# ALASKA PRISON POPULATION IMPACT ANALYSIS

JUNE, 1982

Alaska Judicial Council

Office of the Executive Director

# Alaska Judicial Council

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# PREFACE

This prison population impact analysis constitutes the final report of work begun by the Judicial Council in early 1982. It was made possible by the cooperation and assistance of several agencies and sources. First, it would not have been possible without data collected by the Judicial Council (funded in its FY'81 fiscal budget) concerning 1980 felony sentences, and demonstrates the collateral utility of the Council's ongoing studies of felony offenses and sentences. In addition, the Departmenty of Health and Social Services contributed funding of $7,916, the Governor's Commission on Criminal Justice provided $6,000 and the Division of Corrections and Alaska Parole Board provided considerable statistical input necessary for the analysis. The Judicial Council also wishes to thank the Minnesota Sentencing Guidelines Committee for its valuable assistance, including a computer program designed to project prison populations. Special appreciation goes to Nicholas Maroules whose analytical skills and writing abilities are reflected in the report.

We also wish to note that the results contained in sections III of this report, which project the anticipated impact of a legislative bill proposing changes in felony sentences, indicate outcomes different than those contained in a preliminary report published in March, 1982. This was due to an undetected error in the computer program which incorrectly adjusted sentence lengths for good-time awards. We regret any inconvenience occassioned by this error. The results contained in this report have been exhaustively re-examined and constitute our final projection models.

# I. INTRODUCTION

Over the past two years, Alaska's prisons have experienced unparalleled increases in inmate populations. Unfortunately, these increases were both unanticipated and unaccounted for, underscoring the need for scientifically based projections of future prison populations. The purpose of this report is to provide an empirically-based and statistically rigorous insight into the parameters of future corrections populations. The report expands and elaborates on work begun in this area by the Judicial Council in early 1982.

The projection analysis relies upon a sophisticated computer program originally designed by the Minnesota Sentencing Guidelines Commission that has been modified and tailored to more accurately capture the dynamics of Alaska's corrections system. Three sets of projection models covering five years of future sentenced felon prison populations have been developed. The first includes five empirically developed models based on the universe of 1980 felony dispositions in Alaska, adjusting for various levels of conviction rate growth. The second set includes another five models estimating the impact of a legislative proposal (HB 293) to extend presumptive sentencing to all felony offenders, again adjusting for growth. Finally, estimates of the additional impact of Alaska's new drug law to each of the above models is provided.

Scope of the Problem:

There are three essential components to Alaska's prison population, including (1) sentenced felons (including Alaskan offenders incarcerated in the Federal Bureau of Prisons), (2) unsentenced felons and (3) misdemeanants (both sentenced and unsentenced). Statistical data provided by the Division of Corrections indicates that the increase in prison populations is due mainly to the first two groups--sentenced and unsentenced felons. Between January 1, 1978 and January 1, 1982, the total felony population--sentenced and unsentenced--rose from 595 to 913 inmates, a 53% increase. Sentenced felons rose from 458 on January 1, 1978, to 717 on January 1, 1982, a 57% increase. During the same period unsentenced felons rose from 137 to 196, a 43% increase. During these four years, however, the number of misdemeanants in Alaska's system has remained stable at 140, plus or minus 20.

At the present time, the Division of Corrections maintains ten jail/prison facilities in Alaska. The following table reflects the normal and emergency operating capacities of the ten facilities and the number of prisoners in each facility as of February 1, 1982.

TABLE I

CAPACITIES OF
ALASKAN CORRECTIONAL INSTITUTIONS

| STATE INSTITUTIONS | NORMAL OPERATING CAPACITY | EMERGENCY OPERATING CAPACITY | 02/01/82 PRISONER COUNT | % of NORMAL CAPACITY |
|---|---|---|---|---|
| Ketchikan | 22 | 30 | 21 | 95% |
| Juneau | 90 | 100 | 111 | 123% |
| Anchorage - 3rd Ave. | 70 | 80 | 81 | 116% |
| Anchorage - 6th Ave. | 100 | 115 | 133 | 133% |
| Ridgeview Men's | 50 | 50 | 46 | 92% |
| Eagle River Men's | 80 | 100 | 112 | 140% |
| Eagle River Women's | 28 | 30 | 21 | 75% |
| Palmer | 113 | 113 | 107 | 95% |
| Fairbanks | 110 | 118 | 164 | 149% |
| Nome | 30 | 34 | 32 | 107% |
| TOTALS | 693 | 770 | 828 | 119% |

In addition to the 828 prisoners in state correctional facilities on February 1, 1982, there were 190 prisoners housed in federal institutions (Federal Bureau of Prisons) outside Alaska.

Scope and Method of Analysis:

The prison population projection impact models which follow are strictly limited to estimating changes among the sentenced felon population. Limiting the scope of the projection models to sentenced felons was mandated by two concerns. First, grossly inadequate data is currently available on unsentenced felons in Alaska's criminal justice system. The Judicial Council data relied upon in developing the projection models includes offenders convicted and sentenced for felonies and is thus most appropriate for an analysis of population impacts on this group. Second, and more importantly, the great preponderance of the dramatic increase in prison populations over the past four years has concerned the sentenced felon portion of the population.

As noted above, the analysis relies upon a sophisticated computer program that considers the interaction of two distinct and fundamentally important data bases simultaneously in projecting future population changes. The first is a base file of all sentenced felon inmates incarcerated in Alaskan prisons (including those in the Federal Bureau of Prisons) as of February 1, 1982, and includes the

month of their probable release. This data base provides a "snapshot" of the current inmate population, and serves to inform the program of the beds currently available and the month when each bed becomes available for a new inmate. The second is a micro data base which includes the felony dispositions and sentences of all offenders for a given year. The micro file for the first set of projection models is the Judicial Council's data representing the universe of 1980 Alaska felony dispositions and sentences. Changes to or modifications of the micro file necessary for each set of projection models are fully described in each section. Finally, as described more fully later, the program also contains an adjustment file which reduces the sentences imposed by the court to reflect anticipated good time allowance and/or parole.

## II. PROJECTING ALASKA'S FUTURE SENTENCED FELON PRISON POPULATIONS BASED ON 1980 FELONY DISPOSITIONS

The analytical projections presented in this section provide five alternative considerations of the impact of 1980 felony offense dispositions on Alaska's prison population for the next sixty months. Each of the models is predicated upon the empirical universe of 1980 felony offenses resulting in conviction with modifications for varying levels of increases in crime rate and convictions.

The efficacy of each model relies upon the assumption that 1980 dispositions and sentences are sufficiently representative of what is likely to occur over the 1982-1986 period that the projection models provide reasonably valid parameters of future population changes. While dispositions and sentencing patterns fluctuate from year to year, a comparison of 1980 offense and sentence patterns with those of past study periods confirms the general reliability and representativeness of this data. Most importantly, this data constitutes the best and most rigorous empirical information available concerning felony dispositions and sentences under Alaska's new criminal code.

In addition to the adjustments provided for variations in crime/conviction rates since 1980, adjustment was also made for the variance between the sentences imposed by the courts and those likely to be actually served by offenders. The sentences imposed by judges were reduced to reflect both good time deductions and where applicable, parole decisions.

After careful consideration of statistical information provided by the Alaska State Board of Parole and The Division of Corrections, court imposed sentences were reduced on an aggregate basis for presumptively and non-presumptively sentenced offenders. Presumptively sentenced offenders are eligible for a maximum 25% good time reduction only; they are not subject to parole decisions. In an effort to calculate the most reasonably conservative impact upon the system while not deviating substantially from the available empirical information, the sentences of all presumptively sentenced offenders were reduced by the maximum 25% good time allotment. Non-presumptively sentenced offenders are eligible for both the 25% (maximum) good time as well as parole. On the basis of the statistical information available on past parole decisions the sentences of these offenders were reduced by 35%.

There is one notable caveat regarding these projection models. Due to very limited available information on probation and parole revocations, the impact of these factors on future prison populations is unknown and is thus not included in this analysis.

The following tables provide five projection models of Alaska's sentenced felon prison population. Model #1 makes no allowance for a growth rate in convictions--it simply replicates 1980 felony offense dispositions for the five year period between 1982-1986. Models #2 through #5 each begin by adjusting for a 20% increase in convictions in the first year (1982) over the 1980 base period to approximate the serious increase in crime experienced in Alaska over the past two years. Model #2 then assumes no further growth while models #3, #4 and #5 reflect per annum growth (over the 1980 base) of 5%, 10% and 20%, respectively, for the second through fifth years of the projections (1983 through 1986). As noted, the projections were calculated only for the sentenced felon population, which, in February, 1982, included n=665 inmates including those in the Federal Bureau of Prisons.

## TABLE II - MODEL #1

PROJECTED SENTENCED FELONY PRISON POPULATION COUNTS
(1980 Convictions - No Growth)

| | YEAR | | | | |
|---|---|---|---|---|---|
| | 1 (1982) | 2 (1983) | 3 (1984) | 4 (1985) | 5 (1986) |
| 12th Month | 672 | 698 | 695 | 699 | 676 |
| Lowest Month | 672 | 691 | 695 | 699 | 676 |
| Highest Month | 717 | 716 | 738 | 734 | 729 |
| Annual Average | 693 | 702 | 717 | 720 | 703 |

BASE POPULATION (2/1/82) = 665

| | MONTH | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1 (1982) | 677 | 680 | 684 | 684 | 698 | 710 | 717 | 709 | 706 | 698 | 688 | 672 |
| 2 (1983) | 705 | 691 | 697 | 716 | 711 | 703 | 696 | 695 | 708 | 703 | 711 | 698 |
| 3 (1984) | 729 | 738 | 738 | 725 | 721 | 714 | 712 | 700 | 712 | 704 | 718 | 695 |
| 4 (1985) | 720 | 724 | 722 | 723 | 727 | 712 | 723 | 717 | 715 | 734 | 730 | 699 |
| 5 (1986) | 721 | 718 | 714 | 719 | 729 | 722 | 706 | 685 | 679 | 677 | 696 | 676 |

## TABLE III - MODEL #2

PROJECTED SENTENCED FELONY PRISON POPULATION COUNTS

(1980 Convictions--First Year Growth 20%, 0% Thereafter)

| | YEAR | | | | |
|---|---|---|---|---|---|
| | 1 (1982) | 2 (1983) | 3 (1984) | 4 (1985) | 5 (1986) |
| 12th Month | 719 | 771 | 780 | 793 | 771 |
| Lowest Month | 687 | 745 | 780 | 793 | 771 |
| Highest Month | 757 | 786 | 822 | 834 | 832 |
| Annual Average | 727 | 768 | 800 | 814 | 802 |

BASE POPULATION (2/1/82) = 665

| | MONTH | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1 (1982) | 687 | 695 | 704 | 709 | 728 | 746 | 757 | 751 | 752 | 744 | 737 | 719 |
| 2 (1983) | 760 | 745 | 755 | 780 | 774 | 770 | 762 | 762 | 780 | 774 | 786 | 771 |
| 3 (1984) | 809 | 820 | 822 | 807 | 803 | 798 | 795 | 782 | 797 | 788 | 805 | 780 |
| 4 (1985) | 810 | 815 | 813 | 815 | 821 | 806 | 819 | 813 | 810 | 834 | 829 | 793 |
| 5 (1986) | 820 | 817 | 812 | 819 | 832 | 825 | 806 | 781 | 774 | 773 | 795 | 771 |

## TABLE IV - MODEL #3

PROPOSED SENTENCED FELONY PRISON
POPULATION COUNTS
(1980 Convictions--First Year Growth 20%, 5% Thereafter)

| | YEAR | | | | |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| 12th Month | 719 | 786 | 816 | 859 | 866 |
| Lowest Month | 687 | 749 | 815 | 855 | 864 |
| Highest Month | 757 | 801 | 848 | 902 | 923 |
| Annual Average | 727 | 778 | 831 | 873 | 890 |

BASE POPULATION (2/1/82) = 665

| | MONTH | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1 | 687 | 695 | 704 | 709 | 728 | 746 | 757 | 751 | 752 | 744 | 737 | 719 |
| 2 | 763 | 749 | 761 | 788 | 783 | 780 | 773 | 774 | 793 | 787 | 801 | 786 |
| 3 | 830 | 845 | 848 | 834 | 833 | 829 | 828 | 815 | 832 | 823 | 843 | 816 |
| 4 | 855 | 863 | 864 | 869 | 878 | 864 | 881 | 874 | 873 | 902 | 897 | 859 |
| 5 | 895 | 895 | 893 | 904 | 923 | 919 | 899 | 871 | 864 | 865 | 893 | 866 |

## TABLE V - MODEL #4

### PROJECTED SENTENCED FELONY PRISON POPULATION COUNTS

(1980 Convictions--First Year Growth 20%, 10% Thereafter)

| | YEAR | | | | |
|---|---|---|---|---|---|
| | 1 (1982) | 2 (1983) | 3 (1984) | 4 (1985) | 5 (1986) |
| 12th Month | 719 | 801 | 854 | 929 | 972 |
| Lowest Month | 687 | 754 | 849 | 902 | 965 |
| Highest Month | 757 | 815 | 882 | 976 | 1024 |
| Annual Average | 727 | 788 | 863 | 935 | 989 |

BASE POPULATION (2/1/82) = 665

| | MONTH | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1 (1982) | 687 | 695 | 704 | 709 | 728 | 746 | 757 | 751 | 752 | 744 | 737 | 719 |
| 2 (1983) | 767 | 754 | 767 | 796 | 791 | 790 | 783 | 785 | 806 | 801 | 815 | 801 |
| 3 (1984) | 852 | 870 | 876 | 863 | 865 | 862 | 862 | 849 | 869 | 859 | 882 | 854 |
| 4 (1985) | 902 | 914 | 918 | 926 | 938 | 926 | 947 | 941 | 940 | 976 | 971 | 929 |
| 5 (1986) | 978 | 981 | 982 | 997 | 1024 | 1024 | 1003 | 971 | 965 | 969 | 1004 | 972 |

## TABLE VI - MODEL #5

### PROJECTED SENTENCED FELONY PRISON POPULATION COUNTS

(1980 Convictions--Growth of 20% For Each Year)

| | YEAR | | | | |
|---|---|---|---|---|---|
| | 1 (1982) | 2 (1983) | 3 (1984) | 4 (1985) | 5 (1986) |
| 12th Month | 719 | 830 | 934 | 1088 | 1227 |
| Lowest Month | 687 | 763 | 897 | 1005 | 1167 |
| Highest Month | 757 | 845 | 964 | 1141 | 1270 |
| Annual Average | 727 | 808 | 930 | 1074 | 1221 |

BASE POPULATION (2/1/82) = 665

| | MONTH | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1 (1982) | 687 | 695 | 704 | 709 | 728 | 746 | 757 | 751 | 752 | 744 | 737 | 719 |
| 2 (1983) | 774 | 763 | 780 | 813 | 809 | 810 | 805 | 808 | 832 | 827 | 845 | 830 |
| 3 (1984) | 897 | 922 | 933 | 922 | 930 | 932 | 933 | 921 | 946 | 936 | 964 | 934 |
| 4 (1985) | 1005 | 1025 | 1037 | 1052 | 1072 | 1063 | 1093 | 1089 | 1090 | 1141 | 1137 | 1088 |
| 5 (1986) | 1167 | 1180 | 1187 | 1220 | 1261 | 1270 | 1249 | 1208 | 1205 | 1218 | 1267 | 1227 |

Each of the above tables has two components. The first, at the top, provides a summary of the projected prison population count for each of the next five years. The second section, at the bottom, indicates the projected population count for each of the next sixty months.

Table II, which incorporates a no growth adjustment for 1980 felony dispositions, essentially replicates the number of felony offense convictions and sentences rendered in 1980 for each of the next five years. This projection model results in an anticipated change of -1 bed between month 1 (n=667) and month 60 (n=676). The lowest monthly count is 672 and the highest 738 for a range of only 66 beds. Finally, the maximum number of additional beds required over the February, 1982 inmate base population of 665 would be 73 (the highest month, n=738 less the base of n=665).

This projection model is very significant in revealing that were 1980 felony disposition and sentences replicated for each of the next five years, anticipated prison populations would have largely been stabilized. The significance of this fact will be more fully discussed, infra.

Models #3 and #4 each adjust for a 1982 growth of 20% over and above 1980 cases and provide for further and continuous growth of 5% and 10% per annum thereafter, respectively. They are intended to represent the most likely empirically-based projections of current felony disposition and

sentencing patterns on future jail populations. Model #3 reveals an increase of 179 beds between month 1 (n=687) and month 60 (n=866) and a fluctuation of 236 beds between the lowest monthly count (n=687) and the highest (n=923). A maximum of 923 beds would be required over the next sixty months, 258 more than the February, 1982 inmate base of 665. Model #4 results in an increase of 285 beds between months 1 and 60, a fluctuation of 337 beds between the lowest and highest months and a maximum of 359 beds over the 1982 inmate base.

Table VII, below, summarizes the net growth differentials projected by each of the five models based upon annual average population counts. This table also indicates the number and percentage increase in populations anticipated between year 1 and year 5 as well as that between the 1982 inmate base population and year 5.

TABLE VII

COMPARISON OF ANNUAL AVERAGE
PRISON POPULATION COUNTS FOR
FIVE PROJECTION MODELS BASED ON
1980 FELONY DISPOSITIONS

| | Model | | | | |
|---|---|---|---|---|---|
| YEAR | #1 (no growth) | #2 (20%; 0%) | #3 (20%; 5%) | #4 (20%; 10%) | #5 (20%; 20%) |
| 1/(1982) | 693 | 727 | 727 | 727 | 727 |
| 2/(1983) | 702 | 768 | 778 | 788 | 808 |
| 3/(1984) | 717 | 800 | 831 | 863 | 930 |
| 4/(1985) | 720 | 814 | 873 | 935 | 1074 |
| 5/(1986) | 703 | 802 | 890 | 989 | 1221 |
| Count Increase Between Year 1 and Year 5 | 10 | 75 | 163 | 262 | 494 |
| % Increase Between Year 1 and Year 5 | 1% | 10% | 22% | 36% | 68% |
| Count Increase Between 2/1/82 Base Population and Year 5 | 38 | 137 | 225 | 324 | 556 |
| % Increase Between 2/1/82 Base Population and Year 5 | 6% | 21% | 34% | 49% | 84% |

The projected increases among the sentenced felon prison population range from 38 additional beds (model #1) to 556 additional beds (model #5) over the next five years. As noted earlier, models #3 and #4, which project increases of 225 and 324 additional beds, respectively, over the 1982 inmate base provide the most likely current estimate of our prisons' future needs.

Finally, in discussing model #1, above, we noted that the sentenced felon population results in a largely stabilized population when 1980 felony dispositions and sentences are not adjusted for growth. This finding strongly discounts the theory that the recent (1980-1981) increase in prison populations was a result of Alaska's new criminal code or anything particularly unique regarding 1980 offenses or sentencing patterns. As this analysis reveals, replication of felony offense convictions and sentences rendered during the first year of Alaska's new criminal code (1980) does not result in continued population increases. In fact, it would require a phenomenon nearly equivalent to that represented in model #5 (conviction growth rate of 20% per annum) to equal the magnitude of the inmate population increase experienced by the Division of Corrections between January, 1978 and January, 1982.

On the basis of the prison population dynamics explicated in this analysis and review of the Judicial Council's past studies of felony sentencing patterns, we believe the increases experienced by the Division of

Corrections were the result of unusually high felony sentences rendered during the 1977-1978 period as documented in the Judicial Council's most recent report of sentencing practices, Alaska Felony Sentences: 1976-1979. According to this hypothesis, it is most likely that the dramatic population increase experienced in 1980-1981 was a function of fewer monthly releases from prison during this period--due to the sentencing practices of 1976-1977--rather than the number of new (1980-1981) monthly admissions.

## III. PROJECTION MODELS ESTIMATING THE IMPACT OF HB 293--EXTENDING PRESUMPTIVE SENTENCING TO FELONY FIRST OFFENDERS--ON ALASKA'S PRISON POPULATION

This section of our projection analysis concerns an estimation of the impact of House Bill 293 on future sentenced felon prison populations. Despite the fact that Alaska's Twelfth Legislature has now adjourned, this analysis is included due to the considerable interest given to this bill and the likelihood that it will be considered in future legislative sessions.

In summary, HB 293 would extend presumptive sentencing to all (including first) felony offenders, with graduated presumptive terms of incarceration within all classes of offense according to the number and recency of prior felony convictions. In addition, the bill would increase the maximum "good time" award from 25% to 33% of the total sentence while effectively eliminating parole decisions, and institute a furlough program that would result in an additional 50% (maximum) reduction in sentence length for periods served while on the program.

The presumptive terms of incarceration prescribed by the bill are represented in the following chart.

PRESUMPTIVE SENTENCES
UNDER HB 293
(In Months)

| Class of Offense: | First Felony Offense | Second Felony Offense | Third Felony Offense |
|---|---|---|---|
| "A" Felony | 60/70* | 100 | 180 |
| "B" Felony | 24 | 48 | 72 |
| "C" Felony | 12 | 24 | 36 |

* Applies to first offenders convicted of a Class A felony who used a weapon or caused serious injury.

Extending presumptive sentencing to felony first offenders is by far the most significant aspect of HB 293, since, according to Judicial Council studies of felony sentencing patterns, over 60% of all offenders are within the bill's definition of first offender. Accordingly, it is this aspect of the bill that this analysis models.

On the basis of both prior criminal history information contained in the Judicial Council's 1980 felony sentencing data and the empirical outcomes of presumptively sentenced (repeat) offenders for 1980 offenses, we estimated the number of offenders that would be subject to first-offense and second-offense presumptive terms for each class of felony had they been sentenced under the auspices of HB 293. A number of limitations in this model must be noted, however. We were unable to reliably determine or calculate an estimate of the number of offenders who would be subject to third-offense presumptive terms, owing largely to the very few number of cases thus sentenced in 1980. It is anticipated, however, that third-offense presumptive terms will become more frequent over time, resulting in longer sentences and additional burdens on Alaska's correctional resources. In addition, offenders convicted of drug offenses are not modeled according to this presumptive sentencing scheme. For purposes of this analysis drug offenses are modeled according to the dispositions and sentences rendered in 1980. A projection adjustment model estimating the further impact of Alaska's new drug laws is provided in Section IV of this report.

Despite the fact that a majority of presumptively sentenced 1980 offenders received a sentence other than the specific presumptive term--i.e., they were aggravated above or mitigated below the presumtpive sentence--all offenders in these models, with the exception of "C" felony first offenders, were assigned exactly the presumptive term applicable to them. This approach results in a reasonably conservative projected impact of presumptive sentencing on prison populations. Finally, in an effort to capture newly proposed mitigating factors applicable to first offenders, nearly half (45%) of the first offenders convicted of a class "C" felony were modeled as having their sentences totally mitigated--i.e., to straight probation.

As a parallel to the projection analysis discussed in Section II of this report, the maximum good time allowance under HB 293, 33%, was used to adjust all presumptively sentenced offenders' sentences.

The following tables provide five projection models estimating the impact of HB 293 on Alaska's sentenced felon prison population. All models rely upon the same February, 1982, inmate base population of n=665 used in Section II. Model #6 makes no allowance for a conviction growth rate. Models #7 through #10 each begin with a 20% conviction increase adjustment for year 1 (1982), followed by per annum growth increases of 0%, 5%, 10% and 20%, respectively, for the second through fifth years.

## TABLE VIII - Model #6

PROJECTED SENTENCED FELONY PRISON POPULATION COUNTS (MODEL OF HB293--NO GROWTH)

| | Year | | | | |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| 12th Month | 768 | 769 | 765 | 762 | 768 |
| Lowest Month | 686 | 769 | 765 | 762 | 752 |
| Highest Month | 801 | 814 | 822 | 802 | 794 |
| Annual Average | 759 | 795 | 804 | 782 | 771 |

BASE POPULATION (2/1/81) = 665

| | Month | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1 | 686 | 704 | 721 | 728 | 759 | 778 | 793 | 801 | 796 | 791 | 783 | 768 |
| 2 | 803 | 799 | 806 | 814 | 813 | 799 | 796 | 792 | 787 | 784 | 788 | 769 |
| 3 | 802 | 817 | 816 | 822 | 817 | 819 | 811 | 811 | 798 | 782 | 789 | 765 |
| 4 | 786 | 791 | 786 | 786 | 784 | 767 | 777 | 776 | 781 | 802 | 790 | 762 |
| 5 | 783 | 786 | 777 | 766 | 766 | 752 | 764 | 766 | 760 | 772 | 794 | 768 |

## TABLE IX - MODEL #7

PROJECTED SENTENCED FELONY PRISON
POPULATION COUNTS
(MODEL OF HB293--20% GROWTH YEAR 1; 0% THEREAFTER)

| | Year | | | | |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| 12th Month | 834 | 857 | 864 | 869 | 882 |
| Lowest Month | 698 | 857 | 864 | 869 | 861 |
| Highest Month | 861 | 897 | 923 | 915 | 913 |
| Annual Average | 806 | 879 | 904 | 888 | 883 |

BASE POPULATION (2/1/81) = 665

| | Month | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1 | 698 | 724 | 749 | 762 | 802 | 827 | 848 | 861 | 860 | 856 | 851 | 834 |
| 2 | 877 | 875 | 886 | 897 | 897 | 885 | 882 | 879 | 874 | 871 | 878 | 857 |
| 3 | 896 | 915 | 915 | 923 | 918 | 923 | 914 | 915 | 900 | 882 | 890 | 864 |
| 4 | 889 | 895 | 890 | 891 | 889 | 872 | 884 | 883 | 889 | 915 | 901 | 869 |
| 5 | 894 | 898 | 888 | 878 | 876 | 861 | 876 | 878 | 871 | 886 | 913 | 882 |

## TABLE X - MODEL #8

PROJECTED SENTENCED FELONY PRISON
POPULATION COUNTS
(MODEL OF HB293--20% GROWTH FIRST YEAR 1; 5% THEREAFTER)

| | Year | | | | |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| 12th Month | 834 | 877 | 910 | 949 | 1000 |
| Lowest Month | 698 | 877 | 910 | 942 | 964 |
| Highest Month | 861 | 908 | 967 | 1000 | 1036 |
| Annual Average | 806 | 893 | 946 | 960 | 988 |

BASE POPULATION (2/1/81) = 665

| | Month | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1 | 698 | 724 | 749 | 762 | 802 | 827 | 848 | 861 | 860 | 856 | 851 | 834 |
| 2 | 881 | 880 | 893 | 907 | 908 | 899 | 898 | 896 | 893 | 890 | 899 | 877 |
| 3 | 924 | 947 | 951 | 961 | 959 | 967 | 959 | 962 | 947 | 928 | 939 | 910 |
| 4 | 924 | 954 | 953 | 957 | 958 | 942 | 958 | 959 | 968 | 1000 | 984 | 949 |
| 5 | 984 | 992 | 983 | 975 | 977 | 964 | 984 | 988 | 982 | 1002 | 1036 | 1000 |

## TABLE XI - MODEL #9

PROJECTED SENTENCED FELONY PRISON
POPULATION COUNTS
(MODEL OF HB293--20% GROWTH FIRST YEAR 1; 10% THEREAFTER)

| | Year | | | | |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| 12th Month | 834 | 897 | 959 | 1036 | 1135 |
| Lowest Month | 698 | 885 | 952 | 1002 | 1080 |
| Highest Month | 861 | 920 | 1012 | 1092 | 1175 |
| Annual Average | 806 | 907 | 989 | 1037 | 1107 |

BASE POPULATION (2/1/81) = 665

| | Month | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1 | 698 | 724 | 749 | 762 | 802 | 827 | 848 | 861 | 860 | 856 | 851 | 834 |
| 2 | 885 | 886 | 901 | 917 | 920 | 913 | 914 | 913 | 911 | 909 | 919 | 898 |
| 3 | 952 | 980 | 988 | 999 | 1001 | 1012 | 1006 | 1011 | 996 | 976 | 989 | 959 |
| 4 | 1002 | 1017 | 1019 | 1027 | 1032 | 1017 | 1038 | 1042 | 1054 | 1092 | 1074 | 1036 |
| 5 | 1083 | 1097 | 1089 | 1082 | 1089 | 1080 | 1105 | 1113 | 1107 | 1133 | 1175 | 1135 |

## TABLE XII - MODEL #10

PROJECTED SENTENCED FELONY PRISON POPULATION COUNTS
(MODEL OF HB293--20% GROWTH EACH YEAR)

| | Year | | | | |
|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 |
| 12th Month | 834 | 937 | 1063 | 1223 | 1458 |
| Lowest Month | 698 | 893 | 1009 | 1127 | 1309 |
| Highest Month | 861 | 960 | 1114 | 1298 | 1509 |
| Annual Average | 806 | 934 | 1079 | 1208 | 1386 |

BASE POPULATION (2/1/81) = 665

| | Month | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Year | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| 1 | 698 | 724 | 749 | 762 | 802 | 827 | 848 | 861 | 860 | 856 | 851 | 834 |
| 2 | 893 | 897 | 917 | 937 | 944 | 941 | 946 | 948 | 948 | 947 | 960 | 937 |
| 3 | 1009 | 1049 | 1064 | 1080 | 1088 | 1107 | 1104 | 1114 | 1099 | 1077 | 1095 | 1063 |
| 4 | 1127 | 1154 | 1166 | 1182 | 1195 | 1184 | 1217 | 1226 | 1246 | 1298 | 1278 | 1233 |
| 5 | 1309 | 1337 | 1334 | 1334 | 1354 | 1353 | 1393 | 1408 | 1405 | 1446 | 1509 | 1458 |

According to the projections in model #6 (Table VIII), which provide for no growth in convictions over and above those rendered in 1980, HB 293 would result in little growth over a five year period. The anticipated increase between month 1 (n=686) and month 60 (n=768) is 82 beds, while the range between the lowest month (n=686) and the highest month (n=822) is 136 inmate beds. Finally, the difference between the February, 1982 inmate base population (n=665) and the highest month (in year 3 of the model) reveals a net increase of 157 beds.

As noted in Section II, we believe the models anticipating 20% growth in convictions in year 1 followed by 5% or 10% per annum growth thereafter provide the most likely empirically-based projections for future population changes. In this section these models include #8 and #9, respectively. Model #8 reveals an increase of 302 beds between months 1 and 60, a range of 338 between the highest and lowest months and a net increase of 371 inmate beds between the 1982 inmate base population and the model's highest month. Model #9 results in a 437 bed increase between months 1 and 60, a range of 409 beds between the lowest and highest months and a net increase of 442 inmate beds between the 1982 inmate base population and the model's highest month.

Table XIII, below, summarizes and compares the annual average population counts for models #6 through #10. It

further reflects the number of additional beds and resulting percentage increases of each model between years 1 and 5, and the 1982 inmate base and year 5.

TABLE XIII

COMPARISON OF ANNUAL AVERAGE
PRISON POPULATION COUNTS FOR
FIVE GROWTH VARIATIONS OF
HB293 MODELS
(BASE POPULATION (2/1/82) = 665)

| | Model Variation (Growth) | | | | |
|---|---|---|---|---|---|
| YEAR | No Growth | 20%; 0% | 20%; 5% | 20%; 10% | 20%; 20% |
| 1 | 759 | 806 | 806 | 806 | 806 |
| 2 | 795 | 879 | 893 | 907 | 934 |
| 3 | 804 | 904 | 946 | 989 | 1079 |
| 4 | 782 | 888 | 960 | 1037 | 1208 |
| 5 | 771 | 883 | 988 | 1107 | 1386 |
| Count Increase Between Year 1 and Year 5 | 12 | 77 | 182 | 301 | 580 |
| % Increase Between Year 1 and Year 5 | 2% | 10% | 23% | 37% | 72% |
| Count Increase Between 2/1/82 Base Population and Year 5 | 106 | 218 | 323 | 442 | 721 |
| % Increase Between 2/1/82 Base Population and Year 5 | 16% | 33% | 49% | 66% | 108% |

The projected increases for the sentenced felon prison population, using the HB 293 model, range from 106 to 721 additional beds over five years depending upon the level of growth in convictions. It is interesting to note, in conclusion, that each of these models of HB 293 result in increases of approximately 100 beds more over the five year projection period than those based strictly on 1980 outcomes (Section II). Table XIV below, summarizes the net increases in bed space anticipated for models #3 and #4 based on 1980 convictions and models #8 and #9 based on HB 293, those identified as the most likely future projection models.

TABLE XIV

COMPARISON OF FIVE YEAR OUTCOMES
FOR 1980 AND HB 293
SENTENCED FELON PRISON
POPULATION MODELS

(For models involving growth of 20%; 5% thereafter
and 20% year 1; 10% thereafter)

| | Fifty Year Increase In Beds Over 1982 Inmate Base Population | Fifth Year Proportionate Increase Over 1982 Inmate Base Population |
|---|---|---|
| 1980 Models: | | |
| #3 (20%; 5%) | 225 | 34% |
| #4 (20%; 10%) | 324 | 49% |
| HB 293 Models: | | |
| #8 (20%; 5%) | 323 | 49% |
| #9 (20%; 10%) | 442 | 66% |

# IV. ESTIMATING THE IMPACT OF ALASKA'S NEW DRUG LAWS ON PROJECTION MODELS OF SENTENCED FELON PRISON POPULATION

The purpose of this analysis is to provide an estimate of the contribution of recently enacted drug legislation on the projection models discussed in Sections II and III of this report.

Drug offenses under the new legislation are brought within the scheme adopted by Alaska's new criminal code (effective in 1980), and are classified according to degrees of "Misconduct Including a Controlled Substance" (first through seventh degree). Of considerable importance for the prison population projection analysis, presumptive sentencing is effective with the new criminal code, and applies to felony drug offenses under the new law.

Drug offenses committed in 1980 were modeled in two different ways for this analysis--one for consideration of the new law's impact on the 1980 models (#1 through #5) and one for consideration of its impact on the HB 293 models (#6 through #10).

Insofar as the overwhelming number of drug offenders are first offenders under the definition of Alaska's new criminal code, modeling their sentences under HB 293 is rather

straightforward. In estimating the new law's impact on the five HB 293 models, all offenders, with the exception of some class "C" and "B" first offenders, were assigned exactly the presumptive term applicable to them. Nearly half (45%) of those offenders who would have been convicted of their first class "C" felony and roughly 15% of those convicted of their first class "B" felony were modeled as having their sentences totally mitigated (straight probation). This follows the same analytical logic used in calculating the HB 293 models discussed in Section III.

Modeling drug offense outcomes for the 1980 projection models was more difficult. While it is generally agreed that the new drug law will result in less straight-probation and stiffer penalties than those handed down in the past, estimating such outcomes for first offenders (who, without HB 293 are not subject to presumptive sentencing) is less than a precise science. For purposes of this model, offenders' sentences were assigned by taking the mean of aggregate groups based upon the class of offense, prior criminal history and type and amount of substance. In addition, first offenders who received a probationary sentence in 1980 were assigned probationary sentences.

Before discussing the estimated contribution of the new law to the ten projection models one very important caveat should be noted. The number and type of drug offenders modeled for the projection analysis is based upon those convicted for

1980 offenses under Alaska's old drug laws. Since the new law recriminalizes marijuana, these (new) offenses are necessarily disproportionately underrepresented in the 1980 data base. Accordingly, but contingent upon the future policies of law enforcement agencies and the Department of Law, the effect of such cases on prison populations cannot be ascertained at this time.

Tables XV and XVI, below, summarize the estimated contribution of the new drug law on the ten models included in this report. Table XV reflects the estimated contribution (in numbers of beds) to the annual averages for each of the five 1980 projection models, while Table XVI replicates the analysis for the five HB 293 projection models.

As would be anticipated, the estimated impact of the new law is greater under the HB 293 models than under the 1980 models. The impact upon annual average HB 293 counts is usually around 7% while the impact upon 1980 models averages around 4%.

TABLE XV

ESTIMATE CONTRIBUTION TO SENTENCED
FELON PRISON POPULATION COUNTS
FOR NEW DRUG LEGISLATION ON
1980 MODELS

| | Model | | | | |
|---|---|---|---|---|---|
| YEAR | #1 (no growth) | #2 (20%; 0%) | #3 (20%; 5%) | #4 (20%; 10%) | #5 (20%; 20%) |
| 1 | + 8 | +14 | +14 | +14 | +14 |
| 2 | +24 | +29 | +28 | +30 | +31 |
| 3 | +28 | +37 | +34 | +29 | +45 |
| 4 | +21 | +29 | +26 | +32 | +40 |
| 5 | +27 | +38 | +32 | +44 | +58 |

TABLE XVI

ESTIMATE CONTRIBUTION TO SENTENCED
FELON PRISON POPULATION COUNTS
FOR NEW DRUG LEGISLATION ON
HB293 MODELS

| | Model | | | | |
|---|---|---|---|---|---|
| YEAR | #6 (no growth) | #7 (20%; 0%) | #8 (20%; 5%) | #9 (20%; 10%) | #10 (20%; 20%) |
| 1 | +14 | +17 | +17 | +17 | +17 |
| 2 | +40 | +48 | +49 | +50 | +52 |
| 3 | +39 | +48 | +51 | +54 | +61 |
| 4 | +44 | +53 | +59 | +65 | +82 |
| 5 | +48 | +67 | +69 | +80 | +109 |

## V. CONCLUSION

It is hoped that the projection models incorporated in this report prove to be of assistance in estimating the likely parameters of the future sentenced felon prison population, a group that has proven to be quite unstable in the recent past. While the models are predicated upon many assumptions of future crime and sentencing patterns, they provide a range of alternative outcomes that can be retested as such data becomes available. In addition, these models provide another insight into the sentenced felon population--viz., the likely cause for its sudden population increase over the past two years. It appears very likely that this increase was due more to 1977-1978 sentencing patterns than anything particularly unique regarding 1980-1981 offenses and/or sentences.

Figures I and II provide summary schematic illustrations of the ten projection model estimates included in this report. The estimated impact of Alaska's new drug law has been added to the outcomes represented in these figures.

FIGURE I
PROJECTED SENTENCED FELON PRISON POPULATION COUNTS FOR FIVE YEARS --FIVE MODELS BASED ON 1980 FELONY DISPOSITIONS-- (INCLUDING NEW DRUG LAW)

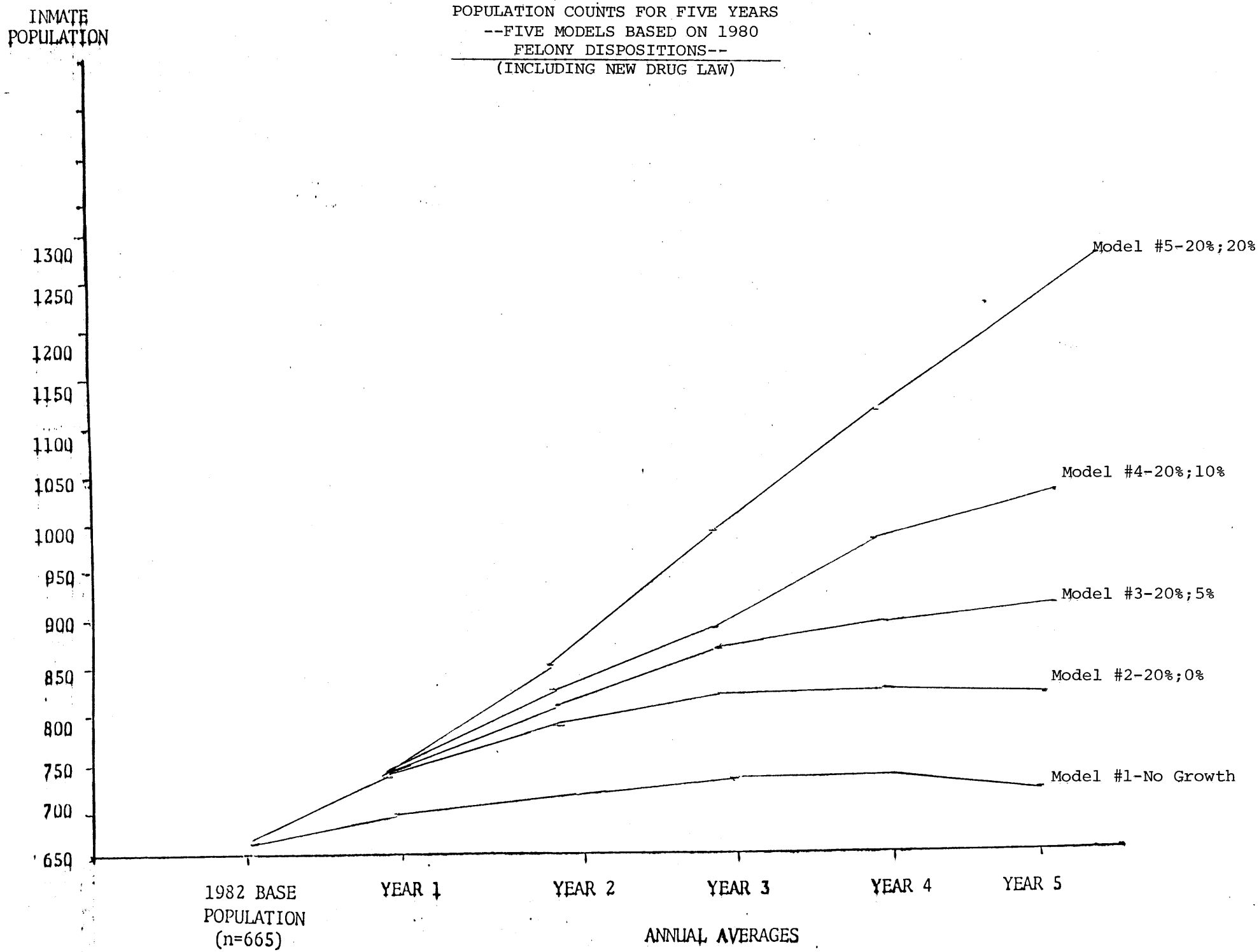
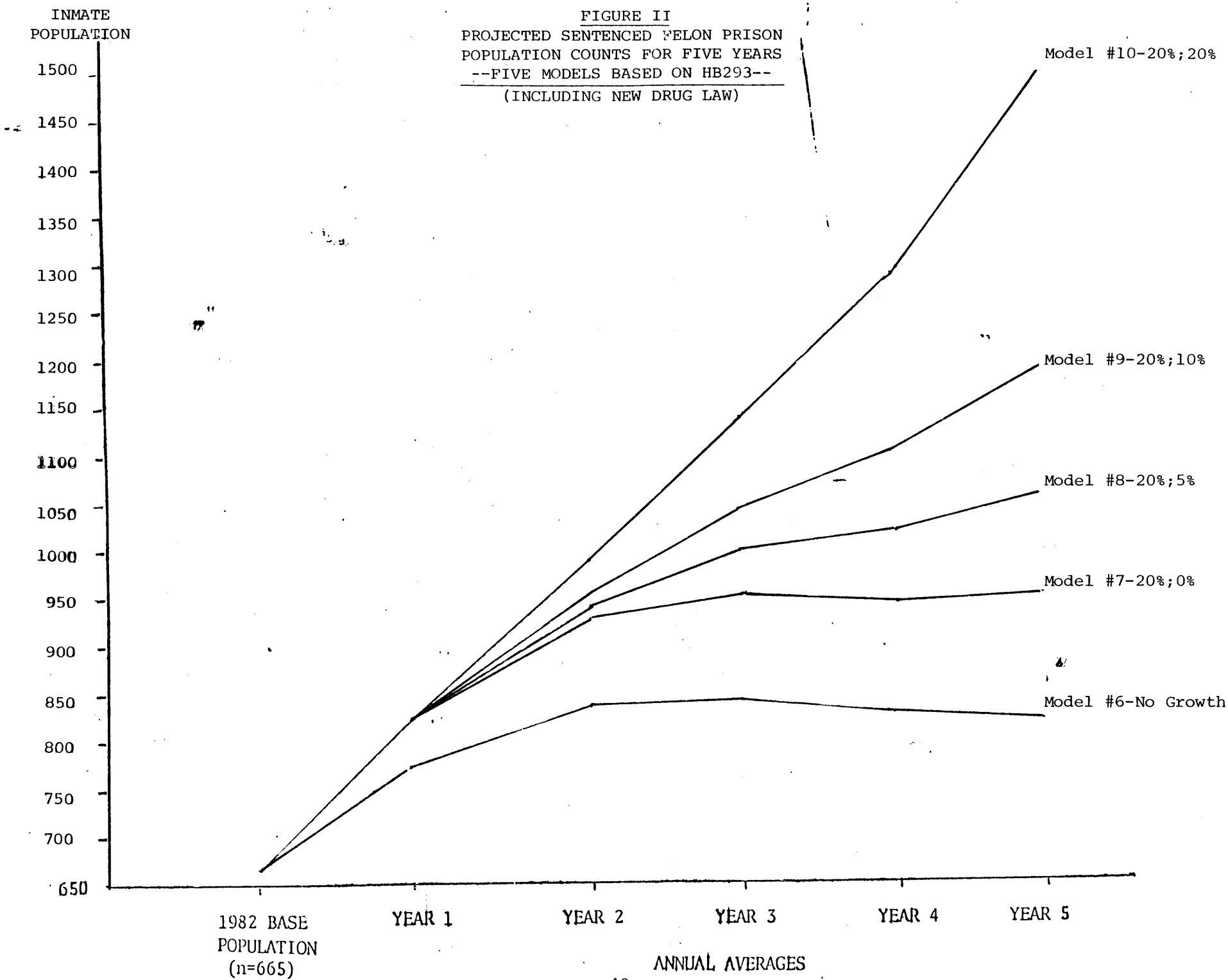


FIGURE II

PROJECTED SENTENCED FELON PRISON POPULATION COUNTS FOR FIVE YEARS --FIVE MODELS BASED ON HB293--

(INCLUDING NEW DRUG LAW)