



CITY OF VANCOUVER

Administrative Report

Date: June 21, 2004
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RTS No.: 4365
CC File No.: 3701
Meeting Date: July 6, 2004

TO: Vancouver City Council

FROM: Chief Constable Jamie Graham

SUBJECT: Acquisition of 139 Additional LPE 200 Portable Radios via the E-Comm Levy

RECOMMENDATION

- A. THAT Council approve the purchase of 139 LPE200 radios previously utilized by the Vancouver Fire and Rescue Services which will be added to the E-Comm levy at an annual cost of \$183,500. For 2004 funding of approximately 6 months of prorated fees, \$91,750, is to be provided from Contingency Reserve and for 2005 funding of \$183,500 is to be added to the 2005 Operating Budget without offset, subject to Budget Review;
- B. THAT Council direct the Vancouver Police Department, in consultation with Corporate Finance, to report back on the radio needs assessment currently being conducted the Vancouver Police Department, including any opportunities to improve radio utilization.

CHIEF CONSTABLE'S COMMENTS

The Vancouver Police Department's portable radio needs have not been revisited since before E-Comm went live, approximately five years ago. Since that time both deployment strategies and demand for portable radios has grown beyond anticipated levels. The demand for radios is driven by a variety of different factors. As a result the number of portable radios that are available to operational members has been negatively affected and requires immediate action. The Senior Executive has identified a fiscally responsible source of new radios that represent a marginal increase to the Levy but represent a substantial increase in the number of radios

available to deployable operational units. There are no technical or infrastructure issues to prevent this acquisition from taking place forthwith.

In addition, the Vancouver Police Department recognizes the need to conduct on-going needs analysis and has made a commitment to conduct a year long analysis to accurately report the increased need as well as report on the deployment strategies that they employ. The Vancouver Police Board also supports these recommendations.

I recommend that Council support these two recommendations so that this acquisition can take place as soon as possible. In addition, the year long radio deployment needs analysis will commence from July 2004 and run through July 2005. The report for Council will be prepared for the fall of 2005.

The Chief Constable recommends approval of recommendations A and B.

COUNCIL POLICY

It is Council policy to approve increased service levels and associated funding.

PURPOSE

The purpose of this report is to gain approval from Council for the immediate acquisition of 139 used radios from Vancouver Fire and Rescue, who returned these radios to E-Comm due to their transition to the Jaguar radios. These portable radios are required to augment the original number of radios that were purchased through E-Comm over five years ago to meet daily operational needs. Council approval is required since billing for the Levy is set on the basis of total equipment and the addition of these radios represents an increase in equipment levels and will not only change the amount of the levy but also service levels which require council approval.

There is a critical need for additional radios to meet the daily need for patrol deployment in order to bring the Patrol Division up to a radio to sworn member ratio that is consistent with other operational units. This report has also identified the need to update the radio needs assessment process to establish realistic and efficient radio deployment strategies for the long term, to meet future demands such as those that will emerge for the 2010 Olympics. This updated assessment will result in policy and procedures that will better identify radio and other equipment needs.

BACKGROUND

On May 1st 1999 the E-Comm Regional Radio System was activated. This was a marked departure from the system that had been in place up to this point. Prior to this each individual agency had its own radio and dispatch system. The events of the 1994 Stanley Cup Riot and the Royal Commission Inquiry into policing served as the impetus to bring the communications component of the various emergency services together in one central location. Radio equipment is purchased and maintained by E-Comm and financed through a Levy model. Initially the Vancouver Police purchased 547 portable radios using a formula that was based on

strict operational guidelines. Specifically, this formula was based on one radio for every four members and likely had assumptions based on patrol deployment.

The needs and requirements for portable radios have evolved in the last five years. As a result the Vancouver Police Department has had to employ a variety of creative solutions to fill the gap between the supply and demand for portable radios. Up to this point in time only temporary stop-gap measures have been used to fill the void. However, these measures are no longer available.

The Regional Radio System at E-Comm has been bringing in new agencies into the radio system over the past several years. As a result E-Comm has had extra radios on hand that were part of the current deployment program. These extra radios were used to augment the supply required by the Vancouver Police Department. This short term solution was not without its costs, as each time the Vancouver Police borrow a radio it must first be re-programmed for the Vancouver Police radio profile and then de-programmed once the event is concluded. The cost is substantial at \$100.00 per radio per event.

The Vancouver Police Department has also augmented radio stocks for patrol by retrieving radios from specialty squads in a “claw-back”. This claw-back process is conducted by civilian fleet staff and involves two fleet members physically attending each specialty unit and retrieving radios that are deemed non-essential. These radios are then amassed inventoried and then centralized for distribution for the special event. Once the event is concluded these radios are then re-collected, inventoried again and then returned to the spot from which they were first taken.

These existing processes and formulas are not sustainable due to various changes to Police Operations and overall assessed needs.

DISCUSSION

1. Increasing Radio Inventory Requirement for Patrol Division

There are a number of variables that are impacting the increasing need for radios within the patrol division. Some of the causes are related to changing police practices, closure of kiosk facilities and overall shift of radios from Patrol to Specialty Units.

- Specialty Units and Redistribution of Radios

Since that initial purchase date, the operational needs of the Vancouver Police Department have continued to grow. As of July 2003, despite an increase in portables that were authorized, the Vancouver Police have only 527 portable radios available for deployment. Lost and permanently damaged radios have not been replaced to ensure that original levels were maintained. Moreover less than 200 of this initial purchase number are actually available for deployment in patrol. The remainder are in use by specialty units that are physically located in three different locations as can be seen in the changing location and distribution of radios.

Several events have lead to this change in distribution including the closing of the Oakridge sub-station in 1997 and the establishment of the 2120 Kiosk, the closing of the 312 Main St Kiosk in 1998, and the moving of units to the E. 8th Ave building. The

consistent theme is that the radios available to patrol members at the 2120 Kiosk have been decreasing. Appendix F shows the 2004 portable radio distribution by both location and functional units. While Appendix G shows the change in portable radio distribution with snapshots from 1995, 1999, 2002 and finally 2004. What can be seen is that the amount of radios available at the Kiosk, which is mainly for Patrol use, has diminished from 292 in 1999 to 181 in 2004. Most of these radios have been redistributed to Specialty Units.

Portable Radio Distribution 2004

	2120 Kiosk	2120 Building	312 Main St.	East 8 th Ave.	Total
1999	292	81	50	91	514
2002	238	79	86	119	522
2004	196*	88	118	127	529

* Only 181 are available for patrol deployment

Exasperating this shortfall is the delay in the purchase of portable radios that were authorized through authorized sworn staffing increases in anticipation of realizing the purchase of the LPE200 radios that were being transition out by the VF&R Service.

Structural Changes Effecting Radio Demand

- As previously mentioned the acquisition formula is based on one radio for every four members. This formula is likely based on a strict patrol definition and likely has assumptions based on patrol deployment. Unfortunately in the last 5 years deployment strategies have changed and this formula may now be inappropriate. It would be more appropriate to re-visit this formula and come up with an updated formula, possibly a weighted distribution. Some of the changes are summarized as follows:
- Organizational developments have led to a greater demand for radios - training initiatives designed to compensate for the younger and less experienced workforce have drawn on radios.
- Dedicated radios for specialty squads - certain squads are assigned dedicated radios. These include ERT, the Dog Squad and the Strike Force. These units have the potential to be deployed in their entirety, given the nature of the operational demand and as such require dedicated radios. The inadvertent benefit of this deployment strategy is that these radios have required virtually zero maintenance. Traffic Enforcement has also received personal issue radios due to the special requirements for the special connections required for the helmet kits.
- Deployment strategies have increased demands for radios- Both District 1 and District 3 have both deployed 10 member Crime Units. In addition, some squads are requiring more radios such a Robbery/Assault, Mounted Squad, Drugs and Vice. This increased need has come from changes in deployment strategies. For example managers and supervisors in investigative units are asking for radios for their members so that these investigators can better monitor situations

and respond to major incidents in the first instance. This is a logical plan as many of these units are ultimately responsible for these investigations.

- Multiple location of radio inventories - radios are all deployed across at least three different locations as opposed to a central pool which contributes to this radio shortage.
- The gap analysis that is outlined in Appendix A shows the typical demands on radio supplies. It begins with the deployment of basic patrol shifts and then works through regular operational squads and then outlines the typical demands by other operational units. While not all of these units demand radios everyday, it is easy to see that even if several events are taking place concurrently the radio deficit can easily hit -106, based on the number currently available at the Kiosk at 2120 Cambie Street.

2. Radio to Member Ratios

Appendix D shows the ratio of radios to sworn members. It can be summarized as follows.

Division	Number of Radios	# Sworn Members	Radio:Sworn Members
Chief Cst's Office	5	16	0.31
Patrol	180	536	0.34
Special Assignment	143	206	0.69
Operations Total	323	742	0.43
Investigations	94	167	0.56
Operational Support	88	150	0.59
Support Services	17	49	0.34
Total	527	1124	0.46

Unfortunately the ratio of radios to sworn members in patrol only is 0.34. This is the same ratio that is found in administrative sections.

This ratio highlights the precarious position that the Vancouver Police Department would find itself if they were to find the need for a mass deployment for either a man-made or natural disaster.

It is clear why there is a chronic shortage of radios. This has resulted in the last five years from changes to deployment strategies, the transfer of radios to specialty squads and the increased demands for radios from sources that were not a concern five years ago.

Appendix E shows a comparison of the ratios based on the minimal requirements, an average and adequate deployment as well as the deployment level for a major deployment. The major deployment is not an inconceivable scenario and should not be discounted as something that may or may not happen. Based on this analysis the ratio

in patrol needs to be increased from 0.34 to 0.61 and 0.82 to prepare for a major incident. To support this claim, if the VPD were to increase their radio supply to the level required for adequate coverage, an additional 148 radios, this would still not meet the needs in a major incident. A claw back can only yield about 100 radios. This means that even with the purchase of 148 radios, including the radios that were available through the claw back the VPD would still be 37 radios shy of the number required for a major incident. It is apparent that the ratio in the Patrol Division must be increased to at least 0.61, which is consistent with the radio to member ratio in the other part of the Operations Division.

3. Jurisdictional Comparisons

As a comparison the departmental ratios are listed for other police agencies.

Department	Sworn Members	# of Portable Radios	Ratio
Vancouver	1124	527	0.46
Calgary	1469	700	0.47
Edmonton	1343	740	0.55
Toronto	5261	2578	0.49

The Vancouver Police Department needs to increase their ratio to 0.61 because of the special demands placed on the Vancouver Police Department. The Vancouver Police Department has made the decision to deploy a certain number of its members in specialty assignments. This deployment practice, coupled with the geographic distribution of the police resources across three main buildings, dictates that the Vancouver Police Department requires a higher ratio of radios to sworn members.

The Vancouver Police Department also has fewer of its members dedicated to patrol duties when compared to other agencies. Bedroom communities typically have higher numbers of members deployed in the patrol division when compared to cities that are responsible for policing a core city. In terms of larger police agencies Vancouver also has a lower percentage of officers in uniform patrol. For example, while the Vancouver Police Department has only about 53% of their sworn members in patrol the Edmonton Police Service has about 62% of their sworn members dedicated to the uniform patrol positions. The Calgary Police Service has 75% of their deployment in uniform patrol positions. The percentage of patrol officers that an organization deploys is inversely related to its portable radio requirements. With more patrol officers, an organization requires fewer radios due to the fact that patrol officers can share radios based on staggered scheduling as opposed to specialty units who often require dedicated radios.

Facing both local and more far reaching issues, the Vancouver Police Department does not have the benefits of resource sharing capabilities as some larger metropolitan police departments enjoy. The Vancouver Police Department cannot make a simple request from its neighbouring police departments, as a metropolitan force can, to borrow radios for operational or special event requirements.

4. Implications of Heavy Radio Usage

The increased use is not without associated costs. Radios are also being used on multiple shifts within a given 24 hour period and will naturally suffer damage and require

maintenance. The average number of radios in the shops is 20 per week. It is also safe to assume as the radios get older, more radios will require maintenance and will be removed from service. When radios are in the shops this will affect the number of radios that are deployable for patrol. Members whose radios are in for repair will attend the kiosk and draw an extra radio to replace their own. These loaner radios are drawn from directly from the number available for patrol members.

5. Officer Safety Concerns

The most important issue that is highlighted with the lack of radios is that of the officer safety concern. The portable radio is the most important tool that the police officer carries. To ensure officer safety requirements are met and that the VPD meets proper operational command and control it is imperative that each police officer that is deployed has a portable radio. This concern was first realized department wide during the 1994 Stanley Cup Riots. The Vancouver Police Union also subscribes to this philosophy and holds the VPD management accountable for the safety of their members.

ALTERNATIVES/OPTIONS

The following options are available to the Vancouver Police Department.

Status Quo

Maintaining the status quo is not viable for several reasons. The extra supply of radios that were on hand as part of the E-Comm deployment schedules have dried up. There is no longer a supply of surplus radios that can be drawn for temporary use.

Claw-backs by the Fleet Staff of radios from specialty squads are an inefficient process. It requires approximately six to eight hours for two fleet staff members to claw back 100 radios. It also takes approximately the same amount of time to replace these same radios. As a result the fleet manager is required to call-out two additional staff members on overtime each time this process is engaged.

A quick cost analysis of this process shows the following costs

Claw back costs 16 hours x \$20/hour =	\$320.00
Overtime for backfill Staff 16 x \$40/ hour =	<u>640.00</u>
Total staff costs per claw back	\$960.00

In speaking with the Kiosk staff, it is not unusual for 15 claw backs in a given year. This number would grow with additional demands but this alone serves as a cost of **\$14,400**. The unfortunate part of this cost is that it does not add value; it must be absorbed by the Vancouver Police Department and is not recoverable.

In addition, there is the intangible cost of depriving specialty units of their radios. They may very well have to curtail projects or duties to accommodate the need for their radios. These projects could very well be related to the large events that are generating the claw back. For example funerals of prominent crime figures have regularly included the deployment of ERT and CIS teams. Another good example has been the major kidnapping investigations that took place

recently and approximately one year ago. In both of these cases the investigations took place over several weeks and involved numerous investigators from various investigative units. The investigations required 24/7 intervention and these units required all their personnel and equipment. These radios were no longer available for claw backs. Many of these squads are also on-call and so their radios must be available at a moment's notice. In addition, many of the clawed back radios do not meet the operational needs of the event as they do not come with shoulder microphones. Furthermore, the officer safety concern is a danger that is difficult to assign a cost to. This alternative is not a financially or practically viable solution.

Acquire the Used Radios from VFD

The first viable alternative is to take advantage of an existing resource. Vancouver Fire and Rescue has recently transitioned to a new portable radio. With the advent of the Jaguar Radio, they have freed up approximately 139 LPE 200's. These are the same radios that are currently used by the Vancouver Police Department. These radios are part of the Regional Radio System and have already been amortized over half of their projected life.

These radios present a viable option with the most obvious benefit being the cost factor, as compared to brand new LPE 200 radios. In addition, unlike brand new radios, these radios would reach the end of their amortized life at approximately the same time as the present stock of radios. This would make replacement a much smoother transition as there would not be an extended period were the Vancouver Police Department would have two different styles of radios.

The Vancouver Fire and Rescue would have 108 available immediately and then another 31 that are still in possession of the VF& R. The problem with this option is that it is time sensitive. E-Comm believes that that when such assets are turned over within a municipality the most fair way in which to offer them to other shareholders is the right of first refusal goes to other emergency services on the Regional Radio System, within the same community. Once this right is relinquished then these assets are then available to the other users of the Regional Radio System. Thus if the Vancouver Police Department were to delay this acquisition, they could conceivably lose the rights to these radios. On the other hand, if the Vancouver Police Department were to acquire the Vancouver Fire and Rescue radios quickly, they would be able to take advantage of other used radios, once operational. Currently, two other Fire departments are also transitioning off the same radio, Richmond and Port Moody Fire Departments. The cost for this option would represent an increase to the Annualized Levy.

While this option does not totally satisfy the operational deficiencies it does allow for some breathing space as it will increase the patrol ratio of radios to members from 0.34 to 0.59. This will allow the VPD an opportunity to have some breathing space and conduct a true needs assessment to assess the specific number of to increase its level to deal with a variety of different operational needs.

Acquire New Radios

Since there are no facilities that allow the rental of this equipment the only other option is for the Vancouver Police Department to purchase new LPE200 radios. While these radios would be brand new, the pristine condition comes with a high cost. These new radios would be amortized over a life of 7 years and thus represent an increase to the Levy that would take twice as long to amortize as would the used radios in Alternative 1. This option is also time sensitive as the

fixed pricing agreement between E-Comm and the technology providers expires 04-07-23. After this date the price for the LPE 200 model will increase. The amount of the increase is not yet known but it could be as high as 50%. For sake of consistency this option is costed out using the same number of radios that are available through alternative one. The purchase of 190 new radios would obviously involve a greater impact on the Levy.

FINANCIAL IMPLICATIONS

E-Comm has prepared a financial analysis on behalf of the Vancouver Police Department. It is included in Appendix B. It can be summarized for each of the options as listed below.

Cost Component	2004 Budget	139 Used LPE Radios		139 New Radios	
		Revised	Levy Impact Increase	Revised	Levy Impact Increase
Radio Infrastructure	2,003,081	2,060,056	56,975	2,060,056	56,975
User Equipment	1,581,081	1,707,560	126,479	1,710,560	129,479
Total Annualized Levy	3,584,162	3,767,616	183,454	3,770,616	186,454
Life remaining			3.5 Years		7.5 Years
Total Additional Cost Over time			<u>\$642,089</u>		<u>\$1,398,405</u>

It is important to remember that the total annualized levy for 139 used radios and 139 new radios appears very close. However, the important factor to consider is that the new equipment carries an amortization period of 7.5 years and not 3.5 years as does the used equipment. Both options also include the capitalized cost of both batteries and shoulder microphones. However, overall financially these options are equal to each other since the same numbers of radios are required over the same period of time. The major intangible benefit of acquiring the older radios is that they will ensure the VPD is using uniform technology.

Should Council approve the purchase of the Fire Department's radios, partial year funding of \$91,750 would be provided from Contingency Reserve while full year funding of \$183,500 would be added to the 2005 Operating Budget, subject to Budget Review and any changes to the E-Comm levy.

PERSONNEL IMPLICATIONS

The obvious implications to personnel are that with the growing demands for radios, without immediately augmenting the existing supply, personnel may be non-deployable as they cannot be deployed without a communication tool, and this in turn may affect the level of service provided to the citizens of Vancouver.

ENVIRONMENTAL IMPLICATIONS

None

SOCIAL IMPLICATIONS

None

IMPLEMENTATION PLAN

By approving the purchase 139 radios the Police Department will be able to meet the most acute needs in an efficient manner. By acquiring these radios the Vancouver Police Department will not only capitalize on the partially amortized asset but this will assist in the future transition of radios. Since the radios that VF&R are transitioning away from will reach the end of their predicted life at approximately the same time as the current stock of Vancouver Police Department radios, this will make the eventual replacement of the stock much cleaner. There will be a shorter period of mixing radios and reduce the potential for having multiple different technologies operating concurrently. In addition, once approval is granted for this option, immediate needs can be satisfied, ensuring that current deployment and safety to the public and to police members is not compromised.

Future Considerations

There are a number of future considerations that the Vancouver Police Department will need to investigate in relation to radio equipment.

- **Needs Assessment Requirements**

Once the 139 radios have been acquired, the Vancouver Police Department will conduct a year long needs assessment of the radio deployment model. This will include an examination of the formula used to decide upon the number of radios that are required to meet both operational and special event needs. This assessment would then examine the logic of current deployment strategies and make recommendations for any increased efficiency that may be put into practice as well as additional radio requirements over and above the 148 to 285 radios that this report has identified. This report will weigh the option of personal issue of radios as well as the option of pooling radios with other agencies. RCMP detachments in the lower mainland have expressed an interest in pooling the radios that were turned over by the Richmond and Port Moody Fire Departments. This option will be evaluated as it has both advantages such as the waiving of infrastructure costs. However, it also has associated costs, which include limited access especially when the pool of radios is required by all the participating agencies concurrently. The report will determine how best the present and future needs of the Vancouver Police Department can be met.

- **Radio Demands of Special Events**

A factor to be considered for the overall needs must also address the portable requirements of special events. To illustrate the magnitude of this demand several large scale scheduled events are listed in the table below along with the portable radio demands for each one.

Special Events	
Celebration of Lights New Years Eve	250 Radios 150 Radios
Motor Sports Spectacular Stanley Cup Playoffs Round 2	70 Radios 150 Radios
Hells Angel Celebration Sun Run Marathon Parades Cruise Ships/Paving	80 Radios 50 Radios 50 Radios 30-50 Radios 40-45 Radios

The trend for special events is increasing. In 2003 there were 2355 Special Events logged through EOPS. Many of these events contribute to the City of Vancouver's economy and help to showcase the city in terms of its liveability and ability to host these types of large events. Some of these events are cost recovery, while others are simply a mandatory deployment that the police are responsible for and offer no cost recovery component. The VPD has no choice in whether they chose to deploy members in these situations.

Deployment levels at the large events are increasing, for example the Celebration of Lights deployment has increased from 140 members in 2000 to 250 members in 2003. In addition to these major callouts, the number of callouts has also increased. Consideration will also be given to Traffic Initiatives and regular call out events which all need to be factored into the demand for radios. The problem of concurrent events highlights the problem of events competing for limited resources. In addition, in the event of a large or even medium scale disaster, if there were to be a need to conduct a major fan-out procedure, many of the deployed officers would be without radios. The result is that these demands affect the radio supply used for day to day deployment of patrol units.

Given that radios for these type of events are not needed on a daily basis, the Vancouver Police Department through E-Comm is looking at opportunities to share radios with other police agencies in order to minimize overall costs.

COMMUNICATIONS PLAN

Upon the approval of Council, the Inspector i/c Communications for the Vancouver Police Department will then forward a formal request to the President and CEO of E-Comm formally requesting that the 139 VF&R LPE 200 portable radios be turned over to the VPD and that the billing process be commenced through the Levy. The Director of Finance will communicate the exact Levy impact to the City of Vancouver Budget Manager.

CONCLUSION

The demand for wireless services, specifically portable radios, among the Vancouver Police Department's members has outgrown any initial projections. Increases in training, changes in

deployment strategies and increased demand for special events callouts have lead to greater taxing on the radio supply. The immediate requirement for radios needs to be met. This acute need can be partially met through an authorization to purchase the 139 used radios that are available through the transition that VF&R have recently completed. This acquisition will give the Vancouver Police Department the breathing room it needs to conduct an in-depth needs analysis of radio requirements and deployment strategies it uses and make any recommendations for optimizing radio, acquisition, usage and deployment.

Appendix A

Gap Analysis of Supply and Demand for Police Radios

Gap Analysis

Event		Radio Requirement	Available at 2120
			188
Charlie Shift	40		148
Delta Shift	40		108
Echo Shift	40		68
	<u>120</u>		
Papa Squad		16	52
Sierra Squad		18	34
		<u>34</u>	
CET			
		22	
Liquor Squad		(11)	12
Roving Squads		13	-1
		<u>35</u>	
<hr/>			
Traffic Authority		12	-13
Vice		8	-21
Patrol Recon Shift		13	-34
Counter Attack		16	-50
Drinking Driver		2	-52
Corridor Enforcement		2	-54
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Movie Callout	2/ movie		-56
Concert	10/concert		-66
Hockey	10/gam e		-76

Football	10/game	
Radios in for Repair	e	-86
	20	-106

Special Events		
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Celebration of Lights	250 Radios
New Years Eve	150 Radios
Motor Sports	70 Radios
Spectacular	150 Radios
Stanley Cup Playoffs	80 Radios
Hells Angel Celebration	50 Radio
Sun Run	50 Radio
Marathon	30-50 Radios
Parades	40-45 Radios
Cruise	
Ships/Paving	

Radio Inventory	
Kiosk	188
312	
Main	110
2120 Cambie	41
E 8th	168
Other	21
Total	528
Deployable	
VFD	108
Yet to be Returned	31
	139

Appendix B
Ratio of Radios by Division

**OFFICE OF THE CHIEF
CONSTABLE**

Chief's Office
EXECUTIVE SERVICES SECTION
Media Liaison
Diversity Relations
INTERNAL INVESTIGATIONS
SECTION

QUALITY ASSURANCE UNIT

**Office of the C/C – Total sworn
members 16 and 5 portable radios**

OPERATIONS DIVISION

Deputy Chief's Office

DISTRICT ONE

Team 1
Team 2
Team 3
Team 4
Team 5
Team 6
Team 7
Team 8
Team 9
Team 10
Team 11
Team 12 - Mounted Squad
Neighbourhood Policing Team

DISTRICT TWO

City-wide Enforcement Team (CET)
Team 1
Team 2
Team 3
Team 4
Team 5
Team 6
Team 7
Team 8
Team 9

Team 10
Team 11 - Waterfront Unit
Neighbourhood Policing Team

DISTRICT THREE

Team 1
Team 2
Team 3
Team 4
Team 5
Team 6
Team 7
Team 8
Team 9
Team 10
Neighbourhood Policing Team

DISTRICT FOUR

Team 1
Team 2
Team 3
Team 4
Team 5
Team 6
Team 7
Team 8
Team 9
Team 10
Neighbourhood Policing Team /
Analyst

TRAFFIC SECTION

Enforcement Team 1
Enforcement Team 2
Enforcement Team 3
Enforcement Team 4
Traffic Services
- Traffic Support Unit
- School Safety and Education
Unit
- Taxi Unit
- Hit & Run Squad
- Commercial Vehicle Unit
Collision Investigation Squad 1
Collision Investigation Squad 2

PATROL SUPPORT SECTION

Analysis Team (Liquor/POP Co-
ordinator)
General Investigation Unit

Anti-Fencing Unit
Property Crime Unit
- Graffiti Unit
- Stolen Auto Unit
Crime Surveillance Unit
CITU
Telephone Response Team
Community Services Unit

Operations Division –

742 Sworn Members

323 Portable Radios

180 Portables at the kiosk

143 individual squad assignment

Ratio of 0.44 radios to member

**536 Patrol Members drawing from
pool of 180 kiosk radios for a ratio
of**

0.34 radios to member

INVESTIGATION DIVISION

Deputy Chief's Office

MAJOR CRIME SECTION

Homicide Squad 1

Homicide Squad 2

Unsolved Homicide

Forensic Identification Unit

Missing Persons

Coroner's Liaison *

Witness Protection Squad

Robbery/Assault Squad

SPECIAL INVESTIGATION SECTION

DVACH Unit *

Polygraph Unit

Sexual Offence Squad

VICLAS

VICE / DRUGS SECTION

Crime Stoppers

Drugs Unit 1

Drugs Unit 2

Drugs Unit 3

Vice Unit
Gaming Unit
DISC Unit

FINANCIAL CRIME SECTION
Financial Crime Unit
Computer Support Unit

Investigation Division

167 Members
94 portable radios

Ratio of 0.56 radios to members

OPERATIONS SUPPORT DIVISION

Deputy Chief's Office

EMERGENCY & OPERATIONAL PLANNING
SECTION

Traffic Authority
Operational Planning Squad
Threat Assessment Unit
Forensic Video Unit

CRIMINAL INTELLIGENCE SECTION

Investigation Unit
Surveillance Unit
CISBC

TACTICAL SUPPORT SECTION

Strike Force Squad 2
Strike Force Squad 3
Outlaw Motorcycle Gang Unit

EMERGENCY RESPONSE SECTION

Green Squad 1
Blue Squad 2
Red Squad 3
Grey Squad 4
Dog Squad

YOUTH SERVICES SECTION

Youth Services Unit
School Liaison Unit
Gang Crime Unit

Operations Support Division –

150 members
88 Portable Radios

Ratio of 0.59 radios to members

SUPPORT SERVICES DIVISION

Deputy Chief's Office

TRAINING /RECRUITING SECTION

Recruiting Unit
Education & Training Unit
Force Options Training Unit

HUMAN RESOURCES SECTION

Employee Services
Career Planning
Assignments & Transfers
Labour Investigator
Safety & Health
Security Officer

PLANNING & RESEARCH SECTION

COMMUNICATIONS SECTION

FACILITIES SECTION

SERVICES LIAISON SECTION

Jail OIC
Document Services Unit
Information & Privacy Unit

**INFORMATION MANAGEMENT
SECTION**

FLEET SERVICES SECTION

**INFORMATION TECHNOLOGY
SECTION**

FINANCIAL SERVICES SECTION

- Stores

Support Services Division

49 Members
17 Portable Radios

Ratio of 0.34 radios to members

Appendix C Authorized Strength VPD

	CC	DCC	INSP	SGT	PC	TOTAL
OFFICE OF THE CHIEF CONSTABLE						
Chief's Office	1					1
EXECUTIVE SERVICES SECTION			1			1
Media Liaison					2	2
Diversity Relations				1	1	2
INTERNAL INVESTIGATIONS SECTION			1	8		9
QUALITY ASSURANCE UNIT			1			1
Office of the Chief Constable - Total	1	0	3	9	3	16
OPERATIONS DIVISION						
Deputy Chief's Office		1		1		2
DISTRICT ONE			3			3
Team 1				1	7	8
Team 2				1	7	8
Team 3				1	10	11
Team 4				1	10	11
Team 5				1	10	11
Team 6				1	9	10
Team 7				1	9	10
Team 8				1	9	10
Team 9				1	9	10
Team 10				1	9	10
Team 11				1	9	10
Team 12 - Mounted Squad				1	6	7
Neighbourhood Policing Team				1	10	11
DISTRICT TWO			3			3
City-wide Enforcement Team (CET)			1	1		2
Team 1				1	12	13
Team 2				1	12	13
Team 3				1	14	15
Team 4				1	14	15
Team 5				1	14	15
Team 6				1	14	15
Team 7				1	14	15
Team 8				1	14	15

Team 9
 Team 10
 Team 11 - Waterfront Unit
 Neighbourhood Policing Team

DISTRICT THREE

Team 1
 Team 2
 Team 3
 Team 4
 Team 5
 Team 6
 Team 7
 Team 8
 Team 9
 Team 10
 Neighbourhood Policing Team

DISTRICT FOUR

Team 1
 Team 2
 Team 3
 Team 4
 Team 5
 Team 6
 Team 7
 Team 8
 Team 9
 Team 10
 Neighbourhood Policing Team / Analyst

TRAFFIC SECTION

Enforcement Team 1
 Enforcement Team 2
 Enforcement Team 3
 Enforcement Team 4
 Traffic Services
 - Traffic Support Unit
 - School Safety and Education Unit
 - Taxi Unit
 - Hit & Run Squad
 - Commercial Vehicle Unit
 Collision Investigation Squad 1
 Collision Investigation Squad 2

PATROL SUPPORT SECTION

Analysis Team (Liquor/POP Co-ordinator)
 General Investigation Unit

			1	14	15
			1	14	15
			1	15	16
			1	13	14
		3			3
			1	7	8
			1	8	9
			1	13	14
			1	13	14
			1	13	14
			1	13	14
			1	13	14
			1	13	14
			1	13	14
			1	13	14
			1	5	6
		3			3
			1	7	8
			1	8	9
			1	11	12
			1	11	12
			1	11	12
			1	11	12
			1	11	12
			1	11	12
			1	11	12
			1	11	12
			1	7	8
		1			1
			1	10	11
			1	9	10
			1	9	10
			1	9	10
			1		1
				2	2
				3	3
				1	1
				5	5
				4	4
			1	9	10
			1	9	10
		1			1
			1	8	9
			1	11	12

Anti-Fencing Unit				1	11	12
Property Crime Unit				1	12	13
- Graffiti Unit					2	2
- Stolen Auto Unit					3	3
Crime Surveillance Unit				1	10	11
CITU				1	12	13
Telephone Response Team				1	8	9
Community Services Unit				1	3	4
Operations Division - Total	0	1	15	64	662	742

INVESTIGATION DIVISION

Deputy Chief's Office		1				1
MAJOR CRIME SECTION			1			1
Homicide Squad 1				1	8	9
Homicide Squad 2				1	8	9
Unsolved Homicide					2	2
Forensic Identification Unit				1	17	18
Missing Persons				1	1	2
Coroner's Liaison *					0.5	0.5
Witness Protection Squad					2	2
Robbery/Assault Squad				2	21	23
SPECIAL INVESTIGATION SECTION			1			1
DVACH Unit *				1	6.5	7.5
Polygraph Unit				2	1	3
Sexual Offence Squad				2	17	19
VICLAS					1	1
VICE / DRUGS SECTION			1			1
Crime Stoppers				1	1	2
Drugs Unit 1				1	16	17
Drugs Unit 2				1	7	8
Drugs Unit 3				1	5	6
Vice Unit				1	8	9
Gaming Unit				1	1	2
DISC Unit					2	2
FINANCIAL CRIME SECTION			1			1
Financial Crime Unit				2	16	18
Computer Support Unit					2	2
Investigation Division Total	0	1	4	19	143	167

OPERATIONS SUPPORT DIVISION

Deputy Chief's Office		1				1
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EMERGENCY & OPERATIONAL PLANNING SECTION

Traffic Authority

Operational Planning Squad

Threat Assessment Unit

Forensic Video Unit

CRIMINAL INTELLIGENCE SECTION

Investigation Unit

Surveillance Unit

CISBC

TACTICAL SUPPORT SECTION

Strike Force Squad 2

Strike Force Squad 3

Outlaw Motorcycle Gang Unit

EMERGENCY RESPONSE SECTION

Green Squad 1

Blue Squad 2

Red Squad 3

Grey Squad 4

Dog Squad

YOUTH SERVICES SECTION

Youth Services Unit

School Liaison Unit

Gang Crime Unit

Operations Support Division - Total

		1			1	
				1	1	
			1	3	4	
				2	2	
				1	1	
		1			1	
			1	9	10	
			1	10	11	
				1	1	
		1		1	2	
			1	9	10	
			1	9	10	
			1	2	3	
		1			1	
			1	6	7	
			1	6	7	
			1	6	7	
			1	6	7	
			2	16	18	
		1		1	2	
			1	16	17	
			1	15	16	
			1	9	10	
	0	1	5	15	129	150

SUPPORT SERVICES DIVISION

Deputy Chief's Office

TRAINING /RECRUITING SECTION

Recruiting Unit

Education & Training Unit

Force Options Training Unit

HUMAN RESOURCES SECTION

Employee Services

Career Planning

Assignments & Transfers

Labour Investigator

Safety & Health

Security Officer

	1				1
		1			1
			1	7	8
			1	3	4
			1	5	6
		1			1
			1		1
			2		2
			1		1
			1		1
				1	1
			1		1

PLANNING & RESEARCH SECTION			1	1	3	5
COMMUNICATIONS SECTION			1	2		3
FACILITIES SECTION						0
SERVICES LIAISON SECTION			1			1
Jail OIC				4		4
Document Services Unit				1	6	7
Information & Privacy Unit					1	1
INFORMATION MANAGEMENT SECTION						
FLEET SERVICES SECTION						
INFORMATION TECHNOLOGY SECTION						
FINANCIAL SERVICES SECTION						
- Stores						
Support Services Division	0	1	5	17	26	49
ADMINISTRATIVE SERVICES DIVISION						
Chief Administrative Officer						0
Administrative Services Division - Total	0	0	0	0	0	0
DEPARTMENT TOTAL	1	4	32	124	963	1124

* Coroner's Liaison & DVACH both have a 0.50 Secondment

Appendix D
Ratio of Radios Broken Down By Division

Division	Radios	Sworn Members	Ratio- Radio:Member
Chief Cst	5	16	0.31
Patrol	180	536	0.34
Special Assigned	143	206	0.69
Operations Total	323	742	0.43
Investigation	94	167	0.56
Operational Support	88	150	0.59
Support Services	17	49	0.34

**Appendix E
Ratio Analysis**

The following table shows the analysis of the ratios of deployable radios for the patrol section, based on the figures from the gap analysis in Appendix A.

Minimum Radio Requirements	Daily Requirements	Adequate Requirements	Major Incident Requirements
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**181 Radios
20 at shops**

**Traffic Authority (12)
Vice (8)
Recon (13)
Counter Attack (16)
Drinking Driver (2)
Corridor (2)**

**2 Movies (4)
1 Concert (10)
1 Sports Event (10)
1 Semi Major Event (50)**

**COL (300)
Canucks Game 7(300)
Natural/Man-made Disaster?**

Based on the operational requirements that are outline the following table summarizes the data and gives a comparative analysis of the data and the ratios that are required. The current ratio of radios to members in patrol is 0.34.

	Radios Required	Ratio Required	Number of Additional Radios Required to Be Purchased
Minimum	201	0.38	21
Average	254	0.47	74
Adequate	328	0.61	148
Major Incident	608	0.82 *	285*

* These figures are based on the entire operations division as these events would likely result in a dedication of the entire section to such an event and call for a temporary suspension of other programs.

Appendix F

2004 Usable Radio Distribution

Kiosk

181 Patrol
 2 CN Police
 4 E-Comm
 1 Radio Shop
 8 Lost

Total 196

2120 Building

60 2120 Staff 1 Stolen Auto
 18 Dog Squad
 3 Marine Squad
 6 Mounted

Total 88

312 Main Street

6 Homicide
 7 Collision Investigation
 5 Sexual Offence
 4 Forensic Identification Squad
 6 DVAC
 1 Public Service Counter
 6 Financial Crime
 1 Jail
 42 Traffic
 13 Robbery
 5 Traffic Services
 22 CET

Total 118

E 8th

30 Drugs 3 OMG
 10 CIS 3 Stolen Auto
 13 Gangs 2 Witness Protection
 7 EOPS
 23 Strike Force
 26 ERT
 10 Vice

Total 127

Appendix G

Historical Distribution of Radios

	<u>312 Main</u>	<u>Oakridge</u>	<u>2120</u>	<u>Kiosk</u>	<u>E 8th Ave</u>
<u>1995</u>	337	141	N/A`	N/A	15
<u>1999</u>	50	N/A	81	292	91
<u>2002</u>	86	N/A	79	238	119
<u>2004</u>	118	N/A	88	181	127