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Land Use, Power, and Knowledge at the Northern Resource Frontier: Mining, Public Engagement, and Contentious Land Imaginaries in Bristol Bay and the Yukon-Kuskokwim Delta

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LAND USE, POWER, AND KNOWLEDGE AT THE NORTHERN RESOURCE FRONTIER: MINING, PUBLIC ENGAGEMENT, AND CONTENTIOUS LAND IMAGINARIES IN BRISTOL BAY AND THE YUKON-KUSKOKWIM DELTA

A Thesis Presented

by

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ABSTRACT

The Donlin and Pebble mines are two of the eight industrial-scale hard rock mines currently under the review of Alaska’s Large Mine Permitting program. Both projects promise to deliver profit and employment to their respective regions: Pebble to Bristol Bay in the southwest, and Donlin to the Yukon-Kuskokwim Delta, just north of Pebble. Both projects would also produce exceptional quantities of waste and will require almost-unprecedented infrastructure development, potentially threatening the lives and subsistence livelihoods of the Alaska Native peoples in their respective regions. The Pebble project inspired international protest and led to the emergence of a powerful resistance coalition of commercial, recreational, and subsistence fishers; activists and expert-consultants were thus able to build a powerful movement outside of and prior to the state permitting and impact assessment process. The coalitions that arose to oppose the Donlin project, in contrast, channeled their work through the state’s official public engagement processes – in part, due to strategic limitations stemming from the complexities of land use, sovereignty, and development politics specific to the Yukon-Kuskokwim region.

The coalitional resistance to Pebble and the creative use of Donlin’s public participation process are key sites in which Western science and knowledge systems, as well as land use ideologies centered on extraction and profit, meet with Native Alaskan traditional knowledge and subsistence approaches to land use. I draw upon a history of Alaskan land use policy alongside extensive interviews with community organizers, state and federal officials, mining industry officials, and consultants in order to describe and understand the result: a set of creative resistance strategies that forefront hybrid approaches to knowledge and multiple, overlapping understandings of the land. Unfortunately, Alaska’s large mine permitting and environmental assessment processes are often structurally and epistemologically unable to consider these divergent discourses and the public imaginations of alternative futures they support and constitute.
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CHAPTER 1: INTRODUCTION

On a midsummer day in 1880, on an empty beach just east of the Sitka Island settlement, American prospector Richard Harris and his French-Canadian colleague Joe Juneau failed to locate Alaska’s first major gold deposit after bartering their grubstake for a large quantity of alcohol. Their bender came to an end only when their untied canoe drifted to sea on a midnight high tide, and the two resorted to trading their guns for passage back to Sitka (Marshall, 2012). The prospectors’ disgraced return did not go unnoticed by their employer, cantankerous Sitka entrepreneur George Pilz, who despite their failure and the stock of ready prospectors on his payroll dispatched the pair again with new canoes, renewed rations, and a stern warning (Hawley and Stone, 1999). Prospectors in the late 1800s were increasingly turning their attention northward as California gold claims ran dry, and Pilz was not one to be left behind.

Stories diverge on the events that followed. Pilz’s later reports, penned in 1922 four years before his death, may be the most direct account – though by the 1920s the popular myths of the Juneau deposit had had forty years to solidify.¹ Pilz remembered chartering Captain John M. Vanderbilt of the Northwest Trading Company to transport Juneau and Harris to what would later be known as Gold Creek, where they loaded a payload of gold-rich ore samples into the bottom of a canoe that Pilz had supplied. But instead of returning to Sitka, as Pilz had instructed, the prospectors set out to Victoria, Canada, planning to sell their boat, provisions, and ore for a substantial profit.

¹ A wealthy man in 1880, Pilz would later fall into substantial financial and legal trouble. After the loss of his land and a stint in a California jail – released on a bail payment made in gold dust by none other than Richard Harris – Pilz entered into a period of deep bitterness that is expressed in his reflections.
They didn’t get far. Another of Pilz’s hired prospectors apprehended them en route and delivered the pair to their employer at gunpoint.² Pilz would later return to verify the Juneau/Harris deposit and register his claims, and other gold-hungry prospectors soon followed. By 1883 the Juneau/Harris site was a regular feature in the national press; an August report in the San Francisco Chronicle described the bustling site at Gold Creek as follows:

In Specimen Gulch in Silver Bow Basin, Juneau and Harris first discovered gold in 1881. They are still working the claim, which pays about $20 per day per man engaged in working…Surrounded by snow-capped mountains towering far above it, and intersected by the rushing, foaming Gold Creek, with its many cascades and falls, it is exceedingly picturesque. About a dozen houses and as many tents have been put up here, and one hundred white men and fifty Indians are at work in the mines. At present the mining is mainly Placer and hydraulic…There have been about a hundred claims located in the Basin, and twenty-five are being worked. A large number only await capital to develop them.

A town soon sprang up along the coast (“a collection of about one hundred houses, arranged ‘in most admired disorder,’ at the foot of an almost perpendicular bluff,” remarked the same Chronicle report), renamed Juneau from its original Harrisburgh when Joe stacked the local ballot box. The 1890 census reported Juneau as Alaska’s largest city

² Not everyone agreed with Pilz’s recollections. Other reports place Harris and Juneau’s failed abscondment as a dramatic finish to their first attempt up Gold Creek – leaving out the second journey altogether – while Harris’ grandson, in a minority opinion, holds that his ancestor was honest and sober to the end. But while Harris later came to be known for his generosity and, paradoxically, his sobriety, there are few who deny the colorful stories of Juneau and Harris’ early expeditions. Rather, the pair’s “reluctance” in their business relations with George Pilz appears to be a matter of general pop-historical agreement. See “Rapscallion?” (1998).
at 1,253 residents, with an additional 402 people at the new Treadwell mine site just across Gastineau Channel (Sandberg, 2013). Politics followed population and the dollar in turn, and in 1906 local governance was transferred from Sitka to Juneau. Twenty-five years after the end of the California rush, and nearly as long before discovery of gold in the Klondike, Alaska was experiencing a gold rush of its own. It represented a vertical shift in imaginations of land use and value: Where beaver were found on the land’s surface, gold – even the gold gathered from rivers or sifted from the silt at the bottom of a stream – was understood to be a subsurface resource. Suddenly, Alaskan land was valuable not only for what lived and grew on its surface, but also for what lay hidden beneath it.

Alaska’s gold prosperity certainly cannot be traced to the resourcefulness of either Juneau or Harris, but it cannot be attributed to Pilz’s dogged entrepreneurship, either. The Juneau deposit, isolated as it was from then-capital Sitka, came to the knowledge of Pilz and other American businessmen not through the work of intrepid white explorers but as the result of a gold-bounty claimed by Auk Chief Kowee. It was Kowee, moreover, who guided the reluctant Juneau and Harris on their second expedition after the orchestrated failure of their first attempt. Kowee would later gain recognition not as a prospector or discoverer in his own right, but as a symbol of benign settlement and cooperation between settlers and Alaskan Native populations, a Northern counterpart to New England’s Squanto. In 1999, Kowee joined Harris, Juneau, and mine executive Livingston Wernecke as the newest inductees into the Alaska Mining Hall of Fame.

Alaskan history has long centered on the promises and prospects of profitable resource development, from the 19th century Russian fur-traders who brought with them
guns, alcohol, and Orthodox priests to contemporary economies built around oil and metals. Since the first gold development near Juneau, it is subsurface resource development in particular that has served as a key impetus for conflicts over land use, resource management, environmental protection, and Native sovereignty. To speak of land, politics, environment, and development in contemporary Alaska, therefore, is to open a black box of institutional, legal, social, and historical complexity, whether one begins the story in 1999, 1880, or earlier still.

One hundred years after Juneau and Harris’ expedition, and fifty years after Alaska had gained full statehood, the Cominco mining company would discover the first gold/copper tract at the Pebble site near Bristol Bay. Initial exploration of the Pebble region in the 1990s had revealed the location of the large copper, gold, and molybdenum deposit north of Lake Iliamna. Later termed “Pebble West” after the discovery of a deeper deposit to the east, the Pebble site promised to become the world’s second largest of its kind by dollar value – and the largest open pit mine in the country. Mining had stagnated mid-century as most of Alaska’s easily accessible minerals were stripped from riverbeds and ore-rich rock, and the Pebble claim was the largest of a new crop of low-density, low-grade, industrial-scale projects that had gained viability with the introduction of new mining techniques in the late 20th century. The Pebble mine proved especially controversial, however, due to its particular location on a tract of state-owned land along the North and South forks of the Koktuli River and the Upper Talarik Creek – part of the network of rivers and streams that form the primary spawning ground for the millions of salmon that return each year to Bristol Bay’s Kvichak and Nushagak Rivers. These, combined with the Wood River system, represent a quarter of the world’s
commercial sockeye salmon production. Other rivers that feed into Bristol Bay account for an additional twenty-six percent, bringing Bristol Bay’s sockeye production to half of the total global yield (Nature Conservancy, 2011). Bristol Bay salmon also support a thriving subsistence culture throughout the traditional territory of Bristol Bay’s Yup’ik, Dena’ina, and Alutiq communities – one that long predates commercial industry.

Simultaneously, the late 1990s also saw initial exploratory moves into a region far different from the commercial fishing hubs along Bristol Bay. Several hundred miles north and slightly west of the Pebble deposit, ten miles north of the Kuskokwim River, prospectors had first located gold at the Donlin site as far back as the early 1900s, but it wasn’t until further exploration from 1995 to 2000 that the Donlin gold deposit emerged as a potential site for modern, industrial scale mineral development. Smaller than Pebble but with a higher concentration of valuable metals, Donlin received its strongest sponsorship from the Calista Corporation, which holds subsurface title to the mineral site, as well as varying degrees of support from the villages of the Yukon-Kuskokwim region that would see benefits in employment and infrastructure. By the time Pebble was beginning to see the formation of strong resistance coalitions around 2006, Donlin Gold was just a few years from submitting permit applications to the state of Alaska and the Army Corps of Engineers; and by the time the EPA issued a controversial (and, as it turned out, temporary) preemptive veto of the Pebble plan in 2014, Donlin’s Draft Environmental Impact Statement (DEIS) was just months from completion. Pebble and Donlin, similar in size and technical complexity but with widely divergent economic and political contexts, therefore represent an especially interesting pair of complementary case studies in the politics of remote resource development, impact assessment, and
sovereignty. Pebble, as we will see, demonstrates the capacity of well-funded and diverse resistance coalitions to slow mineral development by working prior to and outside of established impact assessment procedures. Donlin, in the economically challenged Yukon-Kuskokwim region, emerges as a contrasting case in which resistance to mineral development was without a supportive commercial industry – and where its opponents were therefore limited to acting, cautiously and carefully, within the bounds of the public input directives set down by the DEIS process.

By some measures little had changed between 1880 and the early 2000s beyond the understandable shifts in population, mining technology, and economies of scale. Heavy industry and Placer mines replaced prospectors and their gold-pans, and low-grade industrial projects replaced Placer mines in turn, but the promises of profit underground continued to capture settler imaginaries and mediate state politics, land use policy, and economies in ways that are both particular to the Alaskan context and that reflect wider US colonial projects. By the time the mineral sites at Donlin and Pebble were first mapped in the late 1990s, the equation of land with extractive profit in Alaska was neither new nor novel. Decades of extractive resource development had made that point clear, bolstered in 1959 by Alaska’s new statehood agreement that mandated state-owned land be used to provide for “resources to support the state's economy.” It was no surprise that by 2008 then-governor and vice-presidential candidate Sarah Palin had become a vocal supporter of the Pebble plan, and her chant of “mine, baby, mine” would have been at-home in 19th century Sitka as it was on the 2008 campaign trail.3 If the Juneau claim

3 Just two years earlier, during her initial run for governorship, Palin had trumpeted the opposite position at a campaign stop in the Bristol Bay village of Ekwok. “I am a commercial fisherman; my daughter’s name
represented the first case in which questions of land use, power, and resource
development in Alaska found a focus underground, then the Donlin and Pebble mine
represent the latest.

Contemporary regimes of land use, knowledge, and power were not a given in
1880, however; rather, the ideologies and practices surrounding resource development in
Alaska solidified in material reality and in discursive politics over the decades that
separate Pebble and Donlin from the early days of the Juneau deposit. As familiar as
Palin’s boosterism may have appeared by 2008, the procedural, environmental, and
ethical questions surrounding Alaskan mining had nevertheless grown increasingly
complex in the intervening century. Alaska’s frontier ideology today is joined by another
approach to understanding land and politics, less publicized but just as representative of
the contemporary status of Alaskan natural resource management: the growth of powerful
environmental and conservation movements and movements organizing around Native
sovereignty. These, in turn, have been met with new regulatory regimes designed to
mediate emerging challenges to the indiscriminate exploitation of natural resources and
to contain realms of acceptable dissent to the legal, the legislative, and the procedural.

Mine permitting today has ballooned to become a decades-long process. A
complex web of multiple stakeholders, competing interests, and contradictory studies
surround a highly contested exploration and permitting phase, especially with regards to
baseline data collection and the preliminary preparation of environmental impact
assessments. As a marker of its distinct environmental and symbolic importance,
Pebble’s permitting process has also been dogged by a collection of lawsuits and

is Bristol,” she said. “I could not support a project that risks one resource that we know is a given, and that
is the world’s richest spawning grounds, over another resource.” (NYT, 2008)
countersuits carried out by federal agencies, mining companies, and a coalition of conservation organizations and Native groups. By the early 2000s, mine permitting (and the contestations over the Pebble and Donlin projects in particular) played out largely in esoteric and expert realms, a frontier story far removed from Alaska’s early imaginations of individual exploration and “striking it big.” How, then, did Alaskan mineral development shift from an operation that was primarily concerned with finding and staking a claim, to one where the claim itself mattered less than the quality of knowledge that could be produced to bolster its safety and viability? How did land use policy develop in tandem with practices of knowledge production and land and resource imaginaries?

Sub-surface resource industries are technically and economically massive enterprises. They represent the bulk of development and growth activity in many regions; they furnish raw materials for other technoscientific ventures; they contribute substantially to a country’s or a region’s wealth; and they are in turn implicated in ideologies and economies of nation-building. While sub-surface resource initiatives may result in the irreparable loss of ecosystem health and services, such losses are to some extent seen as necessary sacrifices to sustain consumptive comforts and to fulfill visions of collective good and potential attainable futures. The ideologies and imaginaries at play in major sub-surface resource projects, though they may not serve direct local needs, are carefully constructed exercises of state power and necessarily entail projects of managing political dissent.

“Land use,” here, takes on a multiple layers of coincident meaning. These include the varying modes by which peoples, societies, and institutions relate to the land, the
processes by which knowledge of the land is constructed and legitimated, and the ways in which land imaginaries intersect with discourses of identity, culture, nationalism or regionalism, and history. The Pebble and Donlin cases must be understood within this particular history of the remaking of discursive landscapes throughout the long period of colonial contact in Alaska. Local resistance strategies, in this view, are simultaneously movements to protect the land-based foundations of cultures and livelihoods as well as movements for onto-epistemic justice. With this in mind, this thesis is at its core a critique of the knowledge construction practices surrounding land use policy and large project impact assessment, conducted through the lens of two case studies in the resistance strategies of diverse coalitions of local activists, outside supporters, and expert consultants.

Constructions of Land and Resources

This research relies, in part, on a study of the social construction of lands, resources, and knowledges. This refers to the capacity of particular resources to hold value, significance, and meaning, insofar as they can be seen through patterns of social relations, land use practices, and knowledge construction (Wehling, 2006). Profitable resources, as they are viewed by state and industry accountants, are co-constructed alongside local land imaginaries and cultures – that is, by the active work of specific social groups to define themselves in relation to the material landscape, in specific places at specific times. The significance of individual resources and the landscape of resource discourses they exist within are dynamic, socio-politically and economically constructed conditions. The landscape of meanings attached to a specific place shifts, however, as particular aspects of a site’s natural resources assume dominant significance and value.
What resources are given importance and value is not the direct product of local supply to meet local demand; resource value, rather, is discursively constructed, and has long been shaped by contested social, political, and economic discourses. Through these socially and politically contested processes, dominant resources come to stand in for the place itself; at the same time, they overshadow other resource characteristics, and limit the land and resource possibilities of a place to fit to a narrow set of imaginative boundaries (Davidov, 2014). The dominance of extractive, profitable resource imaginaries in Alaska can thus be seen as an artifact of power, co-produced alongside the hegemonic economic, political, and epistemological systems of the day, in relation to state-building, national projects, and the constant material and discursive contests over national and sub-national identities (Jasanoff, 2005, 2009).

The logics of global capitalism often dictate which resources gain dominant standing and have the capacity to produce short-term profit for private enterprise and for the state. Even as these dominant extractive and profitable constructs render nature productive and valuable for human use, however, hegemonic visions of the land and its resources subsist in a rich environment of other (pre)existing discourses that are inseparable from questions of social, environmental, and cognitive justice. Davidov (2014) reminds us that by the processes of social organization that allow for resource exploitation – commodification, extraction, and profit – nature is simultaneously endangered, with consequences for alternate imaginaries, indigenous sovereignty, and the legibility of local knowledge practices to the state and other powerful, non-local actors. In this view, dominant land and resource imaginations themselves require the consideration of alternative regimes of value, and may spur the organization of strategies
that unite and empower local environmental and conservation movements. These counter resource imaginaries need not be uniformly opposed to and incompatible with extractive profiteering and sub-surface resource imaginaries and practices; in fact there can be broad differences within counter coalitions in their material valuations and approaches to land and its resources. These counter-discourses and social or civic deliberative valuations, in turn, may work to build alternate imaginations and relationships to land, and may forefront environmentally friendly development strategies or development initiatives that incorporate higher precautionary risk thresholds. More narrowly, it is through the contested field of social imagination that a resource gains potential and standing, is given coherence and identity, and is altered in ways both mundane and radical (Barad, 2012; Castoriadis, 1997; Gaonkar, 2002).

While not as well known among anthropologists or social scientists as it may be among subsistence and commercial fishing activists, the Pebble controversy has nonetheless inspired a small academic canon. Hebert and Brock (2016) take special care to document the construction of alternative visions of the land promoted by anti-Pebble activists in Bristol Bay, particularly the counter-mapping projects undertaken by Bristol Bay communities as an act of redefining and “assembling new publics in opposition to resource-extractive designs.” Holley and Mitcham’s (2015) work, as well as Hebert’s (2016) analysis of “overflows,” show, too, how participants in Pebble’s early dialogue processes effectively contested official interpretations of scientific data and reappropriated Pebble’s data for their own ends. “Anglo American was incorrect in assuming that all participants would interpret the science to reveal the mine as safe,” write Holley and Mitcham (2015). Rather, “stakeholders were able to develop their own
interpretations” (p. 24). In Hebert’s (2016) telling, the inability of the process to contain participant interaction and understanding spurred generative effects and “new visions that remake spatial, social, and temporal relations in the face of imperilment” (p. 108).

Lawyer Geoffrey Y. Parker has also been involved in some of the land use and jurisdictional debates surrounding Pebble; his 2008 study of Alaska’s Large Mine Permitting Process formed the core of the early claims by Bristol Bay residents and activists that Alaska’s permitting process may not be capable of handling a mine with the size and risk potential of the Pebble project (Parker et al, 2008). None of the permitting statutes administered by the state “specifically address modern, large scale mining, such as the Pebble Mine, that exploits massive, low-grade ore deposits,” write Parker et al.

“Some of the statutes were enacted before the risks of contemporary mining of massive, low-grade, metallic sulfide ores posed to ecosystems were widely recognized” (p. 30).

While the Donlin conflict itself has thus far escaped sustained academic engagement, the Yukon-Kuskokwim region has seen extensive traditional knowledge documentation through a particular cooperation between academic researchers, the Calista Regional Corporation, and a body of traditional knowledge practitioners and community leaders known as the Calista Elders Council (CEC). Anthropologist Ann Fienup-Riordan and translator Alice Rearden have been working alongside the CEC since at least the early 2000s. Their work, from a 2003 in-depth project with Yup’ik elder Paul John, to a 2012 collection on traditional understandings of the land and weather patterns, to a 2016 collection of place narratives and traditional teachings recorded in collaboration with CEC elders, remains one of the most complete contemporary catalogues of Native Alaskan place-based traditional ecological knowledge. Perhaps in part due to their close
working relationship with the Calista Corporation, which holds subsurface rights to the Donlin site and is Donlin Gold’s primary supporter, Rearden and Fienup-Riordan’s work has yet to look into questions of industrial development as they relate to traditional knowledges or subsistence practices on the Kuskokwim.

Resource conflicts are entangled with questions of social justice, and constitute a platform for imagining more just, sustainable, inclusive and environmentally efficient economies and societies. Local movements linked to resource practices provide a strong foundation for an intersectional politics across race and culture, for renewable and sustainable practices, and for the democratization of resource use (Agyeman et al, 2016). These attachments are relational and originate in peoples’ interaction with the physical, the political, and the environmental world around them. Deliberative valuations which arise naturally and locally through sustained practice perhaps promise more democratic approaches to land and resource imagination and use than those based solely on economic dictates.

Methodology

This research draws upon a variety of qualitative methods, including over eighty in-depth interviews with members of industrial, state, federal, civil, and scientific communities and a thorough interpretive analysis of administrative, scientific, regulatory, media and public documents. Interview data is drawn from three rounds of personal, semi-structured interviews. Bindu Panikkar conducted extensive interviews in Anchorage and the Bristol Bay region in July and August 2014, meeting with nonprofits, state and federal regulators, tribal officials, activists, and community members. Benjamin Lemmond and I expanded on this set of interview data in January of 2017, focusing on
state and federal regulators, activists, and nonprofit consultants working on issues related to the Donlin permitting process in Anchorage, Fairbanks, and the Kenai Peninsula, as well as two extended interviews with the permit manager at Donlin Gold and members of the Calista Corporation board of directors. Panikkar and I developed the third round of interview in July and August 2017 through a series of conversations with community members, activists, and officials in the Kuskokwim River villages of Aniak, Napaimute, and Crooked Creek, as well as two of interviews with the Cook Inlet Region, Inc. (CIRI). Interviews were conducted in person, except in cases where it was necessary to interview remotely, and all interviews were audio recorded.

Data coding and analysis of documents, interviews, and observations were performed with HyperResearch, a program for data entry, coding, sorting and retrieval. Scientific publications, reports, media releases, public testimony, and other outreach materials were also integrated into this analysis. The University of Vermont Institutional Review Board (IRB) approved interview questionnaires and all study procedures. An oral consent to participate was sought from each of the interview participants, and all data were de-identified at the time of transcriptions unless the participant has given consent to use their name. All participants were 18 years of age or older.

Interview data is combined with a brief content analysis of the 526 public comments submitted to the US Army Corps of Engineers as part of the Donlin Gold Draft Environmental Impact Statement (DEIS) process. Benjamin Lemmond performed the primary coding of the public comment data according to the major areas of concern that the comments identified, and I worked to bin the comments according to a smaller set of major themes. This content analysis allows us to count the number of public comments
that mention specific components of the DEIS process, as well as to understand the
relative importance of different issues as they arose through the lens of the DEIS.
“Problems are not simply objectively big or small,” but are instead dynamically shaped
and resized by the symbols and frames used to address them (Birkland, 1997, p. 14).
Public construction of a “problem,” therefore, rests in part on the contested
communication of interpretative frames and packages of meaning. Public comment data
make up a smaller portion of this project, but this analysis of the role of public comments
in shaping risk communication and conversations around public knowledge will feature
in a future publication.

**Thesis Outline**

Chapter two, below, traces the development of Alaskan land use policy through a
history of US colonization to understand how policy has shaped new regimes of
knowledge, power, and political economy in relation to resource extraction. This chapter
looks both to land policy specific to Alaska, and to the effects of a number of national
conservation and management acts on Alaska’s politics of land use, knowledge, and
power, in order to address two central questions: How did Alaskan land use policy
develop from the Juneau deposit in 1880 to the present-day controversies in Bristol Bay
and the Yukon-Kuskokwim Delta? And, by extension, how were Western definitions of
land as a site of profit and ownership imported to or imposed upon the Alaskan territory?

Chapter three turns to the Pebble controversy. Expanding on chapter one’s
discussion of the contentious history of land policy and ideology in Alaska, this chapter
looks to a set of land use and management decisions that sought to centralize state control
over the discourses and deliberative processes surrounding land use decision making in
Bristol Bay. More importantly, this chapter also addresses the role of community members, activists, and expert consultants in challenging extractive land imaginaries, promoting subsistence-based approaches to the land, and making space for traditional knowledge and locally-rooted deliberative processes within the technical debates surrounding mine permitting. This chapter was developed jointly with Bindu Panikkar, and parts of the work presented here appear in a forthcoming article slated for publication in *Social Studies of Science*.

Chapter four moves to the Yukon-Kuskokwim and the public engagement work surrounding Donlin’s environmental impact assessment process. This chapter begins with an outline of land history specific to the Yukon-Kuskokwim region before moving on to the public engagement process that followed Donlin’s Draft Environmental Impact Statement, including a brief analysis of the 526 public comments that followed the release of the DEIS in November 2015. Chapter three concludes with a discussion of the cooperation between consultants and Kuskokwim-area community leaders, activists, and citizens. In contrast with Pebble, where activists and consultants were able to build a powerful movement outside of and prior to the state permitting and impact assessment process, the coalitions that arose to oppose the Donlin project channeled their work through the state’s official public engagement processes – in part, due to a set of complexities surrounding land use, sovereignty, and development politics specific to the Yukon-Kuskokwim region.

If the first chapter is concerned with the role of state and federal land use policy in making extractive capitalism an on-the-ground reality, the subsequent chapters are concerned with the reverse – that is, with the power of local action to resist the material,
procedural, and epistemic components of extraction and extractive ideologies in ways that are tailored to regional contexts of power, knowledge, and land title. Both chapters necessarily address the place of subsistence in contemporary Alaskan life. This project concludes, therefore, with a brief treatment of the challenges and promises of subsistence practices in Alaska today.
CHAPTER 2: LAND POLICY IN AK

Land use policy in contemporary Alaska is more than a question of law, legislation, geography, or cartography. Land use policy shapes how people conceive of and relate to the land; how land is adjudicated and imagined; who has the right, or the ability, to be on, in, or near the land itself; and who has access to participate in the processes of decision-making where land and its uses are delineated and realized. Policy shapes and reflects the ideologies and practices of the past as well as possibilities or imaginations for the future. That the Bristol Bay or Yukon-Kuskokwim regions would play host to large, extractive development sites was hardly on the minds of settlers or Alaska Natives in 1880. That land could be owned and profited off of, and that those profits could accumulate as capital — this, too, was not written into the Alaskan landscape any more than it was in the ontological imaginations of its indigenous residents. Rather, Alaskan ontological landscapes today are the result of the long-term construction of hybrid practices built out of the linked material and discursive interactions between Native Alaskans and white American settler-colonizers. To consider the construction of Alaskan land, therefore, requires an analytical scope that begins long before the discovery of profitable minerals at the Pebble and Donlin sites in the 1990s. Here, we look to a longer-term view of Alaskan land history from US acquisition to the Pebble and Donlin controversies today.

This chapter traces the construction of Alaska as a resource colony through the operationalization of particular land use policies and other key defining moments in Alaskan land history, especially in terms of their role to supplant indigenous subsistence-based land relations with colonial imaginaries of profit and ownership. It explores four
key moments in federal and state action that are central to understanding the construction of land imaginaries and development potentials that run through the Pebble and Donlin debates: the US purchase of the Alaskan territory from Russia in 1867; Alaska’s statehood in 1959; the Alaska Native Claims Settlement Act (ANSCA) in 1971; and the Alaska National Interest Land Conservation Act (ANILCA) in 1980. This analysis will trace the broad processes by which Alaskan land was remade as a site for private ownership, profit, and resource commodification and exploitation.

Purchase

The purchase of Alaska in 1867 from Russia for $7.2 million, though widely ridiculed at the time, has come to be seen as a geographic masterstroke, providing the US with an abundance of domestic natural resources in mineral, oil and gas as well as a point of access to the Arctic Ocean. Expansionist William H. Seward, a wealthy New Yorker and secretary of state under Lincoln, took the lead in pushing the purchase deal. Seward operated under a creed of expansion and commerce; his vision would be fulfilled, at least in Alaska, with the acquisition of new territories not by military force but by the misleadingly benign act of purchase. “Peace is more propitious to the ruling passion of empire than war,” said Seward in 1844, “and the provinces are more cheaply bought than conquered.” He reaffirmed his belief in Alaska’s resource promise with a trip to the Northern British Territories in 1857, where he saw “the element of wealth” in the region’s “broad ranges of the chase at the North, its inexhaustible lumber lands, the most extensive now remaining on the globe, its invaluable fisheries, and its yet undisturbed mines.” Seward would have to wait until after the last shot of the US Civil War, fired off the coast of Russian America in 1865, to realize his expansionist scheme. A flurry of
diplomatic activity finalized the territory transfer on March 30, 1867, with little fanfare – as negotiations had been conducted outside of public view to forestall the possibility of Britain entering the bidding. US land holdings in the Alaska Territory totaled roughly 375 million acres, more than two and a half times the size of Texas. The borders of the new territory were murky, defined by an 1825 treaty between Russia and Britain, and it took until 1903 for the boundaries between Alaska and Canada to fully resolve.

The purchase agreement stipulated that Russian residents could either return to Russia or remain as full US citizens. In contrast, the new treaty neatly ignored Native populations. Indigenous communities, including the Aleut, the southwestern Yup’ik, the northern Inupiaq, the interior Athabascan and the southeastern Tlingit and Haida, were largely autonomous prior to US colonization. While an imperial decree claimed Russian dominion over Aleutians, and while Russian commercial expansion along the coast was often accompanied by aggressive missionary activity, the Russian government held little practical authority over hunters and traders, be they Russian or Native Alaskan. Native Alaskans were not consulted on the transfer of their territory from Russian to American colonial control, however, nor were they given the option to opt out of US administration like Alaska’s Russian residents. Native populations were granted neither US citizenship nor recognized sovereignty, and their claims to land were systematically ignored. Indeed, the US-Russia agreement stipulated that the change in title would not impact still-unresolved Native land claims (Culp et al, 2005). In contrast with the Russian approach, however, US colonial governance going forward crystallized around policies that brought disparate tribes and the territory as a whole under centralized authority, in part by
instituting policies of socio-structural control, to manage the landscapes and resources the federal government saw as politically and economically valuable (Mass, 1991).

Alaska’s value, as Seward observed, rested firmly on its resource potential. This was a departure from trends in the contiguous West, where agrarian settlement and space for population expansion were central to frontier imaginations. Westward-bound settlers had moved toward the Pacific with oxen in front and plow in tow, but Alaska’s state and federal managers never pegged the region as America’s next breadbasket. Poet Bret Harte captured the resource visions of Alaska’s most enthusiastic boosters, despite never having laid eyes on the territory himself (Emmerson, 2010).

There’s a right smart chance for fur chase
All along this recent purchase,
And, unless the stories fail,
Every fish from cod to whale.
Rocks too – mebbe quartz – lets see,
‘Twould be strange if there should be,
Seems I’ve heard such stories told,
Eh – why, bless us – yes, its gold

The potential value of the territory remained the subject of strong debate – indeed, Russia had rid itself of the territory partly due to the collapse of its once-lucrative fur trade – and white settlement in the early years of the purchase was minimal. It would take until the 1880 expeditions, years after Seward’s death, for the decision once derided as “Seward’s folly” to prove its worth underground. Alaska’s drastic population shifts in

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4 Population data in this section is drawn from Sandberg (2013).
the years that followed illustrate the power that subsurface resources held over Seward’s new acquisition. When Juneau and Harris first set out for Gold Creek in 1880, Alaska’s first census reported only 430 white settlers out of the 33,426 people it reached, more than a third of whom lived in the territorial capitol of Sitka. These numbers were not substantially different from an 1839 population estimate by Ioann Veniaminov, a Russian Orthodox missionary – though his count was higher than those of his contemporaries. By the 1900 census, however, Alaska’s population had ballooned to over sixty thousand, nearly half of European descent. A full ninety percent of white Alaskans were male: As in the early days of the California mining boom, new residents were overwhelmingly men traveling alone.

Gold in the Klondike grew to overshadow Juneau’s reputation and Nome, a gold boomtown on the Seward Peninsula, soon eclipsed Juneau’s population, growing to nearly twenty percent of the territory’s population at over 12,000 residents – though by 1910 its population fell to just over a thousand as gold tracts ran dry. By then, mining companies were increasingly relying on large claims that required relatively few workers; though a handful of large mines had existed in Alaska since the first gold rush in the 1800s, including mines dedicated to both coal (Usebeli Coal Mine) and hard-rock mining (Kennicott, Bateson, Hirst Chicagof, Treadwell, and others), it took until the early 1900s for Alaskan mining to solidify as a corporate endeavor.

Fishing soon took precedence as the primary vehicle for population shifts in the Alaska territory. Southeast Alaska’s share of Alaska’s population grew from 23.6 percent to 34.8 from 1910 to 1940, and Juneau regained its status as the territory’s largest city largely thanks to the growing fishing industry. Juneau’s renewed centrality was short
lived, however, and the Alaskan population would shift permanently to the Anchorage area with the rise of Alaska’s strategic military importance, the 1939 and 1940 construction of military bases in Anchorage and Fairbanks, and the extension of the US road network to both cities in 1942. Many subsurface projects were shuttered in favor of increased military activity in the years following World War II, and mining would never again produce the kind of drastic and volatile population shifts that it had at the turn of the century. While Juneau and Nome remained viable population centers after the closure of local mine sites, the areas surrounding newer, larger mining projects were often left deserted after closure.

**Statehood for Alaska**

Truman first recommended statehood for Alaska in 1946, though his initial proposal was delayed due to partisan opposition and doubts on the financial capability of the state (Mass, 1991). State control of land for the purposes of resource exploitation was outlined as an early goal of Alaska’s negotiators: The territorial legislature’s 1955 constitutional draft dedicated the state to the endeavors of settlement and resource development, and when Eisenhower proclaimed Alaska the forty-ninth state on January 3, 1959, more than a decade after Truman’s initial recommendation, the agreement entitled the fledgling state to select 102.5 million acres from the public domain for its own use (Gallagher and Gasbarro, 1989). The purpose of the entitlement, which amounted to 28 percent of the state’s land area and was twenty times larger than other state entitlements,

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5 The 1959 agreement was a deviation from previous state land grant policies in which specific, federally mandated parcels of land were transferred to state governments after the territories had already experience substantial white settlement.
was to provide a financial base from which the new state could generate funds from land and resource sales.

Alaskan statehood was opposed by mining and fishing interests that were wary of the increased regulatory power granted to the new state government (Parker). But private interests did not have long to wait before the regulatory systems they feared would turn to work in their favor. In the same stroke, the coalescence of government and private industry would also resolve the lingering question of Native land claims just as it had in the West: with a land privatization scheme driven by the prospect of large scale, profitable resource development.

**Alaska Native Claims Settlement Act**

State land selection processes raised the issue of development and Native rights to a critical level in rural Alaska. Alaska was initially included on the United Nations 1946 list of Trust and Non Self-Governing Territories. Where most territories were removed from the list following independence, including Namibia in 1990 and mostly recently East Timor in 2002, Alaska was disenrolled upon its entry into statehood – despite the fact that Alaska Natives were not included on the voting rolls for Alaska’s statehood proposal nor were Native land claims, sovereignty, or political status given weight in either the decision-making or the process by which Alaska’s new state government was

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6 This private opposition to statehood would prove misappropriated, and the federal government would ultimately prove a stronger conservationist voice than the state of Alaska. In 1980, Congress set aside over 157 million acres of federal Alaskan land for national parks, wildlife refuges, and other protected areas under the Alaska National Interest Lands Conservation Act (ANILCA). National parks make up roughly 54 million acres of Alaskan land today, nearly a quarter of the federal government’s total Alaskan holdings; state parks, in contrast, account for just 3.3 million acres, less than 4% of Alaska’s 103 million acres of state land, and Alaska’s state government has proven one of the strongest proponents for expanded oil and gas expansion on the North Slope and throughout the state. (National Park Service; Division of Parks and Outdoor Recreation).
organized. As new state land appropriations encroached upon Native villages and subsistence areas, however, Native communities responded with a series of requests to freeze the selection process until their claims to land could be heard (Alaska Native Foundation, 1978). But it would not be enough to spur federal action on its own.

Ten years after Alaska gained statehood, in 1969, the Trans-Alaska Pipeline System (a cooperative venture between ARCO, BP Oil, and Humble Oil, later Exxon) submitted an application for the construction of a 1270 kilometer pipeline from oil deposits at Prudhoe Bay to ports at Valdez on Prince William Sound. Pipeline construction was stalled, however, by the series of unresolved land claims overlapping the pipeline corridor. Native opposition prompted the suspension of land transfers by Secretary of the Interior Steward Udall in 1966. All public lands were withdrawn from appropriation, and the Bureau of Land Management was prohibited from processing mineral leases or patent land titles until Congress could act. This and the promise of a domestic source of oil profit provided a strong incentive to restart state land selection and reopen mineral leasing, and the pipeline inspired quick legislative compromise by the Nixon administration. In 1971, after several years of negotiation between federal, state, and tribal entities, the Alaska Native Claims Settlement Act (ANCSA) emerged as a solution to the impasse. ANCSA would erase Native claims and remove existing Native reserves with the transfer of 44 million acres of land and a lump monetary payment of 962 million dollars to thirteen newly established Regional Native Corporations. Regional Corporations would function as private, for-profit companies, with Native Alaskan residents as their shareholders, and land selection would proceed similarly to the state process that had begun a decade before.
Congress quickly approved the pipeline project when vice-president Spiro Agnew cast the tie-breaking vote on July 17, 1973, and the pipeline system was fully completed by June of 1977. Twelve years later, on March 24, 1989, more than eleven million gallons of Prudhoe Bay oil flowed into Prince William Sound when the Exxon Valdez tanker ran aground just miles from the pipeline’s terminus. Media coverage of soiled beaches and oiled wildlife challenged ideologies of unmitigated development and resituated the fragility of human and natural environments; the debates over prospective resource development projects today arguably recreate these ambivalences surrounding concepts of conservation, development, sovereignty, and knowledge.

ANCSA introduced a system of land use and sovereignty that was a drastic departure from reservation policy in the West and from Native Alaskan land use practices of the day – driven and organized, again, around the extraction of profit from the land. Today, Alaska Native land ownership is primarily concentrated in private land titles assigned to the Regional Corporations. Tribal sovereignty, meanwhile, exists at the level of Village Corporations, which own small tracts of land surrounding the boundaries of established tribal villages. The vast majority of Native Alaskan land, as a result, is not sovereign territory. Rather, it is “owned” in the same way that any other private individual owns land in Alaska: as a deed filed with the state. Regional Corporations, meanwhile, hold the same fiduciary duty as other shareholder-owned companies to maximize profit for their constituents. Local development, employment, and social services in part rely on the ability of Regional Corporations to effectively manage their assets. As Regional Corporation assets are primarily composed of their land holdings, fiduciary duty and local development needs effectively require that Regional
Corporations manage their land in a manner that increases capital accumulation. In Alaska, land profit hinges most often on the exploitation of oil and mineral deposits.

Besides imposing a mandate of land profitability, the Native Corporation system introduced under ANCSA also served to divide land designation from political sovereignty. Political representation, in the form of government-to-government relationships with the U.S., is vested within each individual village. Village Corporations, however, control only the land’s surface; subsurface title, including oil, mineral, or other resource deposits, remains under the management of the Regional Corporations. Both Regional and Village Corporations are tasked with ensuring the economic well being of the Alaska Native population through profit generated from their respective landholdings. Native Corporations are thus caught within a system of competing incentives, where economic survival and financial independence depends, to a degree, on opening land for commercial resource extraction. That extraction, meanwhile, not only has the potential for disastrous geological-environmental consequences, but also represents a concrete enforcement of land use and land ideology as profit-oriented and privately owned. The resource development mandate implied by land profitability in this way has the capacity to threaten subsistence culture and resources – some of the most immediate concerns of rural village residents – putting regional development in a particular kind of conflict with the needs and concerns of the people who live there (Gallagher, 1987). Faith Gemmill, Resisting Environmental Destruction on Indigenous Lands (REDOIL) organizer, describes:

In a nutshell, [ANCSA] was a theft of our lands as it transfers our tradition [and] land…from true authority, which were the tribes of Alaska, to the Native
Corporations which were created under that act. Then it was intended to assimilate [Native Alaskans], take [us] away what we value the most and assimilate us...It was an act to divide us and conquer us. It’s served that purpose in a lot of ways, as tribes’ whole purpose is to look on the well-being of the people. A corporation’s purpose is the bottom line, profit at all cost, and these are two different value systems that are in place now throughout Alaska within Native communities. (interview with Bindu Panikkar, 2014)

In contrast with the 1975 James Bay and Northern Quebec Agreement (JBNQA), which involved similar ideations of resource development and transfers of land title for financial assurances, ANCSA also held little regard for protecting rural subsistence lifestyles and livelihoods. While the JBNQA codified ongoing state support for subsistence hunters and trappers in the form of direct subsidies as well as land use and access preferences, ANCSA held no such guarantee for subsistence hunters, trappers, or fishers (Peel, 2013). To Mass (1991), ANCSA implied that Natives be “assimilated into the American mainstream; away from a communal subsistence orientation to a political economy of private ownership, individualism, a competitive market, limited government and popular passivity” (p. 36).

But ANCSA also represented a shift in US treaty history that should not be ignored. Seward’s creed that “the provinces are more cheaply bought than conquered” came in the midst of decades of powerful, militant resistance to US conquest on the part of American Indians in the contiguous states. Applied to the Alaska context a hundred years later, Seward’s words take on a different, if related, connotation, and instead speak to the effective use of particular kinds of political power by Alaska Native groups in the
20th and 21st century. With ANCSA, indigenous nations under US occupation were for the first time able to ensure that they had a seat at the negotiating table. Alaska today holds the largest tracts of Native-owned (though not sovereign) land, and Regional Native Corporations remain highly profitable and well placed to negotiate on strong terms with federal, state, and outside corporate interests. “ANCSA was a success due to a lot of creativity on the part of Native people,” recalls one member of the Calista board of directors who had been involved in the initial negotiations in the 1970s. Despite the difficulty of transitioning to what she terms a Western business model, communities were able to “adapt to the style of boardroom meetings.”

Two central processes stand out in the period between the Juneau deposit in the 1880s and the Donlin and Pebble projects today. First, land designation was increasingly reorganized to favor American capitalism and private property ownership, whether through the breakup of reservations in the contiguous states or, under ANCSA, as a first resort to settle land claims in Alaska. Reimagining land as private property also meant the dissolution of tribal sovereignty, again through the breakup of reservation land in the lower 48 (that had functioned as a limited form of sovereign space) or, in Alaska, by designating the vast majority of Native areas as privately titled land subject to state and federal jurisdiction. Second, federal policy consistently favored an ideology of land as an improvable, profitable resource. From land grants to private farmers that were contingent on clearing land for agriculture to policies that granted private access to mining claims and oil fields, agriculture and resource development were consistently considered as the optimal, most “civilized” use of land in the contiguous states and Alaska alike. It was land improvement, moreover, that served as the impetus for wide-ranging settlement and
land designation policies – with the pipeline controversy that formed the backdrop to ANCSA as one of the more dramatic examples. Arguably, the remaking of land as a privately held, profitable resource was central to the broad mission to disintegrate and assimilate Native communities – and to open larger tracts of land to resource development, settlement, and agriculture. For Chickaloon Village Chief Gary Harrison, changes in land designation are inseparable from questions of power and humanity: Under ANCSA, “it’s easier to take over your right as a human being, as you are no longer human, but just a stockholder” (interview with Bindu Panikkar, 2014). At the same time, in other interpretations, the compromises built in to the ANCSA agreement have allowed for a level of Native economic power that is almost unheard of elsewhere within the borders drawn by US and European settlers. While later agreements may have allowed for a degree of political sovereignty absent from the Alaska context – the 1993 that settlement paved the way for Inuit self-governance in Canada’s Nunavut territory is perhaps the most relevant example – the relative success of Alaska Native business ventures is undeniably a historically significant outcome, severe social and economic challenges in some localities notwithstanding.

**Alaska National Interest Lands Conservation Act**

The problem of political sovereignty, however, implies a number of major consequences for rural lives and livelihoods. Sovereign land holdings as defined under ANCSA were often insufficient to support subsistence lifestyles, as the land tracts allotted to Native villages were significantly smaller than the large land base that subsistence hunting and gathering requires (Gallagher, 1987). That the patchwork of land rights and jurisdictions that developed through statehood and ANCSA made subsistence
survival on Native land effectively impossible, moreover, created a situation where rural subsistence communities are necessarily dependent on access to land beyond the boundaries of the village. This material reality engenders an additional dependency on state and federal legislation to protect habitat in, and subsistence access to, tracts of non-Native land adjacent to traditional subsistence grounds. As ecosystems and habitats do not conform to messy land title boundaries, subsistence practices even on Native territory rely on broader protections than simply those areas where subsistence takes place; survival on (and the survival of) subsistence practices remain in deep jeopardy. I will return to a discussion of subsistence at the end of this thesis.

Partial relief was coded into the 1980 Alaska National Interest Lands Conservation Act (ANILCA), which set aside 225 million acres for conservation (60% of land under federal ownership, 28% under state, and 12% under Native ownership) and recognized that land held by Native communities would not be sufficient to support subsistence. ANILCA Title VIII established Native subsistence use priority on most federal lands, stipulating that subsistence users should be the first to access limited land resources; wildlife refuges were additionally made available for subsistence harvest, but national parks were to be closed to fishing and hunting. State officials challenged these new regulations, however, arguing that Native priority conflicted with the state’s constitutional definition of natural resources as belonging to all residents, and subsistence priority was ultimately extended to all rural Alaskans. In one stroke, ANILCA codified subsistence access as the responsibility of the federal government, rather than the state – a controversial shift in Alaskan land politics, given the state’s position that it should hold sole responsibility for resource management (Peel, 2013)
ANILCA land designations were controversial in Bristol Bay. In 1979, the Bristol Bay Native Corporation sued, arguing that federal protected land withdrawals reduced the value of their ANCSA land by limiting access to the coast in areas of potential mineral development – another example of the double incentive coded into Alaska’s land system. ANILCA is less a consequence in the Pebble region, however, where the federal government holds a smaller proportion of the land compared to the rest of the state. Much of the Bristol Bay area – 18.9 million acres out of the 48.8 million acre planning area – belongs to the state of Alaska, and state land classifications are not so immutable (Alaska Department of Natural Resources, 2005). While the state’s 1984 Bristol Bay Area Plan classified much of the region for wildlife protection, a revised Area Plan in 2005 removed habitat protections and opened the region for mineral development, setting the stage for the beginning of work on the Pebble site the following year (Alaska Department of Natural Resources, 2005; Citizens Bristol Bay Area Plan for State Lands, 2013). The move underscored the instabilities and dependencies of subsistence-without-land, accumulated over time in congressional documents, legal rulings, and in the desk drawers of land use planners in Juneau and in Washington, DC.

**Land Management and Sovereignty Today**

Throughout the contiguous Western states, federal policies to expropriate and privatize Native land were spurred partly by growing settlement and the perceived need to provide whites with profitable farmland. By the time miners were making their way to Alaska, Native policy in the West had already shifted toward assimilation with the passage of the Dawes Act in 1887 and the accompanying dissolution of tribal land into private parcels. New privatization policies served the dual purpose of opening further
land to white settlement and enforcing, via writ of purchase and maps of ownership boundaries set out in Washington, DC, specific ideologies of land “improvement” based on resource profit on privately owned parcels of land.

Alaska presented a new kind of human and natural terrain for white settlers. Farmers did not follow miners as they had in California, and the perceived need to provide farmland to white settlers did not drive settlement in Alaska. Indeed, white settlement in Alaska was too sparse – and the land, perhaps, too vast – to make federal action on Native land claims an immediate priority, but federal policies around Native Alaskan land claims nonetheless arguably relied on similar assimilation logics as the contiguous states. Where the continental US had treated assimilation policies as secondary to militarized violence, some argue that Euro-American settlement in Alaska used assimilation policies as its primary means of social control. Evon Peter (2008), former executive director of the activist collective Native Movement and former Chief of the Neets’aii Gwich’in from Arctic Village in Northeastern Alaska, writes:

The U.S. had tried massacres, treaties, and reservations in the continental United States and those methods either didn’t work well or were politically unacceptable. So in Alaska, the U.S. worked hard to assimilate Alaska Natives; attempting to both legislatively and educationally convince us that we do not have the rights of sovereign peoples and nations.

Today, nearly twenty percent of the land allocated to the state of Alaska and ten percent of Native Alaskan land remain unclaimed. Alaskan land management remains a complex and contested process, with multiple agencies and multiple stakeholders
competing for prominence. Any single land management question might involve such diverse federal departments as the National Park Service, Fish and Wildlife Service, Forest Service, and the Bureau of Land Management, as well as the State of Alaska’s Department of Natural Resources. What agencies do with land, and the range of activities they regulate – from mining, logging, and wildlife management, to land sales – impacts and alters the character and distribution of available resources. While ANILCA was established in part to facilitate coordination among the different land management agencies, Alaskan land management remains a complex, hotly negotiated patchwork (Gallagher, 1987).

In the following chapters, I will move from this broad overview to the site-specific debates that have arisen around the proposed Pebble mine in Bristol Bay and the Donlin mine off of Crooked Creek in the Yukon-Kuskokwim region of southwest Alaska. While the villages along the Kuskokwim River or in the Bristol Bay area may seem far removed from Washington DC or from the ideologies of 19th century American expansionists, the knowledge, power, and development debates surrounding Pebble and Donlin nevertheless hold reflections of these wider epistemic and ideological issues. US influence in Alaska is a relatively recent historical phenomenon; the presence of large-scale development initiatives, state regulatory officials, or corporate agents in rural Alaska is more recent still.

We move first in chapter three to Bristol Bay, and to a series of conversations that arose following a set of controversial land use planning changes in 2005. These debates culminated in a unique local land planning movement that worked at the boundary between state planning and traditional ecological knowledge practices, and that drew
together a unique coalition of multiple resource users and practitioners of multiple forms of knowledge and ways of relating to the land. Less publicized than – and prior to – the international movement that arose to protect Bristol Bay fisheries, the local land planning initiatives in the region are an excellent example of the possibilities for creative engagement with land planning and environmental impact assessment outside of the channels prescribed by state assessment processes.

Chapter four moves north and west to the Yukon-Kuskokwim delta. Lacking the material support and global resonance of a large commercial fishery, and faced with much stronger local division, activists and community members in Donlin area instead had to channel their work through the existing state and federal pathways for public engagement. This was not due to some misdirection on the part of Donlin Gold, nor to unpreparedness on the part of the community. Rather, the Donlin case is one that holds multiple layers of complexity beyond the “fishing vs. mining (vs. subsistence)” discourse that dominated in Bristol Bay. Still, the Donlin case fits within certain narratives that link it to the goings-on in the Pebble area: In short, community members along the Kuskokwim River drew upon a set of knowledge practices that strategically linked technical expertise with traditional ecological knowledge through a heterogeneous coalition of community members, activists, and outside experts and consultants. That knowledge, however, was necessarily directed to fit within the public engagement processes set out by the state and federal permitting agencies.
CHAPTER 3: PEBBLE

The Bristol Bay region in southwest Alaska is the southernmost finger of the ancient sedimentary Kahiltna basin, formed when the oceanic Pacific Plate collided with the North American plate 90 million years ago. The geologic details of the basin’s southern tongue remained relatively insignificant until 1986, when Cominco Alaska, studying color anomalies in the terrain from specially fitted aircraft, uncovered evidence of a significant mineral deposit at the Pebble site. Today, the Pebble deposit, located deep beneath the basin’s surface, has brought the Bristol Bay region to the center of one of the most widely recognizable debates over natural resource exploration and development in the North.

Figure 1: Trout Unlimited map of the Pebble mine footprint, Bristol Bay region.
Canadian mining company Cominco, later absorbed by Teck Resources, Inc., filed its initial claim with the State of Alaska in 1988. Exploration continued in the region each summer until 1993, at which point the calculated resource deposit included 3 million metric tons of copper and 11 million ounces of gold contained within one billion metric tons of ore – a significant but not world-class find. Cominco’s initial explorations went relatively unnoticed until 2001, when Northern Dynasty Minerals Ltd. (NDML) optioned the claim and expanded exploration activity, resulting in the discovery of the larger and deeper Pebble East deposit in 2005. By the time the “Pebble Partnership” submitted its initial permit applications to the state in 2006, estimates of Pebble’s mineral potential had ballooned to 107 million ounces of gold, 36 million metric tons of copper and 2.5 million metric tons of molybdenum, one of the largest copper and gold deposits in the world.

Early designs of the mine site showed that the complex would span 20 square miles of state land in the Bristol Bay watershed. The excavation would rank as the largest open pit mine in the country, while still relying on additional underground block caving to access deeper, higher-grade minerals. It would be a massive industrial undertaking – one that would entail clearing large areas of land for supporting infrastructure such as new fossil fuel power plants, ports, and containment ponds. Pebble would also require the construction of a 104-mile restricted access industrial road and an adjacent pipeline corridor to reach ports at the Cook Inlet, fifty miles of which would pass through Bristol Bay Native Corporation territory.

The Pebble deposit is tightly nestled between the ecologically rich and socially significant headwaters of the Kvichak and Nushagak Rivers, two of the eight major rivers that feed Bristol Bay (see Figure 1). The deposit area is a flatland dotted with glacial
ponds and salmon spawning streams, interspersed with ranges of hills rising one to two thousand feet high. Every summer some 30 to 40 million adult sockeye salmon return to the bay and swim upstream for renewal; they form the backbone of Bristol Bay’s world-renowned, century-old salmon industry, which is responsible for almost half of the wild sockeye salmon yield worldwide and represents the major economic driver in southwest Alaska.

Only this thriving commercial salmon industry could match the scale of the proposed Pebble mine. The fishing industry has been the largest job supplier in Alaska for years: Bristol Bay fishing alone accounts for the equivalent of 10,000 full-time jobs spread across Alaska and the Western US, and makes up nearly 75 percent of local employment (Aspelund, 2013). Fisheries generate $500 million a year in direct income while creating $1.5 billion in total value across the country (ibid). And the impact of Bristol Bay fisheries is not isolated to the Bristol Bay region. Nearly one-third of Bristol Bay fishers, and two-thirds of fish processing workers, live in Washington, Oregon, and California, while nearly all the Bristol Bay seafood companies and much of the fishing fleet active in Bristol Bay are based in Seattle. The seafood extraction and processing network thus stretches far beyond the Bay’s boundaries. These direct economic ties may partly explain the broad support enjoyed by Pebble’s opponents.

Salmon communities are diverse and genetically isolated due to their specific reproductive cycle, in which adult salmon return to the freshwater, upstream spawning ground of their birth and spawn just once before dying. Bristol Bay salmon are thus

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7 In 2010, 4,369 of the 11,921 total jobs associated with the Bristol Bay fishing industry were located in Alaska. See The Economic Importance of the Bristol Bay Salmon Industry, 2013.
considered an especially resilient and sustainable resource, even in the face of global climate change, as some fish populations fare better under cooler conditions and some produce more fish during warmer climates (Pebble Science, 2011). Beside salmon, the region also hosts a full array of Arctic wildlife, fish and birds – over 260 species, according to EPA statistics (2014). Indeed, when Cominco held ownership of the claim, they considered the region too environmentally sensitive to develop. A resident of one of the several dozen Bristol Bay Native communities explains: “we never heard about what the plans that they had were… Cominco Teck thought it was located in the wrong place, with too much water and habitat. So they pulled back on it, and finally sold their interest to Northern Dynasty” (interview with Bindu Panikkar, 2014).

The Pebble discovery, and the infrastructure prospects that it implied, afforded new extractive significance to the flatlands north of Bristol Bay. But the region is neither undeveloped nor uninhabited. Bristol Bay is home to 31 Yup’ik, Dena’ina, and Alutiq communities whose life on and use of the land long predate the region’s commercial industries. Bristol Bay Native relationships to the land and sea are in part mediated by a strong culture of subsistence hunting, fishing, and gathering, and community members draw from over 150 species of wild plants and animals for subsistence activities. The mine, to them, represents a threat to lives, livelihoods, and cultures that are intimately linked to Bristol Bay’s ecological well being. The late Bobby Andrew, an elder, subsistence hunter, and fisher from Dillingham, and a leading voice of the association of eight Alaska Native village corporations in Bristol Bay known as Nunamta Aulukestai (Caretakers of the Land), remarks: “Fighting for the future of our renewable fish and wildlife resources is a central part of our culture” (interview with Bindu Panikkar, 2014).
Understanding the construction of land and resources in Bristol Bay depends, in part, on modeling this interplay of land use, power, and knowledge debates between Bristol Bay’s two dominant resource industries: commercial salmon fishing, which provides economic value to the state, and sub-surface mining, which is valued primarily for its revenue potential. However, these dominant resource industries are joined by a longstanding subsistence culture practiced by Bristol Bay Native communities, which exists alongside and apart from the ways of knowing and valuing land within the commercial salmon industry and the region’s undeveloped mineral wealth.

The Pebble controversy is a story that takes place in a hybrid world, where visions of the land as a site of extraction and profit are in continual conversation with other approaches to land and traditional knowledge. While mineral extraction is not new to Alaska’s resource landscapes or to state economic logics, the possibility of profitable mineral operations in Bristol Bay does represent a shift in on-the-ground land use calculations as well as new orientations to land and the self. These ontological changes to the Bristol Bay human and natural environment are compounded by the trajectories of risks to health and livelihood that mineral extraction poses. In short, contamination at Pebble could enter into the body by way of salmon and other subsistence resources, shifting people’s relationships to land and self from one of mutual sustenance to one of unknown, unseen danger.

The ongoing debates surrounding the proposed mine, especially during its most publicly visible years between the announcement of the site development plan in 2006 and a preemptive but ultimately temporary veto by the EPA in 2014, were in many ways a venue to determine what forms of land use, knowledge, and valuation could be
considered as legitimate bases for environmental and developmental decision-making in the region. By the 2014 EPA decision, it would become clear that anti-mining coalitions, drawing upon a diverse and geographically broad base of support, had the potential to challenge the primacy of Alaska’s extractive resource cultures through venues outside of the official public engagement processes set out under the National Environmental Policy Act (NEPA) and the State of Alaska’s large mine permitting process. The dominance of extractive resource cultures is not what makes the Pebble case unique, therefore, as extraction and profit hold power throughout the world. Rather, Pebble matters in how land activists and commercial, recreational, and subsistence fishers challenged the dominance of mineral extraction, and in how indigenous subsistence-based land imaginaries and knowledge systems found purchase within the state regulatory apparatus through a hybrid approach to science and traditional knowledge production – and, in the case of the 2014 EPA decision, through the strategic application of section 404(c) of the Clean Water Act.

Pebble’s material and symbolic power came to be possible precisely because of Alaska’s complex history of imaginative frameworks, settlement patterns, and land use policy, driven by specific visions of resource wealth and enacted through the land use and management policies described in the preceding chapter. But how did the gold and copper of the Pebble deposit, in particular, emerge as emblematic in the early 2000s rather than upon Pebble’s initial mapping in the 1980s? And how did Pebble interact with land discourses centered on commercial and subsistence fishing? In the sections below, I trace the making and remaking of land discourses and imaginaries in Bristol Bay through the land use and knowledge construction conflicts surrounding the Pebble permitting
process. In particular, I look to the modes of valuation imposed by the State of Alaska and the Pebble Partnership to exercise authority over the material terms at play in the Pebble debate, as well as the alternate approaches promoted by communities in the Bristol Bay region.

**Extractive Land and Resource Imaginaries**

To understand how extractive approaches to land and value gained resonance in Bristol Bay it is necessary to look backward, four years before the 1988 discovery of Pebble West, to the State of Alaska’s first Bristol Bay Area Plan in 1984. The Bristol Bay Area Plan was designed to “[determine] management intent, land and resource use designations, and management guidelines that apply to all state lands in the planning area” (Alaska Department of Natural Resources, 2005, p1-1). This original planning document acknowledged the importance of the region for diverse habitats, and the state co-classified the majority of Bristol Bay land as “habitat and public recreation” or habitat and mineral development.” When the first Pebble deposit was identified in 1986 it became clear that the 1984 habitat protections would present a roadblock to development. The acceleration of development at the Pebble site in the early 2000s thus coincided with the end of the 1984 plan’s 20-year shelf life. The new Area Plan, completed in April 2005, redrew the boundaries of vast swaths of Bristol Bay lands, opening them to mineral use and setting the stage for the Pebble permitting process to begin. The 2005 Plan declared mining and mineral exploration as the only designated use on 9.4 million acres of the Bristol Bay drainage area, which amounts to nearly 80% of state-owned land in the region, while also restricting the protection of inland habitats. The diverse use of the habitat and practices on the land such as subsistence and recreation were, in this way,
moved to the background, to make room for mineral exploration and extraction. The management priorities that were encoded in the 2005 plan suggest that, by the time Pebble entered into public awareness in the early 2000s, the set of Bristol Bay land use possibilities that were legible to the state had shifted to favor extractive land use and mineral profit. Attorney Geoffrey Parker, who represented the Bristol Bay tribes opposed to the Pebble mine, comments:

By 2004, people realized that in order to develop Pebble we have to peel off the habitat classification, and have to peel off the public recreation classification, and solely leave minerals as it trumps everything else. (interview with Bindu Panikkar, 2014)

At the same time as the state reordered land use priorities in Bristol Bay, Alaskan politicians and regulators, with the support of the mining industry, simultaneously worked to extend state control over the large mine permitting and environmental assessment process itself. In Alaska, the (NEPA) process – which sets out federal standards for environmental protection and impact assessment – is often seen as “federal overreach,” and as Pebble neared the permitting stage, the state worked to further consolidate its NEPA authority. These policies, discussed below, also sought to solidify the state’s ability to script how resources are used and imagined in Bristol Bay.

In 2013, the Alaska legislature passed Senate Bill 27, giving the Alaska Department of Environmental Conservation (DEC) and Alaska Department of Natural Resources (DNR) primacy over project permitting. State primacy effectively limits federal activity and enables “one-stop permitting” unless the project is sited on federal lands. Michelle Bonnet, Director of Alaska’s Department of Conservation, claims that
state primacy functions to “balance its citizens needs with their use of lands and water resources—and, consequently, to maintain productive natural resources while considering industrial growth and development, while providing the protections provided by the Clean Water Act” (Hale and Ross, 2013, p. 7). In a state that is highly dependent on and supportive of resource extraction, moves to centralize the permitting process have contributed to community concerns that Pebble would be assured an easy stamp of approval were it to enter the permitting stage.

House Bill 77, introduced to the state legislature by Alaska governor Sean Parnell in 2013, attempted to further solidify state control over natural resource decisions through several avenues. HB77 would have limited public participation in land use decision making by restricting public comment on the issuance of water and general land permits, as well as by limiting the public’s capability to make appeals to the agency or to the court unless the party had a financial or real estate interest in the affected area. HB77 also granted unlimited extensions of temporary water use permits, as well as indefinite approval for water appropriation without the requirement to assess potential harm to fish or habitat. Pam Miller, of Alaska Community Action on Toxics, notes:

If the public becomes too unruly, too effective at limiting whatever development or project that the industry would like to move forward with, then the state, simply on industry’s behalf, shuts out the public. Whether that's limiting public participation in decisions about permits or limiting our rights to do public litigation, citizen suits; making those things more impossible; and making them more risky because of the fee structures… I think that's what the state has really
been after. The effect is to shut the public out of decisions. (interview with Bindu Pankkar, 2014)

Tribal governments and other entities actively opposed the bill. HB77 became a central issue during the Pebble campaign, and the legislature received more than 1,500 letters, resolutions, petitions, and other documents in opposition. Some of Pebble’s opponents dubbed it “The Silencing Alaskans Act;” community conservation organization Cook Inletkeeper called HB77 “a gift bag full of fish and game habitat rollbacks for large mining corporations” (Cook Inletkeeper, 2013). The bill passed Alaska’s House of Representatives in 2014 but failed to make it through the state senate. For some activists, the HB77 controversy underscored the importance of open public process. Water rights lawyer Hal Shepard (2014) commented:

…because HB77 was merely tabled, this does not mean that it is entirely dead – there’s always next session and more bills. Alaskans must, therefore, remain vigilant and ensure that any future efforts to change the use of the state's water and other natural resources is conducted using a transparent public process, and includes a consultation process with tribes when the proposed changes are significant in scope or would affect subsistence uses and tribal interests.

The construction of land as an extractive and profitable space is not an isolated process. Meaning and value, as they are applied to particular resources, come to be defined in conversation with other relevant resource discourses in the region. Oil dominates Alaskan economics and identity, and it is impossible to consider the significance of gold or copper without placing them in the context of Alaska’s contemporary oil economy. Despite the historical importance of the mining industry as a
driver of Alaskan settlement, the Alaskan economy has been driven by oil – “black gold,” rather than yellow – since the discovery of vast reserves on the North Slope and the 1977 completion of the Trans-Alaska Pipeline System. Off the southern end of Bristol Bay, the North Aleutians Basin has also been home to extensive oil prospecting, though a series of offshore drilling moratoriums has thus far protected the ecologically productive basin region from oil development. But Alaska today is a fading oil empire. Annual crude oil production has fallen by more than two-thirds since its peak in 1988 (USEIA, 2014). In addition, recent years have seen a decline in oil prices, and the state estimates that direct employment in oil and gas industries will fall ten percent by 2024. Employment in mining-related fields, by contrast, is expected to rise by just over five percent.

The Pebble Partnership has promoted mine development in the context of Alaska’s oil challenges, and situates itself as a multi-metal mine with prospects beyond copper, including molybdenum, used in gun barrels as an alloy; rhenium, used in high performance jet fighters; and selenium and tellurium, used in technologies such as wind turbines, hybrid cars, and solar power (Pebble Limited Partnership, 2011; McGroarty, 2013). In Alaska, control over resources is additionally linked to state independence from “federal overreach.” In the words of the Pebble partnership, on their webpage Why Mine, “[the] less our country relies on outside sources of energy, the more control we have for our destiny” (Pebble Limited Partnership, 2017). These ideations of value form the core arguments surrounding Pebble’s symbolic power and the decisions made by the state as to how resources gain power and standing. As we will see, however, the Pebble Partnership’s work to frame the mine’s resource potential as a friendly complement to
sustainable economies and as a boon to state coffers is not uncontested when counterpointed to Bristol Bay’s existing commercial industries.

**Science, Knowledge Production, and Land Planning in Bristol Bay**

The Pebble case is unique in that extractive mineral development, despite its longevity and rootedness in Alaska’s material history, found itself up against a set material imaginaries that had rooting in lived experience – through the work of commercial fishers from Alaska and as far away as Seattle and elsewhere, and the subsistence culture of indigenous residents – with a strong foothold in state resource economies. The same factors that explain the powerful resonance of Bristol Bay salmon, however, also condition Bristol Bay commercial fishing as an extractive industry. That the majority of salmon processing takes place in Seattle, and the majority of Bristol Bay salmon profit flows to Seattle-based companies, mark Bristol Bay as an extractive resource colony, whether its primary resource value lies in salmon or in copper. And commercial and subsistence fishers did not always see eye to eye. It was only the specter of the Pebble mine that provided the basis to unite disparate fishing communities that, until Pebble’s emergence, had often found themselves in contention. Indeed, according to Tim Troll, “the influx of sport fishermen, the rise of lodges, and the fear of intense use” were the most immediate concerns of local people prior to the emergence of the mineral prospects at the Pebble site (interview with Bindu Panikkar, 2014). At that time, the most immediate land use conflict revolved around the purchase, by a non-native Alaskan, of 160 acres from native allotments in a location along the river. The new owner subdivided the parcel into eighty-two-acre lots to sell for recreational use, drawing opposition from Native residents who were concerned with possible impacts on the river ecosystem,
resource access, and how the purchase would shrink Native land allotments. It was then that Northern Dynasty announced the discovery of the Pebble East Deposit in 2006, spurring the emergence of a strong alliance, albeit a potentially temporary one, between the very users of salmon resources that had until then represented the region’s most immediately felt land use conflict.

Alaska’s land use regimes, as we have seen, have historically functioned as a mechanism to remove Native communities from their territory while, at the same time, enforcing a single acceptable definition of the relationship between people and the land. We have also seen the historical ties between land expropriation and the exploitation of natural resources. Native activists in Bristol Bay thus navigate a complex boundary between repudiation and acknowledgement: challenging colonial definitions of land-as-profit, while simultaneously asserting arguments that oppose the mine on grounds legible to existing regulatory structures. In Earthworks executive director Jennifer Krill’s words, this means “win[ning] the debate on mining company terms” (interview with Bindu Panikkar, 2014). The strategic alliance between commercial and subsistence fishing helped grow material and numerical support for the anti-Pebble campaign and opened doors for Bristol Bay activists in state and federal offices.

Land use policy is not always a highly visible arena for environmental activism. The September 2014 Peoples’ Climate March, which drew over 300,000 to the streets of New York City, might be said to represent the most recognizable public face of US environmental activism in recent memory. But the Pebble permitting conflict was not characterized by protest on that scale. Nor has it yet been marked by organized direct action, as at the ongoing Unist’ot’en First Nations encampment and pipeline blockade off
of Alaska’s southeastern border with Canada. Contestations over the Pebble mine have instead played out largely in esoteric and expert realms – with coalitional positioning and technical documents as their primary language. Coalitions of local activists and expert consultants approach the Pebble question from three angles: challenging the science coming out of state and industry offices; promoting local knowledge, alongside science, as a legitimate and meaningful approach to understanding the land and making land use decisions; and engaging in locally-rooted land use planning processes in order to articulate community-led land use, knowledge, and decision-making practices to the state and outside observers.

**Community Oriented Science**

Mediating questions of the viability of mineral resource development in Bristol Bay required a metric and a method that could be identified as an objective reading of natural realities. Western scientific methods and science-producing organizations have historically taken on the role of producing official knowledge, with consequences for the power and resonance of indigenous knowledge systems at the colonial frontier. “Science and technology do not merely change how we live our lives,” writes Epstein. “They also lend power to those who speak in their name, and they offer new tools for establishing what counts as credible or true” (2008, p. 177). In Bristol Bay, scientific data collection can be thought of as a specific set of performed practices, integrating multiple individuals, institutions, and ideologies in order to produce a coherent reading of the landscape that fits within the narrow bounds of EIS requirements and scientific best practices.
The campaign opposing Pebble relied, in part, on the work of a team of scientists and experts to assess Pebble’s environmental and risk data, as well as to identify and fill a number of significant gaps in Pebble’s data. Frickel et al (2010) draw upon the term “undone science” to refer to areas of research that are systematically left incomplete, often with consequences for public understanding of risk and impact. In Bristol Bay, expert consultants attempted to “do” the science that Pebble and the state had left “undone” – and, in so doing, to independently verify or contest the readings of the land implied in state and industry data. In this vein, salmon conservation work coalesced around a particular state land management procedure, the Anadromous Waters Catalog, which tracks waterways important to the “spawning, rearing, or migration” of anadromous fish and that specifies which bodies of water are afforded protection under AS 16.05.871 (Alaska Department of Fish and Game, 2017). Waters listed in the Catalog require additional assurances that development will not harm fish populations; conversely, waters that are not included in the Catalog are assumed to not play host to anadromous fish. Salmon protection in Bristol Bay thus required a deliberate exercise to document anadromous streams for inclusion in the Catalog and for protection under AS 16.05.871. According to Troll:

If there’s a model that predicts there’s salmon here…it creates at least a presumption that they are there, and the presumption should be in favor of the fish. It’s a rebuttable presumption… [That] doesn’t mean that a mining company can’t come in and take more than is reserved for salmon, but it does elevate the notice process, it does elevate the adjudication process to a level where the public is aware of it. (interview with Bindu Panikkar, 2014)
Carol Ann Woody has come to be a central figure in Bristol Bay’s community science network. Woody came to Bristol Bay first with the US Geological Survey, and later again with the National Parks Service and the Fish and Wildlife Service. A report Woody co-authored with Sarah Louise O’Neal (2012) showed that even small amounts of copper are toxic to fish, impacting their sense of smell and the navigating capability of salmon to return to their spawning grounds (McIntyre et al., 2012; Scannell, 2009). She explains why there is an abundance of salmon spawning streams and habitat in the region:

Bristol Bay is a great habitat for [salmon]. But the whole region, the glaciers left this really porous rock, and there's lots and lots of ground water. And the ground water is the key factor here. Because we get winters that go to 40 below for extended periods, and you got teeny little eggs that are this big in the ground, they’re only buried about this deep, 10 cm, 20 cm deep, and if you freeze the dam there they die. But the ground water never freezes; it usually is a constant warm temperature 2 to 4 degrees. There's ground water everywhere there and that's what feeds a lot of those systems, it goes through the porous gravel and it keeps a lot of these little eggs alive and sustains them. It also provides a preliminary habitat for fish, because fish will borough down in the gravel and hang out there. (interview with Bindu Panikkar, 2014)

Pebble proponents, however, contend that the science is not conclusive, and that natural fluctuation in copper levels is of greater significance. “The science is basically where they’ve taken fish in a lab situation and just added [copper], and does not replicate nature. The copper uptake is very different in nature than in a controlled lab environment.
And the irony is that salmon need copper in order to survive. We all do” (PLP official, interview with Bindu Panikkar, 2014).

The Center for Science in Public Participation (CSP2) was another key site for science and knowledge production in conversation with community needs. CSP2 studied water issues, (2011a), impacts associated with Pebble’s exploration phases (Zamzow, 2010), acid rock drainage and metal leaching (Zamzow, 2011b, c), and the seismic risk at the Pebble mine (Higman, 2008). Their work was conducted outside of the response to PLP’s baseline data. Most recently, Dave Chambers at CSP2 has demonstrated significant ongoing contamination, improper closure procedures, and insufficient reclamation work at Pebble’s decommissioned exploratory drill sites. Of the 107 sites they tested, two out of three had experienced environmental contamination (Zamzow and Chambers, 2016).

**Promoting Local Knowledge**

The joint work of outside experts alongside local activists was structured under a series of documents that brought together expert consultants, environmental nonprofits, and Bristol Bay activists and residents. In 2004, before Pebble gained notoriety, Bristol Bay Heritage Land Trust executive director Tim Troll, along with the Nature Conservancy and the Bristol Bay Native Association, developed the Nushagak River Traditional Use Area Conservation Plan based on the traditional knowledge and subsistence practices of Yup’ik residents. As part of this project, Troll visited five villages in the region – Koliganek, New Stuyahok, Ekwok, Aleknagik, and Dillingham – and sat with community members to document place names, hunting and fishing locations, and streams where salmon and other species of fish are abundant. After Pebble
announced its western deposit, Troll and the Nature Conservancy expanded on the project to include an ecological risk assessment of open pit mining in the Nushagak-Mulchatna watershed (Ecology and Environment Inc., 2010) and the Standards and Practices for Environmentally Responsible Mining in the Nushagak River Watershed, a position statement based on the findings of the 2010 risk assessment (Nushagak-Mulchatna Watershed Council, 2011). Both documents in turn drew on the 2007 traditional use plan (Nushagak-Mulchatna Watershed Council, 2007). To Troll, the goal of the 2010 report was “to articulate, for those coming into the region, what informed consent and prior notice look like.”

The four alternative planning documents work to reorient and decentralize knowledge construction as it is applied to land use planning at the moments of question-definition, data collection, and policy recommendation. State land planning starts centrally, and the process of question-definition might settle itself entirely in Washington, DC and in Juneau, where, for instance, lawmakers and planners might negotiate the overarching purpose that state-held lands are designed to serve, insulating communities from the decisions that impact their land, culture, and lifestyle.8,9 Only once the scientists or planners are prepared to execute their plan, study, or proposal might they go into “the field,” where communities are often taken as a subject of research or policy rather than as

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8 See Callon (2011) on the delegation of knowledge production to scientific elites and experts.

9 In 1959, for instance, as the state of Alaska was poised to select its allotted federal acreage, state land selection was congressionally mandated as “for the purposes of furthering the development of and expansion of communities” – not for conservation or the protection of indigenous land use. See An Act to Provide for the Admission of the State of Alaska in the Union, Public Law 88-508, US Statutes at Large 72 (1958): 339-352.
produces or holders of knowledge in their own right. Activists working on the 2007 Conservation Plan upended the stage of question-definition, however, by bringing it to the “field” where the effects of the Plan would be felt, and asking community members to define places, resources, and practices they found important. This is significant in that as its primary and foundational data the Conservation Plan relied not on the analyses of outside experts but on the knowledge of Bristol Bay elders as related in a series of interviews. Troll describes:

So we spent anywhere from 2-3 days in a village with people designated from the community. We sat around with maps, we asked for place names, where they hunted, where they fished, what places they thought were important, where they knew salmon were, different varieties of fish. So we just wanted to capture that baseline. So it’s that baseline. But we also had other data sources, so we wanted to develop: One, a good idea of what resources were out there – intuitively we knew, but, what places the people considered important. But our primary focus was on lands that were owned by the Native corporations created under the settlement act. So that they could be thinking about how do incorporate habitat management or protection into our land management plans in the future. (interview with Bindu Panikkar, 2014)

__10__ Mosse (2005) argues that the networks of policymakers, development experts, and on-the-ground NGO officials and employees that execute local development projects have a tendency to shift project goals in order to match outcomes. In participatory or community-directed projects, this often means that when communities don’t “cooperate” – that is, when local needs or the processes by which community members make and carry out decisions don’t match the expectations of the network of project executors – experts and employees can shift away from the participatory process even when that process was central to the initial design of the project.
These reorientations in knowledge production, decision-making, and value come together to present an interpretation of indigenous modes of relating to the land, visible in the Conservation Plan document as particular image of indigenous life in Alaska focused on practices of subsistence and framed within a notion of connectedness to the land and natural world. These representations are most clearly visible on page nine of the Conservation Plan, “The Subsistence Way of Life – Yup’ik Culture,” where land and human practice appear inseparable:

Although methods have changed, the Yup’ik residents of the region today, like their ancestors, still rely on the bounty of the watershed. Moose, caribou, salmon, geese, berries, and plants are the principal resources that fill smoke houses, drying racks, freezers, and canning jars. Hunting, fishing, and gathering are a vital part of the local way of life. To lose these resources would not only jeopardize the health of people in the watershed, but their culture as well.

The text is followed by a series of images of fishing and fish preparation, where contemporary and historical technologies and methods are interspersed and visually linked. The document applies this same interspersing throughout, with a clear message of connectedness-across-time. This is not to claim something unchanging, for changes in technology and practice are also clearly visible in images that accompany the text; rather, the document appears to mobilize a certain presentation of indigenous life in which subsistence fishing has long allowed for a certain set of cultural and environmental relationships that are themselves valuable – and that would be jeopardized by the construction of the Pebble mine.
The Conservation Plan also draws upon a notion of continuance that directly confronts attempts to write indigenous life out of contemporary history. By drawing connections to practices and, therefore, to the onto-epistemological approaches of Bristol Bay indigenous communities across time, the Conservation Plan confirms, clearly, that practices indigenous to the region and people remain relevant, practical, and widespread. That continued existence, meanwhile, was, and is, predicated on land-based relationships; in this way, threats to subsistence would not only threaten the livelihood of Bristol Bay Natives, but would disrupt a core part of indigenous identification in the region. This is made clear from the third page of the Conservation Plan document, before, even, the table of contents. Beneath a full-page portrait is a quotation attributed to Harvey Samuelson at the Bristol Bay Village Leadership Conference in 2001: “Land is the gift of our ancestors and the guarantee of our right to continue our subsistence lifestyle. Land is the heart of our culture. Without the land, we are nothing.”

If Western scientific ontologies were successful in separating the social from the natural in the metropole, they were unable to entirely enforce that separation in Bristol Bay. And these contestations long predate the Pebble debate. As far back as its inception in the 1980s, the Nushagak-Mulchatna Watershed Council has been at the center of a set of conversations at the intersection of land use, land title, and tribal sovereignty. Bobby Andrew remembers some of the early debates over the environmental and social impact of transferring Native land allotments to private, non-Native hands:

The villages corporations were created in 1971 and that delineated the native allotment application process. Many of the lands on the Nushagak River, the Wood River, the Lake Aleknagik, the Manokotak, Togiak areas. Many of the
native people prior to the passage of ANCSA [Alaska Native Claims Settlement Act] applied for native allotments. And currently today many of those native allotments are being sold, and when they’re sold they become private properties, and they build lodges on those and they’re located right on sensitive habitat areas. (interview with Bindu Panikkar, 2014)

But what is discursively difficult may be accomplished materially. As Samuelson makes clear, the Pebble mine may impose what, so far, scientific, government, and industry circles have been unable to entirely enforce: the remaking of local, specific land use practices and relationships to land along lines of private property and private profit.

Local planners do not present subsistence in complete opposition to notions of nature-as-resource. Rather, just as Bristol Bay activists were able to strategically ally subsistence fishing with commercial fishing, the Conservation Plan also draws upon resource discourses alongside descriptions of traditional and contemporary subsistence. It consistently refers to “What’s at Stake” as “natural resources,” as subsistence, and, at times, as “natural resource related activities.” At the same time as they “contribute to the local economy,” however, natural resources and the subsistence activities surrounding them “support the traditional lifestyle.” Subsistence is presented, in part, as a form of economic activity, albeit economic activity that is particular to indigenous culture, through a careful blend of arguments that may seem, on their surface, to be mutually incompatible.

It is important to not lose sight of the structural realities that condition and necessitate these careful navigations of hybrid discourses. If we momentarily flip the angle of our analysis – and look to the state, instead of the activist – the process of
building knowledge and arguments that are legible to central state planners becomes more complex and more historically central. Indeed, moves to legibility emerged not just as a requirement levied upon particular local activists, but as a broad program that was central to the construction of the modern state. From the development of forest ledgers to the modern street grid, modernity carried with it a series of state administrative practices that aimed to render state subjects clearly legible and, in turn, rationally manageable and easily governable (Scott, 1998). Knowledge, then, to the modern state, can be thought of as a commodity, built out of the collection of individual pieces of data and information. Measurement instruments extract data from the land, and return it to centers of knowledge and power; academic, scientific, or governmental organizations then assemble data into actionable policies, which in turn are transmitted back to the regions from which data were extracted. In this interpretation, information functions almost as a raw material, analogous to sugar or cotton, which is removed from the peripheries of empire and only returned in a form that is fully assembled and fixed in its uses. Where this form of data became, over time, the only acceptable language of knowledge-making for land use policy decisions, activists have no choice but to frame their arguments on those terms.

**Local Land Planning: The Citizens’ Alternative Bristol Bay Area Plan**

In 2005, Alaska’s Department of Natural Resources (DNR) proposed a series of land reclassifications in the Bristol Bay region that opened protected land to resource extraction. The 2005 Bristol Bay Area Plan, a revision to 1984 land use agreements, was quickly taken up by local organizers as a serious threat to regional ecosystems and subsistence practices. Organizers responded with a lawsuit in 2009, and in 2012, the claimants – Nondalton, Koliganek, New Stuyahok, Ekwok, Curyung (Dillingham), and
Levelock, together the “Six Tribes,” along with Trout Unlimited and the Alaska Independent Fishermen’s Marketing Association – settled with the DNR with an agreement to revise the 2005 plan. When the December 2012 revisions proved unsatisfactory, however, the Six Tribes initiated an alternative area plan of their own.

The Citizens Alternative Bristol Bay Area Plan (CABBAP), initially drafted by Parker, Troll, and Emily Anderson of the Wild Salmon Center, with input from the six tribes and several environmental groups, effectively integrated the work of the Nushagak-Mulchatna Watershed Council alongside multiple scientific studies to form a comprehensive land planning document that forefronted subsistence and local use practices. CABBAP, though consistent with the state, federal, local and tribal efforts to balance conservation and development, asserts the importance of local voices in managing natural resources and ways of life in the region. Accordingly, the Alternative Area Plan introduced a “subsistence” land use designation, emphasized increased protection for habitat and precaution when making land use decisions that significantly impact salmon, suggested that all waters in the Bristol Bay region be considered anadromous until proven otherwise, and demanded prohibition of metallic sulfide mines in Nushagak and Kvichak watersheds. The Alternative Plan expanded habitat designations; in contrast, the state definition of habitat and use of resources privileges exploitation unless the land is in a critical condition to require such a protection.

Pebble activists are tasked with a complex exercise in boundary negotiation to challenge colonial definitions of land-as-profit while simultaneously working within existing economic and regulatory structures. These local, alternative land planning documents are a vital part of Alaska’s long history of conflicts over land sovereignty.
Bristol Bay’s alternative planning documents, in their capacity to “‘challenge the state’...by employing ‘the state’s own data,’” draw on a robust hybrid tradition to effectively navigate the border between repudiating state control over knowledge production and acknowledging its power to impact immediate land decisions (Hebert, 2017, p. 60),

The specific practice of community-oriented science in Bristol Bay arguably worked to blur the boundaries between Western scientific knowledge and traditional land-based knowledge rooted in subsistence practices. Troll’s work on local land use plans based in subsistence interviews is perhaps the clearest example. But the practice of knowledge production in Bristol Bay contrasts with Pebble science at a more fundamental level than just the identity of its practitioners or the sources of its data. They differ, crucially, in their respective foundations in practice, experience, and embodiment. For science as it is practiced sits at the level of the process and the procedure of collecting particular data to assemble a particular story; it is a method and approach to knowledge production that can be applied in Bristol Bay in the same manner as in North Dakota or Louisiana, and that is strongly tied to the requirements of regulatory and permit agencies. Measurement, here, is the central activity, used to understand the various biophysical phenomenon of the region – without situating the data within the experienced complexity of the land and the people who exist in and alongside it. In contrast, when considered in aggregate, the work of local knowledge producers and allies like Troll and Zamzow is arguably a practice of relating to the land or territory, first, and the process or procedure second. Stronger procedural inclusion of knowledge systems that arise out of democratic and citizen based initiatives may hold the promise of building land practices
and valuations that are formed out of the hybrid discourses of rural Alaskan life – rather than out of the domination of one form of knowledge and land imaginary over another.

In 2010, based on multiple preliminary environmental assessments, six federally recognized tribes in the Kvichak and Nushagak River watersheds, along with the Alaska Independent Fisherman’s Marketing Association, delivered a landmark petition to EPA Administrator Lisa Jackson and EPA Region 10 administrator Dennis McLerran to protect the Kvichak and Nushagak River Drainages and Bristol Bay from metallic sulfide mining under Section 404(c) of the Clean Water Act. In effect, the petition sought federal intervention prior even to Pebble’s permit decisions – a request that was audacious and unprecedented. Parker (2012) explains the objective of such an early prohibition:

It will eliminate frustrating situations in which someone spends time and money developing a project for an inappropriate site and learns at an advanced stage that he must start over. In addition, advance prohibition will facilitate comprehensive rather than piecemeal protection of wetlands.

In response to the request from the tribes, the EPA initiated a scientific study looking at the potential impacts of large-scale mining on the Bristol Bay region. In January 2014, after three years of research, two independent peer reviews, and two rounds of public comment, the EPA concluded that a mine like Pebble could result in lost salmon habitat and ecosystem degradation. On these grounds, the agency predicted that it would not grant the Pebble project its Clean Water Act 404(C) authorization. It was a landmark decision that halted a major development project before permit applications had been submitted. But the EPA process was also unique in its treatment of the hybrid nature of life of the Bristol Bay region. In a rare acknowledgement of the complexity of
subsistence life, the EPA’s assessment placed special emphasis on the multiple meanings – economic and non-economic – of subsistence livelihood and culture, along with hard data on subsistence use and volumes (Environmental Protection Agency, 2014):

In the Bristol Bay region, the subsistence way of life is irreplaceable. Subsistence resources provide high-quality foods, foster a healthy lifestyle, and form the basis for social relations. Alaska Natives are the majority population in the Bristol Bay region, and salmon has been central to their health, welfare, and culture for thousands of years.

That the 2014 EPA document took subsistence use into consideration was not just due to the benevolence of the agency nor some inherent quality of subsistence resource use, though both certainly helped. Rather, the resonance of indigenous approaches to the land as they appeared in the EPA document was the result of an accumulation of material and discursive power, accomplished through the diverse tactics of Bristol Bay tribes, citizen scientists, lawyers, and environmental activists to build complex hybrid discourses of Western science and indigenous land use, on the one hand, and legibility and legitimacy within state-centered planning processes on the other.

Highlighting the politically motivated nature of permitting, however, Scott Pruitt’s EPA has recently reversed the agency’s prior restrictions, allowing Pebble’s permit applications to move forward after lengthy legal battle.

**Conclusion: Knowledge and Power at the Borderlands**

“Land use” implies, simultaneously, the ways that people and societies interact with the land, how they imagine their relationship to or with the landscape, and how knowledge of the land is constructed and legitimated. It is, in a word, the intersection of
ontology, epistemology, and the material. And practice and imagination have unmistakable consequences. As we trace the development of land use and land imaginaries along lines of private ownership and profit, we are reminded of James C. Scott’s (1998) warning on the limitations of state-centered planning processes:

> These state simplifications…did not successfully represent the actual activity of the society they depicted, nor were they intended to; they represented only that slice of it that interested the official observer. They were, moreover, not just maps. Rather, they were maps that, when allied with state power, would enable much of the reality they depicted to be remade.

It took work to contain and marginalize indigenous forms of relating to the land in favor of profit-motivated (that is, development-motivated) private property. But, as the hybrid contestations surrounding Pebble indicate, the enforcement of epistemic and material uniformity inherent to colonialism and extractive capitalism were not so total in Alaska. To speak of hybrid discourses is, to a degree, to speak of all discourses – especially in temporal-spatial moments that embody colonial contact so clearly as the continuing question of Native Alaskan claims to land and sovereignty. If “hybridity is intrinsic to colonial discourse,” as Brah and Coombes (2000, p. 11) hold, how can we think about the discursive strategies of anti-Pebble activists as anything but a consequence of colonized discourse? More broadly, what epistemic consequences are embodied in the strategic adoption and application of Western scientific discourses?

Following the years of interviews and scientific data-collection that went into the 2007 Conservation Plan and 2010 Risk Assessment, both of which were tailored
powerful networks of government, regulators, and industry in different ways, the Watershed Council and its Nature Conservancy allies worked to develop a set of processes by which development in the region could proceed with the consent of Bristol Bay residents. Summarized in the 2011 Framework on Responsible Mining, they are demands not of outcome, but of process – a statement of how the activists and residents impacted by potential development wish to be approached. This is summed as “free, prior and informed consent,” as follows:

**Free** – people are able to freely make decisions without coercion, intimidation or manipulation;

**Prior** – sufficient time is allocated for people to be involved in the decision-making process before key project decisions are made and impacts occur;

**Informed** – people are fully informed about the project and its potential impacts and benefits, and the various perspectives regarding the project (both positive and negative);

**Consent** – there are effective processes for affected indigenous peoples to approve or withhold their consent, consistent with their decision-making processes, and that their decisions are respected and upheld.

If the history of the region is any indication, standards of free, prior, informed consent are unlikely to enter into Alaska’s large mine permitting process. The authors of the 2011 document know this. What the Framework document recognizes, however, is that while discourse and meaning are themselves significant, they are toothless without their procedural and material counterparts. Indeed, the subtle hybrid reframing that we
see in the Nushagak-Mulchatna Watershed Council documents and in the coalitional work between outside experts and community members is partly important in the precise absence of material, land-based power. Discursive projects can, of course, have material effects – but their impact, both as strategy and as object of research, arises out of a set of historical conditions in which the capacity to create drastic refraings of the material world is limited.

Free, prior, informed consent implies this shift in material-discursive realities. If Pebble activists are any model, and their hybrid work – of appealing to the EPA while educating their neighbors, of interspersing scientific with community data, of mobilizing environmentalist logic while simultaneously altering it – is any indication, then material-discursive shifts can be conceived in tandem. If this work at the boundary, in which questions of discourse, materiality, and power are inescapable, can produce a reframing of multiple discourses and multiple knowledges, then perhaps it is this boundary work, too, in which that reframing can be put into operational practice.
CHAPTER 4: DONLIN

The Donlin project is a proposed gold mine located in southwest Alaska, just northeast of where the Yukon and Kuskokwim Rivers reach their closest point. Estimated at 39 million ounces of gold, it is a significant claim – though not historic – and despite the fact that exploration has been ongoing for over a decade, exploratory drill sites have identified new rich deposits in the region as recently as 2017 (Novagold, 2018). Like most other industrial-scale mineral projects today, the Donlin site holds lower grade material than the incomparably smaller projects of the early 20th century. Compared to its peers, however, Donlin’s estimated 2.24 grams per ton remains a surprisingly rich find, especially for the large size of the claim.

Figure 2: Donlin Gold, LLC map of mine site and pipeline alignment.

Donlin’s plan of operations calls for a large open pit measuring roughly 2.2 miles long and one mile across. Solid mine waste would be stored in a second pit, while liquid waste would be channeled into a tailings pond constructed by flooding a nearby valley.
behind a mile-long, 460 foot high dam. Total waste over the 27-year lifetime of the mine is estimated to exceed 3 billion tons of rock and tailings (Ground Truth Trekking, 2015). Given the relative remoteness of the Yukon-Kuskokwim region, development at Donlin would require significant new infrastructure to operate, including the construction of a new airstrip, roads, housing, and a barge port on the Kuskokwim River. Additionally, the Donlin plan calls for a 315-mile underground natural gas pipeline from the mine site to ports on Cook Inlet (see Figure 2). Given the massive volume of waste rock and tailings and the potential environmental and health risks posed by Donlin’s substantial infrastructure requirements, the proposal has faced strong opposition in the Yukon-Kuskokwim area and in state offices in Anchorage. That opposition, however, has been limited to complex debates over siting questions, development alternatives, and state and federal impact assessment and planning process, putting Donlin in stark contrast with the widespread and vocal opposition that surrounded the permitting process of the Pebble Mine just a few years before.

The Donlin mine is a significant untold story of the complexities of resource development, environmental protection, and Native sovereignty in contemporary Alaska. Donlin’s invisibility is due, in part, to the prominence of the Pebble controversy. As described in the previous chapter, the early 2000s saw the growth of an international movement opposing development at the Pebble site, and a strong coalition of subsistence, commercial, and recreational fishers, with the help of independent scientists and environmental advocacy organizations, successfully petitioned the EPA to veto the Pebble plan under its authority to regulate waste discharge into significant waterways. While Pebble has witnessed near-unanimous opposition in Bristol Bay and nationally, the
Donlin project has thus far flown under the radar of environmental activists outside Alaska while inspiring strong divides between and among communities along the Kuskokwim River. Some activists even characterize Pebble’s notoriety as a boon to the developers at Donlin, arguing that it was the controversy in Bristol Bay that allowed for the Donlin project to proceed with little opposition and a divided constituency.

Donlin also holds a number of operational similarities to Pebble. Both are planned as industrial-scale open pit projects requiring significant infrastructure development, and both Donlin and Pebble represent potential contamination threats to the Yukon-Kuskowim and the Nushagak and Kvichak watersheds, respectively. But Donlin and Pebble differ in two crucial respects. First, where Pebble was to be located entirely on state land, the Donlin site is owned by the Calista Corporation, one of Alaska’s thirteen Native corporations. Second, while Pebble threatened the world-class commercial salmon industry in Bristol Bay, the Yukon-Kuskokwim region has no preexisting industry to counter the development promises of Donlin Gold. For these reasons, as well as the deep and longstanding divisions that Donlin inspired within and outside Kuskokwim-area communities, activists and community members in the Yukon-Kuskokwim region have been unable to access the same arrangements of public support for their work to protect fisheries and subsistence livelihoods. If resistance in Bristol Bay took place largely outside state and federal channels, the relative obscurity of the Donlin project and the lack of public support for Kuskokwim-area communities mean that local resistance there has largely taken shape around the public engagement segments of Donlin’s environmental impact assessment process.
This chapter moves our focus from Bristol Bay to the Yukon-Kuskokwim in order to address questions of land use, development, and knowledge through a case that looks very different from Pebble. It begins first with a short history of the Yukon-Kuskokwim region, with a mind to the historically situated complexity surrounding the development and risk potentials at Donlin and with a specific focus on the arrangement of land title in the Donlin area. This is followed with a description of the official channels for public engagement with the Army Corps of Engineers’ (USACE) Draft Environmental Impact Statement (DEIS) for the Donlin project. This analysis examines the DEIS scoping meetings in particular. Third, I turn to an analysis of the public comments themselves, using a methodology similar to, but somewhat simpler than, that employed by USACE. Finally, this chapter ends with a description of the role of a coalition of expert consultants and community organizers in engaging with the public process in order to produce a set of technically literate, locally relevant DEIS comments. This final section draws on several dozen interviews conducted in winter and summer of 2017 with community members in Aniak, Napaimute, and Crooked Creek, scientific and legal consultants in Fairbanks and Anchorage, the Calista and Cook Inlet Regional Corporations, Donlin Gold representatives, members of state and federal regulatory bodies, and a number of longtime salmon and water rights activists across Alaska. This section argues that the public comment process is unable to capture the forms of community knowledge production and alternative land and knowledge imaginations that are central to deliberative and democratic public practices.
Land, Knowledge, and Economies in the Yukon-Kuskokwim Region

The Yukon-Kuskokwim is, in many ways, not so different from the lands surrounding Bristol Bay. Both regions lie outside the reach of Alaska’s sparse road system, where numbered highways only just break into the double digits. And the residents of both regions have deep ties to their respective waterways: as direct sources of living and livelihood; as mediators of human and non-human action and interaction; as sites of cultural and historical significance; and as the features that give name to the lands they run through and upon. Bristol Bay villages sit, uniformly, on the edges of the region’s lakes and rivers – principally, massive Lake Iliamna and the Nushagak and Kvichak rivers – or cluster around the edge of the bay itself. As in the Bay, the Yup’ik and Athabascan people of the Yukon-Kuskokwim region live by its namesake waterways. The broad Yukon and Kuskokwim Rivers and their many tributaries and feeder streams serve as the primary modes of transportation between villages: In summer, they carry fleets of flat-bottomed metal boats driven by powerful Yamaha or Honda outboards as well as substantial barge traffic; in winter, they serve as ice roads for pickups and snow machines. The Kuskokwim River remains the longest undammed river in the United States, and in March 2018, the extension of the “Kuskokwim Highway” to Crooked Creek increased the length of the graded and marked ice road to over two hundred miles. During the liminal periods of fall freeze and spring breakup, when the river is not able to offer an unobstructed water route or stable ice for surface transport, travel between villages becomes a dangerous and time-consuming affair. Warming winters, too, are quickly shrinking the period during which the frozen river is safe for vehicle travel.
Inlanders along the upper and middle sections of the two rivers travel downriver with some frequency, despite the long distance between villages, and Bethel, the region’s largest town of over four thousand residents, sits just miles from where the Kuskokwim diverges into a marshy delta before emptying into the bay that bears its name. Distance, too, does not impede permanent moves between communities. “Everyone is related” along the rivers, remarks Lisa Feyereisen, a non-Native woman who married into the Aniak community decades ago and today serves on the village board at Chuathbaluk. The tight relationships even across the long reaches of the Kuskokwim have the additional consequence of contributing to a level of conflict and interpersonal risk in discussions surrounding the Donlin project. Given the strong divisions between those who support and those who oppose development – and that many of those divisions may exist within families and between neighbors – Kuskokwim-area residents are much less apt to discuss the project in casual conversation or in formal settings, especially when compared with the level of local conversation and awareness around the Pebble project.

If Bristol Bay stands out from the rest of Alaska for its recognizable salmon industry, just as the North Slope is known for oil, then the Yukon-Kuskokwim may very well stand out for its conspicuous lack of the same. The Donlin project is the first major development site along either river since an abandoned attempt to dam the Yukon in the mid-1950s. Prior to the mid-20th century, neither mining nor transportation technology was advanced to the point that the region could seem attractive for commercial development on the scale of the mineral project at Donlin, small-scale Placer mining along the Kuskokwim notwithstanding. Unlike the territories of the subarctic North American bush that saw extensive commercial trapping operations – in central Quebec,
as early as the mid-1600s – the Yukon-Kuskokwim region is home to few profitable fur-bearing animals. Even as whalers looked north to the Arctic Ocean, the coastal regions between the Kuskokwim Bay to the south and the outlet of the Yukon to the north proved too shallow for a viable whaling industry. Rearden and Fienup-Riordan (2016) explain:

First, its lack of commercial resources meant that it was among the last parts of the state to experience sustained contact with the non-Native world. As a result, Yup’ik language and traditions remain more vital there. And third, although the economy struggles, subsistence activities – hunting, fishing, gathering from the land – remain essential.

Minimal non-Native contact arrived with limited Russian Orthodox missionary activity in the early to mid-19th century. Aside from the modest churches topped by the double crucifix that still sit at the center of some villages, their primary legacy was a series of epidemic diseases that halved the population of southwest Alaska as soon as 1830. These drastic, violent experiences with disease aside, the Yukon-Kuskokwim region went largely unnoticed by non-Native settlers even decades after the first Russian missionaries (Rearden and Fienup-Riordan, 2016).

Indeed, white settlement in the rest of Alaska remained minimal even by the late-1800s. Where settlement in the contiguous states was driven by a perceived need to carve out private agricultural spaces for a growing population, Alaska was too cold, vast, and remote for the same questions of farming and space to find an urgent foothold. Likely drawing influence from Native policy in the Western states and territories, however, American settlers were quick to adopt the assimilation strategies then becoming popular in the lower 48. Prior even to the discovery of gold in the Juneau region, the federal
government had established a small number of English-medium boarding schools, often associated with Christian missions, that mirrored those in the contiguous states and in Canada; these were followed by more extensive, and more brutal, boarding school policies in the mid-20th century (Barhardt, 2001). The impact of these and other missionary projects can be felt across the generations that separate the contemporary Yukon-Kuskokwim from the initial periods of missionary activity a century ago. On the Bering Sea coast and up the Yukon River, the large dance assemblies and competitions that traditionally lifted spirits in the cold, dark hours of winter – and that oral tradition identifies as having brought an end to the warfare that characterized the centuries leading up to the early 1800s – are only just beginning to return following their prohibition by Jesuit churches in the late 19th century. Further south and up the Kuskokwim River, where Moravian missionaries held an even harder line against traditional customs, winter dance assemblies remain a relic of the past (Rearden and Fienup-Riordan, 2016). The Moravian focus on Yup’ik-language sermons, however, contributed to the continuance of the language in religious and day-to-day usage. Today, nearly half of the 26,000 residents of southwest Alaska speak Yup’ik as their first language, with even stronger local usage on the Kuskokwim in particular.

The relative lack of commercial development on the Yukon and Kuskokwim Rivers continues to the present, with strong consequences for those who make their lives and livings along the rivers. More than twenty percent of area residents live below the federal poverty line, and regional unemployment sits at sixteen percent or higher (Dept. of Labor, Bethel Census Area). Subsistence practices outstrip any other region in Alaska by pounds of food fished, hunted, and gathered per capita – due, perhaps, to the
continued strength of traditional language and culture alongside the necessity created by dire economics (Alaska Department of Fish and Game, 2012). With the increasing urbanization brought on by federal assimilationist and boarding school policies in the 1950s and 1960s, however, people today must travel further and further to access subsistence resources (Rearden and Fienup-Riordan, 2016). As gas routinely tops six or seven dollars per gallon along the middle and upper Kuskokwim, reliance on outboard motors, snow machines, and four-wheelers brought on by changes to cultures, economies, and settlement patterns is a greater economic burden than it may be in less remote regions of the North.

**Land Ownership**

A portion of Donlin’s divisiveness is undoubtedly due to the particular arrangement of land and mineral ownership at the Donlin claim and its associated infrastructure sites. The mine itself is under title of the Calista Corporation, one of the thirteen regional Native corporations chartered under ANCSA in 1973. The pipeline route to Cook Inlet passes through Calista land as well as portions administered by the federal government; a small section of the pipeline routing additionally passes an isolated parcel owned by Cook Inlet Region, Inc., the ANCSA corporation based in and around Cook Inlet southwest of Anchorage (Jason Bruni, interview, 2017). Both the Crooked Creek area, where the Donlin site is located, and the isolated CIRI parcel along the pipeline routing were selected under the post-ANCSA land dissemination process; like much of the land selected by regional corporations since the ANCSA agreement, both sites were chosen explicitly for their mineral potential (June McAtee, interview, 2017).
The pipeline parcel owned by CIRI is an especially interesting case. CIRI today represents a broad coalition of Athabascan, Inupiat, Yup’ik, Alutiiq and Aleut people whose traditional territory surrounds Cook Inlet, the Kenai Peninsula, and Anchorage. By the time the ANCSA compromise was drafted in the early 1970s, however, Anchorage and the Kenai Peninsula had long since urbanized, and the Alaskan legislature was, unsurprisingly, unwilling to return these thickly-settled areas to their still-living original owners. Most resource-rich areas around the Cook Inlet had additionally passed into private hands prior to the beginning of ANCSA negotiations, and much of the profitable land that was not already privately held was subject to federal land withdrawals through the Kenai National Moose Range or through federal military installations (Cook Inlet Region, Inc., 2006). Following a lengthy court process, CIRI settled with state and federal negotiators and gained title to large swaths of land initially conveyed to the state of Alaska. Additionally, CIRI was able to select resource-rich land holdings outside of its traditional territory: The parcel along the Donlin pipeline route is one such selection. Pipeline construction would provide CIRI easy transportation and power access for this outlying resource site, positioning the corporation as a strong supporter of development at Donlin despite having no connection to the gold contained in the Donlin site itself.

This complex of land title and resource rights means that risk and benefit calculations in the Yukon-Kuskokwim differ substantially from those in Bristol Bay. Where Pebble was controversial because it threatened subsistence livelihood with little benefit to Native communities, Donlin represents a source of potential profit to the Calista and CIRI corporations, as well as a source of potential (short-term) employment for what some see as an economically depressed hinterland. Siting on Native land also
impacts the arrangement of permitting agencies and jurisdictions. State permitting
cooridnator Jeff Bruno, who works under the offices of Alaska’s Department of Natural
Resources, describes these arrangements as follows:

If it was completely on State land, we would do what's just a Plan of Ops
review...And there are several volumes in that Plan of Ops: project description;
waste management, which includes rock water and a bunch of other stuff;
reclamation plan. And there's a bunch of other plans that I'm missing just off the
bat. And because it's on Native land, the State only has primacy and authority
over certain portions of those. We actually almost still review the entire thing, it's
just a different process. The State still has primacy over reclamation to make sure
that, even if you do a mine on Native land, we do make sure that there's enough
money built into the reclamation and bonding costs for all that. (interview, 2017)

Impact Assessment and Public Engagement

The public centerpiece of large project permitting is the Environmental Impact
Statement (EIS) process. Conducted under the auspices of the US Army Corps of
Engineers (USACE), the EIS process seeks to determine the environmental and health
impacts of large development projects in four phases: scoping (for Donlin, December
2012 to March 2013), where potential impacts and study processes are identified for
inclusion in the EIS; drafting (March 2013 to November 2015), in which USACE and its
contractors collect their initial impact analysis; the public comment period (November
2015 to May 2016), in which individuals and organizations have the opportunity to
respond to the draft impact statement (DEIS); and the final EIS, a revised version of the
DEIS that is supposed to incorporate the comment feedback deemed relevant by the lead
agency. I focus below on the two phases that allow for public input: The public meetings that make up a portion of scoping activity, and the DEIS public comment period.

**Scoping**

The DEIS scoping phase is a process in which USACE seeks to assess public input through a number of community meetings throughout the project area and, often, in Anchorage. Multinational engineering consulting firm AECOM oversaw the Donlin scoping process under contract with USACE. In scoping meetings, AECOM contractors present a broad outline of the project alternatives and give community members the opportunity to ask questions and respond to different stages of the planning and impact assessment process. The scoping process, according to former USACE Donlin project manager Richard Darden, is aimed primarily at allowing community members to raise issues that may be unfamiliar to state and federal agencies, as well as to gauge the importance of different social and environmental questions to specific communities.

Scoping meetings are not a forum to weigh public support for or resistance to the project as a whole; rather, much like the comment processes that follow the DEIS itself, initial scoping meetings are geared toward gathering information, questions, or concerns relating to the specifics of project design and impact assessment:

[Scoping meetings are] everyone’s chance to address what they think should be in the EIS. We’re coming at it from: what are the things that we may not recognize as being important, as being of interest. Sometimes you can predict that, and sometimes you’re surprised to recognize that an issue that you didn’t think was a big one is more in the public concern than you realized – and you say, ok, we should elevate our evaluation of this particular issue, because this is what people
are about. I’ve seen that on projects in the past. I’ve worked on some coal projects in the past. Green house gas at one point along the way wasn’t a big concern in the community, and suddenly over a period of years it became a very, very important concern that people had, and we took that into consideration and elevated our treatment of that topic in our documentation. That's the scoping process really having an impact on what we do. (interview, 2017)

NEPA provides the general framework for scoping activities, but NEPA’s scoping requirements leave much room for interpretation by state agencies and local federal representatives. “NEPA is very general in regard to scoping activities,” said Darden. “It just says ‘you must conduct scoping.’” Scoping in this way is not unique to environmental impact assessment in Alaska, but the specific ways in which USACE and other agencies solicit public input is perhaps different from those in the more developed landscapes of the lower 48. Given the expense and difficulty of travel through the region and from the villages to state and federal offices in Anchorage, the scoping meetings that took place prior to Donlin’s DEIS were scattered throughout the small villages up and down the Kuskokwim River: Between January 14 and March 22, 2013, fourteen different meetings were held across the Yukon-Kuskokwim region and in Anchorage (URS Alaska, 2013). This approach had two related effects. First, their dispersion allowed residents of the more remote villages – some of which are a gas-heavy river trip or an expensive connecting flight away from the regional airports at Bethel and Aniak– a level of access to federal officials and complex technical information that would have been virtually impossible were the only public meetings held at the USACE offices. At the same time, in Darden’s words:
They don’t all get to hear what was said in Anchorage...[For example,] people in Crooked Creek may not get to hear what was said in Bethel until later, when they access transcripts from those scoping meetings, or they read the scoping report. (interview, 2017)

Scoping meetings remain the primary vehicle for community members to interact with the design and methods of large project impact assessment, insofar as the assessment agencies incorporate public concerns into the design specifics of the impact assessment process. Scoping meetings are also the first formal outlets for community members to learn about and comment on the prospective project itself – and in this way, Darden’s characterization is an important window into the limitations coded into the way that rural development happens in Alaska’s hinterland. But scoping meetings, like other forms of public involvement, are specifically geared toward soliciting input on particular scientific or procedural artifacts; at no point do scoping meetings meaningfully ask for community direction on the shape of rural development as a whole.

In Bristol Bay, where the Pebble mine never entered into formal EIS procedures, local community activists conducted independent meetings to gain familiarity with the project design and impact assessment process. Andrew describes these meetings as a key moment for community members to build collective understanding and public momentum:

   Annually we had – I think it was for four years – we had conferences in four different villages where we invited everyone to attend, and we had presenters from the federal government, the state government in the areas of mineral extraction. We had DNR come in and do a presentation on the permitting process,
and we had the federal government there on the NEPA process, and when it’s supposed to be kicking in. So there’s that whole gamut of education and information that was needed in the very beginning. (Bobby Andrew, interview with Bindu Panikkar, 2014)

In contrast with the Donlin process, however, the Bristol Bay meetings were organized not by state or federal officials, but by community members in concert with the Nushagak-Mulchatna Watershed Council. Public meetings were combined with a strategy that linked local activists with community leaders in other regions that had hosted large, extractive development projects. Just as public meetings in the Bristol Bay area helped to build local knowledge and expertise around the permitting and development process, conversations with tribes and communities in the lower 48 helped to build a picture of what the effects of large mine development could look like from the perspective of local people. Again, to draw on Andrew’s explanation:

We went on a mine tour in Nevada, and we had a meeting with the Western Shoshone Tribe, and had a meeting with the Paiute Tribe in Yerington. We asked questions to the tribes – what impact has occurred since your reservations are so close to the mine sites. What has happened to your waters, what has happened to your lands. In both situations the answer was the same. It had contaminated the water, the environment, as well as the fish in the water and the animals that roam the grounds. And it made us start thinking – since the Pebble mine site is located in the headwaters of the Nushagack River, the Kvichak River, it wasn’t a good idea for the fish. And we opposed the project after that. (interview with Bindu Panikkar, 2014)
These conversations, as should be clear, look very different when local communities are as divided as they are along the Kuskokwim. The vernacular education process that Andrew describes could not proceed as smoothly in Aniak or Crooked Creek, due both to the lack of a unified opposition and a dearth of organizational or monetary resources to organize effective processes outside of those set out by the state. Still, local activists were, at times, able to influence the process by which the state gathered information from Kuskokwim-area communities. Feyereisen remembers one case in which she alongside other Aniak-area community members were able to slightly alter the federal and state engagement process:

I got a little grant to bring the agencies out to Aniak. We brought elders from the rivers to talk to them. They made two extra meetings for us, to listen to our elders.

That was important. (interview, 2017)

This is also not to say that state-channeled scoping meetings were ineffectual within the bounds of their design. Donlin permit manager Patty McGrath remembers one moment in which community feedback at the early scoping meetings contributed to shifting, slightly, the role of traditional knowledge in the DEIS data collection process:

One of the issues that came up during scoping was subsistence impacts, cultural, traditional knowledge, and the agencies determined, they looked at all the data and said, 'well, you know, here's a data gap. There is limited Traditional Knowledge information.' So they had a number of workshops in Anchorage where they brought elders in, Knowledge Bearers in from tribes, to talk to them about Traditional Knowledge, their experience, and the wisdom that they have
about the land, and what they saw that the potential impacts could be, both positive and negative. (interview, 2017)

**Public Comments**

I now turn to the important public comment period. Following scoping, the next available forum for public input comes only once the DEIS itself is released. This is a formal public comment process where individuals and organizations may submit comments to the Army Corps for review. When USACE published the completed DEIS document in November 2015, they opened the comment process with a series of public discussions in each of the locations where a scoping meeting had been held (Darden, interview, 2017). Legally, the Corps is required to review – but not, necessarily, to respond – to the entire suite of public comments. For projects as well known and controversial as the Pebble Mine in Bristol Bay, public comments can number in the hundreds of thousands. For the relatively unknown Donlin project, meanwhile, DEIS comments tallied just over five hundred. Examining public comment processes, therefore, is necessary to understand the complex methods by which public concerns are integrated, or ignored, within the state’s environmental planning process. If the Pebble case can serve as an example of creative resistance outside the channels set down by state and federal regulatory processes, the Donlin case, here, allows for a more conventional example of what development looks like in a region with less national recognition and a more divided constituency.

Public comment processes, today nearly universal in large project impact assessment and a key requirement under NEPA, were not always a given. Nor are public comments the only method to solicit public participation. Public participation processes,
including public comment periods such as those initiated under Donlin’s DEIS process, seek to navigate the tension between “democratic participation and the elaborate bureaucracy of large electorate government” (National Research Council, 2008); in so doing, they necessarily work to bridge certain gaps between the complex, technical expertise that marks large project impact assessment and the needs and knowledges of a less technically adept public. But public comment processes as they emerge today are hardly uncontested. Chilvers (2008) identifies three different camps: those who hope to keep a strict division between the analytical and deliberative (that is, to keep “facts” and “values” cleanly separated); those who hold that public involvement should be limited “by the extent to which nonscientists possess ‘contributory expertise’ that can complement or enhance certified scientific expertise”; and a third position, which holds that science and the political are not so separable, and that the public meaning embedded in science “needs to be considered as integral to decision making.” Of these three approaches, Darden’s USACE team seems to consider itself within the second.

The tables below draw upon a complete content analysis of the 526 public comments associated with Donlin’s Draft Environmental Impact Statement. Benjamin Lemmond did the primary coding of these comments in late 2017 and early 2018. The USACE process – like scoping, conducted by AECOM contractors – aggregated comments through 17 public meetings and through submissions received via email, fax, and postal mail. AECOM analysts cut each individual comment into a series of statements, each of which spoke to a single aspect of the project; those statements were then recombined and binned within larger “Statements of Concern.” USACE (2016) describes that process as follows:
All submissions on the Draft EIS were read, reviewed, and dissected into discrete comments which were entered into a Comment Analysis System database, where reviewers sorted substantive comments into specific categories (e.g., Groundwater Impacts, Subsistence, Mitigation Measures). Substantive comments included requests for clarification, new information, criticisms of analysis methods and conclusions, and suggested improvements for the Final EIS.

Many of the comments within each category made similar points. Reviewers grouped like-comments and synthesized them into Statements of Concern (SOCs) that summarized each group of comments. For example, 24 SOCs were written to summarize the 255 comments within the Subsistence category. This process ensures that every substantive comment is summarized by an SOC and is led appropriately in the database.

Our analysis, below, is slightly different. We treat each comment as an individual data point, and bin each comment within broader categories, rather than cutting to the level of individual statements as does USACE. But the tables below, which present several of the most common themes identified through the content analysis process, can nonetheless provide an indication of what “public opinion” may look like to regulators and analysts at USACE and AECOM. Full comment data is available in Appendix 1 at the end of this document.
Supporting comments

<table>
<thead>
<tr>
<th>Comment</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total support</td>
<td>284</td>
</tr>
<tr>
<td>Mine will bring benefits to local economy</td>
<td>233</td>
</tr>
<tr>
<td>Project is well-designed</td>
<td>153</td>
</tr>
<tr>
<td>Project will benefit state economy, other ANCSA corporations</td>
<td>132</td>
</tr>
<tr>
<td>Good relations between Donlin and community</td>
<td>112</td>
</tr>
<tr>
<td>Infrastructure is a needed benefit</td>
<td>80</td>
</tr>
<tr>
<td>Mine will not impact subsistence</td>
<td>72</td>
</tr>
<tr>
<td>Development is necessary for autonomy (re: ANCSA)</td>
<td>69</td>
</tr>
<tr>
<td>Development will bring education and job training</td>
<td>42</td>
</tr>
<tr>
<td>Regulating agencies effectively protect environment</td>
<td>34</td>
</tr>
<tr>
<td>Other mining projects are good examples for positive development</td>
<td>33</td>
</tr>
<tr>
<td>DEIS is sufficient or is overstating impact of project</td>
<td>93*</td>
</tr>
<tr>
<td>“No Build” (Alternative 1) will have negative impact on region</td>
<td>21</td>
</tr>
<tr>
<td>Barging will have minimal impact</td>
<td>18</td>
</tr>
</tbody>
</table>

Opposing comments

<table>
<thead>
<tr>
<th>Comment</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total oppose</td>
<td>93</td>
</tr>
<tr>
<td>Mine will threaten subsistence</td>
<td>64</td>
</tr>
<tr>
<td>Barges will impact Kuskokwim River ecosystem</td>
<td>36</td>
</tr>
<tr>
<td>Pipeline will impact Iditarod trail</td>
<td>36</td>
</tr>
<tr>
<td>Environmental impact is too great (risk is greater than reward)</td>
<td>33</td>
</tr>
<tr>
<td>Concerns with waste and tailings</td>
<td>32</td>
</tr>
<tr>
<td>DEIS is missing data, understating impact</td>
<td>238*</td>
</tr>
<tr>
<td>DEIS is incomplete, missing other important data</td>
<td>35</td>
</tr>
<tr>
<td>DEIS is incomplete, specifically with environmental risk assessment</td>
<td>23</td>
</tr>
</tbody>
</table>

* These two rows add all of the different comments about the DEIS. While other rows count each public comment as a single tally, these rows may double-count some comments that are concerned with multiple specific components of the DEIS process.
The DEIS public comments above present a picture of the potential project that fits well with established ideas of what development may promise – and what it may portent. Public comments are largely divided between supporters, who are concerned with the benefits the project may bring to local employment, infrastructure, and economies, and opponents, who favor the “no build” alternative on the grounds that the project implies an unacceptable level of risk to local people and ecosystems. This is not a surprising distribution. Indeed, it matches the descriptions of the conflict from interviews with Kuskokwim residents and consultants in Anchorage and Fairbanks that Donlin is “highly controversial,” both along the Kuskokwim River and in state and federal offices.

Comments also show the diversity of individuals and organizations involved in the discussions surrounding large rural development projects. While many of the comments were submitted by individuals who live or spend time in the region, a large proportion of the comments are associated with organizations – including a number of ANCSA Corporations and nonprofits – as well as federal offices such as the Bureau of Land Management. The Calista Corporation alone is responsible for seventeen comments submitted by individual employees. Supporters emphasize the long presence of Donlin Gold in the region as well as the technical skill of state and federal regulators; those who oppose the project, meanwhile, express concerns with the limitations they see in the DEIS process. Comments range from line edits, such as a portion of one of the BLM comments that notes the absence of temperature unit markers (Thorpe, 2016); to requests for documentation, including a request by the Center for Science in Public Participation for access to Donlin’s Health Impact Assessment (Craig, 2016); to qualitative statements about the impact of project on the region (Clautice, 2016).
Comments display a range of technical training. What is especially notable, however, is high level of technical familiarity displayed by the project’s opponents, many of who hold little formal education in geology, hydrology, or other technical fields. Comments mention specific components of the project design, including mercury risk and emergency response plans, as well as gaps in environmental risk data, including information on groundwater hydrology and fish ecology. As the tables above indicate, commenters identify specific technical concerns with multiple components of the project and the impact assessment process. Comments also, at times, provide supplemental data that challenges the information or interpretations of the DEIS document. Dave Cannon (2016), a former Department of Fish and Game official for the Aniak area who continues to live in the center of the village, submitted one such comment:

Section 3.13-109 [of the DEIS] states: “Should the underlying geology of Crooked Creek reflect a high level of hydraulic conductivity, flow reductions in Crooked Creek between American Creek and Crevice Creek could be as high as 85 to 100 percent during Year 20 of operations. Farther downstream in Crooked Creek, flow reductions of 40 to 31 percent could occur near Getmuna and Bell creeks, respectively (BGC 2015c). In this case, predicted streamflow reductions of such a high intensity would result in major impacts to salmon production in the middle and lower reaches of Crooked Creek.”

Tom Myers (May 2016) notes that much of the area is geologically heterogeneous and that high K fault areas coupled with high K bedrock values could actually result in water losses of over three times that of the modeled scenarios provided by Donlin Gold.
While trends that indicate the divisiveness of the project or the diversity of commenters are easily predicted given even basic knowledge of Donlin’s social and economic context, the emergence of technically literate public comments that directly address specific components of the DEIS is not so obvious an outcome. Interviewees, in fact, uniformly listed the technical and specialized nature of the DEIS process as a significant barrier to public participation, and multiple organizations submitted requests to extend the public comment period beyond its initial 30-day limit to allow extra time for public education. The development of public comments familiar with the technical language of mineral extraction and impact assessment is perhaps the most significant outcome of the Donlin planning process. This forms the final section of this chapter, below, on the role of technical expertise in public engagement.

Each of the statements of concern identified in this analysis would benefit from further research – indeed, the interviews collected for this project address many of the same technical concerns identified in the public comments themselves, including concerns with mining waste, consequences for subsistence, and the impact of increased barge traffic on Kuskokwim River salmon populations. Before turning to the role of technical expertise in public comment processes, I will look briefly at two issues that arose through the public comment data above, but which interviewees identified as having particular details not captured through the comment process: Donlin’s promise of local employment and the impact of pipeline construction on the Iditarod Trail. Following this, I move to a longer discussion of some of the strategies used by anti-mining coalitions to engage with the comment process as a whole, in order to explain the
high level of technical proficiency seen in the portion of the comments that respond directly to particular sections of the DEIS. See Appendix 1, Table 4 for the full list of DEIS concerns.

Employment

Donlin’s primary benefit, to planners at the Calista offices in Anchorage, to local officials, and to Kuskokwim-area residents, is the promise to bring to the region its first major industrial employer. Calista Regional Corporation representatives, when interviewed, stressed the point that the initial exploration activities undertaken by PlacerDome drew up to ninety percent of their employment from local talent. Today, Donlin-led exploration continues to use local labor, although community members are sure to point out that much of that employment remains unskilled and low-paid. Skilled, technical work, meanwhile, is at times farmed out to a network of contractors and sub-contractors, keeping local employment statistics high despite the lack of technical and permanent positions available to village residents (Aniak resident, interview, 2017).

Beyond the number or quality of jobs available to local residents, some interviewees raised concerns over the patterns by which large-scale mining operations organize workers. Earlier, smaller mineral projects held a certain permanence: Like in the early days of the Juneau strike, the difficulty of long distance travel, especially through the Alaskan bush, meant that mineral projects were necessarily residential. Mine workers would often relocate themselves – and, later, their families – to the area surrounding the mine site, and the company towns that developed around the sites often remained following closure. In the mine’s short lifespan – long enough to take up a large portion of an individual’s employable life, but too short to make for a sustained employment base
for a region – housing infrastructure could be the only remaining form of local development once the mine itself was exhausted. Today, mineral projects house workers only for their limited shifts – often, on a two-week rotation. “There used to be a mine up the Tuluksak River,” remembers a community official at one of the villages downstream from the Donlin site. “They built a town, with a school and everything. We asked them to do that here, but it’s all camps now...it’s the corporate world.”

**Iditarod trail**

Perhaps indicative of the remoteness of the Yukon-Kuskokwim region (at least compared to the internationally recognized fishery brand associated with Bristol Bay), Donlin’s primary public face outside of the region was not in the conservation-development ambivalence that characterizes conversations along the Kuskokwim River itself, but in the various routing alternatives proposed for the planned fuel pipeline from the mine site to Cook Inlet. As planned, a 60-mile portion of the pipeline would run concurrent to the historic Iditarod trail through a tract of land administered by the federal Bureau of Land Management (BLM). The routing inspired some protest among the mushing community and fans. Ahead of the 2017 Iditarod race, the trail issue gained some traction in Alaska newspapers when the Iditarod Trail Committee invoked a little-used race bylaw that bans participants from public criticism of race sponsors, including 2017 sponsor Donlin Gold. When the Committee censured a number of politically active mushers for statements that critiqued the Donlin pipeline routing – including musher and salmon setnetter Monica Zappa, who ran with a pro-salmon banner in the years surrounding the early Pebble controversy – Alaskan papers started to pick up the story of the so-called “Donlin gag rule.” The “gag rule” gained additional social traction with a
February 2016 Anchorage Daily News piece by retired musher Dan Seavey. Seavey today remains a vocal part of the Alaskan mushing community, and his son Mitch and grandson Dallas have combined to win every race since 2012. The influence of the Seavey name inspired some attention in the Alaskan press: “Iditarod gag rule shameful: Race’s ban on disparaging comments by mushers wrongheaded,” read a Fairbanks Daily News-Miner editorial on March 6th; this was followed by another in the Mat-Su Valley Frontiersman, just north of Anchorage, with sporadic media attention continuing through the summer. But the Iditarod controversy was specific and short-lived, and comparing the Iditarod issue with the sustained global attention to the Pebble controversy only underscores Donlin’s relative insignificance – at least in terms of widespread public attention.

Technical Consultants and Community Organizers

Beyond the specific relevance of the employment and pipeline issues cited above, the most significant aspect of Donlin’s DEIS public comment process remains the technical familiarity displayed by many of its layperson commenters. This characteristic of the public comment documents implies a larger question: How are technical and traditional knowledge practices arranged in communities along the Kuskokwim River, and how have those always overlapping knowledges shifted through the many years of debate over development at Donlin? Here, I turn to a series of interviews with a number of technical consultants to understand the relationship between external experts and community-based organizers that contributed to this arrangement of multiple approaches to knowledge emergent in the Donlin public engagement process.

These interviews began with a January 2017 meeting with Julia Mickley, the clean water and mining coordinator for the Northern Alaska Environmental Center in
Fairbanks. Over the prior weeks, Benjamin and I had spoken with the Large Project Coordinator for Alaska’s Department of Natural Resources, the Permitting Manager at Donlin Gold, LLC, and the board of directors at the Calista Native Corporation; we had lived in a language of development alternatives, impact studies, pipeline routings, and regulatory processes. I thought we had developed a clear picture of what was at stake: That development at the Donlin site was a near-certainty, supported strongly in offices in Anchorage and in the communities in the Yukon-Kuskokwim area. Donlin Gold’s permitting manager, who had spent nearly a decade with the EPA prior to working for the mining company, assured us that this project was an exception to Alaska’s controversial mining history – that Donlin had the support and the science to complete a project with real benefit to the villages and the people.

But Mickley told a different story. Donlin Gold had been extremely effective at controlling the narrative of resource development in the Yukon-Kuskokwim region, she said. The company has been actively pursuing mineral exploration in the tundra – and public relations in area villages – for over a decade, sponsoring cultural events, public gatherings, and sled-dog races. Donlin “had built up a lot of good will,” Mickley said. Dissent, in Anchorage and in the Y-K delta, had become increasingly difficult and socially dangerous. Her description would be confirmed by a number of community organizers in interviews several months later. These characterizations – that opposition to the project had the potential to bring with it serious social consequences, primarily – lead me to treat the words of Kuskokwim-area residents with careful anonymity.

The mission of the Northern Center, according to Mickley, was to facilitate communication within and between communities in which opposition to the mine had
been driven underground. Mickley described a complex support infrastructure that had
developed through a series of conversations between the Northern Center, the
Anchorage-based Alaska Community Action on Toxics (ACAT), and environmental
lawyers at EarthJustice (EJ). We had spoken to ACAT’s director as well as EJ’s mining
coordinator in Anchorage. My conversation with Julia, however, was the first in which I
had been aware of the extent of their collaboration. Peter Heiser, an EJ lawyer who had
spent a number of months combing the DEIS document alongside the rest of the
consultant support team, describes the relationship between EJ and the Northern Center:

> We've been working with (the Northern Center) from the start, and then, the
group kind of coalesced around this interesting mix of advocacy organizations
and different experts in the region and outside the region. There were a few
biologists from the Kuskokwim River delta area, fish biologists mainly, who used
to work for the State, and were obviously interested in how the mine might affect
fish populations, and then also some experts from the Lower 48. One group we've
worked with is Earthworks [based in Montana]. (interview, 2017)

Consultants largely consisted of trained legal, scientific, and advocacy experts.
The Northern Center additionally had hired hydrologist Tom Meyers, cited above. Dave
Cannon, also cited above, emerged as another central figure in coordinating outside
expertise with local organizations. Consultants would often come on board for a specific
issue; Meyers, for instance, was hired to look at the proposed design for the mine’s pit
lake and how the dewatering process, in which groundwater is removed from the site to
allow the mine excavation to proceed, could affect water levels in Crooked Creek
(Heiser, interview, 2017). His analysis was eventually included in the EarthJustice set of DEIS comments submitted in May 2017.

The consultant team had focused on the DEIS public comment process as a unique moment for dissenting voices to enter the public record. Their work, in Mickley’s telling, was to provide infrastructure for local communities to understand the DEIS process and, crucially, to connect communities with the legal and scientific knowledge necessary to make their case to the Army Corps. Through sustained conversations carried out over a period of months, the Northern Center and its Anchorage allies provided local residents with significant access to material and logistical support. They also supported the Native Village of Napaimute and others in their successful petition to the Army Corps’ to extend the comment period to six months – half of their goal of a full year, but substantially longer than the standard 30-day period (Heiser, interview, 2017; see also Appendix 2, Native Village of Napaimute Resolution 16-02). In a case where the collected volumes of permitting and DEIS documents would fill a small bookshelf, the comment extension was a much needed break.

An expansive National Research Council study on the design and implementation of public comment processes identifies a number of organizing concepts in the historical debates surrounding public engagement (National Research Council, 2008). Proponents of public comment processes hold that they are necessary for democratic engagement and collective action. Additionally, proponents argue that public engagement has the potential to improve environmental decisions by providing a venue to integrate locally grounded, sensitive, contextual information into the practice and operationalization of project design and risk assessment. Opponents, meanwhile, claim that not only is the public often
incapable of considering the technoscientific complexities of project design, but that public comment processes are often less representative than they claim (National Research Council, 2008). But Mickley’s description reveals something more complex than a dichotomy of knowledgeable, scientific experts and a technically inept public. It appears instead that the public process itself, through the requirement that comments conform to the technical and scientific regulatory apparatus of the state, produces a body of knowledge that is both locally-rooted and scientifically legible. Residents of Yukon-Kuskokwim area villages, with the material aid of the Northern Center and organizations in Anchorage, were able to access scientific and legal expertise at the same time that they were drawing upon their own knowledge of their traditional territory. In Mickley’s words: “We were able to provide scientific support for what they knew was happening to their land.”

This is borne out in the public comment data presented above, but it is not necessarily emergent in the way the data may be collected and displayed. Like the USACE/AECOM analysis, the codes above do demonstrate a strong understanding of the particularities of the Donlin project and the underlying scientific and regulatory questions. Comments in support of and in opposition to the project are highly proficient technically, focusing on specific components of the DEIS process or the scientific and technical work that is the foundation of mine permitting and impact assessment. What is not captured, however, in any coding system, are the complexities of what Mickley described: The central role of community members and traditional knowledge in shaping the data collection and analysis undertaken by residents and their allies at the Northern Center. In Bristol Bay, community-led land planning projects were able to draw upon
scientific data to support the traditional knowledge that was at the root of the Nushagak-Mulchatna Watershed Council and Tim Troll’s research programs; the Northern Center, here, appears to have performed some of the same functions for residents along the Kuskokwim River. But the inherent hybridity of the knowledge production processes undertaken by Bristol Bay activists and Northern Center consultants alike disappears through a public comment methodology that is concerned solely with quantifiable outcomes.

The public comment process, designed as it is to identify and fill gaps in EIS data, is perhaps structurally unable to capture the procedural and political structures that surround community knowledge production. Public input may “make or break the whole process right off the bat,” in Darden’s words, but it is hardly a forum for deliberative and democratic decision-making. That deliberation takes place in Anchorage office buildings with card-access elevators. Access to those deliberative forums was one of the major narratives of Kuskokwim-area community organizing, insofar as a number of tribal entities were able to gain access to the cooperative agency meetings in which USACE, DNR, and other agencies with permitting authority or relevant expertise work to shape the impact assessment priorities and processes.

The social and economic context of the Yukon-Kuskokwim affords a very different set of tools for those who seek to halt development at the Donlin site when compared with the possibilities afforded to activists in Bristol Bay. The lack of strong commercial activity, combined with the region’s relatively small recreational fishing business, means that local development depends to a degree on resource projects that are not as ecologically dependent as Bristol Bay’s diverse fishing industries. This lack of a
recognizable ecological “brand” also leaves local activists without strong external support, limiting the range of viable anti-mining strategies. With this in mind, community organizations and external consultants concentrated their strategies on the existing DEIS public engagement process – which, as detailed above, is meant not to solicit public visions for how development may proceed, but instead is designed to allow for the public to identify possible gaps in environmental impact and risk data. Where activists in Bristol Bay were able to combine their critique of Pebble’s possible impact with a process of envisioning locally relevant, community-led development, the context of the Yukon-Kuskokwim afforded no such deliberative potential. One interviewee, a community leader of one of the Kuskokwim-area villages who asked to remain anonymous, recognizes this limitation

We need something and this is the only thing on the table. Population growth out here is crazy. People live off the land less than they used to. They were building new hospital in Bethel, and had 600 people apply for jobs for construction. They hired maybe 4. [It’s all] outside people. Specialized work. (interview, 2017)

The infrastructure and development promises of the Donlin project, today, are some of the only large-scale options currently under consideration in the Yukon-Kuskokwim region. Donlin’s EIS process, likewise, is the only public process currently under way that allows Yukon-Kuskokwim residents to weigh in on regional development, employment, infrastructure, and environmental planning. But the employment and infrastructure benefits promised by the Donlin project are side effects: Donlin is designed not as a community-oriented development project, but as an extractive, temporary resource scheme. The public process surrounding the Donlin project, likewise, is not
designed to solicit public input on regional development as a whole, but rather to ensure that the mine can proceed with minimal public opposition.

**Conclusion: Imagining Development**

In March 2017, the Native Village of Napaimute began to transport a newly purchased sawmill down the frozen Kuskokwim River to a site just below the village of Kalstag. The project promised to employ nearly as many people as the ongoing exploratory activity at the Donlin site, and the winter route was chosen in part because constructing the Kuskokwim ice road relies on local labor – in contrast with the barges that run up and down the river in the summer, which are owned and operated by outside companies. It was a locally organized, locally imagined project: “The sawmill was the idea of the local Napaimute Council,” emphasized the same anonymous community leader quoted above. “Not Calista or the Kuskokwim Corporation.” While the sawmill project cannot, on its own, solve the employment and infrastructure needs of the region, it will likely outlast the twenty-five year lifetime of the mine. The firewood and lumber produced at the mill, too, are products that Kuskokwim-area communities depend upon directly.

The public engagement process that accompanies Donlin’s DEIS is, for many, the only chance to weigh in on what regional development could look like. Despite Darden’s assertion that the public comment process is not concerned with whether communities support or oppose the project as a whole – but rather, what kinds of data the impact assessment may be missing – many of the comments submitted by individual community members do speak to these larger notions of how communities imagine development and incorporate social, economic, and environmental change into their livelihoods and lives.
ways. For some, the infrastructure promises of the Donlin project are too strong to pass up. For others, however, the economic opportunities promised by the sawmill project—and, crucially, the local control over its construction and operation—represent an alternative pathway to employment, training, and development that may avoid the programmatic and environmental consequences inherent to the kind of industrial-scale development that Donlin represents.
CHAPTER 5: SUBSISTENCE

The preceding chapters investigated two case studies in rural development, knowledge construction, and local resistance. While the cases address questions of risk and benefit in different ways and with different emphases, underlying both the Pebble and Donlin debates is the central question of the role of subsistence in rural Alaskan living, culture, and identity. This short chapter addresses the place of subsistence in contemporary Alaska and its relationship to land, identity, and development – issues that, at times, can disappear behind the language of quantifiable impact.

Subsistence is Alaska’s original economy and a vital part of Alaska Native culture and rural Alaskan living. To many, subsistence is a chosen way of life, a lifestyle, a philosophy, and an ideal of self-sufficiency. It is also a necessity for many rural communities. Though it provides a large portion of rural Alaskan nutrition, subsistence is difficult to quantify, as it is not considered as part of employment or Gross State Product data. ANILCA does not define subsistence itself, but defines subsistence “uses” as follows:

. . . the customary and traditional uses by rural Alaska residents of wild, renewable resources for direct personal or family consumption as food, shelter, fuel, clothing, tools or transportation; for the making and selling of handicraft articles out of nonedible byproducts of fish and wildlife resources taken for personal or family consumption; for barter or sharing for personal or family consumption; and for customary trade.

But subsistence is not devoid of economic pressures. In an ethnographic study of subsistence practices of both Yup’ik natives and non-natives in Bethel, the largest town
on the Kuskokwim River and the center of Lower Kuskokwim economic activity, Chase Hensel (1996) reveals that many subsistence activities, such as moose and goose hunting, have significant monetary cost when gas, equipment, ammunition, food, and other expenses are considered. This is an additional burden, given that many subsistence foods are not monetized, and that many of the delicacies of the region are illegal to sell or do not have commercial value (Hensel, 1996). Subsistence land imaginaries represent more than a subset of resource use, but rather are an essential component of human, cultural, and cosmological meaning.

Regional identity and local knowledge systems in rural Alaska are based in part on the joint construction of the land and the practice of subsistence. “It’s not just the fishing, it's not just the fish,” says Kenai-based anthropologist Alan Boraas. “It's the social dimension and the spiritual dimension of what it is to live on the land, catching wild salmon and other food resources in the manner of their ancestors” (interview with Bindu Panikkar, 2014). Subsistence is an economic-cultural-historical practice in which social identity and relationships with the land are built and practiced in tandem. To the late Harvey Samuelson, local leader and subsistence fisher based in the Bristol Bay village of Dillingham, “land is the heart of our culture; without the land, we are nothing ” (Nushagak-Mulchatna Watershed Council, 2007). The land and ecosystem, in this way, can be thought of as a source and mediator of social relationships, cultural identities, and knowledge. Land-based relationships, mediated by subsistence practices, thus imply a radically different orientation toward the land than the profit motivations of extractive resource development or even the solely utilitarian definition of subsistence resource use as defined by the state. Land as a knowledge base, a source of culture, and a guarantor of
food and water security represents something far more vital than a tract of property or a picturesque setting for a profitable resource.

While subsistence users draw upon multiple resources – including agricultural products, game, and numerous species of fish – salmon emerge as the key link between culture, subsistence, and even market economies through the lens of the commercial and recreational fishing industries. Salmon and threats to the wild salmon economy were the central imaginaries that provided the foundation for an intersectional politics of alliance building across local subsistence fishers, commercial fishing industries, sports fishers, and tourism enterprises in Bristol Bay, and it was the body of the salmon – its distinctive underbite and deep red flesh – that held resonance at the national level. Schlosberg and Coles’ new environmentalism focuses on reconfiguring activism based on promoting local identities and material flows that are more sustainable; the construction of resources and economies in Bristol Bay, however, privilege the renewable wild salmon fisheries over the sustainable or renewable aspects of subsistence livelihood even within the unlikely coalition between commercial and subsistence fishers. Precarious subsistence practices, vital as they are in Bristol Bay, were not enough to capture the (economic) imaginations of broader US culture, and subsistence practices continue to face challenges stemming from a limited resource base and the growing demands of surface and subsurface resource extraction. Likewise, even while local concerns along the Kuskokwim River revolve around maintaining the health of the environments that support the region’s strong subsistence cultures, it was the Iditarod controversy – not the possible threats that development at Donlin posed to subsistence lives and livelihoods – that captured, for a short time, the eyes of the Alaskan press.
The 2005 Bristol Bay Area Plan revision process, in which Bristol Bay tribes successfully sued to have their critiques of the plan taken into account, emerged as a rare arena in which indigenous approaches to land, based in subsistence use and relationality, were afforded space in the state’s land planning procedures. But that space soon proved insufficient to radically alter Bristol Bay land designations, and today Bristol Bay land use is still driven by a management plan that fails to protect habitat and subsistence practices. The Alternative Area Plan’s “subsistence” category and the extensive documentation of traditional knowledge that undergirded the locally-produced Conservation Plan has yet to be substantially considered by state or federal land planners. And on the Kuskokwim, without a powerful fishing industry to elevate its message, the threat that Donlin would pose to sustainable subsistence on and around the river has largely failed to reach audiences that were not already paying attention. Even the successes of local communities in building hybrid comments that are both technically proficient and locally rooted may only be understood in retrospect – and only once the deliberative, democratic action they model can be realized in development policies or sovereignty agreements that recognize the epistemic and procedural components of environmental justice.

Experiential or embodied knowledge, which is specific to regional social-ecological systems, is not “portable” nor as easily transmutable as the procedural practice of state and corporate scientists. Community strategies that relied upon hybrid knowledge production, in this case, were an organized, creative response to these limiting conditions. But where the alternative planning documents that came out of Bristol Bay in the early 2010s sought to translate traditional knowledge into a form that was legible to state and
federal audiences, planners in Anchorage and Washington, DC did not always meet them halfway.

Local epistemologies and issues of justice, uncertainty, and power are frequently removed from public debates, and are not meaningfully incorporated into environmental decision-making. Environmental justice activists here demand not just consideration of their cultural identities and civic epistemologies within the regulatory system, but also epistemic justice and “the right to be respected in their capacities as knowers” (Ottinger et al, 2016; Frickel, 2007). While the state’s environmental assessment process asks only for local input on possible risks associated with large project development, the documents produced under the Nushagak-Mulchatna Watershed Council instead ask: How should we manage our land? What does responsible development look like? It is this power to ask, as well as to answer, that the permitting process works to limit. The procedural and epistemic restrictions imposed by development and impact assessment policy, in this way, must be seen as tools of systemic injustice.

To complicate further, it is only through a colonial lens that the practice of subsistence can be thought of as wholly “unscientific.” Subsistence provides deep ecological knowledge, land skills and robust understandings of complex ecosystem functions, but ‘science’ on the ground is more than the accidental agreement between subsistence-based knowledge and peer-reviewed data. Ann Fienup-Riordan, longtime collaborator with the CEC in their project to articulate and preserve traditional ecological and subsistence knowledge, remarks that “The Yup'ik people have no word for science, yet their tools were so well designed that they allowed the Yupiit to live in a land no one else would inhabit…[The] Yup'ik way of life – both past and present – is grounded in
deep spiritual values and scientific principles” (Fienup-Riordan, 2008). Conversations around hybridity are, in this way, not simply a question of science and non-science, but rather must treat these categories in their full, intimate entanglement.

When the state redrew land boundaries in the mid-20th century, under Alaska’s statehood agreement and the ANCSA compromise, it introduced sets of borders that were foreign to the onto-epistemic and land practices of Alaska’s first peoples. The tracts allotted to Native villages were often insufficient to support subsistence livelihoods, requiring village residents to rely on land outside their sovereign territory (Ross, 2006). New land boundaries that are insufficient for subsistence survival create new dependencies, putting Alaska Native populations in constant threat of a combined loss of lifestyle and livelihood when land designations change. Not only do communities rely on subsistence access to federal lands, but the ecosystems, watersheds, and animal migration routes themselves cross these land use boundaries. Land use decisions that apply to adjacent areas thus have the potential to impact access to Native-owned subsistence grounds as well as the subsistence resources in nearby regions (Gallagher, 1987). It is for these reasons that even the construction of large industrial projects on lands adjacent to – but not overlapping – Native-owned territory has the potential to threaten subsistence cultures, knowledge, and economics. Both Donlin and Pebble would, in this way, represent a reevaluation of the calculus of land use in their respective regions, whereby alterations to topographies and use driven by visions of extractive profit come to supersede the relational and renewable forms of land use implied in the body of the salmon and the practice of subsistence. “It is more than saying ‘you are taking away my
food,’” Miller argues. People are trying to say that “development is going to extinguish who I am as a person” (Heather Kendall Miller, interview with Bindu Panikkar, 2014).
CHAPTER 6: CONCLUSION

Public discourses surrounding questions of development and land use in the lower 48 often emerge in a predictable pattern. Development promises employment, infrastructure, modernity; conservation, its natural antithesis and necessary opponent, promises to protect landscapes and peoples from the environmental or existential risks that are inherent to industrialization. But this dichotomy does not map so easily onto the Alaskan context; in fact, to draw upon a development-conservation model in Alaska is to fall into two definitional traps. First, the development-conservation model as applied to rural Alaskan projects serves to enroll questions of Native land rights into a definition of land conservation focused on the maintenance of pristine and untouched natural environments. Its outgrowth – expanding national parks, refuges, or protected land – has the potential to erase from public conversation the organization of communities and forms of land use, such as subsistence use and seasonal migration to fishing or hunting grounds, that long predate the presence of Western bodies or Western ontologies in the territory. At times, definitions of pristine and untouched wilderness and the forms of land protection they engender have directly limited Native habitation and subsistence use by closing protected areas to all forms of human use – industrial or subsistence based – effectively treating subsistence land use as simply another form of human exploitation that is categorically equivalent to industrial-scale resource development. Second, under these definitions, land comes to exist solely as a site or provider of human value. Land use, therefore, becomes a question of the adjudication of two exclusive value questions: The potential of profitable resource use, on the one hand, and the experiential quality of
pristine wilderness on the other. Native land claims, sovereignty, and subsistence forms of land use that exist outside of the motivations of private profit are lost in the gaps.

It could be argued that the discursive field surrounding large resource development projects, by the early 2000s, had largely solidified around development and conservation themes to the exclusion of other discourses. While Pebble and Donlin actors and activists certainly developed effective strategies to harness existing discursive structures that privilege conservation discourses as the primary means to oppose narratives of profitable exploitive development, they also managed to draw on certain hybridities that worked to bridge these gaps between the technically or popularly legible and the locally relevant. These strategies are visible in the role of consultant-activist-community coalitions in the Yukon-Kuskokwim, which worked to translate traditional and experiential knowledge into a form that would hold sway in state and federal offices, as well as in the work of Nunamta Aulukestai and other local organizations to build alternative visions of land use and management in the Bristol Bay region. By 2010, when Nunamta Aulukestai’s permit lawsuit rose to Alaska’s Superior Court, it was only natural that the individual plaintiffs would include both subsistence fishers and a commercial setnetter. But this development-conservation duality also imposed a set of conditions on the kinds of arguments, strategies, and policies that were legible to policymakers and the public. Analogous to the complexities of the ANCSA agreement itself, the discursive fields surrounding Pebble, Donlin, and other development projects operate as sites of both agency and containment; they provide a surface for creative discursive strategies while simultaneously policing the boundaries of legitimate argument.
State-led land planning is rooted in a history and ideology of “land” as a source of profit, from the trappers and prospectors who made up Alaska’s first European settlers to contemporary economic structures that tie state budgets to the successful exploitation of the earth’s resources. These traditions emphasized the rational, scientific management of discrete land resources in order to maximize production and profit (Scott, 1999). Written into governance through decades of regional land planning documents and into the landscape by decades of industrial scarring, land-as-extraction-site can be thought of as what Mukerji (1994) terms “geo-politics”: A process by which “the state uses technological means to transform the land into both a resource for administration and symbol of state power.”

Both the Donlin and Pebble cases draw out certain tensions between traditional knowledge and Western scientific epistemologies; between sovereign land, and land that is privately held and arranged to produce extractive profit; between deliberative, localized, vernacular decision making, and the governmentality of the technocratic state. But it would be a mistake to view either case as something so simple as a collision between opposed, rarified onto-ethico-epistemic systems. Just as Latour and others have pulled apart the necessarily fraught ontological divisions between “natural” and “social” worlds, Western and traditional knowledges are in contested, cooperative conversation – even in the regions of the Yukon-Kuskokwim where contact with the West and with the social functions of the state were more recent and less total.

The continuance of subsistence practices the continued relevance of traditional knowledge in rural Alaska is a result of both the resilience of subsistence practitioners and the continued relevance of subsistence practices and worldviews to contemporary,
hybrid lives. It is in the hybrid spaces between Western extractive use and indigenous subsistence imaginaries where we can see the work of cognitive justice enacted in service of concrete material goals, and it is in the navigation of these discursive and strategic boundaries that the tensions between and within knowledge regimes are made strikingly clear.

Conceptions of subsistence-based approaches to land today emerge as a mode to subtly claim definitional control over the land and its “resources” and to reframe knowledge production and land planning as community-based, participatory projects. Unfortunately, Alaska’s large mine permitting process is often structurally and epistemologically unable to consider these divergent discourses and the public imaginations of alternative futures they support and constitute. The Pebble and Donlin cases are two examples of many in global debates surrounding development, conservation, land use, and indigenous sovereignty. As the modified Pebble proposal trails Donlin through the hallways and across the desks of Alaskan state offices and federal permitting agencies, both documents will undoubtedly be subject to subtle, meaningful revisions. With recent changes to state and federal land management priorities in Alaska’s increasingly desperate economy, it remains to be seen whether the successes of the coalitions that arose to temporarily defeat Pebble will be repeatable.
REFERENCES


O’Neal, S. (2012). *A review of Pebble Limited Partnership’s environmental baseline documents: Resident fish and juvenile salmon habitat, distribution and*


## APPENDIX 1: PUBLIC COMMENT ANALYSIS

<table>
<thead>
<tr>
<th>Category</th>
<th>Table 1: IN FAVOR</th>
<th>Count</th>
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<tr>
<td>Economic benefit</td>
<td>Will Create Local/Regional Economic Benefit</td>
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<td>Will benefit people throughout the state / AK economy / ANCSA revenue sharing</td>
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<td></td>
<td>Education and/or job training impacts extend beyond life of mine</td>
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<td>Will Benefit other private companies</td>
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<td>Will Benefit Calista Corp.</td>
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<td>Infrastructure benefits</td>
<td>Infrastructure is needed/cost-of-living benefits</td>
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<td>Minimal impact</td>
<td>Little/No Environmental Impact, Design is good</td>
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<td></td>
<td>No cultural heritage (esp. Iditarod) impact</td>
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<tr>
<td></td>
<td>Scale of impacts is small (or reward &gt; risk)</td>
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<td>Mining companies are benevolent / have the interests of the region at heart</td>
<td>Good relationships between Donlin and community, good behavior by Donlin</td>
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<td>Other mining projects were good examples (Red Dog, etc.)</td>
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<td>Opposition is illegitimate</td>
<td>Opposition comes from outside groups</td>
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<td>Regulations are effective</td>
<td>Regulating agencies effectively protect the environment</td>
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<td>Spill response plan by Donlin is adequate</td>
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<td></td>
<td>Neutral or net positive impact on subsistence, keep people from leaving region</td>
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<td>Will reduce social ills (alcoholism, depression, etc.) through good-paying work</td>
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<td>Prevent people leaving the community</td>
<td>15</td>
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<tr>
<td>Sovereignty / autonomy</td>
<td>Indigenous or local autonomy/ANCSA Mandate to develop</td>
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<td>AK state/USA autonomy/mandate</td>
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<th>Category</th>
<th>Table 2: IN FAVOR, DEIS</th>
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<td>DEIS is legitimate</td>
<td>Draft EIS is sufficient</td>
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<td>NEPA / EIS Process is adequate / gives adequate time</td>
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<td>Specific comments on development options</td>
<td>&quot;No Build&quot; / Alternative 1 will have negative consequences</td>
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<td>Barging as proposed is not an issue (no Alternative 3A/3B)</td>
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<td>No alternate pipeline route (no Alternative 6)</td>
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<td>No dry stack tailings (no Alternative 5)</td>
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<td>Port location is fine (no Alternative 4)</td>
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<td>No Diesel Pipeline (no Alternative 3B)</td>
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<td>Regulations are overly limiting</td>
<td>Permitting process takes too long</td>
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<td></td>
<td>HIA is flawed</td>
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<tr>
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<td>BLM subsistence report is inaccurate</td>
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<td>DEIS inappropriately characterizes impacts on Barge traffic (will not create a significant increase)</td>
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<td>DEIS overstates environmental impact</td>
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<td>DEIS improperly includes ‘worst-case scenario’ events</td>
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<td>Category</td>
<td>Table 3: OPPOSED</td>
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<tr>
<td>Corruption</td>
<td>Concern with influence on Iditarod Committee; other nefarious influences</td>
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<td>EJ</td>
<td>Environmental Justice concerns</td>
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<tr>
<td>Environ risk</td>
<td>Concerned w threat to subsistence resources</td>
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<td>Environmental risk is too great (risk&gt;reward)</td>
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<td>General concern with impacts</td>
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<tr>
<td>Health and contamination</td>
<td>Concerns with Hg</td>
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<td>Concerns with Cyanide</td>
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<td></td>
<td>Long-lasting contamination; after mining is finished, locals bear burden of pollution for no benefit</td>
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<tr>
<td></td>
<td>Concerns with fugitive dust</td>
<td>8</td>
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<tr>
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<td>Other Human Health Concerns</td>
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<tr>
<td>Infrastructure concerns</td>
<td>Concerned w Barging</td>
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<td>Concerns with pipeline impacts, incl. impacts to Iditarod</td>
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<td></td>
<td>Concerned with waste rock/tailings dam/pit lake</td>
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<tr>
<td>Inherent risk</td>
<td>Scale /scope too vast to ever be safe or well regulated - no way to enforce some things (perpetuity) / safe regulation is impossible</td>
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<td></td>
<td>Accidents are inevitable</td>
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<td>Local vs. regional</td>
<td>Economic consequence / increased gov't interference if borough is established</td>
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<tr>
<td></td>
<td>Will not benefit tribes</td>
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<td></td>
<td>Native Corporations do not speak for locals</td>
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<tr>
<td>Mines have bad record</td>
<td>Companies /mines have bad track record</td>
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<tr>
<td>Negative econ impact</td>
<td>Jobs will not go to locals / NEGATIVE economic impact from outflow</td>
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<td>Right to know</td>
<td>Right to Know issues, e.g. identity of HAZMATs on river</td>
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<tr>
<td>Social impacts</td>
<td>Concerns with impacts on local population/resource balance / ATVs etc. that come from increased access</td>
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<td>Concerns with mental health, social issues (crime, addiction, etc.), and health care impacts of mine</td>
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<td>Misc. other concerns</td>
<td>Misc. other concerns</td>
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<td>----------------------------------------------</td>
<td>---------------------------------------------------------------------------------------</td>
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<tr>
<td>Access to information</td>
<td>Need public data reporting on mine once in operation</td>
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<td>Assurance and mitigation</td>
<td>DEIS does not include emergency response plan/lacks necessary info to inform emergency response plan</td>
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<td>Need a better financial assurance</td>
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<td>DEIS process flawed</td>
<td>DEIS structurally flawed (segmented/not comprehensive)</td>
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<td></td>
<td>DEIS makes promises it can't keep about ensuring good behavior</td>
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<td>ACE did not consult with ANCs</td>
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<td>DEIS is too long/difficult to read (but no request for extension)</td>
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<td>Missing information</td>
<td>DEIS lacking/incorrect in some other area</td>
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<td>DEIS doesn't adequately address impacts to stream /groundwater hydrology</td>
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<td></td>
<td>Not enough information to compare various alternatives in DEIS / missing options</td>
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<td>DEIS fails to or inadequately incorporates climate change into assessment / Climate change affects level of concern for project</td>
<td>14</td>
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<td></td>
<td>DEIS doesn't adequately address fish ecology</td>
<td>11</td>
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<td></td>
<td>DEIS doesn't address impacts to port of Bethel / local travel along Kuskokwim river</td>
<td>10</td>
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<td></td>
<td>Contradictory findings on subsistence (BLM / DEIS reports differ), DEIS doesn't address this</td>
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<tr>
<td></td>
<td>DEIS Lacking HIA</td>
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<td></td>
<td>DEIS inadequately assesses human health impacts</td>
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<tr>
<td>Regulations are insufficient</td>
<td>DEIS - Insufficient assessment of environmental impact</td>
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<tr>
<td>Risk underestimated</td>
<td>DEIS should include 'worst-case scenario' for dam failure</td>
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<td>DEIS underestimates tailings dam risk</td>
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<td>DEIS improperly characterizes fuel spill risk</td>
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<td>DEIS underestimates seismic risk</td>
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<td></td>
<td>DEIS improperly characterizes Hg risk</td>
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<tr>
<td></td>
<td>DEIS inappropriately assesses economic impacts and true cost of the mine</td>
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<td>Mitigation and/or closure plan is inadequate and/or fails to consider viable alternatives</td>
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<tr>
<td>Specific comments supporting more stringent infrastructure plans</td>
<td>Support Alternative 5 (dry stack tailing)</td>
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<tr>
<td></td>
<td>Support Alternative 4 (Birch Tree Crossing port)</td>
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<tr>
<td></td>
<td>Support Alternative 3A (LNG powered trucks)</td>
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<tr>
<td></td>
<td>Support Alternative 3B (Diesel Pipeline)</td>
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APPENDIX 2: NATIVE VILLAGE OF NAPAIMUTE RESOLUTION

Resolution No. 16-02

A Resolution To Formally Request That The Army Corps of Engineers (ACOE) Extend The Public Comment Period for the Donlin Gold Draft Environmental Impact Statement (DEIS) By An Additional Six (6) Months Beyond The Current Comment Deadline Of April 30th, 2016.

WHEREAS, the Napaimute Traditional Council is the federally recognized tribal governing body for The Native Village of Napaimute, and;

WHEREAS, the Napaimute Traditional Council represents the interests of the tribal members of The Native Village of Napaimute, and;

WHEREAS, the Napaimute Traditional Council believes that given the scale and scope of the proposed Donlin Gold project, the sheer volume and technical nature of the issues and alternatives analyzed in the DEIS; and conflicting Agency conclusions on the impact to subsistence uses that additional time is required for public review of the document to allow for meaningful comments to the ACOE by the public on the DEIS;

WHEREAS, Federal Agencies are required to make efforts to provide meaningful public involvement in their NEPA process (CEQ NEPA Regulations, 40 C.F.R. §§ 1501.4(b), 1506.6(b));

WHEREAS, the Napaimute Traditional Council does not feel that the current public participation efforts to-date, or scheduled prior to the April 30th deadline will meet the requirements of “providing meaningful public involvement”, for reasons stated above;

WHEREAS, the proposed project will directly affect our Tribal Members along with other Kuskokwim Stakeholders for generations to come, potentially in perpetuity;

NOW THEREFORE BE IT RESOLVED, that the Napaimute Traditional Council is formally requesting that the ACOE extend the public comment period six (6) months beyond the current deadline of April 30th, 2016, and that the ACOE schedule additional outreach with the affected communities and Tribes during this extended period for the purpose of soliciting meaningful public comments on the DEIS;

AND FURTHERMORE BE IT RESOLVED, that the Environmental Director for the Native Village of Napaimute has been in contact with the U.S. Institute for Environmental Conflict Resolution to inquire as to what services they can provide to facilitate our request, and given the controversy surrounding the proposed project we would encourage your Agency to do likewise.
CERTIFICATION:

This resolution was adopted at a meeting in which a quorum of the Native Village of Napaimute Traditional Council was present. Passed and approved on the 17th day of February 2016 with a vote of 5 Yes, 0 No, and 0 Abstain.

[Signatures and dates]