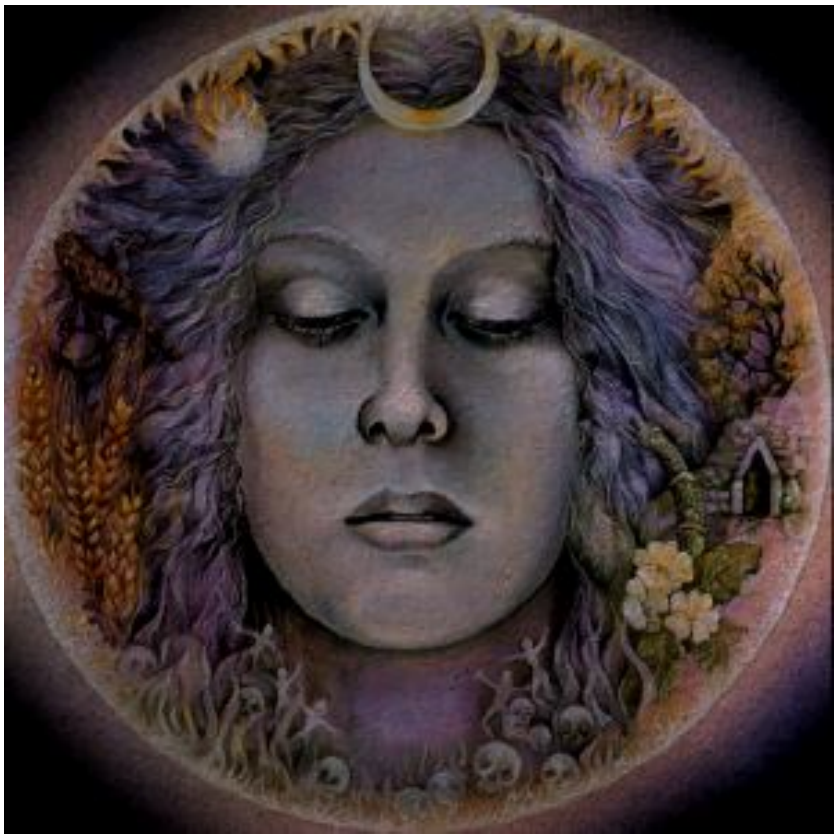
TALKING WITH GAIL



A Dialogue about Toxics Activism, Womanhood, Nature, and Relationship

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April 2005

Signature

This thesis has been accepted in partial fulfillment of the A.B Environmental Studies degree.

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Thanks to
Earth.
wind, fire, rain,
and friends.
family (non-human included).

The elemental forces of my life.

Gratitude for the gift of Christina Zarcadoolas and Rick Benjamin. My fearless advisors.

for the Community of the Center for Environmental Studies.

for poetry. for Mary Oliver.

for Gail Corvello, without whom none of this would have been possible.

in Deo Speramus. Hope, even in the face of toxic landscapes, springs eternal.

"Today, like every other day, we wake up empty
and frightened. Don't open the door to the study
and begin reading. Take down a musical instrument.
Let the beauty we love be what we do.
There are hundreds of ways to kneel and kiss the ground."

-Rumi

Blessed be.

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Prologue

Our own pulse beats in every stranger's throat,
And also there within the flowered ground beneath our feet;
And-teach us to listen!-
We can hear it in the water, in wood, and even in stone.
We are earth of this earth, and we are bone of its bone.
This is a prayer I sing, for we have forgotten this and so
The earth is perishing
-Barbara Deming

I sit down to type with the aroma of sage in the air. With reverence for desert peoples, I burn a bundle of its sweetness around the black box in front of which I now sit. Remnants of a forgotten consciousness. The roots of my passion, the nitrogen-fixing bacteria that feed the bud of my intellectual enterprise. The fire and cellulose that enter my nostrils remind me of the animal beat of my heart. The steady rhythm fuels my brain, births the phantoms of thought writ into 12-point font. I am reminded of Joanna Macy's conception of ecological self – a calling to rediscover our coexistence with all life on this planet[1]*. This thesis I author is not just for the human community and our journals of environment and health, but for the soil, the air, "the force that through the green fuse drives the flower."*[2]
I tell a story of one woman's response to technological disaster and the time I spent with her, learning and connecting. It is a story of emotional and ecological betrayal and strength. A personal story that grows, gnarled but bearing fruit, out of our fissure with the systems that sustain us.
I am a victim of environmental contamination. My endocrine system is dangerously damaged. I, the medical experts tell me, will most likely never be able to reproduce. My body aches for the loss of its fertility, an agony that cuts deep into the granite of this land. Chief Seattle cautioned "all things are connected like the blood that unites one family." The blood that flows through my veins bears the pain and pollution of our biosphere ravaged.
My spirit weeps for the death of species and nutrient cycles. For a young child who fears the ground beneath her feet. For the gray-haired woman who become hoarse as she speaks against the wind of status quo that kills.
Here, on these pages, is the written record of my thesis efforts.
This is the story of Rhode Island environmental activist Gail Corvello;
this is the story of the soil of a small Rhode Island town;
this is her story;this is its story; this is my story; this is our story.
I present it to you: one part ethnography, one part friendship, one part alchemy, one part chemistry, one part soul, one part gray matter: a patchwork of science, art, and self.

[1] Macy, Joanna. Healing the Wounds. CA: New Society 1989
[2] Thomas, Dylan, "The Force that Through the Green Fuse Drives the Flower." http://blue.carisenda.com/archives/dylan_thomas/the_force_that_through_the_green_fuse_drives_the_flower.html 9/10/04 10:44am.

Introduction, or climbing College Hill

Welcome to the pages of a very non-traditional thesis, the culmination of a very non-traditional path through several institutions of higher learning. My road through college has been a winding one, lovely but full of pot-holes. There is something within me that revolts against academia. Call it prolonged adolescence or an awakening to true self, I have been deeply unhappy as a college student. The one thing that stands between me and the kettle drum finality of 30 credits is this paper.

I was biking up college hill a few weeks ago and began to think of my methodic pedal-pushing as a metaphor for my battle with higher education. Things were going fine with bike and body, I was strong and determined, fit to the task when, with little warning, my chain came off. I fixed the chain, grease staining my hands, made some upward progress, but then had trouble with the gear-shifter. Grumbling, I tweaked my derailleur. The gears functioned more smoothly and I pumped my way nearly to the top. On Waterman St., about 10 meters from flat relief, just after I was laughing to myself about how this struggle resembled my wayward ascent to college graduation and these final feet could be my thesis project, my bike became heavy, tugged at by a freakish pull of gravity. My pedaling became molasses slow as I thought to myself, “of course, not even the final stretch could go smoothly.”

In order to keep pedaling, this paper will be reflexive and creative. I opt not to use an academic tone. I want to remain present and vocal in the writing and dreaming. My project is about relationship; I will not be a passive instrument for data collection.

Forgive me if my approach is irreverent, or will not withstand rigorous scientific scrutiny. It is the only way I can present this project, the only way I find that I can make this task embodied and real.

The central "body" in my embodied project is Gail Corvello, a daycare provider and environmental grassroots activist in Tiverton, RI. I remember the first day she came into my life. March 4th 2004. My student research team and I drove down the length of 195 East, wended our way through Dunkin Donuts and neon-lit seafood restaurants, to the Community Center in North Tiverton, Rhode Island. It was a cold, clear spring night. Gail, a daycare provider, was wearing a light gray "Cozy Corner Daycare" sweatshirt with stick-figure children stitched in bold primary color lines. She spoke crisply, decisively as she gave us the history of the soil contamination in her neighborhood. She was most concerned with the children in the neighborhood, particularly her daycare, saying "it hits me in my home, for nine and a half years there have been children on my property. It's heart-wrenching to think something might happen – all of me is on that corner." Driving home, we spoke in disbelieving terms about the stress the residents were experiencing, the health risks, the uncertainties. We also spoke about how impressed we were with Gail, the President of the fledgling Environmental Neighborhood Awareness Committee of Tiverton (ENACT): her directness, determination, and kindness.

This paper is of her and for her. Thank you, Gail, for inspiring me and guiding me to understanding grounded in experience and friendship.

Methodology, or understanding and sensuous subjectivity
or
"How long until we can go out and comfortably play in a tree?"

I have been struggling with how to frame my work. Am I student of psychology? Of literary realism? Of ecological impressionism? Of metadata-based introspection? The different labels bubble, bubble, toil and trouble – I might as well call myself a witch. Magic seems a viable contender for what I practice. Not to self-aggrandize. Or self-deprecate.

I suppose this piece, to satisfy the daemons and gods of academic inquiry, is a biographically-based critical ethnography presented in a reflexive, narrative format. Or, as a friend (and fellow student of things quasi-anthropological) put it as I discussed my thesis project with him, "oh, so you're going to talk to someone and then tell a story." Exactly.

Before the storytelling begins, however, I must again bow before intellectual propriety and create a theoretical framework to justify my approach. This conceptual basis, in good post-modern fashion, ultimately should show proper "incredulity toward metanarratives" (my thanks to Lyotard) and thus, incredulity toward itself. I am essentially creating something that seeks to disprove itself, to render *itself* obsolete and impossible. Sigh. No wonder students these days experience so much existential angst. But I am getting ahead of myself.

From my fieldwork journal, August 26, 2004:
I finally get it. Sitting here in the UEL at 8:48 on August 26th, something hits me about what these numbers mean. An end of trust. An end of peace of mind. There are bold,

italicized quantities in your bracket which is your yard, your children's playground. A clear indication of disease, of something gone dramatically, toxically wrong. I cry. It's like a jail sentence, like getting my blood work back and seeing that my glucose is too high, my androgens out of control. The system is breaking down. Something is amiss. It's not the death penalty, but a continuous ache in your heart or ovaries that something is passing away.

I am an environmental studies concentrator. Understandably, this department is rooted in scientific inquiry, of both the natural and social variety. I entered college convinced of the power of the scientific method. I saw salvation in the clear step-wise process: hypothesis, observation, conclusion. Accept or reject the null hypothesis. Turn the lights off and clean up shop.

In my scientific training, I learned to interpret numbers, to understand confidence intervals and chemical equations. I would often struggle for hours over problems, though, because I wondered about the words and lives that lay beneath the neat edges of linear language. What does one do with the laughter and mudpies that sit uncomfortably within the concentration calculations of toxic substances beneath a child's playground? The weddings and funerals, the hope and fear that lie behind the direct exposure criteria?

Life is messy. Science, it has always seemed to me, tries to make it clean. This serves controlled experiments well in the laboratory, but eliminates much of the spontaneous and chaotic beauty of the realities we inhabit. As David Abram writes in the Spell of the Sensuous:

> The everyday world in which we hunger and make love is hardly the mathematically determined 'object' toward which the sciences direct themselves. Despite all the mechanical artifacts that now surround us, the world in which we find ourselves before we set out to calculate and measure it is not an inert or mechanical object but a

> living field, an open and dynamic landscape subject to its own moods and metamorphoses.[3]

Even controlled experiments are subject to social policies and the fact that "the scientist never completely succeeds in making him(her)self into a pure spectator of the world, for (s)he cannot cease to live in the world as a human among other humans."[4] As per tradition established largely in Descartes' Meditations, science as traditionally conceived often claims exempt status from the hobgoblins that inevitably haunt human minds and endeavors by cleaving mind from matter.[5] It instead claims as "real," in the tradition of Galileo and Newton, only those entities that can be mathematically measured. "Subjective" experiences of emotion, taste, sound, or color become illusions.[6]

However, "subjective" experiences are the basis of how we make meaning in our daily lives. In perceiving something, our emotional, spiritual, sensual selves come to bear on the perceptual experience. Philosophers such as Jurgen Habermas, in his conception of the life world and systems world within modern society,[7] and other postmodern theorists such as Lacan and Foucalt, acknowledge in their work that science is no different than any other form of knowledge, i.e. that it is "a special kind of story" and cannot lay claim to objectivity because "it is made with the linguistics and other meaning-making resources of a particular culture."[8] Even quantum physics contains echoes of the unavoidable bias and experiential messiness of traditional science: physicist Werner

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[3] Abram, David. Spell of the Sensuous. New York: Random House, 1996.
[4] ibid.
[5] Descartes, Renee. Meditations. Trans John Veitch. [electronic version] http://www.wright.edu/cola/descartes/mede.html, 2/10/05 4:40pm.
[6] Ibid.
[7] Habermas, Jurgen. Theory and Practice. Trans John Viertel. Boston: Beacon Press, 1974.
[8] Lemke, J.L. Postmodernism. NY: CUNY press, 2001.

Heisenberg's uncertainty principle acknowledges that the vantage point of the observer alters that which can be calculated and measured ("the more precisely the position [of a subatomic particle] is determined, the less precisely the momentum is known in this instant and vice versa"[9]). Although he is utilizing the language of theoretical physics, the implications of his scientific work with subatomic particles is that an outside, measurable reality doesn't exist per se – we help generate meaning by participating, by observing, whether with an electron spectrometer or a vulnerable eye.

Barbara Allen, in her work Uneasy Alchemy, writes of the fallacy of "scientific objectivity," within the realm of the "official science" (that practiced by corporate and government agencies in her definition) and offers an honest solution (emphasis mine): "This [official] dominant science is premised on a claim to be objective, meaning the absence of bias. *This is never the case*. The way that science is made increasingly objective is by recognizing the biases that are part of the knowledge."[10] A science, based in the cool comfort of its method but welcoming of the subjective experiences of its participants, is one that can claim greater objective truth through candid recognition of the dynamic interactions and subjective, sensual realities of researcher and researched.

Field notebook, 7/7: We stand outside the conference room at the Department of Environmental Management talking politely about Fourth of July fireworks and barbeques. Environmental Neighborhood Awareness Committee of Tiverton (ENACT) members appear slightly nervous as they enter the gray walled room, although they are old hats at this, meeting the experts, the consultants, the government reps. Leo Hellested, the Principle Engineer and Chief of the Waste Management Department, starts the meeting. Discussion of summer diversion ends, giving way to a jagged cascade of

[9] Heisenberg, Werner. "Uncertainty Paper," 1927, [electronic version] http://www.aip.org/history/heisenberg/p01.htm. 3/6/04, 2pm
[10] Allen, Barbara. Uneasy Alchemy Cambridge, MA: MIT Press 2003

jargon techno-speak: scopes of work, geologic restrictions, the confound of solid waste, numbers of people who have signed site access agreements, method two versus method three versus method six point seven-five. My head begins to spin until I hear Gail, the ENACT leader, begin to talk about how the children can't go outside and play in the summer air. She demands a timeline, asking, "How long till we can go out and comfortably play in a tree?"

I turn to the feminist theorist Sandra Harding to provide a picture of what conceptual life must be breathed into science in order for it to account for questions of trees dancing in the wind and tears shed at blue soil. Harding offers a feminist critique of science with her concept of "strong objectivity." Strong objectivity takes into account the inherent biases of scientific inquiry, roots scientific study in the lived human experience. In her work, she emphasizes the importance of "situated knowledges," ideas and interpretations that arise out of the darkness and light of day to day drudgery and divinity.

According to Harding, it is important to ask, critically and meaningfully, "from which people's lives are we viewing the experience?" She argues that context of research is important, that is, the particulars and passions of the researchers' lives are essential to achieving a truer objective result. And she states that research must stem from the hearts and minds of the marginalized – that lay people, particularly women, must inform the scientific exercise.[11]

As Abram says, "our spontaneous experience of the world, charged with subjective, emotional, and intuitive content, remains the vital and dark ground of all our

[11] Harding, Sandra. Whose Science? Whose Knowledge? Thinking from Women's Lives. Ithaca, NY: Cornell University Press. 1991

objectivity."[12] In order to even begin to murmur about objectivity, the deeply subjective dance of human life and work must enter into the dialogue.

So, emboldened by theory and animated late-night conversations with activist Gail Corvello (who is the inspiration for and focus of this piece) this student, author, researcher, and woman who feared studying the humanities (because too many girls studied those disciplines), turned to critical ethnography based in biography to generate a soulful narrative of life and experience of soil contamination.

This critical ethnographic work translated into days and weeks of observation and conversation. Field notebook (and oftentimes tape recorder) in hand, I attended neighborhood meetings in the local community center and spent long hours walking around the streets of North Tiverton, watching, reaching out, listening, breathing in. I helped make peanut butter and jelly sandwiches in Gail's daycare on many an afternoon and tagged along to meetings with engineers and industry executives at the Department of Environmental Management. I even moved in with Gail over the summer, calling a plastic-encased pull-out couch home for several weeks.[13]

After months of watching, participating, feeling, wondering (not to mention eating lots of peanut-butter and jelly), I sat down and conducted two in-depth interviews with Gail. We talked about the soil contamination, about friendship, about her beloved grandmother, about child-rearing. We explored topics we had touched on before in less formal talks we'd had over dinner and on warm summer nights in her fluorescent-lit daycare.

[12] Abram, David 1996
[13] I lived in the Corvello household from July 10th to July 30th in the summer of 2004.

Facilitated by the structure and focus of the in-depth interviews, we entered new territory, too. I captured the hours and hours of these interviews on tape. I later fully transcribed those recorded hours and hours of words and laughter and somber silence into typed pages and pages: Gail's fond memories, political frustrations, and life philosophies filling blank computer screen space.

I utilized my field notes primarily to set the scene in the background section (Part I) of this paper. I, to bring some dramatic rhythm to the written work and (truth be told) for fun, divided the background portion into five quasi-theatric "scenes" derived in part from my field notebook observations. The interviews – Gail's words captured for the record – speak more centrally in the framework and discussion portion(s) (Part II) of the piece.

Through all this, I had to keep in mind that, in critical ethnography, a researcher is explicit about his/her position and identity, taking a reflexive-dialectical view of connections.[14] This means, when engaging in communities or with individuals, you exchange ideas, you challenge each other, and you look hard at what you bring to the conversation and how such dialogue, in turn, nourishes you. You listen and speak with mindfulness of your position, your privilege as researcher, and your identity as rational animal. Critical ethnography takes the recognition of the importance of subjectivity highlighted by Harding and Abram and makes it "a call, a demand for researchers to become reflexive practitioners."[15]

[14] Atkinson, Paul ed. Handbook of Ethnography. Thousand Oaks, CA: Sage Publications, 2001
[15] Campbell, Michael. "Critical Ethnography," [electronic version] http:www.cardijn.net/Michael.campbell/page8.htm 10/2/04 11pm.

I come to this work holding on tightly to my own voice, appearing in capital-I's and irreverent observations. I also seek to allow Gail to speak for herself. There is inherent asymmetry in our relationship – I am, ultimately, the writer of this piece, the ethnographer, the one who will graduate from an (overly expensive) elite university after completing my thesis requirement. But I'd like to think that I've brought a certain reflexive consciousness to the writing, the listening, the participating and observing. And I'd like to think of Gail as the life-force of this work, the muse that inspires, the mentor that demonstrates strength and meaning.

This paper, as the critical theorists would say, is a special kind of story in its own right. The story of one woman working to save her corner of earth. Of me getting to know her. Of her allowing me into her home and her thoughts. To take these experiences, ideas, and emotions, hold them, and weave them, gratefully, into a patchwork of words.

Part I

Setting: Where our action takes place.

Rhode Island is the "ocean state," with a golden anchor on its flag and the long arm of Narragansett Bay reaching up into its geographic core. The state has over 400 miles of coastline. Tourism is one of the three largest industries that fuel the state's economy.[16] Newport in the southwest of the state and other coastal towns are premiere vacation destinations. As you drive along the roads that weave back and forth across the bay and along the Atlantic coast, you see ice cream stands and picturesque bed and breakfasts along with the standard sprawl chain stores.

According to the New York Times, there are some "hidden gems" among RI's coastal towns, particularly the eastern bay. A recent article entitled "A Coast Keeps its Secrets," in the Times travel section highlighted one RI town: Tiverton, located along the Sakonnet River in southeastern RI. The article describes the Tiverton shore as, "a seaside of primary colors -- green grassy marsh channels, white-yellow sand, blue river fading to the paler blue of the sky." Here, the writer insists, is a place where it is possible to still sample a bygone era of "the old life of the sea."[17]

Within this tourist destination of a town, there is a small neighborhood, known as the Bay Street neighborhood. This small square of suburbia, located in the north of the town closer to the city of Fall River than the bucolic shores of Narragansett Bay, is a quaint

[16] http://www.visitrhodeisland.com/history/facts.html
[17] Glasburg, Eve. "A Coast Keeps Its Secrets," NY Times Escapes/HAVENS July 16, 2004 [electronic version] http://query.nytimes.com/gst/fullpage.html?res=9A05E5DE143AF935A25754C0A9629C8B63

working class neighborhood that, true to its name, overlooks the bay. Small homes nestled in neat lines border roads rimmed in green. The properties slope up, each one a bit more elevated than the next, from the edge of the "blue river fading to paler blue of the sky." It is a blue collar community on a hill that receives soft off-shore breezes.

This stretch of split-level ranches and vinyl siding echoes with rich history, from the creak of glaciers depositing the sediment that became its soil to the silent growth of the subsistence agriculture of the first people who used its contours; from the blare of muskets and anchors of European colonists to the methodic churn of the turn-of-the-century farmer's plow; from the march of feet at Portuguese summer harvest festivals to the quiet hum of a gas company's coal processing unit. Today it sits, busy with families, combustion engines, and mailboxes that bear multi-ethnic names.

Bay Street has secrets other than its idyllic seaside (of primary colors) to keep. This small neighborhood in a small town in a small state has toxic contamination in its soil.

Scene I: "We're 'those folks,' you know" in which we learn of the unequal distribution of environmental threats in the US

I: At the end of one of my first nights spent with Gail and her husband Jack, we went out to dinner at Applebee's in Fall River. It was a warm, muggy southern New England night. I had been missing my parents; I was gladly taken under wing and out to eat. Gail wanted to make sure we went somewhere that had vegetarian fare for me. She looked earnestly at me as I surveyed the menu, asking with furrowed brow "Is there stuff you can eat?" I assured her that I would be fine.

Over our sides of mashed potatoes and steamed vegetables, we talked about the rising costs of higher education, the self-centeredness of people these days, how Jack got up at 3am for work. They told me that they would be celebrating thirty years of marriage this year, "if we survive this contamination problem," Gail said, part chuckle, part grumble.

Driving back to Bay Street, I asked if there were wealthy parts of Tiverton. "Oh yes, the south," said Gail matter-of-factly in her authoritative voice, "We're the 'poor area,' the 'ghetto.'" Jack echoed her in his sincere, exasperated way, "We're 'those folks,' you know, 'THEY are the working class.' We live on the wrong side of town." To demonstrate the point, they drove me into a new housing development. Skeletons of condominium units stood, moonlight on steel, beyond a sign warning that only authorized individuals were allowed in this neighborhood. Gail told me quietly, "Each one of these condos will be worth about ten times our gross annual earnings."

Despite its idyllic elements, the Bay Street neighborhood is markedly different in some ways than the other, more southerly, manicured ocean-front stretches of Tiverton. Even a cursory look at the census statistics of the Bay Street neighborhood in North Tiverton as compared to the rest of the town demonstrates, albeit anecdotally, the concept that environmental degradation often occurs in sinister rhythm with lines of class and race. The most severe environmental problems identified to date in the town occur in the most ethnic and least economically privileged sector of Tiverton, in the North near the city of Fall River. This trend - the disproportionate impact of environmental hazards on poor, working class, and/or people of color – is addressed by the growing environmental justice movement.[18]

There are approximately seven hundred eighty residents living in the moratorium area. Of these people, 39.2% are of Portuguese ancestry, as compared to 25.5% for the other sectors of the town. The median income for the neighborhood is $40,736; the rest of Tiverton has $54,534 as its median. Fourteen percent of residents in the contaminated sector have their bachelor's degree, as compared to twenty-six percent for the other

[18] Bullard, Robert D. ed Confronting Environmental Racism. Voices from the Grassroots. Boston, MA: South End Press. 1993

Census blocks in Tiverton. There are clear disparities revealed in these comparative statistics from the 2000 Census.[19]

The Bay Street neighborhood is one of many communities around the country that have to bear more than their fair share of environmental hazards. Many neighborhoods in the greater New Orleans metropolitan area, for example, sit on former toxic waste disposal sites. The Environmental Protection Agency has placed these communities, all poor and predominantly people of color, on their National Priority List for hazardous waste locations.[20] In Everett, WA, a blue-collar residential neighborhood grew up on former lead smelter site.[21] Idling city buses in Boston contribute to air pollution that enters the lungs of children playing in the streets.[22] Aggregate Recycling Systems, a concrete manufacturer in Los Angeles, spews dust into the alleyways, onto the windowsills, and into the pores, eyes, mouths of residents of the Huntington Park neighborhood, a majority Latino community.

The reality of toxic life (and its disproportionate distribution) has spawned cries for justice, for consideration and compassion for the human casualties of technological "advancement."[23] The environmental justice (EJ) movement merges and melds the traditions of the civil rights, women's rights, the antiwar, and other movements. EJ movements "call attention to the ways disparate distribution of wealth and power often leads to correlative social upheaval and the unequal distribution of environmental

[19] http://www.census.gov/main/www/cen2000.html
[20] Adeola, Francis O. "Endangered Community, Enduring People: Toxic Contamination, Health, and Adaptive Responses in a Local Context." *Environment and Behavior* (2000) 32/2 March.
[21] Tuinstra, Rachel. "A contaminated legacy" *Seattle Times.* June 9, 2004.
[22] www.ace-ej.org
[23] Gibbs, Lois. "Wouldn't You Just Love to Live Here." Citizen democracy : political activists in a cynical age, Stephen E. Frantzich, ed. Lanham, Md. : Rowman & Littlefield Publishers, 1999.

degradation and/or toxicity."[24] Unlike the often self-righteous tone and scare tactics of mainstream environmentalism, toxic contamination spawns advocates across socioeconomic and racial lines.[25] It brings environmental issues to the backyard, the vacant lot, the lungs of a young mother's children in the city. According to Lois Gibbs, a woman made famous for her activism against toxics in her neighborhood in Love Canal, NY "these communities where people live and work are taking a leadership role in defining the scope of the environmental movement to include social conditions that people experience in everyday life."[26]

Environmental health and justice crusades in the US are not about disembodied international treaties and distant depletion of ozone or burning of the rainforest (although the EJ movement as a whole is increasingly taking on an international tone in terms of collaboration across geographic lines).[27] For this movement, the "environment" in danger is the backyard, the city block, the immediate places where people live and work.[28]

Not that toxic contamination and environmental justice activism doesn't also spur a broader recognition of the interconnections between issues, communities, culture, and commerce. They do. But in ways grounded in very concrete realities of daily threat and

[24] Adamson, Joni and Mei Mei Evans and Rachel Stein eds. The Environmental Justice Reader. Tucson, AZ: University of Arizona Press, 2002 p. 5
[25] Bullard, Robert.
[26] Hofrichter, Richard, ed. Toxic Struggles: the Theory and Practice of Environmental Justice. Philadelphia, PA: New Society Publishers 1993.
[27] ibid.
[28] Newman, Penny "Killing Legally with Toxic Waste," in Close to Home, Vandana Shiva, ed. PA: New Society Publishers, 1994.

immediate personal concern.[29] Within environmental justice and toxics activism there is the undercurrent that "environmental problems are deeply connected to basic institutions of culture and commerce, particularly the organization of production and investment and the inequities that result from that organization."[30] The air around the home becomes the atmosphere of the planet, a product of culture and economics, in addition to being the life-blood of the children who play in the sidewalk or yard.

Scenes II and III: "Two exits," and "We played in it" in which we learn of a hazard to justice and the environment in North Tiverton, RI

II: There are two exits off Interstate 195 for modern day Tiverton, one for (urban) northern Tiverton and one that places you more in the heart of the town.

The former will take you through the streets of southern Fall River, dotted with Portuguese bakeshops, past Chaves market and other cultural and commercial mainstays of the Portuguese population of Fall River on Chambers St. You pass SAVE-A-LOT foods, a Papa John's Pizza advertising in Portuguese, several large churches and houses squeezed tightly together. There is graffiti, Ana proclaiming her love for a scrawled illegible name on the side of a round storage tank. The city crowding gives way to a string of gas stations, a car dealership and manufacturing plant or two as you make your way over the state-line from Massachusetts into northern Tiverton, a passage heralded by a blue and gold tinted sign that proclaims Tiverton, "the Gateway to the East Bay." This exit is the fastest way to reach North Tiverton.

The latter exit brings you past blasted gneiss and greenery along the highway and then immediately into a scene of sprawling lawns and large white clapboard homes. There are no strip malls, large expanses of concrete, nor graffiti here. This is the Tiverton referred to in the NY Times article about "tourist gems" along New England's southeastern coast, a place of "green grassy marsh channels…white yellow sand"[31].

When looking across the bay along the Tiverton coast, there is a clear visual demarcation between the north, dotted by white cylindrical storage tanks and shadows of industrial plants, and the central/south, covered in those green grassy channels strips of white yellow sand. A visual suggestion of environmental injustice writ large along the shore of this suburban RI town.

[29] ibid
[30] Hofrichter, Richard. 1993
[31] Glasburg , Eve. NY Times 2004.

Not surprisingly, given its environmental justice and toxics issues, North Tiverton, beginning in the late 19th century with the construction of two large cotton mills, has historically been the urban/industrial sector of Tiverton.[32] Today, to the west of the Bay Street Neighborhood, several large white holding tanks line the shore, along with a wastewater treatment plant (the Fall River Wastewater Treatment Facility) and an auto repair shop. Rusted Conrail train tracks run silently north-south along the contours of the land, past the tanks, the homes, the marsh grass.

In the 1930's and 40's, the Fall River Gas Company had its home in this industrial stretch that abuts the Bay Street neighborhood.

Like many energy utility companies between the early 1800's to the mid 1900's, the Fall River Gas Company was in the business of "manufacturing" gas. Energy plants manufactured gas by cracking the hydrocarbon chains of heavier feedstock materials such as coal and oil in order to release lighter carbon products. These lighter products were given off as a gas that could be used for heating, cooking, and lighting in households[33].

Almost every city in the US had an MGP at one point – there are currently 3,000 to 5,000 former MGP sites throughout the country.[34] Most were originally located on the outskirts of cities. Due to relocation and development trends over the latter half of the 20th

[32] RI Historical Preservation Commission. Historic and Architectural Resources of Tiverton, Rhode Island: A Preliminary Report Providence, RI 1983.
[33] EPA Document: A Resource for MGP Site Characterization and Remediation: Expedited Site Characterization and Source Remediation at Former Manufactured Gas Plant Sites
Office of Solid Waste and Emergency Response (5102G) EPA 542-R-99-005
www.epa.gov/tioclu-in.org May 1999
[34] ibid

century, many of the sites are now residential areas that grew up around abandoned industrial areas.[35]

When coal was used as feedstock (as was the case with the Fall River Gas Company), the primary by-products of MGP production were coal tars.[36] Eleven billion gallons of coal tar were generated at MGP sites in US between 1816 and 1947.[37] Several billion gallons remain unaccounted for, meaning they were not disposed of properly and/or in a transparent manner. They were dumped along roadsides, fed into rivers, mixed with fill for construction purposes.

Moreover, it has been shown that, in the forty to fifty years subsequent to the closure of nearly all MGP's, the by-products of the gasification process have not dissipated nor degraded as much as might be expected. Several recent studies show elevated levels of MGP wastes in the upper layers of soil and sediment on and near former MGP sites.[38]

Casual deposition of industrial residues on or near factory sites was not uncommon during the era in which MGP's were in operation. It wasn't until the 1960's and 70's in the US that a slew of legislation for environmental protection and regulation occurred. Prior to these more clearly defined laws (and the greater awareness they signified), waste

[35] ibid
[36] EPA U.S. EPA. 1988. U.S. Production of Manufactured Gases: Assessment of Past Disposal Practices. Office of Research and Development. Hazardous Waste Engineering Research Laboratory. Cincinnati, OH. EPA/600/2-88/012.
[37] Lee, L.S. P. Suresh, C. Rao, and I. Okuda. 1992. "Equilibrium partitioning of polycyclic aroma hydrocarbons from coal tar into water." *Environmental Science and Technology.* 26:2110-2115
[38] http://www.dnr.state.wi.us/org/water/wm/wqs/sediment/assessment/mgp/subdocs/1.html

such as the muck that resulted from the coal gasification process was regarded as unpleasant but not necessarily carcinogenic or hazardous.[39]

However, the waste from this process contains substances that do pose a risk to both humans and the broader systems of which we are a part (see Appendix A for complete chart of MGP hazards). Such inorganic toxics as cyanide and ammonia and heavy metals such as lead and arsenic are constituents of MGP residues.[40] The most hazardous components of MGP by-products are polycyclic aromatic hydrocarbons (PAH's), such as benzo(a)pyrene, and semi-volatile organic compounds (SVOC's), such as benzene[41]. In lab animals, frequent exposure to PAH's reduced fertility and immune response. Offspring of these animals had low birth weight and birth defects.[42] Additionally, certain PAH's and SVOC's have been shown to increase risk for cancer in humans with prolonged exposure.[43] Thus, chemicals found in MGP waste have demonstrable toxic effects.

III: I sit at the table and the smell of Portuguese fried doughnuts wafts to my nostrils. The silver haired man across from me at the table tries to get me to say the Portuguese name of the food we are eating. M-a-la saaaw - it is useless, my tongue won't pronounce the foreign letters. He shrugs and laughs at me. I am sitting with a large group of old-timers from the Bay Street neighborhood area. They talk about inches of ice on windows, making skis out of wine barrels and baskets out of willow. They laugh at antics from the days of the Holy Ghost Feast and motorcycle joyrides down Hilton Street toward the Bay. They toss around Portuguese surnames: Furtado, Imbriglio, Cambra, Arruda. There is fondness in their voices, one man in a gray jacket with an American flag pin and crucifix says, "We didn't have much, but we had everything." In slightly more somber tones, they talk about the rich white Anglo-Saxon Protestant family for whom all the Portuguese worked. The fill that they had to accept on their properties or risk losing their jobs.

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[39] N. Vig and M. Kraft, Environmental Policy: New Directions for the 21st Century (5th Ed), Washington, DC: CQ Press 2000. .
[40] http://www.dnr.state.wi.us/org/water/wm/wqs/sediment/assessment/mgp/subdocs/2.html
[41] : *http://www.egr.msu.edu/tosc/ashland/january_13_2000/fs_public_health.shtml*
[42] http://www.egr.msu.edu/tosc/ashland/january_13_2000/fs_pahs.shtml
[43] ibid

"They started depositing that stuff in the 20's," says the gray jacket American flag crucifix, "We played in it, dug the stuff by hand." The man across from me says he would come home with blue feet from running around in the fill. He takes a bite of doughnut and shrugs at me again.

Some small percentage of the billions of gallons of unaccounted for and non-dissipating MGP residues ended up in the fill used to develop the Bay Street neighborhood in North Tiverton. Although formal records remain buried in the town archives and, potentially, in the personal records of a prominent family who controlled most of the land in the Bay Street neighborhood in the early 20th century[44], the anecdotal evidence[45] and the testing results[46] strongly suggest that by-products of Fall River's MGP activities were combined with the soil used to develop the neighborhood in the 1920's and 30's. This fill terraced the steep slope and created flat surfaces for the construction of homes in that time period. Despite shifts in housing patterns and construction, the same basic soil material has remained under the neighborhood to the present day.[47]

Scene IV: "Benzene, chrysene, benzo(a)pyrene," in which Gail recalls the day it all began, fights the good fight, and we learn the chronology of the ongoing soil contamination saga.[48]

IV: Gail remembers the exact date on which she learned of the soil contamination: February 23, 2003. She states it without hesitation, where others speculated –"winter? spring of last year?" Her words are biting – she knows that day well. A day when her life changed. She can recite for you, too the components in the soil, the toxins that come from manufactured gas plant waste: benzene, chrysene, benzo(a)pyrene…

[44] Personal interview, Tiverton Town Councilor, 6/10/04.
[45] Personal interview, senior residents, 7/15/04.
[46] Crawford, Jay. Personal interview, 7/7/04.
[47] ibid
[48] for a complete timeline of events surrounding the soil contamination issue, included news coverage, see Appendix B

In the late summer of 2002, odd-looking and smelling soil was excavated while town crews dug a sewer line beneath the Bay Street neighborhood. The soil was later confirmed to have the physical appearance and chemicals characteristic of MGP waste. Elevated levels of petroleum hydrocarbon, cyanide and certain SVOC's such as benzo(k)fluoranthene and chrysene, were found in the excavated material.[49]

Additional testing of the area roadways was performed over the succeeding months per order of the Rhode Island Department of Environmental Management.[50] News of the contamination was leaked to the press in February of 2003 by a Tiverton town council member. An article ran on February 23, 2003 in the Fall River Herald News about contamination on Bay Street.[51] The article lead stated, " several dozen households along a four-block area of Bay Street will soon be getting letters from the town informing them that soil in the area contains potential carcinogenic compounds…"[52] So began the protracted (and public) process of soil testing, emotional turmoil, and political wrangling that has characterized the past year and a half of the contamination issue.

Gail tells me that she remembers the day when the article came out. People were calling around the neighborhood. A friend called her and asked if she'd read it. She hadn't yet. She read it. And reread it. She reflects: "My life changed that day. I remember reading articles about people dealing with contamination stuff…I'd think, 'Oh those poor people'

[49] www.tiverton.org
[50] http://www.state.ri.us/dem/programs/ombuds/tiverton/index.htm
[51] "Contaminated soil found near Tiverton homes." February 23, 2003 Marcia Pobzeznik Herald News
[52] ibid

and not really give it another thought. When I read that article, WE became those people."[53]

Neighbors and friends met frequently that week and in subsequent weeks to discuss what to do. Gail invited people into her home to gather during those first days. She stayed up late reading, talking. "Those first days were just information gathering. I read so much. I was pretty good at picking up the information and telling other people about it. We had a(n) [environmental] consultant in the neighborhood, so she helped us a lot to understand."[54]

In March 2003, as the Environmental Neighborhood Awareness Committee of Tiverton (ENACT) was in its first stages, EA Engineering, the firm hired by the Town of Tiverton to conduct testing on roadways and other public lands, released its Site Investigation Report (SIR). Several samples revealed levels above Rhode Island Residential Direct Exposure Criteria (RDEC) of cyanide and certain PAH's, such as benzopyrene, chrysene, benzoflouranthene.[55] On March 17, 2003, the RI DEM issued a letter of responsibility to the New England Gas Company, owned by Southern Union Gas Company based in Texas. This letter ordered Southern Union to do testing and otherwise comply with Rhode Island's Remediation Regulations, a set of laws originally passed in 1993 that outline procedures and penalties for release[56] of hazardous materials[57] into the

[53] Corvello, Gail. Personal interview.
[54] Ibid.
[55] EA Science, Engineering, and Technology report No. 14106.02 10 pgs March 2003)
[56] release as defined by section 101(22) of CERCLA means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment.
[57] see section 101 (23) of CERCLA, pursuant to the Clean Water Act.

environment. These regulations were subsequently amended in 1996 and, most recently, in 2004 to adapt to changing policy needs and approaches to complex environmental hazards.[58]

Also in this month, the Rhode Island Department of Health (RIDOH) ordered residents to avoid soil exposure. A few months later, RIDOH concluded that a handful of private properties had levels in exceedence of the RDEC of cyanide, napthlathene, and other chemicals potentially toxic to human health.

Gail, during this initial testing time, began calling the Department of Environmental Management on a regular basis. "I remember the first time I called. We were so concerned about the RIDOH results. But, I didn't want to bother anybody. But, they were great. I called a lot. I felt bad, but they were, like 'No, no' most people don't care like you do." And she began to oversee the meetings of ENACT. After opening her home, working tirelessly to comprehend the technical documents, and navigating local and state political waters, her voice appeared strong in the group. They elected her president of ENACT in April, as the group became more formalized.[59]

Led by Gail and a handful of others, the group's first objective was to keep the neighborhood informed, operating on the belief that knowledge would empower residents to make sound decisions[60]. Their first task was to put out a newsletter, which appeared in the early spring for the first time. Pressuring the Town Council to place a digging

[58] www.state.**ri**.us/**dem**
[59] Corvello, Gail. Personal interview.
[60] Ibid.

moratorium on the area affected by the contamination was their first public action-oriented campaign[61].

And they ultimately won this campaign, with the help of regulators and community pressure. In August 2003, the Tiverton Town Council enacted a moratorium on excavation and general digging activities for an area bounded by Lepes Rd. to the south, Church St. to the west, Judson St. to the south, and State St. to the north.[62]
In September, a draft report from EA Engineering determined that soil beneath six roads contained contamination. Vanasse Hangen Brustlin (VHB), the engineering firm hired by NEGC/Southern Union, released its Final Site Investigation report on October 31, 2004. The majority of properties are shown to need no further action, and the report stated that many "appear to have different contamination characteristics and have been impacted by other potentially responsible parties."[63] On the same day, ENVIRON, another firm hired by NEGC, released its Human Health Risk Assessment (HHRA). The report claimed that there was no imminent health risk to residents posed by the contamination.[64]

According to Gail, "we were so disappointed by those reports. We witnessed the testing. It was inadequate. They didn't take discrete samples. They didn't set up big enough grids or go far enough down into the soil." Gail and a few other ENACT members

[61] Ibid.
[62] Despite protests from ENACT, Lepes Rd. was later removed from the moratorium area in spring 2004, after much debate and contentious soil test results.

[63] http://www.baystreetproject.com/documents/Final_Report.pdf
[64] http://www.baystreetproject.com/documents/Human_Health_Risk_Assessment.doc

observed the testing process, keeping a watchful eye while trying to maintain their daily lives at the same time. She knew what she was looking for, too, having read several technical accounts of soil testing procedures and talked to different scientists and regulators[65].

Taking ENACT's objections into account, the DEM and RIDOH responded in the end of December to the HHRA in comments stating that "additional information is needed; therefore, conclusions of the HHRA are premature.[66] RIDEM responded to the VHB report on January 27, 2004, criticizing soil-sampling collection and testing methods.[67] In February, NEGC agreed to further testing and on March 2, 2004, a contractor hired by NEGC performed a short term response action on ENACT president Corvello's property and another property on Hilton St. A small square of soil was removed from Gail's property.

Gail reflects on these days: "The Gas Company representatives talked to me. They knew I was making a fuss. They figured if they could take care of me, they wouldn't have to worry as much anymore. But, I'm not in this for myself or for a sackful of money. I'm doing it for the neighborhood. I don't want a child to be digging here twenty years from now and hit this stuff. Anyway, their [the Gas Company] clean-up job was awful, just awful, on my property." Gail took mountains of pictures of the inadequate excavation of her property and circulated them around the neighborhood, sent them to DEM. By this time, she had a command center in her basement. Lining the walls were thick binders of

[65] Corvello, Gail. Personal interview.
[66] http://www.state.ri.us/dem/programs/ombuds/tiverton/pdf/dohcom.pdf 7/9/04
[67] http://www.state.ri.us/dem/programs/ombuds/tiverton/pdf/demcom.pdf 7/9/04

newspaper clippings, engineering reports, meeting minutes, and email correspondence. A huge map of the moratorium area with color-coded testing results hung on the wall. She had a scanner, a fax machine, a copier, a color printer, a high-powered computer to burn digital copies of all her documents and images. She estimated that she had spent over three thousand dollars at that time on publication of the newsletter and all the electronic gadgetry required to keep adequate records, people informed, and the pressure on officials and gas company executives.[68]

In May 2004, after the original ENACT consultant – Woodard and Curran – accepted an NEGC offer for funding in December of the previous year, RIDEM authorized funding for ENACT to acquire a new consultant, a firm called Fuss and O'Neill. On May 19, 2004, RIDEM officials met with NEGC/SU representatives to discuss the progress of the project. On July 17, 2004 VHB submitted a Supplemental Site Investigation Work Plan (SSIWP) to DEM and Fuss and O'Neill, outlining plans for a new round of testing.

Gail was irate when she found out that Southern Union Gas Company had stolen ENACT's consultant, Woodard and Curran by offering them funding. "I couldn't believe it," she told me, "I knew they were bad and hard to work with. But that was just *rotten."*[69] Frustrated but still determined, ENACT, under Gail's direction, worked to get money from RIDEM for another consultant. They were granted the money, and Fuss and O'Neill began helping them in the quest to understand and continue responding to Gas Company science with their own. As a second round of testing was in the planning

[68] Corvello, Gail. Personal interview.
[69] Ibid.

stages, ENACT knew that technical help was essential. They had to be at the table as recommendations were being made. And they were.

On August 15, 2004 DEM, Fuss and O'Neill, and Woodard and Curran released comments on the SSWIP. At present, the second round of testing has resumed, started in late August. It is ongoing as I write this.

For Gail, taking action on the soil contamination issue continues to be an uphill battle. The gas company has deep pockets, DEM and local donors can only give so much. Community interest and active participation is flagging. But she persists in keeping people abreast of the issue and making sure her voice is heard in the halls of RIDEM and the Rhode Island Statehouse as well as the boardrooms of the Southern Union Gas Company.

Why has she done all this? How does she continue to work for justice despite the odds? Those are the questions I seek to answer in Part II.

Part II

I switch off the tape recorder. I have just finished my first in-depth interview with Gail. We sit in the small plastic chairs in the heart of her daycare. The table is bright yellow, rimmed in blue. I drum my fingers on its impersonal surface. Gail begins to talk about some of the frustration she has encountered recently in getting neighbors to attend ENACT-sponsored community meetings. She chuckles through her concern and sighs, "I think that I see a lot of things that other people don't see." I laugh, agreeing wordlessly. I then switch the recorder back into play position as I quietly ask, "Will you say that once more please?" She says, "What, that last thing?" "Yes. I have to get it on tape." "Okay." She falters for a moment, then states her truth again.

In the first chapter of Confronting Environmental Racism, Voices from the Grassroots, Robert Bullard discusses nine case studies of environmentally threatened communities. In looking at the struggles against toxics within these communities, Bullard concluded, "The typical grassroots leader was a woman."[70] The Center for Health, Environment, and Justice (the organization begun by grassroots activist Lois Gibbs in response to the contamination of her community in Love Canal, NY) estimates that 70-80% of grassroots toxics activists are women.[71] Indeed, women comprise the leadership majority in the grassroots anti-toxics, pro-environmental health and justice movement in this country[72]. Mothers from south central Los Angeles, housewives from the plains of South Dakota, and countless other women across the US are raising their voices against the poisoning of the air, soil, and water in their communities.

Why are there so many women in this movement? That's a pretty overwhelming question. The gender theorists could chime in about post-gendered society. They might

[70] Bullard, Robert. 1993.
[71] http://www.chej.org/
[72] Newman, Penny 1994.

inquire, in voices part male-female, part genderqueer, part cyborg,[73] "How are you conceiving of *woman*, anyway?" Cultural theorists would talk about dialectical approaches and discursive directions, asking perhaps whose voices are generally heard in the mainstream environmental movement or how the fact that women on average earn less than men within the socioeconomic structure might have an impact on participation in environmental grassroots activism. The semiotics scholars would want to know precisely what you mean by "movement."

Gail would laugh at all this I'm sure. When I asked her why she thought there were so many women raising their voices against environmental degradation in their communities, she chuckled and said, "Oh, that's easy! It's 'cause men can so much more easily put the blinders up," moving her hands beside her eyes.[74] Or, translated into cultural theory-speak: "A gender order where men dominate women such as exists in many sectors of post-industrial America, cannot avoid constituting men as an interest group concerned with defense, and women as an interest group concerned with change, thus placing women in a unique position of responsibility in challenging hegemonic structures."[75] So, women can't, don't, won't as readily put their blinders up. That is, women can see things that men don't see and act on them because they, by their cultural position, are concerned with change and can challenge existing structures. If only I could

[73] Haraway, Donna. "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late 20th Century," in Simians, Cyborgs and Women: The Reinvention of Nature. New York: Routledge, 1991.
[74] Personal Field notes 7/5/04
[75] Bretherton, Charlotte. "Movements, Networks, Hierarchies:
A Gender Perspective on Global Environmental Governance" *Global Environmental Politics* 3.2 (2003) 103-119.

make such a sweeping, essentializing, loaded statement and call it a day. Unpack my post-modern bags and ride off into a sunset of uncomplicated primary colors.

In truth, the answer to why so many women are leading grassroots environmental health and justice crusades is just not that simple. The answer, really, is beyond the scope of this work. So, my question becomes, why (and to some degree how) did Gail Corvello become a grassroots environmental health and justice activist?

Three frameworks (structures on which to hang a response to this question) emerged as I reviewed my field notes and interview transcripts. First, in reading Gail's words and reflecting on my time with her, it became clear that her gendered role as wife, mother, and working homemaker played a significant causal role in her emergence as an activist. More specifically, this gendered position has a clear impact on concerns for health of family and community.

Secondly, Gail's experiences of nature as a child appeared as another key factor in her engagement with the soil contamination issue. As a young girl, her grandfather would take her out in the woods to hunt for frogs and walk among the trees. She still to this day has deep fondness for the wild places of her youth.

Thirdly, woven throughout her words and actions are vital interpersonal relationships. These connections are the why and the how of the ways in which Gail makes meaning.

Her activism is no exception: she takes a relational approach to her advocacy work, focusing on her ties to people as a means to make things happen.

Gail, as woman, working for the health of family, immediate and (broadly) extended.
It is a warm day and I am sweating in my car. The Sakonnet River flows to my right. I watch the sky, the seagulls, the movement of the green trees. I start the ignition and begin to ease my way toward Gail's house. I am just beginning to get my bearings in the neighborhood. I am driving to familiarize myself with its slopes, its sounds. As I approach, I notice Gail is outside under the hot sun. She is weed-whacking, swift sweep of orange plastic and insistent noise. I tentatively roll down my window and call hello. She recognizes me instantly, a broad smile on her face. She invites me in and we begin to talk about her property, how she wants to live on this ground safely, and how the source of a paycheck should not negatively impact the health of a family.

Prescribed societal roles place family healthcare within women's unique line of sight.[76] Women could be and have been called the family health care gatekeepers – that is, within families, women tend to be more concerned and aware of the state of their health and the health of their families.[77] Women, in an almost philosophical or ecofeminist sense, provide the first habitat for human creatures, giving shelter and sustenance to the growing fetus. Or, as Katsi Cook, Mohawk native and columnist says, "Women are the first environment. We are privileged to be the doorway to life. At the breast of women, the generations are nourished and sustained."[78]

As part of their distinct position within society, what causes many women to take action against environmental threats is the concern over the health of their children and families in general. Additionally, women themselves, by virtue of how they fit in socioeconomic

[76] Debouviere, Simone. The Second Sex. NY: Alfred Knopf, 1952.
[77] Knopper, Melissa, "Our Bodies, Ourselves" *E magazine* September/October 2004 27-35
[78] Cook, Katsi, "Women are the First Environment" *Native Currents* [electronic version] Posted: December 23, 2003 - 1:10 pm EST: http://216.135.185.29/anwc/Women_are_the_First_Environment.doc

strata, are especially vulnerable to environmental diseases.[79] The most dangerous environmental carcinogens are stored in adipose, or fatty tissue in the body. Women tend to have greater percentages of body fat than men.[80] Also, many contaminants – plastics, pesticides, fertilizers – act as estrogen-mimicking agents, negatively impacting how the body uses estrogen (the dominant female hormone).[81] For these reasons, women run a greater risk for developing environmentally-linked health conditions, such as breast cancer.[82] Thus, the preponderance of women grassroots environmental activists could also be attributable to both women's concern for the health of their family and their own susceptibility to environmental hazards. Gail comments, "I think I'm pretty hearty, but I don't know what's actually happening in my own body with this stuff."[83]

Hence, as mothers, cooks, cleaners, and human organisms highly vulnerable to toxics themselves, women are often on the frontlines of healthcare for self, family, and community. And so, in order to preserve family health, they are on the battlefront for sound environmental health as well.

Gail Corvello is the health caretaker of her family. She keeps the home clean and prepares the meals. Moreover, before she had a family of her own as an adult woman, she was largely responsible for the needs of her parents' household, as her mother had multiple sclerosis. As the daughter of a mother afflicted with a disabling illness, Gail

[79] Shiva, Vandana 1989
[80] Colborn, Theo. Our Stolen Future. New York: Penguin Books, 1997.
[81] Steingraber, Sandra. Living Downstream, An Ecologist Looks at Cancer and the Environment. New York: Addison-Wesley Publishing,1997.
[82] ibid.
[83] Corvello, Gail. Personal Interview, 7/15/04.

confronted a major health crisis at an early age and became responsible for the needs of her siblings and father as a teenager. She virtually raised her youngest sibling. She reflects: "When I was 13 I would take my youngest brother to his pediatrician visits. And I was already doing the grocery shopping for the family. My father would drop me off at the grocery store and come back a half an hour later. I would do all the laundry…all the housework type things."[84]

She became a mother in a more biological sense later in life, giving birth to her daughter at age 29. Becky was her "miracle baby," she says.[85] Gail currently works at home, taking care of a large brood of children in her daycare and attending to the dietary and sanitary needs of both daycare family and her own husband and daughter.

For Gail and most other working class women, the gender-based division of labor in a capitalist society gives them the responsibility for the health of their children.[86] As Gail says, "I think for every mom your children become your first and foremost goal, especially when they're young: everything revolves around that infant who needs you at all times." For Indian environmental activist Vandana Shiva, women's involvement in the environmental health movement started with threats to the health of their families.[87]

Involvement in environmental health and justice issues for women, then, is, in part, about a duty to protect the wellbeing of the family, particularly children. In Gail's mind,

[84] Corvello, Gail. Personal Interview, 9/10/04.
[85] Corvello, Gail. Personal Interview, 6/2/04.
[86] Krauss, Celene "Women and Toxic Waste Protests: Race, Class and Gender as Resources of Resistance," *Qualitative Sociology* 16/3, Fall, 1993: 247-262.
[87] Shiva, Vandana: 1989

cleaning up her neighborhood is, "not about a sack full of money. It's about the kids in my daycare and the kids who are going to play in this stuff years from now."[88]

Froggin': the organic roots of Gail's environmental activism.

On the door that is the main entrance to Gail Corvello's home there are two stickers, one of a sea turtle with the World Wildlife Fund logo above it. The other encourages green energy use. On the walls of her daycare is a poster with smiling cartoon animals in overalls and skirts under a solid yellow cartoon sun. They are gardening, cartoon spades in their paws. Over their heads, in the blue sky the words "We Love the Earth" arc in bold, bubble letters.

A poem, written by 12 year old Adam Delavan dances with the idea of ecological identity: "The movement of rivers is in me./In my blood."[89] This young poet is writing about what deep ecologists would call his ecological self. By seeing nature mirrored within our own bodies and lives, say the deep ecologists and ecopsychologists, we work toward changing our relationships with the natural world and behaving in environmentally responsible ways.[90]

Regardless of how one conceives of self as part of the wider non-human world, environmentally sound behavior has been shown to arise out of direct exposure to natural settings, particularly in childhood. In the same way that a woman need not be an explicit ecofeminist in order to speak out against environmental exploitation, one need not have a

[88] Corvello, Gail. Personal Interview, 9/10/04
[89] Salting the Ocean 100 Poems by Young Poets selected by Naomi Shihab Nye pg. 11
[90] Conn, Sarah 1991 "The self-world connection: implications for mental health and psychotherapy." *Woman of Power* 20, 71-77; Naess, A 1985 Identification as a source of deep ecological attitudes. In M. Tobias Ed, Deep Ecology San Diego: Avant Books p. 256-270; Roszak, T. 1992, The Voice of the Earth: An Exploration of Ecopsychology. New York: Simon and Schuster.

fully actualized ecological self in order to take positive action for environmental health and protection.

The poet William Wordsworth wrote of children's capacity for a special relationship with nature. He believed childhood experience of things wild created channels of affinity for nature within a person.[91] In the beginning of his poem, *the Prelude*, his words sing of the electric current of such connection passing through a child:

> There was a boy: ye knew him well, ye cliffs! - many a time/At evening, as the earliest stars began/To move along the edges of the hills,/Rising or setting, would he stand alone/Beneath the trees or by the glimmering lake./ Then sometimes in that silence while he hung/Listening, a gentle shock of mild surprise/Has carried far into his heart the voice/Of mountain torrents; or the visible scene/Would enter unawares into his mind,/With all its solemn imagery, its rocks,/Its woods, and that uncertain heaven, received/Into the bosom of the steady lake.[92]

Many social science researchers have explored this question of childhood exposure to the outdoors. Several researchers have indeed found that early-life outdoor experience seeps far into the hearts of children. Or, at least, to be less poetic about it, they document in their research that time in the outdoors as a child is the most important factor in developing later environmental concern.[93] These experiences can be unsupervised exploration alone and/or time spent with family, through explicit teaching or modeling of pro-environmental behavior.[94] Even in urban areas, nature is featured within accounts of positive childhood memories because of the freedom of exploration, the engagement of

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[91] Clayton, Susan and Susan Opotow. Identity and the Natural Environment. Cambridge, MA: MIT Press 2003.
[92] Wordsworth, William. Boy From Winander. [electronic version] http://www.ilnarratore.com/voices/texts/wordsworth/boyfromwinander.PDF
[93] from Bixler, RD, Floyd, MF, and Hammit, 2002; Palmer, J, Suggate, J, Robottom, I , Hart, P 1999; Tanner, T 1980
[94] Chawla, L. "Significant life experience revisited: A review of research on sources of environmental sensitivity." *The Journal of Environmental Education* (1998) 29(3)11-21

the senses, and a sense of belonging that the outdoors affords.[95] With positive place attachment that includes local natural resources, individuals, with regard to the non-human environment, "appear to act responsibly in day-to-day activities as well as at the setting."[96]

Gail Corvello spent a great deal of time outside as a child, in unstructured play and in "froggin'" with her grandfather. She traces her identity as environmentalist and current role as environmental health advocate to these experiences.

She talks with fondness for a childhood spent in the outdoors (alone and with her grandfather), indignation at the abuse of the environment, laments the shifting experiences of nature (the loss of free time in the outdoors), and the persistence in her adult life of the connections to the natural world forged as child.

Her stories, told with enthusiasm and poetry, speak for themselves:

> *I grew up in Asonet, Massachusetts which is a little section of Freeton andwhen I grew up there it was very very rural. There were very few houses on our street, um we had a two acre yard and we were surrounded by forest and um we were outdoors all the time. There were four of us, four children and um we were outside ALL the time, playing outside. And we were free to go in the woods and play we used to look for teaberry and ladyslippers and all of these wonderful things that now are so hard to come by. But we used to make forts out in the woods. There weren't many children around to play with so the four of us would make our own fun. And I don't know if at that point we respected the environment, it was a place to play, it was a fun*

[95] Chawla, L"Ecstatic Places." Children's Environments Quarterly (1990) 7(4)18-23.
[96] Vaske, JJ and Korbin KC "Place attachment and environmentally responsible behavior." *Journal of Environmental Education* (2001) 32(4) 16-21.

place to play and there were no worries about playing there… I think we had a certain respect for the environment just out of growing up the way we did, never really thinking about the environment, just being there as children, when you become an adult and you have to be away from that for awhile, you feel a little differently when you get to go back. Especially when you see how some people treat it. If you go back to some of those places where you used to go blueberry picking, follow the trails in the woods and go and pick wild blueberries, and you see that someone dumped a truckload of trash or building materials you know. When you see that kind of thing, it bothers you. It bothers you. Because you think what it was like when you were a child and how great it was being out there. And you didn't have to worry that it wasn't a safe place to be that…and your parents didn't worry, they would actually say the blueberries are ripe, go get some we'll make blueberry jam tonight.

And when I was a little girl, my grandfather used to take us to the water holes that were out in the forest and we'd go froggin', we'd look for frogs and we'd look for turtles and anything else we'd come across. My grandfather was a real animal nut. Loved and knew every species of frog and turtle and bird and he would take us on Saturday, my grandmother would pack a picnic lunch and take us and my cousins, and maybe sometimes six or eight of us and they'd take us all – and think about it, that was a time when there were no seatbelts in cars (laugh), we'd go and park the car at the edge of the forest. And my grandfather would lead the way. He knew all the trails and all the dirt roads. He could, in the dark, find his way back. He just loved being out in the woods and he was a hunter, too. So he knew all those places and, on Saturdays, when it wasn't hunting season, we'd go with a picnic lunch and just go from water hole to water hole, seeing what we could find – frogs, snakes, turtles, and anything else that was around. And the best thing that happened in the past week of my life was there was this huge doe, under the crab apple tree, eating the crab apples. We pulled in after doing our grocery shopping, I didn't notice it, it didn't run it was about 30 feet from us. Jack shut off the van, he opened his door up and my door, and he said, he's got wonderful eyesight, he said, "wait, don't move, there's a deer, right there" and I looked and sure enough there was a big old doe,

right there in the front yard, just frozen, 'cause that's what they do, just frozen, looking at us. And there's never just one, there's usually three or four in the yard when they come into the yard and it was still early in the night and uh we, I got out and walked around the back of the van slowly to see if there were any more in the front yard and it took off across the front of the house and it was gone by the time I went those five steps into the lawn it was just gone. But it was wonderful and it made me think about when I was a kid and we used to drive through some of those dirt roads in the forest and a deer would run right across, you know. And it brought me back there, for that second, you know, it brought me back there. But that was the best thing that happened all week (laugh). But, every so often something happens that brings you back, even on our cruise last week, there was this little yellow bird that flew into the boat, and, we were docked, and it just, it was dead and it was on the cement, on the dock and I looked down and I was thinking about all the birds that were always around when I was growing up. We had a family of orioles, a male and female that every year came back to our pear tree. Every year, came back to the exact same nest, every single year. All the years I grew up in Asonet, we had the male and female orioles that had there babies down in a basket nest that hangs down and every year we looked forward to that and we'd hear the babies in there, in the beginning of the summer until they took off. All those things – sitting up in the apple trees, we had eight apple trees and one pear tree in the middle and it was just, uh, every summer, we would climb the apple trees, we'd pick the apples, they were all MacIntosh and one year we made bags and we walked down the street, put them in our wagon and we walked down the street selling them for 15 cents a bag (delighted laugh), you know. And it's all these things that you think about in your childhood that makes me sad that today's children are growing up so different. Instead of being out there playing and being in a field or a forest, they're going to dance lessons and they're going to gymnastics and they're going to soccer and they're going to karate. They're missing out on something that's so special[97].

[97] Corvello, Gail. Personal Interview, 9/10/04.

It is highly likely that these memories and convictions, in addition to the insight her position as woman confers, fuel Gail's environmental activist flames.

Not for myself alone: the importance of social relationships in Gail's activism.

I'm sitting in the back of the Corvello's van, listening to Gail and Jack talk back and forth. For a moment, their voices blur. I can't decipher whose laugh is whose, the sounds and sighs coming from both of them hit the same pitch.

A recent issue of the Harvard Health Newsletter echoes what mental health experts have long known, that social relationships, quality time with friends and loved ones, is as important to the maintenance of physical and mental health as good diet, exercise, and adequate sleep.[98]

Not only are strong social ties essential for health, they also facilitate broader community involvement.[99] In addition to her gendered role as health care gatekeeper and formative environmental experiences, Gail Corvello's environmental activism stems, in part, from vital interpersonal relationships, past and present.

Gail's main sources of support throughout her life have been her maternal grandmother and her husband. She claims that her compassion comes from her grandmother: "honestly because it was just harder for her to always care. But she did anyway. She took care of my mother when my mom was sick, she took care of my aunt – she lost all of her children and her husband. She was the last one left out of both of their families. All of their own brothers and sisters had gone, she lost her children, she lost her husband and

[98] http://www.chpg.net/health.html
[99] Klatch R.E."The Contradictory Effects of Work and Family on Political Activism" *Qualitative Sociology*, (2000) 23/4, p505-519

she was the last one left. I don't know how she endured so much heartache. I really don't know. Because she was the one who was there for all of them. She cared for every single one of them as they were dying, she cared for each and every one. She never thought twice about when my father kicked me out, I went to her."[100] Her grandmother helped the extended family, including Gail, navigate rocky waters of death and disruption. Through upheaval and confusion, Gails grandmother "always had dinner on the table."[101] Her support enabled Gail to weather some very difficult times in her life and provided an example of caring and household norms.

In addition to the strong nurturing base her grandmother provided, Gail's adult spousal relationship has allowed her a high degree of personal integrity and creativity. For many women, spousal support is an important mediating factor in meeting life challenges.[102] She ascribes her ability to do the work she loves and to be an activist within her neighborhood in part to her relationship with her husband, Jack: "being as lucky as I could possibly have been to meet Jack and to marry someone who allows me to be part of those things I feel are important and to handle things in the way that I feel in my heart is important. He allows me all of that. He allows me to truly be who I am all the time. He doesn't force me to do thing differently because it's going to cost extra money or it's something we can't afford right now or it goes against his principles. If it's within my principles, he allows me to do it. And I don't think there are many marriages out there that one partner or the other would allow the extremes that Jack has allowed for me. I mean, leaving a well paying job with an ultimate amount of security. If they would have

[100] Corvello, Gail. Personal Interview, 10/5/04
[101] Ibid.
[102] from Gagnon, Michelle et al; Fisher-Kittay,Lynn 1986.

closed the office in Providence, I had a position in Boston, in Waltham. Um, the security was there, the money was there, the benefits. He allowed me to leave that because this is what I wanted to do. He has allowed me to spend thousands of dollars on other people's children in the last ten years. He has allowed me to treat these children like they're our own. He has allowed me to spend thousands of dollars to try to help this neighborhood through this awful situation that we're sitting in right now[103]." Gail's positive spousal relationship aids her crusade to protect her neighborhood from environmental threats.

In addition to her significant interpersonal connections fueling and aiding the fires of her activism, Gail also functions as a *leader* within a relational framework. She insists on keeping doors opening, seeing officials at the Department of Environmental Management and even representatives of Southern Union gas company "as human beings[104]." She invites them into her house, serves them coffee, sits through meetings with civility and grace. She says, of government and gas company reps, "We need to be able to communicate with these people and we *have* been able to…I think being the spokesperson and being a real person to real people is how I look at it…what I have seen and I have experienced personally is human beings that really want to help…inside I think I've connected with a lot of people that really want to be able to help us in our situation, but can't always."[105]

She insists that she speaks in a different voice than many of the groups that have brought issues to DEM. She speaks not in anger or cool logic, but in terms of connecting with the

[103] Corvello, Gail. Personal Interview, 10/5/04.
[104] Corvello, Gail. Personal Interview, 6/5/04.
[105] Corvello, Gail. Personal Interview, 9/10/04

engineers, the department heads, the communications specialists, the elected officials who are involved, centrally or peripherally, in the soil contamination issue. For Gail, to make change, you generate care. You are a real person to real people. You emphasize relatedness and compassion. This is a process through which, as social psychological theorist Celene Krauss says, "Kinship and friendship become resources of opposition."[106]

Final thoughts

It is one of the last times I will visit Gail's home for awhile, as I move toward completion of this project. As I pull up to the house, I notice a branch of one of the trees in Gail's yard is cracked and hanging at an odd angle, its leaves caressing the ground. Did you see the tree? is one of the first questions Gail asks me. She tells me a story of how her daughter Becky, one cold December day, went out and wrapped her bathrobe around that tree to save it from the chill air. "I think it's a sign," Gail says, although she doesn't elaborate on what the message might be exactly. I think quietly to myself that the loss of the tree limb has a degree of tragedy, but allows more light to fall on the yard.

The struggle to clean up the Bay Street neighborhood continues. Some form of remediation is slated to begin as the ground thaws in spring. Whether this will mean the removal of another small square of earth, environmental land use restrictions, or complete unearthing of the contaminated material remains to be seen.

Gail, through her organization ENACT, continues to apply pressure to RIDEM and Southern Union Gas Company. While her activism is a multilayered and unbounded thing, it is clear that it arises in part from her gender, her role as mother, her experiences of the natural world, and the significant relationships that have buoyed her along her life's path.

[106] Krauss, Celene 1993

While gender, experiences of non-human realms, and important interpersonal relationships are core issues in Gail's genesis as an environmental activist, additional research and exploration of the impact of class and labor on working class women's environmental activism (as in Frederick Buttel's Labor and Environment) could afford further insight into origins of activism among women like Gail Corvello.

What are the implications of these frameworks and observations for other would-be activists? I'm certain there are brilliant minds that could inform me in poignant prose of women and social change, the ontogeny of activism, the pedagogy of resistance. But I'd like to again lay down the (de)constructive conceptual blade and simply draw from mornings, days, nights spent on Judson St. with Gail. From all the hours I spent with her, watching and listening, it has become clear to me that she is a highly authentic person. Her various approaches to her roles as health caretaker, environmentalist, and friend, wife, daughter or grand-daughter all arise gracefully from something warm and genuine within. She isn't following some set theoretical template, but heeding her own internal impulses. I think that is the most essential lesson to be learned from my work and time with Gail: be who you truly are and the direction will follow.

Budding environmental grassroots activists, or even long-term seasoned activists, must be encouraged to trust their values, their pathways, the important relationships they have, their affinities for nature, people, or the political process. We must listen to what we love, be it a stand of pine trees or the cry of a newborn baby, and start from where we are, whether we are caring for a family or moving political mountains. As human

environmental activists, we need to acknowledge that strong interpersonal ties and healthy ecosystems are essential for growth, even if the market won't internalize their value. We must take children outside. We must listen to our mothers and grandmothers. We must listen to the rivers. We must listen to ourselves.

In gratitude to trees and stars, indigenous knowledges, feminist sledgehammers, and Gail Corvello, it is here that I end this academic and alchemical tale. There is more mental ore to be mined here, but I prefer to leave much of it in the veins of earth for future discovery, or gradual transformation.

Epilogue (of sorts)

A poem.

The Journey
By Mary Oliver

One day you finally knew
what you had to do, and began,
though the voices around you
kept shouting
their bad advice --
though the whole house
began to tremble
and you felt the old tug
at your ankles.
"Mend my life!"
each voice cried.
But you didn't stop.
You knew what you had to do,
though the wind pried
with its stiff fingers
at the very foundations,
though their melancholy
was terrible.
It was already late
enough, and a wild night,
and the road full of fallen
branches and stones.
But little by little,
as you left their voices behind,
the stars began to burn
through the sheets of clouds,
and there was a new voice
which you slowly
recognized as your own,
that kept you company
as you strode deeper and deeper
into the world,
determined to do
the only thing you could do --
determined to save
the only life you could save.

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APPENDIX A
Chemicals of Concern in MGP Waste

Table 1
Coal-Derived Chemicals

Conventional	Inorganics	Metals	Volatile Aromatics	Phenolics	PAHs
pH 5 Day BOD Chemical Oxygen Demand Total Organic Carbon Total Suspended Solids Oil and Grease Phenols (4-AAP)	Ammonia Cyanide Nitrate Sulfate Sulfide Thiocyanates	Aluminum Antimony Arsenic Barium Cadmium Chromium Copper Iron Lead Manganese Mercury Nickel Selenium Silver Vanadium Zinc	Benzene Ethylbenzene Toluene Total Xylene	Phenol 2-Methylphenol 4-Methylphenol 2,4 - Dimethyl-phenol	Acenaphthene Acenaphthylene Anthracene Benzo(a)anthracene Benzo(a)pyrene Benzo(b)fluoranthene Benzo(g,h,i)perylene Benzo(k)fluoranthene Chrysene Dibenzo(a,h)anthracene Fluoranthene Naphthalene Indeno(1,2,3-c,d)pyrene Phenanthrene Pyrene

Produced By: Wisconsin DNR, Bureau of Watershed Management
http://www.dnr.state.wi.us/org/water/wm/wqs/sediment/assessment/mgp/subdocs/2.html

APPENDIX B
Timeline: Bay Street Contamination

* http://www.tiverton.org/ 2:15pm Friday 7/9/04

*Contaminated soil found during Sewer Interceptor Project around 16 August 2002. The semivolatile organic compounds detected in soils above RIDEM criteria were: benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(g,h,i)perylene, benzo(k)fluoranthene, and chrysene (all chemical compounds found in gasoline, categorized as Semi-Volatile Organic Compounds (SVOCS)). Total petroleum hydrocarbon and cyanide levels were also found to be elevated in this soil.

*Samples taken August 26th and 27th, by DEM and on behalf of Starwood LLC.

*Samples taken September 10th – 11th for approval of material at waste disposal facility.

*September 24th – stockpile of contaminated soil from Judson and Bay streets transported to Crapo Landfill in New Bedford.

*Notification of Release filed on 30 September 2002 (release of contamination associated with Mount Hope Bay Sewer Interceptor Project)

*October 3th – November 5th: second stockpile on Last Street taken to Crapo Landfill, additional testing performed in stockpiles' footprint areas, scraping and removal of contaminated material performed, EA deemed contamination removed from site (particularly after solid waste is discovered, creating uncertainty of material composition) Nov. 5th.

October 8th, 2002: DEM issues Letter of Responsibility to Town of Tiverton (responsible land-owners under rule 3.60 of the state Remediation Regulations). (letter from Jeffrey Crawford, Principal Environmental Scientist DEM to James F. Towers, Town Administrator October 8, 2002)

*December 2002: EA Engineering released Emergency Short-Term Response Report (in accordance with RIDEM Remediation Regulations). No imminent health hazards found.

February 23, 2003: Article in Herald News "Contaminated soil found near Tiverton homes." (Contaminated soil found near Tiverton homes." February 23, 2003 Marcia Pobzeznik Herald News)

February 25, 2003: Herald News "Residents want answers to Chemicals Found in Soil" (February 25, 2003 Marcia Pobzeznik Herald News) info leaked to press by Louis Durfee before official notification given to residents.

*Letter from Town Administrator dated February 24, 2003 indicating that the Site Investigation Report (SIR) had been prepared for Town and Starwood Tiverton LLC. The SIR analyzed town-owned property on Bay Street between Judson and Foote St. (from sewer interceptor project).

February 26, 2003: ProJo "Suspected cancer-causing compounds found in soil." Louisa Handle

*March 2003: EA Engineering releases SIR. Study analyzed 1.5 acres roughly 500 feet from Sakonnet River. The subsurface investigation occurred along the following public roadways: Bay Street, Judson Street, Hooper Street, Canonicus Street, Hilton Street, Chase Street, Foote Street, and State Avenue. A total of 47 samples were taken on five dates: 29 and 31 October, 1 and 14 November, 18 December. Several samples revealed levels above RIDEM Residential Direct Exposure Criteria (RDEC) of cyanide and such PAH's as benzopyrene, chrysene, and benzofluoranthene. Levels in exceedance of even industrial/commercial limits found for PAH's as well. (EA Science, Engineering, and Technology Project No. 14016.02 10 pgs February 2003) Groundwater samples taken revealed no evidence of contamination. Environmental Land Use Restriction (ELUR) noted as preferred mode of remedial action.

March 5, 2003: ProJo "Toxic Neighborhood, Daycare Center concerned about contaminated soil." Louisa Handle

March 17, 2003: Letter of Responsibility issued to New England Gas Company/Southern Union Gas Company from DEM (letter from Jeffrey Crawford to Alan Fish and Robert Young March 17, 2003). Details that Southern Union must test, otherwise comply with Remediation Regulations.

*Meeting held March 18, 2003 with Cynthia Fuller from DOH, Jeffrey Crawford from DEM, and Thomas Boving (Geosciences) from URI with residents of neighborhood. Explanations of release history, health precautions, and future directions. (meeting put together in part by nascent group that was to become ENACT)

March 18th ProJo Article: Southern Union must test private property East Bay Section Louisa Handle

March 19, 2003: NEGC submits response letter, emphasizing that they are encouraged that EA found no evidence of an imminent health hazard in preliminary testing. Promise that VHB (their engineering firm) will have report ready for April 10th.

March 23, 2003 Herald News: Gas Company Responds to Soil Contamination (will cooperate in clean-up subheader) Marcia Pobzeznik

March 31, 2003 Providence Journal: NE Gas Prepares Plan for Testing Soil by Louisa Handle.

April 1, 2003: EA Engineering releases SIWP for Bay View Recreation Area

April 3, 2003: Corvello household with 85 other households submit testing requests for their properties to NE Gas.

April 10, 2003: NE Gas submits SIWP, after responding to department comments, to DEM. SIWP prepared for NE Gas by Vanasse Hangen Brustlin (VHB). Sixty-eight properties will be tested.

April 11, 2003: Partial testing of daycare property conducted by DEM.

April 16, 2003: DEM submits comments to NEGC/VHB regarding SIWP

April 16, 2003: Providence Journal article "Gas utility offers plan for testing toxic soil." By Louisa Handle

April 18, 2003: NEGC responds to DEM comments.

April 22, 2003: Daycare property test results released to Corvello. Levels in exceedence of several SVOC's, including chrysene, benzo(a)pyrene, benzo(a)anthracene, benzo(b)fluoranthene, fluoranthene.

April 22, 2003: Fall River Herald News "Tiverton residents flood town with requests for soil tests." Marcia Pobzcenik

April 23, 2003: further comments from DEM to NEGC/VHB: SIWP has not been approved yet.

April 23, 2003: Corvello on behalf of ENACT submits comment letter to VHB.

April 28, 2003: riHEALTH sends comment letters to EA Engineering regarding Bay View Recreation area SIWP and VHB regarding Bay Street suspected fill area SIWP.

April 28, 2003: NEGC replies to DEM comments by requesting extension of response time to May 2, 2003. NEGC responds to ENACT letter, requesting correspondence by send to NEGC and not VHB and that VHB response to DEM will address ENACT questions/comments.
"Please note that NEGC agreed to participate in this project on good faith, but believes that other parties were involved in dumping the material."

April 30, 2003: Public meeting with VHB at North Tiverton Fire Station to present SIWP.

May 2, 2003: DEM approves EA Engineering Bay View Recreation SIWP.

*May 2: VHB submits response to DOH, DEM

May 7, 2003: DEM approves VHB Bay Street suspected fill area SIWP (VHB's May 2, 2003 response to DEM not available in set of accessible documents)

May 22, 2003: Public repository of documents related to contamination established for residents at Essex Public Library in Tiverton.

May 30, 2003: VHB final SIWP released to DEM, ENACT.

June 9, 2003: VHB responds to ENACT president Corvello regarding request for split samples (concern over control of sample sites and need for comparison/non-VHB input)

June 19, 2003: RIDOH letter to Town Council declaring Bay View Recreation Area safe for both children and adults to use based on review of EA data.

July 1, 2003: EA SIWP for additional street testing released.

July 1, 2003: ENACT requests soil tests results that have been validated from DEM.
July 2, 2003: ENACT press release expressing disappointment in DEM failure to share validated test results.

July 3, 2003: ENACT notice to residents reminding of July 17 deadline to sign site access agreements for testing to occur.

July 3, 2003: Herald News Marcia "Soil test results under wraps." Details of Bay Street samples won't be made public till final report.

July 3, 2003: Providence Journal news brief: Soil Contamination confirmed.

July 7, 2003: Providence Journal, Louisa Handle. Residential Soil Tests Show Toxic Presence – Napthalene, cyanide found. Thirty five properties tested. Vanderslice comments: no imminent hazard.

July 8, 2003: Letter from DEM legal services to ENACT citing state law that bars release of data in ongoing investigation related to violations of statute, rule, or regulation.

July 10, 2003: Work agreement sent to ENACT from Woodard and Curran, offering their consulting services.

July 14, 2003: email update sent to residents from Chris Medici from NEGC. 36 properties tested, public meeting approaching.

July 26, 2003: Herald news, Marcia P. "Tests confirm contamination in Tiverton soil." Vanderslice quoted as saying everyone in area should take precautions, as it is "possible to miss things."

August 4, 2003: Public meeting with John Thompson (Woodard and Curran). Thompson sends letter to residents offering to preview results/answer questions about results a few days later.

August 8, 2003: test results for Corvello property released.

August 12, 2003: Herald news front page "Gas Company May Move Day Care." Relocation – temporary solution to contamination. Temporary relocation offered to Corvello, not others as NEGC determines how "bad [contamination] is."

August 14, 2003: Providence Journal, Louisa Handle: "High levels of arsenic, lead found on Bay St."

August 21, 2003: Herald news, "Cunha takes on toxicity case." Marcia P. attorney Cunha expects case to become class action suit against NEGC.

August 21, 2003: NEGC press release: samples collected from 60 properties, 38 have validated results, sent to RIDEM.

August 25, 2003: Herald News, Marcia P, Councilor: Town needs soil tests. Tracy Connors proposes mandatory soil testing within all of Tiverton before construction undertaken.

August 26, 2003: Herald News, Marcia P. Contamination Prompts Halt in Excavation. Moratorium implemented by Town Council for 150 parcels of land, from Lepes Rd to State St., Church St. to the Sakonnet River.

August 27, 2003: Providence Journal Shahien Nasiripour Council Enacts Moratorium on Building, Excavation. 30-day moratorium where cancer-causing agents found.

September 1, 2003: Editors of Herald news give "thumbs up" to Tiverton Town Council for protecting residents' safety with moratorium.
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September 8, 2003: Fall River Herald News Marcia P "Digging Ban to Continue" Moratorium will be extended for at least 6 months. Council minutes discuss tax abatement relief and need to meet with DEM director.

September 9, 2003: Herald News, Marcia P "Contamination Costs Debated." Addresses question of "Who is going to pay?"

September 19, 2003: Providence Journal, Alisha Pina "New tests uncover more contaminated soil" – at Bottom and A. Connell Streets.

September 24, 2003: Providence Journal, Alisha Pina "Costly issues taking bite out of town budget." Contamination issue, along with other matters, strains Tiverton budget.

September 29, 2003: Herald News Marcia P "Narrowing in on soil dangers." Article exploring process of analysis of test results by NEGC scientists.

*October 24, 2003: EA releases Addendum to original SIR
http://www.state.ri.us/dem/programs/ombuds/tiverton/pdf/site1003.pdf
7/9/04 5:34pm

*October 31, 2003: ENVIRON releases Human Health Risk Assessment (HHRA)
http://www.baystreetproject.com/documents/Human_Health_Risk_Assessment.doc
5:00pm 7/9/04

*October 31, 2003: VHB releases Final Site Investigation Report, prepared for NEGC
http://www.baystreetproject.com/documents/Final_Report.pdf

*December 30, 2003: DOH comments on HHRA (Cynthia Fuller with DOH sends Vanderslice critique of HHRA/SIR, stating that "additional information is needed; therefore, conclusions of the HHRA are premature.")
http://www.state.ri.us/dem/programs/ombuds/tiverton/pdf/dohcom.pdf 7/9/04 5:30pm

around December 30, 2003: Woodard and Curran agree to accept NEGC offer to fund their work in the neighborhood.

*January 2004: EA releases second Addendum to original SIR
http://www.state.ri.us/dem/programs/ombuds/tiverton/pdf/tivsi.pdf 7/9/04 5pm

January 21, 2004: Woodard and Curran submits comments on remedial action on behalf of Corvello to DEM

*January 27, 2004: DEM releases comments (many critical) on VHB report.
http://www.state.ri.us/dem/programs/ombuds/tiverton/pdf/demcom.pdf 7/9/04 5:47pm

February 17, 2004: NEGC submits response to DEM comments

February 18, 2004: Providence Journal Alisha Pina "NE Gas Company will clear soil at 2 Properties. In a response letter to the Department of Environmental Management, New England Gas says it will also conduct further contamination tests."

February 24, 2004: Council votes to move border of moratorium. Alisha Pina Providence Journal. Town council approves move of moratorium from Lepes Rd. to stone wall on Simpson property. Public hearing must be held to finalize decision.

March 2, 2004: Short Term Response Action (small excavation of soil) performed by NEGC on 2 properties. Covered in Herald News, Sakonnet Times, Providence Journal.

March 8, 2004: Moratorium renewed for additional 6 months.

March 19, 2004: DEM letter to ENACT regarding Technical Assistance Contractor. DEM promises financial assistance for new consultant (Woodard and Curran continue to contact people in the neighborhood, appear as resource in newspaper articles)

April 8, 2004: Sakonnet Times "ENACT almost honored for fighting pollution." No one notified in ENACT by Toxics Action of award.

April 12, 2004: Herald News Marcia P, "ENACT: Don't move lines yet."

April 12, 2004: Public hearing held regarding change in moratorium boundary and application for community development block grant.

April 13, 2004: Providence Journal. Alisha Pina. Council lifts moratorium on Lepes Rd.

April 14, 2004: Supplemental Site Investigation Work Plan submitted by Woodard and Curran for 11 additional properties.

April 24, 2004: ENACT receives EPA award.

May 7, 2004: DEM authorizes funding for Fuss and O'Neil (consultant) work with ENACT.

May 17, 2004: Senator Jack Reed meets with ENACT members, calls situation "very serious."

May 19, 2004: DEM officials meet with Southern Union to discuss ongoing scope of work progress.

June 13, 2004: Front page Providence Journal Article published. Alisha Pina and Steve Peoples "Imagine, your backyard is toxic. Where would the children play?"

June 14, 2004: Senator Jack Reed and three state senators submit letter to federal EPA urging support for constituents dealing with soil contamination in Tiverton, RI.

June 24, 2004: Sakonnet Times Gas Co. Reports Progress Toward Clean-up. SIWP should be ready for 74 properties by July 19, 2004.

July 17, 2004: SIWP with recommendations submitted to DEM, Fuss and O'Neill

August 15, 2004: Comments released by DEM, Fuss and O'Neill, Woodard and Curran on SIWP.

Testing began again August 2004.