened it. He hit enter.

The cooling fans in the rack didn't even pitch up. On the left monitor, a three-line notice rejected the upload before execution.

"Bounced at the boundary," Gabe read aloud. "Field four exceeded thirty-two characters, so the gate dropped the packet unread."

"Keep the templates strict and dumb, and half their clever tricks hit brick," Vera said. She checked her wristwatch. "Forty-five minutes off screens, rule's the rule. Go get some sun before your eyes lock at eighteen inches."

Outside in the Sector Seven courtyard, heat radiated off the concrete apron beneath the broad leaves of an old fig tree. Gabe dropped onto a plank bench beside Sam while Leo tossed a bruised windfall Gravenstein from hand to hand before biting cleanly into the good side.

"Vera pass your board?" Leo asked around a mouthful of apple.

"Passed the solder check, plus two sandbox drills," Gabe said, tipping his head back against the warm brick wall and closing his eyes against the glare. "My neck feels like wire."

"Saw two white utility quadcopters hovering just outside the property markers above the creek road twenty minutes

ago," Sam said, wiping lithium grease off his thumbs with a shop rag. "Staying fifty feet over the county easement so they're technically legal, pointing long lenses straight down at the Foundry transformer pad."

"Let them take pictures," Leo said, tossing the apple core into the compost bucket by the steps. "South ridge solar is pulling peak kilowatts and the salt batteries are topped off."

"They aren't taking postcards," Gabe opened one eye to squint toward the eastern ridgeline. "Vera said outside contractors hit the Foundry router yesterday."

Before Sam could answer, the brass horn bolted under the depot eaves let go with three short, flat blasts, paused two seconds, and sounded three more.

Gabe's slate buzzed hard in his cargo pocket. Red text scrolled down the lock screen: *GATEWAY SPOOF ALERT: FOUNDRY INDUCTION FEED TWO.*

"Speak of the devil!" Sam was already up and running for the steel door. "They're hitting the kiln line while a melt's running!"

Gabe and Leo sprinted on his heels down the concrete hall and back into the diagnostic bay.

Master Vera stood braced over the main standing terminal, both hands flying across the command prompt.

"Gabe, bench three!" she barked without looking around. "Someone's beaming directional microwave packets straight into the rooftop weather relay and injecting falsified thermocouple spikes onto Furnace Two's safety bus!"

Gabe slid onto his stool and pulled up the live Furnace Two telemetry. On the upper plot, the outer bridge reported coil jacket temperatures climbing past eight hundred and forty degrees Celsius, ten degrees shy of triggering the emergency quench trip.

"If that trip fires mid-melt, three tons of steel freeze solid inside the crucible!" Gabe said, opening the raw sensor list. "It'll crack the whole brick core!"

"Cross-check the physical current clamp on the busbar!" Vera snapped.

Gabe pulled up the hardwired hall-effect clamp bolted directly around the copper feed bar inside the Foundry basement, the exact sibling of the board curing on his mat. While the spoofed radio packet screamed eight hundred and fifty degrees, the copper busbar current sat flat as a ruler at four hundred and ten amps, and the cooling-water return line hadn't risen half a degree.

"It's a lie!" Gabe called out, highlighting both traces. "Busbar draw is dead flat at four-ten and return water's fifty-two Celsius! You can't gain three hundred degrees in six seconds with flat amps!"

"Sign the physical override and sever the rooftop bridge!" Vera ordered.

Gabe plugged his apprentice key fob into the side slot, bound the basement current trace and water-return delta into a fault proof, and sent it to Vera's queue. Vera slapped her master key onto the reader half a second later to co-sign.

On the wall display, the rooftop weather relay flashed red as the controller severed the wireless bridge and locked Furnace Two strictly onto its hardwired basement loop. Three inches shy of the emergency trip line, the temperature trace snapped back to five hundred and ten degrees. Down the hill, the deep sixty-cycle hum of the Foundry coils kept running without a stutter.

"Outer flood's starving out," Sam reported from bench two, his voice high and fast. "Whoever hired that microwave rig just burned their last relay token. Packet rate's down to zero."

"Leo, check the ridge camera," Vera said, leaning both palms on the desk edge.

Leo pulled up the telephoto Mast Three feed. "Both white quadcopters just banked east toward Highway Twelve. No smoke from the Foundry stacks, no breaker trip to write a citation on."

For ten seconds nobody spoke over the drone of the rack fans. Gabe looked down and noticed his right heel was bouncing rapidly against the rung of the stool; he pressed his boot

flat to the concrete to stop it.

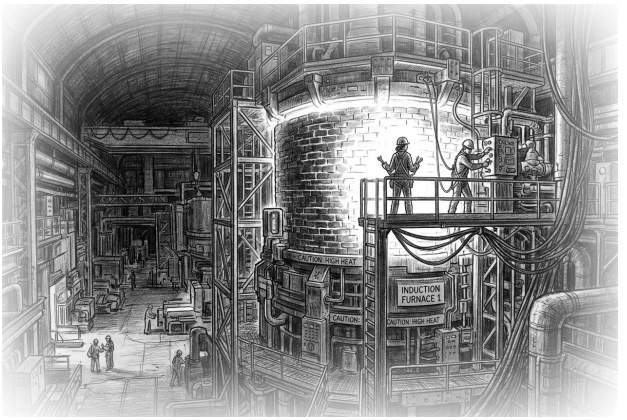
Vera walked over, looked at the signed fault log on his monitor, and pulled her key fob out of her pocket.

"Plug yours back in," she said.

Gabe slotted his key into the reader. Vera tapped hers beside it and typed a two-line endorsement into the guild register. Across the room, the solenoid on the master parts locker gave a sharp metallic clack, its indicator LED shifting from amber to steady green for his badge.

"Apprenticeship signed off," Vera said, picking up her cold coffee mug from the corner of his mat and making a face after one sip. "Clean up your flux jar before supper, steward. Starting Monday you're on rotating watch."

Sam punched Gabe once on the upper arm hard enough to sting, and Leo grinned from ear to ear. Gabe unplugged his newly endorsed key, switched off his soldering iron, and began capping the rosin bottles one by one.




7

# The Heat of the Foundry

Outside the corrugated iron walls, a dry November wind came down off the northern ridge and rattled the high louvers. Every leaf in the coppice woods had dropped two weeks back, leaving bare gray alder branches against a low sky. Inside the primary bay of the Foundry, however, it was over a hundred and ten degrees on the lower catwalk.

Elara hooked one boot toe behind the angle-iron upright

of Furnace Three's scaffolding, leaned back into her climbing harness, and pushed her smoked-glass visor up onto her helmet. Sweat stung the corner of her left eye, cutting clean tracks through the black foundry dust on her cheeks. Below her, three colossal black-brick induction pots radiated a dry, shimmering heat that smelled of hot silica, graphite grease, and scorched wool.

"Give that collar bolt another quarter-turn, Silas!" she shouted over the sixty-cycle thrum of the preheat coils. "If the retaining ring creeps at peak draw, we split the crucible liner!"

Ten feet down the truss, clipped to the main stanchion in a scorched leather apron, Silas braced both boots against the cross-tie and leaned his weight onto a three-foot breaker bar. Rusted threads shrieked twice before seating against the lock washer.

"Seated on the witness mark!" Silas called up, wiping his forehead on the canvas upper of his sleeve. Orange light from the lower vent slots lit the underside of his chin and cheekbones. "Collar's tight. How's your lead?"

"Bolted!" Elara tightened the brass lug on the braided copper ground strap, tugged it twice with a gloved fist, and climbed up onto the catwalk grating. Unclipping her lanyard, she leaned against the pipe rail and drank lukewarm water that tasted of iron straight from her canteen.

Silas pulled himself onto the grating a moment later, unhooked his harness, and leaned his elbows on the rail beside her.

"Battery house says we've got a ninety-minute window at full draw," he said, looking down into the open throat of Furnace Three where three tons of sheared county truck axles and rusted bridge plate lay stacked like cordwood. "Solar's dropping behind cloud cover on the south ridge. If this melt drags out..."

"It won't drag," Elara said, screwing the cap back onto her canteen, though her stomach tightened around the warm water.

Fourteen hillside farms and three machine shops down the creek basin had shifts scheduled around this pour. Local carbon scrap like truck axles made fine structural billets for Sector Four's wind-tower frames and mill shafts, freeing the smaller shops to run surgical lathes and pump housings, or letting Master Vera's electronics benches keep clean voltage for circuit work, without every hamlet burning power on its own tiny forge. For high-impact turbine runners or rock drills, they still relied on vanadium-chromium alloy ingots traded down from the Iron Creek mines in the northern highlands, whose autumn pack train wasn't due until after the bioregional assembly; today's structural carbon steel had to get Sector Four's wind towers bolted up before the ground froze solid.

"Sector Four's crane crew goes idle at dawn if those bearing billets aren't cooling on the flatcars tonight," Elara said.

Silas rested his heavy leather glove over hers on the pipe rail for two seconds, tapped once, and let go.

"Then let's go melt some axles," he said.

They climbed down the iron ladder to the main floor. Elara stepped up to the analog control desk, a steel cabinet of phase meters, rheostat wheels, and hardwired current gauges, while Silas took the floor post beside the hydraulic tilt levers. Around the sand pit, eighteen foundry hands in aluminized coats and face shields checked their skimming rakes and hooked dry sand molds onto the narrow-gauge rail cars. Whistle blasts and hand signals carried orders across the bay where voices couldn't reach.

"Substation confirms bus is locked," Elara called into the wired horn mic. "Closing main contactor in three, two, one."

She pulled the knife-switch lever down into its copper-jawed catch.

The floor plates buzzed right through the soles of her boots. Heavy copper coils buried inside Furnace Three's refractory brick drank four hundred kilowatts at once, tightening the air until loose iron filings on the concrete danced upright in tiny bristles.

"Four hundred Celsius," Elara read off the optical pyrometer. "Seven-fifty. Nine hundred."

Through the thick quartz viewing port, the tangled heap of old bridge plate blushed dull plum, brightened to cherry, and began slumping inward as the alternating magnetic field churned the softening steel from the core out.

"Phase two is drifting!" Elara barked as the middle ammeter needle began slapping violently against its right-hand pin.

Silas didn't wait for a second call. Snatching the eight-foot insulated grounding lance off its wall hooks, he ran across the concrete apron toward the lower bus box. If coil two stayed out of phase under full load, magnetic torque would shear the anchor bolts straight out of the masonry and spill white-hot metal across the pit.

He drove the copper spike of the lance hard into the earth-shunt socket at the base of the housing. Fat blue arcs spat across his boot toes with a sharp crackle of ozone.

"Dropping!" Elara shouted, spinning the heavy cast-iron rheostat wheel counterclockwise with both hands to trim capacitance on bank two. "Hold it on the shunt, ten more seconds!"

Silas kept his boots planted wide on the rubber mat, leaning forward into the vibrating fiberglass shaft until his arms shook. Gradually the violent slap of the ammeter needle narrowed, steadied, and settled dead center alongside banks one and three.

"In phase! Latching!" Elara slammed the mechanical detent home.

Silas yanked the lance clear, stepped back out of the heat wash, and lifted two fingers through the smoke.

Inside the pot, the pyrometer crossed fifteen hundred and forty degrees Celsius. Rusted bridge girders and truck axles were gone; in their place rolled a blinding yellow-white bath of liquid steel.

"Skimmers up!" Elara called.

Four senior apprentices stepped to the refractory lip with

long iron rakes. Floating atop the clean metal was a crust of blistering orange slag made of old lead highway paint, rust scale, and road grit boiled up out of the scrap. Working in pairs, they dragged the glowing crust over the slag notch into dry sand buggies, stepping back every two minutes so the next pair could take the heat.

When the last crust cleared, the bath shone flat and bright as mercury. Tarn, a fifty-year-old patternmaker whose gray eyebrows had been singed short a dozen times over, dipped a long spoon sampler, quenched the button on the test anvil, and shot it with the handheld spectrometer.

"Point-four-two carbon, sulfur under point-zero-three!" Tarn shouted, holding a thumb high. "Right on the print!"

A ragged yell went up from the rail pit.

"Pull the locking pins!" Elara called. "Silas, bring her over slow!"

Silas eased both hydraulic levers back half an inch. On greased trunnions, the massive black drum tilted forward.

Liquid steel spilled over the ceramic spout in a white-hot ribbon that lit the soot-blackened roof trusses like midday sun. Even twenty feet back at the control desk, the radiant heat hit Elara's exposed neck like an open oven door. One sand flask after another rolled beneath the stream on iron wheels as Silas feathered the valves, filling each mold cleanly to the riser cup while jets of dry steam hissed from the vent holes.

As the twelfth and final mold topped off, Silas eased the levers upright. Furnace Three settled back onto its stops with a dull clunk, its empty throat glowing deep tangerine.

For ten seconds nobody moved except the roof exhaust fans spinning up overhead.

Silas walked up the three iron steps to the control platform. Soot blackened the creases around his eyes, and a fresh spark burn smoked faintly on the cuff of his coat. Without a word he caught Elara by both elbows, pulled her against his chest, and rested his chin hard against the crown of her helmet.

Salt, hot wool, and coal smoke filled her nose. Elara gripped the scorched canvas behind his shoulder blades, feeling the rapid hammer of his pulse through two layers of heavy duck cloth. Neither of them moved back as fast as they usually did; for five full breaths she kept her forehead pressed against the brass snap at his collar before stepping half a pace clear.

"Twelve clean billets," she said, her voice rough from smoke.

"Twelve," Silas said. "Sector Four gets their wind towers."

Half an hour later, with their heavy aluminized coats hung on the drying pegs and the night crew banking the furnace brick for slow cool-down, the day shift sprawled along the wooden benches of the air-cooled washroom, passing salted mint tea and cold well water down the line.

Silas tossed Elara a wet aluminum canteen. Her fingers fumbled the catch once before closing around the cold metal, and she drank half of it before coming up for air.

"Cleanest carbon curve we've hit since August," Tarn said, scrubbing black grit off the back of his neck with a wet rag. "Thought bank two was going to throw a shoe there for a minute, though."

"Wait ten seconds longer on that shunt and we'd be chipping frozen steel out with jackhammers all week," Elara said, sitting down beside Silas and letting her knee rest against his.

"Man's getting spry in his forties," Tarn said gravely.

Silas snorted into his canteen and didn't bother answering.

At the end of the bench, a young runner from the northern workshops looked up from his slate. "Message just came across from Master Vera's bay," he said. "After today's microwave spoof on the roof relay, she's asking if we can bump Tuesday's high-purity silicon melt ahead of the second structural steel batch so she can pot thirty backup current clamps."

Elara set her canteen between her boots and ran the calendar in her head. "Bump silicon to Tuesday and we push the lower bridge-girder pour into next weekend," she said. "The

Highland pack train with our turbine alloy isn't even down the pass yet, and if a November freeze locks the creek road before Sector Four finishes pouring concrete pads for those wind towers, we lose a third of our winter wind margin."

"Vera's worried they'll try spoofing the hydro house next," the runner offered.

"Hardwire the hydro house off the radio bridge tonight, same way she locked Furnace Two," Silas said, leaning his forearms on his thighs. "Sensors don't heat cabins when the sun goes behind the ridge for six weeks. Towers go up first."

Heads nodded along the benches. Elara pulled her slate off her belt, typed a three-line schedule note authorizing Vera's bay to draw six spare industrial clamps out of the emergency mill locker in the meantime, and signed it.

Outside the washroom windows, dusk had turned blue-black, and the first scatter of sleet ticked dryly against the iron siding. Beside her on the bench, Silas tipped his head back against the concrete wall and shut his eyes while the overhead fans hummed steadily on.



8

# The Permaculture Dilemma

Three days of cold November rain had turned every footpath between the cabins into ankle-deep gray mud. Inside the Commons Kitchen, eighty people stood shoulder to shoulder in wet wool coats, steaming near the two cast-iron woodstoves while rain drummed steadily on the corrugated roof. Nobody had brought out a fiddle tonight, and the cider urns sat dry on the sideboard.

Elara stood beside the butcher-block prep table at the front of the room with clay caked halfway up her bootlaces, turning a ten-inch length of clipped high-tensile pasture wire over in her fingers.

"It is a replication of the exact violence we left behind," Julian said from the middle of the floor. His voice shook slightly at the start, then found its pitch. Before coming up the valley three years ago, Julian had spent a decade running loading docks at a corporate hog-processing plant outside the city, and he rarely raised his voice unless pushed. "We talk every week about breaking chains of extraction. Yet three hundred yards from this hall, we breed sentient animals as components in a nutrient machine and tell ourselves a pastoral bedtime story so the winter slaughter goes down easier."

Along the west wall, a dozen younger apprentices and recent city arrivals murmured low agreement. Over the autumn they had started calling themselves the Abolitionists during supper-table arguments, pushing to phase out the valley's sheep, goats, and ducks altogether.

Across the stove aisle, Marta unfolded her arms. Sixty-two years old, with wet gray hair tucked under a knitted cap and mud dried in the seams of her canvas bibs, she had managed the valley's pastures since the first winter. Silas and Jace stood two paces behind her alongside the rest of the farm and compost crews.

"You're looking at a hillside paddock and seeing your old loading dock, Julian," Marta said flatly. "There isn't a conveyor belt or a stun chute within forty miles of this creek."

"A small slaughterhouse is still a slaughterhouse," someone called from near the dish racks.

Marta took one step into the aisle, heavy boots creaking on the fir planks. "Then let's talk dirt instead of slogans. When we signed the land trust on these four hundred acres, the upper flats were dead hardpan, burned out by seventy years of anhydrous ammonia and herbicide runoff. Dust in August, brick in January. How do you think we grew eighty tons of grain and roots off it this summer without buying a

single bag of petrochemical nitrate from the city?"

She pointed toward the dark, rain-streaked windows. "Hooves and rumen. Two hundred sheep and goats rotated across tired grass, breaking capped crust, dropping manure that wakes up dormant soil fungi, and ducks clearing slugs out of the ditch beds before blight sets in. Pull the stock off those slopes, and within two growing seasons our yields drop by half."

Beside her, Jace cleared his throat, rubbing a thumb across the faded ink on his wrist as half the room looked over. He didn't like speaking in big halls, and kept his eyes fixed on the stove pipe rather than the crowd.

"Tried running four test windrows behind the kilns all summer without barn bedding, just chipped alder and kitchen scraps," Jace said quietly. "Pile never cleared a hundred and ten degrees. Weed seeds survived right through it, and the winter squash we planted in that batch came up stunted yellow. You want hot compost by April without diesel turners or factory chemicals, we don't have another way yet."

Shouts broke out from three corners at once. Elara rapped a hardwood rolling pin sharply against the edge of the prep table until the noise dropped back under the drumming rain.

"We didn't call an emergency floor at nine at night to settle agricultural theory," Elara said, holding up the clipped length of galvanized wire so the lantern light caught the bright diagonal shear marks on both ends. "We're here because somebody took bolt cutters to the east paddock at two this morning."

Silence settled fast.

Whoever had clipped three spans of wire and left an unsigned note reading *NO MORE CAGES* pinned to the gatepost had expected twenty goats to bound off into the mountain timber. Instead, cold rain and the scent of a coyote pack up on the ridge had turned the herd straight downhill into the unfenced winter root beds.

Elara had walked down with a headlamp at five-thirty that morning. Twenty hungry goats had spent four hours

trampling and chewing their way down twelve raised rows of storage carrots, parsnips, Lutz beets, and hubbard squash: nearly four weeks of cellar rations for the lower lodges, churned into icy brown soup.

"Who cut the wire?" Elara asked quietly.

Rain hissed against the stovepipe collar. Near the back pantry door, nineteen-year-old Lia stepped half a pace out of the crowd. She had come inland six months earlier from a flooded coastal tenement and worked mornings in the radio room; her parka hem was still dripping puddle water onto the floorboards, and her chin trembled as she lifted it.

"I did," Lia said. Her voice cracked once, then steadied. "Every morning walking up to the repeater shack, I had to look at those wether kids by the salt trough knowing Marta already had four of them marked on the whiteboard for December culling because the hay barn's short. That's the exact spreadsheet math my old landlord and every city agency ran on us, deciding who fits the winter budget and who gets cut loose. Somebody had to break it."

Marta rubbed two fingers hard between her eyebrows. She didn't shout; she walked four steps down the aisle and stopped across from the girl.

"Do you know what coyotes do to a tame dairy goat in wet timber, Lia?" Marta asked, keeping her voice low. "They don't die quick, and they don't live free. And because they had more sense than you did last night, they stayed out of the trees and ate two tons of your neighbors' January supper instead."

"So we just accept killing because the math's convenient?" Lia's eyes shone wet in the lantern light. "Where does that stop?"

Julian stepped sideways until his shoulder stood between Lia and the front table. "We aren't nineteenth-century peasants, Marta! Breweries in the old metro zones grew precision protein in stainless vats without touching a single animal—"

"On megawatts of coal and gas grid power, using refined corn dextrose trucked across three states!" Silas cut in, his

temper flashing for the first time all evening. "Have you looked at our hydro gauge in January, Julian? We barely pull enough winter current to keep the Foundry from freezing and run the clinic autoclaves! Where are you getting sterile stainless vats, replacement seals, and forty spare kilowatts when the county's already flying camera drones over our transformer pad?"

"Better lean rations than blood on the porridge!" someone behind Julian yelled back.

"Easy to volunteer lean rations when your kids aren't the ones coughing in a cold cabin!" Tarn barked from the foundry bench.

Elara stepped off the low hearth platform right into the narrow gap between Julian and Silas, holding both palms flat at chest height until Tarn sat halfway back down.

"Look out that north window," Elara said, pitching her voice low enough that people had to stop shouting to hear her. "Two county drones filmed our fence line yesterday, and outside contractors tried to blow a three-ton furnace melt before lunch. Nothing would make the county prosecutor happier by February than watching half this valley walk out over moral purity while the rest of us go short on calories."

She looked straight at Julian and Lia. "Nobody who ever smelled a commercial packing plant thinks you're crazy for hating cages. If we ever start talking about living stock like factory tonnage, we deserve to lose this place."

Then she looked down at the dried gray mud crusted across her own knuckles from trying to dig unbroken beets out of the trench at dawn.

"Nobody gets clean hands by buying food in plastic trays, and nobody gets clean hands here either," Elara said. "Field plows kill voles and ground nests. Apple sprays kill caterpillars. Someday they'll lay every one of us in the upper timber compost to feed black locust roots. Living in the dirt means owing your life to other living things and paying attention to what it costs."

She turned half toward Lia without stepping closer. "Cut-

ting that fence didn't spare a single kid goat, Lia. It dumped four weeks of missing winter roots onto eighty households who trusted you with the keys to the tool shed."

Lia stared down at her wet boots, one hand clamped tight around her opposite elbow as two tears slipped off her chin. "I didn't think they'd go into the garden," she whispered. "I thought they'd head up the creek."

"Goats go where the food is," Marta said dryly, though some of the iron had gone out of her posture.

Elara looked around the packed kitchen. "Nobody's getting thrown off the land, and nobody's losing tool keys forever. Tomorrow at first light, farm and kitchen crews salvage whatever broken roots we can scrub and ferment into sauerkraut crocks before rot sets in, and I'll message the upriver settlements to see what surplus turnips or barley we can trade for before snow closes the pass."

She fixed Julian and Lia together. "For the next four weeks, both of you rotate off your regular bays onto morning stock duty with Marta and Jace. Mucking the loafing shed, checking hooves for rot in this mud, stringing temporary netting, and standing beside Marta when winter culling comes due. If you still want to argue pasture policy at solstice council after you know every animal in that shed by sight, the floor's yours."

Julian pressed his lips thin. He looked down at Lia's bent head, then across the aisle at Jace and Marta's mud-caked bibs, and gave one short nod. Lia wiped her nose on her coat sleeve and whispered, "Okay."

"One thing goes the other way too, Marta," Elara added, turning back to the older woman. "Take the culling tally off the kitchen corridor whiteboard. And sit down with Julian and Lia this week to see whether there's any way to move that herd through the woods without locking them inside shock wire."

Marta blew out a slow breath through her nose, tipping her chin half an inch toward Julian. "Five-thirty at the lower barn, both of you. Wear tall boots."

Little by little the crowd broke up, neighbors pulling damp wool collars up around their ears as they stepped out into the pouring dark by twos and threes. Near the doorway, Silas paused long enough to tap two knuckles lightly against Elara's upper arm.

"Held together," he murmured.

"Until December, maybe," Elara said, sliding the clipped wire into her coat pocket. "Go get five hours' sleep. We're digging mud at dawn."

By daybreak the storm front had pushed east, leaving thick white valley fog hanging low through the alders. Walking down the gravel lane with a stone crock crate balanced on her hip, Elara heard pitchforks scraping concrete inside the goat shed before she could see the roof.

Through the open Dutch doors, Marta and Jace were showing Julian and Lia how to roll urine-soaked straw out of the corners onto two wheelbarrows without spearing the packed clay floor underneath. Nobody was making warm small talk; Julian's shoulders looked stiff in his borrowed oilskin vest as he leaned into a heavy forkful, and Jace silently kicked a wooden ramp plank straight so Lia's barrow wheel wouldn't bog in the threshold rut.

Around their boots, twenty goats wandered out into the misty mud yard, shaking wet ears. A flop-eared speckled doe walked straight up to Lia and butted her knee twice looking for salt. Lia froze, rested her muddy glove briefly between the goat's horns, and bent back over her fork.

Elara hitched the crate higher on her hip and kept walking down toward the ruined carrot beds.



9

# The Soil and the Soul

An hour after the goat shed had been mucked out, thick gray mist still hung motionless across the lower flats. Elara stood at the head of Row Four in the winter garden, her breath fogging the cold air. Hoofprints six inches deep filled with muddy brown water stretched the whole length of the beds, littered with snapped orange carrot crowns, crushed hubbard rinds, and chewed beet tops.

Heavy boots squelched down the headland path behind her. Marta came out of the fog carrying two digging forks and a slatted bushel basket, with Julian and Lia walking three paces back. Both newcomers already had dark mud splashed up to their thighs from wheeling barrows to Jace's compost bays, and Lia kept tucking raw red fingers up inside her coat cuffs whenever she wasn't carrying anything.

Marta set the basket down on the grass verge and handed Julian a fork.

"Anything split or tooth-marked goes in the slats," Marta said. "Kitchen crew will scrub them, trim the bruised meat, and pack them in salt brine for kraut crocks. Won't store till March like clean cellar roots, so January's still going to pinch, but we don't leave calories rotting in the trench. Scrape the trampled topsoil back onto the crowns while you go."

Julian looked down at the ash handle in his grip. "Still feels backward," he muttered, low enough that it barely carried across the trench. "Cleaning up around a system we shouldn't be running."

Marta planted her boot heel in the mud bank. "City yards took live hogs in one gate and sent shrink-wrapped trays out the other while poisoning the river behind the plant, Julian. Out here nothing leaves the basin. Get on your knees and see how many earthworms are in one handful of this dirt compared to the road ditch outside the fence."

For four straight hours nobody wasted breath arguing. Elara dropped onto an old folded grain sack and dug bare-handed through icy clay slurry, feeling blindly for whole parsnips and snapped carrots beneath the churned mud. Within twenty minutes her fingers had gone clumsy and wooden up to the second knuckle.

Three feet to her left, Lia pulled a half-chewed beet out of a hoof-hole, wiped gray slime off its shoulder with her thumb, and stared at it before laying it gently in the basket.

"Hurts before your fingers go numb, doesn't it?" Elara said without looking up from the trench.

Lia sniffed hard against the cold and wiped her cheek with

her forearm, leaving a streak of wet clay across her cheekbone. "I meant my hands, yeah."

"Hands thaw by lunchtime," Elara said, tossing two salvageable carrot stubs into the slats. "Looking straight at how thin the margin is between eighty fed neighbors and an empty root cellar takes longer to get used to."

Lia picked up a split winter squash, tested the firm orange flesh inside the hoof crack, and set it beside the beets. "Back on the coast, everything came off charity pallets or corner stores until the trucks stopped coming," she said quietly. "You never saw the field. You just hated whoever locked the chain-link gate on the warehouse."

"Easier when there's a villain in a necktie," Elara agreed, sitting back on her heels to flex her stiff spine.

Halfway down Row Six, Julian had his fork jammed straight down under a sunken mat of squash vines and clay, heaving backward with his lower back bowed tight.

Silas came down the gravel track pushing a wide-tired wooden garden cart loaded with empty wash tubs, black foundry grease still smudged behind one ear from morning maintenance. Watching Julian strain twice against the suction of the mud, Silas parked the handles and stepped into the row.

"Going to slip a disc before noon doing that," Silas said, laying one palm alongside Julian's on the ash shaft. "Don't pry vertical against wet clay. Drive the tines at forty-five, step on the shoulder, then rock the handle down across your knee. Let the fulcrum break the seal."

Julian stiffened for half a second, pride flashing across his tired face, then let Silas guide the angle. With a wet pop the heavy clod broke clean off the hardpan without jerking his spine.

"Worked ten years on freight docks," Julian muttered, straightening up with one hand pressed to his kidney. "I know how to move weight."

"Pallets sit on flat concrete," Silas said mildly, tossing two wash tubs onto the grass strip. "Wet dirt sucks back."

Marta stood up at the end of the row, leaned both forearms across the T-handle of her fork, and looked from the half-filled tubs over to Julian and Lia.

"Seven o'clock tonight in the shearing shed," Marta said. "Not an eighty-person shouting match. Just us four and a map. I can't afford another cut fence, and I'm tired of spending twenty hours a month mending grounded shock netting in wet brush anyway. If you two think there's a way to move stock without wire, bring something that works in January."

Julian blinked water off his eyelashes. "You're serious?"

"Dead serious," Marta said. "Bring dry socks."

By seven that night the mist had thickened into freezing drizzle pattering across the tin roof of the shearing barn. Cedar splits popped inside a squat cast-iron box stove in the corner, warming air that smelled permanently of lanolin, dry orchardgrass hay, and wet wool coats.

Marta sat at a rough fir plank table beneath two hanging solar lanterns with her oilcloth pasture ledger spread open. Silas was feeding bark scraps into the stove door when Julian and Lia stepped inside out of the rain, stamping mud off their boots on the threshold sack.

"Kettle's hot on the top plate," Marta said, tapping the bench opposite her. "Pour tin mugs and sit."

Once all five of them were seated around the hand-drawn contour sheets of the creek basin, Marta tapped a pencil stub against the red-inked squares along the lower slopes.

"I'll tell you something I wouldn't say in front of eighty people shouting in the kitchen," Marta said, looking directly at Julian. "Electric paddock netting is miserable stuff. Pen two hundred head inside a quarter-acre square during three days of November rain and they trample the perimeter into soup before you can shift stakes, and every deer that hits it at night shorts the charger out."

Julian leaned an inch closer over his steaming mug. "Then why run squares at all?"

"Because fifty yards downhill sits every carrot and cab-

bage we eat in February," Silas said from the end of the bench, "and half a mile uphill sit coyotes waiting for strays."

Lia reached inside her dry wool vest, pulled out her gray radio-room slate, and set it beside Marta's paper map. "What if we stopped pushing them away from wire and pulled them toward browse instead?"

Marta folded her arms on the oilcloth. "Keep talking."

"Soil moisture probes and grass-height tags already report into the repeater net every morning," Lia said, zooming in on the wooded oak ridges above the creek. "Right now nobody reads those numbers except you when you're deciding where to drag stakes next. Suppose we carve weatherproof speaker boxes out of cedar scraps, wire tiny solar trickle cells on top, and strap twenty of them along a two-mile loop through the upper coppice."

She traced a finger from oak grove to oak grove, well clear of the valley-floor vegetable beds. "Train the lead nannies for two weeks that a low wooden bell tone means fresh mineral blocks and sweet chestnut browse under whichever tree is singing. When a slope's grazed down forty percent, that box goes silent and the next ridge down starts ringing at dawn. No shock wire, no square mud pens."

Julian stared at the green elevation lines, his whole face waking up. "Pull logistics instead of prod chutes. Let herd curiosity move them across open timber the way wild ibex drift along snowlines."

Marta chewed the inside of her lip, eyes tracking creek crossings on her hand-drawn sheet. "Bell tones won't bother a hungry coyote pack in deep snow, girl. If anything, you're ringing a dinner chime."

"Bring down two working Maremmas from the upper river shepherds," Silas said. "Oren's crew owed us machine hours on their sawmill arbor last month, and his older bitch whelped a litter last spring. Bond an experienced guardian dog and two yearlings straight into the flock; they sleep in the brush with the ewes twenty-four hours a day. Coyotes won't cross two Maremmas."

"Can we build twenty weatherproof chime chests before hard freeze?" Elara asked him.

Silas rubbed his unshaven jaw, counting stock in his head. "Salvaged car-door drivers in bin four, piezo boards from Vera's scrap drawer, red cedar slab offcuts from the mill dipped in hot beeswax. Give Lia three apprentices on the soldering benches and I'll run the router jigs. Three weeks."

Marta slapped her open palm once on the fir plank, rattling the tin mugs.

"Three weeks," she told Julian and Lia. "And hear the catch right now: until those lead nannies follow a bell blindfolded, you two walk the woods beside them every cold morning at six with mineral pans and hoof picks. No sitting warm in the radio shack watching dots on glass."

Julian looked across the lantern light without flinching. "Six o'clock."

Three weeks later, the first hard killer frost turned every tussock in the home meadow stiff and white under a cloudless dawn sky. Nearly a hundred neighbors stood bundled along the split-rail barnyard lane with frost riming their scarves, breath hanging white in the dead-still air.

Over the prior forty-eight hours, Silas, Jace, and Julian had packed twenty wax-sealed cedar sound boxes two miles up through the oak and hazel coppice, strapping them twelve feet high on trunk forks out of reach of rubbing horns.

Down by the open timber gate, Lia stood in thick wool mittens holding her slate. Her nose was bright pink with cold as she glanced sideways at Marta. Marta leaned on her hazel crook and nodded once.

Lia tapped the trigger icon.

For eight seconds the only sound in the basin was a crow cawing from the Foundry roof. Two hundred sheep and goats kept nosing frozen clover stems near the water trough.

Then a single low, resonant note drifted down out of the bare oaks, a recorded wooden marimba bar tuned to low C and amplified softly by the hollow cedar chest until it carried

cleanly through the cold trees.

Across the frosted grass, forty heads came up at once. Old Meg, a heavy hornless nanny with a notched left ear, turned squarely toward the upper gate and tested the air.

Four hundred yards deeper in the timber, a second cedar box answered a fifth higher, repeating the slow two-note call.

Old Meg gave one short bleat and walked unhurriedly through the open gatepost toward the woods. Behind her, wool brushing wool in a wide, rustling stream without a single shout or barked command, two hundred animals poured smoothly across the frost line and up among the oak trunks, two big white Maremma dogs trotting flank-wide with plumed tails high.

Julian stood bare-handed beside the gate hinge as the tail of the flock passed. A heavy pregnant ewe cut close around the post and brushed hard against his hip and open fingers, leaving warm grease-lanolin shining across his palm. Julian looked down at his greased fingers, blinked rapidly twice against the cold air, and shoved both hands deep into his coat pockets instead of wiping them off.

Marta crunched past him up the frozen wheel rut, tapping Julian's elbow once with the butt of her crook. "Close the lower gate behind you, dockhand. Fresh salt pans need setting at Box Four."

Julian cleared his throat, pulled the wooden latch bar open, and fell into step up the wooded trail behind her.

Late that night, long after dish crew had locked the kitchen doors, Elara sat beside Silas on the frosty timber steps outside the carpentry shop with one shared wool blanket draped across both pairs of knees. Half a mile up the dark hillside, a single faint cedar note sounded twice at ten-minute intervals where the flock was bedded down under the pines.

Silas had a block of red cedar braced against his thigh, paring thin pink curls onto the gravel with his pocketknife.

"Ice storm in January's going to crust over half those little solar panels," Silas observed, turning the block to check

the grain. "And a windfall limb's bound to smash Box Nine before February. Somebody'll be snowshoeing uphill with a ladder every week."

"Julian asked Marta for snowshoes out of quartermaster stores after supper," Elara said, resting the side of her head briefly against the thick wool of his shoulder.

Silas paused his knife blade mid-curl, grunted softly, and went back to paring wood into the dark.



10

# The Politics of Collapse

The east wind coming over the ridge no longer smelled of pine duff or wet slate. Thirty miles down the basin, the coastal metropolis was burning whatever would catch, and the afternoon thermals carried the flat, sour reek of melted PVC, stale diesel, and scorched copper wire straight across the timberline.

Elara stood on the plank deck of Watchtower Two with a pair of scratched marine binoculars pressed to her eyes.

Beside her at the oak rail, Silas had his coat collar turned up past his ears, mud dried gray up to the ankles of his greased boots.

Through the eight-power glass, brown haze lay trapped beneath the November inversion layer across the lower plain. Over the past six weeks the municipal grid had stopped failing by neighborhood and started failing by district; blacked-out tower blocks stood cold beside smoking commercial strips where fires had burned themselves out for lack of water pressure. Eight-lane highway viaducts that used to move ten thousand refrigerated trailers a week sat empty save for stalled cars pushed onto the shoulders and long dark strings of figures walking north along the breakdown lanes.

"Southside treatment plant went dark," Silas said, squinting bare-eyed against the glare at the river mouth. "That black column near the rail yards isn't house lumber. Somebody's burning tire piles near the port, and the substation by the bridge just blew another oil bushing."

Elara lowered the binoculars, cold brass stinging the skin under her eyebrows, and pulled back her wool cuff to check her forearm slate.

Across the e-ink map, their bioregional network looked nothing like a county chart with a courthouse in the middle. Hundreds of small creek farms, timber camps, dock cooperatives, and neighborhood machine shops overlapped in tangled rings of watershed pacts, tool shares, and clinic circuits so dense nobody had ever drawn the whole thing on one sheet of paper. Right in the middle, their own creek valley showed steady amber. Along the southern highway approaches, however, red request markers were stacking up faster than the dispatchers could clear them.

"Four hundred and ten people walked up to the South Fork road stations yesterday," Elara said, scrolling down the intake log. "Soup crews emptied every kettle twice and sent families toward the county fairgrounds shelter over the spur. Word came back an hour ago that the fairgrounds flooded its latrines and state troopers locked the chain-link gates at

gunpoint. Every soul they turn around on Route Nine is going to walk straight back up our grade before dark."

Silas looked down from the horizon. Soot from Tuesday's furnace repair still darkened the creases beside his mouth. "We don't have the carry for thousands, Elara. Even after fermenting the trampled carrots from the east garden, our root cellars sit nine days above bare March rations. Open the lower gates to an unchecked rush and we eat next spring's seed potatoes by New Year's."

Elara didn't argue the math; she had spent the last two nights awake in the basement running bushel and kilowatt curves until her eyes blurred. In their shared ledger, local survival floors weren't up for polite debate. Once stored grain or battery reserves hit the winter survival line, automated cutouts dropped workshop feeders and external transfers to keep cabin stoves and clinic sterilizers running.

"Nobody's talking about letting crowds trample the seed sheds," Elara said, watching a thin gray smear drift higher above the distant highway cut. "Still, if twenty valleys bolt their gates while families freeze in the road ditches outside, we're no different from the gated subdivisions up on Bellevue Hill. Only difference is we wove our own coats."

"Coats don't stretch across ten thousand backs," Silas said quietly. He tapped the oak rail once with his mitten. "Flatbed's charged at the lower shed. Half the regional speakers are already parked down at the crossroads mill."

Three miles down the river junction stood the cavernous timber-and-iron shell of the old Weyerhaeuser sawmill, abandoned thirty years back and patched over time into neutral ground for watershed assemblies. Crews had laid two big brick rocket-stoves at either end of the concrete slab and stuffed them with dry alder splits, though thirty feet overhead the November wind still rattled loose tin sheets along the monitor roof.

Nearly ninety delegates sat on rough-sawn fir benches arranged in a wide oval, smelling of whichever country they had

driven out of that morning. Near the west stove sat Thorne and the speakers from the Highland ridge fellowships, sheepmen and wind-turbine mechanics whose oiled wool smelled of wet snow and pine tar. Behind Thorne's bench sat Harken and three stone-faced foremen from the high Iron Creek mining and timber camps near the pass, their heavy canvas coats dusted with gray rock flour. Across the slab sat the Riverine barge-landing crews smelling of pike smoke and willow silt; Malik and four Coastal Port machinists with salt crusted on their cuffs and rags wrapped around cracked knuckles; Priya and five exhausted organizers from the Urban Retrofit blocks who had ridden electric cargo bikes out through the city's dead streetcar tunnels before dawn; a cluster of prosperous orchardists from the Northern Plateau; and Brenner from Blackwood Siding, the old rail-spur machine yard out on the dry eastern flats.

Elias, oldest of the central creek farmers, walked out to the middle of the sawdust circle and struck a hung truck-rim twice with a ball-peen hammer. Iron rang clear up into the trusses.

"We'll skip roll call," Elias said, his hoarse voice carrying across the concrete. "Everybody drove past the highway columns getting here. City water pressure failed below Fortieth Street on Sunday, state relief depots closed their gates at noon today, and seven times our October estimate hit the southern way-stations since Monday morning. Floor is open."

Alder knots popped loudly inside the east firebox.

Thorne stood up first from the Highland bench. Tall and spare in a mended sheepskin vest, her gray hair cropped short above pale eyes, she governed a string of rocky ninety-day-season valleys where late May snows killed careless orchards.

"On behalf of twelve Northern Ridge fellowships, we are posting notice under the Local Floor clause," Thorne said, her voice flat and unhurried.

Nobody murmured; every apprentice learned that clause before signing their first workshop card. No assembly, trade ring, or emergency vote could compel a settlement to ship

out food, fuel, or medicine once its own winter survival floor was threatened.

"Effective six this morning, our pass gates closed to unscheduled foot traffic," Thorne continued, looking levelly around the oval. "We have pulled our winter barley and hydro margins off the open clearing board until April thaw. I advise every watershed in this building to lock its surplus lines tonight before panic on the highway drags the whole region down into the ditch with the city."

From the row behind her, Harken leaned forward on his knees. "Iron Creek and Upper Crag say amen to that, and go one better," the mine foreman called out harshly. "Why dance around half-measures? Any camp with sense ought to file formal exit papers tonight, sever outside clearing accounts completely, and keep every ingot and cord of fuel inside its own canyon till spring."

"You're talking about watching families freeze twenty yards outside our cattle guards," Priya said sharply from the city bench, dark hollows bruised deep under her eyes. "My block kitchens on Twelfth Avenue fed nine hundred kids oatmeal thin as dishwater this morning! We aren't asking you to import two million strangers into your sheep barns, Thorne. Give our urban blocks dry grain, water-filter candles, and surgical gauze, and we can organize neighborhood triage right inside the apartment shells so half those families never take to the highway in the first place!"

"Put hot porridge out on Twelfth Avenue on Monday and fifty thousand starving people will tear your cellar doors off by Wednesday," Brenner barked from the eastern rail-spur bench. Small-eyed and thick through the neck, he slapped his thigh with his cap. "Out at Blackwood Siding we've got freight tracks leading straight out of the metro yards to our shop fence. Yesterday two hundred stragglers tried camping under our water tower. My shop committee didn't wait for no sixty-day cooling-off clock or eighty-percent double ballot; we padlocked the siding gate at sundown and turned off the outer standpipe."

Dead quiet dropped across the center benches.

Elias lowered his hammer slowly to his side. "You shut water off at an outer sanctuary tap without an eighty-percent household vote, Brenner?"

Brenner's chin came up, color mottling his neck. "Easy for river farmers to quote founding parchment! Our diesel's down to forty drums and we feed our own lathe crews first!"

"Cross the sanctuary floor by committee decree and the review panel strips your network keys inside a week, Brenner," Malik said coldly from the Coastal bench. "Don't come crying to the harbor machine shops when your switch engines throw a rod." He held up one oil-bandaged hand toward the rest of the circle. "Same time, Thorne isn't wrong about raw volume. Down on the sound, unpaid coast-guard crews already tried boarding two of our kelp barges looking for diesel. Broadcast an open invitation to the metro basin and ten thousand desperate souls hit our piers by Sunday night. Our transformers would melt inside an hour."

On the bench beside Thorne, two orchard stewards from the Northern Plateau leaned their heads together over a slate; Elara caught one of them muttering about raising local orchard cover-crop reserve numbers before midnight and posting *No-Transit* markers on the ridge grade so refugee vans couldn't even cross their gravel roads.

Elara stood up from the central bench. Drafts off the cold concrete bit straight through her damp wool stockings.

"Nobody in this mill is proposing we tear our fences down or raid anyone's children's grain," Elara said, pitching her voice straight across the sawdust ring to Thorne and Harken. "Look two months past December before you start cutting lines, though. Harken, what happens in February when rock-drill armatures burn out at Iron Creek and your camp has no copper winding wire from Priya's salvage crews? Thorne, whose kilns supply the orchard char your thin mountain dirt needs in April, and whose Foundry pours replacement bearing races when winter gales crack a turbine shaft on East Peak?"

Thorne didn't blink. "We carry spare stock for one win-

ter."

"And what about the winter after that, once every bridge between us is burned?" Elara stepped out onto the concrete apron, pulling her slate off her forearm. "The city thirty miles south didn't collapse because people got hungry; it collapsed because every company and suburb hoarded behind private walls until the whole supply web snapped! Lock ourselves into fifty little mountain bunkers tonight and the state receivership courts will pick us off one valley at a time come spring."

She walked to the freestanding slate-board near Elias and clipped her cable lead onto the projector terminal. A stark chalk-white schematic lit the plywood screen: staggered roadside intake stations five miles apart along the county approaches, each capped at forty beds.

"We meet the road column in small, metered pockets before it bunches into a mob," Elara said. "Forty people per station: hot soup, delousing, frostbite care from the medics, and clear two-way agreements to join supervised forestry, salvage, or ditch-clearing crews before moving inland by tens and twelves across twenty watersheds. Spread across all ninety settlements in this hall, no single granary drops within ten percent of its safety floor."

"And state troopers?" called an orchardist from the Northern Plateau, arms folded tight. "Put forty-bed camps along Route Nine and the governor's emergency marshal declares an unlawful assembly and seizes every van with a valley stencil on the door!"

"Don't stencil a single banner on them," Elara answered immediately. "We already hold thirty separate agricultural labor co-op charters, county brush-clearing registrations, and salvage hauling licenses across three counties. Paper every roadside camp as an ordinary seasonal contract crew under dull corporate filings. State agencies know how to raid one big protest camp; they choke on thirty boring tax IDs filing routine compliance forms."

Harken spat into the sawdust beside his boot. "Clever

lawyer tricks won't put porridge in a miner's belly when ten thousand city mouths show up anyway. Iron Creek isn't signing a single pound of ore or cordwood into highway soup pots."

Thorne stood up again, her shadow stretching long between the brick stoves. "The founding compact leaves every watershed sole judge of its local floor, Elara. Northern Ridge passes stay shut. Furthermore, if central valleys attempt to draw on shared regional emergency pools for highway camps without unanimous highland consent, our twelve fellowships will pull our relay repeaters off the spine and close clearing channels altogether."

Nobody spoke for five full seconds. Without highland repeaters and cross-basin clearing, river barges stopped trading grain for timber, coastal clinics ran out of mountain willowbark painkillers, and machine parts stayed stranded fifty miles from broken pumps.

Beside Elara, Silas got slowly to his feet. He didn't step into the ring or raise his voice, just stood with his thumbs hooked in his belt looking straight at Thorne.

"Your own linemen helped us string that ridge cable through waist-deep snow four winters back, Thorne," Silas said evenly. "Cut that wire out of panic tonight, and half the people in this building won't trust your word next time an ice storm takes your transformers out."

Thorne's gaze flickered once toward Silas's singed jacket sleeve before hardening again. "My first oath is keeping highland children breathing till May, Silas."

For five more hours the argument ground back and forth across the chilling mill as daylight died behind the high windows and lantern smoke thickened under the rafters. Elara walked bench to bench until her voice went ragged, showing orchardists and river skippers exact bushel margins on her slate. Half listened; half stared past her shoulder toward the unseen glow on the southern sky.

Without a sheriff or an army, no council could compel a single signature.

When Elias finally struck the iron tire-rim at midnight to adjourn, the floor had split into jagged pieces:

Thorne's twelve Northern Ridge fellowships kept their passes shut and their surpluses frozen behind local-floor notices. Harken's three Iron Creek mining camps walked out the west doors twenty minutes early without shaking a single hand, muttering openly about filing permanent exit notices by morning. Out on the eastern bench, Brenner left promising Blackwood Siding's gates would stay padlocked regardless of what any review panel ruled. And the five Northern Plateau orchard delegates slipped quietly out to their trucks already tapping new reserve numbers into their slates.

Only the central creek valleys, the Riverine barge towns, and Priya's battered urban blocks agreed to staff and supply the highway way-stations directly, with Malik's Coastal Port crews promising covert night barges of tarps, fish oil, and hardware while keeping harbor gates shut by day.

Outside in the gravel yard, freezing wind drove dry ice pellets sideways across the parked flatbeds and cargo bikes. Silas unplugged their heavy charging lead from the mill post, coiled the stiff rubber cable into the truck bed without speaking, and climbed behind the wheel.

Inside the dark cab, their breath frosted the inside of the windshield before the defroster fan began to click. Silas rested both gloved hands at ten and two on the cracked plastic wheel without turning the key right away.

"Iron Creek's holding back our autumn alloy pack train if Harken files exit papers," Silas said quietly, staring into the black alders beyond the headlights. "And without Northern Ridge hydro backing us up, running heaters for fifty roadside tents is going to pull our creek batteries flat inside a week."

Elara leaned her head back against the cold vinyl headrest, eyes burning from stove smoke. Down the southern grade, a faint orange smudge still stained the underside of the clouds.

"Did we just promise warmth we can't generate, Silas?" she asked softly.

Silas switched the drive motor on; beneath the floorboards the inverter woke with a low, steady whine.

"Check the battery curve again on Thursday," he said, easing the flatbed out onto the rutted river road. "Tonight we string tent wire."



11

# The Federated Resolution

Four days of sleet and two thousand pairs of boots had churned the roadside pasture at South Fork into gray freezing soup that pulled rubber overshoes clean off people's heels.

Along a half-mile shoulder where the valley logging road met Route Nine stood forty-two canvas wall tents, six converted steel shipping containers, and three hoop-houses skinned in double-wall polycarbonate. Smoke from wet alder splits

hung low over the mud alongside the sour reek of city tire-soot steaming off wet coats inside the drying sheds.

Elara stood ankle-deep in slush outside Intake Container Two, waving a family of four wrapped in foil emergency blankets toward the soup hatch while checking wrist tags on her slate. Her fingers inside greased leather mittens ached up to the wrists.

Overhead, a porcelain cutout on Pole Four cracked like a pistol shot and spat blue-white sparks into the sleet.

"Silas!" Elara shouted as twenty exhausted arrivals under the soup awning ducked at once.

Forty feet up the creosote timber pole in spikes and a leather belt, Silas was already reaching across the cross-arm with long-handled insulated shears. Pushed forty percent past nameplate rating to feed the camp's resistance heaters, the salvaged municipal pole-pig was humming high and shrill. Sparks danced off Silas's rubber lineman sleeves as he clipped the blistered lead, wrenched the lug clear, and clamped a heavy braided copper jumper onto the secondary bushing. Immediately the arcing died back to a strained sixty-cycle drone. Silas leaned back against his pole strap for two breaths, steam rising off his wet flannel collar into the sleet.

Elara pulled back her coat cuff. Her forearm display didn't blink; it sat solid red across the top banner:

*LOCAL FLOOR WARNING: VALLEY GRAIN AND BATTERY RESERVES AT 46 HOURS TO AUTOMATIC CUTOUT.*

And the wider regional board looked uglier than Tuesday night.

Since the midnight breakup at the sawmill, the cracks across the bioregion had hardened in three different directions. Up on the Northern Plateau, five wealthy orchard and cattle hamlets hadn't bothered trying to repeal their sanctuary floor, knowing they could never win an eighty-percent household vote. Instead, Tuesday morning their clerks had inflated local soil-cover and winter hay reserve requirements by forty percent on paper so the shared formula reported zero exportable surplus, then posted *No-Transit* markers across

the plateau ridge road to block refugee vans. Yesterday afternoon, two regional watershed auditors had matched rainfall gauges and August barn tallies against the doctored entries and flagged the bad-faith numbers: automatic sanctions had already throttled the plateau's trade priority to the bottom of every workshop queue. Worse for the orchard bosses, nineteen of their own younger nurses, mechanics, and pruning hands, furious after watching shivering families with coughing toddlers turned back at the ridge gate in the sleet, had packed their personal tool rolls, invoked their individual right of exit, and walked down the mud grade to join Elara's intake tents an hour ago.

Farther north, Harken had made good on his threat. Wednesday at noon, Iron Creek and two neighboring high-crag mining camps had broadcast formal withdrawal notices across the spine, severing their regional treaties outright, freezing bilateral clearing accounts, and locking two tons of smelted vanadium-chromium alloy ingots and high-resin fuel briquettes behind snowed-in pass gates.

And out on the dry eastern flats, Blackwood Siding had crossed a line nobody had crossed since Year One. Refusing to reopen their outer water tap or hold a valid sanctuary ballot, Brenner's shop committee had been ruled in flat breach of the founding compact by a twelve-member sortition review panel drawn by lot across five watersheds. At dawn today, the network had revoked Blackwood Siding's trusted clearing keys altogether, dropping the rail-spur settlement outside the mutual-aid rings onto bare outsider terms.

"Forty-six hours, Elara," Elias said, coming up beside her with an empty oat-bread crate balanced on his hip, sleet crusted white in his beard. "Upper greenhouse loops dropped to forty-one degrees an hour ago because we're shunting every spare amp downhill to these tents. Two more nights of this draw and the safety relays trip automatically, or frost kills every winter kale bed on the terrace."

"Cut power to forty tents tonight in sleet and we carry bodies out at dawn, Elias," Elara said, rubbing snow out of

her eyes with the back of her mitten.

"Wait forty-six hours and the automated cutout drops them anyway while leaving our own batteries flat," Elias answered plainly. "River barges sent dried peas this morning, and those nineteen walkout kids from the plateau brought medical bags and strong backs, bless 'em, but beans and bandages don't spin turbines. Without Thorne's main highland hydro ridges in the loop, one creek valley can't heat three thousand people."

At the base of Pole Four, Silas unbuckled his gaffs and slogged through the churned mud toward them, his left coat seam scorched black where a hot copper drop had caught the wool.

"Transformer Two won't survive another forty-eight hours at this amperage even if the battery floor holds," Silas said, blowing on his stiff knuckles once he pulled his rubber gauntlets off. "Oil inside the can's boiling."

Elara stared down at the regional diagnostic feed scrolling beneath the red floor banner on her slate. Half a minute went by while sleet ticked hard against the screen glass.

"Wait," Elara said slowly, zooming in on the public maintenance beacons still pinging every hour from Thorne's twelve main Northern Ridge fellowships. "Thorne didn't follow Harken into full withdrawal. She only froze surplus clearing. And look at East Peak's repeater status."

Silas leaned over her shoulder, squinting through wet hair.

"Wind Turbines Four, Seven, and Nine on East Peak have been sitting feathered on mechanical brakes since Wednesday night," Elara read off the telemetry flags. "Low gearbox oil pressure and two blown pitch-controller cards. Their mountain creeks are spilling bank-full November rain over the weirs with nowhere to dump excess nighttime kilowatts, while thirty percent of their wind fleet sits dead for lack of coastal marine lube and salvaged city circuit boards."

Silas looked sideways at her. "By freezing clearing channels, Thorne choked off Malik's oil drums and Priya's electronics runners."

"And Iron Creek walking out cut Thorne's high-ridge camps off from valley grain barges just when early blizzards closed their north pass," Elara said. "Get on the sideband radio to Thorne, Malik, and Priya. Tell them to meet us in the Foundry at six tonight."

"Thorne walked out at midnight Tuesday swearing she wouldn't hear another word about charity," Elias reminded her.

"Don't mention charity," Elara said, already turning toward the charging shed. "Tell her we have forty salvaged pitch-controller boards and five drums of coastal gear grease looking for twenty megawatts of spilled night hydro."

At six o'clock, Elara didn't take the delegates to a cold crossroads barn; she brought them straight onto the iron floor plates of the Foundry while Furnace One and all four biochar retorts were running hot.

Steam billowed off sleet-stiff coats ten feet inside the thermal curtains. The bay smelled sharply of hot cast iron, coal tar, charring alder, and wet wool, while the heavy thud of the drop-hammer at the far end of the pit shook water droplets off the steel columns.

Only nineteen regional speakers stood around the chalked floor pit tonight. Harken's Iron Creek bench was empty; Brenner's Blackwood Siding keys were dead at the outer gate; and the five Northern Plateau orchardists were home arguing with half-empty clinics after their own young stewards walked out.

Thorne stood with her wet sheepskin slung over one arm, pale eyes rimmed red from four days of hand-winching feathered turbine blades in freezing sleet. Malik stood across from her with fresh tar bandages on three fingers, while Priya leaned heavily against a mold cart drinking hot salted tea out of a tin cup, brick dust caked into her eyebrows.

"Everyone on a radio knows your battery floor trips Saturday morning, Elara," Thorne called over the furnace blowers without preamble. "If you dragged us through freezing rain

to beg an emergency override on highland grain, save your breath. Harken already took three mining camps out of the compact entirely, and half my own elders wanted to follow him."

"Harken locked himself in a rock canyon with two tons of alloy steel and zero winter wheat or antibiotics," Elara answered evenly from the edge of the pit. "Let's see how warm metal keeps him in January. Meanwhile, Turbines Four, Seven, and Nine on East Peak have been sitting locked on dry gearboxes for thirty-eight hours, Thorne. How many more sleet storms before ice load snaps a stationary blade?"

Thorne's jaw tightened half a fraction; she didn't deny it.

"And Priya," Elara turned to the urban speaker, "your salvage crews have twenty crates of clean industrial pitch-controllers and breaker relays sitting in basement depots on Fourteenth Street, with zero charged battery trucks to haul them north because state troopers blockaded commercial diesel."

Priya set her tin cup down on the cart. "Thirty-two crates as of noon. Sitting in the dark."

"And Malik's coastal presses have twelve drums of heavy synthetic marine gear lube sitting on Dock Three while harbor runoff fouled their oyster flats and left two hundred dockhands short on flour and forged mooring cleats," Silas added beside the control stand.

Malik folded his arms. "All true. Still doesn't change the local floor rule, Elara. Nobody here has slack to write open checks to the whole basin."

"Then don't write a single open check," Elara said.

Silas threw a toggle on the crane pulpit. Overhead, the wide amber gantry display flickered alive, showing the eighty-odd remaining fellowships across the basin with red deficit markers and green surplus bars side by side. Three dark gray holes sat blank on the north and east edges where Iron Creek, Blackwood Siding, and the sanctioned plateau orchards had dropped out or been throttled.

"A majority vote forcing barns open would tear what's left of this Commonwealth in half tonight," Elara said, pointing

up at the three dark gaps on the map. "We already lost Iron Creek's alloy mines and Blackwood's rail yard this week, and we're going to feel every missing pound of vanadium steel before winter's out. What keeps the rest of us standing isn't charity or central decrees. It's closing a trade ring where every link clears simultaneously in escrow."

She picked up a stick of soapstone and drew five heavy arrows connecting chalk circles right on the iron floor plates at their boots.

"Link one: Thorne opens the East Peak tie-line tonight and routes spilled nighttime creek hydro straight down to Malik's coastal desalination and smokehouse pumps," Elara said, rapping the chalk line with the stone. "Link two: Malik puts six drums of heavy marine gearbox grease on the upriver tug for Thorne's wind crews, plus four tons of smoked herring and dried kelp onto barges bound for our South Fork highway kitchens."

She drew the third and fourth lines across the iron. "Link three: coastal fish feeds the highway tents, taking forty percent of the calorie draw off our valley silos while highland hydro takes the heater load off our creek batteries. Link four: our Foundry pours forged dock cleats for Malik's piers and sends two fully charged electric flatbeds loaded with fifty bushels of hard red wheat down the back logging roads to Priya's urban kitchens. Link five: Priya's crews eat, load those same flatbeds with thirty crates of salvaged pitch-controller boards and copper busbars, and run them straight up the ridge road to Thorne's wind techs."

Elara straightened up, tossing the soapstone catch-hand. "Automated escrow switches verify every leg at the boundary. If one barge or kilowatt-hour fails to clear, no settlement's local floor gets drawn down by a single ounce. Nobody bleeds dry; everybody gets the missing part choking their own bay."

For ten seconds only the drop-hammer thumped down the hall.

Thorne stepped forward to the edge of the soapstone diagram, looking down at the five linked arrows and then up

at the three dead gray holes on the overhead map where Harken's camps had vanished into winter silence. Engineers up on the ninety-day ridges knew what happened to isolated trusses when wind shifted.

"Escrow relays trip automatically before touching highland barley reserves?" Thorne asked quietly.

"Hardwired at your own substation breaker, Thorne," Silas said. "Your linemen hold the physical disconnect key."

Malik pulled his oil-stained slate from inside his pea coat. "Going to take some ugly arguing to settle swap ratios between kilowatt-hours, herring barrels, and forged dock iron."

"Kettle's hot on Retort Two," Elara said, wiping soot off her chin with her sleeve. "Pull up a crate."

For five grueling hours, mud-caked linemen, barge skippers, urban electricians, and millwrights crowded around sheet-iron worktables with soapstone and slates, haggling line by line over barge drafts, night-tariff kilowatt blocks, drum weights, and back-road truck schedules around state patrol checkpoints.

By eleven-thirty, thirty-four linked bilateral pacts were typed into the clearing queue:

*Pact 08: Northern Ridge East Peak delivers 600 kWh nightly off-peak to Harbor Substation Three; Harbor Press Two ships 240 liters heavy gear lubricant upriver Tuesday.*

*Pact 22: Valley Foundry casts 1,400 kg structural dock iron for Harbor Pier Seven; Harbor Smokehouse Four lands 1,800 kg cured herring at South Fork Landing.*

One after another, nineteen speakers stepped to the main terminal and pressed their signing fobs to the reader. Last in line, Thorne paused with her hand over the glass, glanced once more at the blank gray patch on the northern border where Iron Creek had cut itself loose, and pressed her key firmly down.

"Close the loop, Elara," Thorne said.

Elara keyed her counter-signature and threw the clearing latch.

Three seconds passed while substation nodes across sev-

enty miles checked every local survival floor. Green clearances cascaded down the right-hand column, with eighty-two percent of the Commonwealth locking into load share and routing cleanly around the three severed holes on the map.

Outside in the sleet, the shrill, tortured whine of the pole transformers dropped a full octave into an even sixty-cycle hum as highland creek current surged down the ridge tieline. On Elara's forearm slate, the forty-six-hour red floor warning winked out, climbing steadily back into safe amber.

Nobody cheered; people were too wrung out to waste breath. Delegates slumped onto wooden flask boxes with tin mugs of hot chicory, already comparing morning convoy times.

Silas walked over behind the terminal desk and leaned both forearms on the iron rail beside Elara.

"South Fork tent heaters are holding sixty-two degrees on highland hydro," he said quietly, checking his maintenance board. "Upper greenhouse pumps are back to full flow. Winter kale lives."

Elara let her shoulder rest briefly against his scorched sleeve, staring up at the gantry map. Bright green lines pulsed steadily from coast to ridge, yet up in the high crags and out on the eastern rail flats, Iron Creek and Blackwood Siding sat pitch-black and unreachable.

"Harken kept the autumn alloy train," Silas added in an undertone only she could hear over the blowers. "That hairline crack we found last week on Creek Turbine One's main runner: we won't have vanadium-chromium stock to recast it before deep freeze. Tobin and I are going to have to weld and cast patch blades out of salvaged truck-axle carbon steel tomorrow morning."

Elara looked at him sharply. "Will axle carbon hold if anchor ice hits the chute in January?"

Silas looked up at the dark northern gap on the screen, then down at his blackened knuckles. "Better than an empty scroll case," he said. "Just pray we get a mild January."



12

# Ignition and Echoes

When Elara and Silas pushed out through the Foundry's heavy canvas thermal curtains after midnight, the sleet had turned to thick, wind-driven snow. White drifts were already banking against the slag carts and burying the wheel ruts down toward the highway.

Neither of them spoke walking up the cinder path past the banked charcoal retorts. Six hours of haggling over kilowatt-hours and herring barrels on top of four sleepless days in the

mud had scraped them both clean out of small talk. Snow hissed sharply wherever flakes touched the hot iron stack collars. Ahead of them, Silas walked with a slight hitch in his left stride where the pole-transformer arc had burned through his wool seam that afternoon, dark smoke-grease still crusted behind his ear.

At the foot of the outside iron stair climbing the old textile mill to Silas's loft, Elara's numb boot missed the frost-slick second tread.

Silas's hand closed fast around her elbow before her knee hit the grate, holding her steady against the gust coming down the alley.

"Watch the rime on the nosing," he said, his voice rough from five hours of foundry smoke.

Elara didn't step back when she got her footing. Under the single amber bulkhead lamp above the landing, snow caught in his eyebrows and dark beard. For three years they had kept an unspoken half-arm's length between them in every workshop and council hall, careful never to tangle personal hunger into shared work while fifty households depended on them staying level-headed. Tonight, looking up at the burn mark along his coat and the exhausted lines cut deep beside his eyes, she didn't have the strength left to step back onto her own tread.

Silas didn't let go of her sleeve either. Turning the iron latch at the top of the stairs, he shouldered open the insulated plank door and drew her inside out of the wind.

The small loft under the mill rafters was warm from hot-water return pipes looped beneath the pine floorboards from the dye-house boiler below. Mycelium wall panels hushed the gale outside down to a dull rush, and the room smelled of boiled linseed oil, dry cedar shavings, wool grease, and iron filings from the neat rack of chisels over Silas's bench.

Elara dropped her snow-stiff coat onto the peg by the door. When Silas shrugged his left arm out of his singed jacket, his breath hissed sharply between his teeth; he caught himself with one palm against the corner of the workbench,

color draining under the soot on his cheekbones.

"Sit on the bed," Elara said, crossing the narrow rug in two steps. "Let me see your side."

"Just flash through the seam," Silas muttered, though he didn't move away when she reached for the heavy brass zipper of his coveralls.

"Sit down, Silas."

He sat heavily on the edge of the low timber bedstead. Elara worked the stiff brass teeth down past his sternum and eased the scorched canvas off both shoulders. Across his collarbones and forearms lay old pale scars from twenty years of steel and line work, and low along his left ribs a palm-sized patch of skin stood angry red and blistered where copper flash had punched through wet wool.

At the washstand she poured cold pitcher water over a clean linen square, picked up a tin of yellow calendula-and-honey salve from the shelf, and knelt between his boots.

"Cold water first," she warned quietly.

The moment wet linen touched raw skin to lift the soot out, every muscle across Silas's stomach and ribs locked hard; he gripped the edge of the mattress plank without making a sound.

"Almost clear," Elara murmured, dabbing lightly instead of wiping.

"Keep going," Silas said, his voice low and tight. Looking down at the top of her head, his thumb brushed once against the edge of her collarbone where her flannel collar gapped. "Keeps me in the room."

Elara paused with the open salve tin in her palm and looked up. His face was ten inches above hers in the dim glow off the stove grate.

"Where were you up on Pole Four this afternoon?" she asked quietly. "Right after you clamped the jumper, before you climbed down."

Silas looked past her shoulder at a dark pitch knot in the floorboards. Under the floor, hot water ticked softly through a copper elbow.

"South Precinct Substation Twelve, down in the metro," Silas said after a long silence. "Seven Novembers back, right before I walked out. Freezing chemical rain coming sideways off the bay, forty miles an hour. I was working high-voltage tower crew for Meridian Grid."

Elara warmed two fingers of salve between her palms and laid it gently across the red burn along his ribs, letting him talk at his own speed.

"District management had cut rigging budgets three quarters running," Silas said, eyes still fixed on the pine knot. "Swapped forged steel carabiners out for cheap die-cast zinc-alloy clips from an offshore liquidator and called it supply-chain optimization. Marcus, a twenty-four-year-old kid I'd trained for two years, was out on the wet cross-arm beside me jumpering a cracked porcelain bell before evening peak."

Silas's fingers dug into the rough wool blanket on his knees. "His boot kicked out on wet frost. Primary lanyard took his weight for half a second, then that cheap cast clip snapped clean across the gate. Sounded like a twenty-two going off in the rain."

Elara's hand stilled warm against his unburned ribs.

"I got both hands around his secondary tail before he cleared the lower brace," Silas said, so softly she barely heard him over the wind on the roof. "Wet three-strand poly. Burned straight through soaked elkhide gloves and took the skin off both my palms before I could snub a wrap on the angle iron. Felt the tail whip out of my fingers. Two hundred and ten feet straight onto concrete."

He looked down at her then, eyes dark and dry and wide awake. "Walked into division safety the next morning with my hands wrapped in gauze and dropped the two halves of that cast clip on the superintendent's blotter. Nobody in the room would say Marcus's name out loud. Company counsel had already flagged the incident number under 'unforeseeable weather slip' and mailed his wife a credit voucher for ninety days of residential kilowatt service. Ninety days of lightbulbs for a twenty-four-year-old kid's spine."

His chest rose hard once beneath her palm. "Every time a pole pig screams in sleet like today, I feel wet poly burning out of my grip. Swore if I ever strung wire again, no bean-counter behind glass was ever going to decide whose life penciled out."

Elara reached up with her clean hand and rested her palm flat along his unshaven jaw, her thumb rubbing a dry smudge of carbon off his cheekbone.

"Nobody fell today, Silas," she said quietly. "Every kid down at South Fork has heat tonight because you stayed on that cross-arm."

Silas closed his eyes and leaned the heavy weight of his head into her palm, letting out a long, ragged breath through his nose.

Rising off her knees between his boots, Elara pressed her forehead against his temple, breathing in scorched wool, pine resin, and salt sweat.

"You don't have to hold the pole up in your sleep too," she whispered against the corner of his mouth.

She kissed him first, slow for half a breath and then hard and open-mouthed as three years of biting back every touch in crowded kitchens and forge bays gave way at once.

A low sound came out of Silas's throat. Both hands came up around her waist, careful of the salve on his left side yet pulling her straight onto his lap before standing and lifting her up against him. His beard scraped rough across her chin and throat; his mouth was hot, tasting of bitter chicory tea and salt. Elara tangled both hands into the damp hair at the nape of his neck and kissed him back until neither of them had breath left, backing blindly half a step until his calves hit the timber rail and they went down together across the wool blankets.

Elara fumbled at the horn buttons of her own damp flannel shirt, shoving wet wool and thermals off her shoulders because another layer of cloth suddenly felt intolerable. Yet the instant Silas's warm, rough palm slid bare across her ribs to pull her flush against his chest, a trapdoor gave way inside her own memory, cold fluorescent light slicing right across the

dark loft.

*Twelfth floor, Municipal Resource Allocation.*

Six winters ago, sitting in dry wool slacks behind dual monitors that smelled of toner dust and lemon sanitizer while sleet ticked against triple-paned city glass. She hadn't worked two hundred feet up in freezing rain like Silas; she had worked in a heated cubicle where people froze cleanly by row number.

*Account Cluster 442-B: 92 Days Delinquent. Execute Automated Steam-Valve Lockout? [Y/N]*

Through a grainy thirty-second hardship-appeal window in the corner of her monitor, a woman in her twenties had held a coughing two-year-old wrapped in a winter parka up toward a cracked phone camera, white breath puffing visibly inside a dark kitchen as she begged for seventy-two hours until a delayed warehouse check cleared.

And Elara remembered her own eyes flicking up to the yellow probationary metric blinking beside her employee ID. One more manual winter deferral dropped her below ninety-four percent compliance and revoked her transfer out of collections, the transfer she needed to keep Gabe's pediatric coverage intact. Tell yourself the supervisor two desks down will just approve the batch at five o'clock anyway. Tell yourself you don't own the boiler.

Her index finger had clicked *Confirm* with a tiny, polite plastic click.

*Valve Lockout Queued.*

She had never learned whether that toddler made it to March. She had sat on the clean end of the exact machine that dropped Marcus onto substation concrete.

A harsh, dry sob wrenched straight out of Elara's ribs before she could bite it down, her whole body jerking once beneath Silas's weight.

Silas checked instantly, propping himself up on both forearms above her, eyes wide in the stove light. "Elara, did I lean on—"

"No," she gasped, hooking both arms hard around his neck and dragging him back down against her, pressing her

face into the hot hollow between his jaw and collarbone so she wouldn't have to see white fluorescent glass in the dark. "Don't stop. Please don't pull back from me."

Tonight she couldn't say *Cluster 442* out loud, not yet; she only needed skin, weight, and the living heat of him to scour six-year-old office frost out of her marrow.

"Stay right here, Silas," she whispered against his pulse, voice shaking. "Please."

Silas didn't ask a single question. Shifting his weight off his burned left ribs onto his right forearm, he slid one broad hand beneath the small of her back and pulled her up against him skin to skin, kissing her damp eyelids, her jaw, then her mouth until her shivering turned into a completely different kind of tremor.

Restraint burned clean off them both. Elara kicked the last tangle of canvas trousers free of her ankles and locked her heels behind his thighs, nails digging hard into the heavy muscle across his shoulders as he pushed inside her with a low, broken groan against her ear.

Nothing gentle or tentative stayed between them; the timber bedstead creaked rhythmically against the pine wall as Elara arched up to meet every slow, driving thrust, mouth open against his throat, tasting salt on his skin while heat built low and blinding in her belly. Outside the rafters a winter gale tore across dark miles of broken highway, yet inside the blankets there was only the slick friction of two tired, weathered bodies refusing to stay cold a minute longer, holding tight onto each other as the tension coiled intolerable and broke through them both at once in ragged, muffled cries against each other's shoulders.

Afterward, neither moved for a long time. Chest still heaving, Silas rolled onto his unburned right side, keeping one arm tucked under her neck and pulling two heavy grey wool blankets up over their slick backs against the draft off the floor.

Under the pine planks, boiler return water gurgled quietly on its night loop. Down at South Fork three miles south,

forty wall tents hummed warm on highland current; forty miles north in the crags, Harken's dark pass sat sealed under three feet of fresh drift.

Silas's thumb moved slowly, absentmindedly back and forth across the curve of her hipbone.

Elara stared at the dim orange chink of coals behind the stove damper until her breathing finally slowed to match his. Nothing outside this room was settled: the alloy pack train wasn't coming, Creek Turbine One had a hairline fracture waiting under black water, and state marshals were still counting roof tarps along Route Nine. Still, as Silas pressed his chin lightly against the crown of her damp hair and fell asleep first, her eyes finally stayed shut without seeing a glowing city screen behind them.



13

# Maintenance and Entropy

Two weeks into January, the temperature dropped to nine below zero and stayed there.

Elara woke before dawn in Silas's mill loft to the quiet tick of cooling copper under the floorboards and the weight of Silas's arm across her waist. Outside the mycelium-insulated rafters, a dry arctic gale hammered sleet and ice pellets sideways against the tin siding. Even under two heavy wool blan-

kets, cold drafts crept around the window sash and bit the tip of her nose.

Careful not to bump the healing burn scar along Silas's left ribs, Elara eased out from under the covers and pulled on thick wool long-johns, greased canvas trousers, and two sweaters in the dark. Ever since Silas and Tobin had bolted the patched runner back into Creek Turbine One after New Year's, using replacement blades cast from salvaged highway truck-axle steel because Harken's Iron Creek mines had kept the autumn vanadium-chromium ingots locked behind their pass, Elara had woken up listening automatically for the faint sixty-cycle hum through the wall studs.

As she bent to pull her bootlaces tight, the yard bell let go.

Hung from the steel tower outside the machine shop, the salvaged locomotive bronze boomed fast and flat under its trip-hammer, vibrating straight up through the pine soles of her socks. Overhead, the loft bulb flickered twice, dropped to dim orange emergency voltage, and stayed there as the battery house picked up the dead bus.

Silas rolled off the mattress in one motion, reaching for his insulated bibs before his boots even hit the planks.

"Gorge feeder dropped flat," he said, voice thick with sleep as he shoved his arms into his coat. "And East Peak's ridge tie-line must have iced out in the pass."

Downstairs, opening the heavy storm door took both pairs of shoulders against the wind. Horizontal snow stung their cheeks like coarse sand. Twenty miles south beyond the hills, the sky over the city hung pitch-black without a single streetlight glow; out here in the creek basin, amber battery lanterns marked the footpaths toward the river trailhead.

Outside the upper rigging shed, eight people were already crowded under the eaves in headlamp beams, breath puffing white and fast. Two shouting voices cut sharp across the wind before Elara reached the steps.

Elias, who tended the root cellars and seed vaults, stood nose to nose with Mara from the South Fork refugee shelters,

while veteran machinist Tobin stood beside an open breaker box slapping snow off his leather gauntlets.

"Read the discharge meter, Mara!" Elias yelled, snow caked white in his eyebrows. "With East Peak's line down in the blizzard and Creek One offline, the salt batteries won't hold forty minutes at full heater load! Drop the seed-vault temperature below thirty-four degrees and frost bursts every sprouted potato eye and grafting scion we saved for April! Cut the highway tent circuits now!"

"Cut heat to South Fork in nine-below wind and fifty people with city lung-rot don't wake up at daylight!" Mara shouted back, grabbing the front of Elias's coat with one mitten. "Twenty kids walked into Tent Six Tuesday with black frostbite on their heels! We aren't freezing sick children to save potato eyes!"

"Lose spring seed stock and three hundred people starve in October, Mara!" Elias yelled.

"And if the glycol loop in the machine bay freezes solid while you two scream at each other, it splits every lathe coolant jacket on the floor!" Tobin barked over both of them.

Elara stepped straight between Elias and Mara and pushed one gloved palm flat against each chest until they gave half a step.

"Save your wind," Elara snapped. "Both of you."

"Elara, the amp draw—" Elias started.

"I can read an amp gauge, Elias," Elara said, holding his eyes in the headlamp beam before looking at Mara. "We aren't pulling the breaker on Tent Six, and we aren't freezing the seed cellar. What does the gorge wire show, Tobin?"

Tobin blew hard into his cold mittens. "Heavy log strike knocked the intake grate loose ten minutes ago. De-icing strip shorted out on impact, anchor ice packed the bars, and the shaft's stalled dead."

"Then we go down the bank, pull the log, and get water turning again before the battery floor trips," Elara said, already unhooking a climbing harness from the pegboard.

Silas slung fifty feet of three-quarter-inch bull rope over

one shoulder and handed Jace a five-ton chain hoist and two iron cant hooks. "Elara, Tobin, Jace, Mara, on me. Elias, go manually throttle cabin heat loops down to forty-eight degrees across the upper village to buy us twenty extra minutes on the battery bank. Move!"

Scrambling down the switchback gorge trail took ten minutes on hands and heels through wind-scoured ice crust. At the bottom, the narrows roared black and deafening between snow-plastered basalt walls. Chunks of white river ice the size of tabletops ground past in the flood current, slamming rhythmically against the half-submerged concrete nose of Turbine House One.

Wedged butt-first between the bent iron trash bars sat a thirty-foot windfall hemlock trunk, glazed in four inches of solid river spray that had cemented the intake gate shut.

Working by headlamp beams without wasting breath, Silas and Jace lashed twin anchor slings around two old-growth firs rooted in the bank rock while Tobin shackled the chain hoist between the tree bridle and the iced hemlock butt. Nobody owned drysuits; oiled wool and canvas gave a body four minutes in thirty-two-degree water before hands stopped obeying.

"Chain hoist won't pull that butt sideways while the gate latch is wedged under glare ice," Silas shouted into Elara's ear, pointing his light at the submerged side housing. "Somebody's got to wade out on a tether, chip the collar off the lower hinge spike, and pull the pin while we take strain on the log."

"My shoulders fit narrower between the wing walls," Elara shouted back, already clipping her waist harness onto the upstream safety line and checking the lanyard on a four-pound steel mash hammer.

Silas looked once at the black water churning past the concrete sill, checked the double figure-eight knot at her waist with his bare thumb and forefinger, and slapped her shoulder once. "Haul on your wave!"

Elara stepped off the shelf into the river.

Cold punched clean through two layers of wool and canvas in half a second, knocking the breath out of her throat in a sharp gasp. Thigh-deep black current tore sideways at her knees as she leaned upstream into the tether and jammed her hobnailed soles between slick cobbles. Ten feet to her left, Jace and Tobin waded knee-deep into the eddy spray together to hook the heavy iron grab-tongs deep into the frozen bark of the hemlock trunk before scrambling back onto the slick ledge beside Silas and Mara at the hoist lever.

Reaching the concrete cheek of the intake box, Elara plunged both arms past the elbows into black water. Within fifteen seconds pain stopped and her fingers turned to clumsy wooden pegs. Four inches beneath the surface, solid glare ice entombed the ring-head of the main iron hinge pin.

Unhooking the mash hammer, she took one lungful of freezing spray, ducked her head and shoulders completely under the roaring surface, and swung blind against the ice collar.

Water clamped around her skull like an iron band. Once, twice, three times she hammered steel against submerged ice, feeling dull shocks jar up her numb wrists. On the fifth blow the ice shell fractured. Dropping the hammer onto its wrist cord, she wedged stiff fingers into the split, wrenched two slabs loose from the iron eye-bolt, and broke surface gasping through clicking teeth.

"Pin’s bare!" Elara yelled, hooking both wrists through the submerged iron ring because her fingers could no longer feel their own grip. "Take strain on the trunk!"

Up on the rock shelf, Silas, Jace, and Mara threw their combined weight onto the long cheater pipe of the chain hoist while Tobin worked the ratchet pawl, guiding the slack chain clear of the iced sprocket. Iron links groaned taut above the white water; wet bark shrieked as the hemlock butt eased two inches back off the trash bars.

"Pull it!" Silas roared over the chute.

Bracing both boots flat against the submerged concrete sill, Elara threw her back straight backward into her safety

tether. Frozen iron screeched against its socket, hung for one sickening beat, and tore upward out of the lug.

Freed of its pin, the heavy trash grate swung wide. In the same breath Jace kicked the cant hook clear as the main current caught the loosened hemlock root-wad and rolled the massive tree tumbling down the white rapids.

Elara's boots swept clean out from under her in the backwash; Mara and Jace grabbed her harness webbing at the bank lip and dragged her chest-first onto the snowy gravel.

Behind them, forty tons a minute of black floodwater, carrying three submerged slabs of two-hundred-pound anchor ice that had been dammed behind the hemlock, shot full-bore down the open concrete throat straight into Turbine One's scroll case.

Deep inside the stone powerhouse, the shaft spun hard for four seconds. Up the gorge trail, two pole lamps flared bright white.

Then a sound like a twelve-gauge shotgun went off inside the cast-iron turbine scroll.

Every boot sole on the rock shelf jumped an inch as a second, ragged metallic crash tore through the powerhouse floor. Cast from recycled truck-axle carbon steel without Iron Creek's vanadium alloy to absorb freezing shock, two primary runner blades had snapped clean off at the hub under the anchor-ice impact and driven sideways through the outer cast-iron scroll casing.

Boiling brown river spray exploded sideways out the powerhouse doorway as the mangled runner jammed dead at six hundred revolutions, slamming a monstrous hydraulic water-hammer straight back up the intake chute.

"Penstock's gonna split!" Silas shouted as the buried forty-inch steel feed pipe up the slope boomed like a struck kettle drum and shuddered in its concrete saddles. "Drop the emergency headgate! Drop it now!"

Tobin was already lunging across the iced concrete cap to knock the dog-pawl out of the overhead iron sluice gate hoist.

Just as his hand hit the latch, a second back-surge slammed

the half-lowered iron gate upward from underneath. Glare ice packed inside the cast sprocket teeth made the wet steel chain skip two links and whip violently backward across the iron housing lip.

Tobin didn't even have time to pull back. Heavy chain links snapped flat across his left hand, pinning three fingers square between sixty-weight iron chain and the cast-iron frame with a wet, sickening crunch.

Tobin let out one short, ragged animal cry and went down on one knee, trapped fast by the hand while pressurized water roared out the split powerhouse wall below them.

"Chain's got him!" Mara screamed.

Jace didn't hesitate a heartbeat. Snatching the four-foot solid iron pry bar off the snow, he jammed the chisel point straight into the whipping sprocket teeth ten inches above Tobin's trapped wrist, locking his tattooed forearms against the kicking bar until the tendons in his neck stood out like cords to keep the chain from taking Tobin's whole arm in.

Silas vaulted onto the cap beside him, hooked a second bar under the jammed link, and heaved upward with every pound in his back. Two inches of slack opened; Mara grabbed Tobin under both armpits and yanked him backward onto the snow as Silas kicked the release pawl clean out and dropped the eight-hundred-pound iron headgate crashing down into its sill slot.

With a deafening thud the main chute sealed shut. Diverted floodwater boiled harmlessly up over the stone side-spillway instead, leaving the cracked powerhouse dripping and dead silent under the wind.

On the trampled red snow at their boots, Tobin sat hunched double clutching his left wrist against his stomach. His split leather gauntlet hung in bloody ribbons; beneath it, the middle, ring, and little fingers of the finest lathe machinist in the valley were crushed pulp and white bone splinters.

"Belt!" Elara bit out through chattering teeth, already dropping onto frozen knees beside him and stripping her wet wool scarf free while Silas yanked his leather trouser belt off

and cinched it hard above Tobin’s left forearm to slow the bright red pumping onto the ice.

Tobin stared down once at his ruined hand, his face gray as putty under the headlamps. "Lathe chuck," he whispered stupidly through white lips before shock took his legs out. "Left my four-jaw chuck set up on—"

"Don’t look at it, Toby, eyes on me," Jace said fast, kneeling behind the older man to haul one arm across his own shoulders while Silas took the other side. "Elara, flip the spillway paddle onto Auxiliary Wheel Two before the hill freezes! We’ve got him!"

Numbed past feeling from the knees down, Elara limped twenty yards across the spillway catwalk, broke the ice off the manual handwheel with a wrench, and spun thirty turns until creek water poured into the smaller secondary Pelton wheel built for summer low-water loads.

Inside the side shed, the small auxiliary generator whined up to pitch. Up on the ridge, emergency bulbs flickered back on at half-strength amber.

The penstock hadn’t burst, the seed potatoes wouldn’t freeze tonight, and Tent Six would keep minimal heat. Looking back into the main stone powerhouse where black water dripped steadily out of a jagged nine-inch split in the cast-iron scroll case, Elara already knew the winter math before touching her slate: Turbine One was dead until spring foundry pours, taking forty percent of the valley’s winter generating power down with it.

Lin kept clinic lamps burning on surgical priority for three hours while snow piled four feet deep against the cedar walls. She saved Tobin’s left thumb, index finger, and palm flap, scrubbing cast-iron grit out of crushed bone by magnifying loupe before stitching clean stumps across the outer three knuckles. By nine that morning Tobin lay awake and silent toward the plaster wall under willow-bark tincture, a thick white club of linen resting on a pillow beside his chest.

At noon, Elara posted the new winter ration schedule on

the Commons Kitchen door. With forty percent of their hydro capacity shattered in the gorge, every residential cabin stove and heat loop dropped to a strict fifty-two degrees overnight; hot wash-water ran Tuesdays and Saturdays only; and the lower pottery kilns and timber dryers went onto split night-shifts whenever wind power dipped, forcing crews to work double turnarounds in thirty-eight-degree bays whenever the ridge blades spun. Nobody argued at the board, though faces around the soup tables looked pinched and hollow-eyed inside thick coats they no longer took off indoors.

Three mornings after the storm broke, under a brittle blue sky at fourteen below zero, nineteen-year-old Lia came sprinting down the packed snow lane from the radio shack without a hat on, slipping twice on the ice before catching herself on the kitchen porch rail.

"Elara! Silas!" Lia panted as they stepped out with tin mugs in hand. "Analog VHF emergency band, sixteen-fifty kilohertz! Open voice, no encryption!"

Inside the cramped radio room, grey static hissed across the bench speaker between ragged bursts of a hoarse voice everyone at the sawmill council two weeks ago had heard shouting from the back row.

"*...repeat, any station receiving in the lower basin, this is Iron Creek Camp Upper... penstock wiped out in Tuesday's ice slide, spring box buried under forty tons of shale... diesel gen-sets gelled solid Wednesday night... got two dead in Bunkhouse Two and nineteen people down with black frostbite in the shaft tunnel... if anybody downriver still monitors open band, for God's sake send tracked rigs before dark...*"

Nobody in the tiny shack spoke. Having broadcast formal withdrawal notices and wiped their mutual-aid keys twelve days ago to hoard two tons of alloy steel, Harken's camp had possessed no automated distress cascade when the mountain came down on their single pipe, and no neighboring watershed had seen a single red warning flag until someone crawled up a ridge with a frozen car battery and an old marine transceiver.

Behind Elara in the doorway, Tobin stood with his bandaged left hand slung high against his wool vest, staring at the hissing speaker grille without blinking. For three full seconds Elara looked at those three missing fingers wrapped in bloody gauze, the exact price paid because Iron Creek's alloy ingots were still stacked uselessly in Harken's dark shed, and felt something cold and ugly stir behind her ribs.

Then Silas reached past her shoulder and keyed the brass desk microphone.

"Iron Creek, this is South Valley Base," Silas said flatly into the static. "Burn your bunkhouse furniture in metal drums inside the tunnel entrance and keep everyone awake. Two tracked snow-cats and a medic sled are leaving our gate in twenty minutes. Five hours to your pass."

It took eleven hours round-trip through chest-deep powder drifts above timberline.

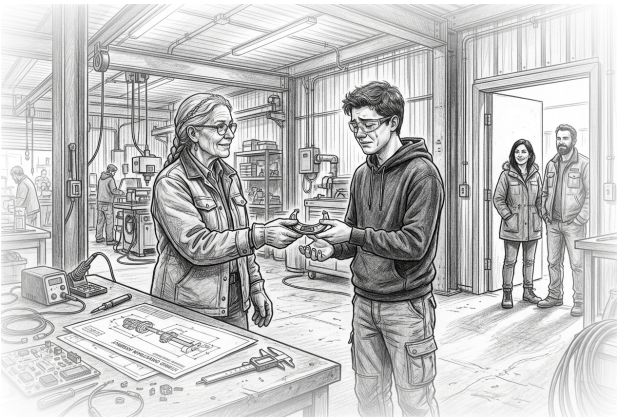
Just before midnight, headlights swept across the frozen yard outside the clinic annex as both battered tracked carriers ground to a halt. Jace, Silas, and two plateau walkout nurses jumped down in stiff, frost-whitened parkas and lowered the tailgate ramps.

Nineteen huddled shapes wrapped in soot-blackened quilts stumbled or were carried on litters into the dim fifty-five-degree corridor of the annex. Two children had gray waxen cheeks; a woman clutched swollen purple hands wrapped in rags; and near the end of the line walked Harken, twenty pounds lighter than at the sawmill, leaning on a splintered pick handle because four toes inside his slit left boot had frozen solid black.

As Harken limped past the doorway where Elara and Tobin stood holding wool blankets out of quartermaster stores, the former mine boss looked up once, saw the thick white club bandaging Tobin's left hand, and dropped his eyes straight back to the concrete floor without uttering a word.

Nobody jeered at him, and nobody offered a warm speech either. Lin pointed the litters toward cots stripped from the

study rooms, Jace went back out into the dark to shovel snow off the carrier tracks, and Elara walked down the cold corridor turning two more workshop breaker switches off so the clinic sterilizers wouldn't trip the auxiliary wheel.



14

# The Elder Wisdom

Four mornings after the snow-cats brought the Iron Creek survivors down out of the pass, Olander did not come down to breakfast.

At seventy-eight, his heart had simply stopped sometime between the two-o'clock stove check and dawn inside his small cedar room behind the pump shop. He had been one of the first twelve mechanics up this creek seven winters ago, hauling

salvaged municipal water pumps up rutted mud tracks by hand-winch when everyone slept under leaking tarps.

By nine o’clock, pale January sun slanted through frost ferns on the reinforced glass of Olander’s machine bay. Because workshop heat stayed shut off under the new sixty-percent hydro ration unless a critical repair was running, every breath hung white above the concrete floor. Olander’s body, washed and wrapped in unbleached flax linen by Miriam and Lin, already lay resting in the cold stone cellar beneath the orchard shed awaiting burial once woodchip mulch thawed a trench.

All that remained on his oiled maple bench were the hand tools he had used for fifty years: drop-forged box wrenches worn smooth at the throat, brass plumb bobs, three Starrett outside micrometers nestled in green felt cases, and a ball-peen hammer whose hickory shaft carried the dark polish of his thumbprint.

Elara stood just inside the sliding door with her hands tucked deep in her coat sleeves, Silas beside her and sixteen-year-old Gabe half a step back looking pale around the mouth. Across the bench stood Miriam leaning on her ash walking stick, old Corin with frost-chapped ears sticking out beneath a knitted wool cap, and Tobin, whose bulky white hand-dressing rested inside a canvas sling pinned across his chest.

"Nobody calls a probate clerk today," Miriam said quietly, resting two gnarled fingers on the green felt lid of the micrometer box. "Out in the counties, a man dies and banks freeze his locks before his sister finishes crying, pricing out sixty years of craft by auction lot to settle hospital bills. In here, a tool only stays alive in a working hand."

Corin picked up Olander’s heavy two-pound alignment maul and held it out handle-first toward Mara, who took it in both mittens to keep by the kiln grates. A roll of fine Swiss needle files went to Sam from Vera’s electronics bay.

Then Miriam lifted the zero-to-one-inch steel micrometer out of its felt bed and looked past the older machinists straight at Tobin.

Tobin looked down at the bright satin-chrome spindle for two seconds. His right hand twitched once at his side, while the bandaged stump inside his sling stayed still.

"Give it to the boy, Miriam," Tobin said hoarsely. He looked across the cold bench at Gabe. "Takes two steady hands to roll a friction thimble while holding bar stock on center, kid. Olander told me in November you had good eyes on the inverter busbars, just rushed your layouts. Somebody with ten working fingers needs to read half-thousandths before spring plow shares wear thin, and I'll be checking your math from the tool crib."

Gabe swallowed hard, pulled off his right wool mitten, and took the cold steel frame carefully in both hands. Under his thumb, the tiny Vernier graduations shone crisp and clean without a speck of rust.

"Don't ever drop it on concrete, and wipe spindle oil on the threads before you shut the box," Tobin added gruffly, turning half away toward the window so nobody had to look at his face.

"Yes, sir," Gabe said softly. "I won't."

At sundown, rather than burning scarce cordwood and battery amps across forty separate cold cabins, two hundred people carried quilts, soup bowls, and carved stools into the insulated main hall of the Sector Seven depot to wake Olander under one shared roof.

Stepping through the wool baffle curtains out of twelve-below dusk felt like walking into another season. Two masonry stoves roared on dry coppice alder while body heat from two hundred neighbors raised the cedar-lined room past sixty-five degrees for the first time all week. Pots of salted barley-and-fish stew simmered on the top plates, smelling of smoked coastal herring, wild garlic, and roasted hubbard kraut.

High among the black locust roof arches hung forty-foot story-cloths woven on Riya's looms out of dyed fleece and salvaged glass optical strands that caught lantern glow in

shifting threads of amber and blue: panels recording Jonas's pry-bar winter, the summer drone sweeps, and already a half-finished border of white river ice at the bottom edge. Near the hot updrafts above the char braziers spun suspended mobiles welded from cracked turbine scrap, drone props, and river slate, chiming softly in minor fifths whenever someone opened the vestibule door.

Nobody sat hushed in neat rows listening to speeches. Over by the living moss wall, six orchard hands and two of the young nurses who had walked down off the Northern Plateau were arguing cheerfully over a jug of dry pear cider, sketching new gravity-siphon pond layouts in window condensation with their fingertips. Near the soup kettles, eight ten-year-olds wearing grotesque cardboard hard-hats and spectacles cut from milk jugs staged a noisy slapstick play in which a pompous "County Subsoil Assessor" tried issuing a zoning ticket to a goat, sending even the bandaged Iron Creek miners propped on blankets along the south wall into rasping, reluctant coughs of laughter.

Around the central hearth pit, twelve drummers sat astride cured goat-hide barrels, tuned truck coil-springs, and gourds strung with steel radial-tire wire. Stripped down to his flannel shirtsleeves, his rib bandages hidden under dark wool, Silas picked up two leather-wrapped mallets and stepped to a halved propane tank tuned to a low, chest-rattling bass note. Three bars in, he locked squarely into the syncopated five-four pulse driving the circle.

Out on the swept sawdust floor, Gabe, with Olander's micrometer tucked safely back in his cabin chest, spun low into a fast, tumbling wheel game alongside Sam, Lia, and four river-barge teenagers, hands slapping pine planks as they vaulted over hooked sweeps and caught each other effortlessly by the wrists without breaking rhythm.

Standing near the locust arch with a tin mug warming her fingers, Elara watched Tobin tap his right boot heel steadily in time against a bench leg while pouring half a cup of pear cider one-handed for Harken's quiet sixteen-year-old nephew

sitting beside him.

"Takes the chill out better than fifty-two-degree cabin pipes, doesn't it?"

Elara turned. Miriam leaned on her ash stick beside the arch, firelight glinting off the deep creases around her mouth. Back in the quieter reading nook behind them, Corin sat near a small iron stove paring thin curls off a willow peg.

"Half the valley walked in here tonight shivering and snapping at each other over wash-water turns," Elara said, raising her voice slightly over the tank drum. "Twenty minutes under the music and people remember they actually like living together."

"Come sit off your feet five minutes," Miriam said, nodding toward the bench beside Corin.

Inside the half-walled alcove the drumming softened to a warm wooden pulse through the floorboards. Elara sat down, letting out a slow breath as stove heat soaked into her sore knees from Tuesday's river dive.

"Don't mistake what's happening out on that floor for simple blowing off steam, Elara," Corin said without looking up from his pocketknife. "Back before the first creek trusts were signed, when Miriam and I were thirty years younger marching down Fourth Avenue behind union banners, we thought songs and street kitchens were side dishes to the 'real' politics."

Miriam rested both knotted hands atop her stick. "We lost three times in twenty years because we fought the old order strictly inside its own buildings. Filed fifty-page briefs before judges whose retirement funds owned the water board. Ran reform candidates who got starved out by bond markets inside six months. Called general strikes when nobody on the picket line knew how to bake bread without supermarket trucks or keep apartment boilers lit once the utility company pulled the master switch."

"Ten days without groceries and riot police barely needed batons," Corin said quietly, blowing a willow shaving off his thumb. "Hungry people went back to clocking in, or turned

on each other over crumbs. Worse, nobody had a life outside buying cheap distractions on glass screens, so the moment management offered two dollars more an hour, half the line folded."

Miriam pointed her chin out past the locust arch where thirty voices had just joined a rough four-part work chorus over Silas's bass tank while children wove paper lanterns between the dancers' knees.

"Out there is why people wade into thirty-two-degree river water at five in the morning without a boss holding a gun or a paycheck over them," Miriam said. "Foundries and turnip cellars keep lungs breathing, Elara. Making weird, loud, unbought beauty together when half the power's out is what keeps a winter ration from turning neighbors into wolves."

Elara looked back through the arch. Out by the south wall, Harken hadn't joined the singing, still staring silently into his tin cup with his bandaged left foot propped on a crate, and down at the kiln sheds three men on late rotation had skipped the wake altogether, angry about pulling midnight stoking shifts in the cold. Even here, winter left rough splinters under the skin.

"State highway patrol parked two armored command vans at the Route Nine junction this afternoon," Elara said quietly to the two elders. "And nobody's heard a word out of Blackwood Siding since we pulled their keys, except diesel smoke rising by their rail spur."

"They'll test the fences hard before mud season," Corin agreed calmly. "Dying beasts always thrash worst right before the lungs quit."

Miriam laid her dry, warm palm briefly over Elara's wrist. "Tend the turbines, girl, and keep the legal clerks buried in boring paper as long as you can. Just don't ever let this valley get so grim about surviving winter that we turn into a barracks. Nobody holds a barracks wall to the end."

An hour before midnight, the fast drums slowed down to a single low heartbeat on wooden log-slits and bowed gourd strings. Silas handed his mallets off to a river boatman and

walked through the crowd with sweat shining down his temples, sitting down beside Elara in the shadows of Arch Four and hooking one warm arm around her waist.

Tomorrow at nine they would carry Olander's linen-wrapped body up through two feet of crusted snow to the insulated compost vaults above the frost line, bedding him deep under warm woodchips, char, and hay so by May his bones would feed the young cherry roots along the upper terrace. Tonight, leaning her temple against Silas's damp flannel shoulder while two hundred voices hummed a slow wordless drone into the locust rafters, Elara let her eyes close for ten quiet minutes in the heat.



15

# The Anatomy of Conflict

Six weeks into the winter power ration, tempers across the lower yards had worn thin as scrap tin.

Every cabin heat loop still dropped to fifty-two degrees after nine at night. Because Auxiliary Wheel Two couldn't pull both the pottery kilns and the biochar retorts during daylight clinic hours, the lower firing crews had spent all of February working split midnight-to-six turnarounds in drafty thirty-eight-degree sheds while sleet rattled the tin roofs.

Late that Tuesday afternoon, carrying a crate of sprouted seed potatoes down the muddy terrace path with Silas thirty yards below her by the culvert ditch, Elara heard the shouting start behind Retort Shed Three. Before she could set the crate down, a single wet, heavy crack cut the voices off short.

Steel on bone.

Elara dropped the wooden crate into the slush, seed tubers bouncing into the drainage rut, and ran flat-out around the stacked alder cordwood.

Silas vaulted the low stone retaining wall from the lower track three strides ahead of her.

In the trampled mud and black charcoal grit between the kiln firebox and the clay-settling tanks, twenty-six-year-old Aris lay curled on his right side, convulsing violently. Bright red blood pumped between his clay-dusted fingers where he clutched the left side of his jaw and temple, pooling dark across the frozen woodchips.

Standing over him with his chest heaving under a soot-stiffened canvas vest was Vane, one of the senior retort stokers. Dangling from Vane's right fist was a two-foot forged iron damper wrench, wet red hair and blood clinging to its square jaw.

"Drop the iron!" Silas barked, not breaking stride as he drove his good right shoulder straight into Vane's ribs, knocking the stoker flat onto his back in the slush and sending the heavy wrench skittering into the gravel.

Vane didn't cry out; he rolled onto one elbow gasping for wind, soot-streaked face twisted tight and white around the mouth. "Took his hand to my main damper!" Vane spat wildly up at Silas. "Sixteen hours I been nursing this firing and he shuts my draft off cold!"

Elara didn't look at Vane. Dropping onto both knees beside Aris in the red mud, she saw instantly it wasn't just a broken jaw. Above the shattered left mandible, four inches of skin over Aris's left temple and ear had split open over a sunken, spongy hollow in the skull bone. Every ragged breath rattled wetly at the back of his throat, and his right

boot scraped spasmodically once in the gravel before going limp.

"Medic!" Elara yelled up toward the greenhouse ridge, easing Aris's head three inches forward with both palms so blood and broken teeth drained onto the woodchips instead of down his windpipe without pressing on the depressed bone over his ear. "Trauma team to Retort Three! Head strike!"

Thirty seconds later, boots crashed down through the cold frames. Lin and Tomas vaulted the terrace wall with orange canvas jump-bags banging against their hips, mud still caked on their greenhouse aprons.

"Slide back, Elara, give me his head," Lin snapped, dropping onto her knees and tearing a suction bulb and curved airway tube out of the top pouch.

Elara backed off onto her heels, staring stupidly for a second at Aris's dark blood cooling across both her wrists.

Lin and Tomas didn't waste half a word.

"Left temporal-parietal depression, pupils unequal. Left's blowing."

"Jaw's comminuted. Suctioning."

"Keep C-spine neutral, pack around the bone ring, zero direct pressure over the dent."

When pain dragged a terrible, garbled moan out of Aris's chest and his left arm flailed upward toward his face, Silas left Vane sitting in the mud under two arriving woodcutters' eyes and knelt across Aris's left shoulder, pinning the potter's good wrist gently against the dirt while Tomas slid a sixteen-gauge needle into his forearm.

"Intracranial pressure's climbing fast," Lin said tightly as an electric cargo trike rigged with a litter frame skidded around the cordwood pile. "If we don't take a burr-hole drill to that epidural bleed inside twenty minutes, he herniates on the hill. Load on three: one, two, lift!"

Four pairs of hands lifted Aris flat onto the backboard. Lin swung onto the moving flatbed straddling his hips to bag air manually into his lungs as the trike whined full-throttle up the steep gravel grade toward the clinic surgical room.

Dead quiet dropped back over the smoking kilns, broken only by steam hissing softly from a cracked mortar joint on Retort Three.

Down in the black slush lay two white molars and Aris's woolen cap.

Vane sat propped on one palm beside the cordwood pile, wiping a smear of his own split-lip blood off his chin. Two other night-shift kiln hands, Marek and Cole, stood three paces behind him by the firebox door with long stoking poles still in their mittens, faces gray and hollow from three weeks of four-hour sleeps.

On Elara's forearm, her slate buzzed three sharp, flat pulses. Around the yard, Marek's, Cole's, and Silas's slates buzzed in unison.

Once Lin logged life-threatening head trauma at the clinic door and two eyewitnesses at the drying racks tapped confirmation, the settlement's automatic safety lockout didn't wait for a council meeting:

**SAFETY BOUNDARY ACTIVE: SEVERE BODILY HARM**
**SUBJECT: VANE (KILN BAY THREE)**
**ALL WORKSHOP, TOOLSHED, VEHICLE & COMMON KEYS REVOKED**
**CABIN HEAT & KITCHEN RATION KEYS UNCHANGED**

Every solenoid latch on the Foundry, the machine shop, the saw sheds, and the tractor pool had just gone dead to Vane's wrist fob. Nobody owned handcuffs in the valley, and nobody could turn off a man's food ration or freeze his bunk, yet within ten seconds Vane could no longer open a single door holding heavy iron.

"Stand up, Vane," Silas said, standing over him with Aris's blood smeared dark across the knee of his canvas trousers.

Vane got to his feet on his own before Silas could touch his collar, shrugging angrily back half a step when one of the woodcutters reached near his elbow.

"Don’t paw at me," Vane snarled, voice hoarse from woodsmoke. "Kid came marching down from the pottery wheel waving an amp-allocation slip and kicked my primary air slide shut mid-burn! Ruined two tons of oak char I stood freezing over since two this morning!"

"He throws clay filter candles on a kick-wheel because we shut power off to the pottery bay three weeks ago, Vane," Elara said, her voice dangerously flat. "And you caved the side of his skull in with four pounds of forged steel."

"He grabbed my wrist when I reached to open the slide back up!" Vane shouted across the yard, looking sideways toward Marek and Cole for backing. "Ask Marek! Kid’s been lording water and kiln amps over the lower sheds all month while uphill clerks sit warm in basement server rooms!"

Marek looked down at the bloody woodchips, shifted his boots uncomfortably, and didn’t say yes or no.

"Walk," Silas said quietly, pointing up the lane toward the textile mill. "Elders are already ringing the hall."

Word had outrun them up the hill. Along the weaving porch and outside the wash troughs, thirty people stood motionless in the grey February dusk watching Vane walk between Silas and Elara. Nobody yelled curses, though young Sam from the electronics bay stared at the dried blood on Elara’s cuffs with his mouth slightly open as if watching a bridge cable snap in slow motion.

Inside the main depot hall, nobody had lit the big masonry stoves yet; the vast cedar room sat at forty-six degrees, smelling of cold ash and wool. Under a single hanging battery lamp in the middle of the sawdust floor sat seven rough wooden chairs. Miriam, Corin, Marta, and Elias were already seated, while forty shaken neighbors stood three deep along the north wall.

Vane dropped heavily onto the empty chair facing Miriam, crossing both soot-blackened arms tight over his ribs instead of looking at the floor.

"Tomas just ran word across from the clinic," Miriam said into the cold room. Her voice didn’t tremble, though both

hands gripped the top of her ash stick hard. "Lin drilled two relief holes above Aris's left ear and pulled a clot the size of a plum off his brain. His heart is beating on its own, and they wired his left jaw shut. Whether he wakes up before tomorrow, or what that clot tore inside his head before they reached it, nobody knows tonight."

Along the north wall, Lia pressed a mitten over her mouth; beside her, Aris's bench partner Doran went chalk-white, leaning both shoulders hard against a locust post.

Corin looked straight across six feet of scuffed pine at Vane. "Speak for yourself, Vane. Plain truth, no crooked corners."

Vane stared back at the old man with bloodshot, sleepless eyes. If anyone in the room expected tears or begged forgiveness, they didn't know what six weeks of freezing boots and bruised pride looked like inside a stubborn skull.

"Already told 'em down at the shed," Vane said loudly, chin jutting out. "Been pulling double turnarounds in thirty-eight-degree sleet since Turbine One blew up in January while half this town sleeps till seven. Had Retort Three right at exothermic peak after fourteen hours on my feet, and Aris walks in waving some clinic slip saying my draft fan's pulling twelve amps over quota and kicks my damper shut with his boot. Grabbed my sleeve when I went to pull it back. Yeah, I swung! Shouldn't have had iron in my hand, fine, bad luck where it caught him, except don't sit there in dry wool acting like you didn't push the lower sheds till somebody snapped!"

Silence hung sharp as broken glass across the cold hall.

"Nobody pushed an iron wrench into a twenty-six-year-old boy's temple except your right arm, Vane," Marta said from the farm chair, her weathered face like flint. "Half this valley is working fourteen-hour shifts in cold boots. Tobin lost three fingers off his hand in that river and hasn't raised his voice at an apprentice once."

"We don't own cages here, and we don't hire county sheriffs to haul our messes out of sight," Miriam said, rising slowly onto her stick. "Starting tonight, Vane, your workshop, shed,

and hall keys stay dead. You move your bedroll to the isolated perimeter cabin by the north woodlot with two stewards keeping watch outside your door in shifts. Starting at six tomorrow morning, every working hour of your back goes to clearing frozen drainage culverts and splitting cordwood to cover Aris's household and clinic heat. And the morning Aris opens his eyes, you will sit in a chair beside his cot and look straight at whatever your hand left of him."

Vane let out a short, ugly bark through his nose and stood straight up, kicking his wooden chair back six inches across the sawdust.

"Dig ditches under armed babysitters like a chain gang while Harken's quitters lie warm on study-room cots eating our barley?" Vane spat dark pink phlegm onto the planks beside his boot. "Go to hell, old woman. You got no police badge and you got no court paper. Compact says every member keeps roof and rations, and I helped lay the brick on those retorts with my own hands. Try dragging me out of Lodge Four tonight and see how many lower-bay men keep firing your kilns tomorrow!"

"Sit down, Vane," Silas said, taking one step forward, his low voice dropping ten degrees colder than the room.

"Or what, Silas? Gonna take a wrench to my head too so we're even?" Vane sneered, spreading both empty soot-stained palms wide so the forty people along the wall could see. "Go ahead! Show everybody who runs the muscle when the speeches wear thin!"

Elara caught Silas's right wrist with both icy hands before he took a second step. Beneath his canvas cuff, the tendons stood rigid as iron rod. If Silas laid one fist on Vane inside this circle, every rule keeping four hundred desperate people together without police tore straight down the middle.

"Walk him to the north perimeter cabin tonight, Jace and Tarn," Miriam ordered evenly, not flinching at Vane's shout. "If he walks past the west cattle guard onto the county highway, nobody stops him; his name comes off every watershed roll from here to the coast. If he stays inside our fences

tonight, he sleeps at the north cabin until a full twelve-person lot jury sits Thursday morning."

Jace stepped quietly out from the end of the wall beside big Tarn from the Foundry. Neither man carried a stick; they simply walked up on either side of Vane and waited.

Vane glared from Miriam to Elara, then looked deliberately past them toward the doorway where Marek, Cole, and four other soot-faced kiln and sawmill workers stood watching with folded arms and unreadable, sullen faces.

"Thursday, then," Vane muttered, wiping his split lip on his forearm before stalking out between Jace and Tarn into the freezing dark without once saying Aris's name.

Nobody in the hall moved for half a minute after the heavy wool curtain swung shut. Along the north wall, Aris's friend Doran pushed off the locust post, stared hard at Elara as if she had just let a rabid dog walk out on a string, and shoved out the side door toward the clinic without a word.

Alone by the unlit stove once the elders dispersed, Silas dipped a clean rag into a cold water bucket, knelt beside Elara's bench, and scrubbed Aris's dried maroon blood off her knuckles until the water ran pink.

"He isn't sorry," Elara said quietly, staring down at the wet rag. "Not by an inch."

Silas wrung the red cloth out into the bucket and looked toward the dark doorway where the kiln hands had stood. "Worse than that," he said. "Half of Lodge Four looked like they agreed with him."



16

# Fracture Lines

Aris opened his eyes on Thursday morning, forty-one hours after Lin drilled into his skull.

Inside Clinic Room Two, a small woodstove burned precious dry birch to hold the air at sixty-four degrees. Elara stood at the foot of the narrow iron cot with her knit cap twisted tight in both hands while Lin checked the clear plastic drain tube taped behind the thick white turban of gauze

wrapping Aris’s shaved head. Stainless surgical wire held his swollen left jaw locked teeth-to-teeth.

When Elara stepped gently into his line of sight on his left side, Aris’s dark eyes focused on her coat collar, climbed slowly to her face, and widened with recognition.

"Hey, Aris," Elara said softly. "You’re in the clinic. Lin’s got you. Don’t try to sit up."

Aris’s left hand came up immediately off the sheet and gripped the iron bedrail hard. On his right side, however, his forearm lay curled inward against his lower ribs, fingers hooked stiff and trembling slightly against the unbleached cotton blanket. Four days ago those five right fingers had centered twenty-pound cylinders of wet stoneware clay on a spinning kick-wheel without looking down.

Behind his wired teeth, Aris’s throat worked fast. His lips parted at the corner, breath hissing hard through his nose as he stared straight at his own motionless right hand on the quilt.

"Hhh," came out through the wire gap. Then nothing.

Panic flared sharp across his bruised eyes. He tried again, neck muscles straining above his bandage collar, left fist pounding once against the mattress ticking as his mouth shaped a sound that wouldn’t cross from brain to tongue.

"Wa... k-k..." Aris choked out, saliva bubbling pink at the left corner of his mouth before breaking into a harsh, trapped sound deep in his chest. Hot tears spilled sideways out of his outer eye into the gauze over his ear.

Lin stepped in fast, laying one warm palm firmly over Aris’s pounding left fist and tilting a plastic straw to the clean right corner of his lips so he could take two small sips of cold water.

"Swelling pressed hard against the motor and speech strip on the left side before we got the bone flap lifted," Lin said quietly once she stepped out into the chilly corridor with Elara and pulled the cedar door shut. Dark smudges sat deep beneath the nurse’s eyes. "Drain’s clear and he understands every word we say to him, Elara. Right leg has partial push,

right hand has almost nothing, and he's got severe expressive aphasia. Maybe six months of daily speech and hand therapy brings thirty or forty percent back. Maybe it doesn't. He isn't throwing clay on a wheel again."

Elara leaned the back of her head against the cold earthen plaster of the corridor wall and shut her eyes for three breaths.

Before she opened them, heavy boots came fast up the stone entry steps. Silas pushed through the front doors with wet sleet crusted across his shoulders and snow still clinging to his beard.

"You need to come down to the lower timber yard right now," Silas said in a low voice, glancing once toward Aris's closed door to make sure nobody inside heard. "Vane walked out of the north perimeter cabin twenty minutes ago when shift watch changed."

Elara straightened off the wall instantly. "Walked out past the highway gate?"

"Walked straight down the creek path into Lodge Four," Silas said grimly. "Marek, Cole, and seven guys off the night kiln and sawmill crews met him on the porch, brought him inside by their woodstove, and wedged a two-by-four under the latch. Told Tarn when he came down the steps that nobody's putting Vane on supervised ditch detail until the uphill council answers for running sixteen-hour freezing shifts on the lower sheds while feeding outsiders."

By noon, a wet grey sleet was falling sideways across a valley split down an invisible chalk line.

At midday soup in the Commons Kitchen, half the long trestle benches sat empty; the lower timber and charcoal crews had drawn raw oats and salted fish in a single zinc bucket at eleven-thirty and carried it back down to eat behind closed doors at Lodge Four. Meanwhile, word of Aris waking up unable to move his potter's hand or speak his own name had run through the pottery shed, the water-line crew, and the greenhouse bays inside an hour.

When Elara and Miriam walked down the muddy wheel

track to Lodge Four at two o'clock to serve notice for the afternoon lot-jury seating, Marek and two burly sawyers stood across the top porch plank with axes tucked head-down behind their heels, breath steaming in the sleet.

"Vane's got nothing more to say to your rigging hall, Elara," Marek said flatly, refusing to meet Miriam's eyes. Marek had helped raise the locust arches in Sector Seven back in September; today grey exhaustion hung like wet cement under his cheekbones, and split purple chilblains showed across his bare thumbs. "What happened to Aris is ugly as hell, nobody inside this door says different. Except your own winter board stuck eight men on double midnight stoking turns for forty straight days at thirty-eight degrees while Vera's electronics kids and basement clerks kept daytime hours! Now a man loses his head for five seconds in the cold and you want to parade him up and down the drainage ditches like a whipped mule? Not happening. Either Vane keeps bunk and regular timber shifts down here with us, or nine of us pack every crosscut saw and chain block in Shed Two onto flatbeds before Sunday and start our own camp upriver."

"Those saws belong to three hundred neighbors, Marek, not nine angry men behind a barred door," Elara said evenly from the bottom step, sleet dripping off her hood brim. "And five seconds of 'losing his head' left Aris in Room Two unable to lift his right fingers off a blanket or say the word water."

Marek winced half an inch around the eyes, then hardened his chin. "Lot jury opens at four in the mill if they want our logbooks. Vane stays behind this door till we hear fair shift rules."

He stepped back inside and dropped the timber bar into its iron brackets.

Walking back up the slushy hill beside Miriam, Elara heard Miriam's ash stick punching deep holes into the mud at every step.

"Draw the twelve jury names out of the brass drum right now in front of the whole kitchen," Miriam said quietly. "Skip every steward who sat Tuesday night, including me, Corin,

Marta, you, and Silas. Neither side trusts an elder's chair today. And double watch on the clinic lane tonight."

Miriam wasn't wrong about nightfall.

At ten-fifteen that night, with sleet turning to thick freezing fog along the creek bottom and the fifty-two-degree curfew dimming cabin windows across the slope, the brass fire-triangle outside the carpentry shop began clanging wild, ragged strokes.

Elara and Silas were still awake in the basement routing room going over kiln shift logs with Gabe when the sound tore down the stairwell.

"Lower bridge!" Gabe shouted, pulling up the infrared gate feed on Screen Two where blurred figures carrying storm lanterns and long iron bars were marching fast down the muddy lane toward Lodge Four. "That's Doran and ten people from the pottery and water sheds!"

"Gabe, stay on the board and wake Miriam and Lin!" Silas snapped, already sprinting up the concrete steps two at a time behind Elara.

They cut straight down through the dark orchard terraces, boots sliding wildly in freezing mud, and burst out onto the packed cinder lane thirty yards short of Lodge Four.

Jace was already there alone. Coming off his evening compost turn, he had planted himself bare-headed in the middle of the narrow bridge planking with his empty, tattooed hands held chest-high in the lantern glare, backing slowly toward Lodge Four's porch as eleven furious neighbors pushed forward out of the fog.

At the front of the knot walked twenty-four-year-old Doran, Aris's bench partner since Year Two, carrying a three-foot steel tire iron in his right fist. Behind him marched six water-crew hands, three young teenagers from the coastal arrivals, and Harken's older cousin carrying pickaxe handles and oak cant-hook shafts.

Up on Lodge Four's covered porch twenty feet behind Jace, the heavy plank door banged wide open. Marek, Cole, and five kiln stokers spilled out under the eaves clutching

splitting mauls and iron pokers, with Vane standing half-shadowed in the doorway behind Marek's shoulder.

"Step off the planks, Jace!" Doran's voice cracked high and raw across the sleet. "I just spent two hours holding a spit cup for Aris while he cried trying to say his sister's name! That bastard's sitting ten yards behind you drinking hot tea by a woodstove! Move aside, we're walking him past the cattle guard onto Route Nine right now in his socks!"

"Come down off those boards and try it, clay-boy!" Cole yelled back from the porch rail, hefting an iron firebox poker.

"Nobody touches those steps!" Elara shouted, sliding through the mud around the bridge post to plant her boots squarely beside Jace while Silas vaulted the low ditch rail on his left and Miriam hobbled fast down the gravel behind them, leaning hard on Gabe's arm.

"Out of the road, Elara!" Doran lunged sideways off the bridge planks through ankle-deep slush to get past Jace, swinging the steel tire iron up to shove Silas back.

Silas didn't step back and didn't throw a punch; he stepped straight inside the arc, caught the cold steel bar six inches below Doran's fist in both bare hands, and locked it dead down at waist height between them until both men's boots sank two inches into the mud.

"Let go of the iron, Doran!" Silas said between clenched teeth, six inches from the younger man's wet, shaking face. "Put one drop of blood on that porch tonight and we got nine bodies in the clinic by midnight and state troopers driving right through an open gate on Monday!"

"He crippled him, Silas!" Doran choked out, straining with both arms against Silas's grip while hot tears ran down his cheeks in the sleet. "You expect me to eat porridge across the hall from him for ten years because we're too high-minded for a county jail?!"

Jace stepped right up until his soaked linen chest touched Doran's raised forearm. Under the swinging yellow storm lantern, Jace yanked his left sleeve back to the elbow, shoving the raised white keloid slash running six inches from wrist to

inner crook straight under the light.

"Look at that seam, Doran!" Jace said without yelling, his low, raspy voice cutting through the fog harder than a shout. "State prison yard at Monroe, Cellblock C, eight winters back. Kid stole two packs of tobacco off my bunk, so four of us righteous tough guys cornered him in the laundry room with mop wringers to teach him respect. Crushed his windpipe in ninety seconds. Next week his cousins gutted my bunkmate in the shower line with a sharpened paint scraper, and guards shot two more off the catwalk."

Around Doran, two of the teenagers with pick handles lowered their tips three inches toward the mud. Up on the porch, even Marek stopped shouting.

"Once you start settling accounts in the dark with iron bars, it never stops at one guy walking down the highway," Jace said quietly, eyes moving from Doran's wet face straight past the lanterns up to Vane standing stiff in the doorway. "And you up on those steps, hiding behind eight tired friends because you don't have the guts to sleep alone in a cold shack after breaking a kid's brain, you're pulling the exact cellblock coward play onto people who gave you a roof!"

Vane flinched back half a step into the shadow of the doorjamb as if struck across the mouth.

Miriam walked slowly past Silas's elbow until the iron ferrule of her ash stick clicked against the bottom wooden porch riser between both crowds. Her knitted shawl was soaked black with sleet.

"Twelve names came out of the brass kitchen drum at four o'clock in front of sixty witnesses," Miriam said into the hush. "Two barge girls, Bryn from the vans, Tobin's apprentice Leo, Sarah from the autumn highway intake, three orchard hands, a weaver, two green-crew plumbers, and Tarn. Nine o'clock tomorrow morning they sit in the shearing barn. Marek, your kiln shift logs go on the table first, every crooked hour of them. Right after lunch, Vane walks into Clinic Room Two with Lin and sits beside Aris's bed before a single word of judgment gets voted. Anyone carrying iron in this lane

five minutes from now answers to that same twelve alongside him."

For ten long heartbeats, nobody moved except sleet hissing on the lantern glass.

Slowly, Doran's white fingers loosened on the steel tire iron. Silas took the bar cleanly out of his grip, tossed it with a heavy splash into the drainage ditch, and rested one broad palm for two seconds on Doran's heaving shoulder before letting go. Turning without another word, Doran and the ten figures behind him walked stiffly back up the dark hill into the fog.

Up on Lodge Four's porch, Marek looked sideways once at Vane standing silent behind the jamb, spat into the snowbank, and spoke down to Jace.

"Have two jury escorts here at eight-thirty," Marek muttered. "Door'll be unbarred. Nobody takes Shed Two's saws tonight."

"Jace and I stay right on that bridge bench till eight-thirty anyway," Silas said flatly. "Go put your mauls away."

Nothing about the next forty-eight hours looked like a pamphlet on neighborly harmony.

All Friday morning inside the cold shearing barn, the twelve randomly drawn neighbors went line by line through six weeks of winter power ledgers. Before noon they handed Elara and Silas a blunt rebuke to their faces: since January's turbine wreck, uphill scheduling clerks had left heavy night-kiln turnarounds falling disproportionately on the same fourteen lower-yard stokers without rotating electronics, clerical, or textile hands into the freezing bays. Starting Monday, every able-bodied adult under sixty, including Elara, Vera, and the radio clerks, went onto mandatory four-hour midnight stoking rotation once a week, and overnight kiln firing dropped by a third even if spring brick stock fell short.

At two o'clock Friday afternoon, Jace and Tarn walked Vane across the packed snow into Clinic Room Two.

Only Lin, Miriam, Doran, and two women from the lot-

jury stood back against the plaster wall. Propped forty-five degrees on pillows under the skylight, Aris watched the door open with his left eye wide above the white jaw-wire.

Vane stopped four feet from the iron cot, his soot-stained cap crushed flat in both hands. All week down at Lodge Four he had talked loud about unfair amps and grabbed wrists; standing in bright afternoon daylight smelling boiled sage and antiseptic, looking down at the shaved, purple-stitched crescent curving above Aris's ear and the master potter's useless right hand twitching spasmodically against a folded towel like a landed fish, every practiced speech died dry in Vane's throat.

Aris stared straight back at him without blinking. Lifting his good left hand off the rail, Aris picked up an unfired clay pinch-cup Lin had set on his tray for grip exercise, placed it deliberately against his curled, trembling right fingers, and tried to close them around it.

His right thumb jerked sideways instead. The dry clay cup rolled off the blanket and shattered into four grey shards across the stone floor right against the toes of Vane's boots.

Aris didn't look down at the broken clay; he locked his dark eyes onto Vane's face and strained with everything in his chest against the wired jaw.

"Wh... wh..." Aris forced out, veins standing thick up his throat as tears of sheer fury leaked sideways into his bandage. "Wh... y?"

Vane stared down at the grey clay dust across his boot leather. Color drained completely out of his weathered cheeks; his throat clicked twice when he swallowed, and he couldn't lift his eyes back above Aris's blanket hem.

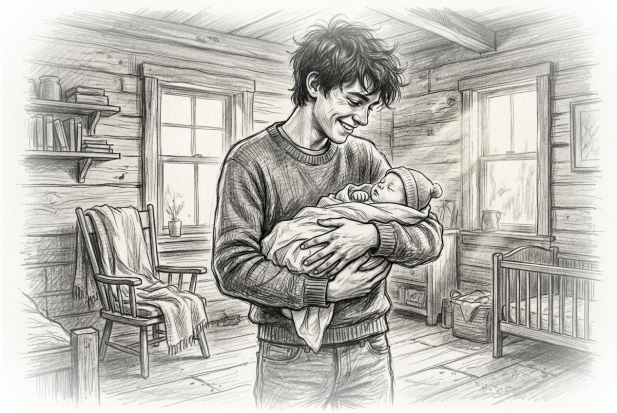
"Didn't—" Vane started in a hoarse scrape, caught Miriam's cold gaze across the bed, and shut his mouth tight. Hands shaking slightly on his wool cap, he turned toward the door without finishing the excuse.

Saturday afternoon the twelve-person jury posted its binding terms on the kitchen door, signed by eleven of the twelve:

Vane remained permanently barred from all kilns, workshops, and unsupervised crews; he moved permanently into the single north woodlot cabin under two-person rotating accompaniment; and for two full years, reviewed quarterly only with Aris's signed consent, six days a week of his heavy timber-splitting and ditch labor were credited directly to supporting Aris's household and full-time speech and physical recovery. Seven of the nine lower-yard stokers from Lodge Four accepted the overhauled shift schedule and returned silently to the retorts Monday morning.

Two did not. Cole and a sawyer named Garrett packed their personal duffel bags Sunday at noon, signed individual exit receipts at the western gatehouse without shaking Elara's hand, and walked down the county highway toward the river towns swearing they wouldn't live under uphill hypocrites. Two hours later, Doran's older cousin and his wife packed their own cart and walked out the exact same gate in the opposite direction, telling Miriam coldly at the cattle guard that any town willing to feed the man who broke Aris's brain under the same sky wasn't a home they wanted to raise their son in.

That Sunday night in the Commons Kitchen, barley stew steamed hot in the copper pots and nobody went hungry, yet an ugly, jagged quiet hung between the trestle tables. Pottery and water hands sat clustered near the south greenhouse glass; lower kiln workers ate fast near the vestibule coat hooks with eyes on their bowls; and out by the north woodlot half a mile upslope, Jace pulled his sheepskin collar up against the March wind and sat down on an overturned stump outside Vane's dark cabin window to begin the midnight-to-four watch.



17

# New Growth

Three weeks into March, the frost finally let go of the upper terraces, though nobody in the kitchen was singing much at breakfast yet.

Up behind the potting sheds, Gabe drove the four steel tines of his pitchfork deep into Windrow Two and leaned his hips back on the ash shaft. Crusty brown straw and coffee chaff split open with a wet sigh, rolling a thick white cloud of

hundred-and-forty-degree steam straight into the cold morning air. Gabe wiped damp mist off his forehead with his coat sleeve, leaving a smear of black compost across his temple. At seventeen he had shot up another inch since winter solstice, wrists hanging bare past his mended flannel cuffs.

Across the steaming trench, Jace slid his own fork cleanly under a matted slab of goat bedding and flipped it onto the center peak without lifting it higher than his knees.

Dark purple hollows sat bruised deep beneath Jace's eyes. He had come straight up to the compost yards from the four-to-eight watch outside Vane's woodlot cabin, drinking cold chicory out of a mason jar while standing beside the burn barrel to warm stiff knuckles. Even with sleeves rolled up to his elbows in the steam, faded blue cellblock ink running right across old white needle tracks along both forearms, his shoulders looked looser out here in the dirt than anywhere near the hall.

"Lifting too high again, kid," Jace said quietly over the hiss of the opened pile. "Roll it off your thigh. Keep hoisting wet straw with your lower back and you'll walk bent like Corin before your kid learns to crawl."

Gabe blew out a breath and propped his chin on the end of his fork handle. "Haven't thought straight since four-thirty. Midwives moved Maya into Room Four before sunrise. Lin told me to go turn two windrows instead of pacing holes in the clinic floorboards because first babies take all day."

A small, genuine crease broke the tired lines around Jace's mouth. Leaning his fork upright into the warm mulch, he unscrewed his mason jar and offered Gabe the last swallow of cold coffee. "Smart woman, Lin. Pacing wears boots out faster than gravel."

Below their terrace, pale March sun glinted off wet polycarbonate panels being unbolted from the winter greenhouse frames. Down by the orchard wall, Aris sat wrapped in two grey quilts on a cedar bench beside Doran, staring intensely at his right lap as he tried over and over to squeeze a soft ball of wet river clay with fingers that barely curled half an

inch while Lin held picture cards up on his knee. Fifty yards farther east, two men from Lodge Four walked past carrying kiln rakes with their eyes fixed straight ahead on the mud ruts, giving the clinic bench a wide berth. Nobody shouted anymore, yet the valley still walked around that corner like a bruised rib.

"Weird bringing a kid into it right now," Gabe admitted quietly, watching the two kiln stokers disappear behind the sheds without looking back. "Two weeks ago I watched Doran nearly swing a tire iron into my mom's ribs on the lower bridge, and county drones flew three low passes over the creek yesterday afternoon."

Jace followed his gaze down toward Aris's quilt on the bench, rubbing his thumb slowly across the pale Monroe scar on his left wrist.

"Beats every place I ever saw outside that ridge, Gabe," Jace said simply.

Gabe glanced back across the steam. Everyone knew Jace had walked over the western pass three autumns ago half-dead off highway fentanyl and ten years of county lockups, though Jace rarely talked about it unless asked.

"Back in the metro," Jace said, kicking a dry clump of alder bark into the hot center of the pile, "court rehabs were just holding tanks with inspirational posters taped over barred windows. Piss dirty once after a nightmare, or miss a Tuesday fee to a private probation clerk, and they shipped you straight back to Monroe in leg irons. Either you played cured saint on their clipboard or you were garbage."

He drove his fork back into the windrow, voice staying flat and conversational. "First three nights I sweated withdrawal out in Room One down there, I kept waiting for Silas to bolt the shutters from the outside. Instead Lin left the latch open, brewed strong cannabis-stem tea so I could keep broth down, and old Olander sat in a chair whittling cedar pegs till sunrise so I wouldn't climb the walls alone. Six months later, when the shakes were gone and the uglier stuff underneath started coming up, Miriam sat twelve hours beside me on blankets

with measured psilocybin tea from the drying loft while I cried forty years of poison out."

Jace paused, looking straight across the rising steam at Gabe without a trace of softness. "Didn't turn me into an angel, kid. Couple nights last week sitting in sleet outside Vane's door listening to him mutter through the planks, that old itch scratched plenty loud behind my ears. Difference here isn't nobody gets ugly or wants a drink after supper. Difference is when somebody breaks a bone, or breaks their own head, nobody makes fifty bucks a day locking 'em in a concrete box and walking away. We're stuck looking at each other in the morning."

Before Gabe could answer, the worn slate strapped to his left wrist gave two bright, sharp chimes.

Gabe yanked his sleeve back so fast he nearly dropped his glove into the mulch:

**CLINIC ROOM FOUR, LIN:
SHE'S CLOSE. WASH YOUR HANDS AND GET DOWN HERE.**

For one full second Gabe stood frozen with his mouth open, staring at the two lines of black text.

Jace let out a short, barking laugh, reached across the trench, and yanked the pitchfork clean out of Gabe's numb fingers. "Move your boots, Papa! Pile'll still be hot tomorrow!"

Gabe bolted straight down the grass bank without taking the steps.

Vaulting the low dry-stone wall below the berry canes, he tore down the muddy wheel lane past the sawmill where two carpenters raised planing irons in salute and whistled shrill through their teeth after him, dodged sideways around Bryn's slow-rolling battery flatbed stacked with kiln brick, and hit the swept gravel path through the winter rosemary beds at a dead run.

Outside the clinic porch, Aris looked up from his quilt as Gabe thundered up the wooden steps; Aris lifted his good

left hand two inches off his knee and tapped his chest once in quiet luck as Gabe pushed through the heavy cedar doors.

Inside the entry hall, boiled linen and woodsmoke warmed the air. Elara stepped out of the laundry room carrying a stack of warm cotton squares fresh off the stove rack, foundry grease scrubbed pink off her knuckles, her tired face breaking instantly into an unguarded grin at the compost stuck in her son's hair.

"Scrub to the elbows at the copper trough first," Elara ordered, pointing her chin toward the soap pump. "Silas is boiling water down the hall. Go on."

Forty seconds later, arms still dripping clean well water, Gabe eased open the latch to Room Four.

Afternoon sun slanted through high south glass across curved earthen walls. No steel stirrups or buzzing ceiling tubes cluttered the floor: only a low wide pine bedstead, stacked warm towels, and a pocket Doppler speaker ticking a fast, steady little *lub-dub, lub-dub* beside a basin of hot sage water.

Maya knelt forward on the mattress gripping a braided linen pull-strap looped over the ceiling beam, dark curls plastered wet to her neck and cheeks flushed deep red.

"Took you... ten minutes," Maya panted between contractions, turning her head far enough to catch his wet hand as Gabe dropped onto both knees beside the bedframe. "You smell like... goat straw."

"Scrubbed the arms, forgot the shirt," Gabe said, laughing raggedly as Maya's fingers clamped down on his wrist hard enough to dent skin when the next wave rolled down her back.

At the foot of the mattress, Lin checked position with warm, unhurried hands, speaking low and steady. "Right on the crown now, Maya. Chin down when this wave builds, push slow through the bottom of it. Nobody's rushing you."

Gabe pressed his damp forehead against Maya's trembling upper arm while she tucked her chin hard to her collarbones and bore down with a long, gravelly groan deep from her diaphragm that lasted ten full seconds until the pine rope

creaked overhead.

"Head's clear, wait one breath for the shoulder," Lin murmured, hands turning once with practiced certainty. "Little push now. There!"

Maya sagged back onto the bolsters gasping for air, eyes wide on the foot of the bed.

Half a second of absolute quiet hung in the sunlit room, followed by an outraged, sputtering squall as wet newborn lungs hit cool March air and bellowed full volume.

Lin didn't cut the cord right away or carry her to a cold tray; wiping nose and mouth once with warm flannel, she lifted the slick, dark-haired little body straight up onto Maya's bare sternum and pulled two heated cotton blankets snug over both of them.

"Oh," Maya whispered, voice breaking completely as both shaking hands came up over the tiny wet back. "Oh, hi. Hi, Clara. Look at your hair."

Under the warm cloth, the furious crying hitched twice, hiccuped into a tiny squeak, and quieted against the thud of Maya's ribs.

Gabe leaned ten inches closer over the mattress rail, throat locked so tight he couldn't have said his own name for gold. Clara's crumpled red fist poked out from the edge of the heated towel, fingers smaller than pine needles curling and uncurling blindly in the sunbeam until Gabe touched his scrubbed index knuckle lightly to her palm and all five tiny fingers latched reflexively shut around his skin.

Behind him, the cedar door clicked open two inches. Silas stood bare-headed in the corridor with coal-dust scrubbed pink off his forehead, resting one heavy palm silently on Gabe's shoulder while Elara stood right beside him looking down at her granddaughter with wet, shining eyes she didn't bother wiping.

Just after sundown, once Maya had fallen deep asleep on clean sheets and Clara lay swaddled tight inside a woven willow basket beside Gabe's low wooden rocker, a soft tap

sounded at the unlatched door.

Jace stood in the dim corridor lamplight in his heavy night-watch sheepskin coat, hair combed flat with cold water and hands scrubbed raw pink up to the tattooed wrists. Balanced gingerly on his open palm sat a hand-carved wooden bird no bigger than a sparrow, pared out of seasoned red cherry scrap and sanded with horsetail rush until the wings gleamed dull satin on a balanced hemp thread.

Looking at sleeping Maya, Jace didn't say a word. Stepping lightly across the stone flags in muddy boots he paused to wipe twice on the threshold mat, he hung the hemp loop from the bent willow hood of the bassinet, looked down for five quiet seconds at Clara's sleeping face, and tapped two knuckles once against his own breastbone toward Gabe before slipping back out into the cold hall toward his midnight shift at the north woodlot.

Gabe reached out with one finger and touched the cherry tailfeather.

Balanced to the grain, the little wooden bird dipped forward, lifted its wings without a sound in the stove draft, and kept rocking steadily above the basket long after Jace's footsteps faded down the gravel lane.




# 18

# The Brink of Severance

Three weeks into April, the east wind smelled of burned insulation and wet coal ash.

Elara stood on the upper catwalk of the south solar ridge with one forearm braced on the galvanized pipe rail. Below her boots, green orchard terraces stepped down toward the swollen creek, where Foundry crews were finally pouring high-alloy sand castings from salvaged mine scrap to rebuild

Turbine One before next winter. Forty miles east beyond the foothill saddle, however, dirty yellow-brown smoke hung flat across the coastal plain.

Over the winter, the old metropolis had stopped unraveling in slow legal filings and started coming apart at the bolts. Four outer suburbs had defaulted on municipal water bonds since February; fire engines sat up on blocks without diesel while electrical fires burned whole commercial avenues down to brick chimneys. Wealthier hillside enclaves above the bay had ringed private diesel microgrids and hydroponic warehouses with concertina wire and contracted guards, leaving miles of dead strip malls and dark apartment blocks between them to precinct extortion crews and copper strippers.

And twelve miles east of Elara's fence line, smoke rose straight up from the Blackwood Siding rail spur too.

Boot steps clanged steadily up the steel stair grating behind her. Silas stepped onto the landing carrying two tin mugs of chicory tea, iron filings glinting dull gray in his beard from grinding road-barrier lugs down at the Foundry.

"Dawn watch just got back off the east saddle," Silas said, handing her a mug and leaning both elbows on the pipe rail beside her. "It wasn't county deputies down by Blackwood Siding last night."

Elara looked up sharply from her tea. "Who was it?"

"Meridian Asset Protection," Silas said flatly. "Unmarked slate-gray six-by-sixes unloading off flatcars right inside Brenner's shop fence. Looks like once we pulled Blackwood's clearing keys in November and their grain ran low in February, Brenner cut a deal with Meridian's regional board: diesel drums and corporate scrip rations in exchange for staging rights on his rail spur and copies of the old utility trench maps into our creek."

Elara's stomach went cold. "Out-of-state contractors."

"Every one of 'em," Silas said. "Two pickups from their scout detail tested our north sheep gate at four-thirty this morning with a winch cable. Gabe and Tarn ran them back down the gravel with flare shells and air horns, except they

weren't rattling fences to steal mutton. They were measuring culvert widths for heavy axle loads."

"City emergency council signed the Energy Reclamation Directive yesterday afternoon," Elara said quietly, looking east toward the brown smudge above Blackwood's spur. "Declares any non-grid generating station over fifty kilowatts within sixty miles of the metro boundary subject to immediate state-marshal seizure. Meridian's gas peaking plants are cannibalizing their own turbines for spare bearings; they want our hydro house and ridge panels intact, or smashed so nobody else gets ideas."

Down at the base of the solar mast, the brass signal horn gave two short blasts followed by a long low note: scheduled tight-beam window in the mill cellar.

"Priya's mirror link is up," Silas said, checking his wrist slate.

Walking fast down the gravel switchbacks through the village, they passed welding teams stitching salvaged highway I-beams into Czech-hedgehog tank traps outside the tractor barn while greenhouse crews bolted winter polycarbonate storm shutters back over glass panes they had unbolted only ten days ago. Across the lane in the schoolhouse yard, old Corin sat on an upturned apple crate counting river pebbles with eight five-year-olds while keeping one eye on the eastern sky.

Down in the vaulted stone cellar beneath the textile mill, six salvaged monitors threw pale green light across fieldstone walls. Maya stood at the center table with three-week-old Clara asleep in a woven cloth sling knotted snug across her chest; Gabe stood at her elbow tuning the rooftop laser receiver.

On the middle screen, grainy black-and-white video resolved into Priya's narrow, soot-smudged face beneath the concrete ribs of an abandoned storm-drain junction.

"Fifteen minutes before direction-finding vans box our roof mirror, Elara," Priya said without greeting, voice hoarse through static pops. "They raided Fourteenth Street Depot

Thursday morning. City tactical squads plus two platoons of Meridian contract guards with battering rams. Smashed the tilapia tanks with sledges and zip-tied nine kitchen kids."

Gabe leaned both palms hard on the table edge. "Did you lose the medical stores?"

"Lost four empty steel vats and a chalk sign, Gabe," Priya said, showing her teeth briefly without humor. She tilted her slate camera twenty degrees left: behind her in the tunnel, thirty teenagers in headlamps were strapping high-output propane-biogas burners, ceramic water filters, and trauma kits onto heavy electric cargo trikes. "Voted two weeks back to abandon fixed addresses altogether. Set up soup pots and wound dressing inside a dead church basement or subway mezzanine for ten hours, feed eight hundred neighbors, then roll three wards west before tactical vans finish fueling up. Better yet, since the water authority shut public standpipes on the east side, whole tenement blocks stand roof lookout for our bike teams with flashlights."

A high two-tone warble sounded off-screen behind Priya's shoulder.

"Scanner van just turned onto Sixth," Priya said fast, reaching for the lens cover. "Watch your east rail flank, Silas. Four engine plants along the river corridor went out on wildcat strike Monday when bosses tried locking machinists inside overnight; workers dumped cold water into hot slag pits before private guards cleared the bays. And check shortwave off the interior interstate. Something big is rolling west-to-east toward the coast."

Static ate the window.

Silas pulled the logged shortwave transcript folder onto the left screen. Across three neighboring farm counties to the south, ten-thousand-acre corporate soy and corn estates had strung electrified razor wire around grain elevators while county bailiffs seized independent farmers' ditch pumps on bank liens.

"Whole state's splitting into company stockades and starving road camps," Silas muttered.

"Except the company stockades don't own the clerks anymore," Maya said quietly, shifting one hand under Clara's sleeping back as she keyed an amber overlay across the county map.

Elara stepped closer to read the labels. Dozens of small amber triangles sat over county courthouse basements, regional water-board pump stations, and state highway maintenance garages.

"For four years Kael's legal circle didn't just file tax forms, Elara," Maya said. "Every time county employees came out to our farm stand for clean flour or insulin from the apothecary network, we built quiet ties. Nine days ago the governor's energy desk ordered District Four Water to drop the headgate feeding our upper canal. District chief hydrologist's sister lives at River Landing Two; he reclassified our intake ditch as a federally protected salmon-spawning bypass, locking the shutoff inside an eighteen-month review docket. Yesterday morning when state police motor-pool requisitioned six lowboy trailers to haul concrete jersey barriers up Route Nine, the shop foreman in Duvall red-tagged every tractor in the yard for cracked brake drums."

"Working people letting the air out of the tires from the inside," Silas said slowly.

"Problem is Meridian knows half the county civil service won't swing the hammer for them," Elara said, thinking of the slate-gray six-by-sixes unloading inside Brenner's fence at Blackwood Siding. "Which is why they brought out-of-state contract muscle in by rail."

Before Maya could answer, the cellar's overhead lamp cut to pulsing red and a low three-note chime sounded from the western ridge laser link: a cryptographic handshake Elara hadn't heard chime live in six years.

Maya bent fast over the verification log, fingers flying across the mechanical keys.

"Not a spoof," Maya said, looking up wide-eyed at Elara. "Signed with two founding root keys off the West Pass line-of-sight dish."

Four lines printed clean across the center glass:

**WEST PASS GATE: THREE-RIG CONVOY AT MILEPOST FOUR**
**ROOT KEYS VERIFIED: KAEL / JAX**
**ORIGIN: INTERIOR HIGHWAY CORRIDOR**
**REQUESTING IMMEDIATE GATE CLEARANCE**

Nobody spoke for two seconds.

"Three thousand miles across the interior," Silas said quietly. "If those two came off the plains now, the middle of the map is on fire."

"Get to the west gate before the hydraulic rams open," Elara said, already turning for the stone stairs. "Maya, keep Clara down here in the cellar till we see what's behind their dust."

Outside in windy April sun, two hundred residents were already forming a watchful half-circle inside the western earthwork gate while herders drove sheep into the stone lower barns and Tarn's crew rolled welded steel tire-spikes beside the guardhouse. Built of double-stacked shipping containers packed solid with river cobble and overgrown with thorny Himalayan blackberry and perennial hop vines, the heavy gate leaves groaned outward on greased hydraulic rams.

Pale alkali road dust rolled across the cattle guard off County Road Nine.

Out of the dust ground three battered diesel rigs burning waste vegetable oil that smelled like scorched fry-grease. Behind two tarped flatbeds carrying salvaged battery banks and lathe beds rolled an eight-wheeled articulated heavy hauler plated around the radiator and cab doors in rusted quarter-inch Corten steel, an angled highway snowplow welded across its front frame rails and its tall tires crusted white with Nevada salt and eastern ash.

Fifty feet inside the earthworks, air brakes blew off with a sharp hiss and the big six-cylinder clattered dead.

Ticking hot manifold iron filled ten seconds of quiet before the heavy steel driver's door creaked open.

Kael climbed down off the top step slowly, one boot at a time, stiff in the hips from sixteen hours behind the wheel.

Ten years ago, when he had handed thirty-two-year-old Elara an encrypted thumb drive in a rainy transit shelter downtown, Kael's beard had been dark brown; today it was almost entirely iron-white, his tall frame pared down to dry leather and tendon inside a canvas coat mended at the cuff with braided copper wire.

Across the cab, the passenger door swung open and Jax dropped straight off the high running board onto the gravel. Wire-thin, sides of his skull shaved close with dark braided hair tied back in a loop of green ground-wire, he wore a faded coverall under a rigged chest vest stuffed with spectrum analyzers, fiber cleavers, and a worn nine-millimeter pistol riding high under his left arm. Before his boot heels settled, Jax's dark eyes had already checked the solar ridge sightlines, the welded hedgehogs by the barn, and Tobin's bandaged hand at the edge of the crowd.

Elara walked four paces out from the half-circle with Silas beside her.

"Kael," Elara said, her throat unexpectedly dry in the wind. "Jax."

Kael stopped three feet away, squinting past the dust on his lashes at the gray threads in Elara's hair, the terraced orchards climbing green behind the mill roof, and two hundred fed people standing in mended wool behind her.

"Still standing, El," Kael said, his voice hoarse from road dust. Reaching out, he gripped her forearm briefly with dry, cracked fingers, equal to equal, before nodding once to Silas. "Damn scarce sight east of the Rockies right now."

"How bad were the plains?" Silas asked plainly.

Jax hauled a dented aluminum pelican case out of the cab footwell and set it down hard on the front bumper.

"Half the prairie nodes we seeded four years back are gone, Silas," Jax said without softening a syllable. "Two basins in

Kansas dried clean out when aquifer pumps failed and fuel militias burned their granaries; another up on the Missouri got shelled flat by National Guard artillery under an emergency grain-requisition decree in January. Don’t let anybody sell you bedtime stories that the old system’s dying peacefully in its sleep. We burned two transmissions getting west of Boise to beat the interstate lockouts."

Kael turned half around so the whole gate yard could hear him over the wind in the blackberry canes.

"Forty-eight hours from tomorrow morning, an emergency joint session of the state legislature and appellate bench convenes under closed martial rules in the capital," Kael said. "We pulled the draft docket off a clerk’s courier line in Spokane. It’s called the Emergency Reclamation Act. In one omnibus writ, they’re voiding every Social Purpose Corporation charter, agricultural land-trust deed, and private microgrid exemption across this basin, classifying autonomous settlements as unlawful hoarding cartels."

Murmurs rippled low across the gravel yard. Up near the barn wall, Gabe shifted sideways until his shoulder stood in front of the cellar stairwell where Maya and Clara were waiting.

"And they aren’t waiting till next month to serve it," Elara said, pieces clicking coldly together in her head. "Meridian unloaded sixty private security contractors onto Blackwood Siding’s rail spur twelve miles east of here last night."

Jax snapped his fingers once, dark eyes flashing. "Brenner’s rail yard. Wondered where their forward depot sat. State patrol provides the lawful badge out front so regular troopers don’t feel like highwaymen, and Meridian’s hired heavy-hitters ride right behind them to crack skulls if county boys hesitate."

"Once that court voids our corporate shells Friday morning, every stalling filing we’ve used for seven years turns to ash," Silas said quietly.

"Which is why we burn the shells ourselves tomorrow morning before their clerk even gavels in," Kael said, open-

ing the aluminum latches on the bumper case to lift out a thick oilskin-wrapped leather folio. "Ten years ago we built corporate masks to buy growing room. Scaffolding's done its job. Tonight we file voluntary dissolution on every dummy company in this valley, and at eight o'clock Friday morning in federal-state appellate chambers, Tahoma and twelve river-basin tribal chairs walk in beside me to assert direct co-stewardship over this entire watershed under Article Six of the unextinguished 1854 Sovereign Point Elliott and Medicine Creek Treaties."

Silence dropped across two hundred people at the gate.

"Federal treaty law sits above the state constitution and above state eminent domain," Elara said slowly, following the gambit straight to its edge. "If the valley lands are formally enrolled under tribal watershed co-management with forty county water engineers swearing affidavits that our farms keep three counties out of famine, the governor's seizure writ collides head-on with federal treaty jurisdiction."

"Buys you a courtroom fight they can't rubber-stamp in ten minutes," Jax said bluntly, slapping the fender. "Only catch is timing. Meridian's column out of Blackwood Siding is gonna roll at daybreak Friday before the appellate judges finish reading page two. If their bulldozers get inside your gate and smash the Foundry and hydro house first, no court paper on earth puts broken cast iron back together."

"And if anyone on our side fires a rifle at state patrolmen on County Road Nine," Silas said, looking straight at the pistol holstered under Jax's arm, "governor declares armed insurrection, federalizes two brigades with helicopter gunships, and treaty law goes straight out the window."

Jax looked at Silas for three quiet seconds, then unbuckled his holster rig, cleared the chamber onto his palm, and tossed both gun and belt onto the passenger seat of the cab before slamming the steel door shut.

"Your road, big man," Jax said evenly. "Tell me where you want concrete poured."

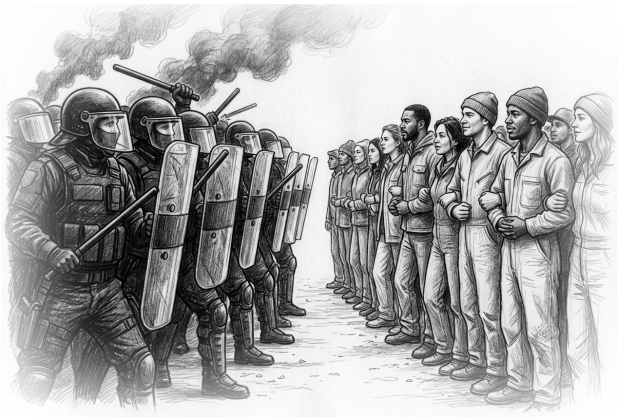
Elara turned around to look at the people standing in-

side the earthworks: Tobin with his three-fingered left hand tucked inside his belt; Doran standing two yards away from Marek with neither man looking away; Miriam and Corin leaning on their ash sticks; Gabe standing tall at the cellar steps. Winter had already taken fingers, speech, Olander's breath, and three households off their roll. Nobody standing in this gravel today thought survival came free.

"Lia, open all basin channels," Elara called across the yard. "Tell Tahoma's council rigs we meet their elders at the boundary line before Friday dawn, and tell Priya's bike teams in the city we need every downtown intersection jammed with soup pots when the precinct riot vans try rolling west. Silas, Tarn, fire Furnace One. We cast road blocks through the night and pull every last switch on the municipal pylon."

She looked back at Kael's road-hollowed eyes.

"Get some hot stew in you first, Kael," Elara said quietly. "You've got sixty miles of back roads left to make court by morning."



19

# Terminal Decoupling

For thirty-six hours Furnace One never shut down.

Working on Auxiliary Wheel Two plus every amp the south solar panels could pull through April cloud-breaks, Foundry crews poured twelve-hundred-pound concrete-and-slag road pyramids, bolted double polycarbonate shields over the clinic skylights, and welded secondary steel bars across the western gate rams.

They were not the only ones moving before Friday dawn.

Forty miles east inside the metro grid, Priya's mobile crews came up out of the storm drains at four in the morning, not with Molotovs, which tactical squads knew how to shoot on sight, but with sixty cargo trikes hauling steaming fifty-gallon soup cauldrons and sourdough crates straight across the main arterial approaches to Interstate Ninety. By five-thirty, four thousand hungry apartment residents sat ten-deep across six lanes of pavement eating hot barley broth outside the central precinct garages, stalling two entire riot-transport companies bumper-to-bumper without a single rock thrown. Out across the southern farm counties, organized tractor mechanics pulled main distributor rotors on twenty contracted equipment haulers, while inside District Four's central utility bunker, two night-shift dispatchers padlocked the high-voltage backfeed disconnects and logged the keys lost in transit.

Even so, Blackwood Siding needed no highway bridges to reach Elara's gate. Twelve miles of dry county blacktop connected Brenner's rail spur straight to the western turnoff of County Road Nine.

Dawn came up flat slate-gray and windless at thirty-nine degrees.

Right across the faded yellow centerline where valley trust ground met County Road Nine stood four hundred and eighty people five ranks deep, arms hooked elbow-to-elbow through heavy canvas coats and oiled wool sweaters. Nobody carried a club, a blade, or a firearm. Behind them in the second medical row stood Lin, Tomas, and one-handed Tobin beside two electric handcarts stacked with vinegar-soaked bandanas, saline squirt bottles, and plywood splints. Four places down from Doran in the third rank stood Marek and six soot-stained stokers from Lodge Four, coats buttoned high and mouths grim; whatever hadn't healed inside the valley since February wasn't getting settled by Meridian's bulldozers.

At the center of the front rank stood Elara with Silas on her right, seventeen-year-old Gabe on her left, and Jace

planted directly behind Gabe's shoulder in the second line, chewing an unlit birch twig at the corner of his mouth while flexing stiff fingers inside fingerless wool mitts.

And linked arm-in-arm across the right-hand lane stood Tahoma and twenty-four tribal councilors, grandmothers, and young treaty runners who had driven down off the reservation ridge roads at three that morning. An elder woman in a cedar-bark hat tended a small cast-iron brazier set dead center on the painted boundary stripe, sending a thin vertical thread of white sage and sweetgrass smoke up into the cold air. Tahoma carried no weapon either, only an eagle-feather staff in his left hand and the beaded buckskin tube holding the duplicate 1854 treaty parchment against his chest.

"State deeds on this creek aren't two centuries old," Tahoma said quietly to Gabe, noticing the boy's rapid breathing in the gray light. "Salmon and cedar knew our names here ten thousand winters back. Keep your heels flat, nephew."

Half a mile east toward the Blackwood rail turnoff, diesel smoke boiled black above the alders.

Twelve armored personnel carriers rolled around the bend in two columns, heavy steel ram-plows bolted low across their bumpers. Marching behind the lead six state-police rigs came two hundred county and state patrol troopers in black polycarbonate shin guards, chest plates, and scratched riot visors.

Marching separately on the north gravel shoulder behind four unmarked slate-gray six-by-sixes, however, came sixty men who didn't walk like local highway patrolmen. Dressed in charcoal flame-resistant flight suits, high-cut ballistic helmets without badge numbers, and wraparound dark goggles, they carried forty-millimeter multi-shot drum launchers and heavy steel-core polymer truncheons: Meridian's contracted asset-recovery unit, brought in off out-of-state rail cars through Brenner's siding at fifty dollars an hour hard scrip.

One hundred yards short of the sage brazier, air brakes hissed and twelve diesels idled rough and loud, vibrating loose gravel against Elara's boot soles.

For ninety seconds nobody spoke except cedar crackling softly in the iron pan.

Then roof horns on the lead state command carrier blared metallic and flat across the wet pastures:

**ATTENTION ALL PERSONS BLOCKING COUNTY ROAD NINE.
PURSUANT TO EMERGENCY RECLAMATION WRIT SEVEN-TWELVE, ALL CORPORATE AND TRUST EXEMPTIONS ON THIS PARCEL STAND REVOKED.
DISPERSE FROM THE ROADWAY IMMEDIATELY.
FAILURE TO CLEAR WITHIN SIXTY SECONDS AUTHORIZES CHEMICAL AND KINETIC DISPERSAL.**

Beside Elara, Gabe swallowed dryly once, then locked his left elbow tighter through hers. Directly behind them, Jace spat his chewed birch twig onto the asphalt and rested one steady palm briefly between Gabe's shoulder blades: "Chin tucked when the cans pop, kid. Breathe through wet cloth."

"Look straight through their plastic shields when they close!" Elara called down the five-hundred-person line so both sides of the asphalt heard her clear. "Half the troopers in that left column have cousins in Duvall and River Landing! Don't swing a single hand back. Make them look at the faces they're hitting!"

An air horn blasted short.

Pop-guns thumped hollow off the carrier roofs. Sixteen gray aluminum canisters arced high over the pavement and clattered spinning ten yards ahead of the brazier, vomiting dense yellow-white CS and pepper fog straight across the road on the morning draft.

First inhalation felt like swallowing boiling battery acid.

Elara's eyelids slammed shut involuntarily as fire tore down her windpipe into her lungs; she bent double coughing hot bile against her sleeve while tears poured scalding

tracks through the soot on her cheeks. Instantly Lin and Tobin shoved wet cider-vinegar rags up into their palms from behind while Silas's right hand stayed clamped like a bench vise around Elara's upper arm so the rank wouldn't part.

"Move! Clear the blacktop!" a state lieutenant barked through a megaphone.

Out of the yellow fog crashed two hundred riot shields.

Heavy Lexan slammed straight into collarbones, chins, and locked forearms. Up and down the center stripe, wood and plastic boomed dull and wet against wool coats.

A two-hundred-and-thirty-pound state trooper drove his shield rim full-tilt into Silas's chest. Silas slid backward eighteen inches on frosted gravel, dropped his center of gravity, and hooked both bare hands over the top lip of the Lexan shield, locking the man's charge dead still.

From the diagonal gap to their right, a second state patrolman swung a heavy polycarbonate baton overhead and brought it down full force across Silas's left collarbone.

Bone snapped loud enough that Elara felt the jar right through Silas's right elbow.

Silas dropped onto his left knee with a short grunt, left arm hanging dead against his coat buttons. Instead of letting go or swinging a fist, he shot his right hand straight out through the smoke, grabbed the webbing on the patrolman's chest rig, and yanked him six inches closer to his face.

"Miller!" Silas rasped through bloody spit, squinting raw red eyes straight through the man's scratched faceplate. "I know that taped watchband, Dan Miller! You and me winched your brother's logging rig out of South Fork floodwater three Aprils back! Your little girl Maya goes to clinic in Duvall for her lungs! Look through that damn glass at who you're breaking!"

Behind the fogged polycarbonate visor, Dan Miller's eyes went wide white. His raised baton shook violently at shoulder height and stopped dead.

"Silas?" came a muffled croak through the respirator valve.

"Push through that seam, Miller!" a sergeant yelled three

yards back.

Miller didn’t swing again; his arm sagged slowly down against his thigh, boots rooted to the yellow paint.

Twenty yards right on the reservation flank, eight troopers stopped three paces short of the smoking sage brazier where Tahoma and three grandmothers held the eagle staff and buckskin treaty tube chest-high while singing an old coast paddle song straight through coughing lungs. The point trooper, a twenty-two-year-old kid from the lower river reserve in state blue, stared at the eagle feathers for four seconds, unclipped his chin-strap with shaking thumbs, dropped both helmet and shield clattering onto the road, and knelt squarely behind Tahoma in the smoke.

All across the left lane, county and state patrol ranks were bogging down into shoving matches they had no stomach to finish.

Up on the hood of the gray six-by-six on the north shoulder, Meridian’s contract commander saw the state line stalling before any appellate call could clear the capital.

"State boys are choking!" his amplified handset barked harsh across the gravel ditch. "Wedge Two, push left-center seam! Clear that gatehouse now!"

Sixty badge-less men in charcoal suits didn’t hesitate and didn’t know a soul in three counties. Forming a tight flying wedge behind reinforced breach shields, they charged straight across the north ditch into the coughing seam beside Gabe and Doran, firing forty-millimeter hard-sponge kinetic baton rounds point-blank at ten yards instead of arcing them high.

*Thump-thump-thump.*

A forty-millimeter kinetic slug caught Doran square across the ribs, folding him sideways into Marek’s arms; the second round hit seventeen-year-old Gabe dead center in the sternum with the force of a swung sledgehammer.

Air exploded out of Gabe’s lungs in a spray of pink spit. His boots left the asphalt completely, slamming him flat onto his back on the torn tar with fractured ribs locking his chest paralyzed while his ears rang deafening white.

Out of the yellow tear-gas cloud five feet above Gabe's head burst three gray-suited Meridian contractors at a dead run, steel-core truncheons raised two-handed to cave in the downed boy's skull and split the road wide open toward the gatehouse.

Gabe tried to roll onto his elbow and couldn't draw breath to move.

From half a step behind him, Jace lunged straight forward over Gabe's body onto both knees on the pavement, planting his lean, tattooed frame like a timber bridge directly over the boy's chest and head.

"Stay flat under me, Papa!" Jace barked down into Gabe's ringing ear, throwing both bare, corded forearms up to lock around the lead contractor's shin guards and stop six boots from stomping Gabe's ribs.

The lead contractor cursed and swung his steel-core truncheon straight down with both hands across the base of Jace's bare neck. A second contractor on the flank swung crosswise into Jace's left temple, and from four feet back a drum-launcher boomed flat in the fog, driving a point-blank kinetic slug square behind Jace's ear.

Gabe felt all three impacts shudder heavy and awful down through Jace's shoulders above him, and still Jace didn't collapse flat onto Gabe's broken ribs; locking both elbows rigid into the asphalt beside Gabe's ears on sheer dying muscle memory, Jace stayed arched three inches clear for two more seconds until blood dripped warm off his nose onto Gabe's chin and his eyes went fixed and quiet toward the orchard trees behind them.

"JACE!" Elara's scream tore raw across the smoke as Tarn and Marek surged out of the third rank like madmen, not swinging iron, locking bare arms around two contractors' shoulders and dragging both men bodily off into the ditch mud while one-armed Silas hauled Jace and Gabe backward behind Lin's knees.

"Driver, ram that center gap!" Meridian's commander screamed from the shoulder, waving the lead twenty-ton National Guard

armored carrier forward past the stalled troopers.

Black diesel exhaust erupted vertical as low-range gears slammed in and four-foot tires crept forward over crushed tear-gas tins straight toward the gap where Lin was tearing Jace's collar open on the road.

Elara let go of Silas's coat and walked six steps straight out in front of Lin's medic cart onto the greasy crown of County Road Nine, planting both muddy boots square in front of the steel plow blade.

Ten feet back behind two-inch bullet-resistant windshield glass sat a nineteen-year-old National Guard corporal with pimples along his jaw beneath his Kevlar rim. Looking down over his hood, the boy could see Trooper Miller standing bare-handed refusing orders on his left, and on his right six gray corporate contractors still swinging steel clubs over a motionless man bleeding out on the centerline while Lin pumped two-handed chest compressions in the mud.

"Push the plow through, Corporal!" Meridian's liaison screamed into the cab intercom loud enough to bleed out the firing port. "Writ's active!"

The nineteen-year-old stared down at Elara's empty blood-smeared hands, then sideways at the gray mercenary raising a drum launcher toward her chest.

The boy yanked the red parking-air knob out with his left fist, killed the master fuel toggle, kicked his armored side door wide open, and stepped out onto the steel fender racking a round into his service rifle, pointed dead center at the Meridian contractor's chest.

"Drop the launcher!" the kid screamed, voice cracking an octave high across the suddenly quiet diesel line. "Drop that fucking launcher right now!"

Sixty miles west inside the packed marble well of the Joint Federal-State Appellate Bench, Chief Judge Halvorsen had brought her gavel down ninety seconds earlier over the unrolled 1854 treaty parchment and forty-two county engineers' famine affidavits, issuing an immediate emergency writ voiding the Governor's Reclamation Order on sovereign treaty

co-management land and stripping state law-enforcement immunity from every unit east of Milepost Twelve.

Inside State Patrol Central Dispatch, Shift Supervisor Carla Vance, whose seventy-year-old mother slept dry in River Landing Four, slapped the red all-band tactical override key down hard.

Every roof horn on twelve carriers and every shoulder mic along two hundred yards of smoke crackled live at once:

**ALL STATE PATROL AND GUARD UNITS AT COUNTY ROAD NINE: CENTRAL COMMAND OVERRIDE. CEASE AND DESIST IMMEDIATELY. FEDERAL-STATE APPELLATE BENCH HAS VOIDED RECLAMATION WRIT SEVEN-TWELVE UNDER THE 1854 SOVEREIGN TREATY COMPACT. PRIVATE UTILITY CONTRACTORS ON SITE HOLD ZERO LAWFUL AUTHORITY. DETAIN ANY ARMED NON-STATE PERSONNEL USING FORCE AND WITHDRAW WEST OF MILEPOST TWELVE IMMEDIATELY.**

Echoes slapped once off the wet timber ridge and died.

Trooper Dan Miller didn't drop his vest gently; he unsnapped his retention holster, stepped squarely across the centerline beside the Guard corporal's fender, and leveled his nine-millimeter straight at the nearest gray-suited Meridian squad leader. Along the left lane, thirty county and state patrolmen snapped their visors up, turned ninety degrees right, and advanced in a grim blue-and-black wall onto the stunned sixty-man contractor wedge, forcing steel-core clubs clattering onto the gravel and zip-tying corporate wrists behind backs right in the roadside weeds.

Nobody along the valley ranks cheered. Not one voice.

Ten yards behind the sage brazier, in a cleared circle of wet blacktop smelling sharp of pepper gas and copper, Lin stopped chest compressions, sat back slowly on her soaked

knees, and pulled the stethoscope tips out of her ears. Across from her, Tomas closed two fingers gently over Jace's open, unseeing eyes and pulled a clean wool blanket up to the faded blue Monroe ink at his collarbones.

Sitting propped upright by Maya's trembling knees with a splint wrap taped hasty around his bruised ribs, Gabe couldn't seem to hear Tahoma's voice announcing the court writ down the road or the armored carriers grinding backward in reverse gear toward the highway. Gabe just kept his bloody right palm resting flat against Jace's cold, inked left wrist on the asphalt, staring dumbly at a stray curl of red cherry shaving still caught inside the cuff seam of Jace's sheepskin pocket.

Elara knelt slowly on the wet tar beside her son, resting one hand on Gabe's shaking neck while looking down at the quiet, angular face of the man who had stood bare-headed on a sleety bridge three weeks ago to keep their town from tearing itself apart, and who had just paid the bill for all four hundred and eighty of them on cold county tar.

Beside her, supporting his broken left collarbone in his coat flap, Silas stood back up only when the last carrier taillights vanished east around the Blackwood turnoff. Looking up toward the sixty-foot galvanized utility pylon at the property corner, where four dead aluminum grid lines still stretched east toward Brenner's siding and Meridian's substations, Silas nodded once to Tarn and Marek.

Nobody gave a speech. Tarn and Marek climbed the concrete pier with two battery partner-saws and insulated long-handle shears.

Abrasive wheels screamed shrill for twenty seconds, throwing white sparks down into the frosted ditch weeds until all four steel-core trunk cables parted one after another with sharp, flat rifle cracks, whipping dead into the mud and staying still.

Down on the quiet highway, two state patrolmen carrying saline-rinsed faces helped Doran limp toward the clinic cart alongside five other stretcher cases with cracked ribs and

broken jaws, while four foundry men lifted Jace gently onto a clean cedar plank litter on their shoulders to carry him home up the orchard lane.



# Epilogue

Nine months after the saws cut the aluminum trunk lines at Milepost Twelve, a deadlocked, exhausted United States Supreme Court let the appellate treaty ruling stand in a three-page unsigned order.

Nobody in the valley mistook those three pages for a change of heart in Washington. By January, federal tax receipts had fallen below debt-service interest, two eastern port authorities were trading grain directly in kilowatt-scrip, and the Interior Department simply lacked the fuel, cash, or reliable regiments to wage a ten-front war against the river basins still growing winter wheat. Like every empire before it when

the ledger ran dry, the old state didn't repent; its reach just shrank back toward the capitals it could still garrison.

Two autumns after County Road Nine, up on the windy gravel turnout above the west gate, Kael and Jax were strapping tarps down over crates of heirloom barley seed, ceramic filter candles, and open-board radio repeaters on the back of their eight-wheeled truck.

The Corten armor plates stayed bolted to the cab doors. Out beyond the Cascade passes, the world hadn't turned into a garden song.

"Got overnight packet burst off the Gulf relay before we pulled the dish," Jax said, cinching a ratchet strap tight with both hands and squinting against the bright October glare. "Port commune outside Galveston went dark Tuesday. Petrochemical junta out of Houston rolled artillery barges up the ship channel when refinery diesel ran out. Maybe four hundred folks got out up the Trinity River barges; rest of the docks burned."

Kael paused with a coil of hemp rope over his forearm, looking east past the foothill saddle where thin cooking smoke rose above the old metro plain, cleaner than two years back, though half the outer sprawl remained boarded-up concrete shells contested by salvage syndicates while Priya's neighborhood blocks painstakingly jackhammered parking lots into fenced potato beds one ward at a time.

"And the Upper Platte watershed?" Kael asked quietly.

"Still split three ways since last summer's drought," Jax said, checking tire pressure with an iron gauge. "Half their upstream nodes hoarded canal water like Iron Creek tried here, collapsed by August, and now the downstream towns are absorbing two thousand dust-bowl walk-ins on half rations. Gonna take fifty years, Kael. Maybe eighty. Whole bioregions are gonna miscalculate or get crushed under falling masonry before that old carcass finishes rotting."

"Fifty years was always the real number, Jax," Kael said, climbing stiffly up toward the cab step before looking back down across the creek basin below them. "Nobody promised

us every seed takes root. Only takes a few deep ones surviving winter to re-seed a burned slope."

Even twelve miles east along the rusted tracks at Blackwood Siding, the lesson sat plain in the weeds. Meridian Grid had pulled its flatcars and diesel drums out forty-eight hours after losing the Road Nine injunction, leaving Brenner's machine yard stranded without power or allies; by last November Brenner himself had drifted south, and the remaining fourteen machinists had spent a humble year trading repaired tractor axles on outer-probation terms just to earn winter oats back from the valley silos.

Five hundred feet below the ridge turnout, October sun lay warm and pale gold across four hundred acres that had held.

Inside the open Dutch door of the machine-shop tool crib, Tobin leaned his elbows on the half-shelf while checking out Olander's zero-to-one-inch steel micrometer to a fourteen-year-old girl from the highway arrivals. Clamping the wooden sign-out clipboard smoothly against his ribs with the healed two-fingered grip of his left hand, Tobin tapped the calibration log with his right pencil.

"Bring it back with a single speck of lathe swarf on the spindle threads and you sweep bronze chips till Solstice," Tobin told her mildly, watching her nod twice and trot off toward the milling bay.

Down the gravel path under the sunny south eaves of the pottery shed, twenty-eight-year-old Aris sat straddling a low bench beside a modified kick-wheel Doran and Silas had rebuilt with a heavy foot-pedal centering guide. His right forearm rested strapped loosely to a padded leather brace on his thigh to steady the tremor; using only his strong left palm and wet thumb, Aris drew a thick cylinder of dark creek clay slowly upward into a wide, slightly uneven soup bowl.

Lia paused by the drying racks with an armful of split alder kindling. "Glaze kiln's running Thursday morning if those dry in time, Aris."

Aris eased the flywheel to a stop with his left boot heel,

looked up into the sun with the pale crescent scar curving clean above his left ear, and took four unhurried seconds to line the words up behind his tongue.

"Twelve... bowls," Aris said, slow, thick around the wired jaw scar, and completely clear. He tapped the wet rim once with his left knuckle, half a crooked grin lifting the good side of his mouth. "Hold... stew."

"Twelve's plenty," Lia smiled, setting the kindling down gently by the door before heading upslope, passing two hundred yards below the north woodlot trail where Vane still worked silent six days a week splitting winter cordwood beside Tarn's afternoon watch: never eating in the main kitchen hall, never forgiven by Doran, yet fed, warm, and alive under kept word.

Fifty yards lower in the terraced comfrey beds behind the clinic, Elara knelt on a folded grain sack tucking straw mulch around perennial roots while Silas worked ten feet down the trench replacing a cracked brass drip-union with a cast-iron T-joint poured out of their rebuilt Foundry.

Above the open collar of Silas's faded flannel shirt showed the thick white ridge where Dan Miller's baton had snapped his collarbone on County Road Nine; two miles down the lane, Miller himself now drove a timber tractor three days a week for River Landing Two after turning in his state badge that same afternoon.

"Creek One's new vanadium runner is holding dead smooth at eighty-eight percent load," Silas said, giving the iron fitting a final quarter-turn with his pipe wrench and wiping red pipe-dope off his thumb. "Even if January drops to twenty below again, nobody's freezing in the pottery bays this winter."

Elara sat back on her heels, flexing stiff dirt-caked fingers in the late sun, grey hair now outnumbering dark along both temples at forty-four. Looking across the comfrey leaves at Silas kneeling solid and unhurried beside the water pipe, she didn't feel triumphant or finished. Ditches still silted up after every hard rain, Kael's truck horn had just sounded twice in farewell heading back out into a breaking continent, and

winter wood tallies still kept her up past ten on Sundays. What remained was a deep, quiet steadiness in her chest that hadn't existed two years ago.

From the grassy knoll above the upper apple rows, a high, clear peal of toddler laughter carried down the slope.

Elara and Silas both looked up.

Two-year-old Clara was tearing barefoot through late red clover in an unbleached linen smock, dark curls bouncing wild as she outran Gabe by six paces up the rise while Maya walked laughing behind them with a basket of windfall Jonagolds balanced on her hip.

At the crest of the knoll, just inside the spot where four severed utility cables lay overgrown by wild blackberry beside the quiet asphalt of County Road Nine, stood a waist-high cairn of rounded river cobbles and a young red cherry tree planted in its second autumn leaf.

Clara skidded to a stop in the clover beside the cairn, tipping her head all the way back to point one muddy finger up into the branches.

Hanging from the lowest bough on a loop of tarred hemp twine, turning slowly and dipping its sanded wings whenever the October breeze came up the gorge, rocked a small, sun-silvered cherry-wood bird.

Gabe caught up on the slope, breath hitching slightly where cold mornings still pulled at his healed rib-cage, and rested two fingers briefly on the warm top river stone of Jace's cairn before scooping his laughing daughter high onto his shoulder.

Down by the Sector Seven depot, the salvaged bronze bell rang three slow, unhurried notes calling the afternoon shifts in to wash up for supper. Silas stood up from the water pipe, held one muddy hand down to pull Elara to her feet, and walked beside her up the stone terrace steps toward the tables under the trees.

# THE BEAST IS DYING
# THE LAND BREATHES AGAIN

The legacy world of fiat coercion, artificial scarcity, and bureaucratic violence is collapsing under its own thermodynamic weight. From the ashes of the old nation-state, a massive Polycentric Bioregional Commonwealth is rising.

Elara and Silas are stewards of the Foundry, a beating heart of steel and fire in a decentralized mesh of mutual aid. But when the dying beast of the legacy system lashes out to reclaim its lost territory through blockades, lawyers, and riot police, the true test of their society begins.

They must defend the physical reality of Layer 1 against the suffocating legalese of Layer 7, relying on the radical trust and restorative justice of the Sovereign Stack to hold the line. They will not be broken. They are building a civilization designed with **Fault Tolerance**.

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STATUS: TERMINAL DECOUPLING
ACTION: SEVER LEGACY TIES
PROTOCOL: INVIOLABILITY OF LOCAL FLOORS
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**A visceral, dirt-under-the-fingernails solarpunk epic.**
**The sequel to *System Call*.**

J.C. NOVAIS RAFFAINE
github.com/raffaine/collective