



Corporate Report

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REGULAR COUNCIL

TO: Mayor & Council DATE: December 17, 2007

FROM: Chief Superintendent, RCMP Surrey Detachment FILE:
Fire Chief, Surrey Fire Service
Crime Analyst, RCMP Surrey Detachment

SUBJECT : An Alternative Response Model to Marijuana Grow Operations: the Electrical
Fire and Safety Investigation initiative as a Case study

RECOMMENDATION

It is recommended that Council receive this report and the attached study on the Electrical Fire and Safety Investigation (EFSI) initiative, as information.

INTENT

The purpose of this report is to:

1. provide an update on the nature and extent of marijuana growing operations in Surrey since 2003; and
2. to discuss how the EFSI initiative has affected grow operations in comparison to police responses relative to “probable” re-establishment of grow operations.

BACKGROUND

- The city of Surrey experienced a 375% increase in the number of marijuana production incidents from 1997 to 2003.
- In March 2005, the City implemented EFSI to address the public safety issues related to marijuana grow operations. This administrative approach was preventative in nature and did not rely on the criminal justice system.
- The development of the EFSI initiative stemmed from the recognition that marijuana-growing operations posed a significant fire risk and public safety threat.
- The EFSI initiative operates under the Safety Standards Act, which permits an inter-agency team, comprising of police officers, fire fighters and electrical inspectors, to conduct electrical inspections of houses that consume higher than normal levels of electricity.
- While there has been optimism about the EFSI initiative, there has also been a growing concern that no criminal charges are laid in cases involving EFSI despite the fact that many of the circumstances that are investigated reveal strong indications of grow operations. In particular, there has been concern that because of the perceived lack of a deterrent effect, grow operations attended by the EFSI

inspection team would have a greater likelihood of re-establishment than those for which police operation is involved.

- The primary aim of the study was to determine whether grow operations the EFSI team responded to would have any greater likelihood of re-establishment than police responded to grow operations.
- A study of this question has been undertaken by a graduate student at the University College of the Fraser Valley. The study examined all marijuana production files brought to the attention of the police in Surrey from November 1, 2004 to November 30, 2006.
- The total number of incidents falling within the specified date range was 1,366 files. These files were manually reviewed to identify only those cases directly related to residential marijuana growing operations. In total, 1,087 police files related to residential marijuana grow operations were identified and categorized (refer to coding sheet in the attached study) into one of four groups:
 - (1) RCMP – cases where the police employed traditional enforcement tactics to respond to select grow operations coming to their attention;
 - (2) EFSI – cases in which information of suspected grow operations was forwarded to the EFSI team by the police and were determined through BC Hydro records as having higher than normal hydro consumption levels;
 - (3) EFSI return to RCMP – cases returned to the police by EFSI because the addresses in question were deemed by BC Hydro as being within the low or normal consumption range and, therefore, outside the mandate of EFSI; and
 - (4) No action – cases in which no action was taken by police in the first instance.
- The likelihood of re-establishment for all cases was determined through Hydro consumption records for November 2006 provided to Surrey Fire Service. This allowed for a period of between one and twenty-four months for re-establishment to occur following any action taken by either the RCMP or EFSI.
- Particular attention was given to the Controlled Substance and Property Bylaw that was introduced by the City of Surrey on February 13th of 2006. The differences in re-establishment rates were compared for EFSI and “police-responded” cases both before and after the Bylaw was introduced to ensure it was not interfering with the results.

DISCUSSION

Comparison of Current and Historical Sample of Marijuana Cultivation Cases

- The size and sophistication of growing operations in Surrey has increased since 2003. The average number of plants within the historical sample (marijuana grow operation cases from 1997 to 2003) was 257 compared to an average of 488 plants since 2003; a 90% increase in the number of plants. This increase was paralleled by a 178% increase in the number of lights within growing operations.
- There was also a marked increase in the presence of illegal hydro bypasses and the amount of theft of hydro power. The likelihood of locating a hydro by-pass within growing operations increased by 56%, while the amount of theft of hydro power increased by 50%.
- The data also showed a trend toward declining incidents of case seizures and a declining likelihood of locating suspects within residences containing grow ops.

Comparison of RCMP and EFSI Characteristics of Marijuana Cultivation Cases

- A descriptive analysis of RCMP and EFSI cases was conducted to assess differences between the groups in the first instance prior to any enforcement action. RCMP and EFSI cases were similar in a number of ways. The average lot size, assessed land value, assessed improvements, and total property taxes did not differ significantly.
- The RCMP received information on suspected marijuana growing operations from a variety of sources. EFSI received nearly all of their cases (95.6%) from anonymous information, such as Crime Stoppers (prior to the introduction of Bill 25¹).
- The information EFSI acted upon tended to be more dated than the RCMP information. This was due to the time lapse between the reported dates and attended dates being affected by the RCMP responding both to real time crimes and historical crime information.
- A comparison of the property characteristics of EFSI and police cases revealed no significant differences.
- The average residential lot size in Surrey decreased by 42% reduction over the past 12 years (from 1993 to 2005). Yet, despite this general decline in average lot size, the average lot size containing a marijuana growing operation remained at approximately four times (18,113.78 square feet) the size of the 2005 average lot size for the City of Surrey.
- In terms of changes in property ownership subsequent to RCMP or EFSI action, there was also a significant difference. Property owners were more likely to make a property change after the RCMP attended a residence than if the EFSI team attended.
- In cases where the RCMP attended there was a greater likelihood of locating other drugs, such as cocaine, heroin, and methamphetamine, equipment used to produce marijuana, a hydro by-pass, or a guard dog within the residence.
- There was a much greater likelihood of finding a marijuana growing operation or even evidence of a past grow operation (i.e. improper wiring, empty plant pots, marijuana shake) in RCMP cases than in EFSI cases.

Comparison of RCMP and EFSI Cases With Respect to Probable Re-establishment of a Grow Op

Pre-Bylaw Rate of Re-establishment

- There was a greater likelihood of re-establishment for the EFSI group of cases (see Table 5.9) than the RCMP group of cases. The greater likelihood was statistically significant and was three times (12.7 per cent of all cases) higher for EFSI cases than RCMP cases (4.1 per cent of all cases).
- Under EFSI, the cases appeared to start as larger growing operations. Specifically, the average daily consumption was 130 kilowatt-hours per day for EFSI cases versus 106 kilowatt-hours per day for RCMP cases, although this difference was not statistically significant.
- Growing operations dismantled by EFSI re-started earlier (6.25 months) compared to RCMP cases (7.5 months). Again, this difference was not statistically significant.

¹ In April 2006, an amendment to the Safety Standards Act was introduced called Bill 25 which enabled any local Government to request from BC Hydro the electrical consumption information of residences within its jurisdictions that are consuming excessive amounts of electricity.

- EFSI cases had a statistically significant lower opportunity to experience a re-start (13 months) than RCMP cases (18 months). Despite having less of an opportunity for re-establishment, this group had a significantly higher rate of re-establishment. Suggesting that cultivators were less likely to be deterred when suspected EFSI, rather than the RCMP responded to growing operations.
- Locations where no change in owner name took place had a significantly greater likelihood, under both the RCMP and EFSI model, to re-establish a growing operation. The rate of re-establishment was more than twice EFSI cases and used 30% more consumption with five months less time to re-start than RCMP cases.
- Presumably there was less deterrence in cases responded to by EFSI, which was consistent with expectations, prior to the introduction of the Controlled Substance Property Bylaw.

Post-Bylaw Rate of Re-establishment

- Re-establishment was virtually zero for both RCMP and EFSI cases after the bylaw was enacted.
- EFSI cases had significantly greater assessed land values (\$246,950.00) compared to RCMP cases (\$219,406.86) and larger lot sizes, though the difference in lot size was not statistically significant. The greater assessed land value and larger lot size for EFSI cases was likely due to the legalities of policing².

CONCLUSION

Primary Finding

- The issue of re-establishment of grow ops was mitigated considerably by the introduction of the Controlled Substances Property Bylaw as the rate became virtually zero for both RCMP and EFSI cases. It would appear that the bylaw was a necessary complement to the EFSI program in reducing the likelihood of re-establishment.

Implications of Amendment to Safety Standards Act – Bill 25

- The introduction of Bill 25 enabled receipt of information pertaining to high consumption locations directly from BC Hydro. This modification has improved the EFSI process by allowing for the inclusion of other risk factors posed by locations of interest into the overall equation of public safety, rather than simply responding to community complaints in a piecemeal, reactive manner.

Limitations of Non-Traditional Enforcement Response

- A residence must consume 93 kilowatt hours per day in order to fall within the mandate of the EFSI program. Although EFSI dealt with some of the community complaints regarding marijuana growing operations, one-third of the complaints failed to meet the 93 kilowatt threshold and were returned to the police with no action taken.
- The data from the present research indicates that those incidents where a hydro by-pass was located had a higher likelihood of fire than those where a hydro by-pass was not located. Nearly half (47.3%) of all marijuana growing operations responded to by the RCMP involved a hydro by-pass. In terms of

² Under the present constitutional context, a police officer cannot walk onto private property to undertake a perimeter search of a dwelling in order to make observations to gather evidence consistent with a marijuana growing operation. The restrictions posed by the evidence gathering process has likely limited police officers to conducting surveillance and investigating marijuana growing operations on smaller lot sizes as it simplifies the process of gathering evidence.

electrical wiring and safety concerns, a considerable risk to safety continues to be posed by cases that currently fall outside the mandate of the program.

Benefits of Non-Traditional Enforcement Response

- The introduction of EFSI alleviated some of the burden on the police by enabling a 29% reduction (or 12.5 fewer days) to respond to informant information (i.e. Crime Stoppers).
- Based on the analysis of the data collected for this study, the EFSI program appears to be an ideal example of the benefits that can be achieved by increasing public involvement in reducing crime and of integrating stakeholders responsible for improving public safety.

Future Direction of Marijuana Enforcement

- The realization that electrical power is the backbone of the cultivation process is increasingly becoming the focal point for future strategies targeting marijuana production.
- Key stakeholders, such as BC Hydro, have been instrumental in moving toward a more integrated, “smarter solution” to marijuana enforcement. BC Hydro is presently working toward the implementation of digital meters on residences to increase energy conservation efforts. The digital meters will enable real-time detection of occurrences of theft of hydro power making it increasingly risky for individuals to attempt to steal electricity.
- Further examination of the apparatus required in the production of marijuana, namely hydroponics equipment, has led to further strategies exploring regulatory options. This will allow for yet another integrated, broad-based approach to attack the problem at its source, rather than attempting to manage its expansion.

Directions for Further Research

- The fact that the re-establishment rate was close to zero was very encouraging. However, some care must be taken when interpreting this result since RCMP cases only had 5.5 months to re-start, while EFSI cases had 7.8 months. This somewhat limited amount of opportunity was noteworthy because re-starts generally occurred within about six months. In order to gain additional confidence in these findings, it is recommended that the study continue for an additional six months to allow for sufficient time for re-establishment to take place.
- The findings demonstrated that marijuana growing operations tended to be located on properties that were five times the average lot size. What was more disturbing was that properties that received either “No Action” or were “EFSI return to RCMP” cases were situated on the largest lot sizes and had the highest assessed improvement value. In the absence of a coordinated strategy to address growing operations, cultivators will continue to evade detection by purchasing residences situated on larger lots and hiding their operations with the presence of natural barriers, or simply by relocating to rural areas.

- The study speculated on the potential reasons behind the finding that re-establishment took place at both a greater and faster rate in EFSI and police cases where properties did not experience a change in ownership. Based on these findings, both the police and EFSI process could be streamlined by conducting a simple audit of the consumption levels of residences on a recurring basis after initial investigation where a change in ownership has not taken place. Further research on this topic would allow for greater sophistication in the deployment of enforcement resources when targeting repeat locations.

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Attachment: Case Study

**AN ALTERNATIVE RESPONSE MODEL TO MARIJUANA GROW
OPERATIONS: THE ELECTRICAL FIRE AND SAFETY
INVESTIGATION INITIATIVE AS A CASE STUDY**

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ABSTRACT

In March, 2005, the City of Surrey implemented a non-traditional law enforcement response known as the Electrical Fire and Safety Initiative as one component in its efforts to address the problem of marihuana grow operations within the city. This innovative initiative involved the City of Surrey's Electrical Fire and Safety Investigation (EFSI) team attending to suspected grow operation locations for public safety reasons, instead of having the police to deal with them. While police supported the initiative, it was amidst concern in and outside police circles that one failing of this approach would be that grow operators dealt with by the EFSI team would escape justice because violators would not face a criminal justice system consequence. In particular, there was concern that because of the perceived lack of a deterrent effect, grow operations attended to by the EFSI team would have a greater likelihood of re-establishment than those attended to by the police. With this in mind, the purpose of this particular study was to examine whether re-establishment was greater in the case of grow operations attended by the EFSI team. The study involved looking at all incidents of marijuana cultivation coming to the attention of the Surrey RCMP over a two year period, with special attention to the impact of the new initiative prior to and following the introduction of the city's new Controlled Substances Property Bylaw.

The study found that re-establishment for EFSI cases was three times (12.7 per cent) greater than for the Police (4.1 per cent). Furthermore, re-establishment for EFSI increased to one in every five cases in which no change in property ownership took place. Additionally, EFSI cases re-established faster and on a larger scale despite having less of an opportunity to do so. Importantly though, re-establishment proved to be mitigated by

the Controlled Substances Property Bylaw as re-establishment dropped to 1% for police cases and to zero for EFSI cases. Accordingly, the bylaw appeared to be an important complement to the work of the EFSI team.

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I would also like to thank Dr. Irwin Cohen for his unwavering belief that if a topic is to be discussed, it must be unpacked and dissected to its fullest in order to achieve a meaningful understanding. This is a lesson I will endeavour to carry forward in the future.

Likewise, it is a rare privilege to be amidst individuals such as Surrey RCMP Chief Superintendent Fraser Macrae and Surrey Fire Chief Len Garis who not only work tirelessly to improve the well-being of Surrey residents, but also have the foresight to see the benefits of conducting a systematic examination of programs and activities.

I extend a very special thank-you to the individuals I work directly with everyday within the Surrey RCMP Drug Section for being a wealth of knowledge and a sounding board for ideas. In particular, Sgt. Vince Arsenault who so kindly shared all his years of invaluable experience of marijuana enforcement with me. Finally, Lakhpinder Takhar, thank-you for providing the constructive “criticism” that was essential in making this paper more articulate when I was going cross-eyed from fatigue.

I am also very appreciative of the efforts of Marla Patterson who spent a seemingly endless amount of time meticulously collecting and coding data to provide this research with a strong foundation.

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Introduction

Canada has been recognized as being a major producer country of marijuana (World Drug Report, 2006). Presently, the marijuana trade in Canada generates \$7.5 billion annually, with British Columbia exporting approximately 2 billion dollars worth of marijuana (Easton, 2004; RCMP, 2005). The high profitability, low risk of detection, and lenient sentences historically associated with marijuana cultivation in British Columbia has made it a highly desirable criminal enterprise (Easton, 2004; Plecas, Malm, & Kinney, 2005). For example, from 1997 to 2003, the city of Surrey experienced a 375% increase in the number of marijuana production incidents and the city had the largest percentage of all cultivation files opened in the province (Plecas et al., 2005). The production of marijuana has become a significant priority for the police, resulting in an increase in enforcement efforts (World Drug Report, 2006). For example, during an address to the Canadian Professional Police Association in 2006, Prime Minister Harper pledged to toughen sentences for drugs offences, including larger fines for marijuana grow operators (Krauss, 2006).

It is no wonder marijuana enforcement is a priority in general as it is associated to a number of harms within society. For instance, persistent and long term marijuana consumption has been linked to adverse affects to physical health such as greater incidences of respiratory problems, the increased likelihood of developing cancer of the head or neck, and impairment of memory and learning skills (National Institute on Drug Abuse, 2005). Additionally, in terms of harms related to the production of marijuana, namely indoor cultivation, such locations often contain weapons, other drugs, deliberate booby traps and moulds. Not to mention that these locations also have a greater

likelihood of being the targets of home invasions (Plecas et al., 2005). Since indoor marijuana cultivation generally takes place in residences within the community the significance of these dangers is magnified for residents in the community and those parties responsible for maintaining public safety, such as local enforcement agencies.

As a result of the prevalence of residential marijuana growing operations and associated spin-off crimes, the majority of local police agencies have been steadily losing their capacity to respond to the public's demand for service. This reality has altered the landscape of marijuana enforcement. For the first time in British Columbia, there has been an observable progression toward the exploration of non-traditional enforcement responses to respond to and prevent marijuana growing operations. One such alternative response in Surrey was the Electrical Fire and Safety Investigation (EFSI) initiative.

The development of the EFSI initiative stemmed from the recognition that marijuana growing operations posed a significant fire risk and public safety threat. Given this, in addition to a police response identified grow operations required the presence of fire and electrical safety officials. The EFSI initiative operates under the Safety Standards Act¹, which permits an inter-agency team to conduct electrical inspections of houses that consume higher than normal levels of electricity. This team consists of two police officers, one firefighter, and one electrical inspector.

With the EFSI model in place, when an alleged case of marijuana cultivation comes to the attention of police it is handled in one of four ways: (1) Police officers respond to select² grow operations as in the past and where there are sufficient grounds to

¹ Safety Standards Act allows for immediate action to be taken to disconnect the electrical supply of premises to prevent injury and property damage.

² Select grow operations addressed by the police include those associated with organized crime and theft of hydro

initiate a criminal investigation they proceed using traditional enforcement tactics; (2) Police officers forward grow operations to the EFSI team who initiate an investigation on those residences determined to have higher than normal hydro consumption; (3) The EFSI team returns cases back to the police in those instances where Hydro records indicate that the address in question is within the low or normal consumption range, therefore, outside the EFSI mandate; or (4) No action is taken by police in the first instance.³

To date, the EFSI team has been active in Surrey for two years and has made several hundred site visits to residences that consumed higher than normal amounts of electricity. All of these site visits were to residences suspected of being marijuana grow operations brought to the EFSI's attention by the police. Since its inception, the EFSI program has garnered interest among those enforcement agencies losing their capacity to respond to the demands on police service created by marijuana growing operations.

While there is optimism about the extent to which the EFSI initiative will help law enforcement agencies recover their capacity to respond to demands for police services, there is also a growing concern expressed by police and others that no criminal charges are laid in cases involving EFSI despite the fact that many of these cases are founded grow operations. Arguably, offenders are not punished or deterred from setting up operations again. With this in mind, the primary aim of the present research was to determine whether grow operations to which the EFSI team responded would have any greater likelihood of re-establishment. The finding is critical since the concern expressed

³ It is important to recognize that although no action in the first instance may be taken by either the police or the EFSI, in all situations, reported complaints of marijuana grow operations are recorded and entered into the national Police Information Reporting System (PIRS) for future possible action and reference by other units and agencies.

about no criminal charges being laid would be minimized somewhat if re-establishment was no greater under the EFSI model than under traditional methods of enforcement.

To answer this critical question, the current study examined all incidents of marijuana cultivation that came to the attention of the police in Surrey between November 2004 and November 2006. Specifically, the study was designed: (1) to provide an update on the nature and extent of marijuana growing operations in Surrey since the research of Plecas et al. (2005); (2) to examine the characteristics of marijuana growing operations between November 2004 and November of 2006 for the purpose of identifying whether any differences existed prior to any enforcement action being taken; and (3) to determine whether EFSI responded to grow operations differed from police responded to grows in terms of “probable” re-establishment of marijuana growing operations.

Particular attention was paid to the impact of the Controlled Substance and Property Bylaw that was introduced by the City of Surrey on February 13th of 2006. The bylaw enabled the City to apply an increased monetary consequence to home owners that were found to have marijuana grow operations in their residences. For this reason the differences in re-establishment rates were examined for EFSI and police responded to cases both before and after the Bylaw was introduced to ensure that the Bylaw was not interfering with the results.

This paper is organized into five chapters. The first chapter is a comprehensive review of the traditional enforcement response to marijuana growing operations. This discussion includes an examination of issues that have arisen over time as a result of an over reliance on the police to meet community requests for service related to incidents of marijuana production. An examination of the enforcement response undertaken within

City of Surrey is highlighted within the chapter to provide an understanding of how enforcement strategies have evolved within the municipality.

The second chapter introduces the implementation of a non-traditional enforcement response in the City of Surrey referred to as EFSI. The chapter consists of background information on the EFSI program and how it works along with some of the preliminary outcomes of the EFSI initiative within Surrey. The research methodology that was applied in this study is discussed in chapter three. The chapter contains a description of how police files related to marijuana production within Surrey were categorized and examined.

The fourth and fifth chapters consider the main findings of the study; particularly that re-establishment is greater for EFSI cases than RCMP in the absence of the Controlled Substance Property Bylaw to provide some measure of deterrence. The positive implications resulting from an amendment to the Safety Standards Act in 2006 (referred to as Bill 25)⁴ on EFSI activity are discussed followed by an analysis of the limitations of the EFSI mandate which restricts activity to only those residences that legitimately consume Hydro power greater than 93 kilowatt-hours per day. The recommendation and need for further integration of stakeholder resources and increased focus on preventative strategies is highlighted in the conclusion.

⁴ In April 2006, an amendment to the Safety Standards Act was introduced called Bill 25 which enabled any local Government to request the electrical information of residences within its jurisdictions consuming an excessive amount of electricity.

Chapter One: The Traditional Enforcement Response

When faced with crime problems, stakeholders, such as community members, government officials, and even the police, typically respond through law enforcement. For instance, the public's reaction to the death of four RCMP officers conducting a marijuana grow operation raid in Mayerthorpe, Alberta, in 2005, was to demand harsher penalties and stronger punishments for marijuana cultivators. Canada's Public Safety Minister at the time, Anne McLellan, held a news conference to state that she would consider tougher penalties for grow operations in the proposed marijuana decriminalization bill (Galashan, 2005). Former RCMP Commissioner, Giuliano Zaccardelli, conveyed similar sentiments by calling for a broad crackdown on the 'plague' of marijuana production in Canada (Maich and Gillis, 2005).

The Mayerthorpe experience highlighted how the traditional enforcement response to marijuana growing operations was still entrenched in a penal welfare state model, where the solution to the crime problem was to allocate additional resources into law enforcement (Rose, 2000; Garland, 1996; Foucault, 1991). Although James Roszko, the shooter in the Mayerthorpe incident, was described by many as a "walking time bomb", suffering from mental health problems and substance abuse, the predominant view was that the state should respond as the exclusive provider of security, primarily through an increase in traditional policing measures (Galashan, 2005). In the face of increasing threats resulting from marijuana growing operations, the majority of jurisdictions chose to adopt traditional enforcement policies that relied heavily on the police to respond to the proliferation of grow operations (Malm and Tita, 2007).

Challenges with the Traditional Enforcement Response

One of the biggest challenges facing law enforcement is cannabis production (RCMP, 2002). In the western regions of Canada, such as British Columbia, outdoor marijuana crops have been eliminated for the most part (RCMP, 2006). However, indoor marijuana cultivation has proliferated making detection more difficult. One way of detecting indoor cultivation is by examining electricity usage because high electricity consumption is a mandatory component of the cultivation process. A study conducted by a British Columbia hydro company indicated that over 17,000 residences consumed electricity well above the normal consumption rate. This has lead researchers to conclude that the number of growing operations in the province was within this range; a result consistent with earlier estimates suggesting that 17,500 grow operations existed in British Columbia (RCMP, 2006; Easton, 2004).

The traditional enforcement response to these grow operations has been based on the theoretical framework of deterrence, namely the certainty of detection and the severity and swiftness of punishment. However, due to the volume of marijuana grow operations in British Columbia, the likelihood of detection or the imposition of serious punishment has steadily declined over the years. The two main factors contributing to the declining likelihood of detection and punishment remain limited police resources and a lack of a substantial criminal justice response to known violators (Plecas et al., 2005).

Limited Police Resources

In 1997, the number of reported cases of marijuana cultivation in British Columbia was 1,489. This number has grown to 4,514 in 2003; a three-fold increase in reported incidents (Plecas et al., 2005). Over the same time period, federal policing units

within the RCMP involved in drug interdiction and organized crime experienced vacancy rates as high as 25% (Report of the Auditor General, 2005). In situations where a market grows at a faster rate than enforcement resources, a phenomenon known as “enforcement swamping” can take place (Kleiman, 1993). Enforcement swamping is an example of a tipping model where the results “tip” from one extreme to another after some threshold is crossed. Essentially, “punishment capacity becomes scarce and the punishment-per-crime falls as the rate of offending rises” (Kleiman, 1993, p.20). In the case of federal drug enforcement, not only had enforcement become “swamped” by market growth, but the problem was compounded further by shrinking resources. This was evidenced by the fact that, even though a general decline took place in the total number of suspected cases of marijuana cultivation in British Columbia since 2000, the percentage of cases with a full investigation by the police dropped to just over half (52 per cent) in 2003 compared to nearly three-quarters (71 per cent) in 2000 (Plecas et al., 2003). The immense growth in the market, coupled with the simultaneous dwindling of police resources, helped explain why fewer and fewer cases were being fully investigated by the police, despite the recent decline in the total number of reported incidents.

Another important factor contributing to enforcement swamping is the nature of present day policing. The ability of police to address marijuana incidents has become increasingly hindered by the highly regulated context of policing. Less than a century ago, officers of the RCMP had much more discretion in their investigation of drug offences. Then, officer liberties ranged from warrantless searches of primary residences to engaging in the prosecution of offenders without the assistance or consultation of prosecutors (Hewitt, 2004). A recent study involving a thirty year analysis of police

service delivery and costing for the RCMP in British Columbia determined that the overall complexity associated with enforcement increased significantly, while police resources declined relative to the associated crime burden (Malm et al., 2006). An examination of the number of procedural steps involved in investigating drug trafficking incidents revealed that, over the past thirty years, the number of steps involved in investigating a drug trafficking case increased from nine to 65 (Malm et al., 2006). Although the procedural steps associated with marijuana production investigations were not broken down to this extent across the thirty year time period, a similar argument can be made for these investigations; the highly complex nature of marijuana cultivation cases, the contemporary requirement for solid grounds for search warrants, and the escalating size and sophistication of modern growing operations have all likely contributed to making the successful investigation and prosecution of marijuana production more difficult, complicated, and expensive (Plecas et al., 2005).

The ramifications of limited police resources combined with an increase in incidents of marijuana growing operations were demonstrated again in 2007, but from a different perspective. While examining the displacement effect of geographically targeted enforcement strategies, Malm and Tita (2007) concluded that, by late 2000, most jurisdictions in British Columbia had chosen one of four traditional enforcement responses to deal with marijuana growing operations. The most commonly chosen option was to maintain the status quo; enforcement continued in the same manner as before although there was an increase in marijuana growing operations. The second option was to reduce enforcement action. This stemmed from the belief that the high costs associated with investigating and prosecuting growing operations resulted in a relatively low rate of

return on investment. The third and fourth options, selected by several jurisdictions, was to react much more aggressively by either reinforcing the resources allocated to their drug squads or by establishing specialized tactical units, known as ‘green teams’, to focus exclusively on reducing marijuana production.

Of the four policy options, only the establishment of a dedicated green team resulted in any notable reduction in the number of grow operations (Malm and Tita, 2007). However, considering that only 14% of jurisdictions had the means to implement this option, displacement rather than any overall provincial reduction generally took place (Malm and Tita, 2007). This result supported an earlier finding indicating that displacement of marijuana growing operations from urban to rural areas steadily took place in British Columbia (Plecas et al., 2005). More specifically, a general decline in the number of marijuana growing operations in the lower mainland of British Columbia since 2000 paralleled an increase in prevalence in rural areas, such as the Thompson and Okanagan area and the Kootneys region, where few attempts to prevent the expansion of grow operations had historically taken place (Plecas et al., 2005).

Declining Criminal Justice Response

The 2006 crime agenda of Canadian Prime Minister Harper rejected Bill C-17⁵; a Bill designed to decriminalize marijuana. Instead, the government committed to instituting harsher punishments for marijuana grow operators (Conservative Party of Canada Federal Election Platform, 2006). Despite current assurances to address the problem of marijuana grow operations, uncertainties concerning the legalization of small amounts of marijuana for personal use and unresolved issues surrounding supply have

⁵ The Cannabis Reform Bill C-17 was introduced in 2004 as an amendment to the *Contraventions Act* and the *Controlled Drugs and Substances Act* in order to modernize the way Canada enforced its cannabis laws.

contributed to the alarming rate of cannabis cultivation incidents in Canada (Fischer, Ala-Leppilampi, Single, & Robins, 2003; Statistics Canada, 2003; Plecas et al., 2005). For the first time in Canada, the courts have played an active role in pressing for law reform stipulating punishment for all cannabis users (Fischer et al., 2003). In fact, Canadian courts have been criticized for their approach toward cannabis enforcement in general. These criticisms have derived from within the country and from other countries, particularly neighbouring jurisdictions in the United States (Fox, 2003). For example, the quantity of marijuana output in British Columbia has been estimated at between 100 to 1,460 metric tons, while consumption within the province is roughly between 21 and 54 metric tons (Easton, 2004). Based on this estimate, it is reasonable to conclude that a large proportion of the British Columbia crop is being exported either to other jurisdictions in Canada or to other countries, such as the United States. According to the United States' National Drug Threat Assessment for 2006, Canada is an increasing source of marijuana (National Drug Intelligence Center, 2006). The report acknowledged that Asian organized crime groups in Canada have been exercising much control over the production and distribution of high potency marijuana. Further, it forecasted that these groups would extend their influence beyond Canada's borders in the near future (National Drug Intelligence Center, 2006).

Sentencing patterns in cases of marijuana possession that do not protect the public or deter offenders have also occurred in cases of marijuana production. The number of suspects charged in British Columbia for cannabis cultivation has steadily declined from a high of 2,116 in 2000 to approximately one third of this amount in 2003 (Plecas et al., 2005). Further, when charges were laid by Crown, nearly half (44 per cent) received a

stay of proceedings. In accordance with Canadian laws, criminals face a maximum sentence of seven years in prison for growing marijuana; however, they receive sentences, on average, amounting to little more than a few months (Controlled Drugs and Substances Act, 1996; Plecas et al., 2005). Incidentally, the province of Alberta has opted to take a tougher stance against marijuana cultivators. The high likelihood of detection by police and equally high chance of receiving a significant sanction from the courts have contributed to keeping cases of marijuana cultivation low in Alberta (Plecas and Diplock, 2007).⁶

The Traditional Enforcement Response Model in Surrey

In spite of limited police resources and lenient criminal justice sanctions, Surrey was among those jurisdictions in British Columbia that took a more aggressive stance towards cannabis cultivation (Malm and Tita, 2007). Demands from the community and mounting political pressure to increase enforcement action against marijuana cultivation led to the development of a number of tactics. These tactics included mechanisms to increase community contact with the police, privatization of the marijuana grow operation dismantling function, and the implementation of a specialized marijuana target team.

Increased Community Contact with Police

A specialized drug tip-line for Surrey residents was established in 2000 to allow community members to report suspicious activities. The line enabled callers to provide

⁶ In 2003 64% of all founded grow operations in British Columbia were treated as no case seizures, while only 20% of founded cases were treated this way in Alberta. Furthermore, in cases not classified as no case seizure, charges were laid in 98% in Alberta, but only 76% of cases in British Columbia proceeded with charges (Plecas and Diplock, 2007).

the detachment with drug related information, the bulk of which pertained to marijuana cultivation (V. Arsenault, personal communication January 16, 2007). In this regard, community members assisted the police by providing information on drug activity in their neighbourhoods. When the line was initially created, the calls were reviewed and monitored by a sworn RCMP officer. However, in 2004, the position was civilianized and a municipal Intelligence Coordinator was hired to oversee the large number of calls requiring police attention. In 2004, the number of files created as a result of information from the tip-line and Greater Vancouver Crime Stoppers⁷ was approximately 500 (V. Arsenault, personal communication January 16, 2007).

Specialized Marijuana Enforcement Team

Historically, the mandated activities of the drug unit have included a broad range of initiatives directed at the street level trafficking of cocaine and other illicit drugs to multi-kilo level investigations involving organized crime targets. However, in 2003, the primary initiative of the unit was the illegal production of marijuana. The Surrey RCMP Drug Section, the largest drug unit within the province, assigned twenty-one constables and two corporals to the enforcement of marijuana cultivation. In 2004, the section underwent further re-structuring and established a dedicated Marijuana Enforcement Team (MET) or 'green team' consisting of seven constables, one corporal, and two

⁷ Greater Vancouver Crime Stoppers is an independent, non-profit society and registered charity managed by a civilian Board of Directors working to help solve crime in partnership with citizens, the media, and law enforcement agencies. The office is staffed by police officers and highly trained civilian personnel who take tips and provide information to investigators (Greater Vancouver Crime Stoppers, 2007).

investigators who focussed on asset forfeiture through the application of the proceeds of crime legislation⁸.

Privatization of Dismantling Grow Operations

Shortly after establishing a specialized MET, law enforcement officials within Surrey realized that a substantial proportion of police officer time was spent disconnecting, removing, and transferring growing operation equipment. Having officers engaged in these activities was seen as hindering the number of growing operations that could be acted upon. In addition, these duties were considered to be outside the core function of policing. At that time, the average amount of police officer time spent dismantling equipment at each grow operation was estimated to be between eight to twenty-four hours. It was envisioned that the civilianization of the dismantling function would increase the internal capacity of the MET. The amount of time saved would allow police officers to spend more time strengthening their cases and initiating additional search warrants (V. Arsenault, personal communication, January, 16 2007).

Eventually, in October 2004, after conducting a cost-benefit analysis, the drug section put forward a formal proposal calling for the implementation of an on-call civilian dismantling team. It was suggested that the team be staffed either by municipal employees or contracted out to the private sector. The additional cost of the team would be billed back to the property owner as per existing municipal 'Cost Back' bylaw provisions (City of Surrey Bylaws, 2006).

⁸ The federal government of Canada enacted Bills C-61 (1989) and C-9 (1991) to deal with money laundering offences and to seize properties obtained by criminal conduct (Desroches, 2005).

A private company, Security Resource Group Incorporated (SRG),⁹ was awarded the contract under a probationary provision in December 2004. The SRG team was comprised primarily of retired police officers who agreed to operate under the guidance and direction of the officer in charge of the MET. The SRG team was provided with very explicit instructions to ensure their role at a marijuana cultivation site was limited strictly to the dismantling function. After successfully completing a six month probationary period utilising the services of the dismantling team in conjunction with the MET, the SRG team expanded their service by providing the same function to the entire Surrey detachment. At present, the dismantling service offered by SRG has expanded to include other RCMP detachments, such as Langley, Coquitlam, Mission, Chilliwack, and Richmond (D. Payne, personal communication, February 16, 2007).

Outcome of the Traditional Enforcement Response Model in Surrey

As indicated above, the Surrey RCMP drug section receive an average of 500 marijuana growing operation tips or calls for service from community members and approximately 100 Theft of Hydro¹⁰ reports directly from BC Hydro on an annual basis. The eight member MET using traditional law enforcement tactics has historically been able to execute approximately 150 search warrants annually, while the detachment has addressed approximately the same amount. This suggests that, all other things being held equal¹¹, the total annual enforcement capacity of the detachment is approximately 300 dismantled grow operations per year. Under the traditional enforcement model, half (or

⁹ SRG Security Resource Group Inc. provides IT Security Services, Protective Security Services, Security Consulting, and Private Investigation services across Western Canada and Ontario (Security Resources Group, 2007).

¹⁰ Reports made directly to the police by BC Hydro that pertain to a location where consumption records are below a normal range indicating that a theft of hydro may be occurring.

¹¹ Such as the number of enforcement resources for both the detachment and the MET as well as the tactical objectives of the detachment.

300 tips) of all suspected marijuana growing operations would not be investigated each year. Using a conservative estimate, the approximate number of actual grow operations coming to the attention of the police that do not receive any enforcement action is roughly 135 per year.¹² In monetary terms, the market value of the marijuana produced from these potential grow operations is approximately 16.2 million dollars.¹³

The above estimate only takes into account the monetary value of the marijuana; not the additional risks associated with not investigating marijuana growing operations, such as fire hazards and health risks posed by moulds or toxins (Plecas, 2005). In addition, these figures only apply to the estimated number of grow operations that the police are aware of, but do not respond to. In other words, there are likely a large number of additional marijuana growing operations in Surrey that the police are unaware of. Moreover, the analysis utilized high consumption data released by BC Hydro in January 2007 to estimate the number of marijuana growing operations in Surrey. It is possible that some of the cases of high consumption were the result of legitimate power usage due to, for example, a hot tub or a swimming pool. Still, a high level of power consumption is typically a good indicator of marijuana production given all the high-powered lights and other equipment required for hydroponic marijuana cultivation.

A recent article, citing BC Hydro estimates, indicated that the city of Surrey had 35 suspicious addresses (consuming unusually high levels of Hydro power) per 10,000 residents (Claxton, 2007). If the current population within Surrey is estimated at being

¹² Plecas et al. (2005) found that, in 2003, 45% of all cases that came to the attention of the police proved to be founded. Applying this logic, 45% of the 300 outstanding grow operations is 135.

¹³ The calculation was based on the assumption: 33.3 grams per plant x 236 plants per average grow operation x 4 crops per year equals 24 kg per year per grow operation. 24 kg multiplied by the 135 outstanding grow operations equals 3240 kg of marijuana. If the market value of 1 kg of dried marijuana is equal to \$5,000.00, 3240kg x \$5,000.00 is \$16,200,000.00 (Plecas et al., 2005; Easton, 2004)

410,000, this would suggest approximately 1,435¹⁴ suspicious addresses within the jurisdiction (City of Surrey, 2007). Preliminary analyses of BC Hydro data for suspicious addresses suggested that approximately one-quarter (25%) of high-consumption homes were legitimate users; the remaining three-quarters (75%) were deemed suspicious (Claxton, 2007). Therefore, it is reasonable to assume that approximately 1,076¹⁵ of the 1,435 addresses could be considered legitimately suspicious of being marijuana growing operations.

As stated above, the seven member MET has the capacity to dismantle about 150 marijuana growing operations per year. In order to meet the demands of addressing 1,076 growing operations, 50 police officers would be required; a seven fold increase to the existing resources allocated to the specialized MET. The likelihood of acquiring this number of additional police officers dedicated strictly to marijuana enforcement is highly unfeasible given that, in 2005, the Surrey detachment only received funding to hire 40 new members for the entire detachment (City of Surrey, 2005).

In the absence of increasing the number of officers, the challenge for City officials was determining how to meet demand within existing resources. From a public safety point of view, the disparity between the size of the problem and the police resources available to address it was deemed unacceptable and requiring immediate rectification. This recognition led to the conclusion that additional stakeholder resources were necessary to have any meaningful effect on reducing the problem. The decision to include other stakeholders in marijuana enforcement resulted in a move away from the

¹⁴ $(410,000/10,000) \times 35 = 1,435$

¹⁵ $1,435 \times 75\% = 1,076$

exclusive reliance on the traditional enforcement model; in effect a non-traditional response model within the overall marijuana enforcement strategy.

Chapter Two: The Non-Traditional Enforcement Response

The continued presence of marijuana growing operations and declining clearance rates suggest that the penal welfare state has failed to accomplish its stated objectives. In effect, present fiscal restraint has resulted in two major developments within policing; the pluralisation of policing and the search by the public police for an appropriate role (Bayley and Shearing, 1996). With respect to marijuana enforcement, one example of pluralisation is the privatization of the dismantling function. This chapter will detail the evolution of the public police to this current role in marijuana enforcement.

In responding to greater fiscal restraint, jurisdictions realized that they needed alternatives to prevent and respond to marijuana producers. In March 2005, the City of Surrey implemented a non-traditional administrative law enforcement response; the EFSI initiative. With this approach, reliance on the police, in the traditional sense, was alleviated somewhat by including a variety of other stakeholders in the responsibilities of enforcement. This approach resulted in an increase in the resources available to respond to marijuana growing operations in Surrey.

What is EFSI?

If the theoretical framework of problem oriented policing (POP) is used to examine the EFSI model, it is clear that EFSI is perfectly aligned with the POP approach. The formal definition of POP is placing “a high value on new responses that are preventive in nature, that are not dependent on the use of the criminal justice system, and that engage other public agencies, the community, and the private sector when their involvement has the potential for significantly contributing to the reduction of the

problem” (Centre for Problem Oriented Policing, 2007, What is problem oriented policing? para. 1). Similarly, the original impetus for the EFSI initiative was prevention. The realization that residences with marijuana growing operations were 24 times more likely to catch fire than non-growing homes led to the conclusion that improper wiring in marijuana growing operations put the residence and the neighbourhood at risk (Plecas et al., 2005; Garis, 2005). The approach taken was to prevent residential fires by conducting electrical inspections of residences suspected of housing a marijuana growing operation. Once reconceptualised as a fire threat to public safety, the presence and continued proliferation of marijuana growing operations became, in part, the responsibility of the Fire Service. Ultimately, the creation of the EFSI model resulted in bringing together three organizations; fire, police, and safety inspectors (under authorization of the B.C. Safety Authority).

Conceptually, the EFSI approach differed from the traditional enforcement response in its recognition that arrests and prosecution, in their current state, did not always effectively resolve the problem. The criminal justice system’s lenient sentencing approach to marijuana producers, combined with the fact that the average case took over seven and a half months to process, highlighted that, in some instances of marijuana production, the benefit of the police effort did not exceed its costs (Statistics Canada, 2005). Given this, the EFSI team’s aim was to minimize the threat to public safety by dealing with lower level, volume incidents (i.e. those cases that were not related to organized crime). The program enabled the jurisdiction to address the unmet demands for service from the community, while freeing up police resources to focus on the criminal networks behind the marijuana trade (Garis, 2005).

How does EFSI Work?

The EFSI team is a joint taskforce comprised of two police officers, one firefighter, and one electrical inspector. The EFSI model operates under the Safety Standards Act.¹⁶ The Act permits the inspection of electrical systems and equipment within houses that consume higher than normal levels of electricity. The determination of high consumption is made by BC Hydro where consumption for a residence is approximately 93 kilowatt-hours per day or more, averaged over one billing cycle. This level is essentially three times the level of normal consumption (Safety Standards Act, 2004).

Originally, the team's scope was limited to the investigation of addresses obtained through anonymous informant information provided by the police. Under this process, when the public reported a suspected marijuana growing operation, the police were responsible for forwarding addresses considered appropriate for an EFSI inspection to the EFSI team. The police officers on the EFSI team would then obtain the necessary consumption data under the provisions of the Freedom of Information and Protection of Privacy Act (FOI)¹⁷ from BC Hydro.

However, in April 2006, an amendment to the Safety Standards Act was introduced in the form of Bill 25, enabling any local Government to request the electrical information of residences within its jurisdictions consuming an excessive amount of electricity (Safety Standards Act, 2006). Under the Safety Standards Amendment Act, the

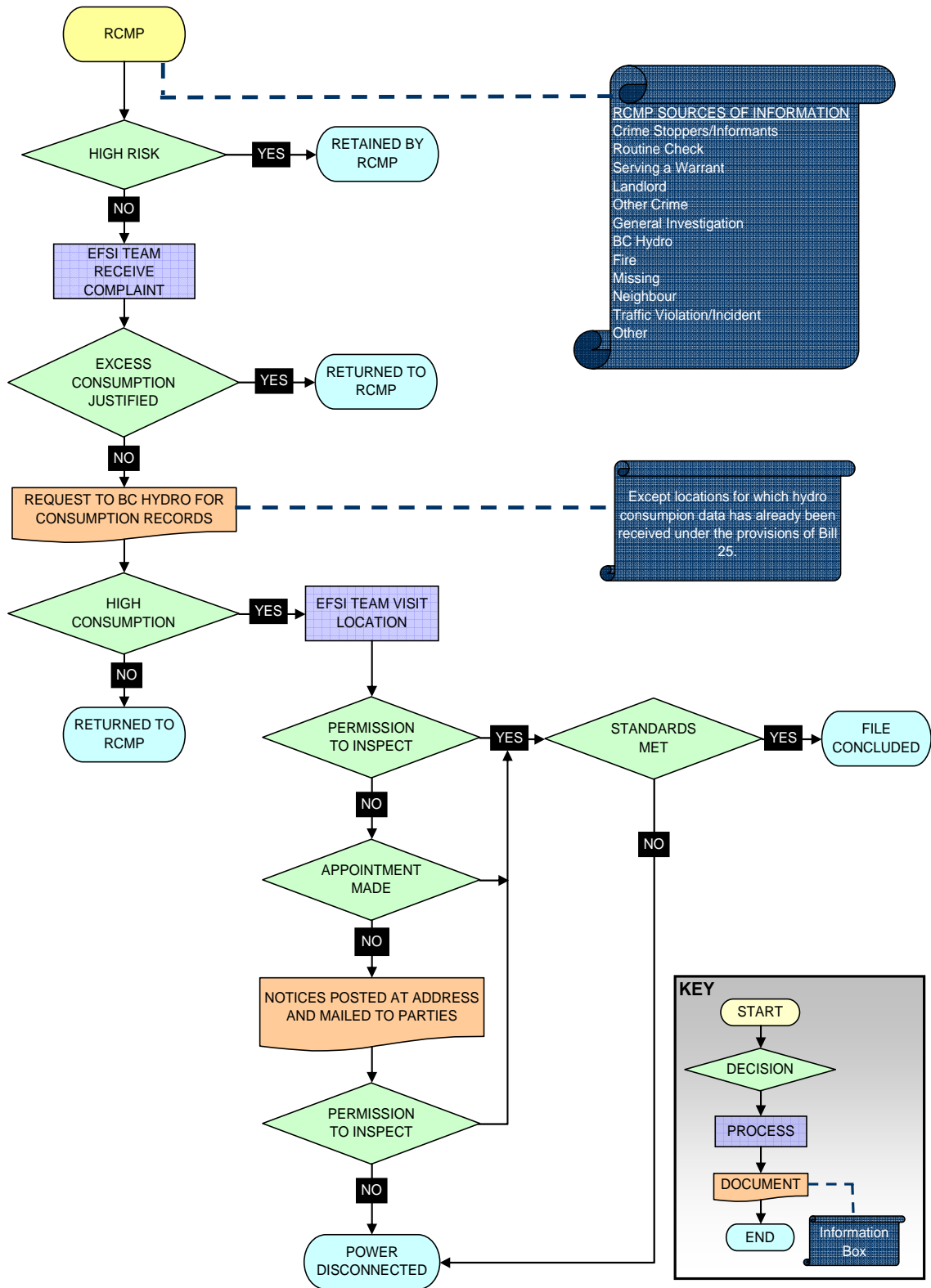
¹⁶ This Act came into effect on April 1st, 2004.

¹⁷ The purposes of this Act are to make public bodies more accountable to the public and to protect personal privacy by: (1) giving the public a right of access to records; (2) giving individuals a right of access to, and a right to request correction of, personal information about themselves; (3) specifying limited exceptions to the rights of access; (4) preventing the unauthorized collection, use, or disclosure of personal information by public bodies; and (5) providing for an independent review of decisions made under this Act (Freedom of Information and Protection of Privacy Act, 1996).

City was granted the ability to acquire consumption data on all suspicious addresses using excessive levels of electricity without the need for FOI legislation. Rather than responding exclusively to reported cases of suspected marijuana growing operations, the City could initiate an investigation into addresses of interest to the EFSI team and provide these addresses to the police for assessment rather than the other way around. Essentially, with this amendment, the scope of the EFSI initiative was broadened. The EFSI team continued to receive information from police as per usual; however, it also received information related to those houses that consumed higher than normal amounts of electricity directly from BC Hydro.

Regardless of whether the address of the location of interest originated from the police or BC Hydro, the police must conduct a preliminary evaluation to determine whether the address is suitable for EFSI investigation (refer to Figure 3.1). Understandably, the police retained limited control over this process and functioned as an organizing force for the team in an effort to ensure that the suspected address was not associated with an ongoing police investigation and to identify whether any risk of violence existed at the location. In this regard, the duty of addressing complex marijuana cultivation investigations was retained by the specialized MET or, in some cases, other appropriate police sections, while lower risk cases were provided to the EFSI team for further investigation to ensure that all electrical safety related concerns were rectified.

Figure 3.1 – EFSI Process Flow Diagram



In terms of its typical practices, upon receipt of the list of addresses from the police, the EFSI team conducts an initial site evaluation to assess whether or not excessive consumption may be justified. In addition, notes are taken of any indicators of a grow operation on the site. If evidence for legitimate high consumption is not ascertained, the team makes a request to BC Hydro for the residence's consumption records under the Freedom of Information and Protection of Privacy Act. Addresses found to be at higher than normal levels of electrical consumption, as determined by BC Hydro, are returned to the EFSI team for further investigation. Presently, the EFSI team can only proceed with those addresses in which consumption records fall within a higher than normal category. All other addresses, irrespective of whether physical indicators exist that corroborate the presence of a grow operation, are returned to the RCMP with no further action taken by the EFSI team.

Once confirmation is received of high consumption at a location, the EFSI team returns to the residence and posts a notice requesting inspection. The posted notice indicates that the owner or occupant must phone and make an appointment for an inspection to occur within 48 hours or the electrical power will be disconnected. Notices are also couriered to the property owner and resident if necessary. If no appointment is made within the allocated time, the EFSI team returns to the location and the electrical power is disconnected.

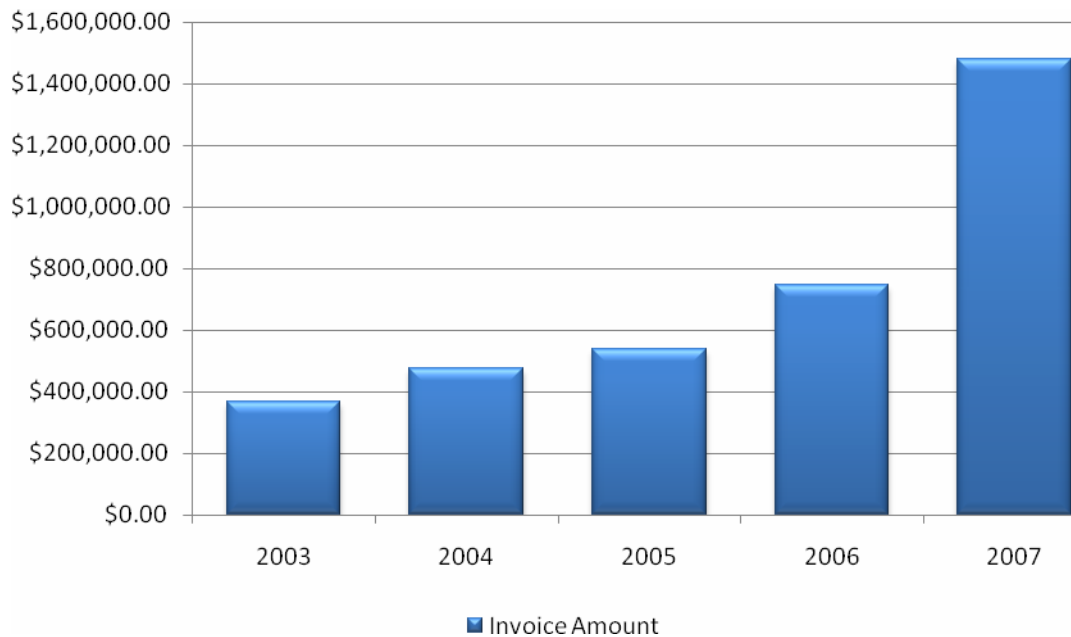
In the event that an appointment is made within the allotted 48 hours, the EFSI team attends at the prearranged time. Upon arrival at the scene, the police officers on the team are responsible for securing the premises. The occupants of the residence are asked to wait outside while an electrical inspector conducts an inspection of the house for

electrical code violations. If an electrical code violation is found, the electrical power is disconnected. In the final stages, the file is turned over to the City's electrical department for follow-up to ensure that the appropriate measures are taken to correct the violations prior to the re-connection of the power supply.

Initially, when EFSI was introduced, the only monetary penalty to owners for any electrical violations was the cost of making the required repairs. In terms of cost-recovery for the City of Surrey, only the standard permit fee for approval of electrical repairs, which amounted to \$73, could be recouped. However, on February 13th 2006, the City adopted a new bylaw; the Controlled Substance Property Bylaw (City of Surrey, 2006).¹⁸ Introduction of the new bylaw increased the monetary consequences associated with controlled substance properties and improved the cost-recovery component. While the previous Bylaw that was enacted in 2001 contained provisions for a maximum penalty of \$5,000 per day in situations where a marijuana growing operation was located within a residence, the new bylaw allowed for a maximum penalty of \$10,000 per day on owners. Furthermore, under the new provisions, the City was able to recover a larger percentage of the costs incurred when dismantling a growing operation. Figure 3.2 demonstrates the increasing monies recovered over the years.

¹⁸ Controlled Substance Properties that contravene applicable standards under the Building Code, British Columbia Fire Code, Safety Standards Act, Health Act, or other applicable enactments, including bylaw requirements of the City, create risks to the health and safety of occupiers and neighbours, are offensive and a nuisance, and reduce the value of neighbouring properties (Controlled Drugs and Substances Act, 1996)

Figure 3.2 – Total Costs Associated with Dismantling Marijuana Growing Operations Invoiced for Cost Recovery 2003-2007



* Amounts rounded to nearest whole number

** The 2007 amount is an approximation based on the 1st quarter total of \$369,865.00

The above figure indicates that the amount billed to homeowners has steadily increased.

The increase from 2007 to 2008 is projected to be 97% as a result of the Controlled Substance Property Bylaw (H. Dhillon, personal communication February 2, 2007).

Furthermore, additions to the bylaw included provisions for prospective homeowners or renters to find out whether a home previously contained a grow operation or a methamphetamine lab.

The City of Surrey is not the only jurisdiction in the lower mainland to enact such a bylaw; the cities of Port Moody, Delta, Abbotsford, and Ladner have similar bylaws in place. What is unique in Surrey is the incorporation of Electrical and Fire Safety Inspections of properties suspected to be in contravention of the bylaw. Essentially, the introduction of the Controlled Substance Property Bylaw is a clear reflection of state

attempts to protect the welfare of the population through the improvement of community conditions (Foucault, 1991).

Preliminary Outcomes of the EFSI Initiative

As predicted, the implementation of EFSI helped to clear the majority of outstanding tips accumulated as a result of police capacity issues. The EFSI teams made several hundred residential inspections and identified a large number of electrical violations and evidence of growing operations (Garis, 2006). Overall, the program has been very well received at both a local and provincial level (Garis, 2006). Since the introduction of the EFSI initiative, a number of jurisdictions, such as Langley, Coquitlam, Ridge Meadows, and Abbotsford, facing capacity issues, have adopted similar models.¹⁹ Areas outside the lower mainland, such as Victoria and Kelowna, have also adopted the program.

Interest level in the program from jurisdictions outside of British Columbia has also been high. For example, Calgary sent representatives to learn more about the process even prior to its official implementation in Surrey (Garis, 2005). Although Calgary has yet to establish an EFSI team, the Calgary Health Region's Environmental Health Program now includes provisions for residences containing marijuana growing operations similar to those initiated in Surrey. A bylaw similar to the Controlled Substance Property Bylaw allows residences to be deemed "unfit for human habitation" and posted with a

¹⁹ In 2005, Abbotsford established an integrated Public Safety Inspection team to conduct inspections of residences suspected of housing a marijuana growing operation. The strategy was based on the authority provided by the Community Charter, the Fire Services Act, and the City's Controlled Substance Property Bylaw. The basis for the program derived from a desire to improve public safety through the use of an administrative approach, rather than the criminal justice system. This approach is similar to EFSI (City of Abbotsford, 2005).

Notice of Health Hazard filed with the Land Titles Office to be placed on the property title (Calgary Health Region, 2006). The Executive Officer in Calgary has the authority to carry out inspections and issue written orders. Under this model, the Executive Officer generally attends the property at the time of the police intervention and criminal investigation. The property is assessed for structural damage, chemical spills, and molds.

At the provincial level, Ontario, for example, has opted for a more partnership-oriented approach by including electrical and fire considerations into their enforcement plan. Changes to the Utilities Act in Ontario have been made empowering electrical utilities to cut the supply to properties without notice if they suspect that unusual consumption patterns are the result of a growing operation (Hilton, 2005). Furthermore, the maximum penalties associated with contraventions of the Ontario Fire Code, such as tampering with wiring that would cause excessive heating leading to a fire, have been doubled (Hilton, 2005).

Discussion

The growing popularity of the EFSI initiative with other non-traditional approaches suggests that there are viable alternate enforcement models which allow the police to regain some capacity to combat marijuana growing operations. Although the jurisdiction of Surrey is the area of examination for this current study, it is apparent that an improved understanding of the impact of this alternative response would benefit other jurisdictions, especially when considering that, although British Columbia has historically been recognized as having a greatest concentration of marijuana growing operations in Canada, recent data from the United Nations World Drug Report (2006) indicated that this was no longer the case. The report stated “seizure and eradication figures suggest that

Ontario and Quebec have recently caught up, and, more recently, major operations have been detected in other provinces” (World Drug Report, 2006, p. 159).

It is reasonable to assume that the combined application of the MET or ‘green team’ with the EFSI initiative would provide positive results given that the risk of detection has increased substantially for marijuana producers in Surrey. However, rational choice theorists would argue that the introduction of an EFSI model is unlikely to produce significant results without a commitment to prosecute and punish violators in the criminal justice system. As there has been no data collected to date examining the effect of this non-traditional model of enforcement, the current research was designed to contribute to the body of knowledge on alternative response models to address marijuana growing operations.

Chapter Three: Methods

The present research utilized the Operational Statistics Reporting (OSR) system within the Police Information Retrieval System (PIRS) to identify all marijuana production files brought to the attention of the police from November 1st, 2004 to November 30th, 2006 in Surrey.²⁰ The total number of incidents falling within the specified date range was 1,366 police files. These files were manually reviewed to identify only those cases directly related to residential marijuana growing operations.²¹ In total, 1,087 police files related to residential marijuana grow operations were identified and categorized into one of four groups:

- (1) RCMP – cases where the police employed traditional enforcement tactics to respond to select grow operations coming to their attention;²²
- (2) EFSI – cases in which information of suspected grow operations was forwarded to the EFSI team by the police and were determined through BC Hydro records as having higher than normal hydro consumption levels;
- (3) EFSI return to RCMP – cases returned to the police by EFSI because the addresses in question were deemed by BC Hydro as being within the low or normal consumption range and, therefore, outside the mandate of EFSI; and
- (4) No action – cases in which no action was taken by police in the first instance.²³

²⁰ This refers exclusively to all incidents of crimes reported to or discovered by the police.

²¹ Residences were defined as all single-family dwellings, such as a house, a mobile home, a self-contained suite in a rooming/boarding house, an apartment, or one unit of a duplex.

²² Select grow operations responded to the police included those associated with organized crime and theft of hydro.

²³ It is important to recognize that although no action in the first instance may be taken by either the police or the EFSI, in all situations, reported complaints of marijuana grow operations are recorded and entered into the national Police Information Reporting System for future possible action and reference by other units and agencies.

The distribution of cases within each group, as a percentage of the total number of cases, is presented in Table 4.1.

Table 4.1 – Distribution of Cases

<i>Category</i>	<i>Frequency</i>	<i>Percentage Total Cases</i>
RCMP	257	23.6 %
EFSI	180	16.6 %
EFSI return to RCMP	365	33.6 %
No action	285	26.2 %
Total	1087	100.0 %

A majority of cases (59.8 per cent) were categorized as EFSI return to RCMP or no action. Given that the purpose of the present research was to conduct a comparison to EFSI only, these cases were not included in further analyses. Still, some comparative analysis was undertaken to determine the extent to which these cases were the same as those included in the study.

The main objective of determining whether the EFSI initiative resulted in any greater re-establishment of associated grow operations was accomplished by comparing EFSI cases to the other ways grow operations were handled. More specifically, the likelihood of re-establishment for all cases in question was determined through Hydro consumption records for November 2006 provided by Surrey Fire Service. In effect, this allowed for a period of between one and twenty-four months for re-establishment to occur following any action taken by the Surrey RCMP or EFSI. Accordingly, at one level, the analysis involved was simply an exercise of comparing across groups to determine which group of cases had the highest percentage of “probable” re-establishment. Referring to “probable” was appropriate because, while higher than

normal (approximately 93KW per day) Hydro consumption levels provided a very good indicator of a grow operation, in rare cases, there were other reasons a property might produce high readings.²⁴ Further, instances of marijuana production involving an outright theft of hydro power were not included within the dataset as these cases of re-establishment failed to meet the higher than normal Hydro consumption levels; this is a recognized limitation of the present study.

At another level, the analysis was more complex because of the need to examine the extent to which re-establishment was influenced by the characteristics of the grow operations themselves. Therefore, all 1,087 police files were reviewed using a coding sheet (see Appendix A) to assess what differences, if any, existed between the groups in question in the first instance and prior to any enforcement action. Additionally, data collected by the EFSI team was also coded in association with the initially coded police file information (see Part 3 of Appendix A). An additional layer of information relating to the characteristics of the properties was obtained by querying Tempest²⁵ and coding the information for all addresses (see Part 4 of Appendix A).

When conducting the final analysis, the No action and EFSI return to RCMP cases were excluded leaving only RCMP and EFSI cases as the primary study group of interest. As indicated in Table 4.2, the primary study group comprised 437 founded cases of marijuana growing operations that either EFSI (n = 180) or the RCMP (n = 257) responded to.

²⁴ As mentioned above, higher than normal hydro consumption levels may result in residences with a pool, hot tub, residential business, etc.

²⁵ Tempest is a municipal database containing property and ownership data for residences that fall within the boundaries of the city of Surrey

Table 4.2 – Founded Cases of Marijuana Production Attended by the RCMP or EFSI by Year

		<i>File Year</i>			<i>Total</i>
		<i>2004</i>	<i>2005</i>	<i>2006</i>	
RCMP	Count	12	112	133	257
	%	70.6%	51.9%	65.2%	58.8%
EFSI	Count	5	104	71	180
	%	29.4%	48.1%	34.8%	41.2%
Count		17	216	204	437

While the file review analysis was essentially a descriptive one, it was believed that this analysis would situate the re-establishment findings in context.

Importantly, although the review of police file data, hydro consumption records, and property details involved access to confidential information, after the data entry was completed and verified, all personal identifiers were removed from the database and were not used in the analysis for the present research. The statistical analysis program SPSS (Statistical Package for the Social Sciences) was used to analyse the database.

As noted in previous studies on marijuana growing operations and related research utilising police data, it must be recognized that police data collection is often incomplete and rarely standardised across variables (Plecas, Dandurand, Chin, & Segger, 2002; Plecas et al., 2005). For this reason, it is reasonable to assume that some of the data presented in this paper, such as the presence of hazards, other drugs, and the number of lights located at the scene, are an underestimation.

Chapter Four: Results and Analysis

Incidents of Suspected Marijuana Production

The number of suspected marijuana growing operations coming to the attention of police within the lower mainland has declined (12 percent) between 2004 and 2006 (see Table 5.1).

Table 5.1 – Marijuana Production Cases Coming to the Attention of Police Between 2004 to 2006 by Jurisdiction

<i>Jurisdiction</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>% Change over 2 Year Period</i>
Burnaby	244	197	174	- 29 %
Coquitlam	287	229	184	- 36 %
North Vancouver	26	19	20	- 23 %
Richmond	72	76	78	+ 8 %
Surrey	717	699	752	+ 5 %
Ridge Meadows	234	192	168	- 28 %
Langley	144	155	110	- 24 %
Mission	151	165	207	+ 37 %
Delta **	44	44	45	+ 2 %
Abbotsford **	90	60	119	+ 32 %
Vancouver	270	220	153	- 43 %
New Westminster **	18	17	19	+ 6 %
Port Moody	7	4	5	- 29 %
Total	2304	2077	2034	- 12 %

* Information obtained from PIRS and PRIME.

** The figure for 2004 files was based on the average of actual 2005 and 2006 figures.

When only those jurisdictions in the Fraser Valley (i.e. Surrey, Langley, Mission, Delta and Abbotsford) were considered, the region experienced an 8% increase; slightly higher than Surrey's overall increase (5 percent). Moreover, there were several regions with substantial decreases over the two year period, such as Vancouver (43 percent),

Coquitlam (36 percent), Burnaby (29 percent), Port Moody (29 percent), and Ridge Meadows (28 percent). These findings were consistent with the Plecas et al. (2005) report which identified a general downward shift in the total number of incidents of marijuana production within the lower mainland, especially when compared to more rural areas. The basis for this shift was likely the need for growing producers to have larger properties to maximize production and an assumption that rural properties were less likely to come to the attention of the police because of their degree of isolation (Plecas et al., 2005).

Another factor that potentially contributed to the slight decline in figures is that the RCMP has been involved in changing its records management system (RMS) over the past three years; a transition that has resulted in some initial inconsistencies in data coding. Fortunately, for the purpose of the present research, this did not pose a problem as Surrey had not made this transition during the time period under consideration for this current study.

The fact that the majority of other jurisdictions experienced a decline in incidents while Surrey experienced an increase in 2006 may also be the result of proactive policing efforts and heightened community awareness. These factors can contribute to an increase in crime statistics even when there is no 'real' increase in the number of incidents because of the improved ability to detect marijuana production.

Given that the only major change that took place with marijuana enforcement in Surrey was the implementation of EFSI, and that one of the key objectives of the program was to increase public awareness, the statistical increase may be attributed to the increase in the actual number of marijuana production files as a result of program implementation.

This assumption was further supported by an increase in the overall number of community complaints (or tips) received by the police after the EFSI model was introduced. As demonstrated in Table 5.2, a 4% increase in the number of files initiated from an anonymous source (i.e. Crime Stoppers) took place over the two year period, while all other sources of complaint declined.

Table 5.2 – Sources of Information Leading to Opening a Marijuana Cultivation File in Surrey by Source and Year

<i>Source of Complaint</i>	<i>File Year</i>			<i>Percentage Change over 2 year period</i>
	2004	2005	2006	
Crime Stoppers or other Anonymous Source	535	433	556	4 %
Routine Check	1	1	0	-100 %
Landlord	25	14	14	-44 %
Other Crime	66	30	58	-12 %
General Investigation	13	7	5	-62 %
BC Hydro	51	31	47	-8 %
Other	65	24	34	-48 %
Neighbour	36	14	28	-22 %
Traffic Violation/Incident	6	2	3	-50 %
Total	798	556	745	-7 %

*All figures rounded to nearest whole number.

Comparison of Current and Historical Sample of Marijuana Cultivation Files

The current sample of data from the file reviews (see Table 5.3) was compared with the data from the Plecas et al. (2005) study to determine the extent to which changes had taken place generally with marijuana growing operations in Surrey since 2003.

Table 5.3 – Current and Historical RCMP Founded Cases of Residential Marijuana Growing Operations

<i>Characteristic</i>	<i>Current Sample</i> %	<i>Historical Sample</i> %
Other Drugs Seized	10 %	9 %
Firearm Seized	3 %	12 %
Other Weapon Seized	12 %	5 %
Equipment Seized	91 %	82 %
Fire Involved	6 %	7 %
Guard Dog Present	6 %	11 %
Presence of Hydro Bypass	56 %	36 %
Use of Violence at Time of Arrest	0.5 %	1 %
Type of Seizure		
▪ Case	51 %	65 %
▪ No Case	49 %	35 %
Charges Laid by Crown	48%	63%
Suspects Present	41 %	80 %
Days Elapsed	12 days	14 days
Number of Plants Seized	488 plants	257 plants
Number of kg Marijuana Seized	1 kg	5 kg
Number of Lights	25 lights	9 lights
Amount of Cash Seized	\$2298	\$2104
Amount of Hydro Theft	\$4484	\$2996
Number of Suspects	1.1 suspects	1.4 suspects

*All figures rounded to nearest whole number with the exception of Number of Suspects and Use of Violence at Time of Arrest.

The main finding from this comparison was that the size and sophistication of growing operations in Surrey had increased over time. The average number of plants within the historical sample was 257 compared to an average of 488 plants; a 90% increase in the number of plants. This increase was paralleled by a 178% increase in the number of lights within growing operations.

There was also a marked increase in the presence of hydro bypasses and the amount of theft of hydro power. The likelihood of locating a hydro bypass within growing operations increased by 56%, while the amount of theft of hydro power increased by 50%. A proportionally greater increase in theft of hydro power was expected

as a natural by-product of the introduction of the EFSI process within Surrey as the team was activated by a finding of high levels of power usage. Given that the increase in the amount of theft of hydro power was far greater, at 50%, than the historical sample of data for Surrey, and that the average increase for the rest of the province from 1998 to 2003 was approximately 7%, it would appear that this prediction was well supported (Plecas et al., 2005).

The data also showed a trend toward declining incidents of case seizures and the likelihood of locating suspects within residences. The reduction of both of these factors provided additional insight into the decline in the number of charges ultimately laid by crown. Finally, information related to the presence of children was not included in the above analysis as the data was unreliable. However, it is conceivable that the likelihood of finding children in these locations also declined since the likelihood of locating suspects was lower.

Comparison of RCMP and EFSI Characteristics

A descriptive analysis of RCMP and EFSI cases was conducted to assess differences between the groups in the first instance and prior to any enforcement action (see Table 5.4).

Table 5.4 – Comparisons of Characteristics Prior to Enforcement Action by RCMP and EFSI Cases

<i>Characteristic</i>	<i>RCMP</i>	<i>EFSI</i>
Sources of Complaint (Anonymous Sources of Information)	22 %*	96 %
Age of Information	11 days*	81 days
Lot Size (square feet)	24,460	22,537
Assessed Land Value	\$250,253**	\$260,653
Assessed Improvements	\$119,830**	\$109,900
Total Property Taxes	\$2,602**	\$2,921
Number of Days Property Owned	1,337 days	1,366 days

* χ^2 , $p < 0.05$.

** Figures based on 2005 Property Tax Assessment Information.

*** All figures rounded to nearest whole number.

RCMP and EFSI cases were similar in a number of ways. The average lot size, assessed land value, assessed improvements, and total property taxes did not differ significantly. In effect, the properties appeared to be essentially the same. The differences were with respect to the sources of complaint and the age of the information.

While the RCMP received information on suspected marijuana growing operations from a variety of sources, the EFSI team received information from only one source primarily.²⁶ Although the RCMP responded to a variety of information sources, for the most part, the sources of information were evenly distributed between another crime (29.2 per cent), BC Hydro (24.5 per cent), and anonymous information (21.8 per

²⁶ As mentioned earlier, in April 2006, EFSI reliance on anonymous informant information was reduced when an amendment to the Safety Standards Act was made in the form of Bill 25. Under the provisions of Bill 25, the scope of EFSI was broadened as all jurisdictions were given the authority to request information pertaining to locations consuming more than 93 Kilowatt-hours per day directly from BC Hydro. However, the cases that went directly to the City, as per Bill 25, were not necessarily included in the current research as they were not cases reported to the police. These cases would only be included if a police file already existed for the address of interest.

cent). EFSI, on the other hand, received nearly all of their cases (95.6 per cent) from anonymous information, such as Crime Stoppers (see Table 5.5).

Table 5.5 – Sources of Complaint: Percentage from each Source from November 1, 2004 to November 30, 2006

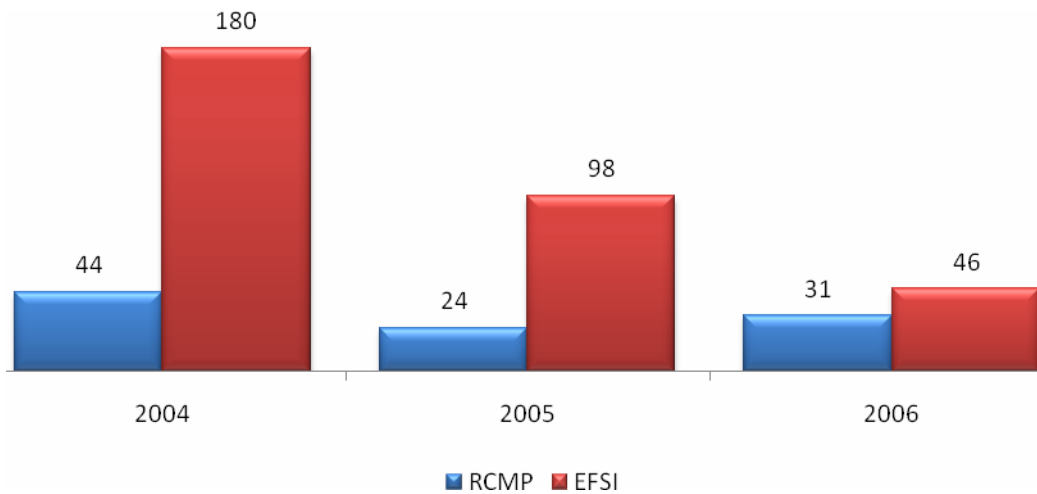
<i>Source of Complaint</i>	<i>Action</i>			
	<i>No Action</i>	<i>RCMP</i>	<i>EFSI</i>	<i>EFSI return to RCMP</i>
Crime Stoppers/Informant	92.6 %	21.8 %	95.6 %	97.0 %
Landlord	2.1 %	4.3 %	1.1 %	.3 %
Other crime	.0 %	29.2 %	.0 %	.0 %
General Investigation	.4 %	1.9 %	.0 %	.0 %
BC Hydro	1.8 %	24.5 %	.0 %	.5 %
Other	1.1 %	12.8 %	1.1 %	.0 %
Neighbour	2.1 %	3.9 %	2.2 %	2.2 %
Traffic Violation/Incident	.0 %	1.6 %	.0 %	.0 %

When suspected marijuana growing operations were attended to by either the EFSI team or the RCMP, the information EFSI acted upon tended to be more dated than the RCMP information. This was due to the time elapsed between the reported dates and attended dates being affected by the RCMP responding both to real time crimes and historical crime information, not just historical data. Again, the main objective of EFSI was to reduce the threat to public safety resulting from improper electrical wiring. Given this, the EFSI team tried to clear the considerable amount of backlogged police information related to suspected marijuana growing operations. By design, the EFSI team worked with older information rather than responding to current reports of marijuana production.

Regardless of what approach was taken to respond to suspected marijuana growing operations, it was predicted that, over time, as the backlog of anonymous informant cases

declined, the response time would diminish for both groups. As indicated in Figure 5.1, this occurred.

Figure 5.1 – Number of Days Time Lapse for Anonymous Informant Cases from November 1, 2004 to November 30, 2006



As the EFSI team cleared the backlog of incidents, it was able to reduce its response time nearly in half with each successive year. The most encouraging finding was the impact on police response time in the two year period. As demonstrated in Table 5.6, the improvement in response time amounted to a 29% (or 12.5 day) reduction in the time taken by the police to respond to Crime Stoppers and Informant information regarding suspected marijuana growing operations.

Table 5.6 – Police Response Time in Days by Sources of Complaint

<i>Source of Complaint</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>Percentage Change over 2 year period</i>
Crime Stoppers/Informant	43.8	24.3	31.3	-29 %

*Percentages rounded to the nearest whole number.

In terms of property characteristics, a comparison between EFSI and police cases revealed no significant differences. The most revealing finding related to property characteristics was lot size. A Corporate Report submitted to the Mayor and Council of the City of Surrey on July 7th 2006 noted an emerging trend in the housing market in Surrey toward smaller, single family lots (City of Surrey, 2006). While the average lot size in Surrey in 1993 was approximately 7,600 square feet, in 2005, the average lot size was 4,500 square feet or a 42% reduction in lot size in the past 12 years among average residences in Surrey (City of Surrey, 2006). Yet, despite this general decline, the average lot size for marijuana growing operations remained four times (18,113.78 square feet) the size of the 2005 average for the City of Surrey. This finding further supported earlier predictions by Plecas et al. (2005) suggesting that marijuana producers would gravitate toward larger, more remote properties in order to increase production and minimize police and community detection. The larger property size associated with marijuana growing operations was also not altogether surprising given that to obtain grounds for a search warrant the police are limited to conducting a perimeter check from off the property when making observations to gather evidence regarding the presence of a marijuana growing operation (Hill, 2007).

The data were also analyzed to determine the nature of the differences existing between the two enforcement models after enforcement action was taken. The first characteristic examined was whether any differences existed in the status of complaint (see Table 5.7).

Table 5.7 – Comparisons of Characteristics after Enforcement Action by RCMP and EFSI Cases

<i>Characteristic</i>	<i>RCMP</i>	<i>EFSI</i>
Status of Complaint Founded	80.9 %*	3.9 %
Status of Complaint Founded but too late	8.2 %*	65 %
Property Change	42.4 %*	34.1 %
Other Drugs Seized	11.7 %*	0 %
Equipment Seized	74.6 %*	0.6 %
Guard Dog Present	5.1 %*	1.1 %
Presence of Hydro Bypass	47.3 %*	0.6 %
Firearms Seized	2.3 %	0.6 %
Children Present	11.7 %	9.4 %

* χ^2 , $p < 0.05$.

This analysis revealed that, when the RCMP attended a residence, there was a much greater likelihood of finding a marijuana growing operation (80.9 percent) compared to an EFSI case (4 percent). This was likely a direct result of the EFSI team providing the owner a 48-hour notice of inspection. This notice provided individuals the opportunity to dismantle the marijuana growing operations, only leaving behind evidence of a past growing operation (i.e. improper wiring, empty plant pots, marijuana shake). Given this, the figures for the EFSI and RCMP cases from both the Founded and Founded but too late groups were combined to determine whether any differences remained between the groups. The findings (see Table 5.8) remained significant even after the groups were combined indicating that when the RCMP attended the site of a suspected marijuana growing operation, the case was more likely to be founded than when EFSI attended.

Table 5.8 – Status of Complaint: Percentage for each Status from November 1, 2004 to November 30, 2006

		<i>Status of complaint</i>					<i>Total</i>
		<i>Founded</i>	<i>Founded but too late</i>	<i>Unfounded</i> *	<i>Other</i>	<i>No Action</i>	
Action	RCMP	80.9 %	8.2 %	0 %	4.7 %	6.2 %	100 %
	EFSI	3.9 %	65 %	15 %	10 %	6.1 %	100 %

* χ^2 , $p < 0.05$.

In terms of changes in property ownership subsequent to RCMP or EFSI action, there was also a significant difference. Property owners were more likely to make a property change after the RCMP attended a residence than if the EFSI team attended. As indicated earlier, the RCMP has a Proceeds of Crime unit that is predominantly dedicated to the restraint and forfeiture of houses involved in marijuana production. The potential risk of having one's property seized likely played a role in the greater propensity to change ownership in the RCMP group of cases. Furthermore, the legalities associated with the criminal justice approach may have also motivated individuals to sell their properties in an effort to conceal assets.

The remaining characteristics listed in Table 5.7 related to findings within the residences once entry was made. The majority of the differences between the RCMP and EFSI cases were statistically significant. In cases where the RCMP attended, using the traditional enforcement response model, there was a greater likelihood of locating other drugs, such as cocaine, heroin, and methamphetamine, equipment used to produce marijuana, a hydro bypass, or a guard dog within the residence. There was no difference in the likelihood of finding a firearm when inspecting a growing operation for either EFSI or RCMP, nor was there a difference in the likelihood of locating children (approximately 10%) within the residence, although, as noted earlier, the reliability of the information

regarding the presence of children was questionable as this information was not consistently captured in police cases.²⁷ Analyses into the type of seizures made, whether or not charges were laid by Crown, and the likelihood of finding suspects were not comparable since the EFSI enforcement model is an administrative approach and thereby not driven by the criminal justice system.

Pre-Bylaw Rate of Re-establishment

There was a greater likelihood of re-establishment for the EFSI group (see Table 5.9). The greater likelihood was statistically significant and was three times (12.7 per cent) higher for EFSI cases than RCMP cases (4.1 per cent). Importantly, this analysis considered re-establishment before the Controlled Substance Property Bylaw was in effect, thus ensuring that the bylaw did not interfere with the results.

Table 5.9 – Pre-Bylaw Rate of Re-establishment of Marijuana Growing Operations

<i>Action</i>		<i>Reestablished</i>		<i>Total</i>
		<i>No</i>	<i>Yes*</i>	
RCMP	Count	141	6	147
	%	95.9%	4.1%	100.0%
EFSI	Count	110	16	126
	%	87.3%	12.7%	100.0%
Total	Count	251	22	273
	%	91.9%	8.1%	100.0%

* χ^2 , $p < 0.05$.

Under EFSI, the cases appeared to start as larger growing operations. Specifically, the average daily consumption was 130 kilowatt-hours per day for EFSI versus 106 kilowatt-hours per day for RCMP cases, although this difference was not statistically significant

²⁷ For the most part, police files noted whether a child (or children) was present. Typically, however, the precise number of children on scene is not provided.

(see Table 5.10). As well, growing operations dismantled by EFSI re-started earlier (6.25 months) compared to RCMP cases (7.5 months). Again, this difference was not statistically significant indicating that growing operations dismantled by EFSI were less likely to be deterred from re-starting. Further, not only did these cases exhibit a greater propensity for re-starts, they consumed higher levels of Hydro power, indicating that the operations were larger than RCMP re-starts.

Table 5.10 – Pre-Bylaw Rate of Re-establishment of Marijuana Growing Operations by Opportunity and Amount of Consumption

<i>Action</i>		<i>Opportunity to Re-Establish (Months)</i>	<i>Daily Average Consumption (Kilowatts)</i>	<i>Re-establishment Time (Months)</i>
RCMP	Mean	18.37	106.17	7.50
	N	147	6	6
EFSI	Mean	13.48	129.69	6.25
	N	120	16	16
Total	Mean	16.17	123.27	6.59
	N	267	22	22

EFSI cases had a statistically significant lower opportunity to experience a re-start. Specifically, EFSI cases had 13 months to re-start versus 18 months in the case of RCMP. Despite having less of an opportunity for re-establishment, this group had a significantly higher rate of re-establishment. This finding, in addition to the above findings, suggested that cultivators were less likely to be deterred when suspected growing operations were responded to by EFSI, rather than the RCMP.

Post-Bylaw Rate of Re-establishment

As mentioned earlier, one change that took place in Surrey during this research project was the introduction of the Controlled Substances Property Bylaw. This bylaw

appeared to have a substantial impact on the likelihood of re-starts. This can be seen in Table 5.11 which provides data on the likelihood of re-establishment after the bylaw was enacted.

Table 5.11 Post-Bylaw Rate of Re-establishment of Marijuana Growing Operations by RCMP and EFSI Cases

		<i>Re-established</i>		<i>Total</i>
		<i>No</i>	<i>Yes</i>	
RCMP	Count	107	1	108
	%	99.1%	.9%	100.0%
EFSI	Count	41	0	41
	%	100.0%	.0%	100.0%
Total	Count	148	1	149
	%	99.3%	.7%	100.0%

Specifically, only one RCMP case and none of the EFSI cases resulted in a re-establishment after the bylaw was enacted. On a cautionary note, however, one must be careful when interpreting this result because, as demonstrated in Table 5.12, the RCMP cases had only 5.5 months in which to re-start, while EFSI cases had 7.8 months.

Table 5.12 – Post-Bylaw Rate of Re-establishment of Marijuana Growing Operations by Opportunity

<i>Action</i>	<i>Opportunity (Months)</i>	<i>N</i>	<i>Standard Deviation</i>
RCMP	5.5	109	2.72
EFSI	7.8	41	1.65
Total	6.1	150	2.67

This somewhat limited amount of opportunity was noteworthy because re-starts generally occurred within about six months. Accordingly, more time for the opportunity to re-

establish is necessary to allow for further study and to have more conclusive findings. Still, the fact that the re-establishment rate was virtually zero was very encouraging.

Comparison of Pre-Bylaw and Post-Bylaw Characteristics

The background characteristics of RCMP and EFSI cases before and after the implementation of the bylaw were compared. No major change in housing characteristics were noted before or after the bylaw was implemented for EFSI or RCMP cases. The only key observation was that an extended period of study was needed to fully understand the effect of the bylaw as this would allow for greater opportunity for re-establishment, especially where RCMP cases were concerned (See Table 5.13).

Table 5.13 –Pre Bylaw Comparison of Property Characteristics of Marijuana Growing Operations by RCMP and EFSI Cases

<i>Action</i>		<i>Opportunity (Months)</i>	<i>BC Lot Size (Square Footage)</i>	<i>Assessed Land (Lot Value)</i>	<i>Assessed Improvements</i>	<i>Total Taxes</i>	<i>Time elapsed (days)</i>
RCMP	Mean	18.37	30,091.09	272,920.71	126,436.43	2,741.96	9.82
	N	147	139	140	140	140	147
EFSI	Mean	13.48	26,668.07	263,331.45	109,005.65	3,011.63	86.42
	N	120	123	124	124	124	115
Total	Mean	16.17	28,484.10	268,416.67	118,249.24	2,868.63	43.44
	N	267	262	264	264	264	262

Table 5.14 – Post Bylaw Comparison of Property Characteristics of Marijuana Growing Operations by RCMP and EFSI Cases

<i>Action</i>		<i>Opportunity (Months)</i>	<i>BC Lot Size (Square Footage)</i>	<i>Assessed Land (Lot Value)*</i>	<i>Assessed Improvements</i>	<i>Total Taxes</i>	<i>Time elapsed (days)*</i>
RCMP	Mean	5.52	12,392.75	219,406.86	110,132.35	2,407.93	12.24
	N	109	102	102	102	102	107
EFSI	Mean	7.78	16,945.18	246,950.00	102,742.50	2,542.52	71.35
	N	41	40	40	40	40	40
Total	Mean	6.14	13,675.12	227,165.49	108,050.70	2,445.84	28.33
	N	150	142	142	142	142	147

* c^2 , $p < 0.05$.

The only statistically significant difference in property characteristics after the implementation of the bylaw was within the assessed land values between the two groups. EFSI cases were found to have significantly greater assessed land values (\$246,950.00) compared to RCMP cases (\$219,406.86) (see Table 5.14). This difference was likely due to the legalities of policing.

The police have considerable difficulty bringing to justice persons engaged in marijuana cultivation in their homes. Under the present constitutional context, a police officer cannot walk onto private property to undertake a perimeter search²⁸ of a dwelling in order to make observations to gather evidence consistent with a marijuana growing operation as the occupant's reasonable expectation of privacy would be infringed (Hill, 2007). This restriction has limited police officers to conducting surveillance and investigating marijuana growing operations on smaller lot sizes as it simplifies the process of gathering evidence.

It was hypothesized that of all the RCMP cases of marijuana growing operations, the ones where a no case seizure of marijuana took place would be the most similar group to EFSI cases. For this reason, an analysis of the re-establishment rate for RCMP cases by the type of seizure made was conducted to determine whether any differences existed (see Table 5.15).

²⁸ A lawful perimeter search is one conducted from off the subject property (Hill, 2007).

Table 5.15 – Rate of Re-establishment for RCMP Cases by Type of Seizure

<i>Type of Seizure</i>		<i>Reestablished</i>		<i>Total</i>
		<i>No</i>	<i>Yes</i>	
Case	Count	104	2	106
	%	98.1 %	1.9 %	100.0 %
No case	Count	145	5	150
	%	96.7 %	3.3 %	100.0 %
Total	Count	249	7	256
	%	97.3 %	2.7 %	100.0 %

Although re-establishment was slightly higher in the no case seizure group, this finding was not statistically significant.

Suspecting that those individuals who stayed at a residence once the police or EFSI had attended were of particular interest, since they were more likely to establish a marijuana growing operation in the first place, the rate of re-establishment within the Property did not Change Owner Name group was examined. The results of this analysis are presented in Table 5.16.

Table 5.16 – Pre-Bylaw Re-Establishment by Whether or not the Property Changed Owner Name after Dismantling of Grow Operation²⁹

	<i>Re-Establishment within RCMP Model</i>	<i>Re-Establishment within EFSI Model</i>
	<i>%</i>	<i>%</i>
Property Changed Owner Name	1.3 %	2.4 %
Property did not Change Owner Name	8.1 %	18.1 %*

* Difference in models χ^2 , $p < 0.05$.

²⁹ All properties where either an outright change in ownership or a name change took place were considered a part of the Property Changed Owner Name group. This information was determined by querying Tempest, the City of Surrey database that tracks ownership data.

Not surprisingly, locations where no change in owner name took place had a significantly greater likelihood, under both the RCMP and EFSI model, to re-establish a growing operation. In the case of EFSI, re-establishment was more than double that of the RCMP where there was no change in property ownership.

Table 5.17 – Pre-Bylaw Characteristics of Re-Establishment in No Change Group by RCMP and EFSI Cases

<i>Action</i>		<i>Opportunity (Months)</i>	<i>Re-establishment (Months)</i>	<i>Average Consumption (Kilowatts/Day)</i>
RCMP	Mean	17.42	7.75	101.50
	N	53	4	4
EFSI	Mean	12.76	3.17	131.67
	N	70	12	15
Total	Mean	14.76	4.31	125.32
	N	123	16	19

Furthermore, as indicated in Table 5.17, the rate of re-establishment among those properties where no change in ownership occurred was more than twice in the case of EFSI and used 30% more consumption with five months less time to re-start than RCMP cases. Presumably there was less deterrence in cases responded to by EFSI, which was consistent with expectations, prior to the introduction of the Controlled Substance Property Bylaw.

Chapter Five: Summary and Conclusion

The present research indicated that the rate of re-establishment for marijuana growing operations in the case of EFSI was three times (12.7%) greater than cases where a traditional enforcement tactic was employed by the police (4.1%). Furthermore, the likelihood of re-establishment for EFSI cases increased to one in every five cases in residences where no change in property ownership took place. The data also suggested that, where EFSI cases were concerned, marijuana growing operations re-established faster and on a larger scale, despite having less time to do so.

The issue of re-establishment was mitigated considerably with the introduction of the Controlled Substances Property Bylaw as the rate became virtually zero for both RCMP and EFSI cases. It would appear that the bylaw was a necessary compliment to the EFSI program in reducing the likelihood of re-establishment. In essence, the bylaw seemed to act as a deterrent combined with the actions of the court system in British Columbia. It is reasonable to assume that the above findings would hold true in provinces with similar sentencing patterns to that of British Columbia. However, whether the bylaw would result in an equally effective deterrent in provinces with stricter sentencing patterns is questionable.

In the absence of the Controlled Substance Property Bylaw, a rate of re-establishment of 12.7% (or 16 cases) over two years for EFSI cases could be viewed as insignificant since the number of overall cases was relatively small. However, when the impact of the finding is considered across all jurisdictions in Canada, particularly provinces such as Quebec and Ontario that have been experiencing increasing rates, the

importance of the result is increased. Given this, consideration of the likelihood of re-establishment across the country is important as there has been an abundance of recent evidence indicating that marijuana growing operations are increasingly being detected across the country (World Drug Report, 2006).

Finally, the problem of illicit marijuana production is by no means limited to Canada. In fact, in 2006 a total of 82 countries around the world provided the United Nations Office on Drug and Crime (UNODC) with estimates related to marijuana production. Whereas, for the purpose of comparison, only 36 countries provided estimates for opium poppy cultivation, and only six provided estimates for coca leaf production (World Drug Report, 2006). In terms of the magnitude of global marijuana production, recent estimates indicate that approximately 45,000 metric tons was produced in 2006, which was more than twice as high as a decade earlier (World Drug Report, 2006).

Implications of Bill 25 – Safety Standards Amendment Act

Initially, the work of EFSI was predominantly driven by anonymous informant information that had become backlogged with the police over time. The reliability of informant data, in comparison to other sources, likely impeded the ability of the team to locate founded (or more precisely founded but too late) growing operations. Furthermore, the original model of EFSI was heavily reliant on the police to provide information to the team. There were times over the two year period of interest where the EFSI team was placed on hiatus due to a lack of available information to follow-up (L. Garis, personal communication March 12, 2007).

The introduction of Bill 25 helped alleviate some of the above challenges. Presently, the City of Surrey receives information pertaining to high consumption locations directly from BC Hydro which is provided to the EFSI team. This modification improved the EFSI team by allowing for the inclusion of other risk factors posed by locations of interest into the overall equation of public safety, rather than simply responding to community complaints in a piecemeal, reactive manner. This is not to say that community complaints have been removed from consideration, but this source of information is presently cross-referenced with BC Hydro information and assessed within the larger context. The likelihood of attending founded (or founded but too late) grow operations should be positively influenced by the provisions of Bill 25, thereby, reducing associated risks to public safety even further.

In terms of future policy decisions regarding illicit marijuana cultivation and related public safety concerns, information pertaining to consumption data provided a level of insight and understanding into the extent of the problem within various jurisdictions and, more importantly, within the province that had been otherwise unavailable to date. Although consumption data is not a perfect barometer, it does allow for the most informed estimates available regarding the amount of marijuana production taking place within a jurisdiction. This information enables the development of informed policy decisions related to whether or not the levels of enforcement should be further expanded and where existing resources should be targeted.

Limitations of Non-Traditional Enforcement Response

The foundation for the EFSI approach was grounded in the prevention of fires resulting from the improper wiring commonly found in marijuana growing operations. A

residence must consume 93 kilowatt hours per day in order to fall within the mandate of the EFSI program. As was demonstrated in Table 4.1, although EFSI dealt with some of the community complaints regarding marijuana growing operations, one-third of the complaints failed to meet the 93 kilowatt threshold and was returned to the police with no action taken.

Furthermore, the potential for improper wiring exists in all marijuana growing operations, yet the EFSI team was limited to only those locations where an abnormally high level of electricity was being consumed. The data from the present research indicated that those incidents where a hydro bypass³⁰ was located had a higher likelihood of fire than those where a hydro bypass was not located. As Table 5.7 suggested, nearly half (47.3%) of all marijuana growing operations responded to by the RCMP involved a hydro bypass. In terms of electrical wiring and safety concerns, a considerable risk to safety continues to be posed by cases that currently fall outside the mandate of the program.

Benefits of Non-Traditional Enforcement Response

The introduction of EFSI alleviated some of the burden on the police by enabling a 29% reduction (or 12.5 days) in response time informant information (i.e. Crime Stoppers) related to marijuana growing operations. In the preliminary discussion stages of EFSI, it was envisioned that the program would allow the police to focus on investigations to ensure that charges were increasingly being forwarded and that those charges would result in a greater number of criminal convictions. Given the length of time it takes for the court system to lay charges, it is too soon to comment on whether this

³⁰ An incident where a Theft of Hydro takes place involves the installation of a jumper cable ahead of the meter to effectively by-pass the meter.

occurred. However, the number of founded complaints made by the police does indicate that some improvement in police effectiveness took place in 2006.

The findings further demonstrated that marijuana growing operations tended to be located on properties that were five times the average lot size. It was assumed this was the result of deliberate efforts to avoid detection on the part of marijuana cultivators. What was more disturbing was that properties that received either “No Action” or were “EFSI return to RCMP” cases were situated on the largest lot sizes and had the highest assessed improvement value.³¹ This suggested that a system needs to be put in place to deal with larger properties where no theft of hydro power takes place, but the property poses a challenge for police surveillance.

The findings from the present research on the types of seizures, suspects, and charges, all indicated a significant difference between EFSI and the police – which will always be the case given that the ultimate goal of the EFSI program is to ensure electrical safety, rather than to arrest and prosecute offenders. Earlier cost comparisons between the EFSI and the police approach indicated that the EFSI process was more cost effective than the traditional enforcement response (Garis, 2005). Although the existence of the EFSI initiative has resulted in lower police costs in the long-term, a direct cost comparison between the two approaches is not realistic as it would fail to acknowledge the complexities and challenges facing a public police force.

The EFSI approach was established to strictly contend with high consumption residences, whereas the police must continue to maintain the expertise and resources required to respond to all of the various types of marijuana production, including high

³¹ Improvements, for assessment purposes, generally refer to any building, fixture, or structure placed on land or water (BC Property Assessment Appeal Board, 2007)

consumption, theft of hydro, and hybrid thefts in addition to suspects, investigations, court; all of which takes place in police cases where a marijuana growing operation is discovered during the commission of another crime. In effect, the traditional enforcement response and the non-traditional enforcement response are independent and service unique needs; therefore, cannot be directly compared in terms of costs. Furthermore, given the unique needs serviced by both models, it would not be implausible to state that one model should not exist without the other as only a multi-faceted approach, involving a multitude of stakeholders within the community, can address the complex problem of marijuana growing operations and related public safety concerns.

Based on an analysis of the data collected for this current study, the EFSI program does appear to be an ideal example of the benefits of increasing public involvement in reducing crime and of integrating stakeholders responsible for improving public safety. Surrey has made every effort to ensure the approach has all the necessary components to maintain safer and healthier communities in the long-term.

Future Direction of Marijuana Enforcement

The future direction of marijuana enforcement is dependent on the continued involvement of additional stakeholders. Despite the existence of a number of local initiatives responding to the proliferation of marijuana growing operations, the problem has continued to present a significant hazard to public safety in the absence of integrated efforts aimed at response and prevention.

The realization that electrical power is the backbone of the cultivation process is increasingly becoming the focal point for future strategies targeting marijuana production. Key stakeholders, such as BC Hydro, have been instrumental in moving

toward a more integrated, “smarter solution” to marijuana enforcement. The first advancement in this regard derived from the added benefit of the amendment to the Safety Standards Act (in the form of Bill 25) allowing jurisdictions to receive information on residences consuming higher than normal amounts of electricity. The second advancement, which is still pending, is the implementation of digital meters on residences to increase energy conservation efforts (Birmingham, 2007). These meters are expected to be in place by 2010 or 2011. The digital meters will enable real-time detection of occurrences of theft of hydro power making it increasingly risky for individuals to attempt to steal electricity. These changes will assist in ensuring that marijuana producers in all jurisdictions are detected in the first instance simply through the examination of consumption records or digital meter readings, rather than a reliance on community complaints or the surveillance efforts of the police.

The whole issue of consumption of electricity has opened the door for further examination of the apparatus required in the production of marijuana, namely hydroponic equipment. This recognition has led to strategies seeking the establishment of regulatory options aimed at ensuring hydroponic equipment is restricted to legitimate users. This will allow for yet another integrated, broad-based strategy to attack the problem at its source, rather than attempting to manage its expansion, as has commonly been the case.

Directions for Further Research

The results of the present research indicated that the rate of re-establishment of marijuana growing operations was virtually non-existent in both the case of EFSI and the police once the Controlled Substances Property Bylaw was in place. However, in order to

gain additional confidence in these findings, it is recommended that the study continue for an additional six months to allow for sufficient time for re-establishment to take place.

Furthermore, this study speculated on the potential reasons behind the finding that re-establishment took place at both a greater and faster rate in EFSI and police cases where properties did not experience a change in ownership. This occurrence, however, necessitates further consideration to obtain a better understanding of the relationship between ownership and re-establishment of marijuana growing operations. This would assist in the development of more informed policies and practices to future growing operations. With the present knowledge, enforcement efforts related to residences dismantled or rendered “safe” by either the police or EFSI could be streamlined by conducting a simple audit of the consumption levels of residences where a change in ownership had not taken place. Further research on this topic would also allow for greater sophistication in the deployment of enforcement resources when targeting repeat locations.

The notion of lot size and marijuana growing operations was a recurring theme in the present research. It has become increasingly apparent that, in the absence of a coordinated strategy to address growing operations, cultivators will continue to evade detection by purchasing residences situated on larger lots and hiding their operations with the presence of natural barriers, or simply by relocating to rural areas. From a public safety point of view, the displacement of such cultivation sites is not a desirable solution as the threats posed by such sites continue unabated for the most part. Identification of the characteristics of marijuana cultivation sites would serve to better inform the various

stakeholders, namely members of the community, in turn allowing for improved coordination of enforcement efforts within the provinces.

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Appendix A

INCIDENT FORM

Part 1		
1		ID# (use assigned numbers)
2		Incident ID#
3		File Year (2004, 2005, 0r 2006)
4		File Number
5		District (1, 2, 3, 4, or 5)
6		Street Number
7		Street Name
8	-	Date Offence Reported (dd-mm-yy)
9	-	Date Offence Attended (dd-mm-yy)
10		Time Elapsed (days between offence report and attendance)
11		Source of Complaint
12		Status of Complaint (0=unfounded, 1=founded, 2=no action, 3=other, 4=founded but too late)
13		Type of Facility
14		Rented (1=rented, 2=owned, 3=Crown, 4=other, 5=don't know)
15		Action (1=no action, 2=RCMP, 3=EFSI, 4=EFSI return RCMP)
Part 2		
16		Number of Marijuana Plants Seized
17		Number of kg of Marijuana Seized
18		Other Drugs Seized (0=none, 1=cocaine, 2=heroin, 3=other)
19		Firearm Seized (0=none, 1=prohibited, 2=restricted, 3=other, 4=mix)
20		Other Weapons Seized (1=yes, 0=no)
21		Equipment Seized (1=yes, 0=no)
22		Number of Lights Seized
23		Amount of Cash Seized (Nearest C\$, 1US\$=1.2C\$)
24		Number of Children Present
25		Fire Involved (1=yes, 0=no, DK=3)
26		Other Hazards Present (1=booby trap, 2=explosive, 3=toxin, 4=other, 5=mix)
27		Guard Dog Present (1=yes, 0=no, 3=DK)
28		Presence of Hydro By-Pass (1=yes, 0=no)
29		Amount of Theft in Hydro (In Cdn\$ to nearest dollar)

Source of Complaint

1=crime stoppers/informant
 2=routine check
 3=serving a warrant
 4=landlord
 5=other crime
 6=general investigation
 7=BC Hydro
 8=other
 9=missing
 10=neighbour
 11=traffic violation/incident

Type of Facility

1=house
 2=apartment/multiple units
 3=warehouse/commercial
 4=detached bldg e.g. shed, barn
 5=outdoors – Private
 6=outdoors – Crown land
 7=vehicle
 8=other

Conversion

1000 gm=1 kg
 28 gm=1 oz
 450 gm=1 lb

30		Use of Violence at Time of Arrest (1=yes, 0=no)
31		Type of Seizure (1=case, 2=no case)
32		Date of Report to the Crown (dd-mm-yy)
33		Charges laid by Crown (1=yes, 0=no)
34		Number of Suspects
35		Suspects Present (1=yes, 0=no)
Part 3		
36	-	Date of Drive-By (dd-mm-yy)
37		Status of Drive-By (0=unfounded, FOI not sent no further action, 1=founded, FOI sent)
38		Status of FOI (0=no comment, 1=high cons)
39		Evidence of grow op (1=yes, 0=no)
40		Disconnected due to non-compliance order (1=yes, 0=no)
41	-	Date Disconnected (dd-mm-yy)
42		Time Elapsed (days between attended and disconnect)
43		7 Day Repair Notice Issued (1=yes, 2=no)
44	-	Electrical Permit Issued (dd-mm-yy)
45	-	Hydro Reconnected (dd-mm-yy)
46		Time Elapsed (days between disconnect to reconnect)
47		Bylaw Enacted by EFSI (1=yes, 2=no)
Part 4		
48		BC Lot Size (sq ft)
49		Assessed Land Value for 2005 (In Cdn\$)
50		Assessed Improvements for 2005 (In Cdn\$)
51		Net Taxes Paid in 2005 (In Cdn\$)
52	-	Purchase Date (dd-mm-yy)
53	-	Property Change Date (dd-mm-yy)
54		Property Change (1=no change, 2= Sold to New Owner, 3= Name Change but Same Owner)
55		Time Elapsed (days between purchase to property change)
56		Time Elapsed (days between date attended to property change)
Part 5		
57		Re-established (1=yes, 2=no)
58		Daily Average Consumption (kilowatt)
59	-	Date Re-established (dd-mm-yy)
60		Time Elapsed (months between date attended to re-establishment)