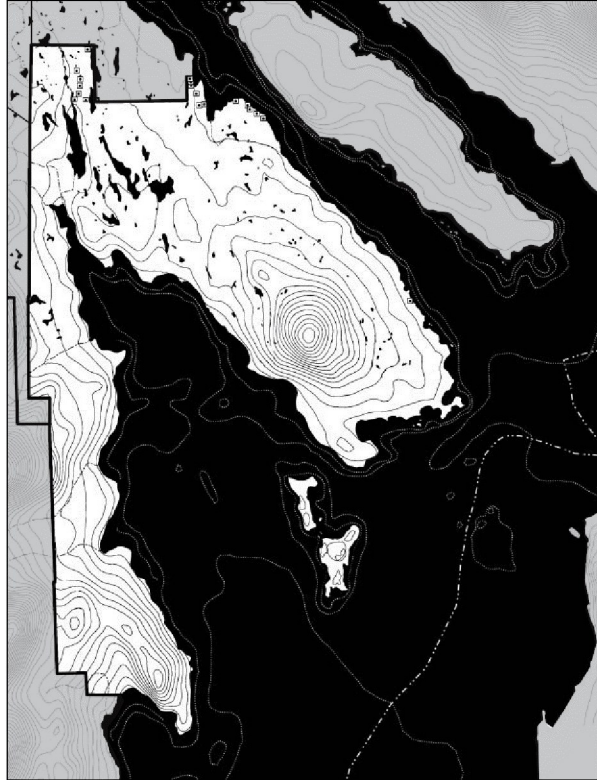




Gravina
Island Plan

Clam Cove & Blank Inlet

Area



KETCHIKAN GATEWAY BOROUGH
Department of Planning & Community Development
2005

The Clam Cove and Blank Inlet area includes some of Gravina Island's less pronounced topography and most extensive lake and wetland ecosystems. Here, Black Sands Beach is visible in the foreground, with Judy Hill, the planning area's highest point at 206 ft., just behind. Directly across from the tip of Pennock Island can be seen Clam Cove--the site of a small, water-oriented community dating from the early 1900s. The northern part of Pennock Island and the city of Ketchikan are visible in the background.



Gravina
Island Plan
***Clam Cove &
Blank Inlet***
Area

October, 2005

Contents

Introduction & Issues to be Addressed 1

Part One: Context

1. The Clam Cove and Blank Inlet Area 2

2. Development Suitability 4

3. Economic Development Opportunities 6

Part Two: Policies

4. Community Interest Lands and Resources 8

5. Proposed Zoning 12

6. Roads and Infrastructure 14

7. Clam Cove Community 16

8. Residential and Recreational Subdivisions 18

9. Planned Development 20

10. Recreation Development 22

11. Resource Management 24

12. Shoreline Development “Best Practices” 28

13. Implementation Strategy and Costs 30

Acknowledgements

Borough Mayor
Michael Salazar

Borough Assembly
David Kiffer
David Landis
George Lybrand
Mike Painter
John “Jack” Shay, Jr.
Glen Thompson
George Tipton

Planning Commission
Charles Arteaga
David Deal
Daniel Kelly
Mike McCormick
Linda Millard, Acting Chair
Trevor Sande
Merrill Stulken

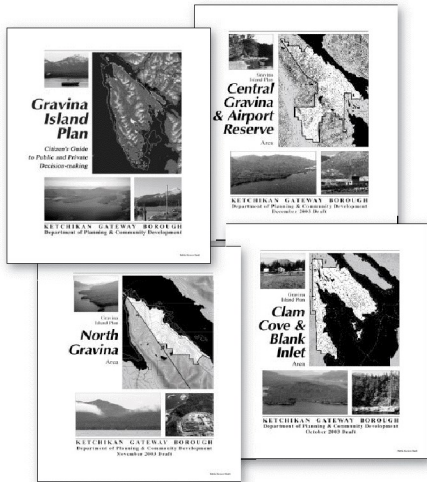
Borough Manager
Roy Eckert

Clam Cove & Blank Inlet Area Planning Team

Staff:
Cee Glasser, Planning Secretary
Tamela McColley, Planning Commission Clerk
Tom Olson, Mapping Technician
David Taylor, Principal Planner

Consultants:
Michelle Hutchinson, Research & Publishing
Dennis Kuklok, Planning Consultant
Kyan Reeve, RAI, Computer Graphics Consultant
Stephen Reeve, RAI, Planning Consultant
Laura Shelton, Resource Data Inc., Mapping

Note: It is impossible to recognize individually all the assistance received from citizens throughout Ketchikan and from staffs of federal and state agencies, the City of Ketchikan, the City of Saxman and private firms and individuals.



This document is one of a set of four describing the Borough’s long-term plans for Gravina Island. Island-wide policies and background are provided in the “Citizen’s Guide.” The eastern shoreline of Gravina has been divided into three area plans that address development issues and provide practical guidance at a detailed level. Copies of all four documents are available at the Ketchikan Gateway Borough Planning Department.

While the Clam Cove & Blank Inlet plan area contains some of Gravina’s most extensive and diverse wetlands, it also provides significant opportunities for development and use. Clam Cove has been slated in the Gravina Island Plan as one of three residential growth centers on the island (along with North Gravina and Vallenar Bay). The mix of extensive Borough and Mental Health Trust lands suggests the potential for considerable future private lands, in particular shoreline parcels. Key state lands (Black Sands Beach) mean that some of the highest value recreational properties will remain in public ownership and use. The popular Blank Inlet area is expected to continue to provide some of the best areas for fishing, hunting, hiking and recreational use for Ketchikan residents and visitors. If a Pennock bridge is built, this area will be directly connected to the airport and city and development is likely to occur near Clam Cove, along Tongass Narrows and, over the longer term, at Blank Inlet. If a bridge is not built, a road from the airport to the Clam Cove area, while still likely, would be postponed until demand warrants and it can be afforded.

This Clam Cove and Blank Inlet Area Plan addresses the following:

- Which areas are most suitable for development and which are less due to wetlands, hazards, difficult access, etc.? (pp 4-5)
- What are the key development opportunities? (pp 6-7)
- What lands and resources have significant community value and how should they be developed or protected? (pp 8-11)
- How should current zoning be changed? (pp 12-13)
- What are the best road alignments to access developable lands and fit into an efficient Gravina road network? How might a Pennock Bridge affect land use and development? (pp 14-15)
- How should the Borough manage its lands; which areas should be sold or leased to support desired growth, and which areas should be retained under Borough ownership? (pp 16-27)
- How can the area’s many recreational attractions be used and what improvements should be made so more residents and visitors can enjoy them? (pp 22-23)
- How might other landowners (DNR, University of Alaska and Mental Health Trusts) develop and manage their lands in order to support and be consistent with this plan? (pp 12-13 and 20-29)
- What management strategies should be followed to protect and sustainably use the area’s timber, fisheries, wildlife and personal harvest resources? (pp 24-27)
- What steps must be taken to implement the recommendations in this plan? (pp 30-34)

Introduction and Issues to be Addressed



Black Sands Beach, shown here, has long been a popular recreation attraction for Ketchikan residents. For some, a picnic there was a long-held Fourth of July tradition. Today, Black Sands Beach is part of a 640-acre State Park, which includes the Blank Islands. While its improvements only consist of one mooring buoy and some pit toilets, it will likely in the future have improved facilities. It may one day even be accessed by road as improved access to Gravina is implemented and road extensions to Clam Cove and beyond are made. Note the summit of Judy Hill in the right background, which could be a popular vista point on trails within Black Sands Beach State Park.

Part One: Context
1/The Clam Cove & Blank Inlet Area

Ownership

- The Clam Cove & Blank Inlet area totals 4,851 acres comprised of:
- 3,074 acres of land owned by the Borough (63% of the total);
 - 528 acres of private parcels, including the Long Lake area, Clam Cove, along the shoreline south, and patented tidelands near Clam Cove;
 - 186 acres of Mental Health Trust lands, in two parcels, one at Gravina Point and another along the north and eastern slopes of Judy Hill;
 - 467 acres of University Trust land, primarily forest lands near Blank Point;
 - 596 acres of State DNR land comprising Black Sands Beach State Park.

Landscape and Natural Resources

The Clam Cove and Blank Inlet area is a landscape created by glaciers. Huge ice sheets emanating from the mainland both scoured and flattened low-lying areas (creating the extensive lake and muskeg wetlands) while meltwaters and retreating glaciers left thick deposits as compacted glacial till and as features such as the many small hills. As a result, this landscape is some of the most extensive muskeg wetlands and lake country in the Borough. Approximately 2,269 acres (56% of total area) is classified as a M12 ecosystem, with organic soils too wet to support tree growth and where grass-like sedges are the dominant plants. The most notable natural features include the highest point, Judy Hill (806 ft.), Long and other lakes, a major estuary, and Blank Inlet, one of Gravina's three major bays. Blank Inlet is exposed, with storm waves coming from Clarence Strait up Nichols Passage, often resulting in rough seas.

The area's natural resources include fisheries, wildlife, scenic beauty, lakes and beaches. The area receives high recreational fishing and hunting use. Wildlife is abundant and the lakes are prime waterfowl habitat, important to migrating waterfowl (there have been reported sightings of the rare Greater Sandhill crane in Long Lake). The Blank Inlet shoreline is prime deer winter range. Timber resources are limited to scattered, relatively small areas, mostly along streams. There has been mineral exploration, however, area resources are not significant.

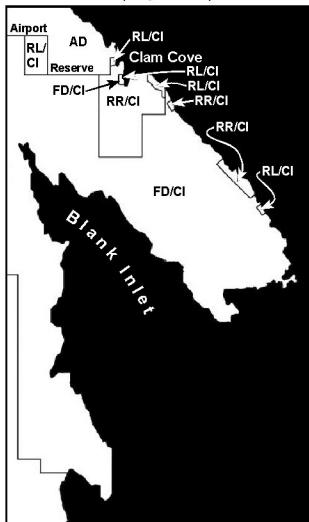
The recent inventory of archaeological and historic places for the Gravina Access EIS has identified 7 sites in and around the Clam Cove & Blank area. An architectural assessment of buildings needs to be conducted to determine if any should be placed on the State's historic register (none are currently).

Development Trends

Clam Cove has been Gravina's center of settlement since the early 1900s when the first homesteads were patented. The small cove provided protection for boats, and the services of Ketchikan were just across the Narrows. There were expectations of growth. Both the US Forest Service and US Coast and Geodetic Survey established facilities there, and the community even developed its own water system. Still, Clam Cove remained small. The Forest Service and Coast and Geodetic Survey shut down their facilities in the early 1950s. The 1970s saw some change and expectations for development. The Stensland homestead was partially subdivided and several waterfront homes were built. Fifty recreational cabin sites around Long Lake were marketed, and 6 cabins built. However, no new construction has been recorded since 1981. Vacant lots remain available, including some waterfront parcels.

While Clam Cove is identified as one of three island growth nodes, growth will depend on improved access. If the Pennock bridge is realized, the Clam Cove area could change rapidly. If not, most growth will wait for a road extension from the airport. In either case, development will prefer waterfront and adjacent properties, and will look to Borough lands to meet demand.

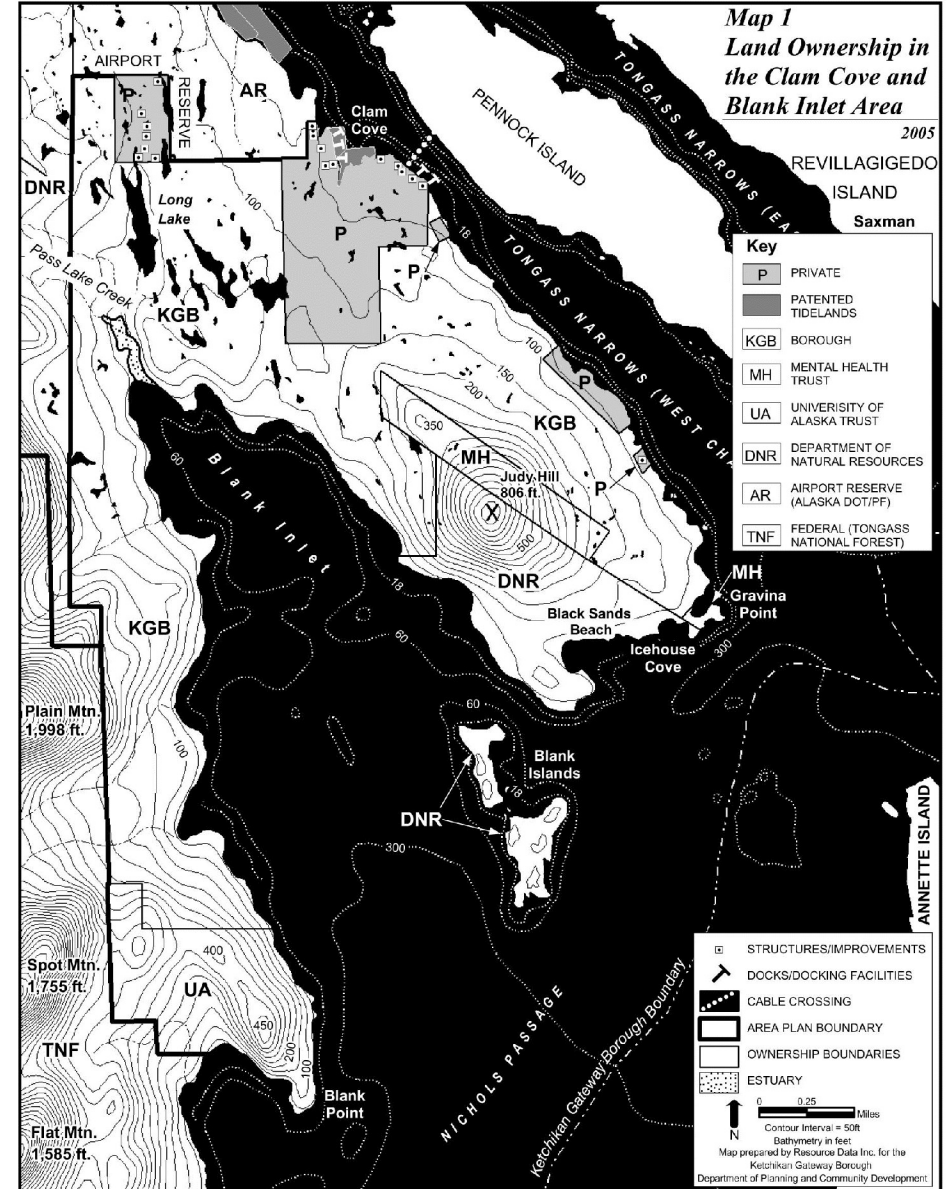
Current Zoning In the Clam Cove & Blank Inlet Area (May, 2005)



Current Zoning

There are five zoning classifications in the Clam Cove and Blank Inlet area:

- RL** (Low density residential), most privately owned small lots (under 20,000 square ft.)
- RR** (Rural Residential), larger privately owned parcels
- FD** (Future Development) all other very large tracts of Borough, Mental Health Trust, University, and State lands
- CI** (Cottage Industry) all of the above zones have a Cottage Industry overlay which allows certain low-impact "industrial" and commercial activities.
- AD** (Airport Development) all lands within the Airport Reserve.



Part One: Context
2/Development
Suitability

Some areas are better suited for development than others. A site with deep, well-drained soil, near a road, on gentle terrain, and away from flooding is considered suitable for conventional development. Another area, equally accessible, but with muskeg soils and poor drainage, is less suitable. While development is possible, it is more costly and requires less conventional building practices. Some areas are unsuitable due to uneconomic access, natural hazards, critical habitat, proximity to airport noise and operations and other reasons. These are often best retained as open space reserves.

It is expected that development in this plan area will be concentrated near Clam Cove and along Tongass Narrows to the south. This would complement proposed industrial park activities in the south Airport Reserve as described in the Central Gravina and Airport Reserve plan. Over the longer term, residential development may occur along the eastern Blank Inlet shoreline and on some of the better-drained sites around Judy Hill. More difficult sites (such as Judy Hill) should be planned carefully to respond to site opportunities and limitations (see page 21).

The major limitation in this area is poor drainage and deep organic soils. Approximately 2,269 acres (56% of the entire area) was classified as M12, with the water table typically at the surface. Not only are these areas costly to develop, Federal wetlands regulations require mitigation measures be taken when roads or other development activities are located in them. The Borough is now developing a detailed wetlands inventory to better define the location and development implications of these kinds of areas.

The facing map presents a suitability analysis for the plan area. (Borough and University lands south of Spot Mtn Creek were not analyzed due to absence of ecosystem data). The following findings are noted:

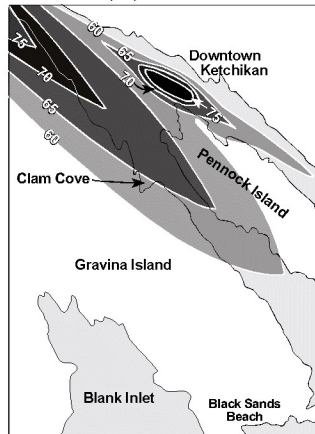
- There is no acreage without significant limitations. Such areas would be characterized by well-drained soils and gently sloping topography.
- Approximately 31% (1,277 acres) is below 300 ft elevation, with slopes under 10 % and with potential road access. The main limitation is poor drainage and organic soils as indicated by the muskeg-scrub forest ecosystems (M1, M2, MF5, F5) found there.
- In addition to poor drainage, limitations include moderate-steep slopes (10-30%), cold microclimates (north facing slopes), higher elevations (300-400 ft.), reduced accessibility (more than 1/2 mile from proposed roads) and proximity to airplane flight paths/noise.
- Approximately 15% is not suitable due to presence of one or more of the following: severe slopes (greater than 30%), high elevation (greater than 400'), "prohibitive" wetlands (classified by ADF&G), and salmon spawning stream corridors. Such areas are suitable for recreation, wildlife, flood control, watershed protection and maintaining visual quality.

Development on the poorly drained organic soils associated with the extensive muskeg and scrub forest ecosystems typically uses either an overlay technique (adding rock fill) or replacement (excavating the organic soils and replacing it with better draining and load bearing materials). These techniques are most successful when they:

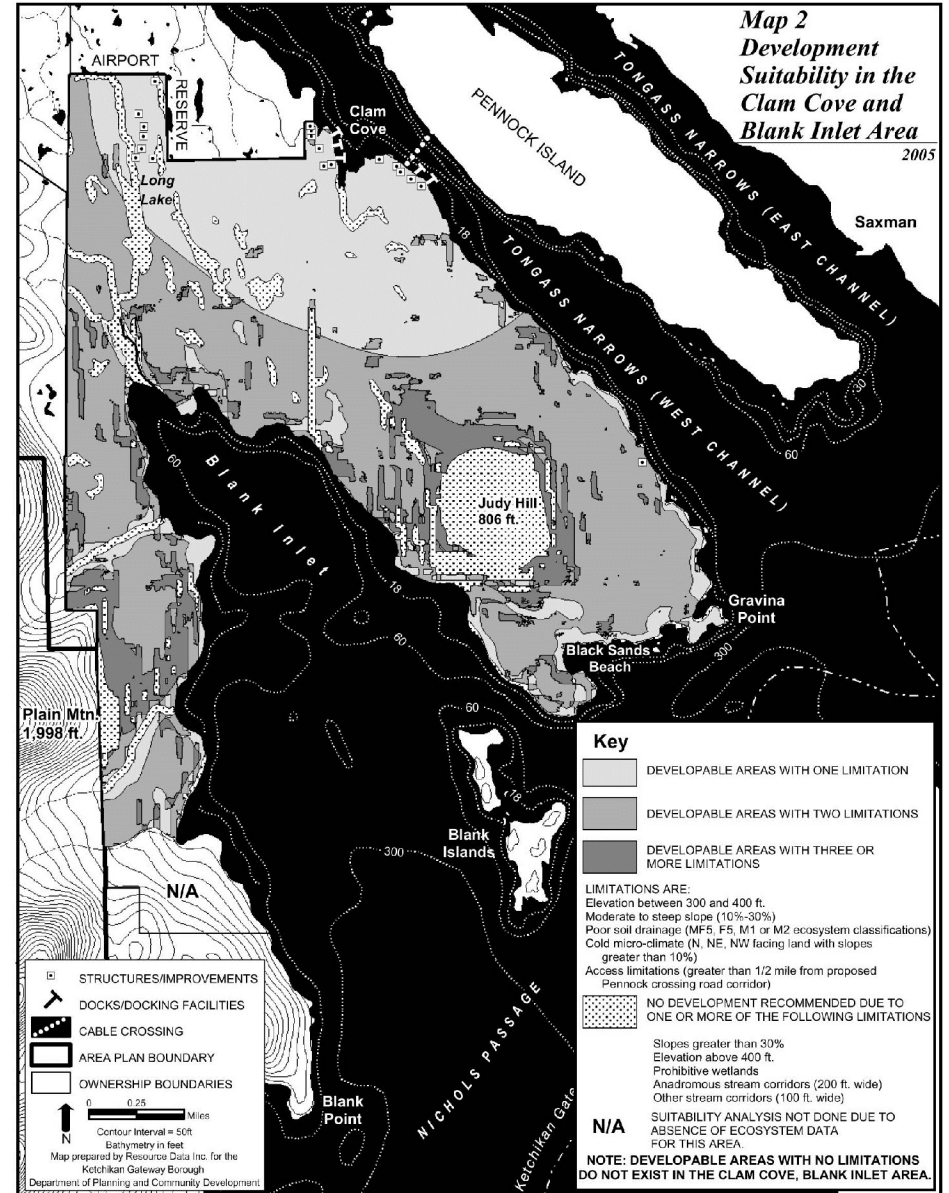
- minimize re-grading and disturbance to drainage patterns,
- minimize land clearing and tree removal, and
- utilize public or community wastewater treatment systems.

Generally, mitigation actions such as restoring a wetland in a nearby area, or placing acreage in a protected status are required where development impacts Federally recognized wetlands. The area around Blank Inlet estuary and upstream has been so designated to mitigate for the construction of North Gravina Road.

Aircraft Noise Exposure
Numbers indicate day-night average sound levels in decibels (Ldn).



Airport noise levels are a factor in development suitability. The FAA considers an Ldn (day/night average sound level) of 65 decibels as its threshold for "significant" noise affecting a neighborhood/community. The World Health Organization uses a lower measure of 55dB as "engendering serious annoyance and creating an unhealthy environment." The map above shows the Ldn's of 60-65 dB impact much of the Clam Cove area and extend for nearly a mile to the south, with some areas to the north into the 65 dB and higher range.



Part One: Context
3/Economic Development Opportunities

Economic development is often measured by numbers of jobs, increases to existing business activities, additions to the local tax base, investments in infrastructure and community services, and the formation of new businesses. While the Clam Cove and Blank Inlet areas have seen little economic activity and change in the past 25 years, the potential for economic growth exists, particularly if some of the major barriers to such growth are reduced or removed, and certain projects which typically stimulate economic activity are implemented. Primary barriers to investment and growth in the Clam Cove and Blank Inlet area include:

- lack of road access, with dependence on boats and shoreline docking facilities,
- significant amounts of land with poorly drained, organic soils, and thus more difficult to develop,
- enough other sites in the Borough which are more easily accessible and less expensive to develop, and
- preferences of some residents for a rural lifestyle without many of the conveniences that most people deem essential.

Major projects which could stimulate investment and growth in the area include:

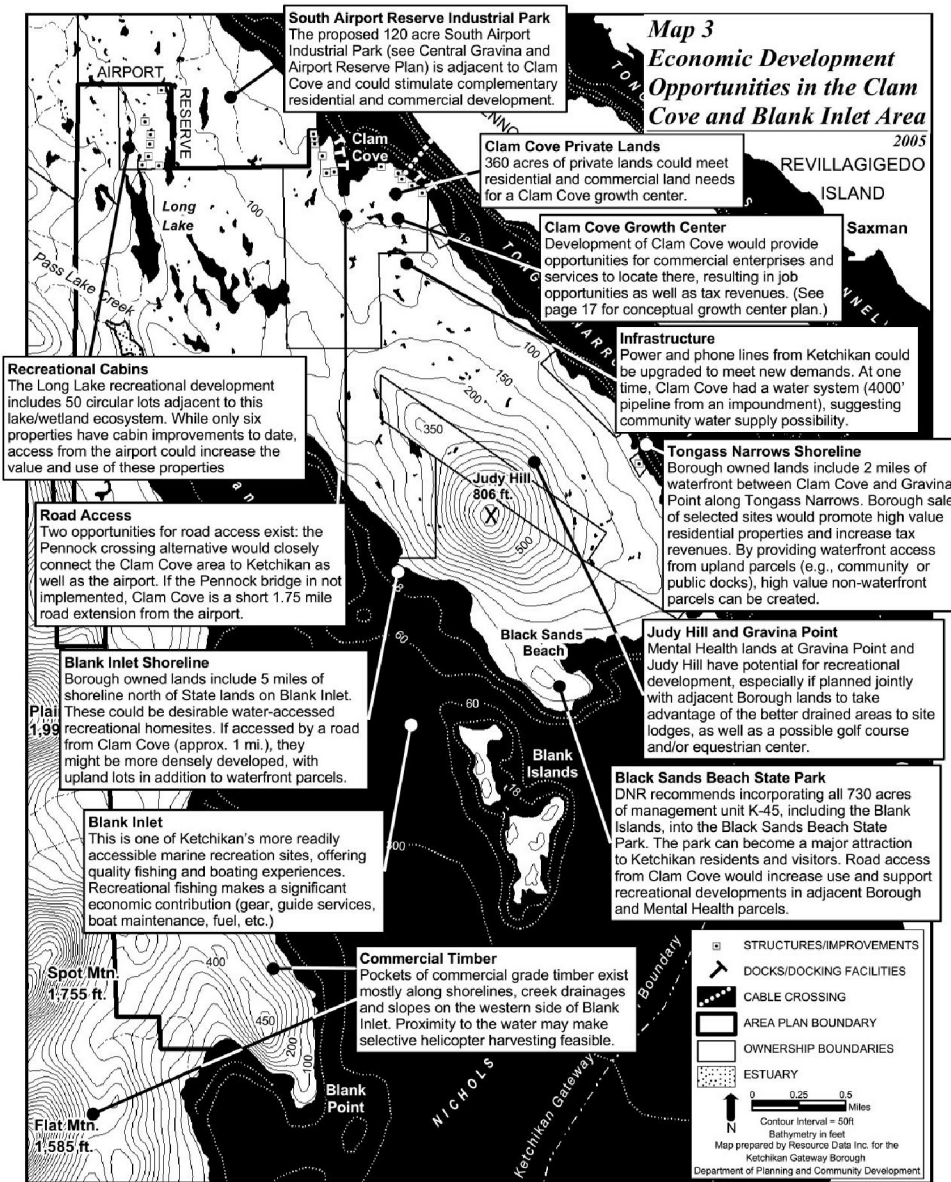
- either a Pennock bridge, or extension of a road from the Airport,
- Borough land sales, especially shoreline properties,
- small boat marina and other improvements to boat docking facilities,
- development of proposed Fisheries Industrial Park at south end of Airport Reserve (including a water distribution and wastewater treatment system extended to Clam Cove properties), and
- improvements to facilities within Black Sands Beach State Park.

The matrix below lists some of the projects identified during the planning process and indicates likely economic benefits. It needs to be noted that projects such as these might bring costs to the community in addition to economic benefits. For example, new roads mean more annual maintenance costs; growing neighborhoods may need extensions of services such as fire, police and schools; and sales of Borough land require survey, legal and administrative costs. Successful economic development strategies are those where these costs are minimized and/or met by developers or beneficiaries, rather than assumed by the general public. The map on the facing page illustrates where economic development opportunities might be found in the Clam Cove and Blank Inlet area.

Economic Benefits/Impacts of Selected Projects

DEVELOPMENT ACTIVITY OR ACTION	Supports local construction jobs	Supports commercial fishing industry	Supports local timber industry	Supports tourism & visitor industry	Supports real estate, banking, etc.	Supports recreation businesses/services	Creates new businesses/services	Increases local tax base
Clam Cove Community Center	○	○	○	○	○	○	○	●
Fisheries Industrial Park	○	●	○	○	○	○	○	●
Community water and sanitation system	○	○	○	○	○	○	○	●
Small marina in Clam Cove	○	○	○	○	○	○	○	○
Timber harvest on Borough & University lands	○	○	○	○	○	○	○	○
Borough land sales/leases	○	○	○	○	○	○	○	○
Gravina trail system improvements	○	○	○	○	○	○	○	○
Pennock bridge	○	○	○	○	○	○	○	○
Road from airport to Clam Cove	○	○	○	○	○	○	○	○
Golf course or equestrian center	○	○	○	○	○	○	○	○
Small resort hotel	○	○	○	○	○	○	○	○
Recreational Cabin sites	○	○	○	○	○	○	○	○
Black Sands Beach improvements	○	○	○	○	○	○	○	○

KEY:
 ● Significant benefits likely
 ○ Some benefits likely
 □ No benefits likely



**Part Two: Plan & Recommendations
4/Community Interest
Lands & Resources**

Clam Cove is expected to become a growth center and the Blank Inlet area will be a prime recreation destination. Eventual road improvements will permit developing lands around Clam Cove as well as establishing an industrial park at the south Airport Reserve. This will create the right conditions for subdivision and sales of Borough lands, especially shoreline and second tier properties, to the south of Clam Cove. As this occurs, it is important to recognize that it is in the community's interest to identify and set aside some lands and resources to:

- protect future economic development opportunities, especially those associated with community growth around Clam Cove and along the shoreline, and
- maintain the quality of and access to resources now enjoyed by many residents, especially Black Sands Beach, Blank Inlet shoreline and recreation areas, and important lakes, streams and estuaries.

1. Black Sands Beach

Description: approximately 600' sandy beach and nearly 3/4 mile of walkable shoreline; part of a State Park; includes one mooring buoy and basic sanitation (pit toilets).

Community Interests/Values: popular summer recreation area close to Ketchikan; somewhat protected from storms; used for hunting and fishing as well as boating and general recreation; surrounded by old growth spruce-hemlock forest.

Use/Development Considerations: part of State Park system; develop a park master plan to identify priority improvements.

Recommended Actions: improve boat facilities (small dock) for better access; blaze trail system along shoreline and to Judy Hill; develop attraction of old-growth trees/groves, with trails and interpretive signage.

2. Blank Inlet Estuary

Description: approximately 7 acres of intertidal area at head of Blank Inlet, fed by two unnamed creeks, Pass Lake Creek and Long Lake watersheds, DNR tideland management unit KT-23.

Community Interests/Values: diverse ecosystem and wildlife habitat (eelgrass beds, spring Pacific Herring spawning, coho and pink



Like so much of Gravina, the Blank Inlet area shown here is an almost untouched landscape virtually at the doorstep of most of Ketchikan's people. To enjoy it one needs a boat--or serious waterproof walking shoes--and a sense of determination and adventure. While much of this landscape appears forested from a distance, a good portion, including many steep upland slopes, has scrub timber and very wet soils. The area just above Blank Inlet estuary has over 25 large and small lakes scoured out by the last glacier. The large mountain to the left is Curve Mountain, with Bostwick Lake just behind.

salmon spawning, rich in shorebirds, black bear, deer winter range, Dungeness crab, marine mammals, furbearers; some personal harvest activities.

Use/Development Considerations: high value wetland, unsuitable for development; health dependent on upstream water quality; part of Borough-dedicated wetland mitigation area.

Recommended Actions: integrate into proposed Gravina Lake Country Natural Area, encompassing adjacent creek watersheds; limit disturbance due to site's fragility (boardwalks as necessary).

3. Judy Hill

Description: a small mountain (806' tall), NE slopes within Mental Health lands; open muskeg with some steeper slopes; named by 1883 Nichols expedition based on Punch and Judy puppet theater (see Punch Hill and a mountain called "the Puppets" above Seal Cove).

Community Interests/Values: natural landmark; possible viewpoint within State Park; some better-drained lands on NW and SW slopes may have development potential; some commercial timber; may contain sites suitable for quarry/materials site development.

Use/Development Considerations: wet soils and steep slopes limit use; develop to support State Park uses.

Recommended Actions: maintain ridgeline in natural vegetation with only selective clearing for view management; evaluate recreational uses for Park master plan; incorporate viewpoint in Park trail network.

4. "Historic" Clam Cove

Description: Sites and structures associated with early Clam Cove settlement (including Stensland homestead, Forest Service shipyard and boathouse site, Coast and Geodetic Survey site).

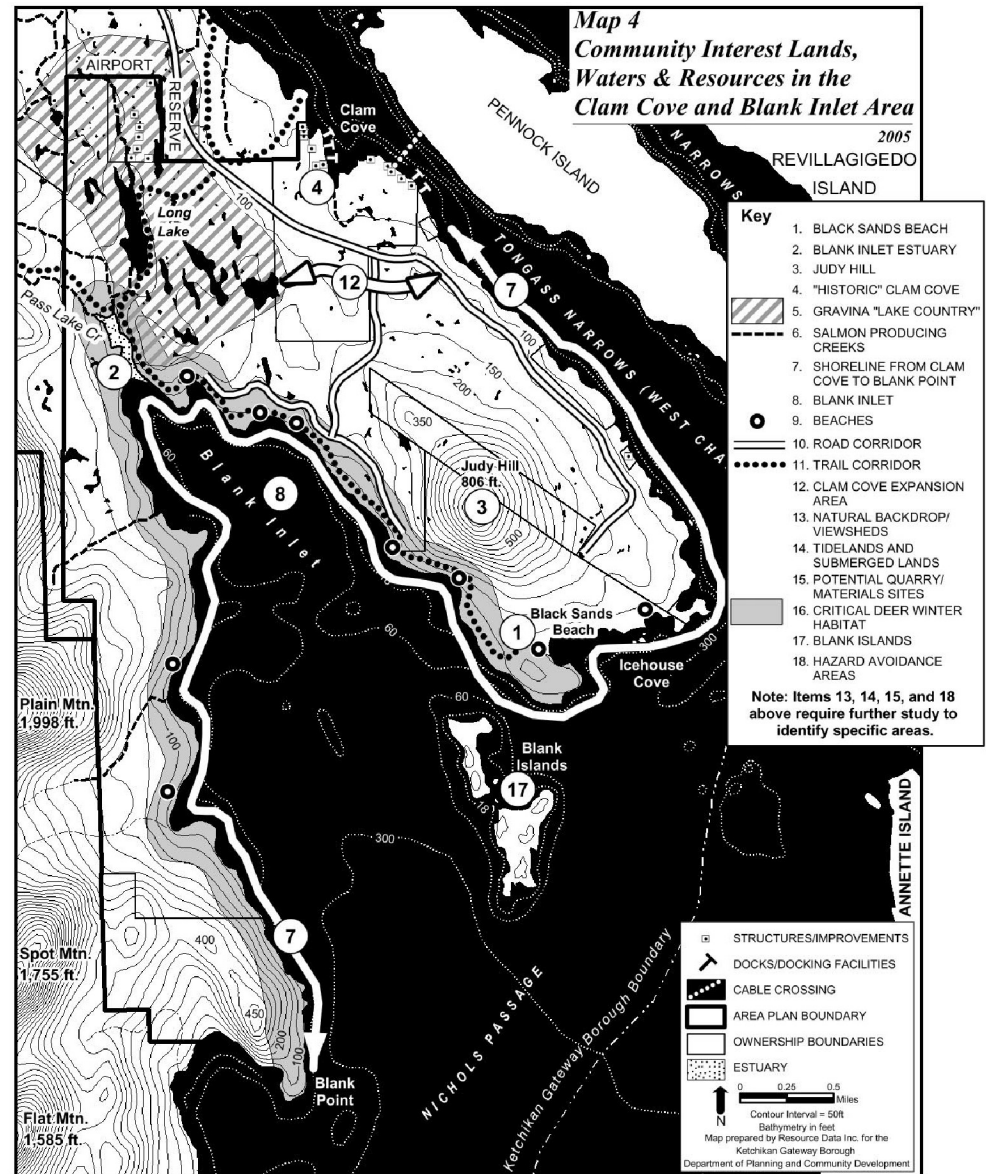
Community Interests/Values: one of the area's oldest settlements, part of Ketchikan's heritage; potential visitor attraction.

Use/Development Considerations: some structures may be restored; sites should be surveyed and catalogued; some sites currently within Airport Reserve.

Recommended Actions: seek funding for inventory and research, gather information and photographs; complete interviews with residents and old timers who have stories and information; include as destination on Gravina Shoreline Trail.

5. Gravina "Lake Country"

Description: over 20 lakes west of Clam Cove, the largest being Long Lake, nearly 3/4 mile long and 500' wide; includes catalogued salmon stream # 0010 (coho); all Borough-owned except for Long Lake subdivision (84 acres).



Community Interests/Values: lakes part of salmon producing creek systems (coho); key to water quality of Blank Inlet estuary; prime fish and wildlife habitat, supports migrating waterfowl; best example of lake-muskeg-estuarine complex of wetlands in the Borough; at one time popular "swimming holes."

Use/Development Considerations: includes Long Lake recreational subdivision; Federal wetland regs apply in much of area; part of Borough dedicated wetland reserve (mitigation for Airport road); used for hunting/fishing; road development difficult.

Recommended Actions: promote awareness as attraction; restrict incompatible uses; invite scientific research, including possible Wetlands Information & Research Center; negotiate exchange of several incompatible lots with Long Lake property owners; establish Gravina Lake Country Natural Area and use as future mitigation; require sealed sanitation systems for cabin development to maintain water quality; develop trails; limit road access.

6. Salmon Producing Creeks

Description: seven catalogued anadromous creeks (#s 10520, 10560, 10610, 2001, 10620, 0010, and 10310) with pink and coho runs; four of the systems feed into Blank Inlet estuary.

Community Interests/Values: runs support commercial, recreation and personal harvest fishing; some commercial timber within stream corridors; creeks are prime habitat for other wildlife.

Use/Development Considerations: considered "high value" wetlands, best retained as habitat/mitigation bank; stream crossings (roads, trails) to permit fish passage and control siltation.

Recommended Actions: some selective logging may be possible; include corridors in open space reserves where they run through proposed development areas (such as through Clam Cove); remove barriers to increase spawning habitat.



Much of the Clam Cove and Blank Inlet shoreline is rocky, with forested vegetation extending down to the high tide line, as illustrated in this photo of the eastern shore of Blank Inlet. Boat access is often limited due to shallow nearshore topography and submerged rocks, as well as exposure to wind and wave action coming from the south-southeast. Shoreline sites tend to have better drained conditions and are more suitable for residential or recreational homesite development than more inland sites in this area.

7. Shoreline from Clam Cove to Blank Point

Description: approximately 11 miles of undisturbed, rocky, mostly Borough-owned shoreline from south Clam Cove to Blank Point.

Community Interests/Values: highest valued lands for recreation and residential development; includes Blank and Gravina Points, important landmarks and navigation reference points; conspicuous section of Tongass Narrows shoreline, a heavily trafficked scenic corridor for recreation & ferry/cruise travelers.

Use/Development Considerations: Borough ownership enables high quality subdivisions with public shoreline access, scenic area conservation and development compatible with safe transit of vessels in and out of Ketchikan; minimize bulkheads, retaining walls and structures that impact the natural shoreline; restrict development of shoreline next to high banks.

Recommended Actions: promote public awareness and adoption of "best practices" for shoreline development (see pages 28-29); include shoreline protection measures in deeds prior to sale of Borough lands; establish shoreline walking trails when possible.

8. Blank Inlet

Description: includes approximately 196 acres of tidelands and submerged lands within DNR management unit KT-23.

Community Interests/Values: Gravina Island's second largest bay; high personal harvest use as well as recreation fishing/boating; a wild and natural marine area 20 minutes by boat from Ketchikan.

Use/Development Considerations: part of dive fishery study area (closed to commercial geoduck harvests); DNR management regimes include habitat, harvest, and limited shoreline use; water quality determined by upland uses, creeks and lakes feeding into Blank Inlet estuary.

Recommended Actions: recreation and personal harvest should be given priority over commercial fishing; manage upland uses (primarily Borough lands) so as to not impact water quality; monitor harvests and use to maintain fish and wildlife stocks.

9. Beaches

Description: shorelines with sandy rather than rocky or muddy intertidal zone (includes Black Sands Beach).

Community Interests/Values: preferred shoreline type for recreation; rare in Clam Cove and Blank Inlet area; can offer a secluded, natural beach experience for users.

Use/Development Considerations: beaches are small and separated by rocky shorelines with dense forest cover landward; many are exposed to wind and wave action; typically accessible only by boat, boat anchoring often possible; may be accessed and linked by future shoreline trails; below mean high water owned by DNR.

Recommended Actions: retain uplands adjacent to key beaches in public ownership; develop trail system in State Park between beaches to promote access and use; install mooring buoys when difficult anchoring conditions; link to Gravina trail system where possible to provide land access.

10. Road Corridors

Description: best alignments for future road system, providing access to developable lands and resources as well as destinations such as Black Sands Beach.

Community Interests/Values: saves public funds by protecting best alignments and avoiding future buy-back or re-routing costs; can minimize crossing of anadromous creeks and sensitive wetlands; promotes cost effective development patterns; provides predictable framework for private land development; provides space for efficient utility distribution.

Use/Development Considerations: road alignments needed in order to move ahead with land subdivision and sales; determine right-of-way width by type of road and projected level of service; avoid wetlands and ecologically sensitive areas; provide for scenic turnouts, trailheads/parking, bike trails, etc.

Recommended Actions: prepare a Gravina road system master plan to guide planning decisions and investments; private (pioneer) roads are to follow proposed alignments and establish access until up-graded to minimum Borough standards and opened to public.

11. Trail Corridors

Description: easements and public lands designated for inclusion in a proposed Gravina trail system, providing for recreational use (walking, hiking, x-c skiing, mountain biking, and ORV) and for access to community facilities/services.

Community Interests/Values: ensures public access to attractions/services; can make areas more accessible to more people; useful management tool to direct activities to desired areas, and control potentially incompatible uses (e.g., ORVs and hiking); convenient trail access adds to property values where provided.

Use/Development Considerations: extensive wetlands make trail development more costly; trailheads should be integrated with the proposed road network as well as water access points (docks, moorings, etc.); some trails should be sited within the road rights-of-way (e.g. biking, ORV); shoreline trail easements should be included in waterfront development layouts; may require negotiating with private landowners for easements.

Recommended Actions: incorporate recommended Clam Cove and Blank Inlet area trails into the Gravina trail system master plan; include trail considerations into Black Sands Beach Master Plan; include trail easements in Borough land sales when trails pass through proposed lots and along shorelines.

12. Clam Cove Expansion Areas

Description: land and marine areas for future Clam Cove expansion of residential, commercial and public uses.

Community Interests/Values: supports Clam Cove development (areas will be particularly important if Penneck crossing is implemented); promotes cost effective growth patterns; reduces need to develop on wetlands and less suitable sites.

Use/Development Considerations: Penneck bridge alignment would establish "edge" to Clam Cove community; extensive wetlands and lakes beyond Clam Cove "core" area constrain expansion; most expansion would occur on Borough lands.

Recommended Actions: develop a Clam Cove community master plan to address community expansion and growth; evaluate marine areas to provide for harbor and mooring opportunities, including the proposed south industrial park within the Airport Reserve; set aside shoreline and adjoining uplands for harbor related facilities/services.

13. Natural Backdrop/Viewsheds

Description: shorelines and uplands visible from boats (small craft, ferries, cruise ships), residences and high use areas such as road turnouts, parks, trails, etc.; includes the shoreline fringe along Blank Inlet and Tongass Narrows, slopes of Judy Hill, and lower slopes of Spot, Plain and Nipple Mountains.

Community Interests/Values: helps maintain high visibility shoreline as a scenic landscape; contributes to the attractiveness of area for visitors and local recreational users.

Use/Development Considerations: shorelines most sensitive areas; flat to gently sloping topography with forest cover is the best condition for visually absorbing development activities; some of most sensitive areas within Black Sands Beach State Park.

Recommended Actions: minimize land surface alterations along shoreline (especially high bank waterfront); analyze visual impacts of proposed land development and timber harvests; shoreline developments to follow best practices (pp 28-29).

14. Tidelands & Submerged Lands

Description: areas between mean high and mean low water (tidelands) and those below mean low water to 3 miles seaward (submerged lands); there are two privately owned tidelands in Clam Cove (17.1 acres), all others are State owned.

Community Interests/Values: includes "high value" wetlands and marine habitat (nursery areas for many fish); popular recreation areas (beachcombing, fishing, boating); sites for essential shoreline structures (effluent outfalls, docks, moorings, marinas).

Use/Development Considerations: permits and leases for use available from DNR subject to Coastal Management regs and recommended practices; also subject to Federal wetlands regs.

Recommended Actions: Borough should acquire tidelands in areas it owns; identify "best practices" for tidelands/submerged lands use and promote implementation; include provision for common dock facilities in Borough waterfront subdivisions.

15. Potential Quarry/Materials Sites

Description: areas close to roads and proposed development centers (away from wetlands and anadromous streams) with rock, sand and gravel resources; potential hard rock sites around Judy Hill, sand and gravel deposits in glacial moraines.

Community Interests/Values: materials needed for most development activities, especially in areas where organic soils predominate; hauling costs minimized if sites close to developments; careful siting can minimize negative impacts.

Use/Development Considerations: site can be reclaimed/re-used when materials removal completed; need noise/dust control plan; site selection should consider potential for screening.

Recommended Actions: prepare a Materials Site Reconnaissance Survey to identify potential sites, quality of materials, reclamation potential, and strategy for providing materials for Gravina development; promote balance cut and fill on road alignments to reduce rock materials needs; explore using materials sites to store/process overburden and vegetation debris from land clearing.

16. Critical Deer Winter Habitat

Description: forested shoreline and adjacent low elevation uplands providing deer forage and cover during periods of heavy winter snowpack, primarily along Blank Inlet.

Community Interests/Values: Gravina is one of Ketchikan's most important deer hunting areas.

Use/Development Considerations: primary habitat threat from recreational homesite developments along north Blank Inlet.

Recommended Actions: only selective cutting within 300 ft. of shoreline on public lands; Borough or University land sales to follow best practices for shoreline developments (pp 28-29).

17. Blank Islands

Description: two small islands within Black Sands Beach State Park.

Community Interests/Values: wildlife habitat; recreational use; emergency boat harboring; personal resource harvest.

Use/Development Considerations: access only by boat; eastern and southern shoreline very exposed; protected side shallow, rocky.

Recommended Actions: evaluate recreational opportunities for inclusion in Black Sands Beach State Park master plan; consider installing mooring buoys in most suitable site.

18. Hazard Avoidance Areas

Description: very steep slopes and floodplains.

Community Interests/Values: protect public safety and minimize costs from environmental accidents.

Use/Development Considerations: generally unsuitable for development and should be avoided.

Recommended Actions: map/incorporate into Borough natural hazards database; manage as open space; avoid road/trail crossings; promote awareness of locations and risks; manage cutting/land clearing in watersheds above flood-prone lowlands.

Part Two: Policies
5/ Proposed Zoning

Zoning regulations protect the rights of individuals and the public. They affect the future of Gravina more than almost anything else that is done at the local level. Zoning will define the extent of residential development in Clam Cove and along the shoreline, locations where commercial development might occur, as well as guide resource management and use of large tracts. The zoning ordinance consists of two parts; a text and a map. In the Clam Cove and Blank Inlet area there are two types of zoning recommendations:

- No changes to some existing zones (Low Density Residential, and Rural Residential), and
- New zoning classifications for those situations where existing Borough zone classifications may not satisfactorily guide development activities (e.g., Development Reserve, Resource Management, Planned Development)

Zoning of private land within the proposed Clam Cove Community Development Area (see map to right) remain in current classifications until a community master development plan is approved. At that time it is expected that zoning changes including General Commercial, Medium Density Residential and Public Lands and Institutions would be designated.

Note that some of the proposed zones include a Cottage Industry overlay. Below is a summary of recommended zoning actions. The page numbers in parenthesis indicate where policies and additional information are to be found.

AD/IP Industrial Park-South Airport Reserve (120 acres, see pp 12 and 20-21 of Central Gravina and Airport Reserve Plan for detailed information).

RL/CI Low Density Residential with Cottage Industry overlay (33 acres)

Intended Uses: Clam Cove community residences with provision for small scale business or cottage industry related activities.
Development Considerations: minimum lot size, 20,000 square ft.; cottage industry activities must not adversely impact neighbors (noise, odors, visual clutter, hazards to children, etc.)

RL Low Density Residential (83 acres, see pp 22-23) (this is the Long Lake Park subdivision with circular lots)

Intended Uses: recreational homesites/cabins
Development Considerations: private road access may only extend to community center area, not to individual lots; individual properties accessible by ORV trail; approved sanitation systems required; no further subdivision or additional lots permitted.
Note: This proposed zoning removes the Cottage Industry overlay.

PLI Public Lands & Institutions (2 areas)

1. Black Sands Beach State Park (640 acres, see pp 22-23)

Intended Uses: public recreation
Development Considerations: hunting, fishing and personal resource harvest permitted subject to park regulations

2. Gravina Lake Country Research & Educational Center (68 acres, see pp 22-23)
Intended Uses: public or non-profit research and educational activities, interpretive centre, museum, staff housing, University of Alaska campus.
Development Considerations: may be operated under a lease agreement with the Borough; access by boat or trail initially; research, educational and interpretive activities may use adjacent public areas (proposed Gravina Lake Country National area, Black Sands Beach State Park, and proposed US Forest

Service Nipple Mountain Old Growth Reserve); facilities may be shared by a number of entities including private non-profit organization, USFS, State Parks, ADF&G, University of Alaska, or others.

PD Planned Development (2 areas, totaling 664 acres)

1. Judy Hill (526 acres, see pp 20-21)
Intended Uses: mixed residential (condominiums, cabins), commercial (lodge/small hotel, restaurant) and recreational (horseback riding, golf).
Development Considerations: site plan to avoid and protect high value wetlands; development restricted to better drained uplands; may require joint Borough-Mental Health Trust development partnership; golf course development may need to include better drained forest uplands around Judy Hill; activities within Black Sands Beach State Park are subject to State Parks approval and joint management agreement.

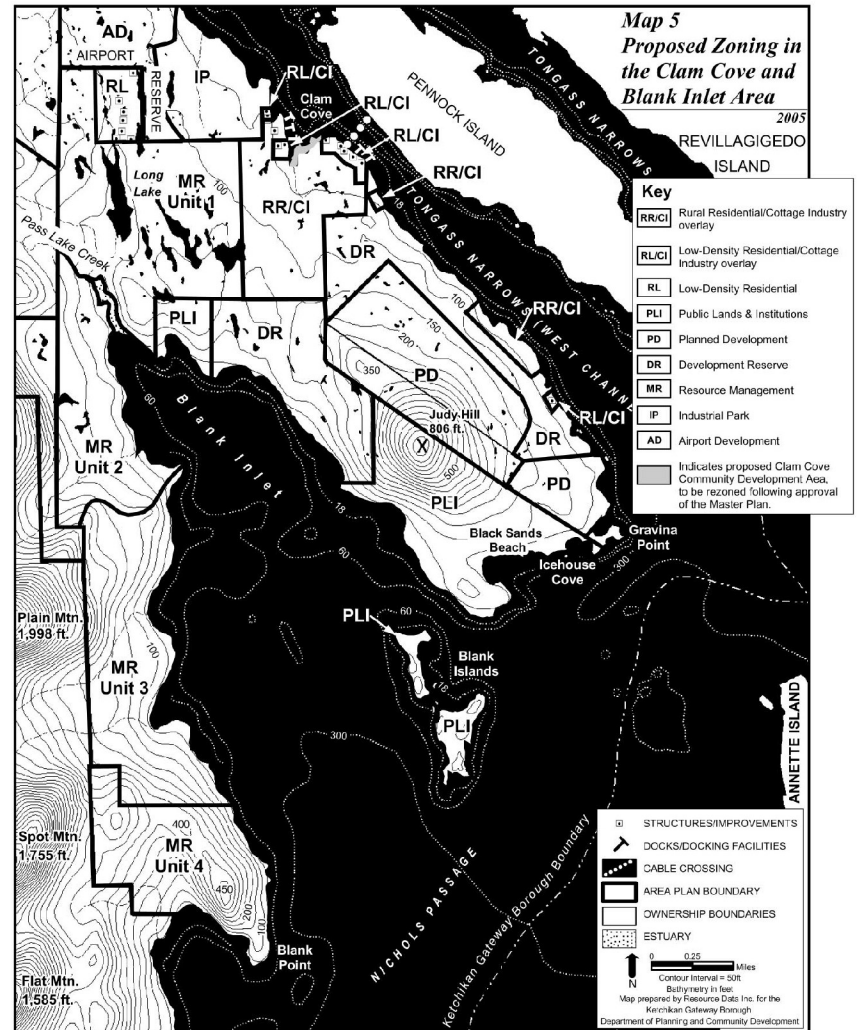
2. Gravina Point (138 acres, see pp 20-21)
Intended Uses: mixed commercial and recreational uses (small hotel/fishing lodge, cabins, restaurant, small marina, and boat related facilities).
Development Considerations: Mental Health Trust-Borough partnership; opportunities for linkages to attractions and amenities at Black Sands Beach State Park, and Judy Hill development.

DR Development Reserve (2 areas, totaling 727 acres)

1. Tongass Narrows Shoreline (see pp 18-19)
Intended Uses: future residential expansion of Clam Cove community (prime waterfront properties and water accessible uplands).

Development Considerations: design subdivisions around a common dock serving both waterfront and upland lots (see pp 28-29); small lots (15,000 sf) if community sanitation systems developed; lots to have vehicular & boat access; retain creek corridors as open space; maintain greenbelt along roads.

MR Resource Management (2,258 acres) (see pp 24-27 for information on management units and allowed activities).



2. East Shoreline Blank Inlet (see pp 18-19)
Intended Uses: recreational homesites, waterfront and uplands.
Development Considerations: design subdivisions around a common dock serving both waterfront and non-waterfront lots (see pp 28-29); initially larger lots (2 acres), which may be further subdivided when road access provided.

Intended Uses: recreation, personal resource harvest, scientific research, environmental education, selective timber harvest.
Development Considerations: roads and permanent structures generally not permitted; timber harvest by helicopter techniques; some waterfront sites may be leased for seasonal recreational cabin use, subject to site clearing and cabin siting restrictions to minimize impacts; 200 ft. wide greenbelt to be maintained along shoreline; boardwalk trails through high value wetlands.

*Part Two: Policies
6/ Roads &
Infrastructure*

Findings

A Pennock bridge crossing (F1-high east channel) is the final preferred alternative announced by DOTPF in October, 2004. This alternative proposes a somewhat lower (180 ft.) bridge across the west channel of the Narrows, resulting in the road meeting grade approximately 500 feet from the Gravina shoreline. This will create a visual and physical “edge” to the Clam Cove community but should provide enough land to meet expected growth of the community center. A Pennock bridge would make the Clam Cove area easily accessible from Ketchikan and reinforce its role as a growth center on the island.

While financing of the bridge remains uncertain, it is important to note that future road access to Clam Cove area is not dependent on a Pennock bridge. A road could be extended from the airport to the Clam Cove area (approximately 2.5 miles). Eventual extensions of such a road could be made to service shoreline properties along Tongass Narrows to the south (an additional 2 miles) as well as Borough lands along the east side of Blank Inlet.

A few residential streets within Clam Cove have been laid out within areas where small subdivisions were platted.

The Blank inlet estuary, upland creeks, wetlands and lakes prevent cost effective road extensions towards the west shore of Blank Inlet.

While much of the landscape is poorly drained, with considerable wetlands, road alignments especially east of the lake system, may take advantage of the rolling glacial topography (moraines and eskers) and the mixed rock, sand and gravels (glacial till) associated with them.

The Long Lake recreational subdivision would be difficult to serve by a conventional road network due to its circular lots and lake-wetland ecosystem.

The Clam Cove area is served by underwater power and phone cables crossing Tongass Narrows. Existing cable capacity could meet the power needs of an additional 75-100 residences. Powerline easements to all existing lots in Clam Cove have been recorded.

If Clam Cove significantly increases in population, a central water distribution and wastewater disposal system would be needed. A package wastewater treatment facility could be located in the proposed South Airport Reserve Industrial Park site or in the area southwest of the proposed main road alignment (Area A, see facing map).

Road & Infrastructure (R&I) Policies:

R&I/1 Road development shall be guided by a Gravina Road System Master Plan in order to ensure efficiency and cost effectiveness. The Borough will work with DOTPF, USFS, and private interests to determine alignments, ROW widths, design standards, financing and maintenance responsibilities. The Master Plan should also include a section describing “Best Practices” for road design, construction and maintenance.

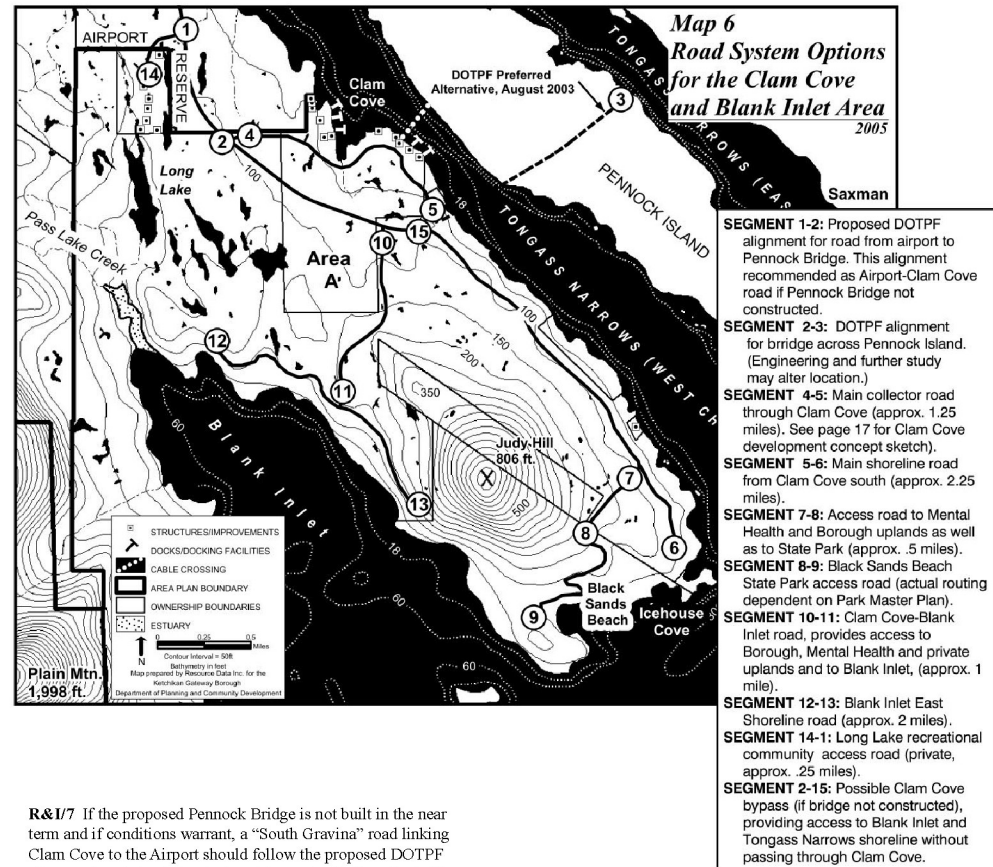
R&I/2 Pioneer roads shall be consistent with the Master Plan. Improvement and maintenance costs are to be borne by the landowner(s). Such roads are to be gated and closed to the public until demand warrants inclusion in the public road system. At such time they shall be upgraded to Borough standards.

R&I/3 The Road System Master Plan shall consider alternative means of movement within the road ROW, including bus, bicycles and pedestrians as appropriate.

R&I/4 Road corridors shall allow for provision of infrastructure and community services.

R&I/5 The Borough shall extend services as an incentive and means to guide development activities and shall recover costs of roads and infrastructure from landowners and other beneficiaries.

R&I/6 The Borough will identify the most cost effective options for providing roads, infrastructure and services to the Clam Cove area, and work with appropriate entities to implement them.



R&I/7 If the proposed Pennock Bridge is not built in the near term and if conditions warrant, a “South Gravina” road linking Clam Cove to the Airport should follow the proposed DOTPF alignment, and should be designed to eventually be extended to serve shoreline areas along Tongass Narrows to the south.

R&I/8 Access to individual lots in the Long Lake Park subdivision should continue to be by private trail. A private road may be extended from “South Gravina Road” to a community center site, from which ORVs or other small vehicles would be used to access individual properties.

R&I/9 The priority for road extensions south from Clam Cove should be first along Tongass Narrows and secondly toward the east shore of Blank Inlet.

R&I/10 The west shoreline of Blank Inlet and adjacent uplands would not be served by roads over the time horizon of this plan. Shoreline parcels leased for recreational cabin use would be accessible by boat only.

R&I/11 If a community wastewater treatment facility is developed, it should be sized and located to effectively serve both the Clam Cove community as well as the proposed South Airport Reserve Industrial Park.

Part Two: Policies

7/ Clam Cove Community



This boat maintenance structure on the Stensland property in Clam Cove is the community's most prominent landmark. It was first constructed in the early 1900s. Note that the building next to it is on skids and was brought in by water; often the easiest way to get a house in an area without roads.

Findings

Clam Cove has had limited growth in the past 25 years (the last “building boom” was in the late 1970s, early 1980s when most of the structures currently occupied were permitted). Difficult access (by boat only) has undoubtedly been the major factor. Two proposed developments could change this:

- The construction of a bridge from Ketchikan over Pennock to Gravina which would make landfall near Clam Cove, or
- The extension of a road from the airport to the proposed Airport Industrial Park South (and Clam Cove which borders it).

It is not expected that Clam Cove would grow into a community center without either of these two developments.

While Clam Cove has had a few subdivisions platted with provisions for streets (complete with names), 23 small lots (20,000 sf), and easements for infrastructure (power, phone), no overall community road and lot layout has been done. Sixteen of these lots have not had improvements. Most of the buildings and structures which attest to the history of Clam Cove have been destroyed or are in serious disrepair. Today, several families live in the Clam Cove area year-round, and one family to the south along Tongass Narrows.

Clam Cove has been identified as one of three small community growth centers on Gravina Island (the others are North Gravina and Vallenar Bay). Private lands would form the core of a future Clam Cove growth center, with mixed commercial and residential properties. A conceptual community layout (see Map 7 on facing page) illustrates one way that current ownership and use patterns could be incorporated into a multi-use community center.

The Clam Cove area has extensive wetlands and lakes, limiting development potential. Shoreline properties are the most desired and typically the easiest to develop. While the Borough does not own land within the proposed Clam Cove community center, its properties would provide for eventual community expansion. They may also be used in trades or exchanges with private landowners for future public lands and facilities needed within the community center (e.g., school, fire, police, dock/wharf sites).

All waterfront sites are privately owned, as are the tidelands, with no formal or legal provision for public or community access and use. A public dock/marina would be an essential part of a larger, more diverse Clam Cove community.

Clam Cove Community (CCC) Policies

CCC/1 The Borough will work with Clam Cove residents and property owners to incorporate their interests in community growth decisions.

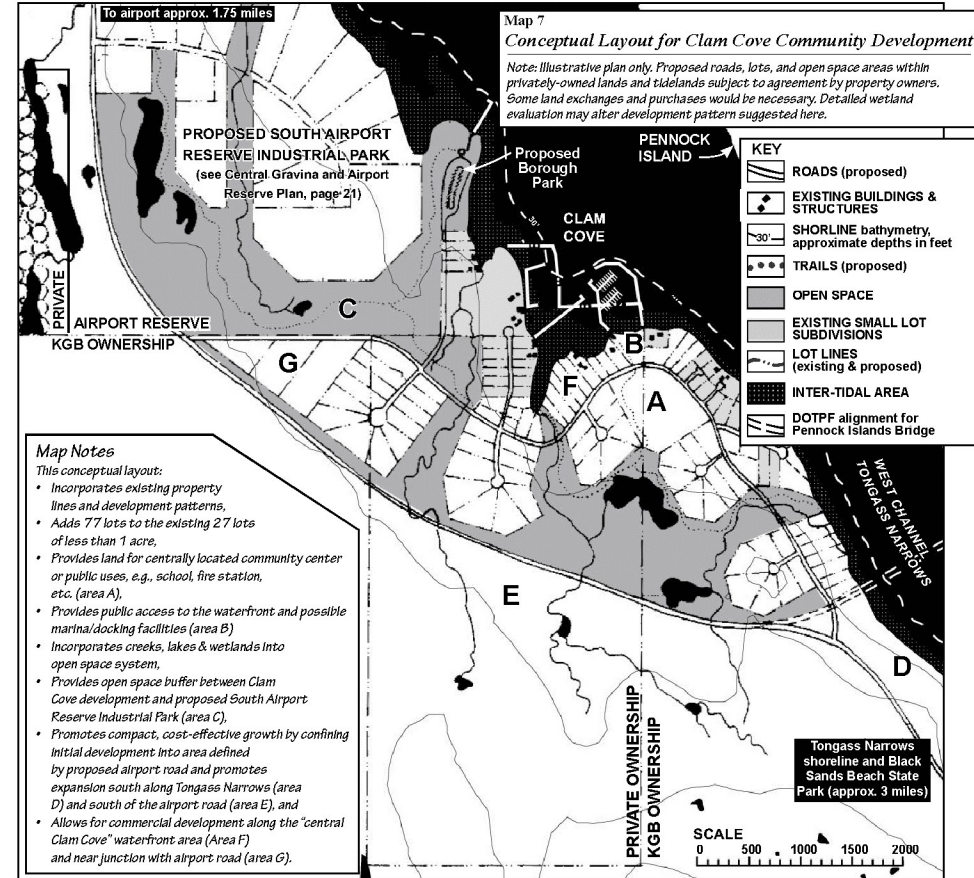
CCC/2 Clam Cove will continue to be water oriented and the Borough will work with residents and property owners to find and implement ways to insure water access and provide boating facilities such as a public wharf or dock and small marina.

CCC/3 The Borough will use its lands surrounding Clam Cove to support cost effective community growth patterns, and to ensure that adequate and appropriate sites for public facilities are available.

CCC/4 Residential properties in Clam Cove will continue to have the option to operate small businesses and cottage industry activities, as reflected by the Cottage Industry zone overlay.

CCC/5 Suitable and sufficient lands for future commercial activities will be set aside to meet this need and provide opportunities for local business and service growth.

CCC/6 The Borough will encourage concentrated growth around the existing Clam Cove community core in order to make cost-effective use of infrastructure and service investments.



CCC/7 The proposed DOTPF road alignment will serve as an initial “edge” or growth boundary for the community. Private and Borough lands south and west of this road corridor will be reserved for community expansion when demand warrants.

CCC/8 The Borough will encourage owners/developers of waterfront/shoreline parcels to follow recommended “best development practices” (as described on pp 28-29).

CCC/9 Historic structures and sites within the community will be identified and where possible protected or restored to preserve the community’s cultural heritage.

CCC/10 The Clam Cove community will be linked to the proposed Gravina trail system, offering residents access to enjoy nearby attractions and alternative modes of transportation.

CCC/11 The area’s lakes, creeks, and wetlands will be used to form the basis of the community’s open space/recreation system.

CCC/12 Access to the waterfront and associated improvements and services will be available to all residents and visitors.

CCC/13 Provision will be made for future routing of traffic away from the waterfront and community center in order to reduce congestion and maintain its character and attractiveness.

Part Two: Policies
8/Residential & Recreational Subdivisions

See pages 16-17 for residential development recommendations in the Clam Cove area.

Findings

The proximity to excellent hunting and fishing, presence of Black Sands Beach State Park and Gravina Lake Country, pristine nature of much of the area, proposed Gravina Trail System and expected near-term vehicular access--all contribute to making this an attractive area for recreational homesite/cabin development.

The Clam Cove/Blank Inlet area has 1.4 miles of potentially near-term developable shoreline and adjacent uplands under Borough ownership along Tongass Narrows, and 3.7 miles along the east shore of Blank Inlet.

The Tongass Narrows shoreline would be the natural location for residential and road extensions beyond Clam Cove. It is more protected from wind and wave than Blank Inlet, offering better boat access. In addition to the Borough lands along Tongass Narrows, there are two private tracts (one 33 acres with 1,600ft shoreline, the other 5 acres with 350ft.). One lot has a residence.

Blank Inlet's eastern shoreline has exposed sea conditions and steep slopes adjacent to the coast. Road access, while possible, would be more difficult and expensive. Boat-accessible recreational cabin sites, centered around protected moorings, could be provided on Borough lands.

The Long Lake recreational subdivision, created with fifty 20,000 sf circular lots in 1973, currently has only 6 parcels with recorded improvements (small cabins). It will have better access if either a Pennock bridge is built, or if a road to Clam Cove is extended from the airport. The nature of the landscape and the subdivision would make road extensions to each of the lots difficult, though a private access road could be extended to a community center/parking area from which ORVs or other means could be used.

There is significant demand for boat-accessible waterfront lots since such properties are not readily available in other parts of the Borough. The recent State land disposal at Vallenar Bay sold all the shoreline lots, but not all of the non-waterfront sites. The Borough's land along Blank Inlet could be ideal for remote recreation development, as would be the University of Alaska Trust lands at Blank Point. If water access is provided by shared or commonly owned docks/moorings, upland sites may be equally viable for recreational cabin development.

Today's building industry makes available a wide range of pre-fabricated, portable recreation structures (yurts, tents, kit-cabins, etc.) as well as numerous options for providing power, water, and sanitation.

Conceptual layouts for two residential and/or recreational subdivisions (one along Tongass Narrows south of Clam Cove and the other along the east shore of Blank Inlet) are illustrated on the facing page.

Residential & Recreational Subdivision (RRS) Policies

RRS/1 The Borough will use a portion of its shoreline and related upland properties in a manner that meets community demands for residential and recreational homesites and brings the greatest financial return to the Borough.

RRS/2 The Borough will retain key parcels of lands it sells or leases for residential and recreational homesite use to provide public access to beaches, shorelines, lakes, and other attractions, as well as for development of common or shared facilities such as docks, access corridors, small sanitation systems, etc.

RRS/3 The Borough will promote adoption of its "best shoreline development practices" as described on p 28-29.

RRS/4 The Long Lake Park subdivision will remain primarily a recreational cabin development. When access by road becomes feasible, it will be extended to a centrally located area, from which ORV or other trails will provide a private trail system to individual properties.

RRS/5 The Long Lake subdivision and other recreational homesite subdivisions will require proper sanitation systems in order to protect fragile wetland and lake ecosystems from pollution. Large subdivisions, if fully developed, may require community sanitation systems.

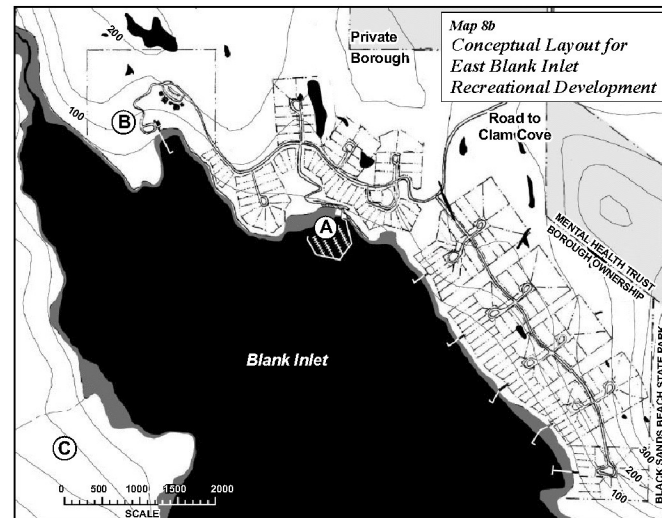
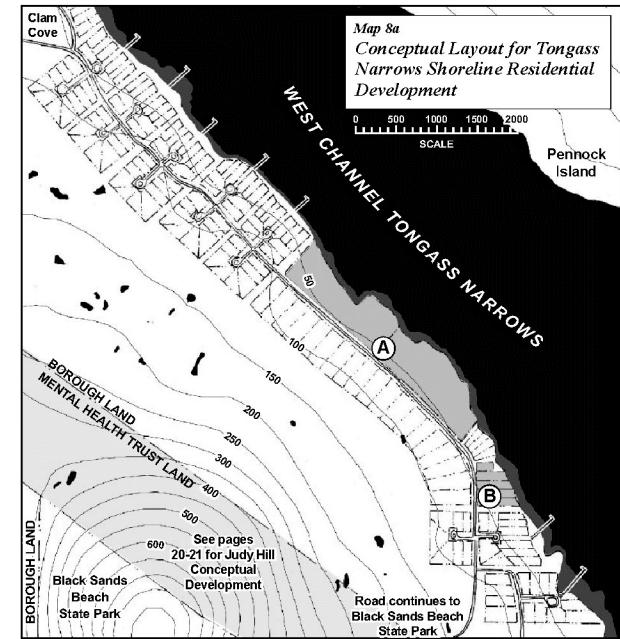
RRS/6 Recreational subdivisions will include trails to common amenities and links to the proposed Gravina Trails System.

RRS/7 The Borough's shoreline lands immediately south of Clam Cove along Tongass Narrows will serve Clam Cove community expansion needs when demand warrants and road extension becomes feasible. Subdivision layouts will insure convenient waterfront access from upland lots.

RRS/8 Borough lands on and near the east coast of Blank Inlet will be the first priority for homesite development. A limited amount of Borough (and possibly University) lands on the west shoreline of Blank Inlet will be made available for water-accessible, recreational cabin development (this area will not likely be served by roads during this plan horizon).

Notes, Map 8a

- Layout provides 134 new lots averaging 20,000 sf and larger, 44 of which are on the waterfront
- Could help meet demands for Clam Cove community expansion.
- Subdivisions could be initially developed with boat access around shared docks (see sidebar, pp 28-29). Full development as shown would require a road extension from the Clam Cove area.
- Land is Borough-owned except for two privately owned tracts (A and B). Borough-owned shoreline could be retained for public access and use, primarily by area residents.



Notes, Map 8b

- Layout provides 148 recreational cabin/homesite lots 20,000sf and larger, 52 of which are on the waterfront.
- Subdivisions could be initially developed with boat access around shared docks (see sidebar, pp 28-29). Full development would require a road from Clam Cove.
- All land is Borough-owned
- Steep slopes, major creeks, wetlands and lakes incorporated into open space system on which all lots have frontage.
- Shoreline retained in public ownership for access and use (shoreline trail connects Black Sands Beach State Park to other Gravina trails).
- Small boat harbor and community center (area A).
- Potential site for "Gravina Lake Country Research & Educational Center" (public or non-profit facilities such as an interpretive center, University of Alaska SE satellite campus, etc.) (area B).
- Possible water accessible cabin leases (area C).

Part Two: Policies
9/ Planned Development

By “planned development” is meant larger scale site development (more than just several lots) guided by an overall master plan, often undertaken by multiple landowners and investors (including public partners), and often with public participation. Planned development offers many advantages. It can:

- maximize the efficiency of infrastructure and services through more concentrated development;
- permit greater mix of development types, often incorporating single detached residences with townhouses, apartments and commercial areas;
- permit shared or common improvements including trails, boat ramps, docks, moorings, recreation facilities and community centers;
- increase the attractiveness (and value) of individual properties;
- maintain a desired density in areas with difficult terrain or site conditions;
- make smaller parcels more viable and profitable if combined;
- protect key amenities, such as a special beach, boat harbor site, etc.; and generate greater tax revenues.

Planned Development (PD) Policies

PD/1 The Borough will consult with Mental Health Trust to explore ways their Judy Hill and Gravina Point lands might be combined to promote future planned recreational developments.

PD/2 The Judy Hill and Gravina Point planned developments will be promoted as part of a development that would include road, infrastructure and trails extensions, residential and commercial land disposals, marine improvements (docks, mooring buoys, boat launching ramps, etc.) and recreational development.

PD/3 The Borough and Mental Health Trust will include Alaska State Parks representatives in development proposals for Judy Hill and Gravina Point in order to maximize benefits from Black Sands Beach State Park operations.

PD/4 Planned development areas shall be designed to provide waterfront access for upland properties and the general public.

PD/5 The Borough will examine the feasibility of public or private golf course development at the Judy Hill site.

PD/6 The Borough will use its lands in the Gravina Lake Country area to meet mitigation requirements for wetland impacts as a result of roads and other development activities associated with planned developments.

PD/7 Planned developments will require provisions for on-site package sanitation systems unless connection to a community or other existing system is feasible.

Findings

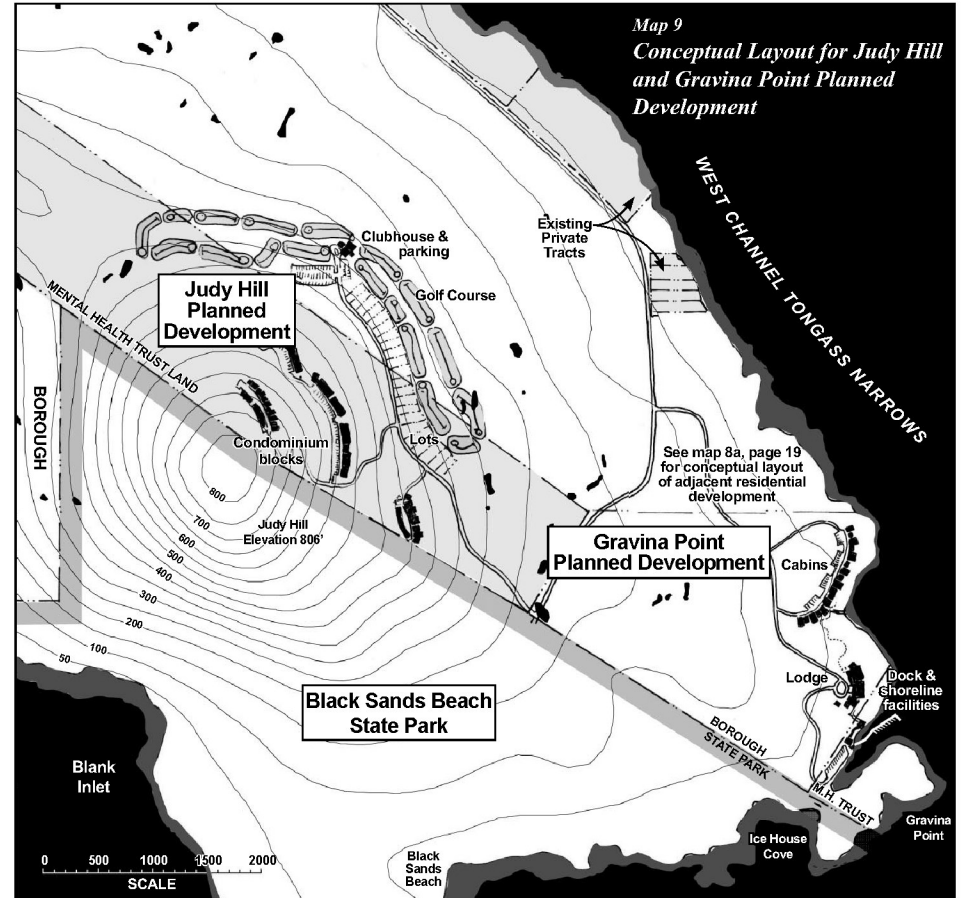
Mental Health Trust and Borough uplands on the east side of Judy Hill contain poorly drained soils and steep slopes, making conventional development difficult. A planned development strategy would permit siting development activities in the suitable pockets and leaving unsuitable areas as open space. The patches of better drained soils around Judy Hill may be sufficient to develop a golf course, equestrian park, ORV park, or other recreational facilities associated with residential and commercial activities.

The Mental Health Trust holdings at Gravina Point are too small (10 acres) to take advantage of the dramatic nature of the site. By combining it with some of the Borough’s adjacent shoreline and uplands, it becomes much more viable for recreational development such as a fishing lodge and related residential properties. Viable development of the Judy Hill and Gravina Point areas would require road access since the sites include extensive uplands. Approximately 2.75 miles of road would be needed to reach Gravina Point from Clam Cove.

Black Sands Beach Park improvements, proposed trails, and natural areas near the Judy Hill and Gravina Point sites could support high quality recreation-oriented planned developments to be enjoyed by residents as well as visitors.

For years, local residents have sought to develop an 18-hole golf course. Within SE Alaska, there are courses in Wrangell and Juneau. While the Judy Hill area is not the only site in and near Ketchikan, it does have potential to warrant serious consideration. An important limitation is the presence of wetlands and deep organic soils. Wetlands are protected by Federal statute, and peat soils, while developable into fairways, are subject to compaction and shrinkage as the organic deposits decompose. The slopes of Judy Hill may contain enough mineral soil areas and slope to permit the site drainage necessary for golf course development. Typical physical requirements for competition-level golf courses include: 150-175 acres of well-drained land, gently rolling topography, primarily a north-south orientation and an attractive setting.

The facing page illustrates conceptual layouts for Judy Hill and Gravina Point planned developments.



Judy Hill Notes This concept consists of condominiums and single family lots around an 18-hole golf course.

- Development uses Borough and Mental Health Trust lands.
- Condominium blocks sited on upper slopes of Judy Hill to take advantage of soil drainage, views and natural forest cover.
- High value lots front on proposed golf course.
- Lower slopes of Judy Hill may have more mineral-based soils and possibilities for site drainage to make golf course development feasible. Clubhouse and parking situated between two 9-hole circuits.
- Improved access from Ketchikan necessary, including road from Clam Cove area.
- Other options (if conventional golf not feasible) include equestrian center, ORV park, winter sports, or recreation cabins.

Gravina Point Notes This concept consists of a small fishing lodge situated on the cove north of Gravina Point.

- Development uses Borough and Mental Health Trust lands.
- Cabin block provides waterfront views, southeast exposures and shoreline access.
- Main lodge on bluff above cove could include restaurant.
- Shoreline facilities could include boathouse, dock, café and parking.
- Development could take advantage of trails and attractions at adjacent Black Sands Beach State Park.

Full development would depend on road access from airport. Initial development (lodge, dock, waterfront facilities) may be feasible with access by boat or floatplane.

Part Two: Policies
10/ Recreation Development

Findings

The wild and untouched character of the Blank Inlet area, with its abundance of wildlife and fisheries resources, and proximity to Ketchikan form the basis of its attraction for recreational use. Fishing, hunting and boating are the primary recreational activities in the area.

Black Sands Beach State Park, with its 640 acres of land and marine waters, has a number of attractions including popular Black Sands Beach, other beaches and coves, Blank Islands and Judy Hill. Facilities include pit toilets and one mooring buoy.

The area has exposed marine conditions subject to wind and wave from Nichols Passage. The few protected coves and beaches are important to recreational boaters. The buoy at Black Sands Beach is the only public mooring.

Primary access to the area will continue to be by boat and recreation activities will be concentrated along the shoreline. Trails development on Gravina may improve land access and use of uplands. Road access to Black Sands Beach from Clam Cove may be feasible depending on proposed Pennock bridge implementation and road investment decisions.

Trails could link Black Sands Beach, Judy Hill, the Blank Inlet estuary, and Gravina Lake Country with Bostwick Lake and other proposed trails. Trail development will require careful alignment to minimize the need for boardwalks and other techniques to traverse the extensive muskegs. Gravina Lake Country, a unique concentration of lakes and wetlands, is a rich natural area with potential to be a popular attraction. All of it is Borough owned except for the 84-acre subdivision of 50 circular recreational lots.

The Clam Cove community does not have parks and recreation related areas. A park, public dock, and trailhead to the Gravina Shoreline Trail is recommended as part of the proposed South Airport Reserve Industrial Park (see Central Gravina & Airport Reserve plan, pp 21) immediately north of Clam Cove. Providing some waterfront land in Clam Cove for public recreation and marine access would be important to a future community.

Planned development areas around Judy Hill and Gravina Point (see pp 20-21) could include special recreational facilities such as a golf course or equestrian park to serve residents and visitors.

The west shoreline of Blank Inlet (Borough and University Trust lands), as well as sites within Black Sands Beach State Park could provide places for boat accessible recreation cabins. Some could be long-term leases; some could be rentals. Currently, Gravina Island only has one rental cabin, administered by the Forest Service, located at Phocena Bay on the island's west coast.

With improved access from Ketchikan, winter recreational use of Gravina Island could be promoted. The numerous lakes could provide ice skating opportunities, the extensive poorly drained areas can be more easily explored, and snowmobile use areas could be delineated.



Blank Inlet's western shoreline, shown here, slopes up to mountains making up California Ridge. The peak to the right is 2096 ft Nipple Mountain, which is recommended as an old growth reserve in the Gravina Timber Sale, draft EIA. The left peak is the slightly lower Plain Mountain. Access to this shoreline will likely remain primarily by boat.

Recreation Development (RD) Policies

RD/1 The Borough shall work with the USFS, Alaska State Parks, Trails Ketchikan and others to prepare a Gravina Island Trail Plan, incorporating Clam Cove and Blank Inlet attractions and linking to the proposed Gravina Shoreline Trail along the Airport Reserve and Bostwick Lake loop (see Central Gravina & Airport Reserve Plan).

RD/2 New recreational attractions shall be developed that provide multiple means of access (boat/kayak, vehicle, bicycle, walking, wheelchair) to address a range of needs & preferences.

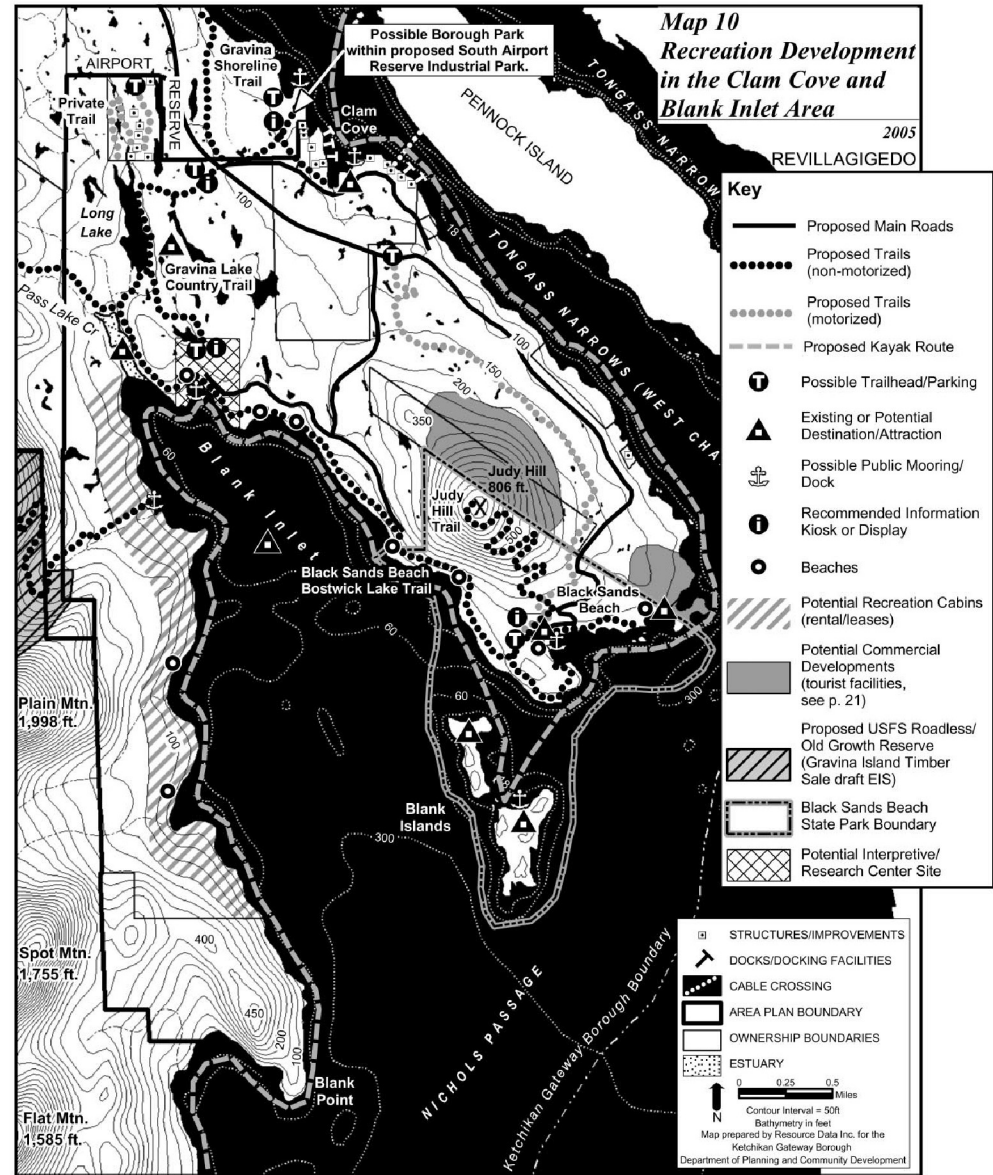
RD/3 The Borough shall provide easements and setbacks for development activities on its waterfront lands to enable access and movement along the shoreline.

RD/4 The Borough shall work to provide suitable areas for motorized recreational activities, away from sensitive natural areas, and from areas of high non-motorized recreational use.

RD/5 The Borough shall support development of visitor industry services, facilities and attractions such as lodges, boat launching ramps, golf courses, etc.

RD/6 The Borough shall work to improve marine access and use of the area's recreational attractions through the installation and maintenance of mooring buoys.

RD/7 Hunting will continue to be permitted on Borough lands. Motorized access will be regulated to minimize impacts.



Part Two: Policies
11/Resource Management
(timber, fisheries, mining, habitat & views)

Findings

The Clam Cove and Blank Inlet area has limited commercial timber resources, mostly located in prime recreational areas (Black Sands Beach State Park), along the shoreline, or along creeks.

Blank Inlet is part of ADF&G Statistical Area 101-27, considered to be a "secondary troll and seine fishery" meaning that it is not as heavily fished as, for example, the western shoreline of Gravina. The area does have geoduck potential, but is currently within a dive fishery study area, with no commercial harvest permitted. Blank Inlet estuary is one of Gravina's three most important fisheries nursery areas (along with Bostwick Inlet and Vallenar Bay).

The habitat values are significant. Blank Inlet estuary and its watersheds are a microcosm of many of the Ketchikan area's ecosystem types (eel grass beds, open muskeg wetlands, various forest types, large and small lakes, etc.). This diversity is reflected in an abundance of marine and terrestrial plants and animals. The lake system is important to migrating waterfowl, and the Blank Inlet shorelines are considered critical deer winter range.

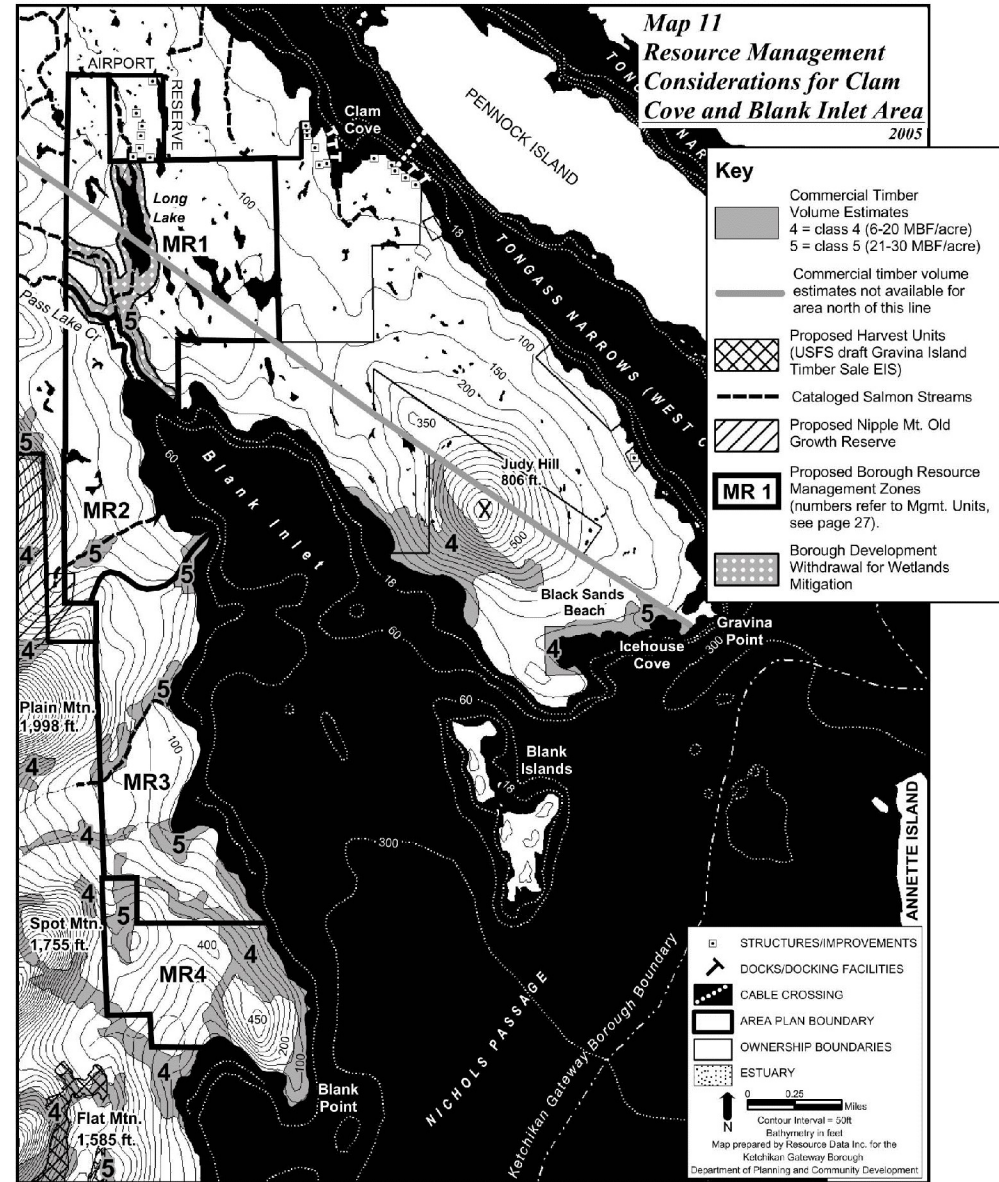
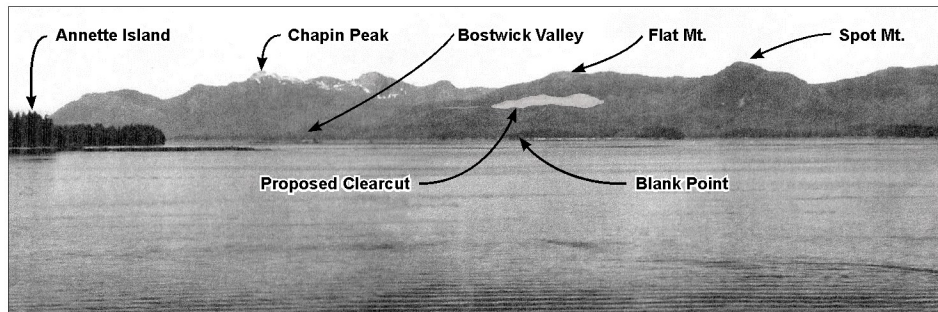
There may be sand and gravel deposits along the glacially deposited moraines and eskers between and around the lakes. Some rock materials sites may exist around Judy Hill, but these resources need to be evaluated.

The area's flat to rolling topography and low elevations makes shorelines the most sensitive areas visually. Much of the area is not readily visible from Ketchikan (blocked by Pennock Island), making shoreline visibility from ship channels the most critical visual concern. There is virtually no sign of human activity other than the developments around Clam Cove.

Mining exploration focused on the Judy Hill area, and resulted in one patented gold mining claim along Tongass Narrows, but no significant development. The area was included in a mineral survey fly-over (1999) with results pending.

The Forest Service proposes that its Nipple Mountain area lands be managed as an Old Growth Reserve. In addition, Borough lands along several streams and lakes above Blank Inlet estuary have been classified open space as wetlands mitigation for the North Gravina road under development.

View from Mountain Point across Blank Inlet, illustrating the location of clearcuts proposed in the Gravina Island Timber Sale draft EIS. Photo simulation is a useful tool in assessing visual impacts of proposed timber cutting or other development activities. The harvests proposed here are located around Flat Mountain, and are near the University Trust lands below Spot Mountain to the right. The lower slopes of Blank Inlet shown here, owned by both the Borough and University, do contain patches of commercial timber; however it is mostly along stream valleys, and would be difficult to access except with helicopter logging techniques. Due to high recreational values of the Blank Inlet area, this plan recommends selective harvesting rather than larger clearcut.



Resource Management (MR) Policies

MR/1 The Borough will complete a materials (rock, sand, gravel) resource assessment of eastern Gravina Island (including the Clam Cove & Blank Inlet area) to identify potential sites, quality of materials, feasibility of development, reclamation potential, and recommended strategy for providing materials for Gravina development (including analysis of securing materials from the Airport quarry and from sites on Revillagigedo).

MR/2 Clam Cove and Blank Inlet's commercial timber resources will be used to support small, value added forest products industries, especially those located within the North Gravina industrial park and adjacent cottage industry zone.

MR/3 Timber harvest activities will be designed to protect the beach fringe along Blank Inlet (up to 300' along the shoreline).

MR/4 Timber harvest activities within anadromous creek watersheds will be guided by Alaska Department of Fish and Game requirements.

MR/5 Marine areas in Blank Inlet should be managed by DNR to give priority to habitat protection first, recreational and personal resource harvests second, and commercial fisheries harvests third.

MR/6 Personal resource harvest activities will continue to be allowed throughout the area except on private lands. Harvest activities in specially designated lands such as Black Sands Beach State Park will be permitted and guided by park management plans and policies.

MR/7 The Borough will exercise its development controls to retain the natural visual character of the coastal landscape primarily through setbacks of road construction and other land transformation activities from the shoreline.

MR/8 Mineral exploration and development will be permitted to the extent that existing and planned uses as outlined in this plan are not adversely impacted. Master plans are required for materials and quarry site developments which include provision for screening, noise and dust control during operations as well as restoration and re-use when mining activities are completed.

MR/9 The Borough will mitigate the impacts of roads and other development activities affecting federally recognized wetlands through expanding high value wetlands watersheds in the Gravina Lake Country area.

MR/10 The Borough and other landowners will identify and dedicate sites where experimental timber management activities can be tested (e.g., hybrid poplars, spruce and cedar plantations, fuelwood lots, replanting approaches, etc.).

MR/11 Critical habitat areas defined by ADF&G and USF&WS should be retained in their natural state. Buffer strips may be required to separate such areas from road building or residential development. The width of such buffers is to be recommended by ADF&G and/or the USF&WS.

MR/12 The Borough will pursue land exchanges where appropriate to create ownership boundaries which allow for more cost-effective and consistent management.

The following resource management policies, from the Gravina Island Plan Citizen's Guide are important to the Clam Cove and Blank Inlet area.

10.1 The State of Alaska Forest Resources and Practices Act (AS 41.17) and its regulations and procedures, shall provide the minimum resource protection standards and permit review procedures for timber harvest from federal, state, borough, and private land.

10.2 The Borough's forest management activities shall be planned so as to:

- Create a sustainable supply of direct and indirect jobs within the local economy.
- Provide a range of opportunities for large and small businesses engaged in the wood products industry.
- Improve timber growth and productivity on suitable timberlands made available for timber harvest, and manage these lands for long-term sustained yield.
- Contribute a timber supply to meet market demand.
- Provide a mix of resource use activities to meet recreation, personal resource harvest & other needs.
- Recognize scenic values of timberlands viewed from popular roads, trails, marine travel routes, recreation

sites, bays, and anchorages, and modify timber harvest practices accordingly.

- Minimize adverse impacts to fish and wildlife populations and their habitats.
- Ensure the free passage of anadromous and resident fish in rivers, streams, lakes, and marine waters.
- Minimize sedimentation, erosion, and alteration of natural drainage patterns.
- Maintain long-term productivity of forest soils and ecosystems.
- Promote regeneration of harvested forests.

10.3 Sites for in-water log storage and transfer shall be selected and these activities conducted so as to minimize adverse affects on the marine ecosystem, conflicts with recreational uses, navigation hazards and exposure to storms.

10.4 Sand and gravel may be extracted from intertidal areas only when there is no feasible alternative to meet public need.

Guidelines for Clam Cove and Blank Inlet Resource Management Units

Management Unit
(see map, page 25)

RESOURCE VALUES

	1	2	3	4
Recreation	●	●	○	●
Timber				●
Fisheries		○	○	○
Minerals				
Energy				
Habitat	●	●	●	●
Air & Water Quality	●	●	○	○
Hazard Avoidance	○	○		
Visual/Aesthetic	●	○	○	○
Visitor Attractions		●		○
Screens & Buffers	●	○		
Open Space	●	●	○	

ACTIVITIES

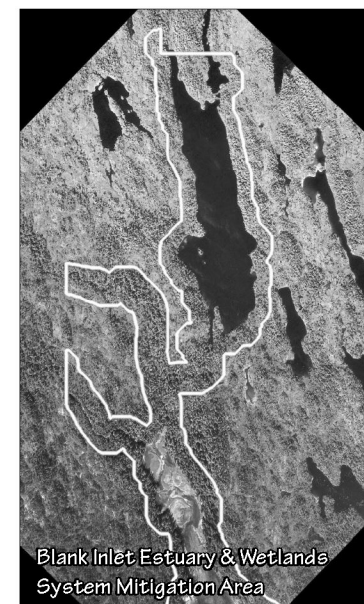
	1	2	3	4
Recreational hunting	●	●	●	●
Recreational fishing	●	●	●	●
Recreational cabins (leases)	●	●	●	●
Motorized recreation, ORVs	●	●	●	●
Personal fuelwood cutting	●	●	●	●
Structures (temporary)	●	●	●	●
Structures (permanent)	●	●	●	●
Materials site/quarry	●	●	●	●
Timber harvest	●	●	●	●
Commercial fishing	●	●	●	●
Roads (controlled access)	●	●	●	●
Roads (open access)	●	●	●	●
RV camping	●	●	●	●
Tent camping	●	●	●	●
Hiking	●	●	●	●
Wild food gathering	●	●	●	●

Values Key

- Primary value (access, use and management decisions should favor this activity)
- Secondary value (access, use and management decisions should favor this activity as long as it does not interfere with primary values)
- Not present or of significance in this area

Activities Key

- Generally allowed
- Allowed only in designated areas or by permit
- Not generally allowed



This cropped aerial photo of the Blank Inlet mitigation area shows the path of glacial ice movement across this landscape by the elongated, parallel, mostly north-south oriented lakes. Glaciers scour out depressions which eventually become lakes. They also push up and leave deposits of silt, sand and rock which become small hills (called moraines and eskers). All of these features are evident in this landscape.

Notes:

1. Management Unit 1 (Borough land) should be designated "Gravina Lake Country Natural Area".
2. Management Unit 2's primary management objective is to extend the management objectives proposed for the USFS Nipple Mountain Old Growth Reserve to the Blank Inlet shoreline.
3. Management Unit 4 includes private lands where access and uses are subject to permission by owner

*Part Two: Policies
12/ Shoreline
Development
“Best” Practices*

The development that occurs on Gravina will be largely expressed in changes to its shoreline. Most industrial activities are dependent on marine access and most residential uses will occur along the beach. Gravina’s shoreline is important in many ways to Ketchikan residents: we admire its beauty, we fish along it, we walk along it (where possible), we enjoy or depend on the deer and other animals who rely on the shoreline for survival, and we benefit from the visitors who come to Ketchikan to, among other things, appreciate our beautiful waterfront setting.

The impacts of change that reduce our enjoyment of Gravina or our attractiveness as a visitor destination can be minimized by employing development practices that respect the important role the shoreline has in our lives. Regulations administered by the Borough, Corps of Engineers, Fish & Game, and others address only some impacts. Many impacts can only be addressed through responsible individual initiative. The following “best practices” are intended to assist planning and siting of new shoreline structures and protecting assets that citizens now enjoy. They are not meant as official procedures, but rather as guidance to designing successful shoreline facilities and residences.

1. Give priority to water-dependent and water-related uses Waterfront land is scarce and expensive. It is important to use it carefully and not substitute it for uses that could function just as well on non-waterfront land. A water-dependent use is one that requires a waterfront location, like a dock, which can only be located on the water. A water-related use is one that benefits uniquely from its waterfront location, even though it is not strictly necessary for it to be on the water. A waterfront lodge at Gravina Point is an example, as well as recreation and some residential uses. It is important to optimize water-dependent and water-related values, both because community interests will be well-served by the property’s contribution to the local economy and because high property values will be developed and maintained.

2. Start with a site development plan An important first step is a site plan that identifies the best locations for structures, roads and other improvements, as well as areas to remain natural. In preparing such a plan it is important that the long-term development and use of the entire property and, when appropriate, neighboring properties be taken into account.

3. Minimize site re-grading People often respond to steep and irregular shoreline topography by filling in low areas and cutting away steep banks in order to have a flat building pad. This typically leads to extensive rock retaining structures. On narrow waterfront lots, this can easily impact most of the site. Often the best solution is to build on posts or pilings in order to make a lighter footprint. On lots where site re-grading may impact 50% of the site within 200 feet of the shoreline, professional design assistance should be sought prior to commencing work.

4. Maintain the natural flow of water through the property. Shoreline areas have many small creeks and drainage channels for directing Ketchikan’s abundant rainfall and storm water to the sea, thereby preventing erosion and flooding. Property owners should minimize disturbance to these often fragile, natural water flow paths.

5. Setback buildings and structures from the shoreline. Shoreline setbacks are used to allow property owners to enjoy the privilege of living or establishing a business on the waterfront while protecting the views of adjacent property owners as well as recognizing public interests and ecological considerations. The setback may often be 50 to 100 feet or more depending on the site, nature of the proposed development, extent of vegetation removal and other development practices.

6. Minimize clearing of trees and other native vegetation. Shoreline areas contain many different ecological communities and the greatest number and variety of plants

and animals. Leaving dead snags (for eagles and other birds to nest/roost), leaving native trees and shrubs (for deer to use in winter), and setting structures back from the shoreline (leaving tidelands undisturbed) are all ways to provide for the needs of native animals. It is recommended that for new residential and recreational development within 200 ft of the Blank Inlet shoreline, at least 50% of the natural vegetation should remain undisturbed.

7. Setback buildings and structures from the shoreline. Shoreline setbacks are used to allow property owners to enjoy the privilege of living or establishing a business on the waterfront while protecting the views of adjacent property owners and recognizing public interests and ecological considerations. The amount of setback may be 50 feet or more depending on the site, nature of the proposed development, extent of vegetation removal and other development practices.

8. Allow for walking along the shoreline. Property lines typically extend landward from the mean high tide line, permitting public movement along the shore when tides are low. Docks, jetties, mooring lines and other shoreline structures should not interfere with this except as required for economic development activities. A “best practice” in Borough waterfront subdivisions is to provide shoreline trails where needed above the mean high tide mark to help people more easily negotiate obstructions such as rock outcrops, logjams, small creeks, etc.

9. Maintain the natural flow of water through the property. Shoreline areas have numerous small creeks and drainage channels for directing Ketchikan’s abundant rainfall and storm water to the sea, thereby preventing erosion and flooding. Property owners should minimize disturbance to these often fragile, natural water flow paths.

10. Keep wastewater out of the sea. Residential development creates two kinds of wastewater: sewage and runoff (from buildings, driveways, etc.). For years, waterfront properties took advantage of the significant tidal flushing of Tongass Narrows to dilute sewage. This is no longer permitted due to higher water quality standards. Surface runoff can best be controlled with site grading and landscaping. Wherever possible, runoff should be directed into a natural basin or swale where sediments and possible pollutants can be naturally filtered prior to flowing to the sea. Sewage treatment systems should be regularly checked to insure proper functioning.

11. Avoid difficult site conditions. Some shoreline lots may have especially difficult site conditions such as a high bank, very steep topography, or a large creek running through. These may mean that one cannot build as close to the shoreline as desired, or special professional assistance is needed to work within these constraints. In a few cases, such limitations may indicate that the lot should not be developed at all.

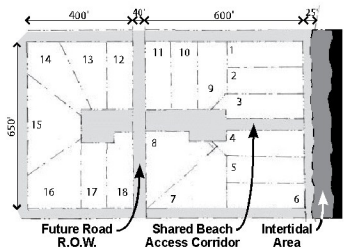
12. Minimize site disturbance during construction. Providing access for heavy equipment and storing building materials typically requires land clearing and site modification beyond the perimeter of the finished building. Minimizing and keeping these areas upland, away from the shoreline, will save later landscaping costs and maintain the natural quality of the site. Trees and areas to remain undisturbed by construction crews should be clearly marked.

13. Keep vehicles and clutter back from shoreline. Shorelines are visually sensitive parts of the landscape: they are frequently viewed and have low screening ability. This is especially important along the heavily-trafficked west channel of Tongass Narrows south of Clam Cove. Derelict vehicles, piles of building materials and similar items should be kept upland, screened by vegetation. Providing for vehicular access to the waterfront requires site disturbance (clearing and re-grading). Unless essential for the conduct of business, driveways, garages, and parking are best kept upland.



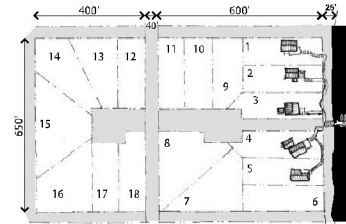
Development on shoreline lots without road access requires investments in some kind of mooring or docking structure. Where nearshore topography is shallow, such as in this case along Tongass Narrows south of Clam Cove, a lengthy dock may be necessary. Where more intense shoreline development happens, such structures could be shared by both waterfront and upland property owners to reduce construction and maintenance expenses, minimize environmental impacts and reduce clutter along the shoreline.

Shoreline Subdivision Layout Incorporating Many of the Recommended Practices Described Here



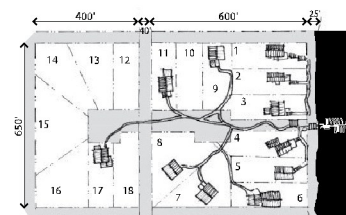
Subdivision layout establishes 18 lots (6 waterfront properties), access easements and open space reserves for shoreline and upland properties. Note recommended 25 ft. shoreline common space above mean high tide to allow for walking along beach. Public/common space is shaded.

Docks



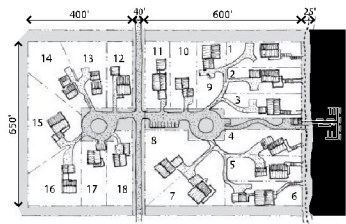
Stage 1: Waterfront properties sell first and are developed around a shared dock and access by boat only. Note development of shoreline trail/ boardwalk.

Trails/Pioneer Roads



Stage 2: Some upland properties also develop with access still by boat only. Note development of central access corridor down to shared dock.

Main Road



Stage 3: Road extended to subdivision. Upland properties begin to develop, and waterfront properties add driveways and parking. Note shared driveways along lot lines and road down to beach/shoreline.

Part Two: Policies
**13/ Implementation
 Strategy & Costs**

The Borough's Role

As the principal landowner in the Clam Cove and Blank Inlet area, The Borough has a key role in plan implementation. The Borough has local responsibilities for land management (including the subdivision and sale of Borough lands and the regulation of land uses), economic development, and transportation planning. These responsibilities imply important leadership roles to:

- promote and implement economic development and land use activities within the Clam Cove and Blank Inlet area;
- determine an effective transportation network for this area;
- stimulate private/public partnerships for initiatives such as the Judy Hill and Gravina Point planned developments proposed in this area plan;
- develop recreational uses and facilities on selected lands as proposed in this plan;
- secure federal/state funds for infrastructure improvements; and
- work with DNR and the Mental Health and University Land Trusts to secure stable timber supplies for local processing and to provide recreational and visitor industry opportunities on appropriate State lands.

One important early regulatory initiative will be the proper zoning of Gravina's lands to provide the framework for the plan's recommendations to be implemented. New zoning classifications are needed (resource management, planned development and others) and some existing zones should be modified. The Borough can facilitate priority economic development projects by working with regulatory agencies to pre-qualify sites so that planning and environmental review steps are complete and a project applicant can go directly to site, engineering and construction plan review.

To successfully implement the plan, the Borough will need to commit to sufficient staff (contracted or "in-house") to assume its leadership roles. It will require close cooperation between the Planning Commission, Borough Assembly, and Planning and Public Works Departments. It will also require collaboration between these organizations, other public agencies, and the private sector, including individuals and firms interested in investing in the projects conceptually proposed in this plan.

Interagency Partnerships

Implementation of the Clam Cove and Blank Inlet Area Plan requires working relationships between the Borough and those public agencies and land trusts given responsibility for managing major portions of this area's lands and resources: State DNR (including the Division of Parks), State DOTPF, and Mental Health and University Land Trusts. Each of these has its own mission and objectives. Each needs to coordinate with the others for effective implementation. In order to secure an intergovernmental partnership, it is recommended that a task force of these agencies and trusts be formed and meet at least once a year to define cooperative actions to manage area resources. Cooperative actions may include:

- joint financing for construction of roads, trails and recreational facilities;
- cooperative harvest management to sustain timber flows to local processors;
- land exchanges to facilitate better and more cost effective management;
- joint development of projects proposed in this plan;
- identification of quarry locations for construction projects;
- road maintenance and closure policies to manage habitat and contain maintenance costs; and
- agreements on mitigation lands to facilitate projects.

Clam Cove Expansion

A plan for Clam Cove is presented in conceptual form (see pp 17) in order to stimulate discussion on the future of this community. An early priority for

implementation is to meet with property owners and residents to determine a desirable community plan to guide development of private and Borough property in this growth center. The Clam Cove community plan should address:

- community resident and property owner interests;
- access of present and future residents to the waterfront;
- provision of sufficient and suitable lands for future commercial activities, community facilities and residential expansion;
- an efficient road network to serve the community center and future expansion;
- a trails network that links the community with other planned Gravina trails and ensures access to the waterfront;
- a capital improvements plan that meets immediate infrastructure needs; and
- appropriate zoning that implements the community plan findings.

Borough Land Development

The timing of financing of the Pennock bridge to Gravina will have considerable bearing on the timing and sequence of Borough land sales in the Clam Cove & Blank Inlet area. An early decision to build the Pennock bridge will focus greater Borough road and infrastructure investments in this area whereas financing delays would likely emphasize investments in the North Gravina area. If the Pennock crossing is constructed, the most cost-effective choice for new development would be near to and south of Clam Cove along Tongass Narrows.

As the Borough develops new subdivisions, access roads and infrastructure should be provided and the Borough should expect to recover all costs of development in the sales prices of lots.

The Planned Developments

The proposed Judy Hill and Point Gravina planned developments have similar requirements to meet for successful implementation. (For a discussion of the planned developments, see pp 20-21.) Both are presented in conceptual form in this area plan. In both cases, Planned Development Master Plans will need to be prepared that provide strategies for development, including:

- defined land use plan for each commercial and residential development site;
- preferred recreational facilities mix and locations;
- shared use of facilities and infrastructure (wastewater, roads, power, water, docks);
- financing of infrastructure;
- land sales and lease terms;
- waterfront access measures;
- project marketing; etc.

Financing Implementation

To implement the Clam Cove & Blank Inlet Area Plan, an early priority will be to finalize the road and infrastructure network to serve the area. This Gravina Island Plan proposes a "Road System Master Plan" that provides for consistent design, standards and management policies for the various road segments outlined on pp 14-15. Three initial segments of the road system are illustrated in the map on page 33. The order-of-magnitude costs indicated in the sidebar represent a paved road, developed to a 35-45 mile per hour Forest Highway standard, water main, and sanitary sewer. Road construction costs could be reduced with lower standards and initial stages might be unpaved, single-lane roads with turnouts.



North Pennock Island, shown here in the foreground, with Clam Cove above. Pennock has developed more because it is closer by boat to downtown Ketchikan and has more private shoreline available. In the background are three of Gravina's prominent mountains: Curve, Nipple, and Plain. The highest is Nipple Mountain at nearly 2100 feet.



The community of Clam Cove is clustered near the shoreline for easier boat access. The privately owned float shown here extends out several hundred feet from the shoreline due to the relatively shallow water depth. The buildings are on the Stensland property, occupied by the third generation of the Antone Stensland family, which homesteaded this site back in 1913.

Part Two: Policies
**13/ Implementation
 Strategy & Costs**
 (continued)

If the Pennock bridge is constructed, water and sewer could be incorporated in the bridge structure and roadway and distributed to existing treatment facilities in Ketchikan or to a facility on Gravina Island. If the Pennock bridge is not constructed, water and sewer might be connected to expanded facilities at Ketchikan International Airport (extension across Tongass Narrows is not included in the Summary of Costs). Residential, commercial, and some industrial uses can be serviced with a Septic Tank Effluent Pumping (STEP) system, as an alternative to a large-dimension sanitary sewer and fully centralized treatment plant. Alternatively, a local community water and wastewater treatment might be developed in conjunction with the South Airport Reserve Industrial Park.

Several funding sources are available for roads and infrastructure:

Priority Roads: Segment A: The segment between the Airport and Clam Cove area would be needed only if the Pennock bridge is not constructed. This would likely need to be financed by a combination of Borough funds, proceeds from Borough land sales, State contributions, private sector support via local improvement district assessments (see below), and possible federal support.

Segment B and C: Segment B would be the main collector road through Clam Cove and be the first stage of the shoreline road from the Clam Cove area south (segment C).

Design and construction funding for Gravina roads may be available from the U.S. Department of Transportation TEA-21 and other programs, while related pedestrian ways, shoreline access and other amenities may be eligible for TRAAK program funds. These programs typically cover 80-90% of total project costs; the remainder requires local matching funds, all or part of which may be obtained from the State.

Water and Sanitary Sewer Systems: Funding for these services is provided by U.S. Environmental Protection Agency programs, which often funds approximately 50% of total project design and construction cost.

Electrical and Telephone Systems: Electrical and telephone systems have previously been installed by the City of Ketchikan, Ketchikan Public Utilities, with their development cost repaid by customers.

The local share of road and infrastructure costs can be provided by assessments to benefited private properties, using a Local Improvement District (LID). The LID may be initiated either by the Borough or by property owners in the benefit zone. Assessments upon individual properties are based on factors which can include area of property, building area of the property, property's demand for services, and degree of benefit from the improvements. A majority of property owners within the LID boundaries must approve its establishment and their respective assessments.

In determining the sum to be assessed under an LID, an allocation formula usually determines a public share of the total cost, attributable to community benefits for public safety, recreation and other purposes, as well as the shares representing benefits to private property owners. When public and private shares of the LID are determined, a municipal bond may be sold to cover their cost. The public share of such a bond issue is sometimes collateralized by a pledge of anticipated real estate tax receipts from the benefited properties, while the private shares are collateralized by the agreed assessment of the properties, supported by their fair market value.

2005-2006 Action Plan

The implementation plan, presented below, outlines 6 action priorities, estimated costs and lead responsibilities for each. The first 4 tasks are common to all three Gravina area plans (North Gravina, Central Gravina & Airport Reserve, and Clam Cove & Blank Inlet). Together they represent a logical strategy for responding to the development issues and opportunities described in this Clam Cove & Blank Inlet area plan.

1. New Zoning Classifications

Objective: Add three new zoning classifications to meet plan recommendations (Resource Management, Development Reserve, Planned Development).

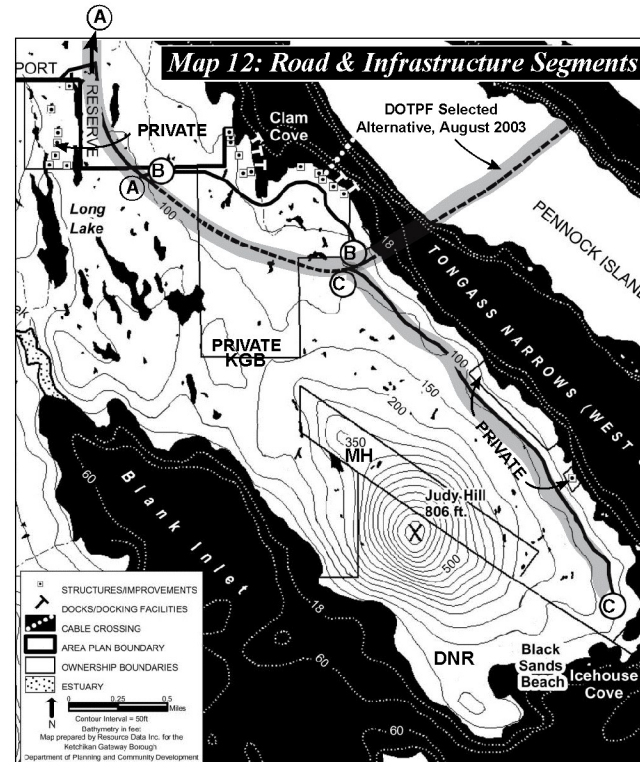
Description/Tasks: Conduct background research related to new zoning classifications; draft new ordinances; solicit public comment; secure approval by Planning Commission and Borough Assembly; prepare legal descriptions of zone boundaries.

Lead Responsibility: Planning Department.

Estimated Costs: \$10,000 (consultant fees) (this work will be applicable to all three Gravina plan areas and in other planning work underway such as Clover Pass).

Financing Strategy: Planning Department Budget (FY 2005-06).

Implementation Actions: Develop scope-of-work; select/ manage consultant.



Summary of Estimated Road and Infrastructure Extension Costs

Segment A: South end of runway to south end of Airport Reserve (this segment needed only if Pennock route not constructed).

Road: 1.5 miles @ \$1.0m/mile = \$1.5m
Water: 1.5 miles @ \$0.5m/mile = \$0.75m
Sewer: 1.5 miles @ \$0.5m/mile = \$0.75m
Total: \$3.75 million

Segment B: Clam Cove road
Road: 1.25 miles @ \$1.0 m/mile = \$1.25m
Water: 1.25 miles @ \$0.5 m/mile = \$0.6m
Sewer: 1.25 miles @ \$0.5 m/mile = \$0.6m
Total: \$3.1 million

Segment C: Clam Cove-Gravina Pt
Road: 2.25 miles @ \$1.5 m/mile = \$3.375m
Water: 2.25 miles @ \$0.5 m/mile = \$1.1m
Sewer: 2.25 miles @ \$0.5 m/mile = \$1.1m
Total: \$5.8 million

2. Gravina Interagency Task Force

Objective: Establish a mechanism for Gravina Island agency and selected private stakeholders to discuss and coordinate management and development plans.
Description/Tasks: Prepare information packet for task force members; establish first year task force priorities and meeting schedule.
Lead Responsibility: Borough Manager's Office
Estimated Costs: Minimal
Implementation Actions: Identify task force membership; secure commitments for participation; prepare information packet.

3. Gravina Road System Development Master Plan (Note: this will likely be one of the priority actions recommended by the Task Force described in number 2 above.)

Objective: To integrate all Gravina road development proposals (USFS, DNR, Borough, DOTPF, MHT) into a single master road plan and clarify issues regarding timing, costs, maintenance responsibilities, standards & level of service, public access, etc.
Description/Tasks: Conduct a Gravina roads system workshop, inviting agencies to present plans, frame the issues and invite public comment; create Gravina Roads Task Force to integrate proposals and public comment into proposed master plan.

Lead Responsibility: Borough Planning Department (coordination)
Estimated Costs: \$5,000 (Borough portion) with financial support from other agencies.
Financing Strategy: Planning Dept budget and other agency funds
Implementation Actions: Secure commitment to participate by other agencies, including funding; prepare issues presentation and supporting graphics for workshop.

5. Clam Cove Community Plan

Objective: Establish a community-supported vision for the future of the Clam Cove area to guide Borough, DOTPF, and other agency policies as well as public and private investments and plans for the area. (This would form the basis for the next step: a Clam Cove Community Master Plan)
Description/Tasks: Prepare materials to be used in community workshop (presentation, wall graphics, questionnaires, etc); conduct a workshop for Clam Cove residents, land-owners, interested citizens, and other stakeholders; document findings and recommendations into draft vision statement for comment; present final vision statement to Borough Assembly and community.
Lead Responsibility: Borough Planning Department
Estimated Costs: \$10,000
Financing Strategy: \$5,000 Borough Planning Dept budget (FY 2005-06) and matching funds from DOTPF Gravina Access project
Implementation Actions: Secure Borough and other funds; prepare scope-of-work; identify consultant(s).

6. Clam Cove Historic Buildings and Places Assessment

Objective: Understand the location and condition of possible heritage resources in the Clam Cove area and outline options for restoration, continued use, and interpretation.
Description/Tasks: Review historic information on Clam Cove area; conduct field survey of structures and sites (including interviews with knowledgeable residents); prepare report for interested groups and individuals.
Lead Responsibility: Borough Planning Department and Historic Ketchikan
Estimated Costs: \$5,000
Financing Strategy: Seek grant from State Heritage Resources Office
Implementation Actions: Write grant proposal and secure funding; prepare scope-of-work for contract; select consultants to complete work.

Borough Responsibilities for Implementation

	Borough Assembly	Planning Commission	Manager's Office	Planning Department	Public Works Department	Airport Management	Legal Department	Finance Department	Rec Department
Plan approval/policy setting	●	●	○	●			●		
Project planning for roads/infrastructure		●		●	●			●	
Master planning for industrial parks		●	●	○	○		●		
Recreation projects		●		○					●
Land use regulations/zoning		●		●			○		
Grant-writing				●	○			●	●
Creation/coordination of interagency task force	●		●	○	●				●
Airport-related economic activities		●		○	●	●	●	●	
Political lobbying	●		●				●		
Formation of LIDs	●			○			●	●	
Financial management	●		●					●	
Project management			●	○	●			○	●

● Leadership/Coordination Role
 ○ Major Role
 ● Advisory/Participation Role

4. Gravina Island Materials (rock, sand, gravel) Assessment

Objective: Ensure that the materials needs for Gravina road and other development are met in the most cost effective and timely manner, with minimal adverse impacts, and that quarry sites are reclaimed and reused to the extent possible.
Description/Tasks: Estimate short and long-term needs; identify potential sites, quality of materials, feasibility of development, reclamation potential, etc.; conduct cost-benefit analysis of securing materials from existing Gravina and Revilla materials sites versus developing new ones; recommend strategy to Borough Assembly.
Lead Responsibility: Public Works Department
Estimated Costs: \$20,000 (Borough portion)
Financing Strategy: \$10,000 from Borough, with matching funds from DOTPF
Implementation Actions: Secure funding; prepare scope of work; identify consultant(s).