

SUNFLOWERS

A NOVEL



BY THOMAS T. THOMAS

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Amid a growing national energy crisis, a radical environmental group destroys the generating capacity of Hoover Dam, the engineering masterpiece of the 20th century. A new President responds by vowing to build the engineering marvel of the 21st century: clean solar power from an orbital platform. The politician doesn't understand the huge challenges his project involves. And no one plans on the determined, ultimately violent, opposition of the world oil cartel. The project tests the ingenuity and stamina of five people: Harley Waters, the presidential assistant who must bring the satellite project to fruition through the maze of Washington politics; Nikolas Starik, the construction engineer who must solve the project's various puzzles and make it viable; Raven Howell, the clever publicist who creates a climate of acceptance for the solar power satellite; Willem Cerkes, the Butcher of Mostar, who is hired by international oil interests to make sure it never flies; and Janey Pulaski, who single-handedly poses the greatest threat to the satellite's future. This novel is an inside look at the high-stakes world of engineering project management: part inspiration, part politics, always risky. It will appeal to readers who treasure the *aha!* moment of creative insight, who enjoy the interplay of politics and personality, and who relish the adrenalin rush of looming catastrophe and the triumph of winning a fight to the finish.

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Prologue
NO GROWTH RESOLUTION

Parking was a bitch. All the visitor lots were full, so Janey Pulaski had to haul the aged Volkswagen Vanagon half a mile up on the Arizona side of the canyon, beyond the dam itself, before she found a parking space. From the line of cars and campers along the roadway, she could tell the tourist crowd was unusually heavy today. It was just a fluke that her group's target date fell on a Thursday—a day that Janey would have expected most tourists to stay home. But having a crowd around was a *good* thing ... wasn't it?

"Well, there are advantages and disadvantages," George had said when the group discussed it. "People are a good source of natural cover. Yet there is always the chance some civilian bystander will be watching you at the critical moment, remember something, and later—"

"As if anyone'll be around, later, to remember anything," Davy had sneered. "No, you want a crowd, the more the better, so no one will notice what you're doing."

Janey herself was still too new at all this to have an opinion.

The parking space was a short one, squeezed into the hollow of the rock wall. She had to back and fill, heeling and toeing the brake and gas pedals, cranking the steering wheel full left and right, to get the van completely off the road. All that work in the sun-baked interior raised a sheen of sweat down her throat and under her arms.

Next time—if she ever got talked into doing anything this crazy again—Janey was going to make sure the air conditioner worked *before* she stole the car.

The sweat film dried the minute she stepped out into the crisp desert air. Then, as she was walking back downhill to the dam, her ankles and knees started popping. Thank God she'd worn flats, instead of the high heels that George had suggested. Janey hated heels.

"But they make your calves stand out," he insisted. "Men like that."

And he'd wanted her to wear pantyhose.

"You have to *disguise*, Janey. Divert people's attention. If you go wearing a tie-dyed tee-shirt and Army Surplus jacket, then you *look* like a terrorist. Someone people instinctively distrust. But wear a nice dress, short above the knee—this way men will look at you, sure, but they'll get *nice* thoughts, sexy thoughts."

Men, hell. Sexy, hell. Let the *men* wear short dresses and high heels then. She'd look at *their* calves. ... But at the last minute Janey had relented and put on a dress, plain blue cotton with an attached belt—like something her mother would wear—and a long raincoat. She looked about thirty-five years old. Matronly. Disguised.

The sun was hotter than Janey had expected, for the middle of winter. Her group had chosen the date most carefully, January 20th, and she had imagined the high desert would be cold. But, even with the sun hanging low on

the canyon rim, the air down in the gorge was oven-hot. Janey regretted bringing the raincoat right away but, having reached the top of the dam, she had no place to leave it.

She crossed the roadway to the north parapet and let the moist breeze off Lake Mead fan her face and neck. Then she did the obligatory tourist thing and walked to the south side, leaned over, and stared down at about a million square feet of bone-white concrete. The glare shot right up under her picture-book sun hat and made her eyes ache. The hat was also George's idea, to go along with the big, floppy, white leather purse, which was the whole point of this exercise.

Now, looking down the face of the dam, Janey felt a moment of hesitation. It was a lot bigger than she had anticipated. Studying pictures was one thing. Standing on a mountain of smooth, white concrete like a God-damned Swiss alp plunked down among the raw rock of the gorge, this was something else. She wanted to make a point, sure, a statement about how fucked over the world really was. But this ...

"The dam is a perfect target," George had told the group, many times. "It silts up streams, kills rare fish species, and floods important tribal artifacts and holy places. It gives cheap water to agri-business and makes cheap electricity for the bourgeoisie to heat their hot tubs and run their electronic gadgets. A lot of evil is tied up in that dam."

Janey agreed with him, of course. She really hated what was happening to the environment of the West. Once the land had been clean and shining in the sun, a sparse ecology but rich in energy and life for all that. Now the desert was crumbling and waterlogged where this dam and others in the river system backed up the yearly runoff. And downstream the land strangled under lawns, parking lots, shopping malls, and all the other useless kitsch of sprawling suburbs. Where once people had lived easy on the land, in brotherhood with the plants and animals, they now raped and burrowed, gouged and destroyed. Janey hated it all.

Still ... as she bent over the railing and looked down, the scale of the dam took her by surprise. It was bigger than any human-made thing she'd ever seen. But that was why she carried the absurd purse.

She almost lost it when a gust of wind came back up the canyon, flipping up her hat's wide brim and lifting the crown off her head. Janey snatched at the hat, and the strap of the idiotic purse slid off her opposite shoulder, pulled by the weight inside. She spun and grabbed, catching the strap on her wrist before the bag could hit the pavement. It swung an inch short of too late.

Janey leaned against the parapet, trying to control her breathing. Relax, she told herself. Take your time. This dam isn't going anywhere. Davy said she could place the package anytime before three o'clock that afternoon—actually 4:15 on the timer mechanism—right up to the last tour going down inside the dam.

When she was ready, she walked over to the kiosk, smilingly paid the fee, and blended in with the group waiting for the next tour to start. The ranger

who herded them toward the elevator seemed a nice enough guy. He might be a college student, just making tuition, and not a career stooge at all. His hair was cut clean around the ears, however, and his mustache trimmed to align precisely with the corners of his mouth. Probably, though, he was just dressing to regulation, playing The Man's game.

The ranger was noticing Janey, too. His eyes—she saw them wander to the sides of his sunglasses—were going over her from hat to shoes, leaving nothing out. Maybe he was just ogling. And maybe he was trying to reconcile a face and body shape that said “twenty” with clothing that said “forty.”

So let him try, she thought smugly.

“We’re standing now at the crest of the dam,” he said, loudly enough to override the traffic moving on the roadway, “at elevation one thousand, two hundred thirty-two feet. We’re going to be riding down five hundred and thirty feet inside the arch, to the visitor’s gallery, which is just *five inches* above the old riverbed. Although this is a fast elevator, the trip will take us eight minutes.”

The tourists packed themselves into the elevator cab, and the ranger managed to slip in right behind Janey. He was still reeling off facts and figures—“four and a half million cubic yards of concrete . . . pouring thirty-five hundred tons per day at peak construction in 1935”—while the crisp edge of his shirt brushed back and forth between her shoulderblades. When he paused for breath, his belt buckle pressed briefly against her spine.

Maybe he was just ogling, after all. Janey wanted to tell him to stick around after shift.

As the elevator dropped down inside the dam, the air turned cooler and damper. The people stopped gasping, relaxed, and began to breathe deeply. The elevator cab finally bobbed to a stop and they walked out through a long, electrically lit tunnel. Daylight shone in at the far end of the gallery, where they could look down into the powerhouse with its row of round, flat things. She supposed they were the generators Davy had talked about.

“Here are the nine General Electric turbines,” the ranger said, “of the Arizona, or eastern, wing of the powerhouse. There are eight over in the Nevada wing. When they’re all running together at peak output, they make a total of two million kilowatts of electric power.”

The ranger called them “turbines.” Was that the same thing as “generators”? On the basis of nothing more than hope, Janey decided they must be.

“You want to go back inside the dam, upstream from the generators,” Davy had told her. “You have to get right in under the arch, down at bedrock. Lay the package against the wall, then just turn and walk away. Take your purse with you, because somebody’s sure to notice if it’s missing. They might even come after you, try to return it.”

“But . . . two keys isn’t going to do much damage,” she had protested. Janey didn’t want it to sound like a question, which would make her the lowly student and Davy the big expert. She knew something about physics, too.

“Not against all that concrete, no,” Davy agreed. “However, two kilos will create a disequilibrium in the dam’s internal pressures, a momentary flexure. Then the weight of water will do the work for us.”

Ah, water pressure! That would make the difference, of course. Davy had seen this in an old movie and described it for her: first a tiny explosion, then a hairline crack, then fist-sized chunks of concrete falling out of the crack, and finally a gush of water.

Plain old dynamite did that, in the film. Davy had provided the group with Semtex, the Czech-made plastique, preserved from the days when Czechoslovakia had been one country and an agent of revolution. Semtex was a hundred, a thousand times more powerful than dynamite, Davy said. One ounce was enough to hurl a car fifty feet through the air—or so everyone said.

Except ... she couldn’t *find* any bedrock under the dam.

“Of course,” the ranger was saying, “for safety reasons, we can’t take you down on the turbine floor. Not while the powerhouse is on line. But you can see everything much better from up here.”

Shit! All she saw on this tour was featureless tunnels—too crowded for her to unload the package in—and a postcard view of the powerhouse. The plan was a bust. Davy hadn’t checked out *anything*.

“Over here—” The ranger walked them to the right, through an opening in the wall and out onto a narrow catwalk. “—is the main penstock for the Arizona wing. It carries blah-de-blah gallons of water at a pressure of blip-da-dee pounds per square inch under a head of whoop-de-doo feet coming down from the gate valves in the intake towers.” Whatever. It sounded like a lot of water.

So, all right, this “penstock” thing in front of them was just a pipe. But it was a *big* pipe—twenty, maybe thirty feet across and painted silver. On the uphill side, it came out of a rough tunnel gashed in the rock. On the downhill side, it disappeared into an arch plastered over with white-washed cement. That was the way into the powerhouse.

The pipe *rumbled* at her. Janey figured there must be a ton or two of water in there.

Davy had left her no contingencies, just “put your package down at bedrock and get out.” But no one was letting her go that deep under the dam. This place was lined with rock, at least, and the pipe carried water that was obviously under pressure. Maybe if she left the package here, the shockwaves or something would follow this pipe up inside the dam. Not as good as being right under the arch, perhaps, but better than nothing.

Better than taking the package back up in the elevator, then driving like hell to find someplace she could get rid of the package without being noticed. Or blown apart.

So ... hang back, she told herself. As the yokels filed out, leaving the walkway, Janey dawdled. She pretended to be enjoying the cool air and feeling the throb of those vibrations go through her. Let the crowd hurry to catch the rest of Mr. Ranger’s boring statistics. She had plenty of time.

When the last Hawaiian-shirted tourist passed through the exit door and she was totally alone, Janey leaned over the railing. She stood on tiptoe, heels rising out of her shoes. The top of the pipe was just level with her eyes but still about fifteen feet away. No way could she reach it. So ... she was going to have to throw her package.

Wrong! Dumb! Dangerous! Instead, she should just carry the thing back out of here, drive away, and lose it somewhere in the desert. And then? Then try to explain her failure to the group. And Davy would want to *hurt* her for it, Janey was sure of that.

Well, if she threw the plastique over the pipe, would it survive the impact of landing? Maybe. Probably. Everyone said Semtex was safe. You could cut it, shape it, stamp on it—and it wouldn't do anything until you plugged in a detonator. But how stable was the detonator? Or the timing mechanism? Janey figured she was about to find out.

She opened her purse and took out the block of plastique, wrapped in butcher paper and tied with string. It was a flat oblong, like four one-pound sticks of butter strapped together.

Janey knew she'd have to throw the thing hard, with enough *oomph* to get it over the top of the pipe. Otherwise, the package would fall on this side and lie on the tunnel floor, in plain view from the catwalk. But if she lobbed it and went too high, then the package would hit the low ceiling, bounce back, and end up in the same place: exposed, with the white paper as good as a flag to the security guards or janitors or whoever it was that patrolled down here.

No, she had to throw the package just right, in a flat arc, skimming across the pipe and falling on the other side, between the penstock and the rock wall. And she had to throw it *gently*.

Janey tightened her hold on the railing, took a deep breath, and held the block in a backhand grip, like a Frisbee. She practice-swung it once, twice, three times, and let go. The package flew out, bounce-skipped on the upper curve of the silver-painted metal, leaving a scuff mark in the dust, and hit the wall behind.

Instinctively, she closed her eyes.

The package fell without a sound, its fall covered by the mind-numbing rumble of water in the pipe.

Nothing happened.

No explosion.

She opened her eyes. The thing was done. The package was placed and out of sight.

Settling into her shoes, gulping hard to get her breath back, Janey Pulaski turned and hurried to catch up with the crowd. She wanted to get away from the thing. She hiked the loose strap of her purse up on her shoulder. She had her excuses all ready, in case the ranger or anyone else noticed her lagging behind.