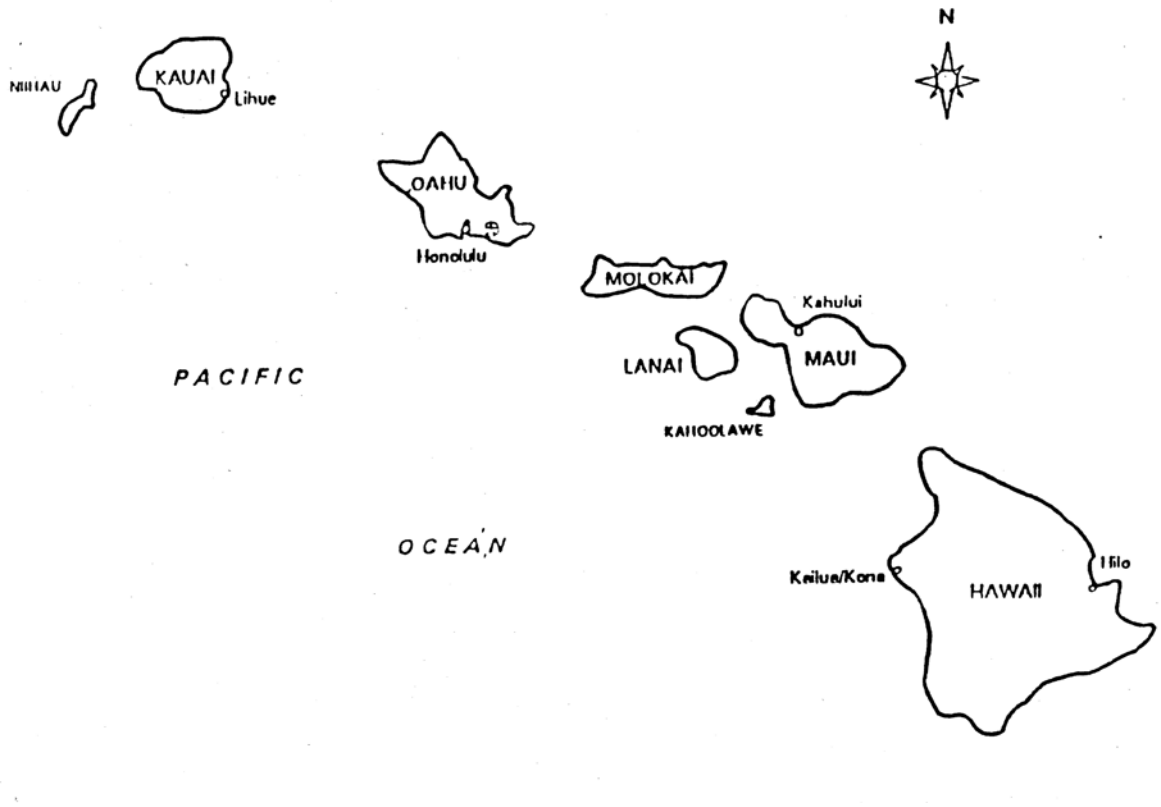
STATE OF HAWAII

800 MHZ
REGIONAL COMMUNICATIONS PLAN



REGION 11

JANUARY 1992

Amendment #1 – 2009 March 19

LIST OF AMENDMENTS

NUMBER	DATE	BRIEF DESCRIPTION
1	19 March	Updated Section 6.0 – The Region 11 Planning Committee; and Section 7.0 – Channel Allocation Plan

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1. 0 SCOPE

1.1 INTRODUCTION

In December of 1983, the United States Congress directed the Federal Communications Commission (FCC) to establish a plan to ensure that the communications needs of state and local public safety authorities would be met. By their regular means of initiation, the FCC began the process of developing such a plan. Through their efforts, and the efforts of the National Public Safety Planning Advisory Committee (NPSPAC), the plan was begun.

The National Public Safety Planning Advisory Committee provided an opportunity for the public safety community and other interested members of the public to participate in an overall spectrum management approach by recommending policy guidelines, technical standards, and procedures to satisfy public safety needs for the foreseeable future. After consideration of NPSPAC's Final Report and comments filed in Docket No 87-112, a Report and Order was released by the FCC in December 1987, which established a structure for the National Plan that consists of guidelines for the development of regional plans.

The National Plan provides guidelines for the development of Regional plans. The particulars of this plan are found in FCC 87-359, which contains the required steps and contents for regional plan development. It is on this document that this plan for Region 11, State of Hawaii, is developed.

1.2 PURPOSE

Public safety communications has, for many years, been inadequate throughout the United States. This is as true for Hawaii as it is for any other state. Many, if not all, public safety radio users constantly contend with outside interference, noise, and overcrowding. It is with these problems in mind that this plan was developed.

This regional plan was developed with the objective of assuring all levels of public safety/public service agencies that radio communications in the near and distant future will not suffer from the problems of the past. The allocation of frequencies was done as equitably as possible. The goal was to supply a pool of frequencies for each county and a pool for state agency use with adequate reserve allocations for future needs in all areas, and a method to appeal initial allocations based on need.

The National Plan, as developed by NPSPAC, was followed very closely in all considerations for frequency allocation, re-use, turn back, regional interoperability, spectrum requirements, and adjacent region operations. This plan should provide the flexibility to accommodate growth and changes that are bound to occur in public safety and public service communications operations long into the future.

2. 0 AUTHORITY

2.1 REGIONAL PLANNING COMMITTEE

The development of the Public-Safety Radio Communications Plan for Region 11, the State of Hawaii, has followed the requirements of the FCC's Report and Order as issued in the matter of General Docket 87-112.

In accordance with the FCC's Report and Order 87-112, the Associated Public-Safety Communications Officers Inc (APCO) recommended to the Commission the appointment of a "Convener" for Region 11. The Convener served as the coordinator for the assembly and formation of the planning committee.

Participants in the formation of the Regional Planning Committee represent interested parties from the Public Safety and Special Emergency Radio Services. A total of 15 individuals participated in the development process. The list herein contains the names, organizational affiliations, mailing addresses, and phone numbers of all participants in the Regional Planning Committee.

The Committee was selected by those who attended the planning meetings. Each member of the Committee, representing an eligible licensee under the Public Safety Radio Services and the Special Emergency Radio Services, was entitled to one vote in all Committee matters. Except as may be provided elsewhere in the Plan, the majority of those present at a scheduled meeting constituted a majority for all business.

Only the final approval of the plan prior to submission to the FCC required a vote from more than would be in attendance at a regular meeting. In the case of absentees, the vote was conducted by mail ballot sent to all those who had participated in the planning process. This way, the finished plan was reviewed and accepted by the widest, within reason, group of public safety/public service users.

2.2 PLANNING COMMITTEE FORMATION

The process of forming the Planning Committee was conducted in the following steps:

1 A public notice announcing the first planning committee meeting was placed in newspapers having circulation on each of the islands within the State of Hawaii. The first meeting was held on November 9, 1992, at the State of Hawaii, Kalanimoku Building, 1151 Punchbowl Street, Honolulu, Hawaii, a public facility. (See Appendix A)

2. Letters of announcement were also mailed to each major state, county agency, and other eligibles that are radio users. Letters were also sent to all members of the Pacific Chapter of APCO.

3. The requirements for a regional planning committee were also presented and discussed at statewide organization meetings held in each County. At each presentation, there was an opportunity for persons to place themselves and/or their agency on the mailing list.

4. One statewide organizational meeting was held before the Chairperson was elected.

5. Personal interviews were held with the representatives of all major state and county agency radio users.

6. Committee membership was left open to any person or agency which may not have been notified or decided to join the committee later.

7. Vendor participation was encouraged, but vendors were not allowed a vote.

2.3 NATIONAL INTERRELATIONSHIP

The Regional Plan is in conformity with the National Plan. If there is a conflict between the two plans, the National Plan will govern. Due to the uniqueness of the State of Hawaii's geographical location, it has no adjacent regions requiring frequency coordination or regional plan concurrence. The State is located several thousand miles from the nearest major land mass. Further, the governmental structure has only two levels, which are State and County. There are no incorporated cities. Thus, the Regional 11 plan deals only with these two levels of government causing it to differ significantly from those approved for other areas of the country that may have the traditional three levels of government of City, County, and State.

By officially sanctioning this plan, the Federal Communications Commission agrees to its conformity to the National Plan. Nothing in the Plan is to interfere with the proper functions and duties of the organizations appointed by the FCC for frequency coordination in the Private Land Mobile Radio Services. Rather it provides procedures that are the consensus of the Public Safety Radio Services and Special Emergency Radio Service user agencies in this Region. If there is a perceived conflict, then the judgment of the FCC will prevail.

2.4 FEDERAL INTEROPERABILITY

Interoperability between the Federal, State, and Local Governments during both daily and disaster operations will primarily take place on the five common channels identified in the National Plan. Additionally, through the use of S-160 or equivalent agreements, a licensee may permit Federal use of a non-Federal communications system. Such use, on other than the five identified common channels, is to be in full compliance with FCC requirements for government use of non-government frequencies (Title 47 CFR, sec. 2.103).

It is permissible for a non-Federal government licensee to increase channel requirements to account for 2-10 percent increase in mobile units, dependent on the amount of Federal Government agencies involvement in its area, provided that written documentation from a Federal agency supports at least that number of increased units.

2.5 REGIONAL REVIEW COMMITTEE

Upon approval of this plan by the Federal Communications Commission, a Regional Review Committee will be established for the review of applications which do not fall within the stated guidelines provided for in this plan, or for the settlement of disputes concerning this plan and/or its application.

At a minimum, this Committee shall consist of the local APCO frequency advisor for Region 11, state agency representatives, and representatives for the Police, Fire, and EMS services from each

County. Representation from other eligibles is also welcome. This Committee and its composition will be assured by the Pacific APCO chapter and other Public Safety organizations. Membership on this committee will be solicited on an annual basis. Since this Committee will probably not have regular business, it will be up to the local APCO frequency advisor to notify the Committee of problems, conflicts, or when it becomes apparent that spectrum demands will outpace available spectrum. Each member of the Committee shall be furnished a copy of this plan upon their appointment or election to the Committee.

Plan updates shall be accomplished by this Committee. All changes or updates to the plan shall be first agreed upon by this Committee and then submitted to the FCC for their review and consideration. When approved, all changes shall be added to the plan with the appropriate documentation of approval.

This Committee shall meet at least once annually to review the implementation of the plan. This review shall consist of examination of any and all license activity.

3.0 SPECTRUM UTILIZATION

This portion of the plan provides a basis for proper spectrum utilization. Its purpose is to guide the local APCO frequency advisor and/or the Regional Review Committee in their task of evaluating the implementation of this plan within this Region.

3.1 REGION DEFINED

Region 11 is the State of Hawaii. This region is the result of definition by the Federal Communications Commission as a result of recommendations made in the National Public Safety Planning Advisory Committee (NPSPAC) plan as submitted and approved and contained in Docket 87-112. For purposes of this plan, the State shall be defined as all the lands and waters contained within the boundaries of the State of Hawaii.

3.2 REGION PROFILE (Demographic Information)

The purpose of this section is to provide the basis for the assignment of frequencies, and their re-use. Since the frequency allocation is based on geography, population, and operational needs throughout the state and counties, it is necessary to provide demographic information within this plan. This data is shown below.

3.2.1 State Of Hawaii Population And Expected Growth

The principal source for this data is the decennial population censuses conducted by the U. S. Bureau of the Census, the estimates developed by the Hawaii State Department of Business and Economic Development (DBED), the Hawaii Health Surveillance Program, the Hawaii Visitors Bureau, and the U.S. Immigration and Naturalization Service.

The 1990 resident and defacto population was 1,137,200. This includes members of the armed forces stationed in Hawaii and their local dependents, a group making up 10.4 percent of the resident total when last surveyed.

The 1993 population is estimated in excess of 1,161,371 and the projected population growth for the years 2000 and 2010 is estimated to be 1,285,100 and 1,435,500, respectively.

The third largest island, Oahu, with its highly urbanized area of Honolulu, has approximately 80 percent of the total population of the State, and the 1993 population estimate approaches 861,000. The balance of the State population is spread among the more rural islands of Kauai, Maui, Lanai, Molokai, and Hawaii. (See population data in Appendix D)

3.2.2 Geographical Description

The State of Hawaii is located in the Pacific Ocean several thousand miles from any major land mass. It is approximately 2,650 nautical miles west of the continental 48 states. It was formed from volcanic activity and the existing islands are the summits of a great volcanic mountain range that stretches nearly 2,000 miles across the floor of the Pacific Ocean. The topography of the state contains small rolling plains to extremely rugged mountainous terrain with water falls, green canyons, and vegetation ranging from sparse to extremely dense. (Refer to a map of the State of Hawaii in Appendix C)

The total land mass in the State is 6,423.4 square miles, an area that continues to increase as new land is formed by volcanic activity and coral accretions. The major islands are: Kauai, Oahu, Maui, Molokai, Lanai, and Hawaii. The Island of Niihau is privately owned but is administered by the County of Kauai. The population per square mile is somewhat sparse, which generally indicates that the concentration of radio users for public safety activities is in the major urban area of Honolulu.

The largest island is Hawaii. It is nearly twice as large as the other islands combined with a total of 4,028.4 square miles. It has the state's highest mountain, Mauna Kea, at 13,796 feet above sea level. The Island of Hawaii has the state's only active volcanoes of Mauna Loa and Kilauea, both located within the Hawaii Volcanoes National Park.

The second largest island is Maui, with 727.3 square miles. Maui is the site of Haleakala and Puu Kukui, two dormant volcanoes, which are separated by a seven mile isthmus. Most of the island's residents dwell along the west coast and on the northern shore of the isthmus in the communities of Wailuku and Kahului.

The third largest island of Oahu, with over 600 square miles, is the best known and is traditionally the most popular place for visitors. It is the seat of state government with the capitol at Honolulu. It is also the site of Waikiki Beach, Diamond Head, and Pearl Harbor.

Honolulu, with its commerce, industry, and its famous resort beach, is the heart of both the island and the state. Commercial, governmental, and military are the primary economic force. The military installations employ thousands, and the Federal expenditure ranks first as a source of the island's and the state's revenue with tourism ranking second. (See state economic projections in Appendix D)

Geologically the oldest and the fourth largest is the island of Kauai with 552.3 square miles. The wettest spot on earth is here and the island is noted for its lush foliage. Kauai's nearest neighbor is the 70.2 square mile Island of Niihau, which is privately owned and populated mainly by pureblood Hawaiians.

The fifth and sixth largest islands are the sparsely populated islands of Molokai and Lanai, respectively. Both these islands are administered by the County of Maui. Molokai covers 260.0 square miles and 140.5 square miles make up the island of Lanai. Both are mostly rural and untouched by development, with the exception of a resort area on the western end of Molokai and the south side of Lanai.

From the standpoint of state agency radio users, the distance and separation between the islands presents some problems in coverage for statewide radio systems. This concern has been taken into consideration in the allocation plan.

3.3 USAGE GUIDELINES

All systems operating within the Region having five or more channels will be required to be trunked. Those systems having four or less channels may be conventional or trunked.

The FCC, in its Report and Order states, "Exceptions will be permitted only when a substantial showing is made that alternative technology would be at least as efficient as trunking or that trunking would not meet operational requirements. Exceptions will not be granted routinely, however, and strong evidence showing why trunking is unacceptable must be presented in support of any request for exception."

Systems of four or less channels operating in the conventional mode that do not meet FCC loading standards will be required to share the frequencies on a non-exclusive basis.

The first level of communications coverage will be at the state level. Its impact will be reviewed by the Committee. All public safety agencies operating statewide will submit their communications plans for impact approval if they utilize communications systems within the Region, and those portions of such systems must be compatible with the Regional Plan.

State agencies have a need for radio operations on all the islands. However, because the islands are not contiguous and are widely separated, a single statewide trunking system for State operations is not envisioned. A combination of state trunked and conventional channels may be implemented on each island. It is anticipated that where statewide interconnect communications is deemed necessary between islands for state agencies, designated conventional channels will be utilized.

However, where technically and operationally feasible, the agencies of the State of Hawaii, which operate on each of the islands and having the same coverage requirements as the countywide system, are encouraged to become part of the county's trunking system for their daily operations. This will be in addition to any state intra-island or inter-island communications networks that may be required and implemented.

The next level of communication coverage will be county, which, in most cases includes a single island, such as the islands of Kauai (County of Kauai), Hawaii (County of Hawaii), and Oahu (City and County of Honolulu). The islands of Maui, Molokai, and Lanai are all administered by the County of Maui and communications coverage is required for each of the three islands. County systems shall be designed to provide countywide communication coverage.

However, communication coverage beyond the bounds of a county jurisdictional area on that county's system will not be permitted unless it is critical to the protection of life and property. Communications between and among the county users will occur on one of the statewide mutual aid or other channels established for interoperabiIty. Where 800 MHz trunked radio technology is utilized, the system design must include as many county public safety and public service radio users as can be managed technically.

The county agency(ies), depending upon system loading and the need for multiple systems within an area, must provide intercommunications between area-wide systems. In a multi-agency environment, a lead agency using the 800 MHz spectrum, which is an agency or organization having primary response obligations in the geographic area, shall be responsible for coordinating the implementation of the Common Channels in this band as mandated by the National Plan. Such implementation must be reviewed and approved by the Local APCO Frequency Advisor, and at his/her discretion, the Regional Review Committee.

Hawaii is unique in that there are no incorporated cities, as commonly found on the mainland. Thus, additional terminology is needed to describe the next level of coverage. The terms "Board",

"District", or "Authority" may be used to define such levels. Board, District, or Authority communications for public safety and/or public service purposes must provide only the communications needed within its boundaries. However, if the total number of radios in service does not reach minimum loading criteria for a trunked system, these agencies must consider utilizing the next higher system level, if 800 MHz trunked radio is available in the area. As those higher level systems reach capacity, the smaller system communicators in public safety and public service must then consider uniting their communications efforts to formulate one large system or forfeit use of the limited 800 MHz spectrum.

Where smaller conventional 800 MHz channels are requested, those frequencies must not interfere with the region's trunked systems. The 800 MHz trunked radio system is to be considered the higher technology at this time and in greater compliance with FCC guidelines. The amount of interference that can be tolerated depends on the service affected. Personal life and property protection shall receive the highest priority and disruptive interference with communications involved in these services in an area shall not be tolerated. Any co-channel interference within an authorized area of coverage will be examined on a case-by-case basis by the Regional Review Committee.

3.4 TECHNICAL DESIGN REQUIREMENTS FOR LICENSING

3.4.1 Definition of Coverage Area or Area of Jurisdiction

The coverage area shall be that area for which a system is intended to cover with a received signal strength of 40 dBu or greater. This area shall normally represent the boundaries of each county which is applying for license but may include separate localized, low elevation systems having limited coverage.

3.4.2 System Coverage Limitations

Radio coverage in each of the counties (islands) is heavily affected by mountainous terrain. In order to obtain adequate wide area coverage, it is necessary to utilize numerous high level or elevated sites within each county. Over-the-water paths from elevated sites are known to exist between the islands. As such, and to the extent possible, countywide system coverage shall be limited to the coverage area defined as listed above plus no more than twenty-five (25) miles in all directions extending outward over the ocean waters from the boundaries of each county. This limitation shall assure maximum frequency reuse between the islands. Localized, low elevation systems shall be limited to a coverage area of not more that three (3) miles in all directions from the boundaries of the legally defined area of service.

The only exception to this rule shall be those applicants that may offer service or system use to areas outside of their jurisdictional boundaries, such as the County of Maui which administers the islands of Lanai and Molokai. In these situations, the applicant shall provide a proposal of said service to the local APCO frequency advisor, who may request Regional Review Committee consideration, for approval.

The system may use both omni-directional and directional antennas, but in no case, shall the effective radiated power (ERP) be more than necessary to provide the required coverage of the operational area. Localized and low elevation systems operating within a larger county area shall

utilize either minimum power and antennas or antenna/tower relationship techniques to achieve only the necessary coverage within their operational area.

3.4.3 Determination Of Coverage

There are four variables used in determining the area of coverage of a proposed system. These variables are: (1) the required strength of the received signal, (2) antenna height above average terrain (HAAT), (3) the effective radiated power (ERP) of the system, and (4) the type of environment.

Received Signal Strength

For purposes of this plan, "received signal strength" shall be the determining factor which defines the actual boundary of a system. The minimum signal level which marks the outer boundary of a system shall be 40 dBu.

Antenna Height

For purposes of this plan, "antenna height" shall be the height of the antenna above the average terrain surrounding the tower site.

Effective Radiated Power (ERP)

The ERP is the transmitter output power times the net gain of the antenna system. The actual formula is ERP(w) equals Power(w) times antilog (net gain in dB divided by 10).

Environment Type

OKUMURA/HATA METHOD - The Okumura method uses four different classifications to describe the average terrain around a transmitter site or area. These four classifications are:

1. URBAN: An area that is built-up, city-crowded with large buildings or closely interspersed houses and thickly-grown trees. This would include the downtown area of a major city.

2. SUBURBAN: A city of highways with scattered trees, houses, and buildings. This would include the downtown area of a small city.

3. QUASI-OPEN: An area between suburban and open areas. This includes areas outside of city limits that have few buildings and houses.

4. OPEN: An area where there are no obstacles such as tall trees or buildings in the propagation path or a plot of land that is cleared of anything for 300 to 400 meters ahead. This would include farm land, open fields, etc.

In all counties, regardless of size, a maximum coverage radius of twenty-five (25) miles extending from the coastline for countywide systems shall be allowed, provided adequate measures have been taken to assure that interference of existing co-channel and adjacent channel systems will not occur.

For localized or low level systems, the maximum boundary radius of 3 miles beyond the defined service area shall be allowed. Preparation of these requirements shall be the responsibility of the applicant. The Federal Communications Commission provides, in part 90.309(a)(4) of the Rules and Regulations, some additional guidance for these calculations.

3.4.4 Annexations and Other Expansions

The State of Hawaii has only two levels of government, state and county. There are no incorporated cities as is common on the mainland. All communities, towns, or cities (such as Honolulu) located within each county are part of that county political jurisdiction, which is generally confined to a single island. Thus, annexations are not an issue in the State of Hawaii. However, it is understood that a non-countywide, localized system may have to be expanded and its range increased if the size of the service area is enlarged. This is a modification and may be permitted. The increased range of the system will have to be determined at the time of modification to assure non-interference with any other existing system. Where interference is likely, the use of alternate methods of expansion, such as remote receiving systems, may be necessary.

Should the expansion effectively take in all or most of a county, the allocation for the localized system may be given, but not required, to the county for inclusion of the countywide system.

In any case where more spectrum is not available from the initial allocation, the rules for expansion of initial allocation, as contained in this plan, shall apply.

3.4.5 Coverage Area Description

All applicants shall provide with their applications, a map showing the jurisdictional boundaries to be covered by the system and the calculated system coverage. This map shall display the location of the system transmitter(s), including control stations. It is recommended that a U.S. Geological Survey (USGS) quad topographical map be used for this purpose. If not available, a high- quality, locally-produced map or a highway map may be substituted. Regardless of the type map used, the name of the applicant and the scale of the map shall be displayed on the map.

3.4.6 Give-Back Frequencies

Agencies or jurisdictions choosing to migrate to the new 800 MHz spectrum shall prepare and submit a plan for the abandonment of their currently licensed frequencies in the lower bands. The time frame allowed for phasing into 800 MHz and out of the lower currently licensed bands will be considered on a case-by-case basis by the Regional Review Committee. Generally, two years will be considered acceptable in most cases, with three years as a maximum. Any agency requiring more than three years shall provide documents to the Regional Review Committee stating the reasons for the delay, and giving the estimated time of completion.

The Regional Planning Committee shall have the freedom to consider below 800 MHz public safety bands in developing their regional plans, but the licensing of channels in these bands would continue to be conducted through existing frequency coordination procedures.

It is recommended that any jurisdiction wishing to "hand down" frequencies to another agency or jurisdiction submit the proper coordination and application forms with the document of release.

3.4.7 Unused Spectrum

Because all of the frequency spectrum is not needed at this time, unassigned channel pairs will be returned to a reserve pool. These channels may be used for conflict with adjacent counties or may simply remain within this Region until needed. This does not imply that these frequencies are unavailable; only that before they can be utilized within the Region, they must be coordinated via the regular APCO coordination process and within the guidelines set forth in this plan. Where possible, the channels designated for a jurisdiction in this plan shall be used.

3.4.8 Adjacent Region Coordination

Coordination with adjacent regions are not required due to the remoteness of the State of Hawaii from any other land mass. However, all national, state, and county level mutual channels will be coordinated for use throughout the state. The use of these channels will be in keeping with the approved guidelines.

Any user found to be operating in any manner other than the approved method shall be considered to be operating improperly and subject to the existing Federal Communications Commission rules for willful interference with the communications of other users.

3.5 INITIAL SPECTRUM ALLOCATION

3.5.1 Frequency Sorting Methodology

The initial spectrum allocation for the Region was determined by a computerized frequency sorting process performed by APCO. The purpose of the computer program, which assigns frequencies to specific eligibles and to pools for future assignments, is two-fold:

1. The assignments must result in a high degree of spectrum efficiency.

2. The assignments must result in a low probability of co-channel and adjacent channel interference.

Since the desired output is a geographic sorting of frequencies, a method of defining geography must be part of the input. A list of the number of channels to be assigned in each geographic area is also required, along with the name of the eligibles or pool.

Acceptable interference probabilities are determined for the Region. Frequency assignments are then made using a computer program that satisfies the goals of spectrum efficiency and interference protection. The following narrative describes the factors and process used by the computer program.

3.5.2 Geographic Area

For the purpose of this frequency sort, a geographic area is defined as one or more circles of equal radius. To the degree practical, the circle(s) include the entire area of the eligible's geopolitical boundary, which in the case of countywide systems, includes the entire island making up that county.

Thus, the procedure is to gather maps of sufficient detail, outline the areas to be defined, determine the coordinates and radius of the circle(s) that define(s) each area, and tabulate the data.

In any case, the effective radiated power (ERP) shall not exceed that necessary to provide the required coverage on a non-interfering basis to other counties (islands) and/or adjacent systems.

The environment of each system is defined according to the Okumura/HATA method of classification.

3.5.3 Blocked Channels

In the Region there are five mutual aid channels which must be blocked out to prevent the computer from making assignments on these channels. Since the mutual aid channels are spaced at 0.5 MHz intervals, other Region-wide systems are spaced at 0.5 MHz and placed adjacent to the mutual aid channels.

This procedure reduces the impact of blocked adjacent channels by virtue of the fact that the channel plan already has protection spacing on each side of the mutual aid channels.

These Region-wide blocked channels are identified by FCC channel number, tabulated, and used as input to the computer program.

3.5.4 Transmitter Combining

The computer program is designed to provide a minimum frequency separation between any two channels assigned to the same eligible at the same site. This separation is provided in order to enable more efficient combining of multiple transmitters to a single antenna. These separated blocks of frequencies also have a maximum size.

If the eligible has more frequencies than the maximum size of the combining block, then a second compatible block is created, and so on. Each of these parameters is adjustable in the program on a global basis. The default parameters chosen are 0.25 MHz minimum spacing and five channel blocks.

3.5.5 Special Considerations

There are licensees in the 806-821/852-866 MHz spectrum who plan to expand existing systems into the 821-824/866-869 MHz bands. Some of the existing radio units are unable to operate on 12.5 KHZ separated carrier frequencies. The result is that these radios can only operate on "even" FCC numbered channels in the 821-824/866-869 MHz band. The computer program is able to take this into account when making assignments.

3.5.6 Protection Ratios

There are two interference protection ratios built into the computer program. One is for the co-channel case; the other is for the adjacent channel case. The ratios provide 35 dB desired/undesired signal ratio for co-channel assignments, and 15 dB desired/undesired ratio for the adjacent channel case. These ratios provide an acceptable probability of interference for public safety services.

4.0 COMMUNICATIONS REQUIREMENTS

4.1 COMMON CHANNEL IMPLEMENTATION

The implementation of the International Common Channels must follow the guidelines as set forth by the Federal Communications Commission by the approval of the National Plan. These five common channels are accessible by all levels of government and shall be used in accordance with the provisions of the National Plan. All mobile and portable equipment must be equipped to operate in the "talk around mode" when required on the International Channels.

The International Calling Channel operating on 821/866.0125 MHz shall be implemented as a full mobile relay system. Wide area coverage transmitters will be installed where applicable within a system. Large system users, such as a county, with five or more 800 MHz channels shall be required to monitor this channel at all times. The area of coverage for this channel shall be equal to the area covered by the licensed system. This may or may not require the use of remote receivers within the area to meet this requirement.

The four International Tactical Channels will be assigned statewide, for use as needed by all eligible licensees. These channels are to be used in accordance with the National Plan and in compliance with the regulations as set forth by the Federal Communications Commission. These channels require no special licensing, only that the users be eligible for licensing on the other Public Safety 800 MHz channels as specified in section 90.0l6 (a) of the FCC Rules and Regulations.

4.1.1 Areas of Operation

The common channels shall be available for use throughout Region 11. No specific assignments are deemed necessary within the Region.

4.1.2 Operation on the Common Channels

Normally, the five interoperable channels are to be used only for activities requiring intercommunications between agencies not sharing any other compatible communications system. Interoperable channels are not to be used by any level agency for routine, daily operations. In major emergency situations, one or more common tactical channels may be assigned by the primary public safety agency within that area of operation.

The primary public safety agency in each county, if not defined elsewhere in the plan, may be the County Police Department, a central communications center, or a lead agency, which may be any agency licensed to operate in this spectrum, or "on-scene" commander. These primary agencies will assign one or more of the common tactical channels for use according to need during each special situation requiring the use of these channels.

Participants in the interoperable channels include federal, state, and local disaster management agencies. Police, fire, and providers of basic and advanced life support services will be the primary using agencies. If radio channels are available, other services providers in the Public Safety Radio Service and the Special Emergency Radio Service may also participate to the extent required to ensure the safety of the public. These include the state and county public service agencies and other special service organizations not normally involved in day-to-day public safety operations.

4.1.3 Operation Procedures

On all Common Channels, plain English will be used at all times, and the use of unfamiliar terms, phrases, or codes will not be permitted.

4.1.4 International Calling Channel (ICALL):

The ICALL channel shall be used to establish contact with other users in a particular Region that can render assistance at an incident. This channel shall not be utilized as an ongoing working channel once contact has been established between agencies. An agreed-upon tactical or mutual-aid channel shall be used for continued communications.

4.1.5 International Tactical Channels (ITAC-1 through ITAC-4)

These frequencies are reserved for use by those agencies involved in inter-agency communications. Incidents requiring multi-agency participation will utilize these frequencies as directed by the control agency assuring responsibility for an incident or area of concern. These frequencies may be subdivided according to function in an incident or by geographical location in response to an incident. It is recommended that the following assignments for ITAC-1 through ITAC-4 be used when possible.

ITAC-1.....Law Enforcement
ITAC-2 .....Fire Services
ITAC-3 .....Emergency Medical Services
ITAC-4 .....Command and Control

4.1.5.1 Coded Squelch

All equipment capable of operating on the five (5) common channels shall be equipped with the National Common Tone Squelch of 156.7 Hz. Mobile relays on these channels may use additional tone or digital squelch codes for the purpose of selecting individual mobile relay stations, provided the National Common Tone squelch code is used on the output. If such an arrangement is utilized, provision must also be made for certain centralized, high-level sites to be activated by the 156.7 tone to ensure emergency access by transient units.

4.2 NETWORK OPERATING METHODS

Communications systems on ITAC-1 through ITAC-4 will be implemented by agencies who volunteer on a distributed coordinated basis. Every primary geographic section of the Region is intended to be covered by at least one of the ITAC channels. In many areas the common channels will be utilized on a mobile-to-mobile talk-around basis. Mobile relays on ITAC-1 through ITAC-4 will be on a limited coverage design to permit reuse of the channel several times within the Region and its counties. This will fill an "on-scene" requirement for most multi-agency response situations.

Region 11 may also have additional mutual aid channels in operation throughout the state and counties. The implementation of mobile relays on these channels is strongly encouraged.

4.3 REQUIREMENTS FOR TRUNKING

All systems operating in the Region having five or more channels will be required to be trunked. Those systems having four or fewer channels may be conventional. However, it is strongly recommended that any entity licensing three or more mobile relays use trunking.

The FCC in its Report and Order states, "Exceptions will be permitted only when a substantial showing is made that alternative technology would be at least as efficient as trunking or that trunking would not meet operational requirements. Exceptions will not be granted routinely. Strong showings as to why trunking is unacceptable must be presented in support of any request for exception."

Systems that do not meet FCC loading standards may be required to share such frequencies on a non-exclusive basis. Those agencies requesting data channels can only be required to share channels with adjacent agencies wherever feasible or limit coverage to their geographic area. Exceptions will be considered on a case-by-case basis by the Regional Review Committee.

Depending on systems loading and the need for multiple systems within an area, operators of wide area systems (including, but not limited to, designated "monitoring agencies") must provide for coordination between area-wide systems and "monitoring frequencies." Agencies using localized systems must restrict design and implementation to provide only the communications needed within their service area. The use of trunked systems is encouraged.

However, if the total number of radios in service does not reach minimum loading criteria for a trunked system, that user must consider utilizing the next higher system level if 800 MHz trunked radio is available in the area. As systems reach capacity, the smaller system users shall consider consolidating their communications systems to form one large, trunked system.

A requesting applicant for radio communications in the 800 MHz Public Safety Radio Services in the Region will be required to conform to the FCC loading criteria for its proposed system. The provisions of this regional plan must be used as a guide for establishing any new systems.

Strict adherence to the rules for limiting the area of coverage to the boundaries of the applicant agency's jurisdiction must be observed. Overlap or extended coverage must be minimized, even where systems utilizing 800 MHz trunked radio systems are proposing to intermix systems for cooperative and/or mutual-aid purposes.

Where antenna locations are utilized on elevated sites, such as mountain tops, transmitter outputs and antenna gain and/or patterns must be employed to produce only the ERP and directional characteristics necessary to provide adequate coverage of the service area. At lower elevated sites, the antenna heights and gain shall be limited to that necessary for coverage within the primary area of operation. In any case, all necessary precautions shall be taken to realize maximum reuse of the 800 MHz channels.

4.4 CHANNEL LOADING REQUIREMENTS

An agency/jurisdiction requesting a single frequency to replace a frequency currently in use will not be required to meet loading requirements in order to obtain the new frequency if the old frequency will be turned back for reassignment. However, if the single frequency is not loaded to

more than 50 units within three years after the license is granted, the frequency will be available for assignment to other agencies on a shared basis in the event that other frequencies meeting the criteria for assignment are exhausted. Shared use of a frequency is not interference-free.

Users of single frequency systems may be required to provide the Regional Review Committee "confirmation of loading" for mobiles and portables as a method of validating system loading. This exception shall apply to agencies having only one system and a single frequency. Agencies/jurisdictions requesting multiple frequencies or employing trunking technology shall comply with the loading standards as outlined below, or provide a "traffic loading study" that meets the criteria as outlined below.

4.4.1 Loading Tables

Emergency Services		Non-Emergency	
Channel	Units/Channel	Channel	Units/Channel
1 - 5	75	1 - 5	80
6 - 10	80	6 - 10	90
11 - 15	85	11 - 15	105
16 - 20	90	16 - 20	120

Agencies requesting additional frequencies must show loading of 100 percent or greater on their existing system. Should a demand for frequencies exist after assignable frequencies become exhausted, any system having frequencies assigned under this plan four or more years previously and not loaded to at least 70 percent will lose operating authority on a sufficient number of frequencies to bring the system into compliance with the 70 percent loading standard. Frequencies lost in this manner will be reallocated to other agencies to help satisfy the demand for additional frequencies.

4.4.2 Traffic Loading Study

Justification for adding frequencies, or retaining existing frequencies, can be provided by a traffic loading study in lieu of loading by the number of transmitters per channel. It will be the responsibility of the requesting agency to provide a verifiable study showing sufficient air time usage to merit additional frequencies.

A showing of air time usage, excluding telephone interconnect air time, during the peak busy hour greater than 70 percent per channel on three consecutive days will be required to satisfy loading criteria.

4.4.3 Slow Growth

All systems in the 821-824/866-869 MHz brands under this plan will be "slow growth" in accordance with Section 90.629 of the Commission's rules.

4.5 USE OF LONG-RANGE COMMUNICATIONS

During incidents of major proportions, where Public Safety requirements might include the need for long-range communications in and out of a disaster area, alternate radio communications plans are to be addressed by primary public safety agencies within this Region. These agencies should integrate the appropriate interface to the long-distance communications providers.

Such long-distance radio communications might be amateur radio operations, satellite communications and/or long-range, emergency preparedness communications systems, such as that used in the high frequency (HF) band by the Hawaii Office of Civil Defense.
Any of these or all of these long-distance radio communications should be incorporated as part of the communications plans of the lead agencies, which then could provide the means to communicate outside the area for themselves and the smaller agencies that might need assistance.

Instances as addressed in the National Public Safety Planning Advisory Committee's Plan (such as earthquakes, hurricanes, floods, widespread forest fires, or nuclear reactor problems) could be a cause for such long-range communications needs.

4.6 EXPANSION OF EXISTING SYSTEMS

Existing systems operating in the 806-821/851-866 MHz band that are to be expanded to include the frequency bands of 821-824/866-869 MHz may utilize mobile and portable radios, provided these units are modified in conformance with the FCC Docket 87-112, Report and Order. This involves reducing the modulation to 4 kHz.

Existing base stations in the frequency bands 806-821/851-866 MHz may not be used in the frequency bands 821-824/866-869 MHz.

5.0 IMPLEMENTATION AND PROCEDURES

5.1 NOTIFICATION

Several methods of notification were used to invite interested parties to participate in the development of this plan. Initially, letters were mailed by the "Convener" to all of the public safety, emergency medical, public service agencies, and other interested parties in the State of Hawaii. Further, preliminary and personal meetings with representatives of these agencies and other interested parties were held separately in each county.

Supplemental to the meetings, an advertisement was placed in the major newspapers serving each county (island) several weeks prior to the initial meeting. All APCO Chapter members and a large number of other interested parties who had requested notification were also sent letters of invitation (See Appendix A).

Names, addresses, and telephone numbers of individuals/agencies who wished to participate in the planning effort, or who wished to be kept informed of progress, were collected during the initial meetings. These individuals or agencies were sent the announcements for subsequent meetings.

When work on the plan was completed, a final Regional Planning Committee meeting was called and held in Honolulu, Hawaii on January 6, 1993. Each member of the Regional Planning Committee was presented with a draft copy of the plan for study. A copy of the final draft was mailed to all members of the Regional Planning Committee not present at the meeting. Each copy mailed contained a ballot for voting on the acceptance of the plan along with instructions to return the ballot within seven (7) days. The instructions further stated that if no response received within that period of time, the recipient's vote would be considered in the affirmative.

As with the formation of the Regional Planning Committee, a public notice was placed in the newspapers serving each of the counties announcing the completion of the plan and the intention to file with the Federal Communications Commission.

5.2 FREQUENCY ALLOCATION PROCESS

The method used for "packing" Region 11 was the APCO computerized method. The approximate geographical locations of each county's center, in latitude and longitude, were provided with the environmental type of each county and the approximate radius to cover the county boundaries. The frequency assignments were made geographically to minimize adjacent or co-channel interference with other counties (islands).

For descriptive purposes, the geographical channel allocation plan lists the assignments by the county name and includes channel assignments for State of Hawaii use within that geographical area. Due to the fact that the channel allocations are done on a geographical basis and not on a jurisdictional basis, the allocations within a specific county (island) are available to any eligible operating within that county and specific channel assignments shall be at the discretion of the Region 11 Frequency Advisor and/or the Regional Review Committee.

Since there are no adjacent regions near the State of Hawaii, it was not necessary to block out frequencies used along the adjacent region's border.

5.3 FREQUENCY ALLOCATION MAP

The channels were allocated on a county-by-county basis utilizing the APCO computerized packing program. A map of the state showing these counties is contained in Appendix C and the allocation plan is shown in Section 7.

5.4 EXPANSION OF INITIAL ALLOCATION

In the event that the allocation for the State or any County becomes depleted, the Regional Review Committee shall meet to make further allocations. Should this occur, the applying agency or entity shall submit the proper license and coordination applications, with all applicable fees, as in any other licensing request. Allocations will be made based on the initial frequency allocation plan as mentioned above, taking into consideration the channels returned to the reserve pool.

5.5 PRIORITIZATION OF APPLICANTS

As there is no unmet spectrum requirement, there is no need for prioritization, at this time. However, to resolve any future problems that may arise, the following rating system shall be used.

Prioritization shall be done according to a final score, based on applicant criteria. The highest score, in points, shall be given priority in a situation where spectrum is insufficient to fulfill the needs of all.

Public Safety Agencies	4 Points
Multi-agency Systems	3 Points
Public Services Agencies	2 Points
Single Agency/Jurisdiction Systems	1 Point

5.6 APPEAL PROCESS

At any time, any applicant may appeal an allocation, rejection, or any limits placed on a particular application for any reason. The appeal process has three levels: (1) the Regional Review Committee, (2) APCO, and (3) the FCC. An applicant who decides to appeal a rejection should initiate that appeal immediately upon notification of rejection. In the event that an appeal reaches the FCC, their decision will be final and binding upon all parties.

6. 0 THE REGION 11 PLANNING COMMITTEE

The following individuals are the members of the 800 MHz Region 11 Planning Committee. The counties (County of Hawaii, County of Kauai, County of Maui and City and County of Honolulu) and the State are each allowed three voting members and three alternates on the committee.

This roster is accurate as of March 19, 2009.

Chairperson: Alvin Sunahara
650 South King Street, 5th Floor
Honolulu, HI 96813
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Tom Koontz – Secretary DAGS (Department of Accounting and General Services) 1177 Alakea Street, Room 201 Honolulu, HI 96813 (808) 586-1930 x 612 thomas.l.koontz@hawaii.gov	Bob Hlivak DAGS (Department of Accounting and General Services) (808) 586-1930 x 613 robert.j.hlivak@hawaii.gov
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7.0 CHANNEL ALLOCATION PLAN (Revision #2 - Post Rebanding - March 2009)

Channel #	Frequency		Assignment
	Base TX	Mobile TX	
1	851.0125	806.0125	National Interoperability - ICALL
2	851.0375	806.0375	Honolulu City & County
3	851.0500	806.0500	Kauai County
4	851.0625	806.0625	Honolulu City & County
5	851.0750	806.0750	Hawaii County
6	851.0875	806.0875	Honolulu City & County
7	851.1000	806.1000	Kauai County
8	851.1125	806.1125	Honolulu City & County
9	851.1250	806.1250	Hawaii County
10	851.1375	806.1375	Honolulu City & County
11	851.1500	806.1500	State of Hawaii (Maui County)
12	851.1625	806.1625	Honolulu City & County
13	851.1750	806.1750	State of Hawaii (Hawaii County)
14	851.1875	806.1875	State of Hawaii (Honolulu C&C)
15	851.2000	806.2000	State of Hawaii (Kauai County)
16	851.2125	806.2125	Maui County
17	851.2250	806.2250	State of Hawaii (Honolulu C&C)
18	851.2375	806.2375	Maui County
19	851.2500	806.2500	Honolulu City & County
20	851.2625	806.2625	Maui County
21	851.2750	806.2750	Region 11 Interoperability - TAC81
22	851.2875	806.2875	Honolulu City & County
23	851.3000	806.3000	Kauai County
24	851.3125	806.3125	Honolulu City & County
25	851.3250	806.3250	Hawaii County
26	851.3375	806.3375	Honolulu City & County
27	851.3500	806.3500	Kauai County
28	851.3625	806.3625	Honolulu City & County
29	851.3750	806.3750	Hawaii County
30	851.3875	806.3875	Honolulu City & County

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31	851.4000	806.4000	State of Hawaii (Maui County)
32	851.4125	806.4125	Honolulu City & County
33	851.4250	806.4250	State of Hawaii (Hawaii County)
34	851.4375	806.4375	State of Hawaii (Honolulu C&C)
35	851.4500	806.4500	State of Hawaii (Kauai County)
36	851.4625	806.4625	Maui County
37	851.4750	806.4750	Guard Channel (Region 11)
38	851.4875	806.4875	Region 11 Interoperability - RTAC6
39	851.5125	806.5125	National Interoperability - ITAC1
40	851.5375	806.5375	Honolulu City & County
41	851.5500	806.5500	Kauai County
42	851.5625	806.5625	Honolulu City & County
43	851.5750	806.5750	Hawaii County
44	851.5875	806.5875	Honolulu City & County
45	851.6000	806.6000	Kauai County
46	851.6125	806.6125	Honolulu City & County
47	851.6250	806.6250	Hawaii County
48	851.6375	806.6375	Honolulu City & County
49	851.6500	806.6500	State of Hawaii (Maui County)
50	851.6625	806.6625	Honolulu City & County
51	851.6750	806.6750	State of Hawaii (Hawaii County)
52	851.6875	806.6875	State of Hawaii (Honolulu C&C)
53	851.7000	806.7000	State of Hawaii (Kauai County)
54	851.7125	806.7125	Maui County
55	851.7250	806.7250	State of Hawaii (Honolulu C&C)
56	851.7375	806.7375	Maui County
57	851.7500	806.7500	Honolulu City & County
58	851.7625	806.7625	Maui County
59	851.7750	806.7750	Region 11 Interoperability - TAC82
60	851.7875	806.7875	Honolulu City & County
61	851.8000	806.8000	Kauai County
62	851.8125	806.8125	Honolulu City & County
63	851.8250	806.8250	Hawaii County
64	851.8375	806.8375	Honolulu City & County
65	851.8500	806.8500	Kauai County

66	851.8625	806.8625	Honolulu City & County
67	851.8750	806.8750	Hawaii County
68	851.8875	806.8875	Honolulu City & County
69	851.9000	806.9000	State of Hawaii (Maui County)
70	851.9125	806.9125	Honolulu City & County
71	851.9250	806.9250	State of Hawaii (Hawaii County)
72	851.9375	806.9375	State of Hawaii (Honolulu C&C)
73	851.9500	806.9500	State of Hawaii (Kauai County)
74	851.9625	806.9625	Maui County
75	851.9750	806.9750	Guard Channel (Region 11)
76	851.9875	806.9875	Region 11 Interoperability - RTAC5
77	852.0125	807.0125	National Interoperability - ITAC2
78	852.0375	807.0375	Honolulu City & County
79	852.0500	807.0500	Kauai County
80	852.0625	807.0625	Honolulu City & County
81	852.0750	807.0750	Hawaii County
82	852.0875	807.0875	Honolulu City & County
83	852.1000	807.1000	Kauai County
84	852.1125	807.1125	Honolulu City & County
85	852.1250	807.1250	Hawaii County
86	852.1375	807.1375	Honolulu City & County
87	852.1500	807.1500	State of Hawaii (Maui County)
88	852.1625	807.1625	Honolulu City & County
89	852.1750	807.1750	State of Hawaii (Hawaii County)
90	852.1875	807.1875	State of Hawaii (Honolulu C&C)
91	852.2000	807.2000	State of Hawaii (Kauai County)
92	852.2125	807.2125	Maui County
93	852.2250	807.2250	State of Hawaii (Honolulu C&C)
94	852.2375	807.2375	Maui County
95	852.2500	807.2500	Honolulu City & County
96	852.2625	807.2625	Maui County
97	852.2750	807.2750	Region 11 Interoperability - TAC83
98	852.2875	807.2875	Honolulu City & County
99	852.3000	807.3000	Kauai County

100	852.3125	807.3125	Honolulu City & County
101	852.3250	807.3250	Hawaii County
102	852.3375	807.3375	Honolulu City & County
103	852.3500	807.3500	Kauai County
104	852.3625	807.3625	Honolulu City & County
105	852.3750	807.3750	Hawaii County
106	852.3875	807.3875	Honolulu City & County
107	852.4000	807.4000	State of Hawaii (Maui County)
108	852.4125	807.4125	Honolulu City & County
109	852.4250	807.4250	State of Hawaii (Hawaii County)
110	852.4375	807.4375	State of Hawaii (Honolulu C&C)
111	852.4500	807.4500	State of Hawaii (Kauai County)
112	852.4625	807.4625	Maui County
113	852.4750	807.4750	Guard Channel (Region 11)
114	852.4875	807.4875	Region 11 Interoperability - RTAC8
115	852.5125	807.5125	National Interoperability - ITAC3
116	852.5375	807.5375	Honolulu City & County
117	852.5500	807.5500	Kauai County
118	852.5625	807.5625	Honolulu City & County
119	852.5750	807.5750	Hawaii County
120	852.5875	807.5875	Honolulu City & County
121	852.6000	807.6000	Kauai County
122	852.6125	807.6125	Honolulu City & County
123	852.6250	807.6250	Hawaii County
124	852.6375	807.6375	Honolulu City & County
125	852.6500	807.6500	State of Hawaii (Maui County)
126	852.6625	807.6625	Honolulu City & County
127	852.6750	807.6750	State of Hawaii (Hawaii County)
128	852.6875	807.6875	State of Hawaii (Honolulu C&C)
129	852.7000	807.7000	State of Hawaii (Kauai County)
130	852.7125	807.7125	Maui County
131	852.7250	807.7250	State of Hawaii (Honolulu C&C)
132	852.7375	807.7375	Maui County
133	852.7500	807.7500	Honolulu City & County

134	852.7625	807.7625	Maui County
135	852.7750	807.7750	Region 11 Interoperability - TAC84
136	852.7875	807.7875	Honolulu City & County
137	852.8000	807.8000	Kauai County
138	852.8125	807.8125	Honolulu City & County
139	852.8250	807.8250	Hawaii County
140	852.8375	807.8375	Honolulu City & County
141	852.8500	807.8500	Kauai County
142	852.8625	807.8625	Honolulu City & County
143	852.8750	807.8750	Hawaii County
144	852.8875	807.8875	Honolulu City & County
145	852.9000	807.9000	State of Hawaii (Maui County)
146	852.9125	807.9125	Honolulu City & County
147	852.9250	807.9250	State of Hawaii (Hawaii County)
148	852.9375	807.9375	State of Hawaii (Honolulu C&C)
149	852.9500	807.9500	State of Hawaii (Kauai County)
150	852.9625	807.9625	Maui County
151	852.9750	807.9750	Guard Channel (Region 11)
152	852.9875	807.9875	Region 11 Interoperability - RTAC7
153	853.0125	808.0125	National Interoperability - ITAC4
154	853.0375	808.0375	Honolulu City & County
155	853.0500	808.0500	Kauai County
156	853.0625	808.0625	Honolulu City & County
157	853.0750	808.0750	Hawaii County
158	853.0875	808.0875	Honolulu City & County
159	853.1000	808.1000	Kauai County
160	853.1125	808.1125	Honolulu City & County
161	853.1250	808.1250	Hawaii County
162	853.1375	808.1375	Honolulu City & County
163	853.1500	808.1500	State of Hawaii (Maui County)
164	853.1625	808.1625	Honolulu City & County
165	853.1750	808.1750	State of Hawaii (Hawaii County)
166	853.1875	808.1875	State of Hawaii (Honolulu C&C)
167	853.2000	808.2000	State of Hawaii (Kauai County)

168	853.2125	808.2125	Maui County
169	853.2250	808.2250	State of Hawaii (Honolulu C&C)
170	853.2375	808.2375	Maui County
171	853.2500	808.2500	Honolulu City & County
172	853.2625	808.2625	Maui County
173	853.2750	808.2750	Region 11 Interoperability - TAC85D
174	853.2875	808.2875	Honolulu City & County
175	853.3000	808.3000	Kauai County
176	853.3125	808.3125	Honolulu City & County
177	853.3250	808.3250	Hawaii County
178	853.3375	808.3375	Honolulu City & County
179	853.3500	808.3500	Kauai County
180	853.3625	808.3625	Honolulu City & County
181	853.3750	808.3750	Hawaii County
182	853.3875	808.3875	Honolulu City & County
183	853.4000	808.4000	State of Hawaii (Maui County)
184	853.4125	808.4125	Honolulu City & County
185	853.4250	808.4250	State of Hawaii (Hawaii County)
186	853.4375	808.4375	State of Hawaii (Honolulu C&C)
187	853.4500	808.4500	State of Hawaii (Kauai County)
188	853.4625	808.4625	Maui County
189	853.4750	808.4750	Guard Channel (Region 11)
190	853.4875	808.4875	Region 11 Interoperability - RTAC9
191	853.5000	808.5000	Honolulu City & County
192	853.5125	808.5125	Maui County
193	853.5250	808.5250	Region 11 Interoperability - TAC86D
194	853.5375	808.5375	Honolulu City & County
195	853.5500	808.5500	Kauai County
196	853.5625	808.5625	Honolulu City & County
197	853.5750	808.5750	Hawaii County
198	853.5875	808.5875	Honolulu City & County
199	853.6000	808.6000	Kauai County
200	853.6125	808.6125	Honolulu City & County
201	853.6250	808.6250	Hawaii County
202	853.6375	808.6375	Honolulu City & County
203	853.6500	808.6500	State of Hawaii (Maui County)

204	853.6625	808.6625	Honolulu City & County
205	853.6750	808.6750	State of Hawaii (Hawaii County)
206	853.6875	808.6875	State of Hawaii (Honolulu C&C)
207	853.7000	808.7000	State of Hawaii (Kauai County)
208	853.7125	808.7125	Maui County
209	853.7250	808.7250	State of Hawaii (Honolulu C&C)
210	853.7375	808.7375	Maui County
211	853.7500	808.7500	Honolulu City & County
212	853.7625	808.7625	Maui County
213	853.7750	808.7750	Region 11 Interoperability - TAC87D
214	853.7875	808.7875	Honolulu City & County
215	853.8000	808.8000	Kauai County
216	853.8125	808.8125	Honolulu City & County
217	853.8250	808.8250	Hawaii County
218	853.8375	808.8375	Honolulu City & County
219	853.8500	808.8500	Kauai County
220	853.8625	808.8625	Honolulu City & County
221	853.8750	808.8750	Hawaii County
222	853.8875	808.8875	Honolulu City & County
223	853.9000	808.9000	State of Hawaii (Maui County)
224	853.9125	808.9125	Honolulu City & County
225	853.9250	808.9250	State of Hawaii (Hawaii County)
226	853.9375	808.9375	State of Hawaii (Honolulu C&C)
227	853.9500	808.9500	State of Hawaii (Kauai County)
228	853.9625	808.9625	Maui County
229	853.9750	808.9750	State of Hawaii (Honolulu C&C)
230	853.9875	808.9875	Maui County

APPENDIX A

PUBLISHED LEGAL NOTICES

AND

LETTER OF NOTIFICATION

FIRST MEETING FOR THE ALLOCATION OF THE PUBLIC SAFETY 800 MHz BAND

The Federal Communications Commission (FCC) has allocated 120 radio channels in the 800 MHz spectrum for exclusive use by State and county public safety agencies. These channels are commonly known as the Public Safety 800 MHz band. Being in a common band, these new channels offer an opportunity for appropriate agencies to meet both present and future communications requirements and to improve interagency communications on a statewide basis.

In order for the State to utilize these channels, the FCC has mandated that a regional plan be developed and submitted for FCC approval. An initial meeting is required to alert public safety radio users that the State will be preparing a regional plan for the Public Safety 800 MHz band.

The State Department of Budget and Finance and the Hawaii Chapter of the Associated Public-Safety Communications Officers will be conducting the initial meeting for all public safety agencies throughout the State. All State and county agencies having public safety radio systems, i.e. police, fire, forestry, public works, highways, airports and emergency medical agencies, should send representatives. Subsequently, meetings will be held with the individual State and county agencies to define and identify their radio communications needs and requirements and provide input to the development of the regional plan.

The first meeting will be held:

DATE: Monday, November 9, 1992
TIME: 9:30 a.m.
PLACE: Kalanimoku Building, 3rd Floor, Conference Rooms 322B, 1151 Punchbowl Street, Honolulu, HI 96813.

Agencies and interested parties may contact Ms. Gwen Nakahara at 808/586-1930 for further details.

(Sgd.) Yukio Takemoto
YUKIO TAKEMOTO
Director of Finance

(MN: Sept. 2, 9, 1992)

MAUI NEWS

FIRST MEETING FOR THE ALLOCATION OF THE PUBLIC SAFETY 800 MHz BAND

The Federal Communications Commission (FCC) has allocated 120 radio channels in the 800 MHz spectrum for exclusive use by State and county public safety agencies. These channels are commonly known as the Public Safety 800 MHz band. Being in a common band, these new channels offer an opportunity for appropriate agencies to meet both present and future communications requirements and to improve interagency communications on a statewide basis.

In order for the State to utilize these channels, the FCC has mandated that a regional plan be developed and submitted for FCC approval. An initial meeting is required to alert public safety radio users that the State will be preparing a regional plan for the Public Safety 800 MHz band.

The State Department of Budget and Finance and the Hawaii Chapter of the Associated Public-Safety Communications Officers will be conducting the initial meeting for all public safety agencies throughout the State. All State and county agencies having public safety radio systems, i.e. police, fire, forestry, public works, highways, airports and emergency medical agencies, should send representatives. Subsequently, meetings will be held with the individual State and county agencies to define and identify their radio communications needs and requirements and provide input to the development of the regional plan.

The first meeting will be held:

DATE: Monday, November 9, 1992
TIME: 9:30 a.m.
PLACE: Kalanimoku Building, 3rd Floor, Conference Rooms 322B
1151 Punchbowl Street
Honolulu, HI 96813

Agencies and interested parties may contact Ms. Gwen Nakahara at 808/586-1930 for further details.

YUKIO TAKEMOTO
Director of Finance

(Hon. Adv.: Sept. 2, 9, 1992) (A-10123)

HONOLULU ADVERTISER

FIRST MEETING FOR THE ALLOCATION OF THE PUBLIC SAFETY 800 MHz BAND

The Federal Communications Commission (FCC) has allocated 120 radio channels in the 800 MHz spectrum for exclusive use by State and county public safety agencies. These channels are commonly known as the Public Safety 800 MHz band. Being in a common band, these new channels offer an opportunity for appropriate agencies to meet both present and future communications requirements and to improve interagency communications on a statewide basis.

In order for the State to utilize these channels, the FCC has mandated that a regional plan be developed and submitted for FCC approval. An initial meeting is required to alert public safety radio users that the State will be preparing a regional plan for the Public Safety 800 MHz band.

The State Department of Budget and Finance and the Hawaii Chapter of the Associated Public-Safety Communications Officers will be conducting the initial meeting for all public safety agencies throughout the State. All State and county agencies having public safety radio systems, i.e. police, fire, forestry, public works, highways, airports and emergency medical agencies, should send representatives. Subsequently, meetings will be held with the individual State and county agencies to define and identify their radio communications needs and requirements and provide input to the development of the regional plan.

The first meeting will be held:

DATE: Monday, November 9, 1992

TIME: [illegible]

PLACE: [illegible] Building, 3rd Floor, Conference Rooms 322B
1151 Punchbowl Street, Honolulu, HI 96813

Agencies and interested parties may contact Ms. Gwen Nakahara at 808/586-1930 for further details.

YUKIO TAKEMOTO
Director of Finance

(September 2 & 9, 1992)

THE GARDEN ISLE

FIRST MEETING FOR THE ALLOCATION OF THE PUBLIC SAFETY 800 MHz BAND

The Federal Communications Commission (FCC) has allocated 120 radio channels in the 800 MHz spectrum for exclusive use by State and county public safety agencies. These channels are commonly known as the Public Safety 800 MHz band. Being in a common band, these new channels offer an opportunity for appropriate agencies to meet both present and future communications requirements and to improve interagency communications on a statewide basis.

In order for the State to utilize these channels, the FCC has mandated that a regional plan be developed and submitted for FCC approval. An initial meeting is required to alert public safety radio users that the State will be preparing a regional plan for the Public Safety 800 MHz band.

The State Department of Budget and Finance and the Hawaii Chapter of the Associated Public-Safety Communications Officers will be conducting the initial meeting for all public safety agencies throughout the State. All State and county agencies having public safety radio systems, i.e. police, fire, forestry, public works, highways, airports and emergency medical agencies, should send representatives. Subsequently, meetings will be held with the individual State and county agencies to define and identify their radio communications needs and requirements and provide input to the development of the regional plan.

The first meeting will be held:

DATE: Monday, November 9, 1992
TIME: 9:30 a.m.
PLACE: Kalanimoku Building, 3rd Floor, Conference Rooms 322B
1151 Punchbowl Street, Honolulu, HI 96813

Agencies and interested parties may contact Ms. Gwen Nakahara at 808/586-1930 for further details.

YUKIO TAKEMOTO
Director of Finance

(988—Hawaii Tribune-Herald: September 2 and 9, 1992)

HAWAII TRIBUNE-HERALD

JOHN WAIHEE
GOVERNOR

EMPLOYEES' RETIREMENT SYSTEM
HAWAII INC
HAWAII PUBLIC EMPLOYEES HEALTH FUND
HOUSING FINANCE AND DEVELOPMENT CORPORATION
OFFICE OF THE PUBLIC DEFENDER
PUBLIC UTILITIES COMMISSION

STATE OF HAWAII
DEPARTMENT OF BUDGET AND FINANCE
STATE CAPITOL
P.O. BOX 150
HONOLULU, HAWAII 96810-0150

YUKIO TAKEMOTO
DIRECTOR

EUGENE S. IMAI
DEPUTY DIRECTOR

THOMAS I. YAMASHIRO
DEPUTY DIRECTOR

BUDGET, PROGRAM PLANNING AND MANAGEMENT DIVISION
FINANCIAL PLANNING AND POLICY DEVELOPMENT DIVISION
INFORMATION AND COMMUNICATION SERVICES DIVISION
TREASURY OPERATIONS DIVISION

Ref: 418/421
Lib: TCPROJS

September 9, 1992

Dear :

SUBJECT: INFORMATIONAL MEETING FOR THE ALLOCATION OF THE PUBLIC SAFETY 800 MHz BAND

The Federal Communications Commission (FCC) has allocated 120 radio channels in the 800 MHz spectrum for exclusive use by State and County public safety agencies. These channels are commonly known as the Public Safety 800 MHz band. Being in a common band, these new channels offer an opportunity for appropriate agencies to meet both present and future communications requirements and to improve interagency communications on a statewide basis.

In order for the State to utilize these channels, the FCC has mandated that a regional plan be developed and submitted for FCC approval. An initial meeting is required to alert public safety radio users that the State will be preparing a regional plan for the Public Safety 800 MHz band.

The State Department of Budget and Finance and the Hawaii Chapter of the Associated Public-Safety Communications Officers (APCO) will be conducting the initial meeting for all public safety agencies having public safety radio systems, i.e., police, fire, forestry, public works, highways, airports, emergency medical agencies, and other public safety agencies. It is very important that public safety agencies send representative(s) to the meeting.

The first meeting will be held:

DATE: Monday, November 9, 1992

TIME: 9:30 a.m.

PLACE: Kalanimoku Building, 3rd Floor, Conference Rooms 322B & C
1151 Punchbowl Street, Honolulu, HI 96813

Since the 800 MHz public safety frequency allocation draft plan must be submitted to the FCC in December 1992, the State of Hawaii and APCO will be holding informational meetings, statewide, with individual State, County, and other public safety agencies to define and identify their radio communications needs and requirements and provide input to the development of the regional plan. In order to gather the needed information, we have prepared the following schedule for the informational meetings:

Island	Place	Date	Time
Maui	Wailuku State Office Building, Third Floor Conference Room B	Tues., 9/22/92	9:30 AM
Hawaii	Hilo State Office Buiding Video Conference Room, Basement	Wed., 9/23/92	9:30 AM
Kauai	Lihue State Office Building, Second Floor Conference Rooms A and B	Thurs., 9/24/92	9:30 AM
Oahu	Kalanimoku Building, Third Floor Conference Rooms 322B	Fri., 9/25/92	9:30 AM

We strongly urge all public safety agencies and interested parties to send representative(s) to the informational meetings. Attached is a form on which we would like you to list all of the frequencies and number of different types of radios your agency operates in carrying out your public safety functions. If you are not able to attend the scheduled meetings, please complete and mail the attached form to:

Lester Nakamura
Information and Communication Services Division
Department of Budget and Finance
P.O. Box 150
1151 Punchbowl Street
Honolulu, HI 96810

If you have any questions about the meeting, please contact Ms. Gwen Nakahara at 808/586-1930 for further details.

Sincerely,

Lester Nakamura, Chief
Systems Networking Branch
Information and Communication
Services Division

Attach.

APPENDIX B

LIST OF ATTENDEES AT MEETINGS

ATTENDANCE ROSTER
1ST STATEWIDE REGION 11 MEETING
NOVEMBER 09, 1992

Hall, Charles, Asst. Chief
Maui Police Department
55 Mahalani Street
Wailuku, HI 96793
808/244/6410

Chun, Jonathan
Dept. of County Attorney
Kauai County
4396 Rice Street
Lihue, HI 96766
808/245-3688

Ikeda, Clifford
Kauai County CD Agency
4396 Rice Street, #107
Lihue, HI 96766
808/245-4001

Jones, Leo
State Dept. of Transportation
727 Kakoi Street
Honolulu, HI 96719
808/831-6703

Yoshizumi, Ralph
Hawaii County Fire Dept.
466 Kinoole Street
Hilo, HI 96720
808/961-8336

Viray, Tomas. B
Pali Momi Medical Ctr
98-1079 Moanalua Road
Aiea, HI 96701
808/486-1390

Harmer, Mark
Harmer Radio
P.O. Box 1652
Makawau, HI76768
808/572-6462

Reis, Cheryl
Hawaii Co. Police Dept.
349 Kapiolani Street
Hilo, HI 96720
808/961-2247

Tominaga, James
Board of Water Supply
630 So. Beretania
Honolulu, HI 96813
808/527-5274

Roark, Karen
Pali Momi Medical Center
98-1079 Moanalua Road
Aiea, HI 96789
808/486-1112

Fujita, Calvin C.
Kauai Police Department
3060 Umi Street
Lihue, HI 96766
808/241-6715

Voeller, Jerry
Diversified Comm Svcs
P.O. Box 30289
Honolulu, HI 96820
808/833-9545

Shim, Moses
Community Hospital
Island of Hawaii
P.O. Box 40
Pahala, HI 96777
808/928-8331

Kim, K
Department of Education
1390 Miller
Honolulu, HI 96813
808/586-3222

Martin, Bill
Oahu Civil Defense
650 S. King Street
Honolulu, HI 96813
808/523-7587

Shimabuku, George
Keakhole Associates
Honolulu, HI 96819
808/834-6055

Morikawa, Sterling H.
State DOT - Highways
869 Punchbowl St., Room 203
Honolulu, HI 96813
808/587-2185

Ogasawara, Norman
State Civil Defense
3949 Diamond Head Road
Honolulu, HI 96816
808/734-2161

Kitaoka, Brian K.
Delta Communications
2645 Kihihau Street
Honolulu, HI 96819
808/836-2134

Matsumoto, Leslie
Hawaii Co. Police Department
349 Kapiolani Street
Hilo, HI 96720
808/961-2280

Arjona III, Ramon
Oahu Transit System, Inc.
811 Middle Street
Honolulu, HI 96819
808/848-4547

Richards, Kevin
Kuakini Medical Center
3478 N. Kuakini Street
Honolulu, HI 96817
808/536-2236

Nguyen, Buu
1164 Bishop
Suite 1400
Honolulu, Hi 96814
808/586-1930

Langeslay, Patrick
Motorola, Inc.
99-1180 Iwaena Street
Aiea, Hi 96701
808/488-7232

Hoppe, Ken
Western Comm.
P.O. Box 31241
Honolulu, HI 96820
808/455-1710

Tagomori, Howard
Maui County Police Dept.
55 Mahalani Street
Wailuku, HI 96793
808/244-6300

Nakaichi, Lester
Dept. of Public Safety
777 Ala Moana Blvd
Honolulu, HI 96814
808/587-1253

Edwards, Patricia
State DLNR/DOCARE
1151 Punchbowl Street
Honolulu, HI 96813
808/587-0070

McCulloch, Robin
C&C of Honolulu DOH
EMS Division
3375 Koapaka Street, D450
Honolulu, HI 96819
808/831-4354

Gokan, Helen
Department of Education
P.O. Box 2360
Honolulu, HI 96804
808/586-1920

Kobayashi, Osame
Honolulu Police Department
801 S. Beretania Street
Honolulu, HI 96813
808/831-7200

Kamahele, Frank
State Airports Div - Keahole
P.O. Box 1660
Kailua-Kono, HI 96745
808/329-2484

Pong, Erick
St. Budget & Finance - ICSD
P.O. Box 150
Honolulu, HI 996810-0150
808/586-1930

Freeman, Dan
E.F. Johnson Co.
P. O. Box 1088
El Granada, CA 94018
415/726-7791

Nakayama, George
State DOT - Highways Div.
P.O. Box 4277
Hilo, HI 96720
808/933-4640

Coffin, Richard V.
State DOT - Airports Div.
Honolulu International Airport
Honolulu, HI 96819
808/836-8542

Bailey, Pat
Motorola, Inc.
99-1180 Iwaena Street
Aiea, Hi 96701
808/487-0033

Nishimura, Walter
APCO Pacific Chapter
94-1075 Ha'ala Street
Waipahu, HI 96797
808/677-0042

Okumura, Lorin
Motorola, Inc.
99-1180 Iwaena Street
Aiea, HI 96701
808/487-0033

Swalinkavich, Mark
Motorola, Inc.
99-1180 Iwaena Street
Aiea, Hi 96701
808/487-0033

Safarik, Gary
Western Pacific Comm.
7 Kukila Street
Hilo, Hi 96720
808/935-0255

Lum, Gerald
Harbors/DLNR BOR
103 Ala Luiua Street
Kahului, HI 96732
808/661-3557 - 661-5602

Morita, Gerald
St. DOT - Harbors Div.
79 S. Nimitz Hwy.
Honolulu, HI 96813
808/587-1903

Hashiro, Brian
Co. of Maui Hwys Div.
1827 Kaohu Street
Wailuka, HI 96793
808/243-1809

Morikawa, Clifford
C&C of Honolulu - Bldg Dept.
650 S. King Street
Honolulu, HI 96713
808/527-6350

Shimugawa, Wayne
Motorola, Inc.
99-1180 Iwaena Street
Aiea, Hi 96701
808/487-0033

Tanaka, Les
Kapiolani CC - UOH
4303 Diamond Head Road
Honolulu, HI 96816
808/734-9571

Shima, Ernest
St. Budg and Finance - ICSD
P.O. Box 150
Honolulu, HI 96810
808/586-1911

Kanada, Henry
Board of Water Supply
630 S. Beretania Street
Honolulu, HI 96834
808/527-5222

Cannerella, Ron
State DLNR/DOFAW
1151 Punchbowl St., Rm 325
Honolulu, HI 96813
808/527-0166

Maiava, Donna
State Dept. of Health - EMS
3627 Kilauea Ave, Rm 102
Honolulu, HI 96816
808/735-5267

Morita, George
St. Dept. of Health - EMS Div.
3267 Kilauea Ave, Rm 102
Honolulu, Hi 96816
808/735-5267

Powell, John
President, National APCO
P.O. Box 4342
Berkeley, CA 94704
510/642-4530

Nakahara, Gwen
St. Budg and Finance - ICSD
P.O. Box 150
Honolulu, HI 96813
808/586-1930

Nakamura, Lester
St. Budg and Finance - ICSD
P.O. Box 150
Honolulu, HI 96813
808/586-1930

Marin, Glenn
Schema Systems, Inc.
P.O. Box 5307
Whittier, Ca 90605
310/861-1443

Campbell, Jerry
Diversified Comm. Engineering
167 Fisher Court
Calimesa, CA 92320
909/795-1855

ATTENDANCE ROSTER OF COMMITTEE MEMBERS
REGIONAL PLANNING COMMITTEE MEETING
JANUARY 6, 1993

Nakamura, Lester, Chairman
Dept Budg & Fin - ICSD
P.O. Box 150
1151 Punchbowl Street Honolulu, HI 96810
Tel: 808/586-1930
FAX: 808/586-1962

Reis, Cheryl, Secretary
Hawaii Co. Police Dept.
349 Kapiolani St.
Hilo, HI 96720
Tel: 961-2247
Fax: 808/961-2702

Pong, Erick
Dept of Budg & Fin - ICSD
P.O. Box 150
Honolulu, HI 96810
Tel: 808/586-1930
FAX: 808/586-1962

Morita, George
Dept of Health EMS Div.
3267 Kilauea, Rm 102
Honolulu, Hi 96816
Tel: 808/735-5267
FAX: 808/733-9182

Hall, Charles
Maui Police Department
55 Mahalani Street
Wailuku, HI 96793
Tel: 808/244/6410
FAX: 808/244-6411

Mimura, Eric
Honolulu Fire Department
3375 Koapaka St., H-425
Honolulu, HI 96819
Tel: 808/523-4810
FAX: 808/527-5884

Hashiro, Brian
Maui Public Work
Highways Division
1827 Kaohu Street
Wailuka, HI 96793
Tel: 808/243-7869
FAX: 808/243-7870

Fujita, Calvin C.
Kauai Police Department
3060 Umi Street
Lihue, HI 96766
Tel: 808/241-6715
FAX: 808/241-6776

Yoshizumi, Ralph
Hawaii Co. Fire Dept
466 Kinoole Street
Hilo, HI 96720
Tel: 808/961-8336
FAX: 808/961-6920

Matsumoto, Leslie
Hawaii Co. Police Dept. 349
Kapiolani Street
Hilo, HI 96720
Tel: 808/961-2280
FAX: 808/961-2702

Kobayashi, Osame
Honolulu Police Department
801 S. Beretania Street
Honolulu, HI 96813
808/831-7200
808/831-7210

Pong, Erick
Dept of Budg & Fin - ICSD
P.O. Box 150
Honolulu, HI 96810
Tel: 808/586-1930
FAX: 808/586-1962

Imamoto, Richard
C&C of Hono Bldg Dept
650 S. King Street
Honolulu, HI 96713
Tel: 808/527-6350
FAX: 808/523-4567

Mimura, Eric
Honolulu Fire Department
3375 Koapaka St., H-425
Honolulu, HI 96819
Tel: 808/523-4810
FAX: 808/527-5884

Watanabe, Morris
Hono Public Transit Auth.
Pacific Pk Plaza, Suite 275
711 Kapiolani Blvd
Honolulu, Hi 96813
Tel: 808/523-4725
FAX: 808/599-2930

ATTENDANCE ROSTER OF COMMITTEE MEMBERS
REGIONAL PLANNING COMMITTEE MEETING
DECEMBER 10, 1992

Nakamura, Lester, Chairman
Dept Budg & Fin - ICSD
P.O. Box 150
1151 Punchbowl Street
Honolulu, HI 96810
Tel: 808/586-1930
FAX: 808/586-1962

Hall, Charles
Maui Police Department
55 Mahalani Street
Wailuku, HI 96793
Tel: 808/244/6410
FAX: 808/244-6411

Matsumoto, Leslie
Hawaii Co. Police Dept. 349
Kapiolani Street
Hilo, HI 96720
Tel: 808/961-2280
FAX: 808/961-2702

Reis, Cheryl, Secretary
Hawaii Co. Police Dept.
349 Kapiolani St.
Hilo, HI 96720
Tel: 961-2247
Fax: 808/961-2702

Hashiro, Brian
Maui Public Work
Highways Division
1827 Kaohu Street
Wailuka, HI 96793
Tel: 808/243-1809
FAX: 808/243-7870

Imamoto, Richard
C&C of Hono Bldg Dept
650 S. King Street
Honolulu, HI 96713
Tel: 808/527-6350
FAX: 808/523-4567

Pong, Erick
Dept of Budg & Fin - ICSD
P.O. Box 150
Honolulu, HI 96810
Tel: 808/586-1930
FAX: 808/586-1962

Ikeda, Clifford
Kauai County CD Agency
4396 Rice Street, #107
Lihue, HI 96766
Tel: 808/245-4001
FAX: 808/241-6335

Mimura, Eric
Honolulu Fire Department
3375 Koapaka St., H-425
Honolulu, HI 96819
Tel: 808/523-4810
FAX: 808/527-5884

Ralph Moore
DOT - Directors' Office
869 Punchbowl Street
Honolulu, HI 96813
Tel: 808/587-2164
FAX: 808/587-2168

Fujita, Calvin C.
Kauai Police Department
3060 Umi Street
Lihue, HI 96766
Tel: 808/241-6715
FAX: 808/241-6776

Watanabe, Morris
Hono Public Transit Auth.
Pacific Pk Plaza, Suite 275
711 Kapiolani Blvd
Honolulu, Hi 96813
Tel: 808/523-4725
FAX: 808/599-2930

Morita, George
Dept of Health EMS Div.
3267 Kilauea, Rm 102
Honolulu, Hi 96816
Tel: 808/735-5267
FAX: 808/733-9182

Yoshizumi, Ralph
Hawaii Co. Fire Dept
466 Kinoole Street
Hilo, HI 96720
Tel: 808/961-8336
FAX: 808/961-6920

ATTENDANCE ROSTER OF NON-COMMITTEE MEMBERS
REGIONAL PLANNING MEETING
DECEMBER 10, 1992

Yamaki, Myron
Honolulu PD -Tech Svcs Sec.
801 South Beretania St.
Honolulu, HI 96813
Tel: 808/831-7200
Fax: 808-831-43900 (HTH)

Nishimura, Walter
APCO - Pacific Chapter
94-1075 Ha'alau St.
Waipahu, HI 96797
Tel: 808/677-0042

Marin, Glenn
Schema Systems, Inc.
P.O. Box 5307
Whittier, Ca 90605
Tel: 310/861-1443
Fax: 310/698-1968

Cannarella, Ron
DLNR - DoFAW
1151 Punchbowl St, Rm 325
Honolulu, HI 96813
Tel:
Fax:

Nakahara, Gwen
St. Budg and Finance - ICSD
P.O. Box 150
Honolulu, HI 96810
Tel: 808/586-1930
Fax: 808/586-1962

Campbell, Jerry
Diversified Comm. Eng.
167 Fisher Court
Calimesa, CA 92320
Tel: 909/795-1855
Fax: 909/795-4926

Truesdell, Larry
State DOT - PPB
869 Punchbowl Street
Honolulu, HI 96813
Tel:
Fax:

Shimabuku, George
Keakhole Associates
Honolulu, HI 96819
Tel: 808/834-6055
Fax: 808/836-6441

Kitaoka, Brian
Delta Communications, Inc.
2645 Kilihau St.
Honolulu, HI 96819
Tel: 808/836-2134
Fax: 808/833-9655

Shima, Ernest
St. Budg & Finance - ICSD
P.O. Box 150
Honolulu, HI 96810
Tel: 808/586-1911
Fax: 808/548-6179

Swalinkavich, Mark
Motorola, Inc.
99-1180 Iwaena Street
Aiea, Hi 96701
808/487-0033

Ching, Stan
Parsons Brinkerhoff
Two Waterfront Plaza
Honolulu, HI 96813
Tel: 808/531-7094
Fax: 808/528-2368

ATTENDANCE ROSTER
COUNTY OF KAUAI - PRELIMINARY NPSPAC MEETING
NOVEMBER 10, 1992

Hinazumi, Wayne
Dept. of Water
P.O. Box 1706
Lihue, HI 96766
808/245-6986

Nekomoto, Jon H.
State Dept. of Public Safety
Harbors/Marine Patrol Sect.
P.O. Box 263
Lihue, HI 96766
808/246-1007

Shimamoto, Roy
Department of Education
3060 Eiwa Street
Lihue, HI 96766
808/241-3366

Burnett, George
State Civil Defense
3949 Diamond Head Road
Honolulu, Hi 96816
808/734-2161

Garcia, Andrew
State Dept. of Public Safety
Harbors/Marine Patrol Sect.
P.O. Box 3893
Lihue, HI 96766
808/245-6996

Detwiler, R. D.
I. Herman Company
800 Claremont
San Mateo, CA 94040
415/348-8272

Pettys, ED
State DLNR/DOFAW
3060 Eiwa Street #506
Lihue, HI 96766
808/241-3433

Chong, Herman Y. W., Jr.
Samuel Mahelona Hosp
4800 Kawaihau Road
Kapaa, HI 96746
808/822-4961

Herman, Ike
I. Herman Company
P.O. box 5454
San Mateo, CA 94402
415/348-8272

Kawakami, Galen
State DLNR/DOFAW
3060 Eiwa Street, #506
Lihue, HI 96766
808/241-3433

Aipoalani, Debbie
St. Budg & Fin - ICSD
3060 Eiwa Street
Lihue, HI 96766
808/241-3448

Nakamura, Lester
St. Budg & Finance - ICSD
P.O. Box 1150
Honolulu, HI 96813
808/586-1930

Morris, Melvin
Kauai Police Department
3060 Eiwa Street
Lihue, Hi 96766
808/241-6742

Gerard, Sonny
Kauai Civil Defense
4396 Rice Street
Lihue, Hi 96766
808/245-4001

Powell, John
President, National APCO
P.O. Box 4342
Berkeley, CA 94704
510/642-4530

Ikeda, Clifford
Kauai CD Agency
4396 Rice Street, #107
Lihue, Hi 96766
808/245-4001

Sekimoto, Stan
State DOT - Airports Div.
3901 Mokulele Lp. - Box 6
Lihue, HI 96766
808/246-1400

Marin, Glenn
Schema Systems, Inc.
P.O. Box 5307
Whittier, Ca 90605
310/861-1443

Hansmeier, Bob
State DOT - Airports Div.
3901 Mokulele Lp
Box 6
Lihue, HI 96766
808/246-1400

Overlock, Bob
KUMH
P.O. Box 337
Waimea, HI 96796
808/338-1227

Campbell, Jerry
Diversified Comm. Engineering
167 Fisher Court
Calimesa, CA 92320
909/795-1855

Yorkman, Gilroy
State DOT - Airports Div.
3901 Mokulele Lp. - Box 6
Lihue, HI 96766
808/246-1400

Kajioka, Kenney
KUMH
P.O. Box 337
Waimea, HI 96796
808/338-9431

ATTENDANCE ROSTER
COUNTY OF MAUI - PRELIMINARY NPSPAC MEETING
SEPTEMBER 22, 1992

Shima, Ernest
St. Budg & Finance - ICSD
P.O. Box 150
Honolulu, HI 96810
808/586-1911

Nakamura, Lester
St. Budg & Finance - ICSD
P.O. Box 150
Honolulu, HI 96813
808/586-1930

Nakahara, Gwen
St. Budg & Finance - ICSD
P.O. Box 150
Honolulu, HI 96813
808/586-1930

Siarot, Bob
State DOT - Hwys Div - Maui
650 Palapala Drive
Kahului, HI 96732
808/877-5061

Hashiro, Brian
Maui Dept. of Public Works
Solid Waste Div.
200 S. High Street
Wailuku, HI 96793
808/243-7875

Riska, Ron
Maui Dept. of Public Works
WWRD
200 S. High Street
Wailuku, HI 96793
808/243-7417

Jarshi, Bob
Maui Dept. of Public Works
Kahului WRE
291 Amala Pl
Kahului, HI 96732
808/243-7417

Sone, Mike
ICSD - St. Office Bldg, #2
2264 Aupuni St.
Wailuku, HI 96793
808/243-5152

Oliveira, Frederick
Dept of Health, Hana Med Ctr.
Hana, HI 96713
808/248-8294

Clemann, Doug
Motorola, Inc.
115 South Wakea Ave
Kahului, HI 96732
808/871-8873

Bailey, Pat
Motorola, Inc.
99-1180 Iwaena Street
Aiea, HI 96701
808/487-0033

Shishido, Glenn
State DLNR/DOFAW
54 High Street
Wailuku, HI 96793
808/243-5352

Hobdy, Robert
State DLNR/DOFAW
54 High Street
Wailuku, HI 96793
808/243-5352

Ueoka, Meyer
State DLNR/DOFAW
54 High Street
Wailuku, HI 96793
808/243-5352

Lum, Gerald
Harbors/DLNR BOR
103 Ala Luina Street
Kahului, HI 96732
808/661-3557 - 661-5602

Perreira, Mel
Maui Memorial Hospital
221 Mahalani Street
Wailuku, HI 96793
808/244-9056

Bista, Richard
Maui Memorial Hospital
221 Mahalani Street
Wailuku, HI 96793
808/244-9056

Hall, Charles, Asst. Chief
Maui Police Department
55 Mahalani Street
Wailuku, HI 96793
808/244-6410

Palazzotto, John, Lt.
Maui Police Department
55 Mahalani Street
Wailuku, HI 96793
808/244-6375

Dela Cruz, Reuben
Maui Community College
310 Kaahumanu Ave
Kahalui, HI 96732
808/298-1263

Silva, Louis D.
State Dept. of Public Safety
Marine Patrol Unit - Maui Dist.
103 Ala Luina St.
Kahalui, HI 96732
808/871-6822

Marin, Glenn
Schema Systems, Inc.
P.O. Box 5307
Whittier, Ca 90605
310/861-1443

Campbell, Jerry
Diversified Comm. Engineering
167 Fisher Court
Calimesa, CA 92320
909/795-1855

Hall, Jim
Jim's Communications
P.O. Box 610
Haiku, HI 96708
808/871-4431

ATTENDANCE ROSTER
COUNTY OF HAWAII - PRELIMINARY NPSPAC MEETING
SEPTEMBER 23 1992

Shima, Ernest
St. Budg & Finance - ICSD
P.O. Box 150
Honolulu, HI 96810
808/586-1911

Shim, Moses
Kau Hospital
P.O. Box 40
Pahala, HI
808/928-8331

Mitsumori, Richard
Hawaii Pub. Wrks - Hwys Div
630 E. Lanikaula Street
Hilo, Hi 96720
808/961-8349

Nakamura, Lester
St. Budg & Finance - ICSD
P.O. Box 150
Honolulu, HI 96813
808/586-1930

Nakayama, George
State DOT - Highways Div.
P.O. Box 4277
Hilo, HI 96720
808/933-4640

Okumura, Lorrin
Motorola, Inc.
99-1180 Iwaena Street
Aiea, Hi 96701

Yoshizumi, Ralph, BC
Hawaii Co. Fire Department
466 Kinoole Street
Hilo, Hi 96720
808/961-8336

Kamahele, Frank
St. Airports - Keahole Airport
P.O. Box 1660
Kaillua-Kono, HI 96745
808/329-2484

Marin, Glenn
Schema Systems, Inc.
P.O. Box 5307
Whittier, Ca 90605
310/861-1443

Shinchi, Steve
Hawaii Co. Transit
630 E. Lanikaula Street
Hilo, HI 96720
808/961-8343

Lee, Daniel Y.
DOT - Airports Div
Kailua-Kona, HI 96745
808/329-2484

Campbell, Jerry
Diversified Comm. Engineering
167 Fisher Court
Calimesa, CA 92320
909/795-1855

Matsumoto, Leslie
Hawaii Co. Police Department
349 Kapiolani Street
Hilo, HI 96720
808/961-2280

Birnie, Ian
DOT - Harbors Div.
Port of Hilo
Hilo, Hi 96720
808/933-4778

Reis, Cheryl
Hawaii Co. Police Dept.
349 Kapiolani Street
Hilo, HI 96720
808/961-2247

Balarrino, Larry
DOT - Airports Div.
Hilo Int'l Airport
Hilo, Hi 96720
808/933-4782

ATTENDANCE ROSTER
CITY AND COUNTY OF HONOLULU (OAHU) - PRELIMINARY NPSPAC MEETING
SEPTEMBER 25, 1992

Foster, Wayne
Oahu Transit Services
811 Middle Street
Honolulu, HI
808/848-4549

Sniffen, Edward
Oahu Transit Services
811 Middle Street
Honolulu, Hi
808/848-4547

Roark, Karen
Pali Momi Medical Center
98-1079 Moanalua Road
Aiea, HI 96789
808/486-1112

Moniz, Gary
State DLNR - Enforcement
1131 Punchbowl Street
Honolulu, HI 96813
808/587-0069

Sherwood, Terry W.
U.S. Coast Guard, 14th District
200 Ala Moana, PJKK Fed. Bldg, Rm 9121
Honolulu, HI 96850
808/541-2024

Roberts, Crichton C.. Lt.
DPS - Harbors/Marine Patrol
606 Fort Street, 2nd Floor
Honolulu, HI 96813
808/587-2000

Kim, K
Department of Education
1390 Miller
Honolulu, HI 96813
808/586-3222

Viray, Tomas. B
Pali Momi Medical Center
98-1079 Moanalua Road
Aiea, HI 96701
808/486-1390

Tominaga, James
Board of Water Supply
630 So. Beretania
Honolulu, HI 96813
808/527-5274

Weigand, Richard, LCDR
U.S. Coast Guard, 14th Dist
300 Ala Moana Blvd
Honolulu, HI 96850
808/541-2021

Kobatake, Earl
State DOT - Hwys Div - Oahu
727 Kakoi Street
Honolulu, HI 96819
808/536-2236

Richards, Kevin
Kuakini Medical Center
3478 N. Kuakini Street
Honolulu, HI 96817
808/536-2236

Coffin, Richard
State DOT - Airports Div.
Honolulu Airport
Honolulu, HI 96819
808/836-6542

Kama, Ronald
State DLNR - DOCARE
1131 Punchbowl Street
Honolulu, HI 96813
808/587-0069

Cavallo, Fredrick
UOH Campus Security
1980 East West Road
Honolulu, HI 96822
808/956-8211

Jones, Wayne
Oahu Civil Defense Agency
P.O. Box 794
Wahiawa, Hi 96786
808/621-5916

Martin, Bill
Oahu Civil Defense Agency
650 S. King Street
Honolulu, HI 96813
808/523-7587

Kamealoha, Peter C., Jr.
UOH Campus Security
1980 East West Road
Honolulu, HI 96822
808/956-8211

Shiroma, Beverly
Motorola, Inc.
99-1180 Iwaena Street
Aiea, HI 96701
808/487-0033

Mimura, Eric
Honolulu Fire Department
3375 Koapaka St, H-425
Honolulu, HI 96819
808/523-4810

Ogasawara, Norman
State Civil Defense
3949 Diamond Head Road
Honolulu, HI 96816
808/734-2161

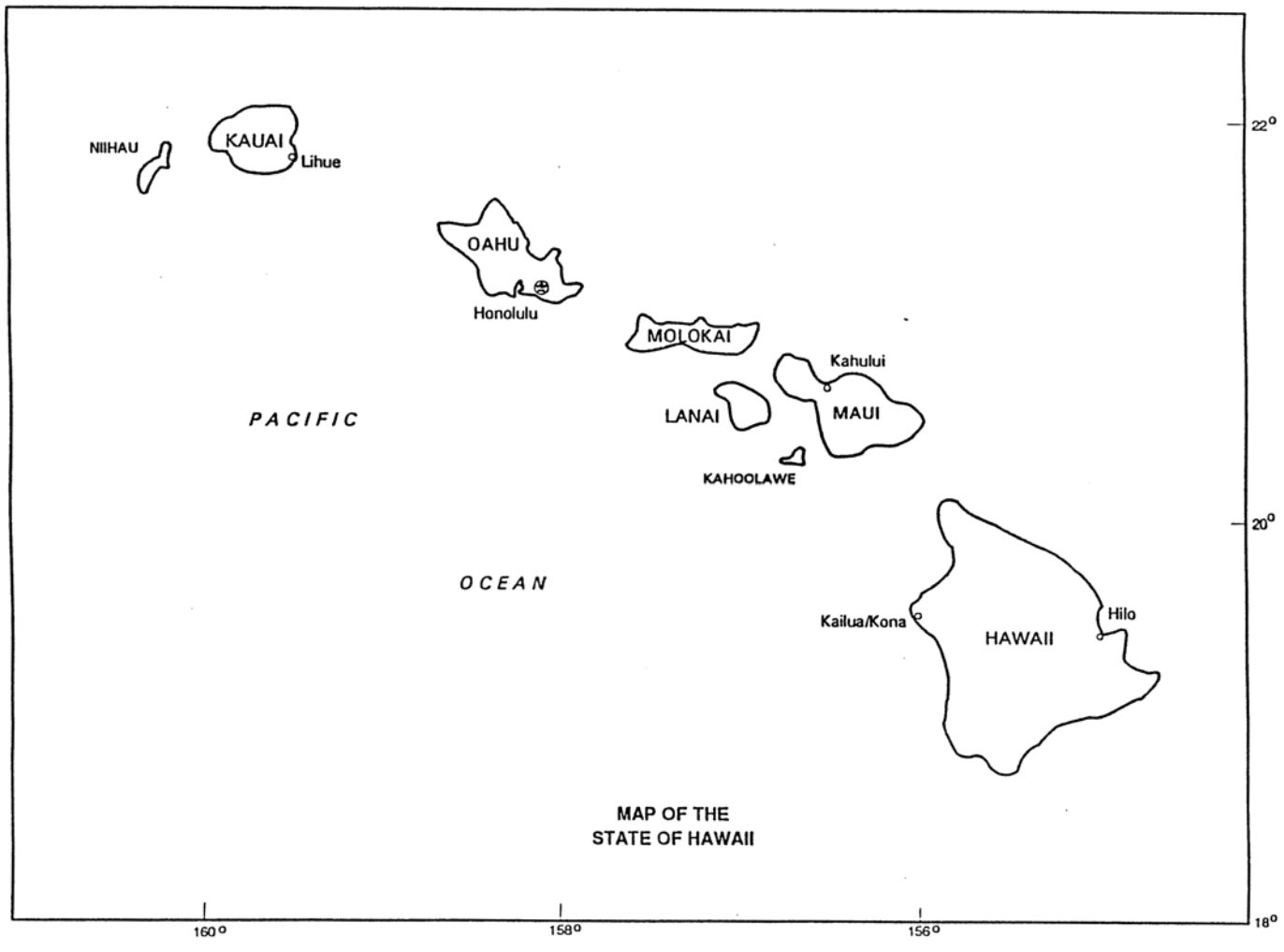
Arjona III, Ramon
Oahu Transit System, Inc.
811 Middle Street
Honolulu, HI 96819
808/848-4547

Langeslay, Patrick
Motorola, Inc.
99-1180 Iwaena Street
Aiea, Hi 96701
808/488-7232

Nakaichi, Lester
Dept. of Public Safety
777 Ala Moana Blvd
Honolulu, HI 96814
808/587-1253

APPENDIX C

MAP OF THE STATE OF HAWAII



MAP OF THE
STATE OF HAWAII

APPENDIX D

POPULATION AND ECONOMIC DATA

RESIDENT AND DEFACTO POPULATION
1980 TO 2010

ISLAND	1980	1990	2000	2010
OAHU	764,800	861,600	932,800	999,500
HAWAII	93,000	124,600	160,400	206,100
KAUAI	39,400	54,100	68,200	84,600
MAUI	71,600	96,800	123,900	145,200
LANAI	(2,119)[1]	(2,426)[1]	(Not Available)[1]	(Not Available)[1]
MOLOKAI	(6,049)[1]	(6,717)[1]	(Not Available)[1]	(Not Available)[1]
NIIHAU	226	226	(Not available)	(Not available)
STATE TOTAL	968,900	1,137,200	1,285,100	1,435,500

[1] Population included in Maui totals

LAND AREA AND POPULATION DENSITY

ISLAND	LAND AREA SQUARE MILES	1990 POPULATION DENSITY
OAHU	600.2	1,512.9
HAWAII	4,028.2	33.5
KAUAI	552.3	122.6
MAUI	727.3	174.6
LANAI	140.5	18.7
MOLOKAI	260.0	29.5
NIIHAU	70.2	3.2

STATE ECONOMIC PROJECTIONS
1990 TO 2000

SUBJECT	1990	1995	2000
Total labor force	602.2	657.5	704.9
Civilian labor force	543.8	599.1	646.5
Civilian persons employed	516.7	568.6	614.0
Total jobs	611.0	665.5	713.1
Military jobs	68.4	68.4	68.4
Civilian jobs	542.6	597.0	644.7
Self-employed	42.3	46.6	50.3
Wage and salary jobs	500.2	550.5	594.4
Sugarcane – field	3.6	3.2	2.8
Pineapple – field	1.9	1.9	1.8
Other agriculture	5.4	6.3	7.1
Sugarcane processing	3.1	2.7	2.4
Pineapple canning	1.7	1.6	1.4
Other food processing	5.2	5.6	5.9
Misc manufacturing	12.7	13.3	13.9
Construction	21.2	23.3	25.0
Transp/warehousing	26.2	28.3	29.8
Communication	8.5	9.1	9.7
Utilities	2.7	2.8	2.9
Wholesale trade	22.5	24.5	26.3
Retail trade	65.9	73.3	80.0
Eating and drinking places	48.1	52.7	57.3
Banking and finance	35.4	39.2	41.6
Hotels	34.5	38.1	41.3
Health/prof services	42.4	49.7	55.8
Other services	61.1	71.5	80.7
State/local gov.	65.8	70.7	75.3
Federal gov	32.5	32.9	33.3
Personal income (millions 1982 dollars)	15,509	17,994	20,094
Per capita income (thousands of 1982 dollars)	13.6	14.7	15.6
Disposable personal income (millions of 1982 dollars)	13,311	15,411	17,241
Gross State produce (millions of 1982 dollars)	18,345	21,670	24,720

APPENDIX E

REGIONAL REVIEW COMMITTEE

MEMBERSHIP OF THE REGIONAL REVIEW COMMITTEE

The Regional Review Committee will be established after the Region 11 Plan is approved by the FCC.

The membership will be listed in this Appendix and a copy will be distributed to Region 11 personnel and also sent to the FCC and APCO.