Yukon Next Generation Hydro and Transmission Viability Study:

Scalability Assessment Report

Submitted By: Midgard Consulting Incorporated

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Executive Summary

The Yukon Development Corporation ("**YDC**") has commissioned Midgard Consulting Incorporated ("**Midgard**") and its team of sub-consultants to complete the *Yukon Next Generation Hydro and Transmission Viability Study.* The study, delivered through a series of technical papers, is intended to help inform the decisions necessary to fill the territory's growing energy gap and to support the Yukon's continued economic growth and development.

In the *Yukon Electrical Energy and Capacity Need Forecast (2035 to 2065)* the Yukon's future electrical energy and electrical capacity needs were estimated based upon expected demand drivers such as population, per capita electrical energy consumption, and industrial (e.g. mining) activity. Consideration was also given to future scenarios that could alter electrical energy and electrical capacity demand such as the impacts of climate change, technological change, and changing electrical energy consumption patterns (e.g. fuel switching from heating oil to electricity for heating homes).

In the *Site Screening Inventory (Parts 1 & 2)*, ten (10) sites were identified that represented the best potential for developing larger than 10MW hydroelectricity in the Yukon Territory over the planning period from 2035 to 2065. Projects were evaluated based upon their ability to meet the Yukon's capacity and energy requirements, environmental impacts, constructability issues, and project economics. Some themes that came out of the Site Screening Inventory (Parts 1 & 2) for the shortlisted sites are that:

1) Historic hydroelectric project designs were sometimes larger than could be utilized in the Yukon,
2) All projects had environmental impacts that required further study,
3) All projects impacted stakeholder and First Nations lands, including both surface and sub-surface rights.

As a result of the themes found in the *Site Screening Inventory (Parts 1 & 2),* the *Scalability Assessment Report* studies ways to match the size and scale of potential hydroelectric projects to the Yukon's forecasted need for electrical energy and capacity while reducing potential impacts. The scalability assessment process is divided into the following steps:

1) Step 0 - Project Scoring Methodology: Determine a method to score the value of the generation output from each project with the goal of encouraging winter energy production.
2) Step 1 – Resizing: Revise project designs on a standalone basis to match their size to satisfy the Yukon's forecasted Baseline electricity needs in 2065.
3) Step 2 – Cascading: Combine projects to see if their footprints can be reduced when compared to standalone projects while still meeting the Yukon's forecasted Baseline electricity needs in 2065.
4) Step 3 – Reconciliation: Compare resized projects and cascaded projects to see which projects have smaller reservoirs.

5) Step 4 – Scalability: Evaluate project designs in terms of a staged build out over time. Because projects sized to meet the Baseline 2065 electricity need are not fully utilized in 2035, the projects are evaluated on the basis of progressively increasing their energy and capacity over time.

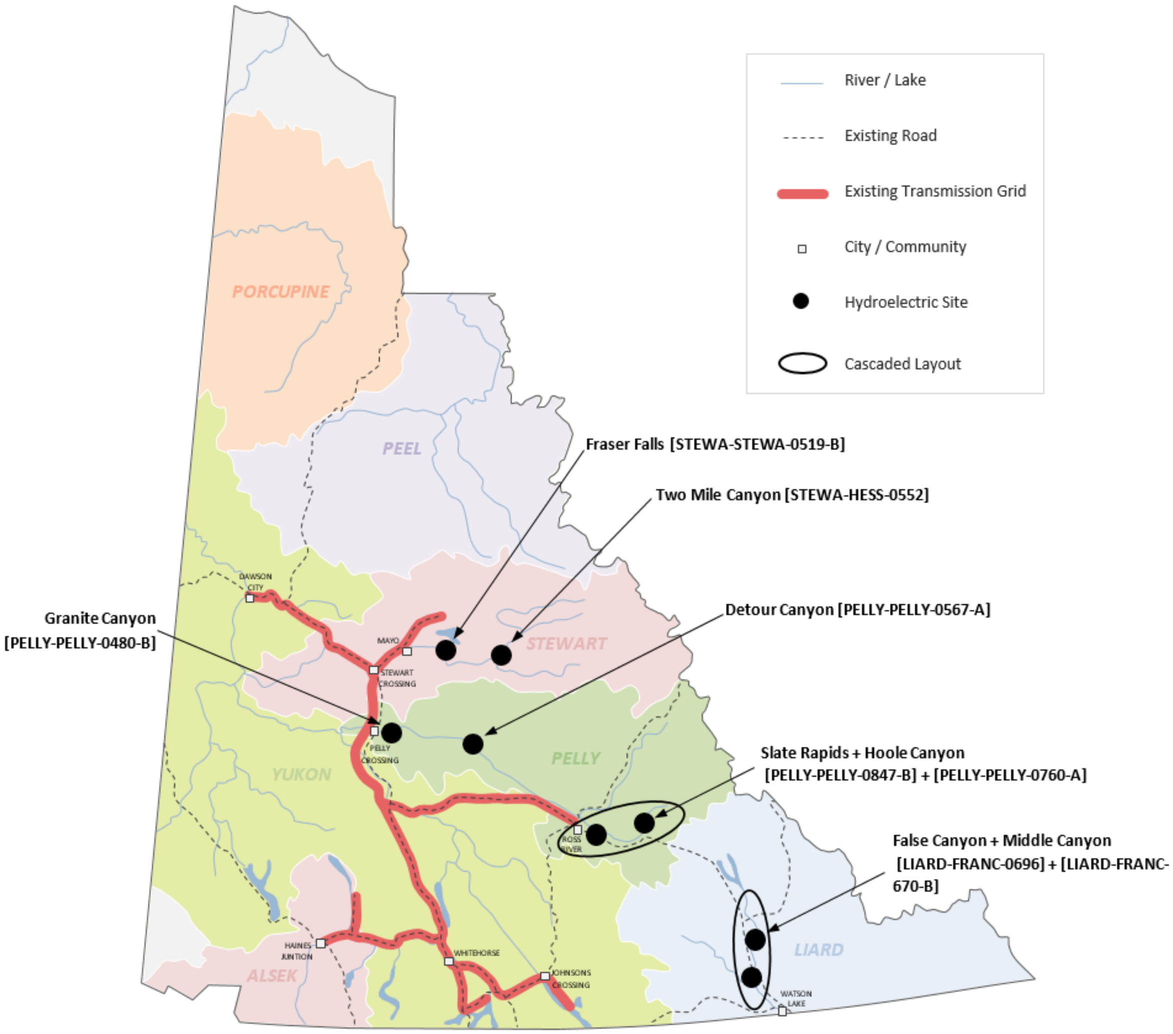
The results from Steps 1 through 3 are summarized in Table 1.

Table 1: Steps 1 through 3 Results

Step	Number of Projects	Maximum Incremental Reservoir Footprint	Maximum Total Reservoir Footprint
Step 1: Resizing	10 → 5 (Standalone)	575 km^2 → 311 km^2	575 km^2 → 332 km^2
Step 2: Cascading	5 (Standalone) → 7 (Standalone & Cascaded)	311 km^2	332 km^2
Step 3: Reconciliation	7 → 6 (Standalone & Cascaded)	311 km^2	332 km^2 → 311 km^2

The six (6) sites of interest shortlisted at the end of Step 3 are mapped on Figure 1.

Figure 1: Scalability Short List Map



The shortlisted project reservoir footprints and Gap Closures are shown in Table 2.

Table 2: Scalability Short List

Site Name	Site ID	Existing Lake Area[1]	Incremental Reservoir Footprint	Total Reservoir Footprint	Gap Closure
Detour Canyon	PELLY-PELLY-0567-B	0 km^2	130 km^2	130 km^2	100%
Fraser Falls	STEWA-STEWA-0519-B	0 km^2	311 km^2	311 km^2	100%
Granite Canyon	PELLY-PELLY-0480-B	0 km^2	173 km^2	173 km^2	100%
Two Mile Canyon	STEWA-HESS -0552	0 km^2	101 km^2	101 km^2	97%
False Canyon + Middle Canyon Run of River (ROR)	LIARD-FRANC-0696 + LIARD-FRANC-0670-B	109 km^2	154 km^2	263 km^2	100%
Slate Rapids + Hoole Canyon ROR	PELLY-PELLY-0847-B + PELLY-PELLY-0760-A	37 km^2	154 km^2	191 km^2	100%

Step 4, the last step of the scalability assessment process, discusses strategies to build out the projects over time so that their energy and capacity better matches the Yukon's growing needs from 2035 to 2065.

Two general scalability strategies are described:

1) Standalone layouts: build the project at its full dam and reservoir size to meet the Baseline 2065 energy demand but add generating units as required over time
2) Cascaded layouts: build the upstream project in a cascade first, and then add generating units until the upstream project reaches its maximum size. After the upstream project reaches its maximum size, then build the downstream project last at its maximum (i.e. 2065) size.

For the scalability assessment, environmental impact considerations were limited to minimizing the reservoir footprints. It is important to state that no detailed consideration was given to environmental and socio-economic impacts, surface and subsurface tenure issues, design, engineering, constructability planning, and the overall economics of a major capital project as part of this report. These critical considerations will be studied in future technical papers:

1) *Project Costs per Hydro Development Phase*, and
2) *Positive and Negative Socio-Economic and Environmental Effects*.

[1] Existing lake areas do not include river beds.

At the end of the Scalability Report the following projects are proposed along with their associated build out timelines as shown in Table 3.

Table 3: Scalability Build Out Timelines

Project Name and Site ID	Build Out Timeline				
Detour Canyon [PELLY-PELLY-0567-B]	2035: First 2 turbines installed	2045	2050: 3rd Turbine Added	2055	2060
Fraser Falls [STEWA-STEWA-0519-B]	2035: First 2 turbines installed	2045	2050: 3rd Turbine Added	2055	2060
Granite Canyon [PELLY-PELLY-0480-B]	2035: First 2 turbines installed	2045	2050: 3rd Turbine Added	2055	2060
Two Mile Canyon [STEWA-HESS -0552]	2035: First 2 turbines installed	2045: 3rd Turbine Added	2050	2055	2060
False Canyon + Middle Canyon ROR [LIARD-FRANC-0696 + LIARD-FRANC-0670-B]	2035: Upstream Project Operation with 2 Turbines	2045	2050: 3rd Turbine Added	2055	2060: ROR Operation
Slate Rapids + Hoole Canyon ROR [PELLY-PELLY-0847-B + PELLY-PELLY-0760-A]	2035: Upstream Project Operation with 2 Turbines	2045	2050: ROR Operation	2055	2060

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ADL	Average Drawdown Level
ASL	Above Sea Level
FSL	Full Supply Level
GWh	Gigawatt Hour
IFR	Instream Flow Requirement
MAD	Mean Average Daily Flow
MW	Megawatt
ROR	Run of River
TWL	Tail Water Level

1 Introduction

The Yukon Development Corporation ("**YDC**") has commissioned Midgard Consulting Incorporated ("**Midgard**") and its team of sub-consultants to complete the *Yukon Next Generation Hydro and Transmission Viability Study*. The study, delivered through a series of technical papers, is intended to help inform the decisions necessary to fill the territory's growing energy gap and to support the Yukon's continued economic growth and development.

In the previously released *Yukon Electrical Energy and Capacity Need Forecast (2035 to 2065)* the Yukon's future electrical energy and electrical capacity needs were estimated based upon expected demand drivers such as Yukon population, per capita electrical energy consumption, and industrial (e.g. mining) activity. Consideration was also given to future scenarios that could alter electrical energy and electrical capacity demand such as the impacts of climate change, technological change, and changing electrical energy consumption patterns (e.g. fuel switching from heating oil to electricity for heating homes).

In the *Site Screening Inventory (Parts 1 & 2)*, ten (10) sites were identified that represented the best potential for developing larger than 10MW hydroelectric projects in the Yukon Territory over the planning period from 2035 to 2065. Projects were evaluated based upon their ability to meet the Yukon's capacity and energy requirements, environmental impacts, constructability issues, and project economics. Some themes that came out of the *Site Screening Inventory (Parts 1 & 2)* for the shortlisted sites are that:

1) Historic hydroelectric project designs were sometimes larger than could be utilized in the Yukon,
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As a result of the themes found in the *Site Screening Inventory (Parts 1 & 2)*, the *Scalability Assessment Report* studies ways to better match the size and scale of potential hydroelectric projects to the Yukon's forecasted need for electrical energy and capacity while reducing potential impacts. The scalability assessment process is divided into the following steps:

1) Step 0 - Project Scoring Methodology: Determine a method to score the value of the generation output from each project with the goal of encouraging winter energy production.
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1.1 Assessment Team

The assessment team for the *Yukon Next Generation Hydro and Transmission Viability Study* consists of the following industry experts:

1) *Midgard Consulting Incorporated ("**Midgard**")* - Midgard provides consulting services to the electrical power and utility industry. Midgard is the lead consultant for the *Yukon Next Generation Hydro and Transmission Viability Study*, with specific components of the assignment sub-contracted to other leading industry experts.

2) *SLR Consulting Global Environmental Solutions ("**SLR**")* - SLR is part of a multi-disciplinary consultancy providing worldwide environmental sciences, engineering, and socio-economic expertise and high-value advisory services.

3) *Hatfield Consultants* (***"Hatfield"***) – Hatfield's core expertise is environmental monitoring and assessment, particularly the design and deployment of environmental evaluation and monitoring programs for aquatic environments. In addition, services include environmental impact assessments, GIS applications, environmental information systems, aquatic ecology, and biodiversity assessments.

4) *J.D. Mollard and Associates (2010) Limited ("**JDMA**")* - JDMA has experience reaching back to 1956 and has carried out upwards of 5000 consulting assignments for governments, academia, and private industry, across Canada and around the world. JDMA has a long tradition of excellence in applied civil and geological engineering, geology, hydrogeology, geography, biology, remote sensing, terrain analysis, and environmental studies.

5) *Yukon Peer Review Panel ("**YPRP**")* - The YPRP is an internal review panel that is comprised of four senior and respected Yukoners that provide oversight, feedback, and advice at all stages of the project. The four members of the YPRP ensure that a strong Yukon voice, knowledge, and experience is brought to the project from the perspective of long term residents who collectively have over 130 years of experience living in the Yukon Territory.

1.2 Overall Scalability Assessment Process

The *Scalability Assessment Report* studies the findings from the *Site Screening Inventory* and the *Electrical Energy and Capacity Need Forecast* papers to evaluate the scalability potential of the Yukon.

The scalability assessment process is divided into the following steps:

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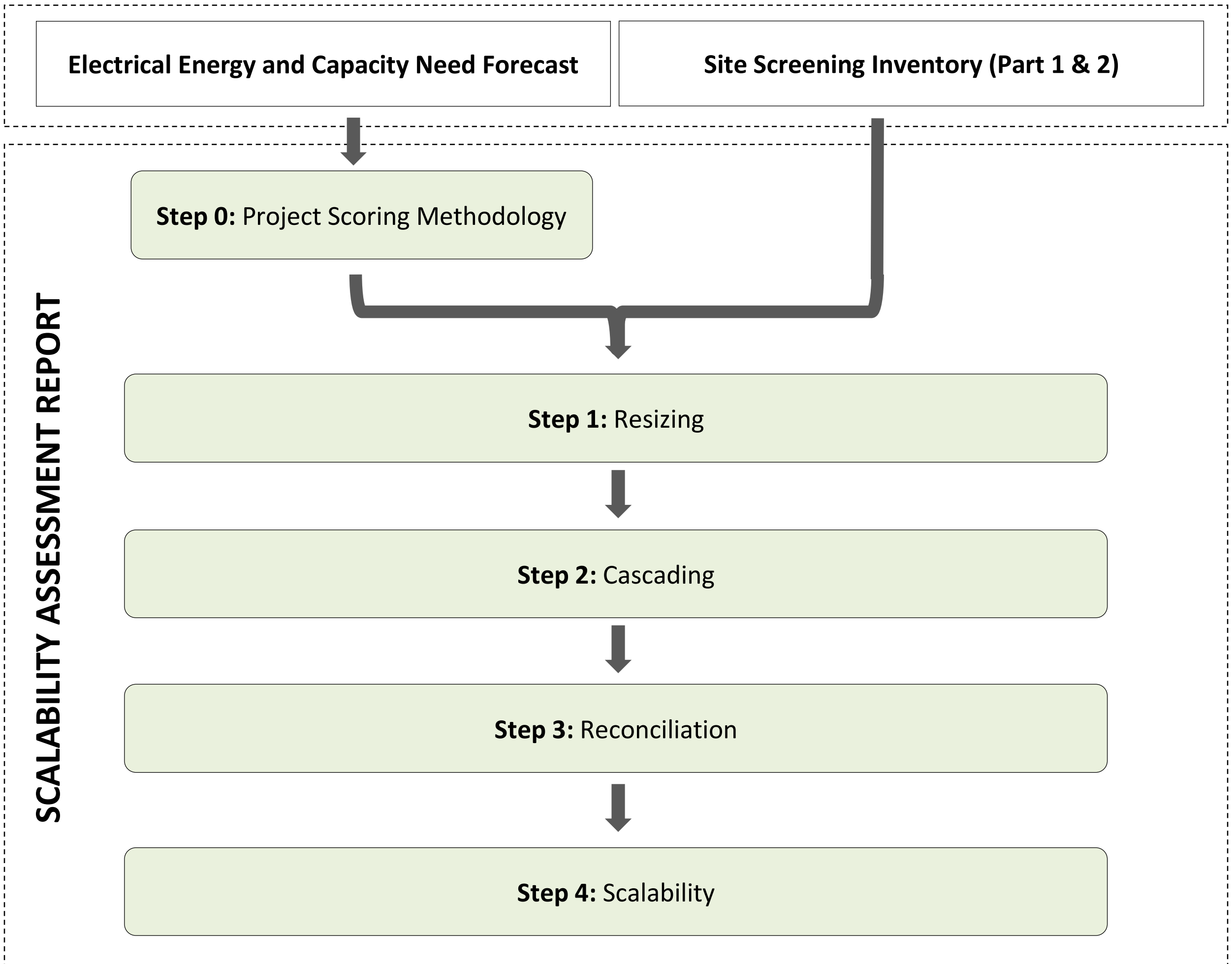
The scalability assessment process is summarized in Figure 2.

Figure 2: Scalability Assessment Process



1.3 Yukon Electrical Energy and Capacity Need Forecast – Summary

The *Yukon Electrical Energy and Capacity Need Forecast* report estimated future needs based upon expected future demand drivers such as Yukon population, per capita electrical energy consumption, and mining activity. Consideration was also given to future scenarios that could alter electrical energy and capacity demand such as the impacts of climate, technological, and electrical energy consumption pattern changes.

Yukon is an islanded grid that must self-supply all its own electrical energy and capacity. The Yukon need for electrical energy and capacity is growing and is expected to continue growing through to the end of 2065 and beyond. As a result, Yukon must meet the monthly electrical energy gaps and capacity gaps for 2035 to 2065 as shown in Table 4.

Table 4: Yukon Energy and Capacity Gaps Forecast (2035 – 2065)

		2035	2045	2055	2065
Low Case Scenario	Capacity	11 MW	17 MW	24 MW	31 MW
	Energy	54 GWh	85 GWh	118 GWh	154 GWh
Baseline Case Scenario	Capacity	21 MW	31 MW	42 MW	53 MW
	Energy	103 GWh	157 GWh	211 GWh	265 GWh
High Case Scenario	Capacity	36 MW	62 MW	95 MW	136 MW
	Energy	180 GWh	311 GWh	476 GWh	682 GWh

1.3.1 Generation Target

For the purposes of the scalability assessment, the Baseline energy and capacity gap was selected as the scenario to evaluate for the window 2035 to 2065. Figure 3 shows the monthly energy gap and Figure 4 shows the annual peak capacity gap for the Baseline scenario. A tabular version of the monthly energy gaps and capacity gaps is found in Appendix A: Forecasted Energy Gaps and Capacity Gaps.

Figure 3: Yukon Baseline Monthly Energy Gap

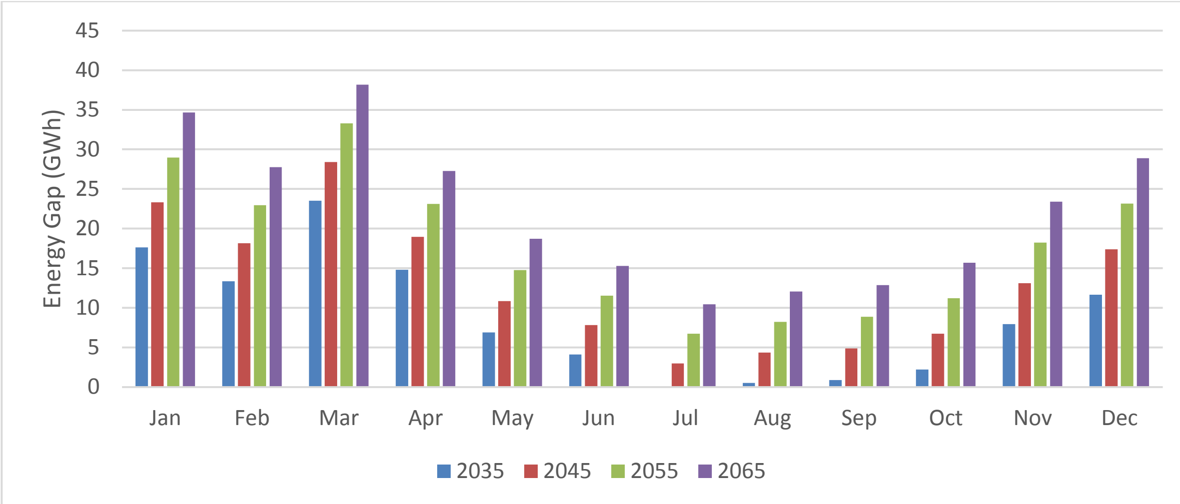
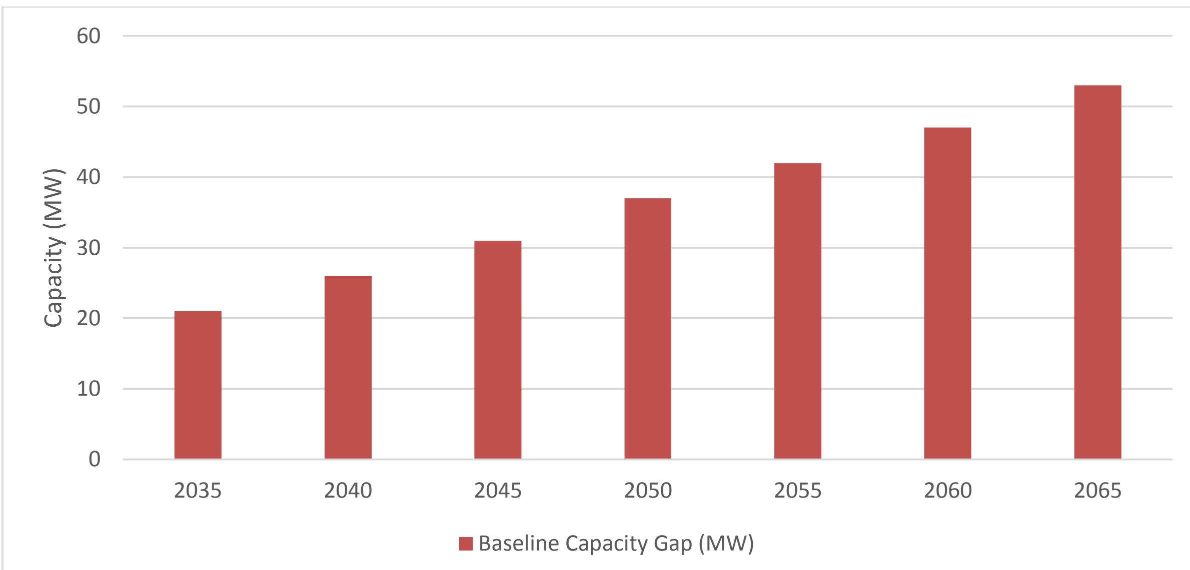


Figure 4: Yukon Baseline Capacity Gap



1.4 Site Screening Inventory (Parts 1 & 2) – Summary

The *Site Screening Inventory (Parts 1 & 2)* narrowed potential hydroelectric projects from 200+ to 10 sites of interest. The screening was divided into two parts:

1) Part 1 – Included reconciliation of known sites, screening for fundamental development barriers, and screening for fundamentally uneconomic sites.
2) Part 2 – Contained a ranking of the projects selected in Part 1, based on: Environmental Considerations, Surface / Subsurface Tenure Considerations, Constructability Considerations, and Economic Considerations. A short list of ten (10) projects were identified for further study.

The ten (10) sites of interest that form the starting point for the scalability assessment are listed in Table 5 and are shown on a map of the Yukon Territory in Figure 5 below.

Table 5: Site Screening Short List

Site Name	Site ID
Detour Canyon + Fortin Lake Dam	PELLY-PELLY-0567-B
False Canyon	LIARD-FRANC-0696
Fraser Falls	STEWA-STEWA-0519-B
Granite Canyon	PELLY-PELLY-0480-B
Hoole Canyon + Fortin Lake Dam	PELLY-PELLY-0760-A
Middle Canyon	LIARD-FRANC-0670-B
NWPI	YUKON-TESLI-0670-A
Slate Rapids	PELLY-PELLY-0847-B
Two Mile Canyon	STEWA-HESS -0552
Upper Canyon	LIARD-FRANC-0730-C

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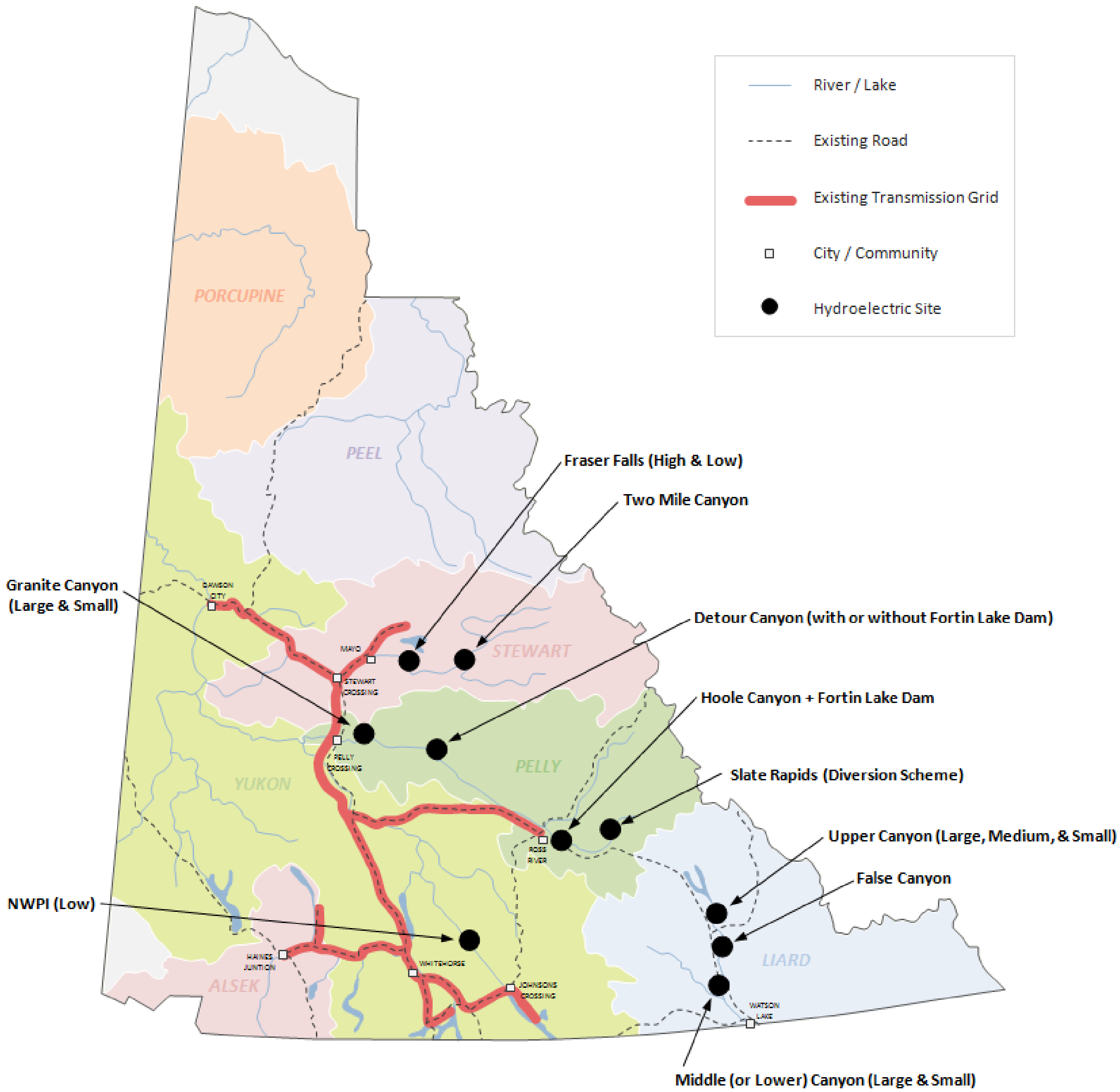
Figure 5: Site Screening Inventory Map



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2 Step 0: Project Scoring Methodology

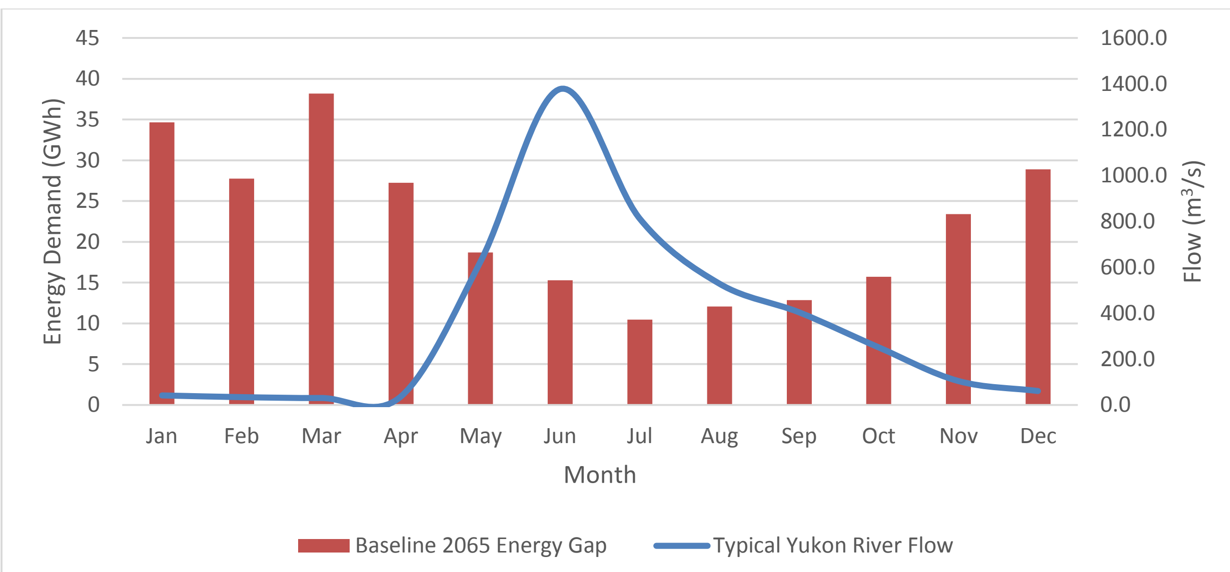
To determine if a generation project meets the Yukon's need for energy and capacity, a scoring methodology must be developed. The scoring methodology developed for the scalability assessment evaluated the projects using two parameters:

1) Gap Closure: Ability to meet the forecasted Yukon Baseline 2065 energy and capacity gap
2) Reservoir Footprint: Minimize the reservoir footprint for each project site.

2.1 Gap Closure

As described in the *Yukon Electrical Energy and Capacity Need Forecast* report, the Yukon's energy gaps are largest in the winter months, specifically from November through April. Unfortunately, the typical river flows (i.e. fuel for hydroelectric generation) in the Yukon have an inverse relationship, with the smallest river flows occurring during the months of greatest demand. This inverse relationship is at the root of the Yukon hydroelectric generation challenge as illustrated in Figure 6.

Figure 6: Yukon 2065 Baseline Monthly Energy Gap and Typical Yukon River Flow[2]



The inverse relationship between Yukon energy demand (i.e. high winter demand) and natural river flows (i.e. low winter flows) results in the need to build water storage reservoirs with sufficient storage so that the water needed to generate electricity during the winter months is available even when natural river flows are low.

[2] The flow pattern from Fraser Falls was used to illustrate the typical flow patterns in the Yukon. The average flows for all projects are shown in Appendix C.3: Synthetic Daily Flows.

2.1.1 Hydroelectric Generation Model

A computational storage model was created to forecast the energy production for the projects and their ability to meet the Baseline 2065 energy demand forecast. A daily energy output target was calculated for each month to meet the energy demand forecast. The modelled project released enough water to meet the energy output target and stored the remaining water for later use. To obtain an appropriate forward looking energy generation estimate, project specific design parameters and operating assumptions and limitations were integrated. The major inputs that play into the storage model are listed below:

1) Daily estimated flow series;[3]
2) Water evaporation;
3) Instream Flow Requirements (IFR);
4) Reservoir storage curves;
5) Average drawdown;
6) Hydraulic head losses;
7) Turbine and generator efficiencies;
8) Transmission and transformer losses;
9) Scheduled and unscheduled outage; and
10) Station usage.

The storage model process is described in Appendix B: Storage Model Process and the storage model inputs are described in further detail in Appendix C: Storage Model Inputs.

2.1.2 Energy Value

Because the Yukon is an electrical island and must self-supply all of its own electrical generation, the value of electricity is not informed by an independent mechanism such as an electricity market in the same way prices can be determined in southern Canada and the United States. As a result, determining the relative value of energy throughout the year in the Yukon must be done using an alternative method. This alternative method must provide a way to place a higher value on generation at times when the need is the greatest (i.e. winter), and a lower value on generation at times when the need is the least (i.e. summer).

For scalability scoring purposes the value of energy in a given month expressed as a percentage is directly proportional to the energy need (monthly gap) for that month divided by the total energy need (annual gap) for that year. For the Baseline 2065 scenario, the relative energy value for each month is shown in Figure 7 and Table 6. Not surprisingly, the energy value is higher in the winter months and at its highest in March when the forecast Baseline 2065 energy gap is the highest. Similarly the energy value is lower during the summer months and at its lowest in July when the energy demand is the lowest.

[3] Climate change effects on the daily estimated flow series are discussed in Appendix C.2: Climate Change.

Figure 7: Yukon Monthly Energy Value for Baseline 2065

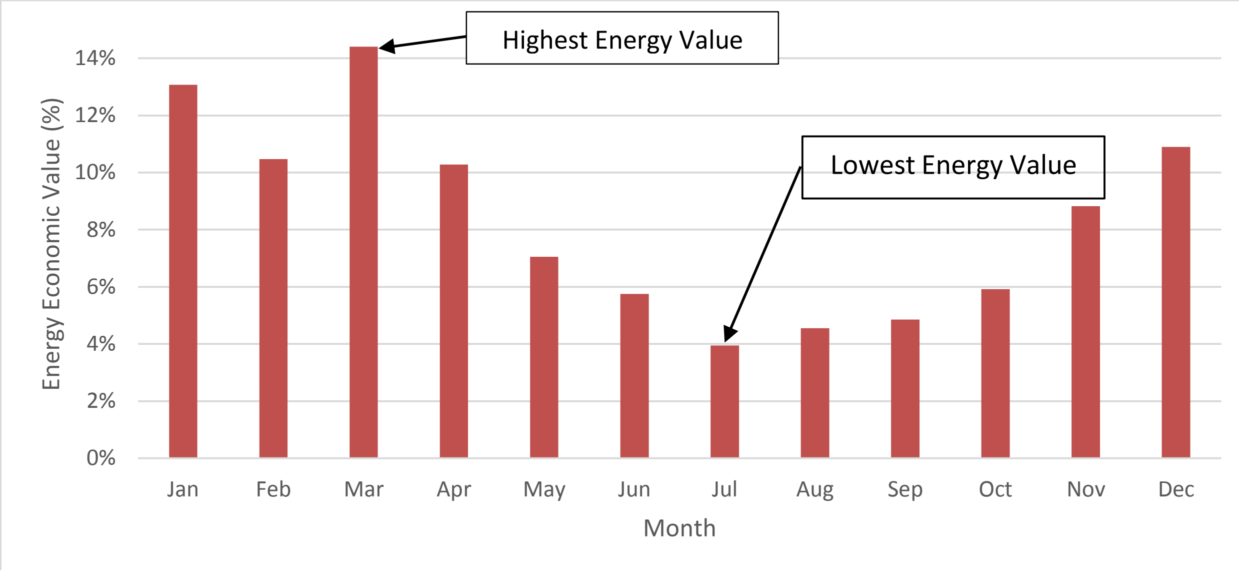


Table 6: Monthly Energy Value (Baseline 2065)

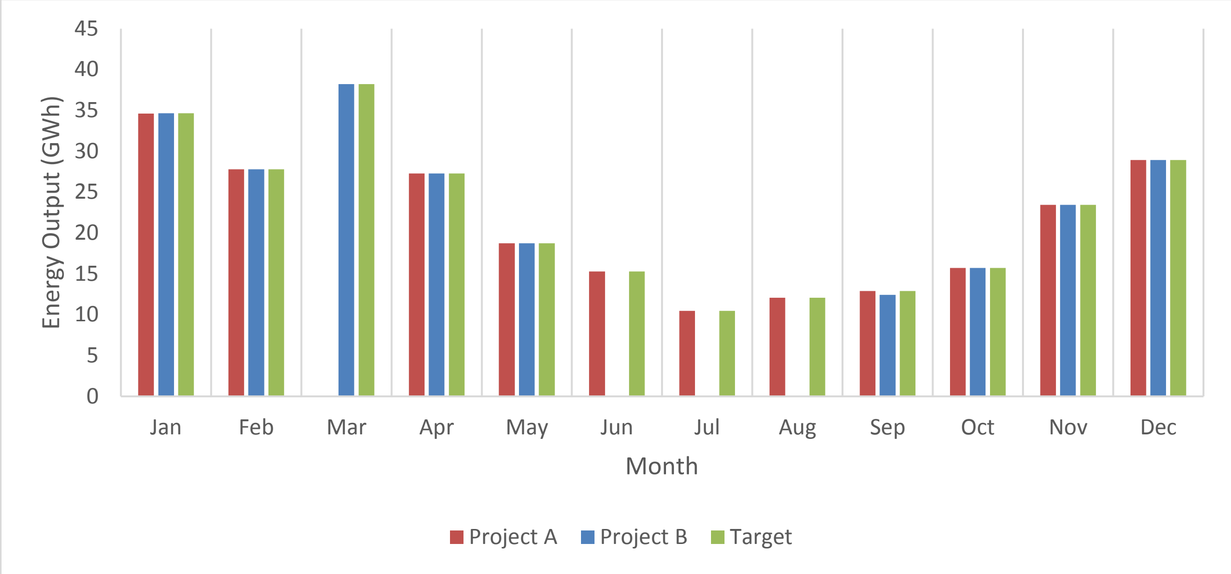
Month	Energy Value (%)
Jan	13.1%
Feb	10.5%
Mar	14.4%
Apr	10.3%
May	7.1%
Jun	5.8%
Jul	3.9%
Aug	4.6%
Sep	4.8%
Oct	5.9%
Nov	8.8%
Dec	10.9%

2.2 Gap Closure Scoring

To measure a project's ability to generate the desired energy at the desired time and thus provide valuable energy to the Yukon, a scoring system was developed with the resultant score called Gap Closure (see Appendix D: Gap Closure Calculation for complete discussion on the calculation method). The maximum score for Gap Closure is 100%.

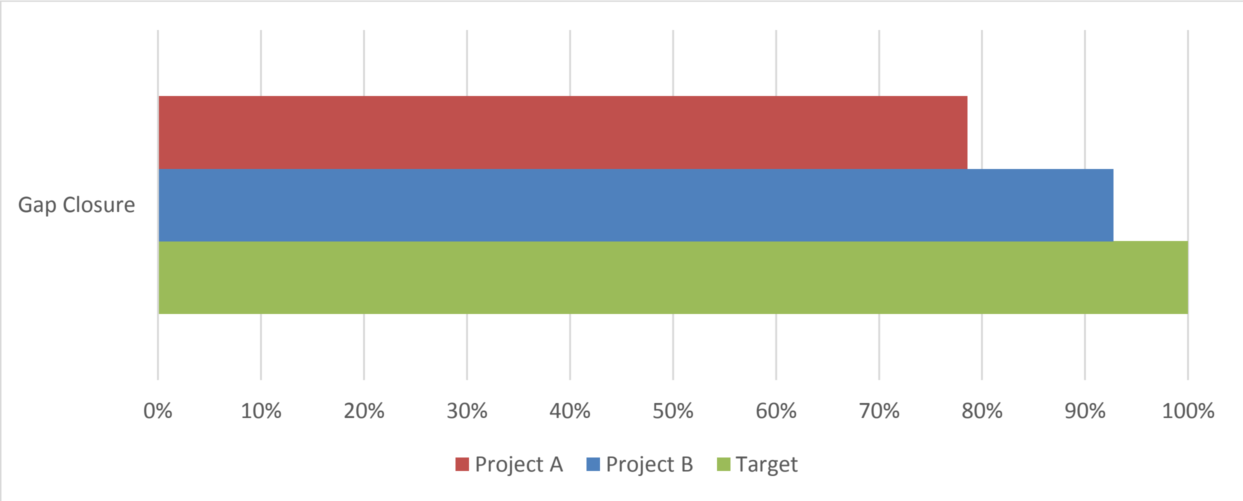
To illustrate the concept of gap closure, two projects, Project A and Project B, with the same annual energy generation output but with different generation patterns were compared. Both projects annually generate 227GWh; however, Project A does not generate energy in March and Project B does not generate energy from June through August. The energy production of Project A and Project B are shown in Figure 8.

Figure 8: Project A, B and Target Energy Output



As shown in Figure 9, although Project A and Project B have the same annual energy output, Project B has a better Gap Closure because of its superior ability to generate energy during the months which have higher energy values. Stated another way, generating energy in higher value months is worth more than generating energy in the lower value months; therefore, Project B's output is worth more than Project A's output.

Figure 9: Project A, B & Target Gap Closure

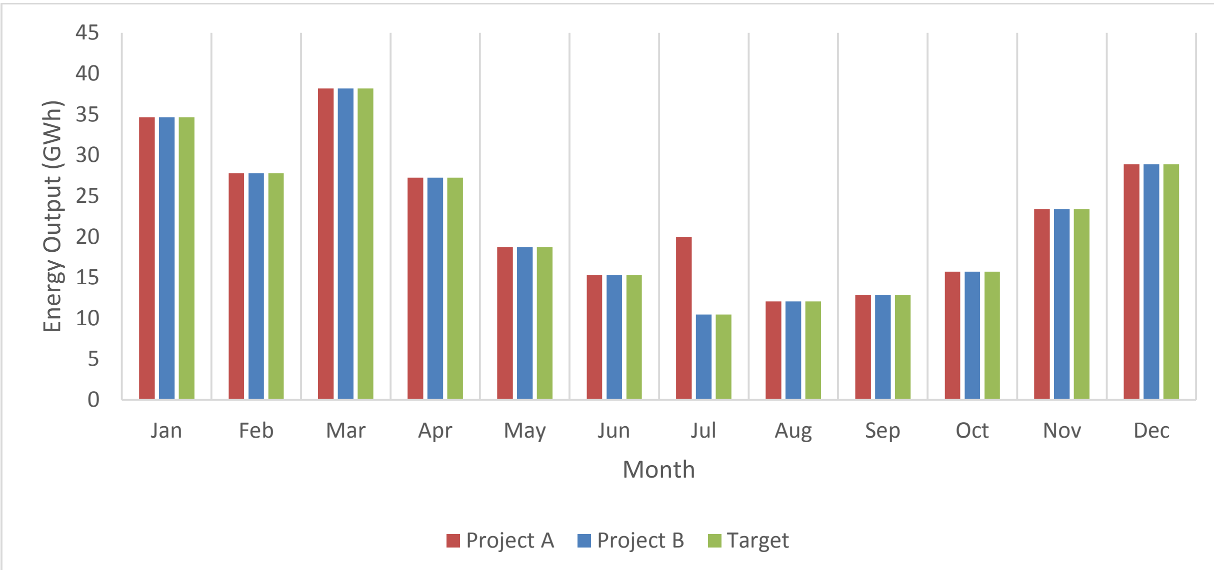


2.2.1 Overproduction

In the event that a generation project produces more energy in a given month than can be consumed in the Yukon in that month, the excess production above the targeted value is given a value of zero (0%).

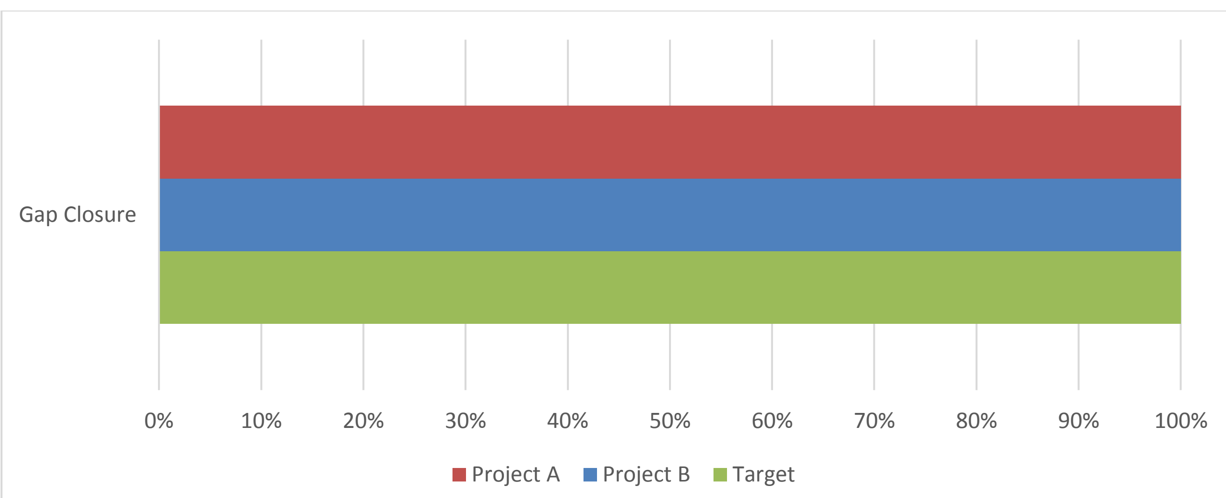
To illustrate the concept of overproduction, two projects, Project A and Project B, with the different annual energy generation outputs are compared. Project A and B produce the same amount in all months except July when Project A produces 20 GWh and Project B produced the targeted amount of 10 GWh. The energy production of Project A and Project B are shown in Figure 10.

Figure 10: Project A, B & Target Energy Output



As shown in Figure 11, although Project A has a greater annual output than Project B, they both have the same Gap Closure score of 100% because excess generation beyond the target generation has zero value for an electrical island such as the Yukon.

Figure 11: Project A, B & Target Gap Closure



2.2.2 Gap Closure Score Target

A Gap Closure score of 100% represents a project that is able to fully supply the Baseline 2065 energy gap described in Figure 3. The target Gap Closure score is 100%, and the minimum acceptable Gap Closure score target is 95%.

2.3 Incremental Reservoir Footprint

The Incremental Reservoir Footprint is the area of the reservoir excluding existing lake areas. The second assessment metric for scalability is minimizing the Incremental Reservoir Footprint[4] while targeting an average drawdown of 5 m or less[5]. In other words, the goal is to minimize the area flooded by the water storage reservoir subject to a 5 m target average drawdown. Limiting reservoir drawdown should decrease overall environmental impacts because increases in the reservoir footprint area due to drawdown restrictions (e.g. 5m target) are offset by reductions in undesirable drawdown effects such as cyclic disturbance of riparian habitats, stranding of fish & fish eggs, water quality changes, and potential slope stability issues.

Given the choice between multiple configurations of the same project, the preferred project configuration minimizes reservoir footprint while still meeting the 5 m drawdown target and Gap Closure of 100% (or at least 95% Gap Closure). Minimizing reservoir area is a first step towards addressing the *Site Screening Inventory (Parts 1 & 2)* observation that some of the historic hydroelectric project designs are larger than the modern Yukon context will support.

It is important to note that Incremental Reservoir Footprint is not an assessment of environmental and socio-economic effects, rather a first step towards minimizing project footprint while still meeting the Yukon's electricity needs.

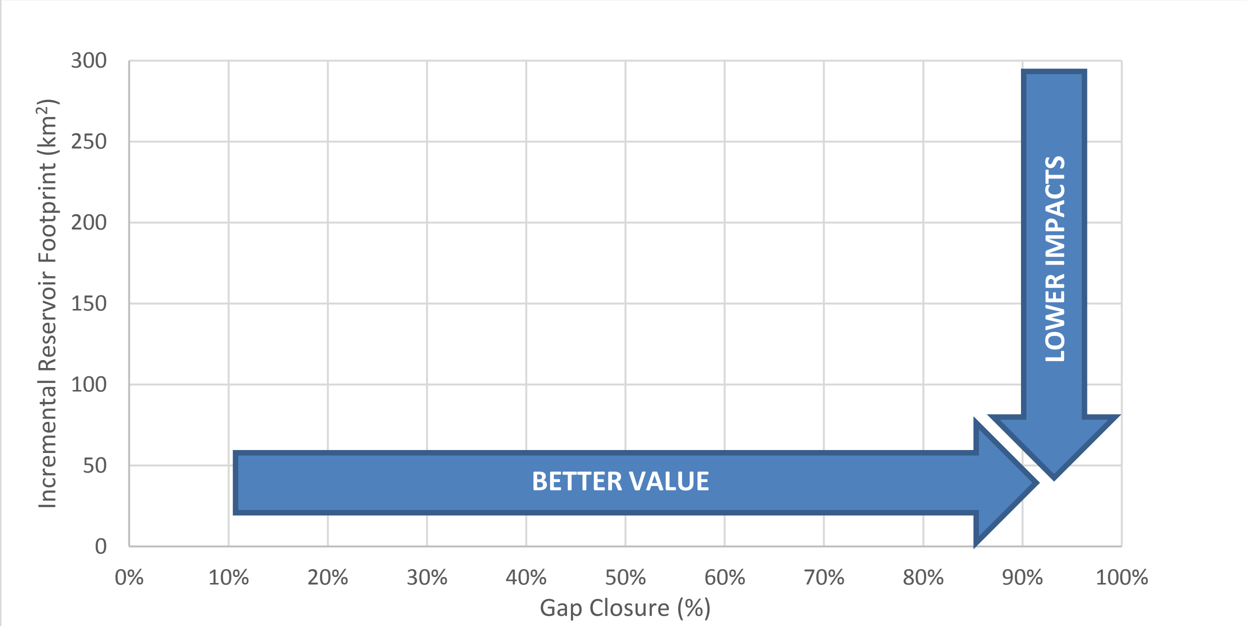
2.4 Gap Closure and Incremental Reservoir Footprint

When combining the assessment of Gap Closure and Incremental Reservoir Footprint, different projects can be plotted on a two dimensional graph as shown in Figure 12. In Figure 12 the preferred project configurations are those which can provide a high Gap Closure (e.g. 100%) while minimizing the Incremental Reservoir Footprint.

[4] The projects were also assessed based on their Total Reservoir Footprint. The results of this assessment are included in Appendix E: Project Gap Closures and Total Reservoir Footprints Scatter Plots.

[5] The average drawdown was capped at a maximum of 10 m for projects that did not achieve the 95% Gap Closure target with a 5 m average drawdown.

Figure 12: Project Reservoir Incremental Footprint vs. Gap Closure



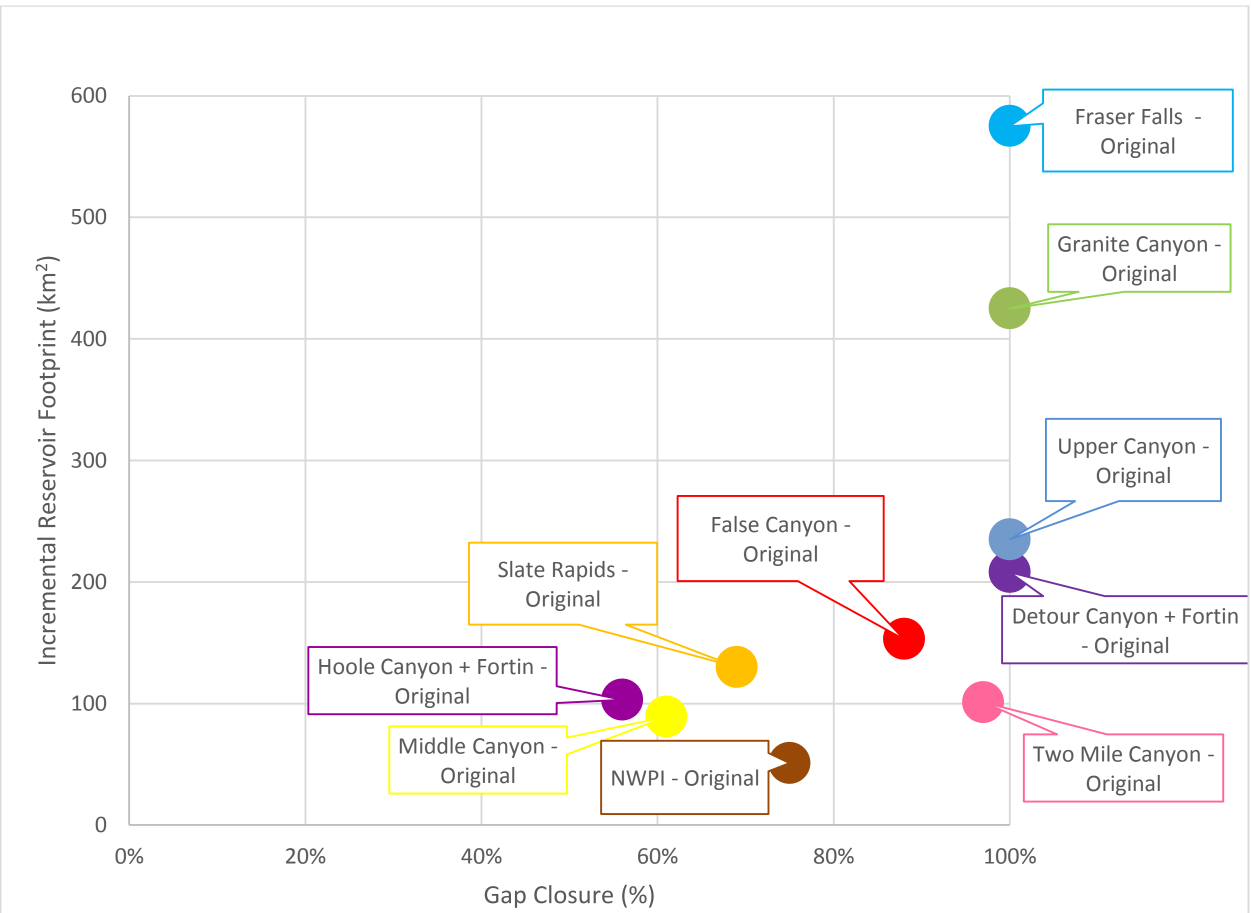
3 Step 1: Resizing

The *Site Screening Inventory (Part 1 & 2*) identified ten sites that represented the best potential for the Yukon Next Generation Hydro. One recurring theme that came out the *Site Screening Inventory* was that the historic hydroelectric project designs were sometimes larger than could be utilized in the Yukon.

3.1 Original Project Designs

The ten project sites identified at the end of the *Site Screening Inventory (Part 2)* were assessed based on their Gap Closure and Incremental Reservoir Footprint, and the results plotted in Figure 13.[6] As seen in Figure 13, the Incremental and Total Reservoir Footprints for these historic project designs range from 51 km^2 to 575 km^2, while their Gap Closures range from less than 40% to 100%.

Figure 13: Original Project Incremental Reservoir Footprint vs. Gap Closure



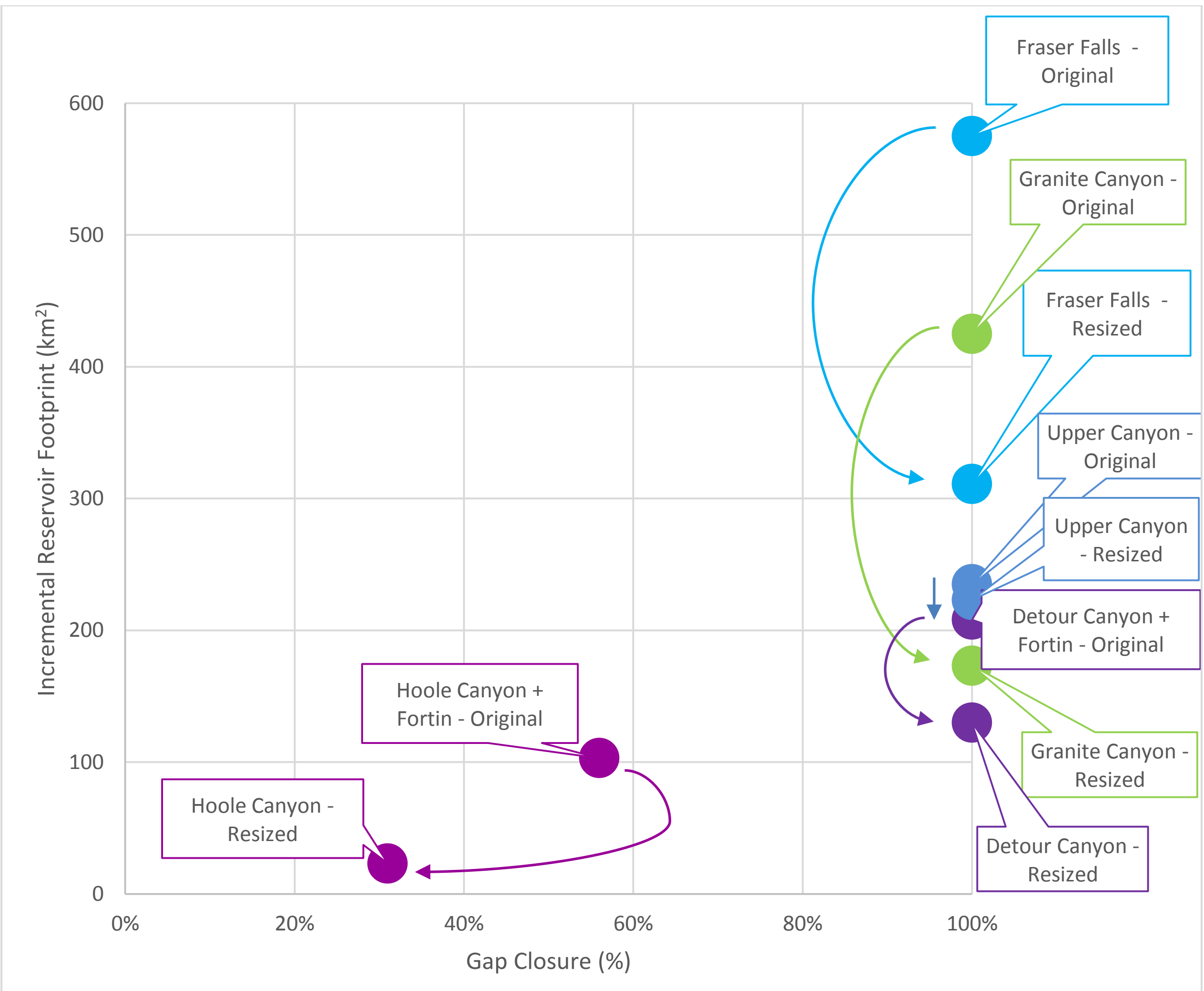
[6] Total Reservoir Footprints vs. Gap Closure are shown in Appendix E: Project Gap Closures and Total Reservoir Footprints Scatter Plots.

3.2 Resized Projects

Since some of the original project designs appear oversized when compared to the forecast Baseline 2065 energy need, the projects were re-analyzed to identify if standalone project configurations exist that could provide the same Gap Closure score for a smaller Incremental Reservoir Footprint. The Gap Closure and Total Reservoir Footprints for all incremental project configurations from zero reservoir storage up to historic (i.e. maximum) reservoir storage are shown in Appendix F: Project Gap Closures and Reservoir Footprints.

As a result of this resizing evaluation Fraser Falls, Granite Canyon, Upper Canyon, Detour Canyon and Hoole Canyon were resized as shown in Figure 14[7].

Figure 14: Project Resizing – Incremental Reservoir Footprint vs. Gap Closure

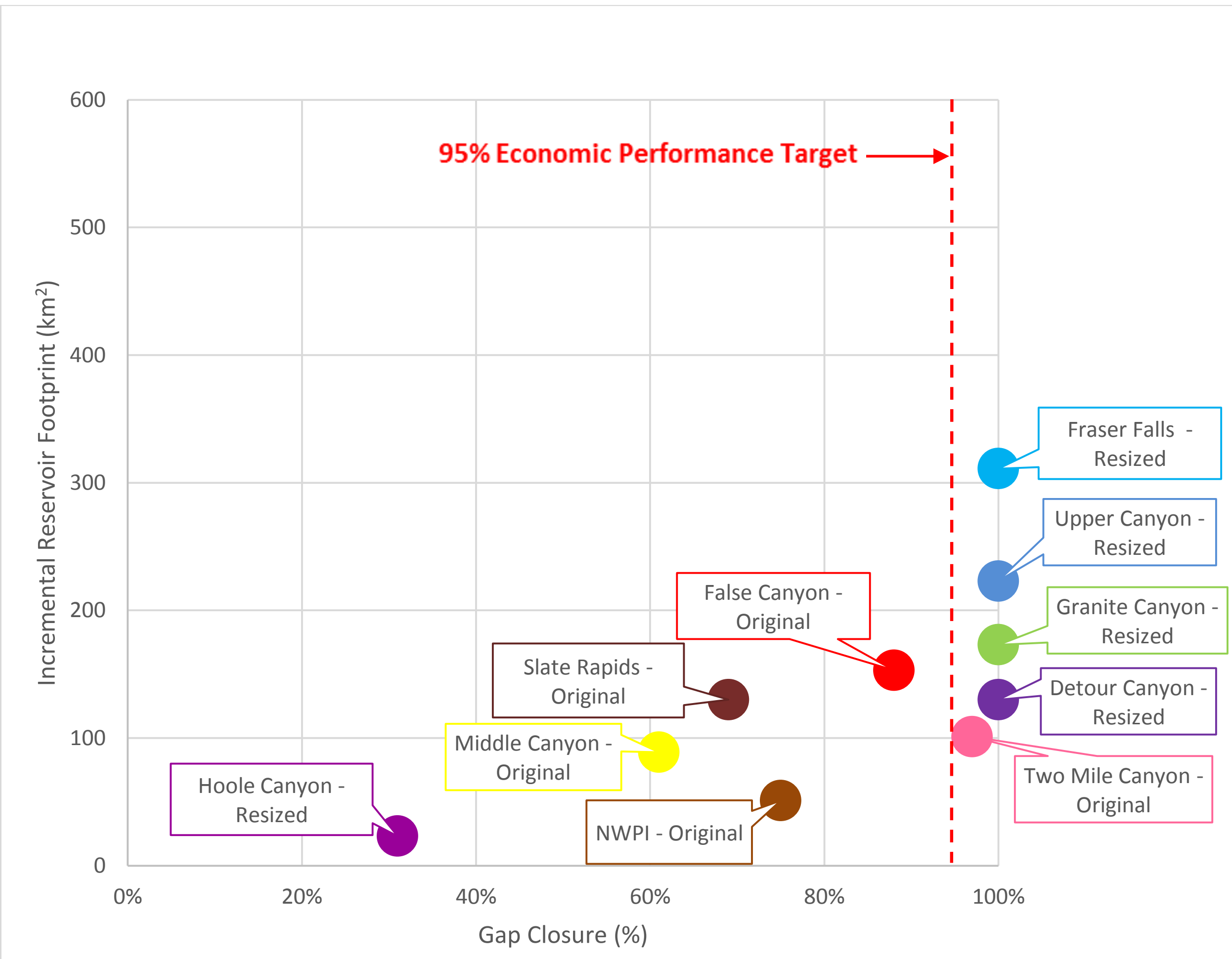


[7] Total Reservoir Footprints vs. Gap Closure are shown in Appendix E: Project Gap Closures and Total Reservoir Footprints Scatter Plots.

It is worth noting that the addition of Fortin Lake to either Hoole Canyon or Detour Canyon does not provide a significant quantity of valuable water storage (i.e. water storage for winter use). Specifically, the addition of Fortin Lake does not enable Hoole Canyon to reach the minimum gap closure target of 95%, and Detour Canyon alone is able to reach the 100% Gap Closure target using a smaller reservoir than would be possible by adding Fortin Lake water storage[8] to Detour Canyon. Therefore, Fortin Lake was discarded from the study because it is an inefficient source of water storage compared to the storage reservoirs of the other projects on the shortlist.

The resized and original project configurations are shown in Figure 15[9]. This new set of ten (10) shortlisted projects have Incremental Reservoir Footprints ranging from 23 km^2 to 311 km^2 and Total Reservoir Footprints ranging from 23 km^2 to 332 km^2, while their Gap Closures range from 30% to 100%.

Figure 15: Standalone: Resized Incremental Reservoir Footprint vs. Gap Closure



[8] Appendix F: Figure F-1 and Figure F-11 for a graph of Gap Closure and Reservoir Footprint for Detour Canyon with and without Fortin Lake.

[9] Total Reservoir Footprints vs. Gap Closure are shown in Appendix E: Project Gap Closures and Total Reservoir Footprints Scatter Plots.

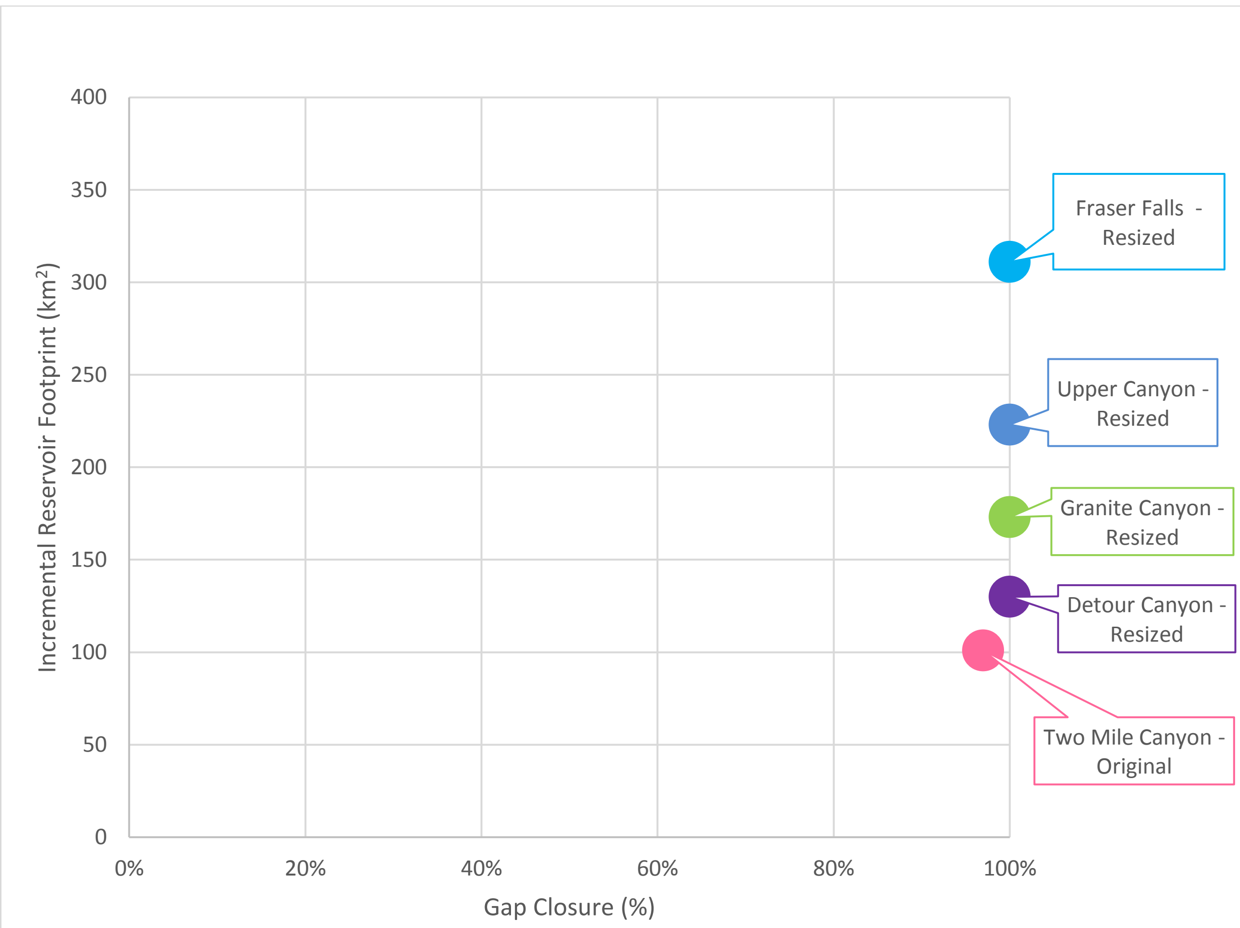
As shown in Figure 15, Hoole Canyon, Middle Canyon, Slate Rapids, NWPI, and False Canyon do not achieve the minimum 95% Gap Closure target. Therefore they were removed from further consideration as potential projects[10]. The discarded projects are given further consideration as combined hydroelectric projects in Section 4.

Upper Canyon, Fraser Falls, Granite Canyon, Detour Canyon and Two Mile Canyon met the minimum 95% Gap Closure and are retained for further analysis as part of the scalability assessment.

In summary, the standalone projects that remain at the end of Step 1 of the scalability assessment are shown in Figure 16 and listed in

Table 7.

Figure 16: Step 1 – Resizing – Retained Projects – Incremental Reservoir Footprint vs. Gap Closure[11]



[10] It is recognized that the discarded projects could be developed in the future with other combinations of other generation sources such as diesel, natural gas, wind or seasonal pumped storage but this analysis is outside the scope of this paper.

[11] Total Reservoir Footprints vs. Gap Closure are shown in Appendix E: Project Gap Closures and Total Reservoir Footprints Scatter Plots.

Table 7: Step 1 – Resizing - Retained Projects

Project Name	Site ID	Existing Lake Area[12]	Original Incremental Reservoir Footprint	Resized Incremental Reservoir Footprint	Resized Total Reservoir Footprint
Detour Canyon	PELLY-PELLY-0567-B	0 km^2	208 km^2	130 km^2	130 km^2
Fraser Falls	STEWA-STEWA-0519-B	0 km^2	575 km^2	311 km^2	311 km^2
Granite Canyon	PELLY-PELLY-0480-B	0 km^2	425 km^2	173 km^2	173 km^2
Two Mile Canyon	STEWA-HESS -0552	0 km^2	101 km^2	101 km^2	101 km^2
Upper Canyon	LIARD-FRANC-0730-C	109 km^2	235 km^2	223 km^2	332 km^2

[12] Existing lake areas do not include river beds.

4 Step 2: Cascading

Step 2 of the scalability assessment process is to study project combinations along a cascade. A cascade is a series of projects along a common river or river system. The potential benefits of a cascade are that two (or more) projects can benefit from upstream water storage because the downstream projects can use upstream stored water to:

1) Achieve a better Gap Closure score
2) Reduce the Total and Incremental Reservoir Footprint

In this paper, a combination of projects along a cascade are referred to as cascaded projects, where the upstream project is a storage reservoir plus generation, and the downstream project is a run of river (ROR) project with a fixed headpond elevation (i.e. fixed water level).

4.1 Cascades

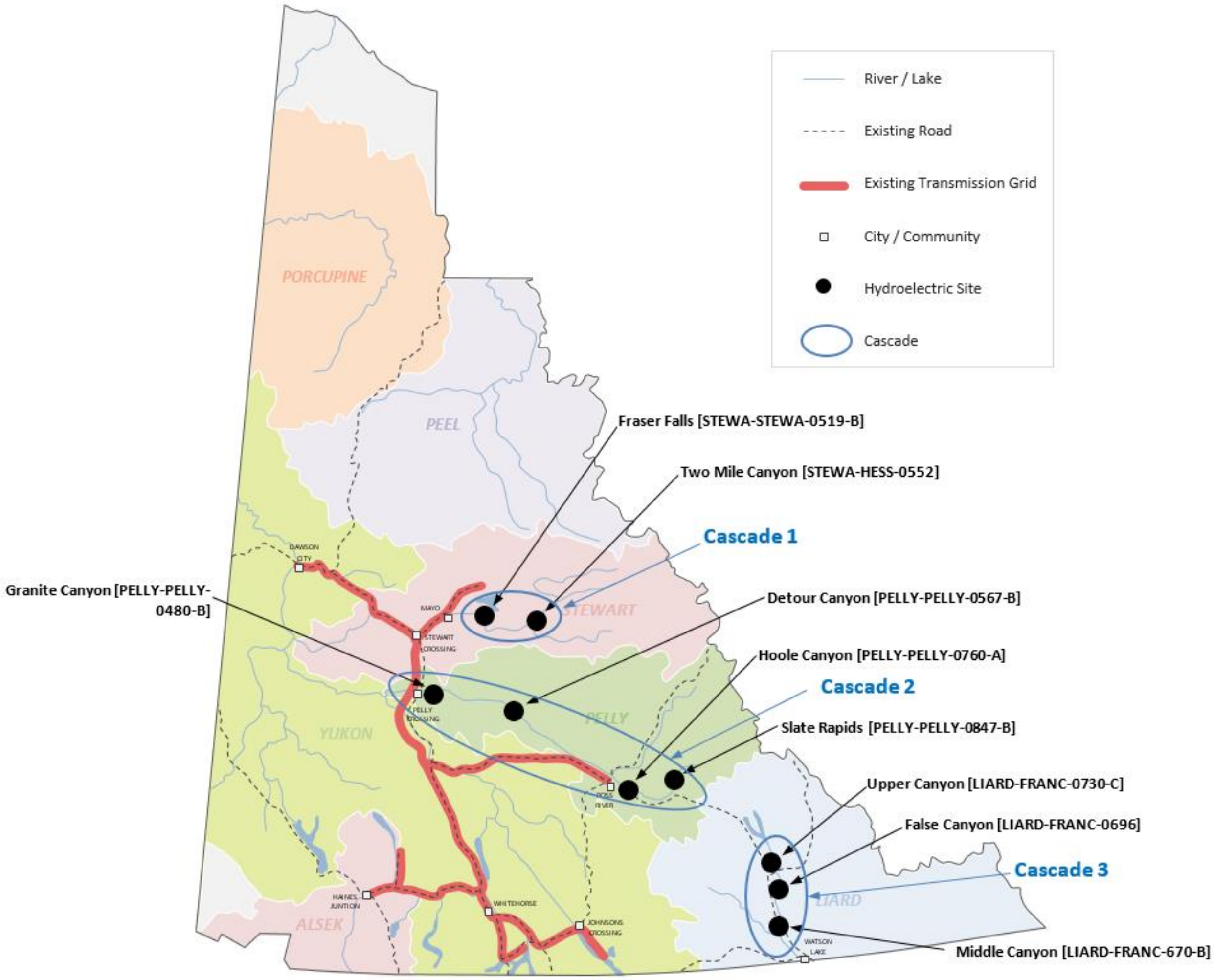
The following cascades are identified as shown in Figure 17.

1) Cascade 1: Two Mile Canyon → Fraser Falls
2) Cascade 2: Slate Rapids → Hoole Canyon → Detour Canyon → Granite Canyon
3) Cascade 3: Upper Canyon → False Canyon → Middle Canyon

NOTE: NWPI does not belong to a cascade and is studied as a standalone project only[13].

[13] It is recognized that NWPI could be combined with a project on a different river system but preference was given to projects that only impacted one river. Impacting only one river tended to minimize overall combined reservoir footprint and still meet at least 100% Gap Closure.

Figure 17: Yukon Cascades



4.2 Cascade Screens

The cascaded layouts to be studied are selected through a two (2)-screen process:

1) Mutually Exclusive: Discards layouts where both projects in the cascade use the same reservoir and are therefore mutually exclusive.
2) Performant Standalone Project: Eliminates projects that undermine future hydropower developments beyond 2065. In a cascaded layout, the downstream ROR project will be a smaller configuration than its standalone version. By choosing not to cascade standalone projects that meet the minimum 95% Gap Closure (called Performant Standalone Projects), the Yukon preserves the possibility to develop those projects at a larger (i.e. standalone) size to meet energy demands beyond 2065.

The cascade screening process is in described in Table 8.

Table 8: Cascade Screens

#	Screen	Screen Description
1	Mutually Exclusive	Eliminate cascaded projects that use the same reservoir
2	Performant Standalone Project	Eliminate cascades when the downstream project is able to provide 95%+ Gap Closure on a standalone basis.

The results of the 2-screen process are presented in Table 9, Table 10, and Table 11.[14]

Table 9: Cascade 1 Screening

Project Layout Option	Screen 1	Screen 2
Two Mile Canyon + Fraser Falls ROR	PASS[15]	DISCARDED

Table 10: Cascade 2 Screening

Project Layout Option	Screen 1	Screen 2
Slate Rapids + Hoole Canyon ROR	PASS	PASS
Slate Rapids + Detour Canyon ROR	PASS	DISCARDED
Slate Rapids + Granite Canyon ROR	PASS	DISCARDED
Hoole Canyon + Detour Canyon ROR	PASS	DISCARDED
Hoole Canyon + Granite Canyon ROR	PASS	DISCARDED
Detour Canyon + Granite Canyon ROR	PASS	DISCARDED

[14] For completeness, the discarded projects that passed Screen 1 were also assessed based on their Gap Closure and Reservoir Footprint. The results for all project layouts may be found in Appendix F: Project Gap Closures and Reservoir Footprints.

[15] The Fraser Falls reservoir impounds parts of the reservoir of Two Mile Canyon. At this stage the overlapping of the two reservoirs was considered negligible and the cascade was advanced to Screen 2.

Table 11: Cascade 3 Screening

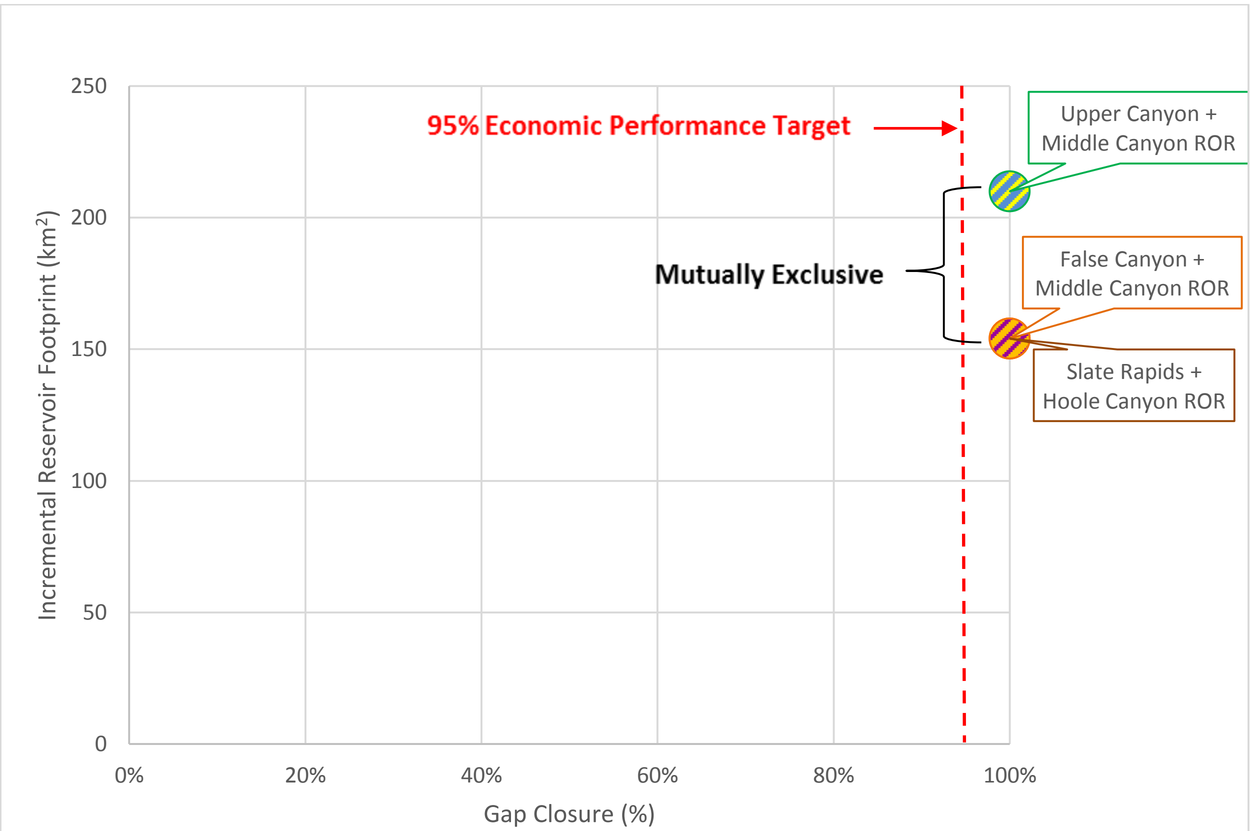
Project Layout Option	Screen 1	Screen 2
Upper Canyon + False Canyon ROR	DISCARDED	
Upper Canyon + Middle Canyon ROR	PASS	PASS
False Canyon + Middle Canyon ROR	PASS	PASS

The remaining cascaded layouts after Screen 1 and 2 are listed in Table 12, and their Gap Closure and Incremental Reservoir Footprints are shown in Figure 18.[16]

Table 12: Screened Cascaded Layouts

Project Layout Option
Upper Canyon + Middle Canyon ROR
False Canyon + Middle Canyon ROR
Slate Rapids + Hoole Canyon ROR

Figure 18: Cascaded Layouts Incremental Reservoir Footprints vs. Gap Closure



[16] Total Reservoir Footprints vs. Gap Closure are shown in Appendix E: Project Gap Closures and Total Reservoir Footprints Scatter Plots.

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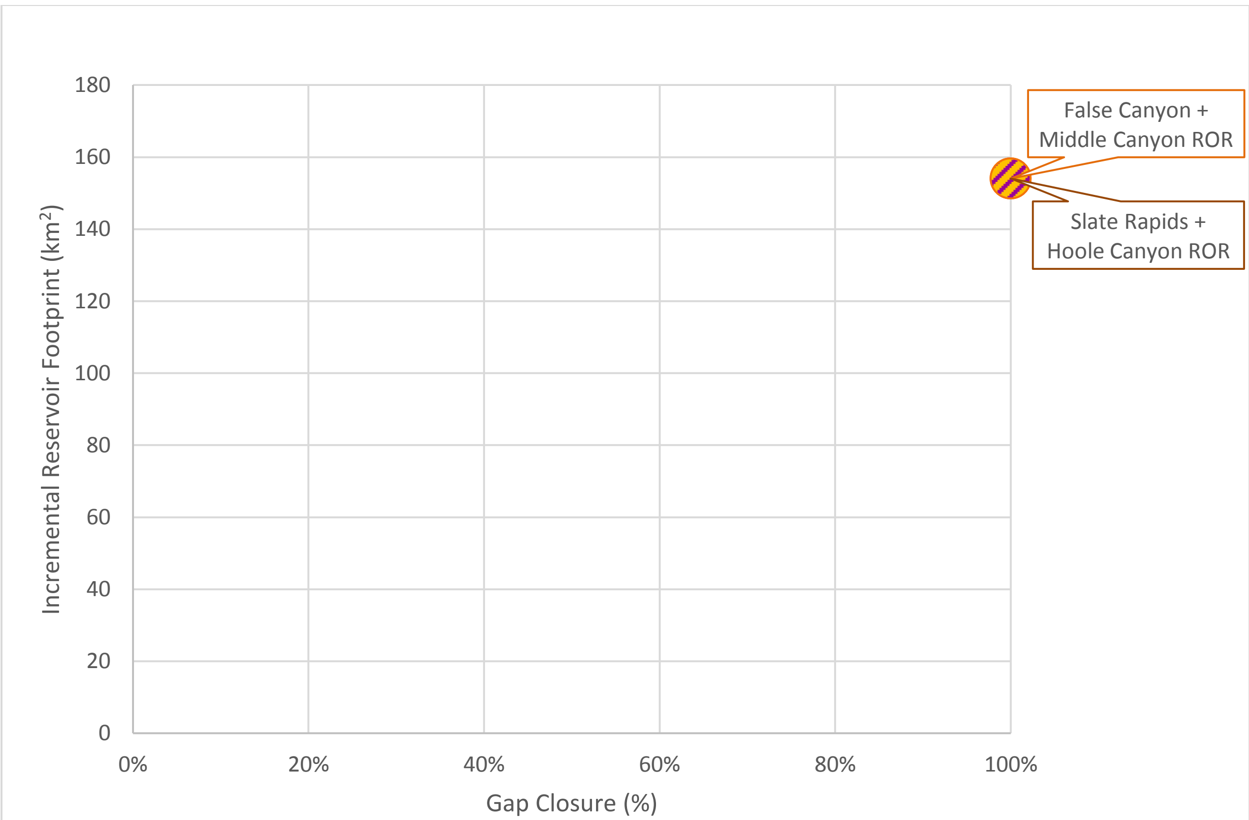
All of the cascaded layouts are able to achieve the minimum 95% Gap Closure. However, False Canyon + Middle Canyon ROR and Upper Canyon + Middle Canyon ROR are mutually exclusive cascades because Upper Canyon and False Canyon use the same water storage reservoir. Since the cascaded layout of False Canyon + Middle Canyon ROR has the lower footprint, then that cascade becomes the preferred cascade layout. Therefore, the cascaded layout of Upper Canyon + Middle Canyon ROR is discarded from the scalability discussion.

The retained projects from Step 2 of the scalability assessment process are shown in Figure 19 and listed in Table 13.[17] The retained cascaded projects' Incremental Reservoir Footprints are both 154 km^2, their Total Reservoir Footprints range from 191 km^2 to 263 km^2, and their gap closures are 100%.

Figure 19: Step 2 – Cascading – Retained Projects – Incremental Reservoir Footprint vs. Gap Closure



[17] Total Reservoir Footprints vs. Gap Closure are shown in Appendix E: Project Gap Closures and Total Reservoir Footprints Scatter Plots.

Table 13: Step 2 – Cascading – Retained Projects

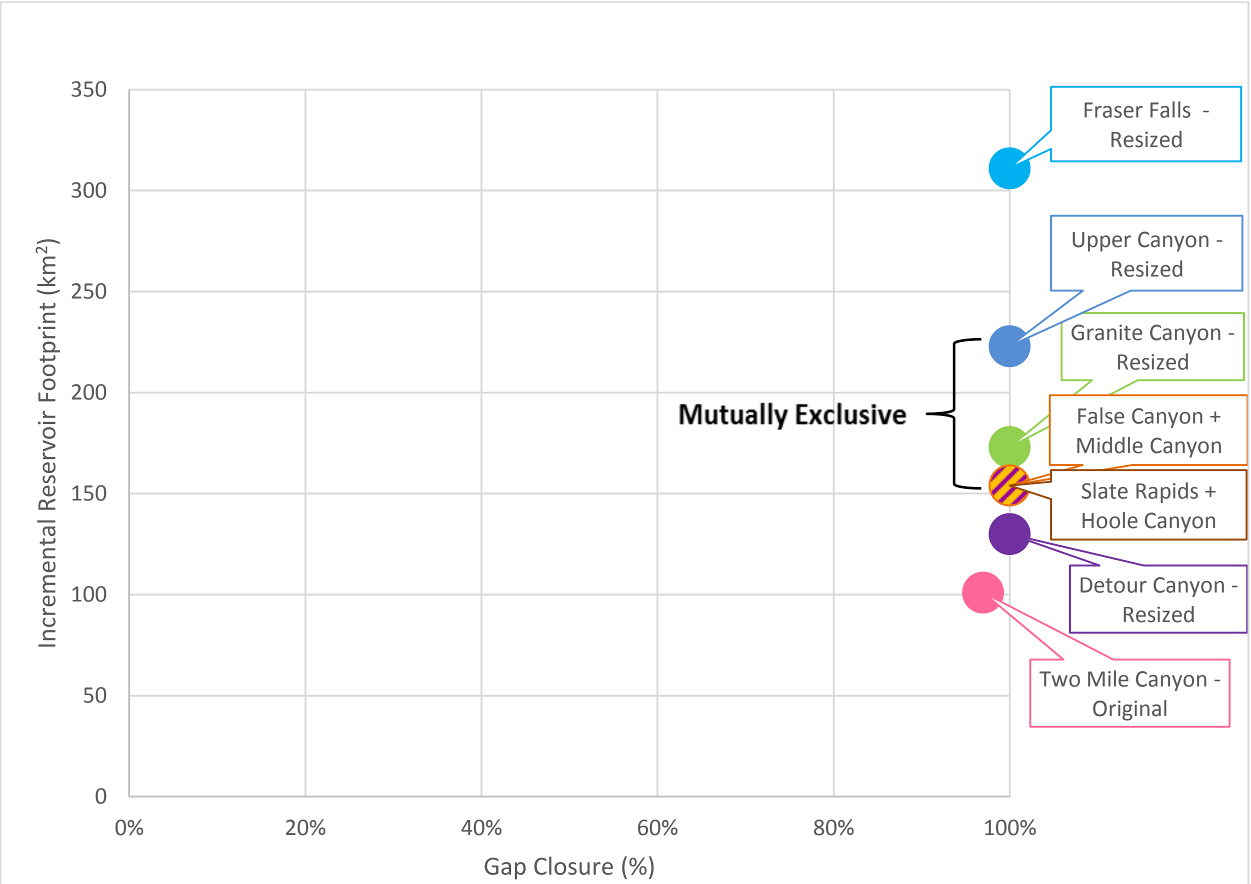
Project Name	Site ID	Existing Lake Area[18]	Incremental Reservoir Footprint	Total Reservoir Footprint
False Canyon + Middle Canyon ROR	LIARD-FRANC-0696 + LIARD-FRANC-0670-B	109 km^2	154 km^2	263 km^2
Slate Rapids + Hoole Canyon ROR	PELLY-PELLY-0847-B + PELLY-PELLY-0760-A	37 km^2	154 km^2	191 km^2

[18] Existing Lake Areas do not include river beds.

5 Step 3: Reconciliation

The project configurations at the end of Step 1 and Step 2 are shown in Figure 20.[19]

Figure 20: Retained Project Layouts from Steps 1 & 2 – Incremental Reservoir Footprint vs. Gap Closure



Step 3 of the scalability assessment process reconciles the standalone projects (from Step 1) and cascaded projects (from Step 2) to remove the projects that are mutually exclusive and have larger Incremental Reservoir Footprints.

As mentioned in Step 2, Upper Canyon and False Canyon are mutually exclusive. Therefore, the cascaded layout of False Canyon + Middle Canyon ROR may not coexist with Upper Canyon. Therefore, since the cascaded layout of False Canyon + Middle Canyon has a smaller footprint than Upper Canyon as a standalone project, Upper Canyon is removed from the scalability discussion.

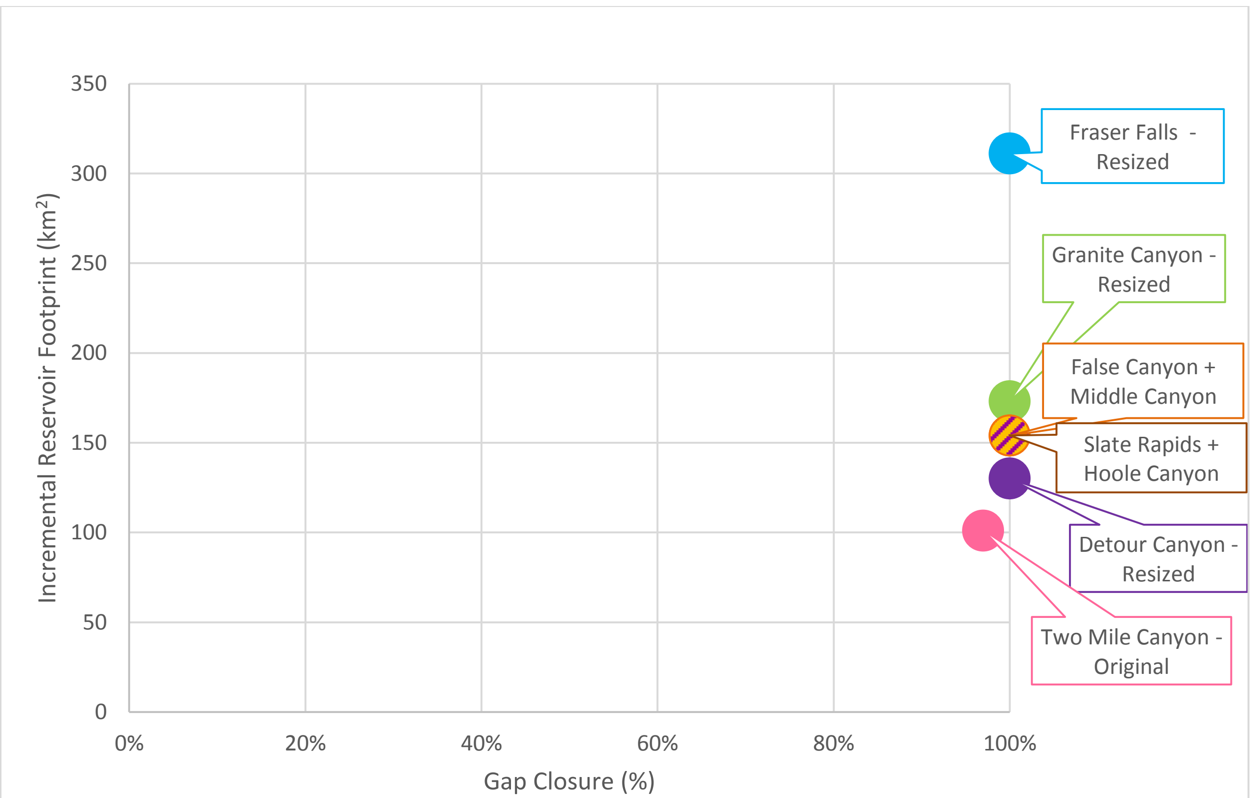
The remaining projects at the end of Step 3 Reconciliation are shortlisted in Table 14, shown in Figure 21, and mapped in Figure 22.

[19] Total Reservoir Footprints vs. Gap Closure are shown in Appendix E: Project Gap Closures and Total Reservoir Footprints Scatter Plots.

Table 14: Scalability Short List

Site Name	Site ID	Existing Lake Area[20]	Incremental Reservoir Footprint	Total Reservoir Footprint	Gap Closure
Detour Canyon	PELLY-PELLY-0567-B	0 km^2	130 km^2	130 km^2	100%
Fraser Falls	STEWA-STEWA-0519-B	0 km^2	311 km^2	311 km^2	100%
Granite Canyon	PELLY-PELLY-0480-B	0 km^2	173 km^2	173 km^2	100%
Two Mile Canyon	STEWA-HESS -0552	0 km^2	101 km^2	101 km^2	97%
False Canyon + Middle Canyon Run of River (ROR)	LIARD-FRANC-0696 + LIARD-FRANC-0670-B	109 km^2	154 km^2	263 km^2	100%
Slate Rapids + Hoole Canyon ROR	PELLY-PELLY-0847-B + PELLY-PELLY-0760-A	37 km^2	154 km^2	191 km^2	100%

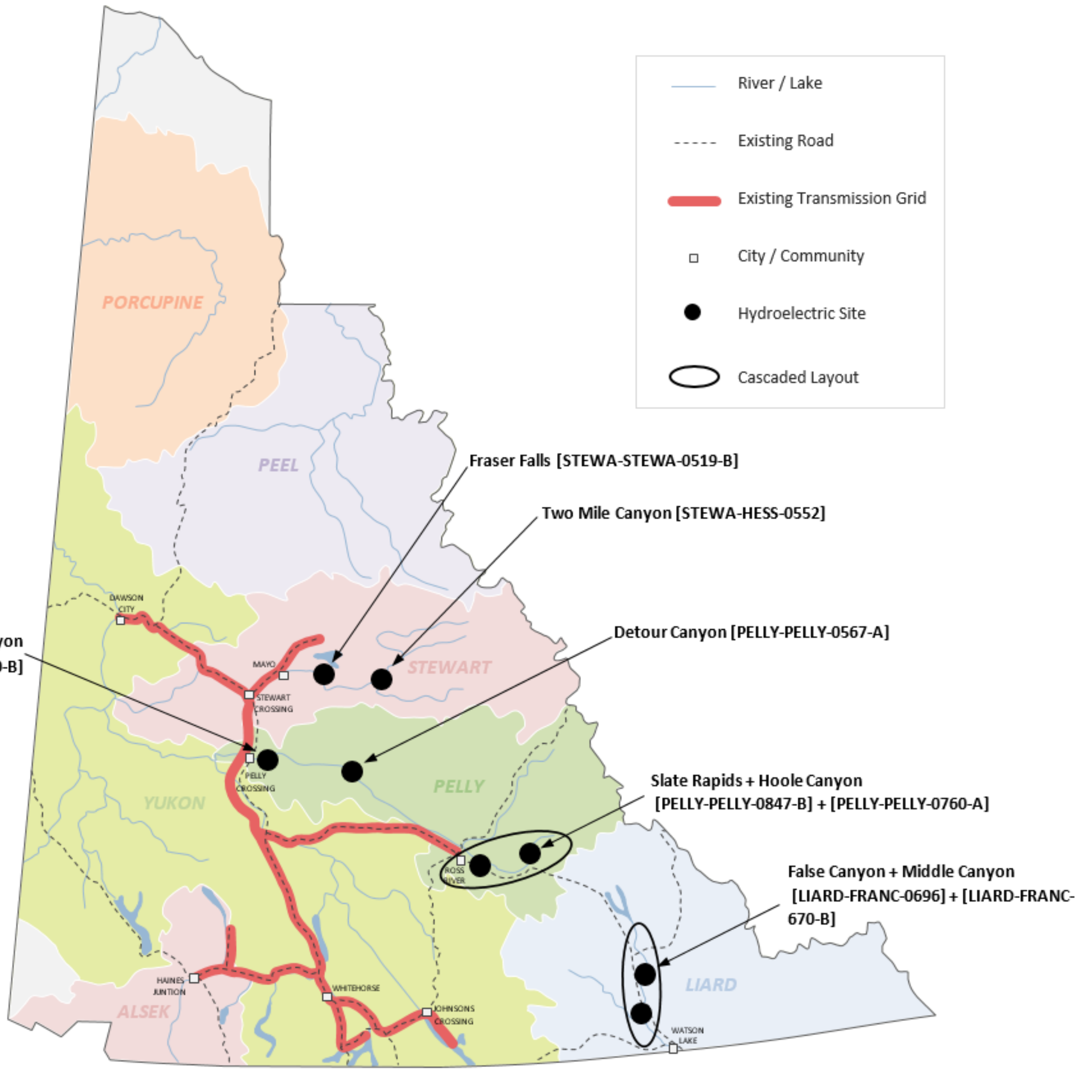
Figure 21: Step 3 – Reconciliation – Scalability Short List – Incremental Reservoir Footprint vs. Gap Closure[21]



[20] Existing lake areas do not include river beds.

[21] Total Reservoir Footprints vs. Gap Closure are shown in Appendix E: Project Gap Closures and Total Reservoir Footprints Scatter Plots.

Figure 22: Scalability Short List Map



5.1 Project Descriptions

The project description of each of the Scalability Short List projects is described in the following subsections. When describing the energy output from the shortlisted projects, the energy production in 2065 under the Baseline 2065 scenario is categorized as described in Table 15 below:

Table 15: Energy Summary Components

Component	Description
Energy Output	Generated energy that is fully utilized to meet the Yukon demand.
Must Run Energy	Generated energy that is surplus to the Yukon demand. Excess energy must be produced due to operational constraints such as minimum turbine flow requirements or minimum environmental water flow releases (IFR).
Available Energy	Available energy that is surplus to the Yukon demand that can be generated as needed by either operating all turbines at 95% capacity factor or by ROR operation. The available energy may be utilized for energy gaps larger than the 2065 Baseline gap or as "fuel switch" opportunity.
Spilled Energy	Water that is spilled due to the limited size and operating restrictions of a project (e.g. water flows are so high during the summer that the generation facility spills excess water).
Generation Shortfall	Energy shortfall representing the gap between the Yukon demand for energy and the ability of the project to meet that gap. In practice this energy shortfall will need to be produced from another source (e.g. diesel, natural gas fired generation, wind or other hydro) to meet the Yukon demand.

The number of turbines selected for each project is based on the following criteria:

1) A minimum of two turbines is required to facilitate continued generation operations during maintenance or scheduled and unscheduled outages of a single turbine.
2) A minimum of one turbine beyond the baseline requirement is necessary for a scaled construction scheme.
3) The number of turbines shall be minimized to avoid additional costs associated with supply, freight, installation, construction, operation and maintenance.

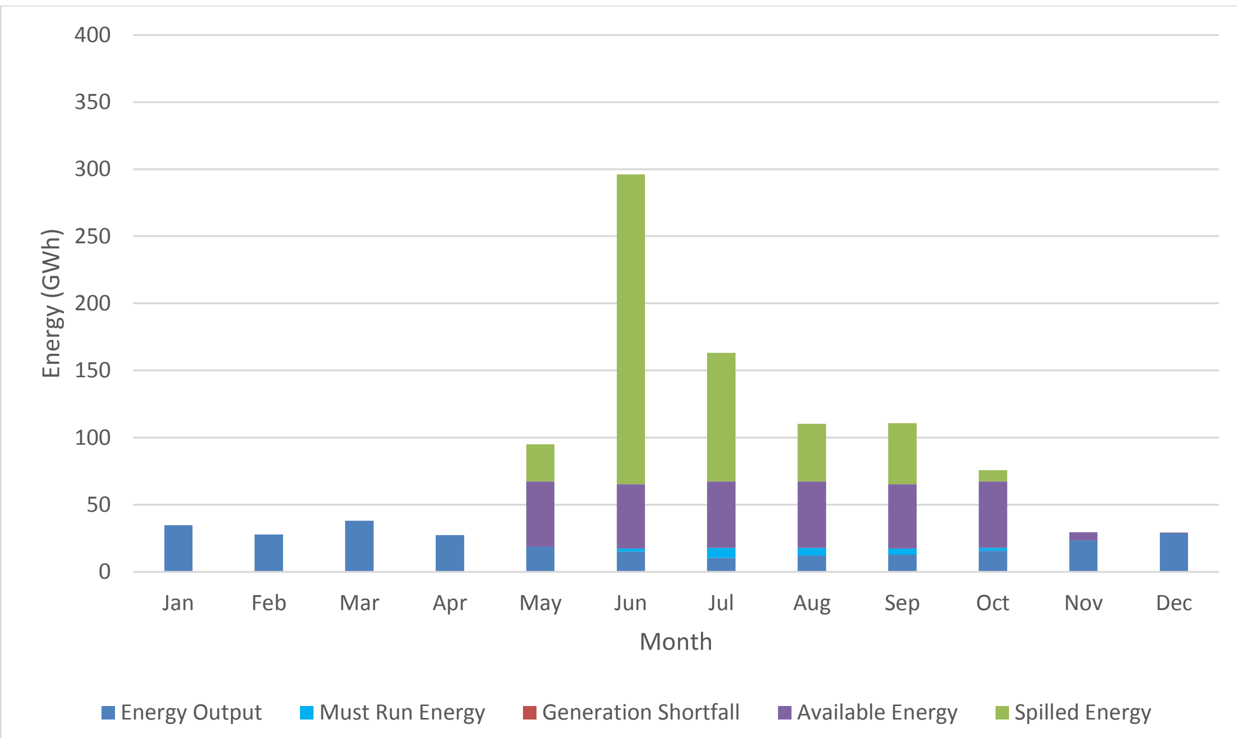
5.1.1 Detour Canyon [PELLY-PELLY-0567-B]

Detour Canyon is a potential hydroelectric project on the Pelly River, located in the Pelly River Basin approximately 80 km downstream (northwest) of Faro. The total drainage area is estimated to be 28,500 km^2.

The preliminary project layout includes an approximately 60 m dam with a spillway control structure, a fish ladder, a water intake, conveyance, a 3-unit powerhouse with 2 additional turbine and generator bays for post 2065 upgrades, tailrace structures, and diversions to facilitate de-watering of the dam site during construction.

The estimated full supply level (FSL) of the water reservoir is 621 m above sea level (ASL), flooding a total area of approximately 130 km^2. The average drawdown level (ADL) of the water reservoir is 614 m ASL, fluctuating the reservoir water level by 7 m over an average year. Approximately 90 km of new road and 80 km of new transmission line are required to access and interconnect the project.

Figure 23: Detour Canyon 2065 Energy Summary



Detour Canyon is able to meet the forecasted Baseline 2065 energy demand for the Yukon (i.e. no Energy Shortfall). In addition to the spilled water (i.e. energy) and available energy in the months of May through November, there is “Must Run” energy from June to October which would require other Yukon facilities (e.g. Whitehorse) to restrict generation in the months from June to October to balance Yukon electrical load and demand.

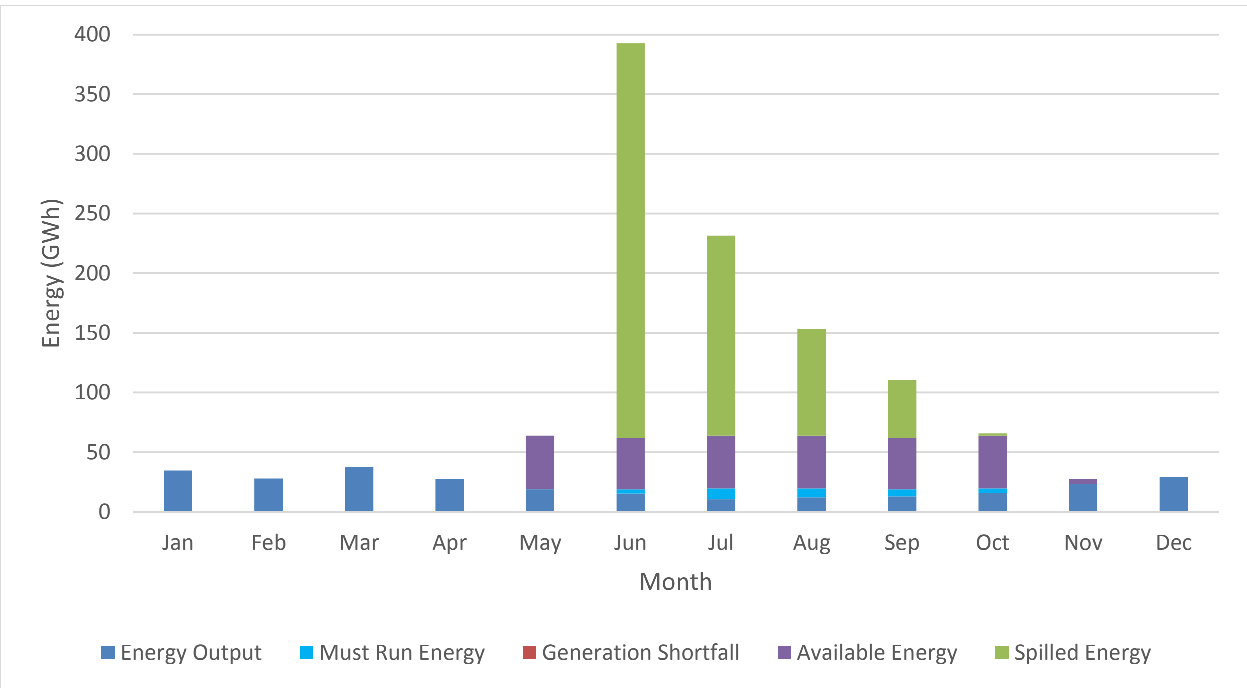
5.1.2 Fraser Falls [STEWA-STEWA-0519-B]

Fraser Falls is a potential hydroelectric project on the Stewart River, located in the Stewart River Basin approximately 40 km upstream of Mayo. The total drainage is estimated to be 30,700 km^2.

The preliminary project layout includes an approximately 50 m dam with a spillway control structure, a fish ladder, a water intake, conveyance, a 3-unit powerhouse with 2 additional turbine and generator bays for post 2065 upgrades, tailrace structures and diversions to facilitate de-watering of the dam site during construction.

The estimated FSL of the water reservoir is 563 m ASL, flooding a total area of approximately 311 km^2. The ADL of the water reservoir is 560 m ASL, fluctuating the reservoir water level by 3 m over an average year. Approximately 40 km of new road and 80 km of new transmission line are required to access and interconnect the project.

Figure 24: Fraser Falls 2065 Energy Summary



Fraser Falls is able to meet the forecasted Baseline energy demand for the Yukon (i.e. No Energy Shortfall). In addition to the spilled water (i.e. energy) and available energy in the months of May through November, there is "Must Run" energy from June to October which would require other Yukon facilities (e.g. Whitehorse) to restrict generation in the months from June to October to balance Yukon electrical load and demand.

The project dam height was resized from its original height of 85 m (597 m ASL) to 51 m (563 m ASL). This site offers the possibility to build a larger project in order to meet the Yukon energy demand beyond 2065 but that would require increasing the reservoir footprint back towards historic design sizes (e.g. from 311 km^2 towards 575 km^2).

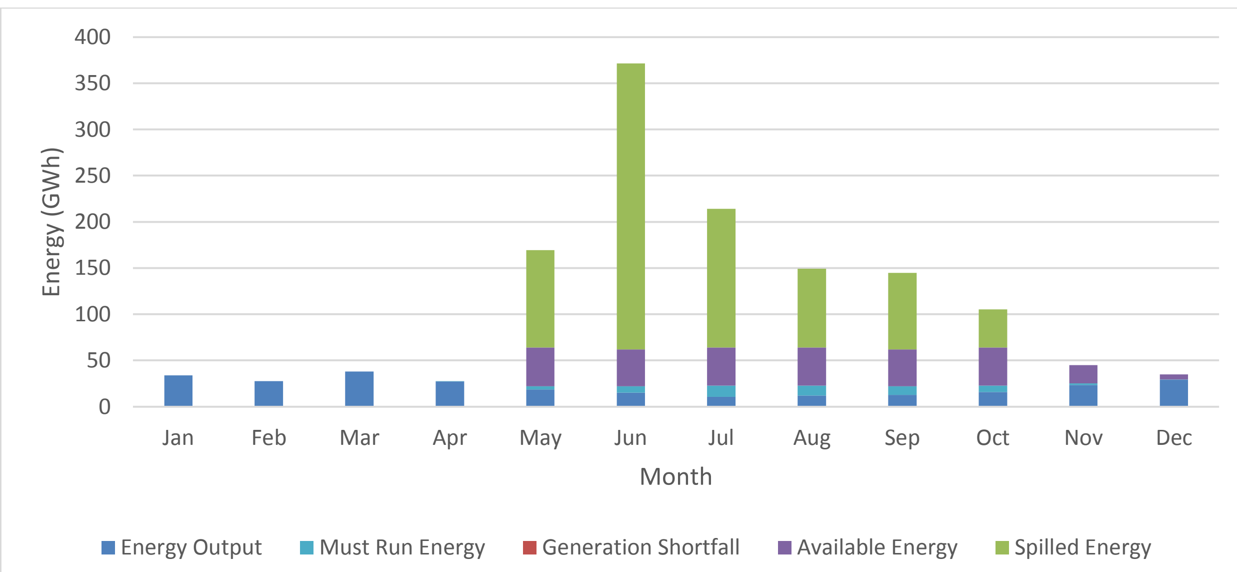
5.1.3 Granite Canyon [PELLY-PELLY-0480-B]

Granite Canyon is a potential hydroelectric project on the Pelly River, located in the Pelly River Basin approximately 20 km east of Pelly Crossing. The total drainage area is estimated to be 45,900 km^2.

The preliminary project layout includes an approximately 75 m a dam with a spillway control structure, a fish ladder, a water intake, conveyance, a 3-unit powerhouse with 2 additional turbine and generator bays for post 2065 upgrades, tailrace structures and diversions to facilitate de-watering of the dam site during construction.

The estimated FSL of the water reservoir is 529 m ASL, flooding a total area of approximately 173 km^2. The ADL of the water reservoir is 526 m ASL, fluctuating the reservoir water level by 3 m over an average year. Approximately 15 km of new road and 15 km of new transmission line are required to access and interconnect the project.

Figure 25: Granite Canyon 2065 Energy Summary



Granite Canyon is able to meet the forecasted Baseline 2065 energy demand for the Yukon (i.e. No Energy Shortfall). In addition to the spilled water (i.e. energy) and available energy in the months of May through December, there is “Must Run” energy from June to October which would require other Yukon facilities (e.g. Whitehorse) to restrict generation in the months from June to October to balance Yukon electrical load and demand.

The project dam height is resized from its original height of 100 m (555 m ASL) to 74 m (529 m ASL). This site offers the possibility to build a larger project in order to meet the Yukon energy demand beyond 2065 but this would would require increasing the reservoir footprint back towards historic design sizes (e.g. from 173 km^2 towards 425 km^2).

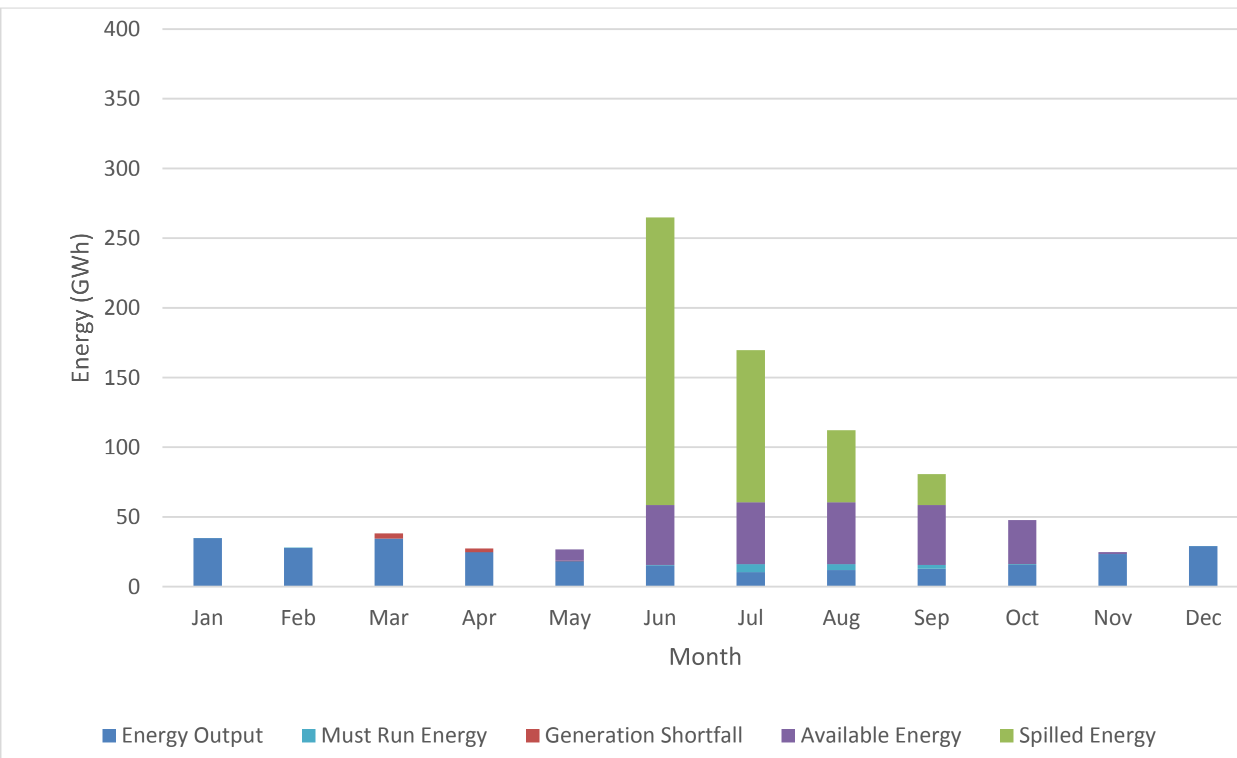
5.1.4 *Two Mile Canyon [STEWA-HESS -0552]*

Two Mile Canyon is a potential hydroelectric project on the Hess River, located in the Stewart River Basin approximately 100 km east of Mayo. The total drainage area is estimated to be 14,200 km^2.

The preliminary project layout includes an approximately 70 m dam with a spillway control structure, a fish ladder, a water intake, conveyance, a 3-unit powerhouse with 2 additional turbine and generator bays for post 2065 upgrades, tailrace structures and diversion tunnels to facilitate de-watering of the dam site during construction.

The estimated FSL of the water reservoir is 611 m ASL, flooding a total area of approximately 101 km^2. The ADL of the water reservoir is 602 m ASL, fluctuating the reservoir water level by 9 m over an average year. Approximately 110 km of new road and 140 km of new transmission line are required to access and interconnect the project.

Figure 26: Two Mile Canyon 2065 Energy Summary



Two Mile Canyon is able to meet 97% of the forecasted Baseline 2065 energy demand and therefore has a predicted energy shortfall in the winter months of March and April. Meeting this shortfall will require other generation resources to fill the energy gap. This energy shortfall also implies that Two Mile Canyon is at its maximum storage reservoir size.

In addition to the spilled water (i.e. energy) and available energy in the months of May through October, there is “Must Run” energy from June to September which would require other Yukon facilities (e.g. Whitehorse) to restrict generation in the months from June to September to balance Yukon electrical load and demand.

5.1.5 False Canyon + Middle Canyon ROR [LIARD-FRANC-0696 + LIARD-FRANC-0670-B]

False Canyon + Middle Canyon ROR is a cascade of two sites with False Canyon located upstream on the Frances River providing water storage and generation, and Middle Canyon ROR located downstream operating as a run-of-river facility with no water storage (but a headpond needed to create head for generation purposes).

5.1.5.1 False Canyon [LIARD-FRANC-0696]

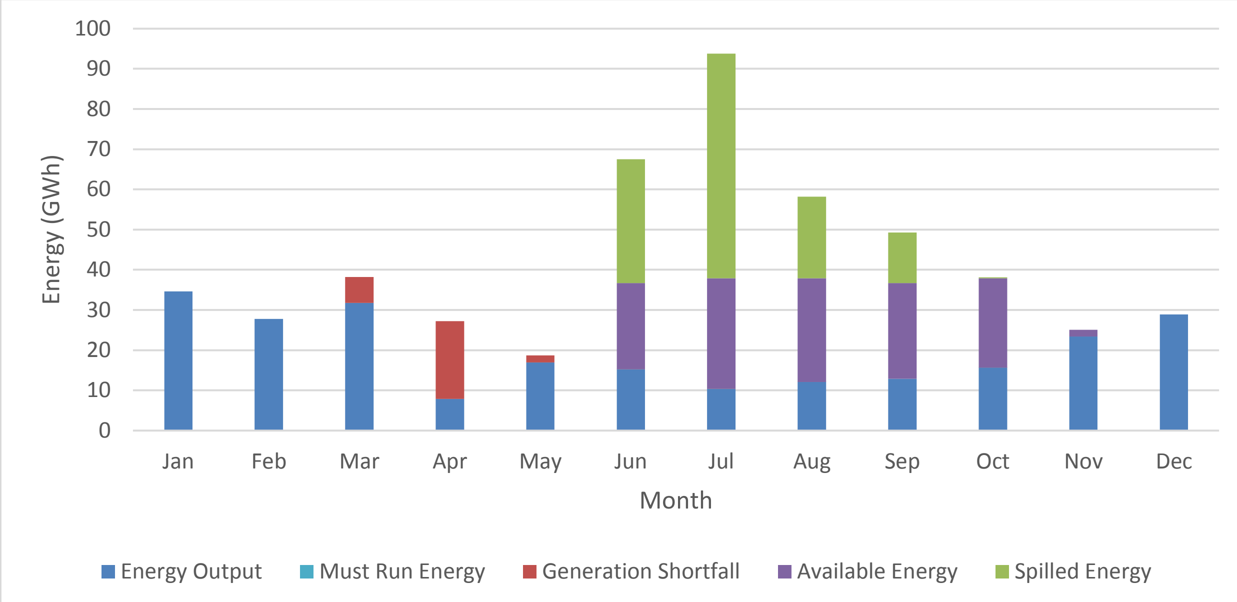
False Canyon is a potential hydroelectric project on the Frances River, located in the Liard River Basin approximately 75 km north of Watson Lake. The total drainage area is estimated at 12,200 km^2. The preliminary project layout includes an approximately 50 m dam with a spillway control structure, a fish ladder, a water intake, a conveyance, a 3-unit powerhouse, tailrace structures and diversions to facilitate de-watering of the dam site during construction.

The estimated FSL of the False Canyon water reservoir is 742m ASL, flooding a total area of approximately 262 km^2 (including raising the existing 109 km^2 Frances Lake level by 8 m). Excluding the existing Frances Lake area of 109 km^2, the incremental flooding area of the reservoir is 153km^2. The ADL of the water reservoir is 737 m ASL, fluctuating the reservoir water level by 5 m over an average year. This means that Frances Lake will typically change elevation from +8m in the summer to +3 m at the end of winter on an annual basis[22]. Assuming a future transmission line between Faro and Watson Lake, less than 10 km of transmission line and less than 10 km of new road are required to interconnect and access the project. Without a Faro to Watson Lake transmission line, approximately 310 km of transmission line is required to connect the project to the substation near Faro.

While False Canyon is not able to supply all of the forecasted Baseline 2065 energy demand on a standalone basis, based on a targeted 5m average draw down it closes a considerable portion of the forecast gap as shown in Figure 27 with energy shortfalls in March, April and May.

[22] The maximum drawdown will be larger than 5 m with the potential to draw the reservoir level down to +0 m or the natural lake level.

Figure 27: False Canyon (Standalone) 2065 Energy Summary



5.1.5.2 Middle Canyon ROR [LIARD-FRANC-0696]

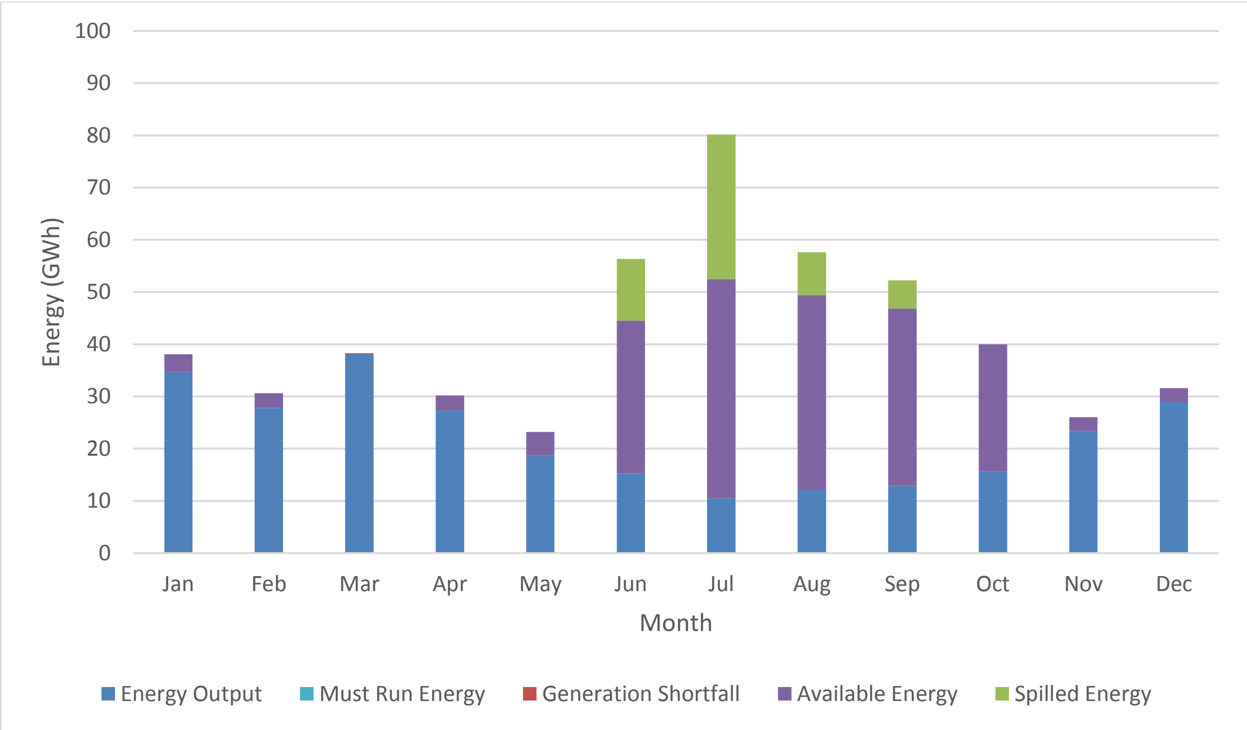
As the downstream project in the cascade, Middle Canyon is a potential ROR hydroelectric project on the Frances River, located in the Liard River Basin approximately 40 km northwest of Watson Lake. The total drainage area is estimated to be 13,000 km^2.

The preliminary project layout includes an approximately 15 m weir, fish ladder, a water intake, conveyance, a 3-unit powerhouse, tailrace structures and diversions to facilitate de-watering of the dam site during construction.

The estimated FSL of the water reservoir is 672 m ASL, flooding a total area of approximately 1 km^2 just downstream of the Robert Campbell highway. Assuming a future transmission line between Faro and Watson Lake, less than 10 km of transmission line and less than 10 km of new road are required to interconnect and access the project. Without a future transmission line, approximately 30km of transmission line is required to connect to the transmission line required for False Canyon.

While False Canyon alone was not able to meet the forecasted Baseline 2065 energy demand, the cascaded layout of False Canyon + Middle Canyon ROR is able to provide more energy than the forecasted Baseline 2065 energy need. As a cascade, False Canyon + Middle Canyon ROR has unutilized energy throughout the year which allows other hydroelectric projects in the Yukon (e.g. Whitehorse) to restrict their generation accordingly. The reason the cascade of False Canyon + Middle Canyon ROR generates more energy than required is that a 5m reservoir drawdown was targeted from the False Canyon reservoir and the Middle Canyon ROR head pond was sized to back up water to the foot of the Robert Campbell highway. Both of these targets increased the project sizes beyond what was strictly necessary to meet Baseline 2065 demand, but likely represents a more accurate view of what an optimized cascade configuration would look like (i.e. the projects are sized "right" rather than "too small" for the geography found at this cascade). It is recognized that the average drawdown for the False Canyon reservoir could be reduced to less than 5m, but this could be viewed as not fully utilizing the river resource once a decision is made to impact the river system and build the cascade.

Figure 28: Cascaded False Canyon and Middle Canyon 2065 Energy Summary



5.1.6 Slate Rapids + Hoole Canyon ROR [PELLY-PELLY-0847-B + PELLY-PELLY-0760-A]

Slate Rapids + Hoole Canyon ROR is a cascade of two sites with Slate Rapids located upstream on the Pelly River providing water storage and generation, and Hoole Canyon ROR located downstream operating as a run-of-river facility with no water storage (but a headpond needed to create head for generation purposes).

5.1.6.1 Slate Rapids [PELLY-PELLY-0847-B]

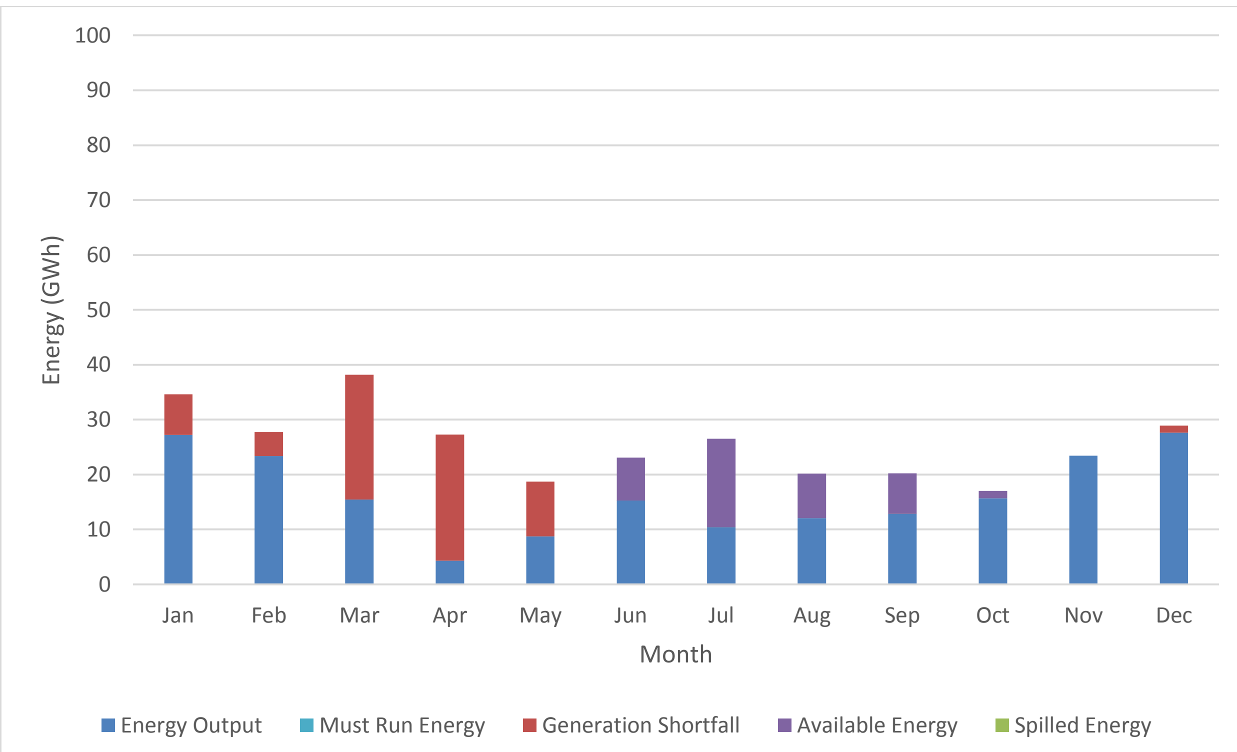
Slate Rapids is a potential hydroelectric project on the Pelly River, located in the Pelly River Basin approximately 75 km east of the community of Ross River. The total drainage area is estimated at 5,400 km^2.

The preliminary project layout includes an approximately 45 m dam with a spillway control structure, a fish ladder, a water intake, conveyance, a 2-unit powerhouse, tailrace structures and diversions to facilitate de-watering of the dam site during construction.

The estimated FSL of the water reservoir is 892 m ASL, flooding a total area of approximately 168 km^2 (37 km^2 of which is the existing Fortin and Pelly Lakes). Excluding the existing lakes area of 37 km^2, the incremental flooding area of the reservoir is 131 km^2. The ADL of the water reservoir is 887 m ASL, fluctuating the reservoir water level by 5 m over an average year. Assuming a future transmission line between Faro and Watson Lake, less than 10 km of transmission line and less than 10 km of new road are required to interconnect and access the project. Without a future transmission line, approximately 145 km of transmission line is required.

Slate Rapids is not able to supply all of the forecasted Baseline 2065 energy demand on a standalone basis, but based on a targeted 5 m average drawdown[23] it closes much of the forecast gap as shown in Figure 29 with energy shortfalls in December through May.

Figure 29: Slate Rapids (Standalone) 2065 Energy Summary



5.1.6.2 Hoole Canyon ROR [PELLY-PELLY-0760-A]

Hoole Canyon ROR is a potential ROR hydroelectric project on the Pelly River, located in the Pelly River Basin approximately 30 km upstream of the community of Ross River. The total drainage area for the dam is estimated to be 9,900 km^2.

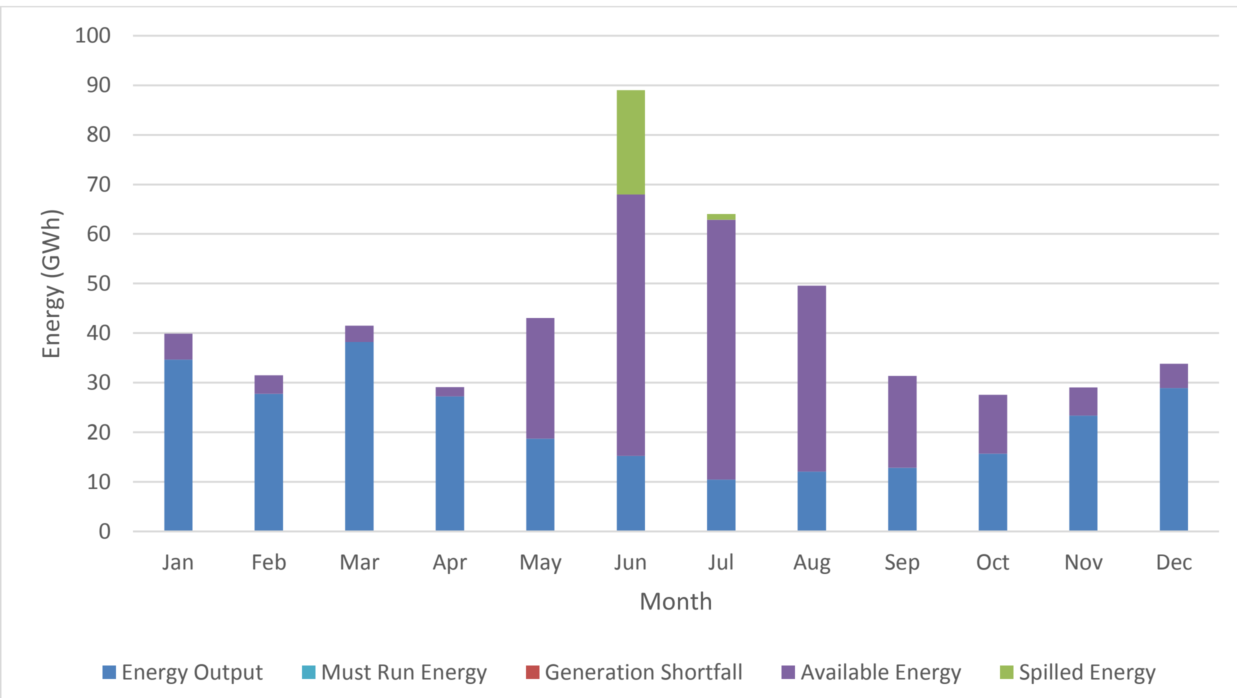
[23] Maximum drawdowns will be larger but the actual maximum drawdown will need to be determined after further study is performed in the future (post 2015).

The preliminary project layout includes an approximately 45 m weir, a fish ladder, a water intake, conveyance, a 2-unit powerhouse, tailrace structures and diversions to facilitate de-watering of the dam site during construction.

The estimated FSL of the water reservoir at the main power dam is 807 m ASL, flooding a total area of approximately 23 km^2. Less than 10km of transmission line is required to connect to the transmission line required for Slate Rapids.

While Slate Rapids alone is not able to supply the forecasted Baseline 2065 energy demand, the cascaded layout of Slate Rapids + Hoole Canyon ROR is able to provide more energy than the forecasted Baseline 2065 energy need. As a cascade, Slate Rapids + Hoole Canyon ROR has unutilized energy throughout the year which allows other hydroelectric projects (e.g. Whitehorse) in the Yukon to restrict their generation accordingly. The reason Slate Rapids + Hoole Canyon ROR is able to provide more energy than required is that a 5 m reservoir drawdown was targeted from the Slate Rapids reservoir and Hoole Canyon was sized at its maximum configuration to utilize the available head. Both of these targets increased the project sizes beyond what was strictly necessary to meet Baseline 2065 demand.

Figure 30: Cascaded Slate Rapids + Hoole Canyon ROR 2065 Energy Summary



6 Step 4: Scalability

As listed previously in Table 14, the six (6) shortlisted projects (standalone and cascade) have the ability to meet the forecasted Baseline 2065 energy need. However, because the projects can meet the 2065 Baseline need in 2065 they may be larger than is required to meet the Yukon's needs in the preceding years from 2035 up to 2065. As a result, Step 4 of the scalability assessment process is to identify potential strategies to scale up (i.e. Scalability) the shortlisted projects over time so that they better match the growing size of Yukon's electricity needs.

The main advantages to scaling projects over time revolve around reducing the cost to the Yukon's ratepayers including:

1) Better matching between project generation and the Yukon's energy and capacity needs with less risk of under-utilized generation assets,
2) Defers capital outlays until such time as they are required, thus reducing the cost to electricity ratepayers,
3) Reduced operation and maintenance costs, thus reducing the cost to electricity ratepayers.

For the Scalability evaluation the following assumptions were used:

1) The projects will reach the size and configuration described in Section 5.1 by 2065.
2) The primary water storage reservoirs and dams will be constructed at full size in 2035.
3) A minimum of two turbines are required from 2035 onwards to facilitate continued generation operations during maintenance or scheduled and unscheduled outages of a single turbine.

Since the water storage reservoirs and dams are constructed at full size from the start of each project, standalone projects will have sufficient energy storage to meet the monthly energy needs in the years leading up to 2065 because the energy requirements before 2065 are less than the energy requirements in 2065. For cascaded projects, this energy sufficiency assumption is not necessarily true and the upstream project may be winter energy limited before it is capacity limited. Therefore the cascaded projects were analyzed from both an energy and capacity perspective to ensure both energy and capacity limits were accounted for.[24] Therefore, the opportunity for scaling up projects resides solely with adding additional turbine generators in the case of standalone projects, and a combination of turbine generators and downstream cascade projects in the case of cascade projects.[25].

[24] For simplicity, only the capacity limits graphs were shown in the report. However, the scalability timeline accounts for both capacity limits and energy limits.

[25] It is acknowledged that at least one hydroelectric project in the Yukon was studied with the concept of having a dam built in two height stages over time so that the reservoir could be expanded over time. However, evaluating the potential for having multiple dam heights that increase over time is outside the scope of this study.

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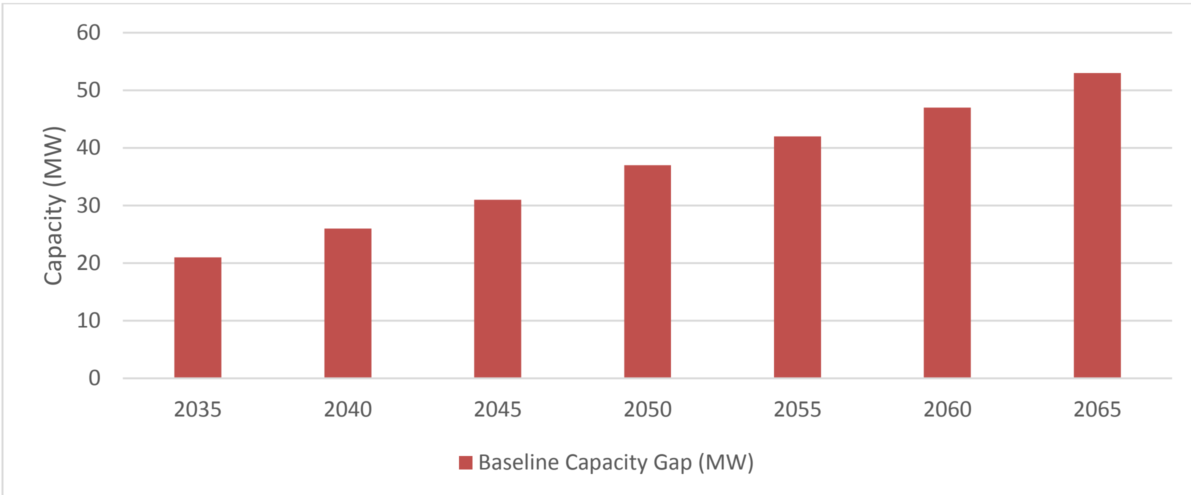
Using the assumptions listed previously and, since capacity constraints are the primary determinant of scaling for the shortlisted projects, the growth in Baseline 2065 capacity gap is shown in Figure 31.

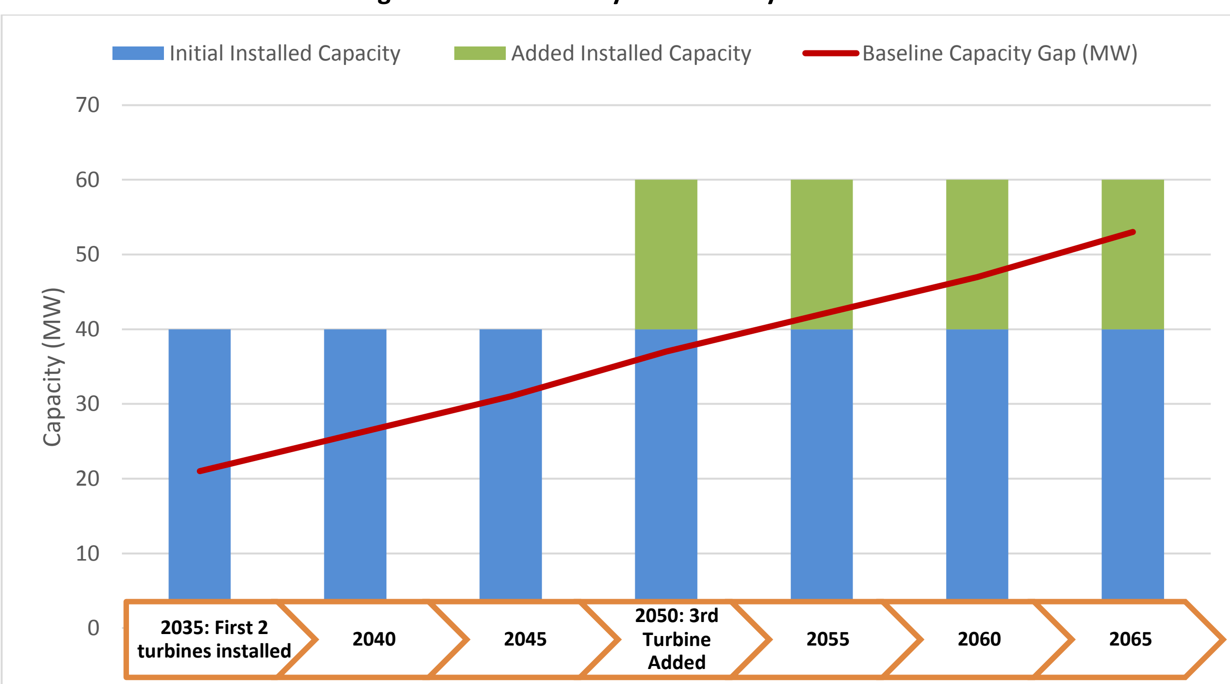
Figure 31: Yukon Baseline 2065 Capacity Gap



6.1 Detour Canyon [PELLY-PELLY-0567-B]

The scalability timeline for Detour Canyon is shown in Figure 32 with the project built at full size in 2035 with two (2) turbine generators, and the 3rd turbine generator (and supporting infrastructure) added in approximately 2050.

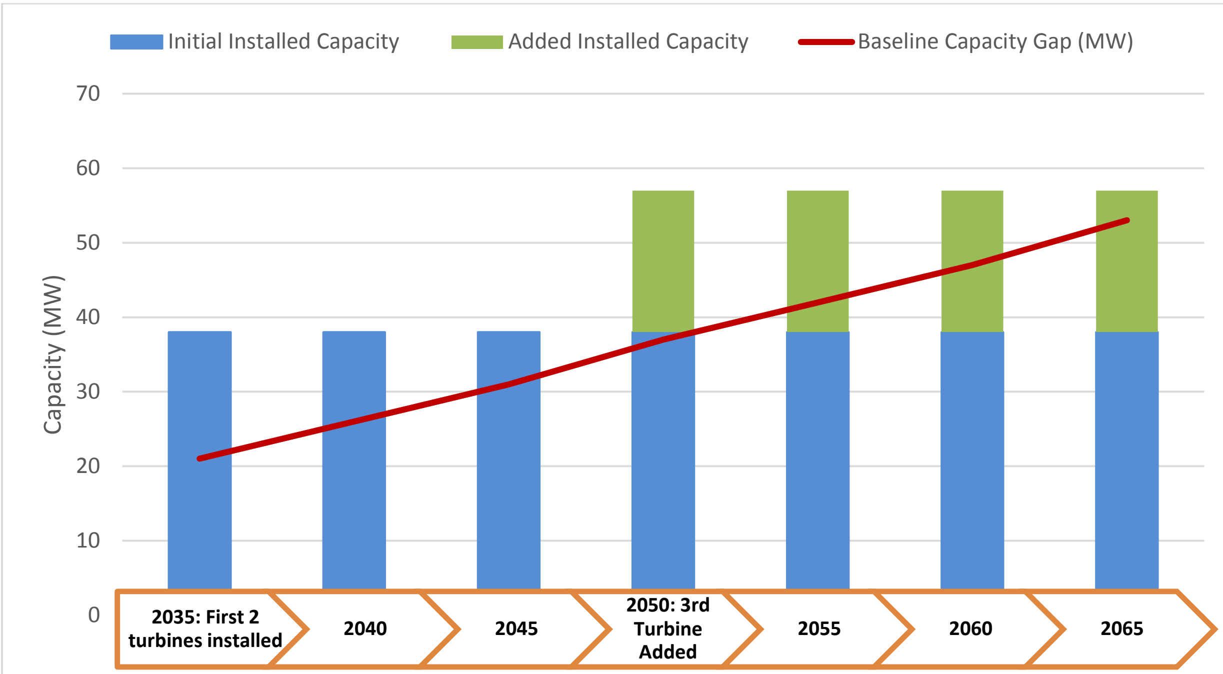
Figure 32: Detour Canyon Scalability Timeline



6.2 Fraser Falls [STEWA-STEWA-0519-B]

The scalability timeline for Fraser Falls is shown in Figure 33 with the project built at full size in 2035 with two turbine generators, and the 3rd turbine generator (and supporting infrastructure) added in approximately 2050.

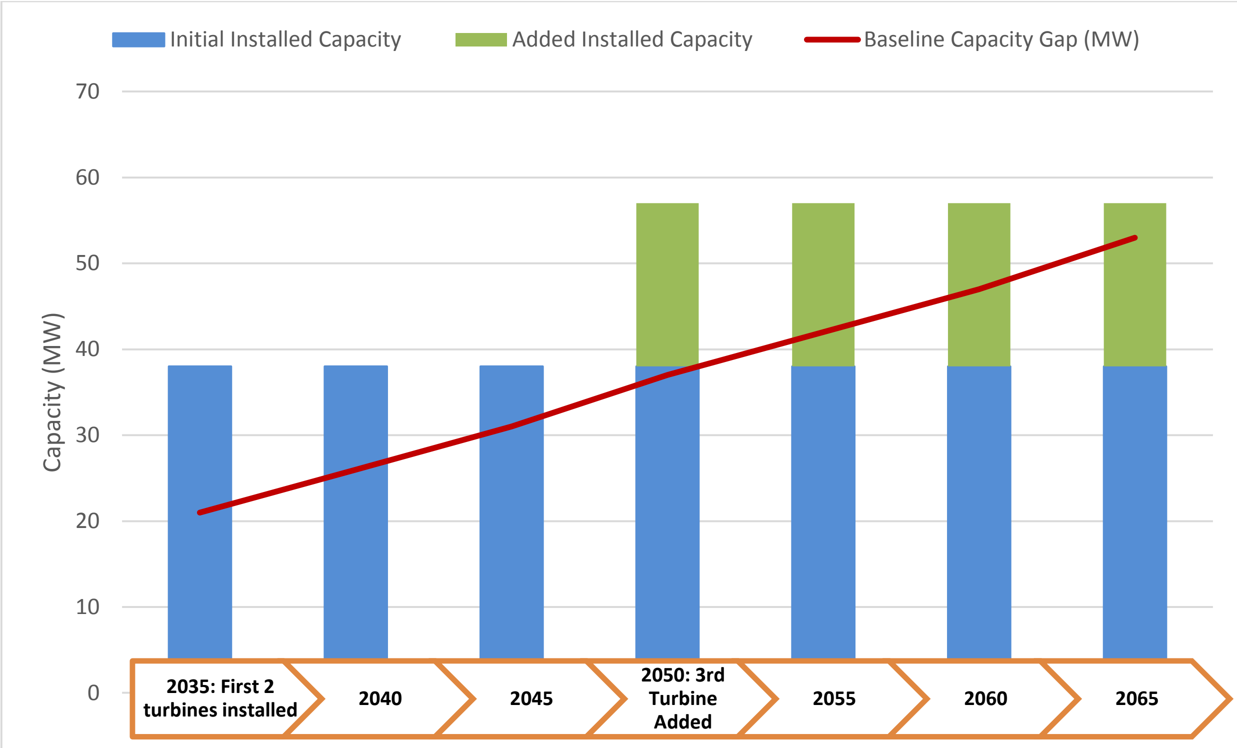
Figure 33: Fraser Falls Scalability Timeline



6.3 Granite Canyon [PELLY-PELLY-0480-B]

The scalability timeline for Granite Canyon is shown in Figure 34 with the project built at full size in 2035 with two turbine generators, and the 3rd turbine generator (and supporting infrastructure) added in approximately 2050.

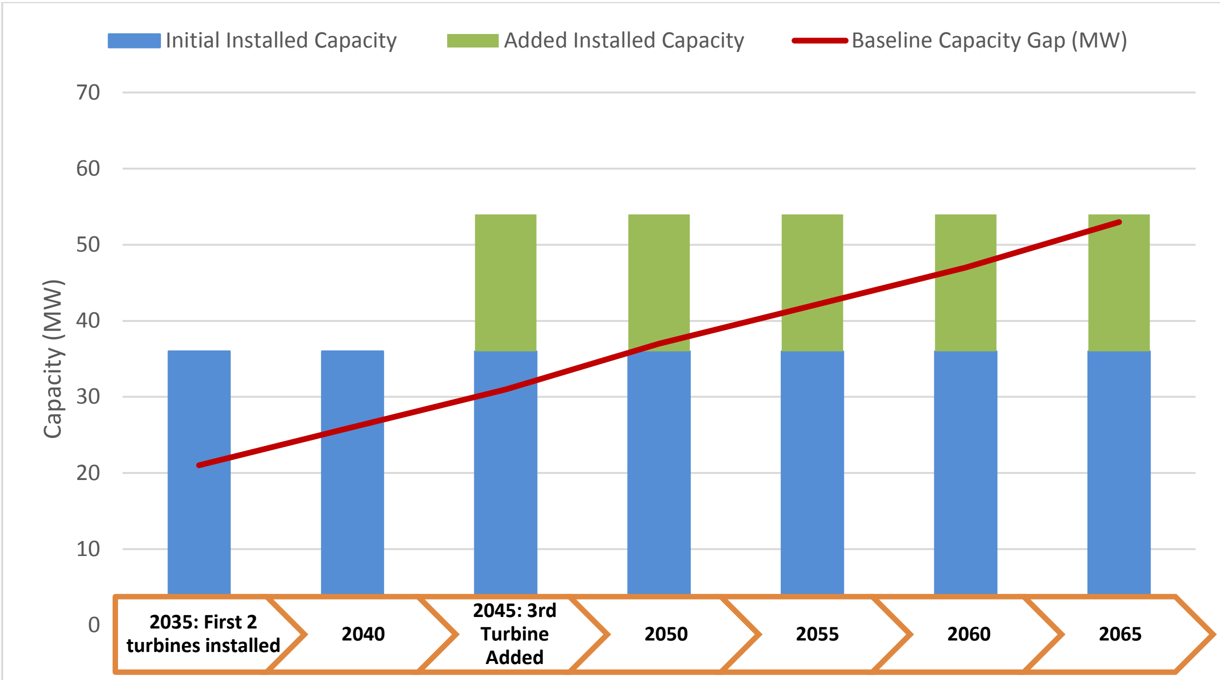
Figure 34: Granite Canyon Scalability Timeline



6.4 Two Mile Canyon [STEWA-HESS -0552]

The scalability timeline for Two Mile Canyon is shown in Figure 35 with the project built at full size in 2035 with two turbine generators, and the 3rd turbine generator (and supporting infrastructure) added in approximately 2045.

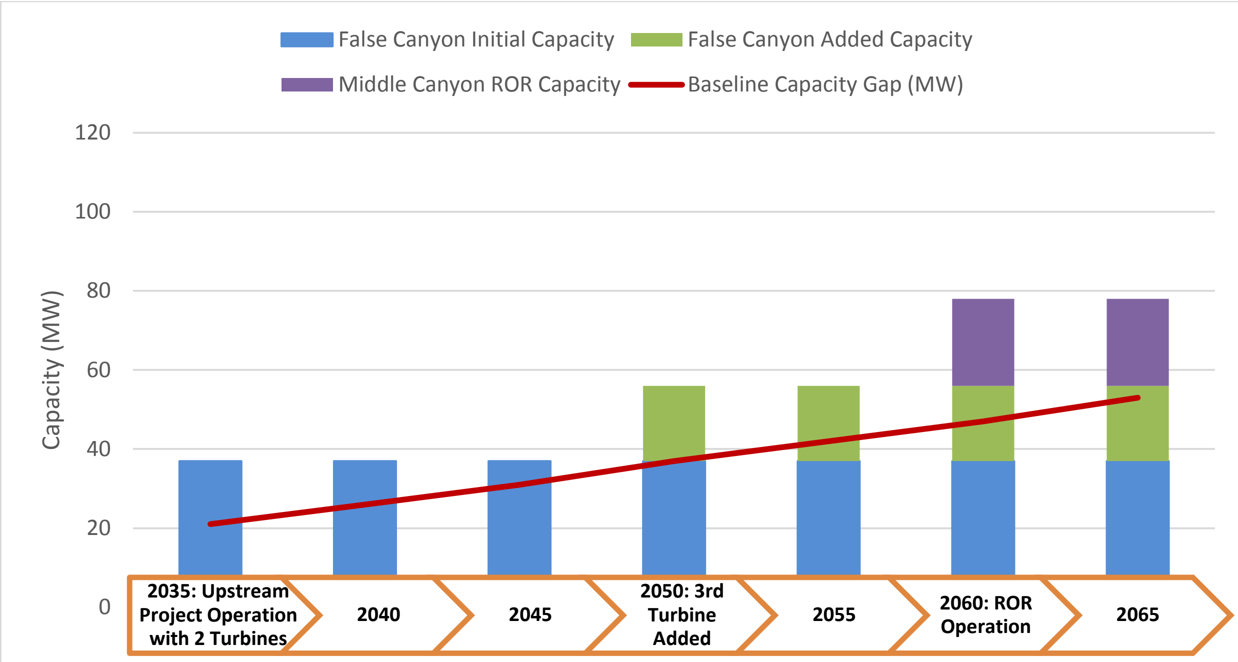
Figure 35: Two Mile Canyon Scalability Timeline



6.5 False Canyon + Middle Canyon ROR [LIARD-FRANC-0696 + LIARD-FRANC-0670-B]

The scalability timeline for a cascaded False Canyon + Middle Canyon ROR is shown in Figure 36 with False Canyon built at full size in 2035 with two turbine generators, a 3rd turbine generator (and supporting infrastructure) added in approximately 2050, and the Middle Canyon ROR with 2 turbine generators built in 2060. False Canyon energy limit is reached in 2060 while its capacity limit is reached in 2065 therefore the Middle Canyon ROR is built before False Canyon reaches its capacity limit.

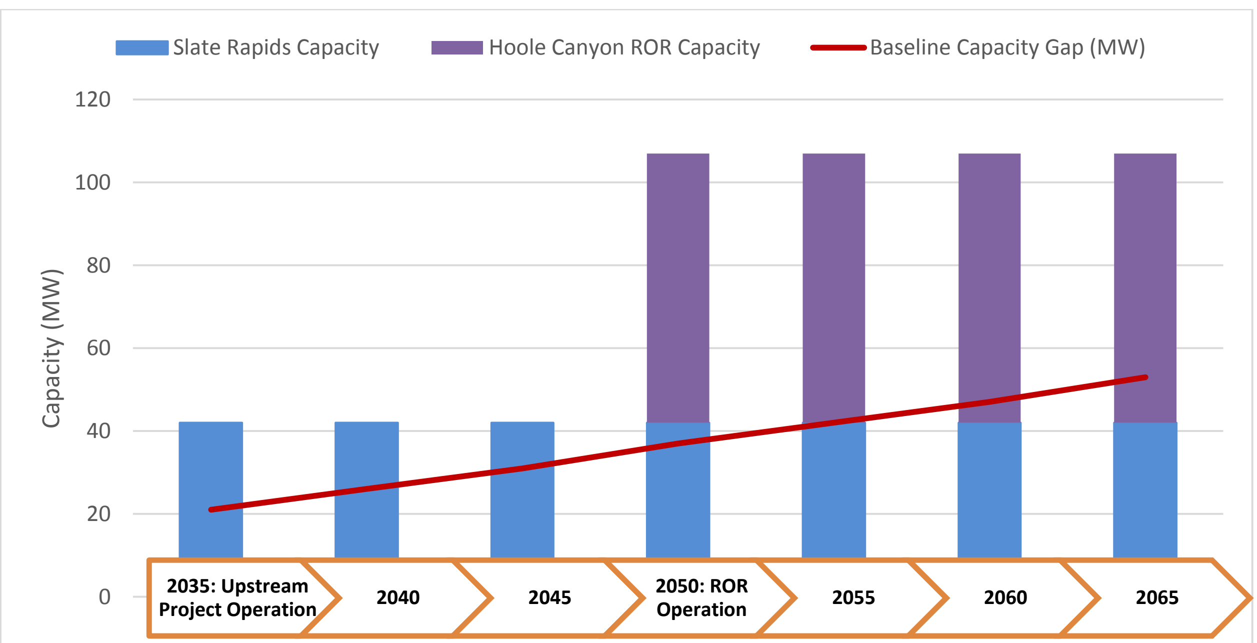
Figure 36: False Canyon + Middle Canyon ROR Scalability Timeline



6.6 Slate Rapids + Hoole Canyon ROR [PELLY-PELLY-0847-B + PELLY-PELLY-0760-A]

The scalability timeline for a cascaded Slate Rapids and Hoole Canyon is shown in Figure 37 with Slate Rapids at full size in 2035 with two turbine generators, and the Hoole Canyon ROR with 2 turbine generators built in 2050. Slate Rapids reaches its capacity limit at the same time it reaches its energy limit.

Figure 37: Slate Rapids and Hoole Canyon Scalability Timeline



7 Scalability Assessment Results and Recommendations

The *Scalability Assessment Report* further assessed the potential of larger than 10MW hydroelectric projects to fill the Yukon's growing energy and capacity gap. At the conclusion of the scalability analysis six (6) projects remain (4 Standalone, 2 Cascades) as shown in Figure 38 and summarized in Table 16. These projects were shortlisted based on their ability to meet the Yukon's forecasted Baseline 2065 energy and capacity gaps while minimizing reservoir sizes.

Figure 38: Scalability Short List Map

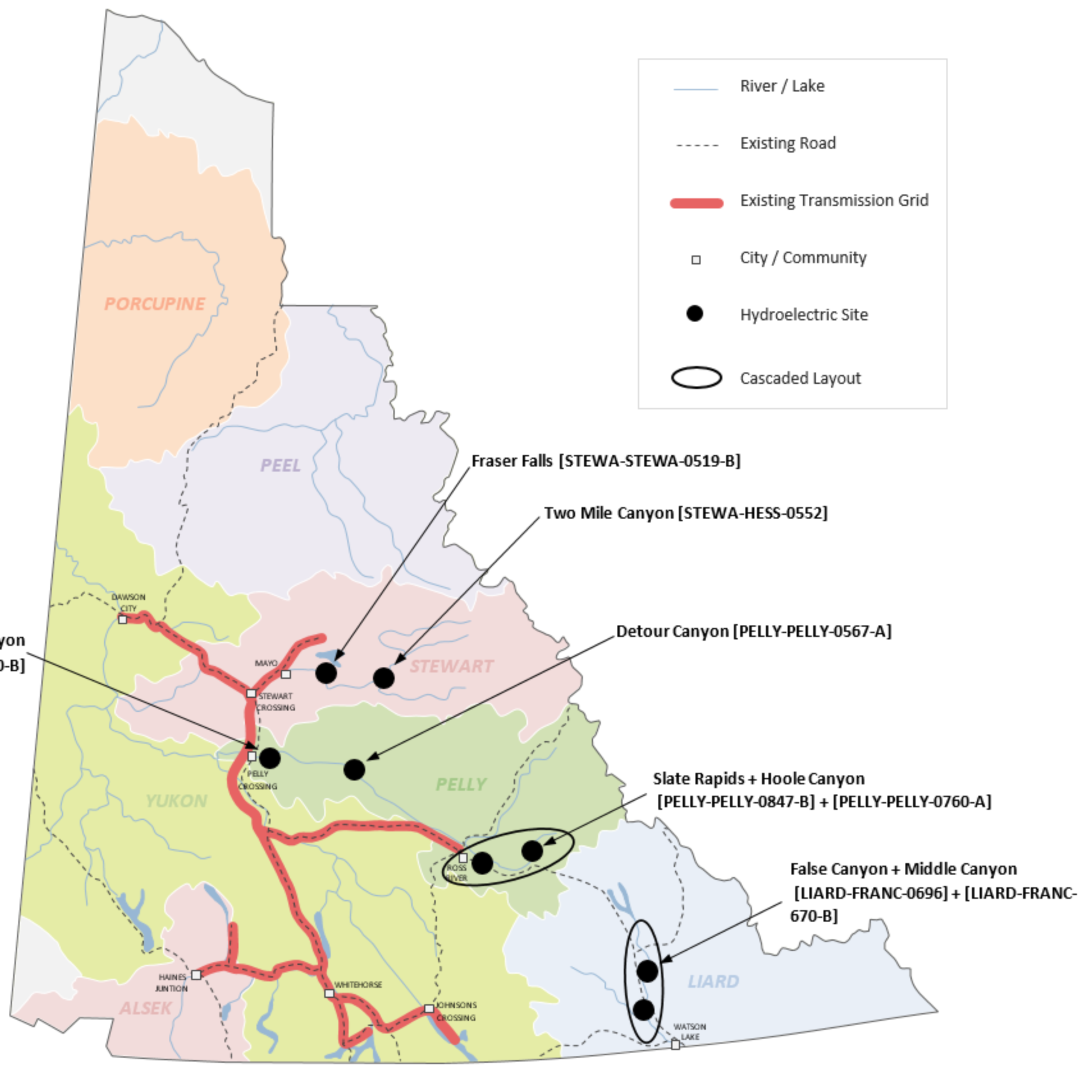


Table 16: Scalability Short List

Site Name	Site ID	Existing Lake Area[26]	Incremental Reservoir Footprint	Total Reservoir Footprint	Gap Closure
Detour Canyon	PELLY-PELLY-0567-B	0 km^2	130 km^2	130 km^2	100%
Fraser Falls	STEWA-STEWA-0519-B	0 km^2	311 km^2	311 km^2	100%
Granite Canyon	PELLY-PELLY-0480-B	0 km^2	173 km^2	173 km^2	100%
Two Mile Canyon	STEWA-HESS -0552	0 km^2	101 km^2	101 km^2	97%
False Canyon + Middle Canyon Run of River (ROR)	LIARD-FRANC-0696 + LIARD-FRANC-0670-B	109 km^2	154 km^2	263 km^2	100%
Slate Rapids + Hoole Canyon ROR	PELLY-PELLY-0847-B + PELLY-PELLY-0760-A	37 km^2	154 km^2	191 km^2	100%

At this stage, no detailed consideration was given to environmental and socio-economic impacts, surface and subsurface tenure issues, design, engineering, constructability planning, and the overall economics of a major capital project. These aspects will be studied in future technical papers:

1) *Project Costs per Hydro Development Phase*, and
2) *Positive and Negative Socio-Economic and Environmental Effects*.

[26] Existing lake areas do not include river beds.

Appendix A: Forecasted Energy Gaps and Capacity Gaps

Table A-1 and Table A-2 show the forecasted baseline energy gaps and capacity gaps for 2035 to 2065.

Table A-1: Forecasted Baseline Monthly Energy Gaps (GWh)

Month	2035	2045	2055	2065
Jan	17.6	23.3	29.0	34.7
Feb	13.4	18.2	23.0	27.8
Mar	23.5	28.4	33.3	38.2
Apr	14.8	19.0	23.1	27.3
May	6.9	10.8	14.8	18.7
Jun	4.1	7.8	11.5	15.3
Jul	0.0	3.0	6.7	10.5
Aug	0.5	4.4	8.2	12.1
Sep	0.9	4.9	8.9	12.9
Oct	2.2	6.7	11.2	15.7
Nov	7.9	13.1	18.2	23.4
Dec	11.6	17.4	23.1	28.9

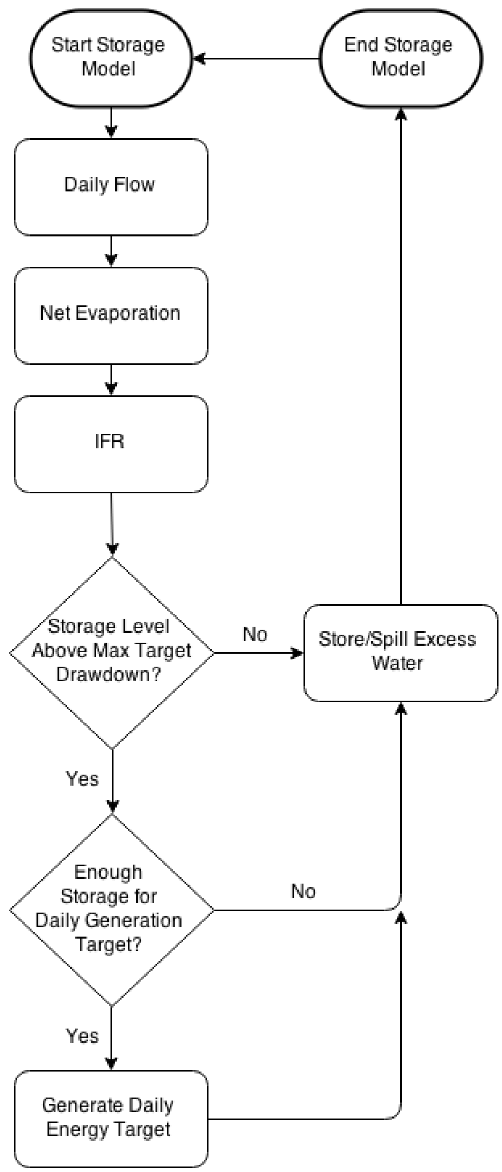
Table A-2: Forecasted Baseline Capacity Gaps

	2035	2040	2045	2050	2055	2060	2065
Baseline Capacity Gap (MW)	21	26	31	37	42	47	53

Appendix B: Storage Model Process

For standalone projects, the storage model process is described Figure B-1. The model examined the daily average flow for each day of the historical flow series and deducted the Instream Flow Requirements (IFR)[27], and evaporation to obtain the available flows for generation. The head losses and resulting net head were calculated, and the appropriate water-to-wire efficiency was selected to then calculate the daily energy generation.

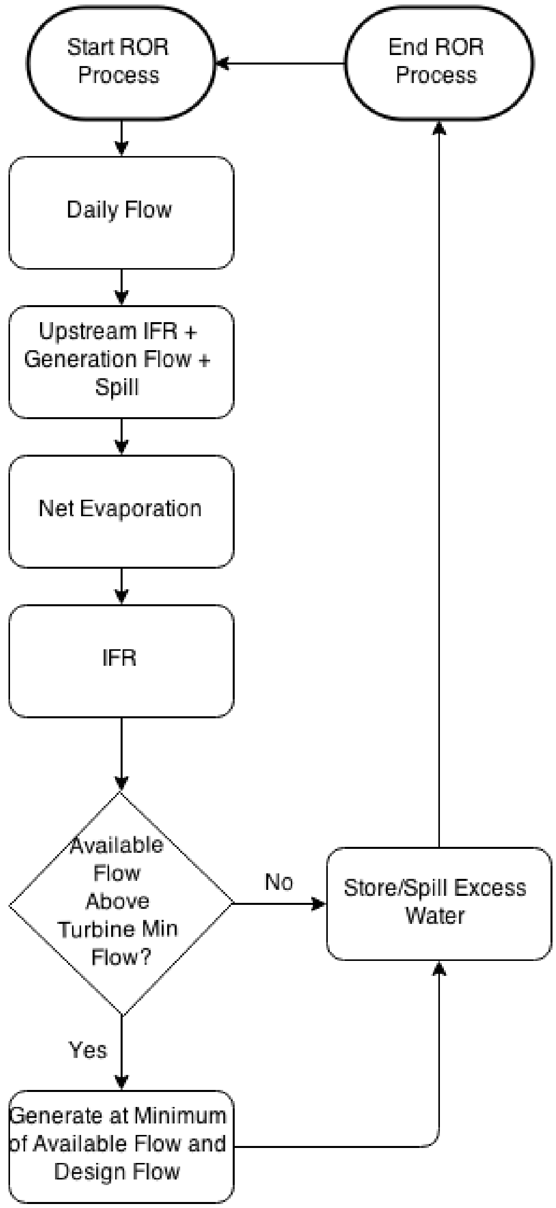
Figure B-1: Storage Model Process



[27] The IFR were passed through the turbine for a short diversion reach (i.e., the powerhouse was at the dam or near the dam).

For cascaded projects, the upstream storage process is described in Figure B-1 and the downstream ROR process is described in Figure B-2. For the ROR process, the outflows including water used for generation, IFR, and spill from the upstream project along with the daily flows from the added downstream catchment area were used to generate additional energy as a ROR operation.

Figure B-2: Cascade Downstream ROR Process



Appendix C: Storage Model Inputs

C.1 Hydrology Report

Midgard has commissioned JEM Energy Ltd. (JEM) to complete a hydrology review for the sites of interest identified in the *Site Screening Inventory Part 1 & 2*. The hydrology report is attached thereafter. The climate change effects on the hydrology are discussed in Section C.2: Climate Change.

JEM ENERGY LTD.

Yukon Hydrology Report

Prepared for:

Midgard Consulting Inc.
828 - 1130 West Pender Street
Vancouver, BC V6E 4A4

FINAL

May 26, 2015

Prepared by:
JEM Energy Ltd.
16779 Mapletree Close
Surrey, BC, V4N 5L5
Contact: Jennifer McCash, P.Eng.

JEM ENERGY LTD.

16779 Mapletree Close
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May 26, 2015 File No.: 2010-01

Midgard Consulting Inc.
828 - 1130 West Pender Street
Vancouver, BC V6E 4A4

Attention: Michael Potyok, P.Eng.

Dear Sir:

Re: Yukon Hydrology Report
Scope of Work #1

Please find attached a digital ***Final*** copy of the Yukon Hydrology Report, Scope of Work #1.

If you have any further questions, please do not hesitate to contact the undersigned.

Sincerely,

Jennifer McCash

____

Jennifer E. M[c]Cash, P.Eng.

JEM Energy Ltd.
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1.0 INTRODUCTION

1.1 General

JEM Energy Ltd. (JEM) was retained by Midgard Consulting Inc. to complete a hydrology review of a number of watersheds within the Yukon Territory. The development of synthetic long term daily flow sets will be used as input into power generation modelling to be completed by Midgard Consulting Inc. ("Midgard"). The results of this work will prioritize the potential for hydroelectric power production based on a number of environmental, social and economic factors. The scope of this report is only the development of individual synthetic average daily flow sets.

A total of eleven (11) proposed dam sites for the purpose of generating hydroelectric power were provided to JEM by Midgard. In order to estimate the power generation potential of a site, a synthetic long term average daily flow set is required. The synthetic flow sets are based on historical flow records from the Water Survey of Canada ("WSC") gauges installed throughout the Territory. The eleven (11) proposed dam sites requested for review are listed in ***Table 1.1***.

Table 1.1 – Proposed Hydroelectric Dam Sites

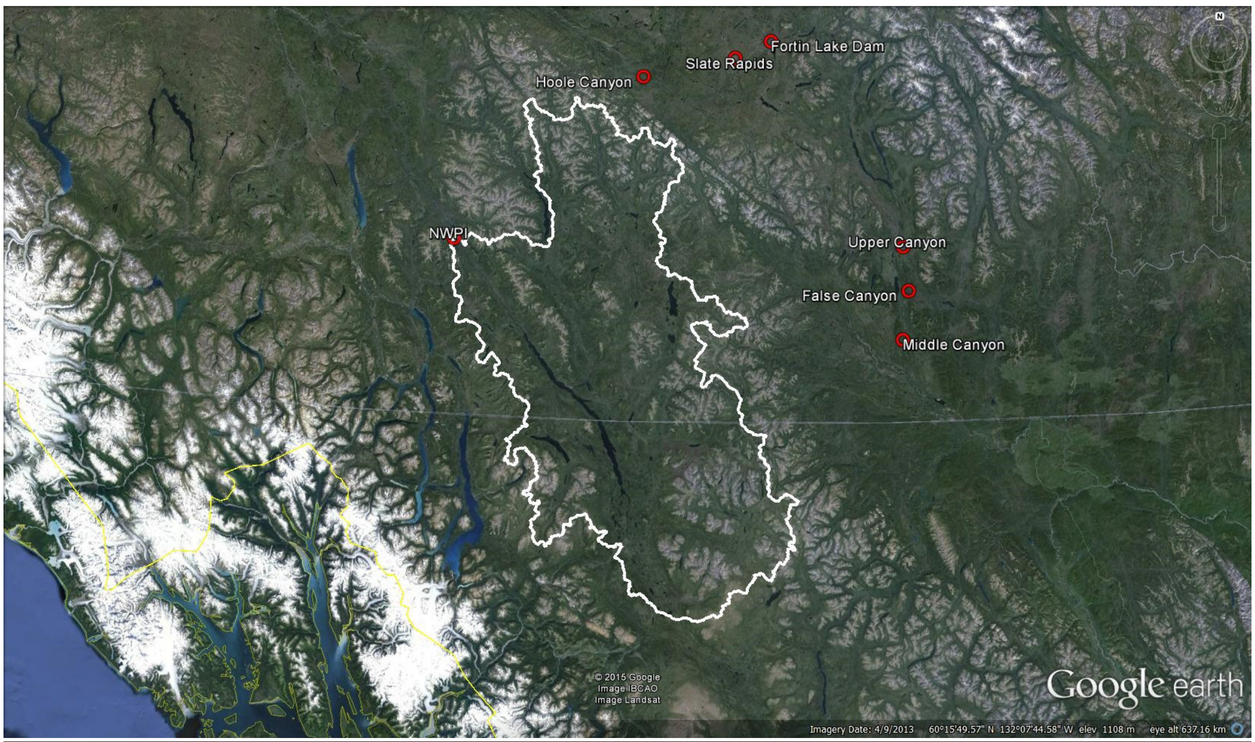
Name	Area (km^2)
NWPI Canyon	32,622
Upper Canyon	11,014
False Canyon	12,163
Middle Canyon	12,901
Fortin Lake	4,997
State Rapids	5,357
Hoole Canyon	9,876
Detour Canyon	28,353
Granite Canyon	45,665
Two Mile Canyon	14,127
Fraser Falls	30,452

1.2 Watershed Descriptions

1.2.1 NWPI Canyon

The NWPI Canyon watershed is located on the Teslin River located approximately 155 km south of Faro as shown on ***Figure 1.1***. The Teslin River above the NWPI Canyon dam location flows northwest collecting drainage from the southwestern facing slopes of the Pelly Mountains from a maximum elevation of 2,404 meters above sea level ("masl") down to an average dam elevation of 688 masl with a mean elevation of 1,450 masl. The 32,622 km^2 contains no glacier content and a lake fraction of approximately 2.45%. Refer to ***Table 1.2*** for a summary of watershed characteristics.

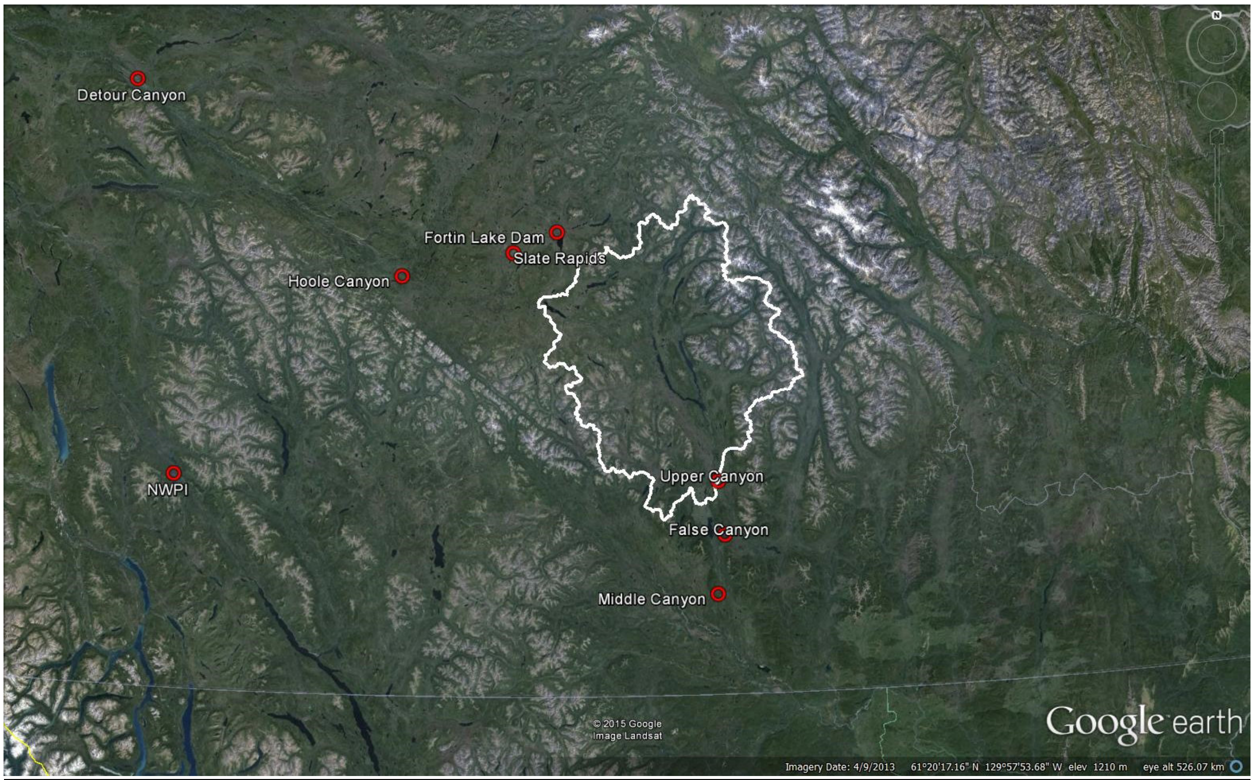
Figure 1.1 – NWPI Canyon Watershed



1.2.2 Upper Canyon

The Upper Canyon watershed is located on the Frances River located approximately 283 km southwest of Faro as shown on ***Figure 1.2***. The Frances River above the Upper Canyon dam location flows south collecting drainage from the southwestern facing slopes of the Selwyn Mountains from a maximum elevation of 2,572 masl down to an average dam elevation of 766 masl with a mean elevation of 1,250 masl. The 11,014 km^2 watershed contains glacier and lake fraction of approximately 0.19% and 2.10% respectively. Refer to ***Table 1.2*** for a summary of watershed characteristics.

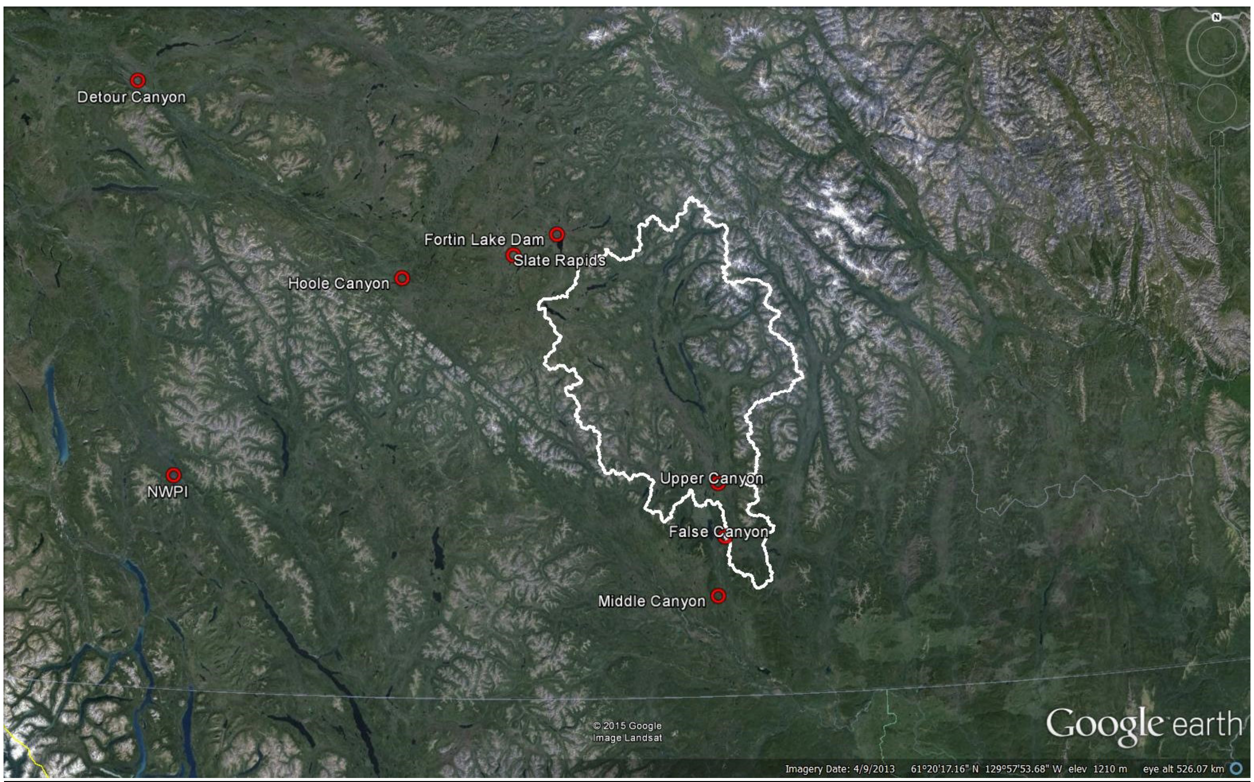
Figure 1.2 – Upper Canyon Watershed



1.2.3 False Canyon

The False Canyon watershed is located on the Frances River located approximately 283 km southwest of Faro and includes the Upper Canyon watershed as shown on ***Figure 1.3***. The Frances River above the False Canyon dam location flows south collecting drainage from the southwestern facing slopes of the Selwyn Mountains from a maximum elevation of 2,572 masl down to an average dam elevation of 724 masl with a mean elevation of 1,250 masl. The 12,163 km^2 watershed contains glacier and lake fraction of approximately 0.12% and 1.92% respectively. Refer to ***Table 1.2*** for a summary of watershed characteristics.

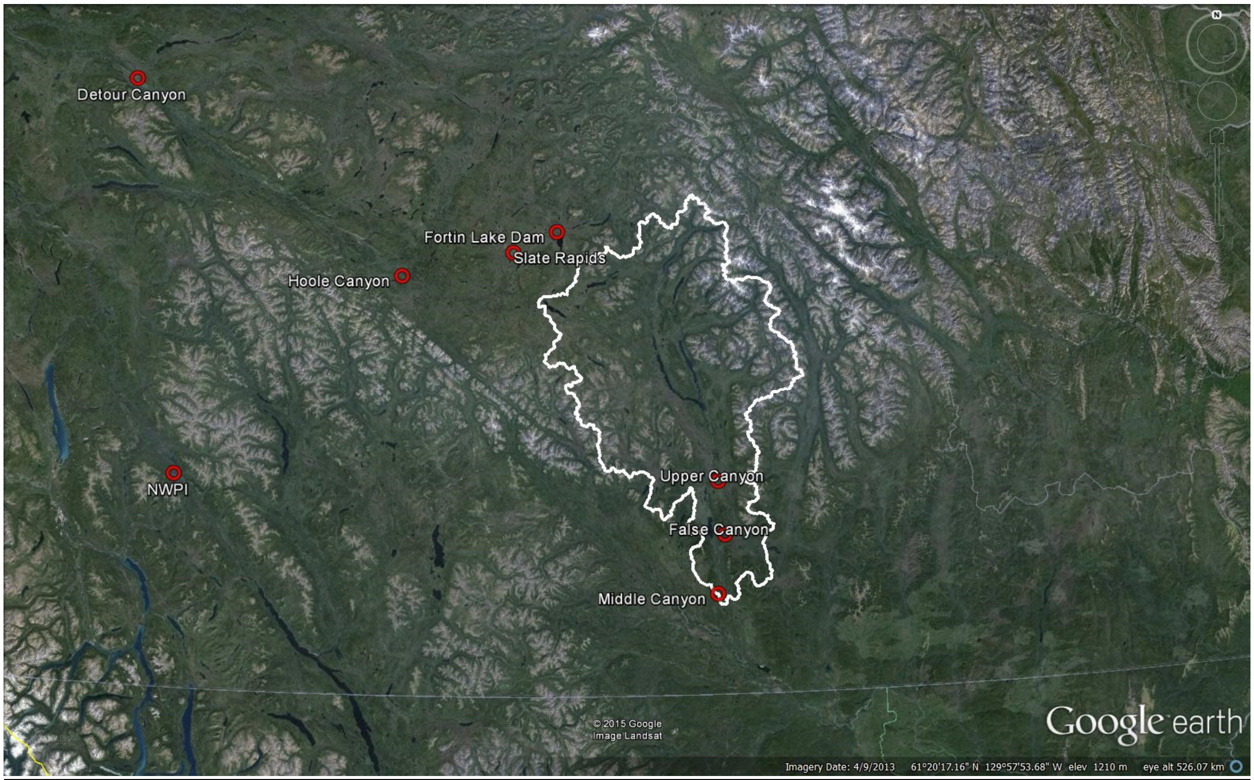
Figure 1.3 – False Canyon Watershed



1.2.4 Middle Canyon

The Middle Canyon watershed is located on the Frances River located approximately 300 km southwest of Faro and contains the Upper Canyon and False Canyon watersheds as shown on ***Figure 1.4***. The Frances River above the Middle Canyon dam location flows south collecting drainage from the southwestern facing slopes of the Selwyn Mountains from a maximum elevation of 2,572 masl down to an average dam elevation of 710 masl with a mean elevation of 1,250 masl. The 12,901 km^2 watershed contains glacier and lake fraction of approximately 0.11% and 1.98% respectively. Refer to ***Table 1.2*** for a summary of watershed characteristics.

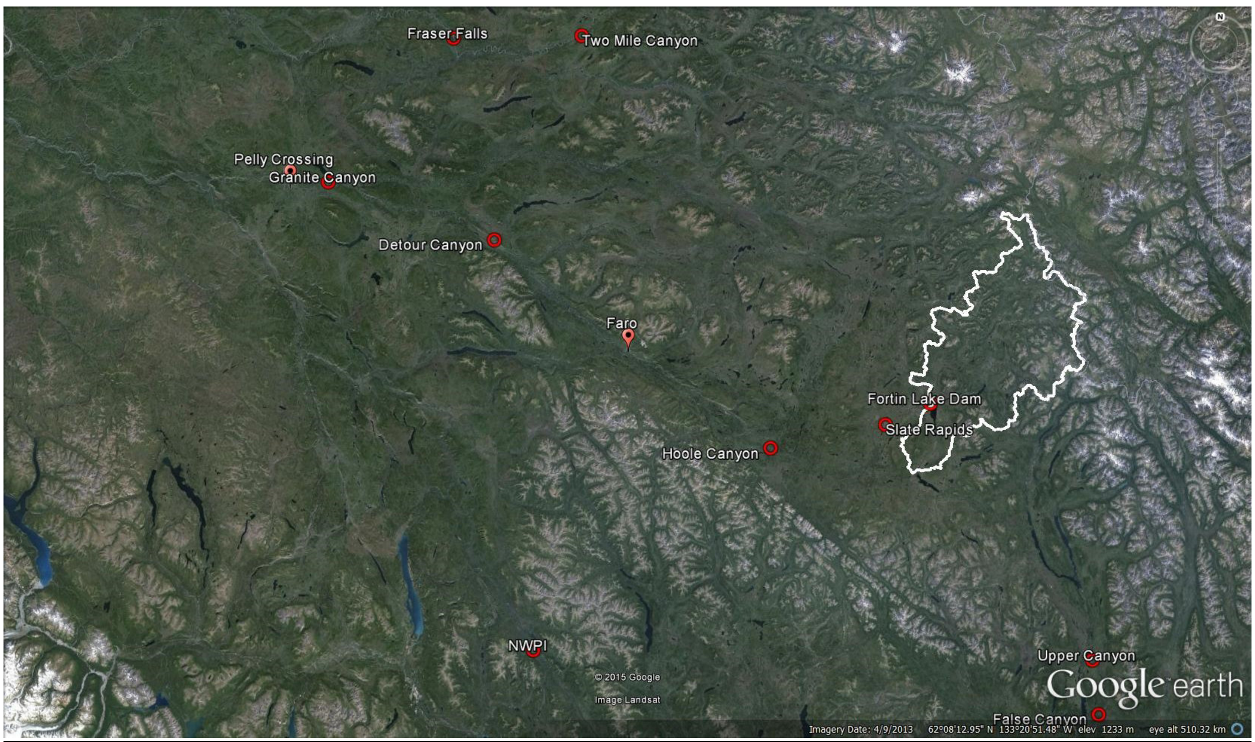
<u>Figure 1.4 – Middle Canyon Watershed</u>



1.2.5 Fortin Lake

The Fortin Lake watershed is located on the Pelly River located approximately 145 km east-southeast of Faro as shown on ***Figure 1.5***. The Pelly River above the Fortin Lake dam location flows southwest collecting drainage from the southwestern facing slopes of the Selwyn Mountains from a maximum elevation of 2,353 masl down to an average dam elevation of 884 masl with a mean elevation of 1,250 masl. The 4,997 km^2 contains no glacier content and a lake fraction of approximately 0.88%. Refer to ***Table 1.2*** for a summary of watershed characteristics.

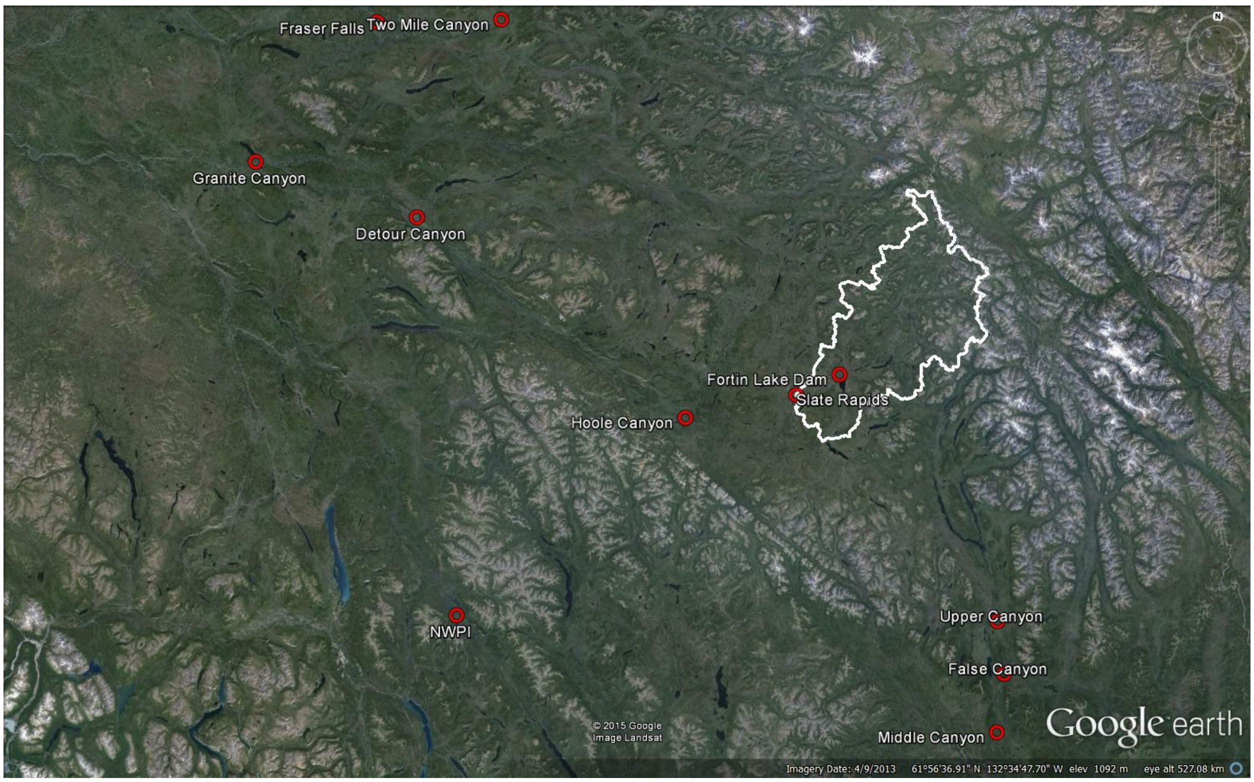
Figure 1.5 – Fortin Lake Watershed



1.2.6 Slate Rapids

The Slate Rapids watershed is located on the Pelly River located approximately 127 km southeast of Faro and 24 km southwest of the Fortin Lake dam and contains the Fortin Lake watershed as shown on ***Figure 1.6***. The Pelly River above the Slate Rapids dam location flows southwest collecting drainage from the southwestern facing slopes of the Selwyn Mountains from a maximum elevation of 2,353 masl down to an average dam elevation of 890 masl with a mean elevation of 1,200 masl. The 5,357 km^2 watershed contains no glacier content and a lake fraction of approximately 0.87%. Refer to ***Table 1.2*** for a summary of watershed characteristics.

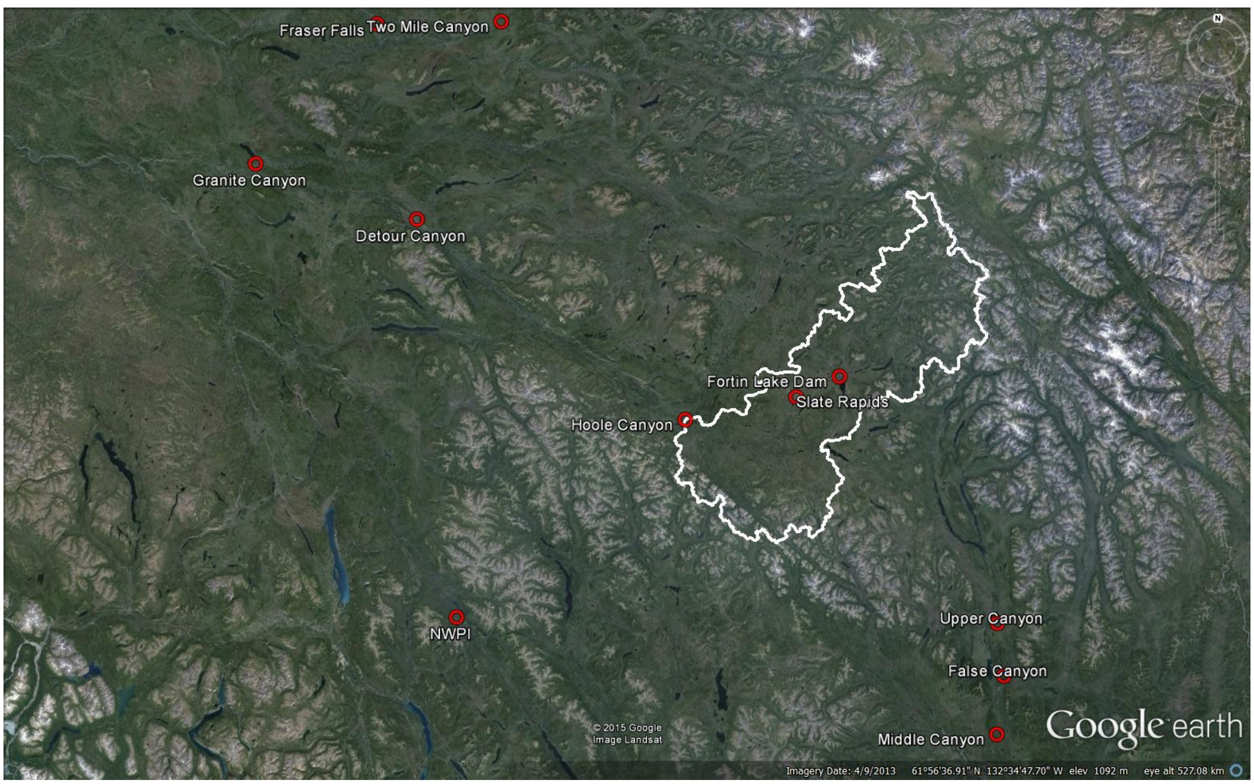
Figure 1.6 – Slate Rapids Watershed



1.2.7 Hoole Canyon

The Hoole Canyon watershed is located on the Pelly River located approximately 82 km southeast of Faro and contains the Fortin Lake and Slate Rapids watersheds as shown on ***Figure 1.7***. The Pelly River above the Hoole Canyon dam location flows southwest then turning northeast collecting drainage from the southwestern facing slopes of the Selwyn Mountains from a maximum elevation of 2,353 masl down to an average dam elevation of 804 masl with a mean elevation of 1,150 masl. The 9,876 km^2 watershed contains no glacier content and a lake fraction of approximately 0.68%. Refer to ***Table 1.2*** for a summary of watershed characteristics.

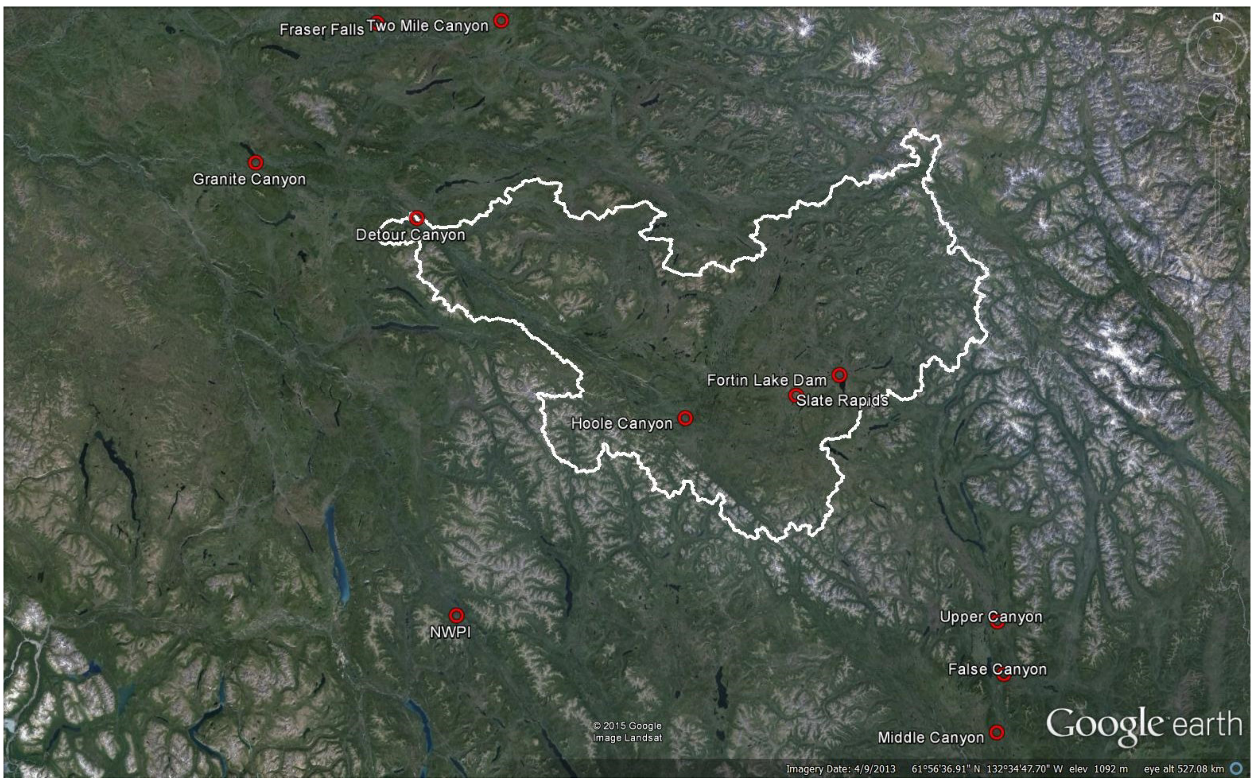
Figure 1.7 – Hoole Canyon Watershed



1.2.8 Detour Canyon

The Detour Canyon watershed is located on the Pelly River located approximately 80 km northwest of Faro and 100 km east-southeast of Pelly Crossing and contain the Fortin Lake, Slate Rapids and Hoole Canyon watersheds as shown on ***Figure 1.8***. The Pelly River above the Detour Canyon dam location flows northeast collecting drainage from the southwestern facing slopes of the Selwyn Mountains from a maximum elevation of 2,515 masl down to an average dam elevation of 613 masl with a mean elevation of 1,200 masl. The 28,353 km^2 watershed contains glacier and lake fraction of approximately 0.75% and 0.05% respectively. Refer to ***Table 1.2*** for a summary of watershed characteristics.

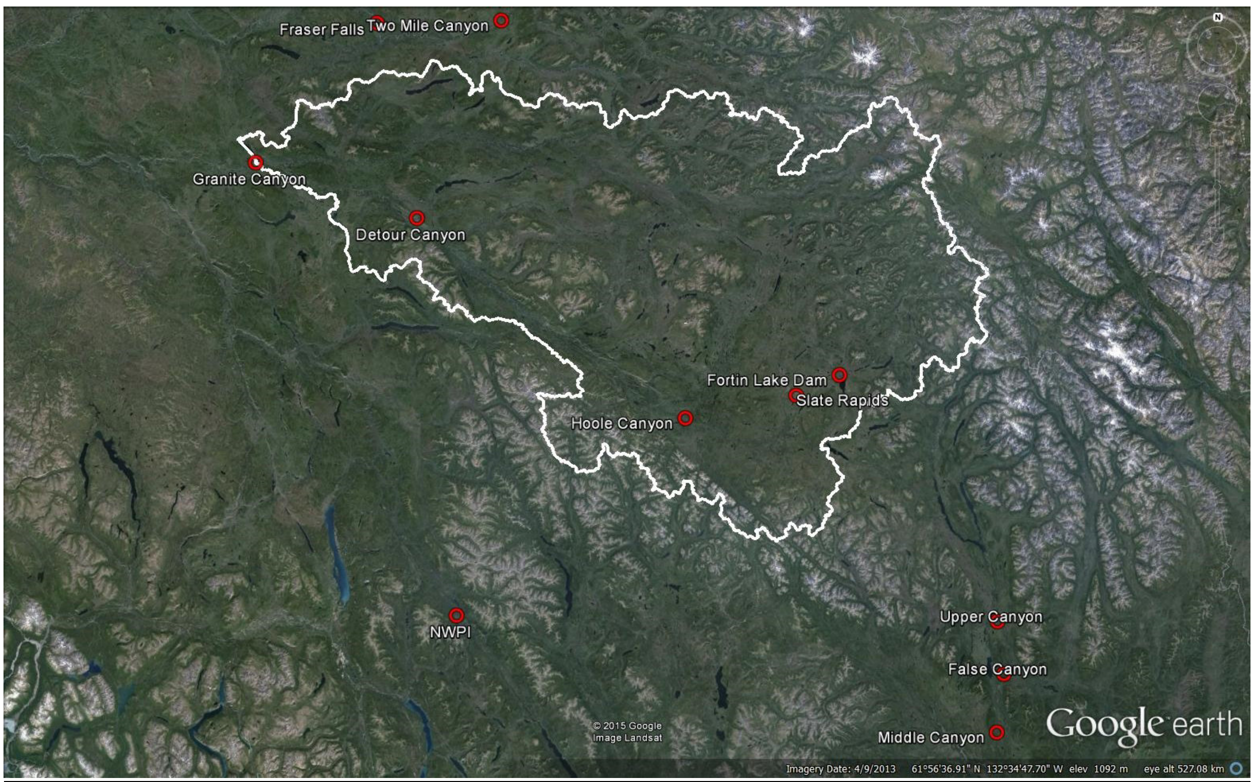
Figure 1.8 – Detour Canyon Watershed



1.2.9 Granite Canyon

The Granite Canyon watershed is located on the Pelly River located approximately 18 km east of Pelly Crossing and contain the Fortin Lake, Slate Rapids, Hoole Canyon and Detour Canyon watersheds as shown on ***Figure 1.9***. The Pelly River above the Granite Canyon dam location flows northeast collecting drainage from the southwestern facing slopes of the Selwyn Mountains from a maximum elevation of 2,515 masl down to an average dam elevation of 545 masl with a mean elevation of 1,300 masl. The 45,665 km^2 watershed contains glacier and lake fraction of approximately 0.08% and 0.88% respectively. Refer to ***Table 1.2*** for a summary of watershed characteristics.

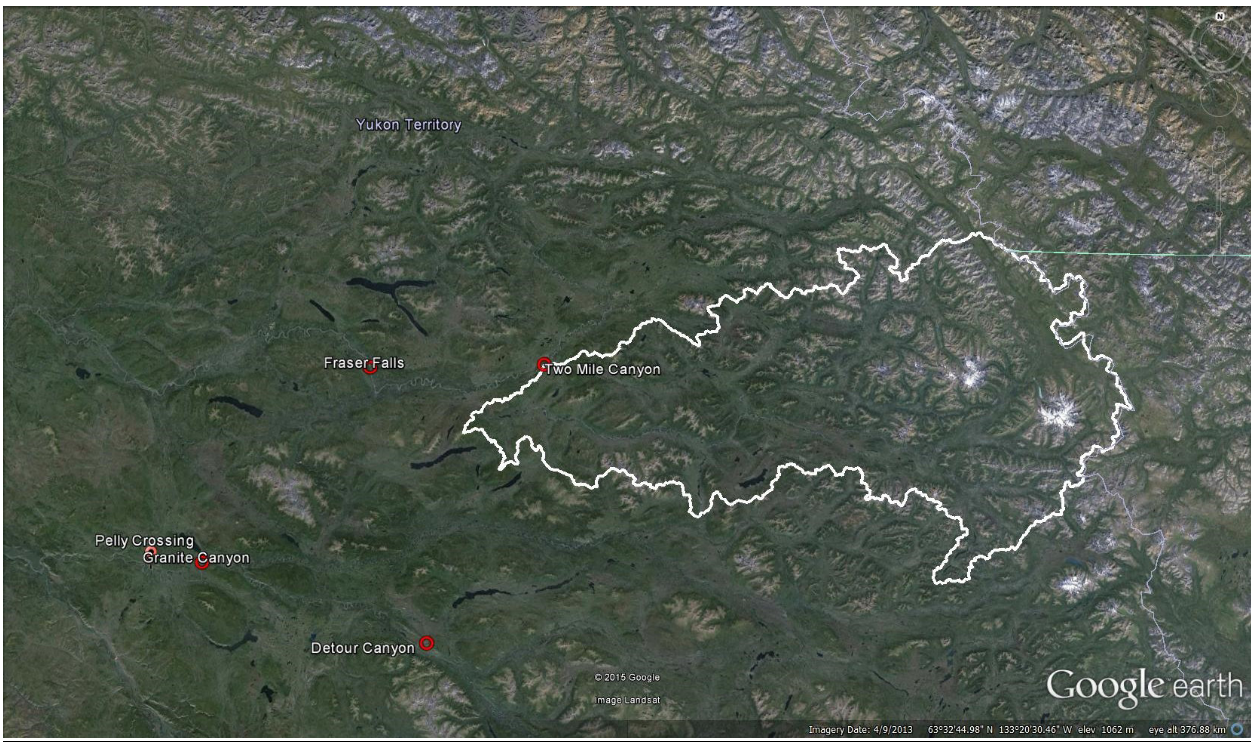
Figure 1.9 – Granite Canyon Watershed



1.2.10 Two Mile Canyon

The Two Mile Canyon watershed is located on the Stewart River located approximately 154 km northeast of Pelly Crossing as shown on ***Figure 1.10***. The Stewart River above the Two Mile Canyon dam location flows east collecting drainage from the western facing slopes of the Mackenzie Mountains from a maximum elevation of 2,298 masl down to an average dam elevation of 603 masl with a mean elevation of 1,300 masl. The 14,127 km^2 watershed contains glacier and lake fraction of approximately 1.30% and 0.41% respectively. Refer to ***Table 1.2*** for a summary of watershed characteristics.

Figure 1.10 – Two Mile Canyon Watershed



1.2.11 Fraser Falls

The Fraser Falls watershed is located on the Stewart River located approximately 102 km northeast of Pelly Crossing and contains the Two Mile Canyon watershed as shown on ***Figure 1.11***. The Stewart River above the Fraser Falls dam location flows east collecting drainage from the western facing slopes of the Mackenzie Mountains from a maximum elevation of 2,298 masl down to an average dam elevation of 590 masl with a mean elevation of 1,250 masl. The 30,452 km^2 watershed contains glacier and lake fraction of approximately 0.62% and 0.45% respectively. Refer to ***Table 1.2*** for a summary of watershed characteristics.

Figure 1.11 – Fraser Falls Watershed

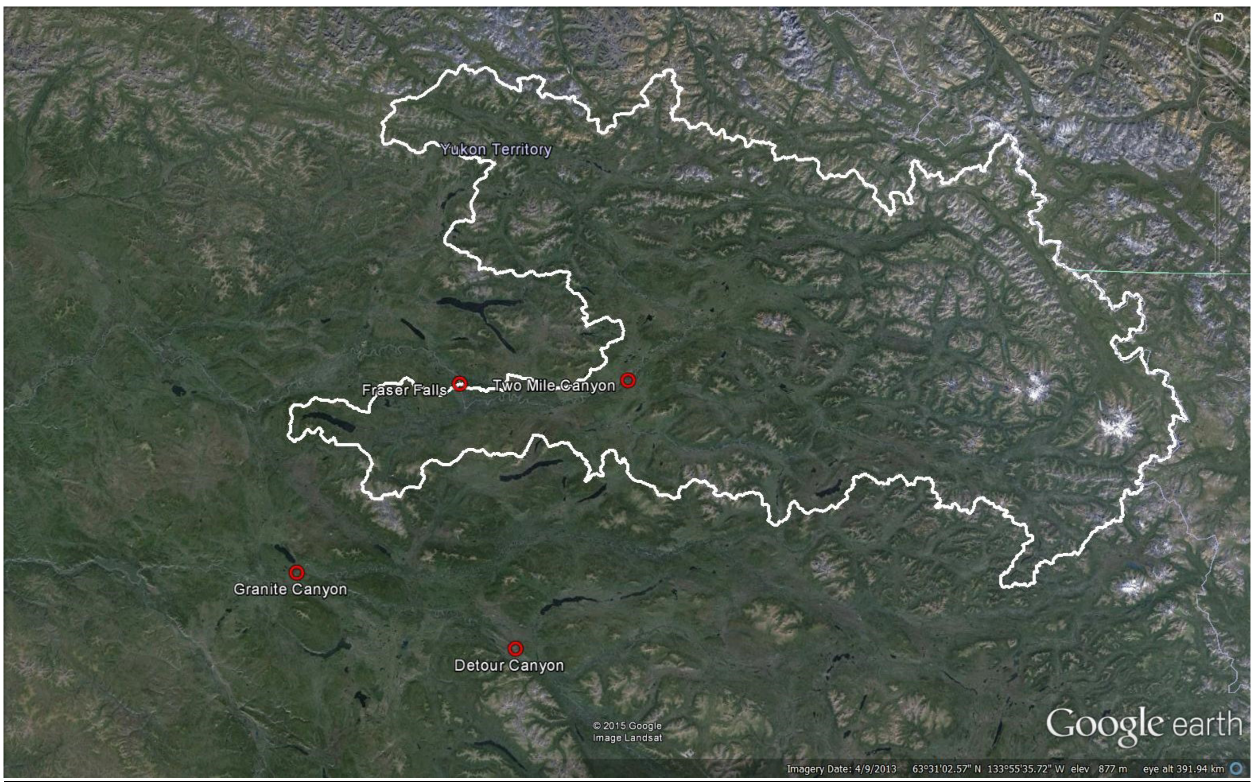


Table 1.2 – Watershed Characteristics

Watershed	River	Watershed Characteristics						
		Area (km^2)	Max. Elev. (masl)	Avg. Elev. (masl)	Min. Elev. (masl)	Aspect	Lake Content (%)	Glacier Content (%)
NWPI Canyon	Teslin River	32,622	2,404	1,450	688	southwest	2.45	0
Upper Canyon	Frances River	11,014	2,572	1,250	766	southwest	2.10	0.13
False Canyon	Frances River	12,136	2,572	1,250	724	southwest	1.92	0.12
Middle Canyon	Frances River	12,901	2,572	1,250	710	southwest	1.98	0.11
Fortin Lake	Pelly River	4,997	2,353	1,250	884	southwest	0.87	0
State Rapids	Pelly River	5,357	2,353	1,200	890	southwest	0.87	0
Hoole Canyon	Pelly River	9,876	2,353	1,150	804	southwest	0.68	0
Detour Canyon	Pelly River	28,353	2,515	1,200	614	southwest	0.75	0.05
Granite Canyon	Pelly River	45,665	2,515	1,300	545	southwest	0.87	0.08
Two Mile Canyon	Stewart River	14,127	2.298	1,300	603	west	0.41	1.30
Fraser Falls	Stewart River	30,452	2,298	1,250	590	west	0.44	0.62

2.0 REGIONAL SETTING

The Yukon is a relatively cold, rugged and mountainous territory covered by sparse vegetation in the north with fairly lush river basins in the south containing wide varieties of forest and vegetation. The temperature also is quite variable with long cold winters and short warm summers. The coldest month is typically January and the warmest July or August. Due to the complexity of the terrain and the mountainous regions in the south, the temperature and precipitation extremes are at their highest in the Territory. In January the southern Mackenzie and Selwyn Mountains experience high pressure resulting in clear skies and cold temperatures. In the summer, the temperatures are warm with precipitation varying on proximity, aspect and elevation within the mountains. Typically the wettest month is July, August and September.

The Selwyn and Mackenzie Mountains in the southeast of the territory provide for the upper watersheds of all but the NWPI Canyon watersheds. Average annual precipitation from this mountain range can be moderate to heavy ranging from over 700 mm in the southeast to 400 or 500 mm in the Selwyn Mountains.

The Pelly and Cassiar Mountains in the central south of the territory provide for the NWPI Canyon watershed. This region is characterized by relatively high annual precipitation, ranging from 500 to 700 mm. The heaviest precipitation occurs in fall and early winter.

2.1 WSC Gauge Stations

An investigation of WSC gauges was completed with the determination that six (6) current long term gauges on the same river as the project dam locations could be used to derive the long term synthetic flow sets.

Teslin River near Teslin (09AE001) is an inactive station with data from 1944 to 1994. Its Mean Annual Runoff (“MAR”) is 10.05 l/s/km^2 based on a Mean Annual Discharge (“MAD”) of 304.46 m^3/s and a drainage area of 30,300 km^2, which is located approximately 65 km upstream of the NWPI Canyon project site. The average watershed elevation is 1,475 masl. The gauge has zero glacier content and 2.49% lake content.

Frances River near Watson Lake (09AB001) is an active station with available data from 1963 to 2013. Its MAR is 12.58 l/s/km² based on a MAD of 160.97 m³/s and a drainage area of 12,800 km², which is located approximately 50 km and 24 km downstream of the Upper Canyon and False Canyon project sites respectively and approximately 6 km upstream of the Middle Canyon project site. The average watershed elevation is 1,250 masl. The gauge has 0.12% glacier content and 1.99% lake content.

Pelly River at Ross River (09BC002) is an active station with available data from 1954 to 1977 and 2011 to 2013. Its MAR is 10.16 l/s/km² based on a MAD of 186.97 m³/s and a drainage area of 18,400 km², which is located approximately 125 km, 95 km and 7 km downstream of the Fortin Lake Dam, Slate Rapids and Hoole Canyon project sites respectively. The average watershed elevation is 1,175 masl. The gauge has no glacier content and 0.94% lake content.

Pelly River below Vangorda Creek (09BC004) is an active station with available data from 1972 to 2013. Its MAR is 9.19 l/s/km² based on a MAD of 201.24 m³/s and a drainage area of 21,900 km², which is located approximately 80 km upstream of the Detour Canyon project site. The average watershed elevation is 1,175 masl. The gauge has 0.07% glacier content and 0.95% lake content.

Pelly River at Pelly Crossing (09BC001) is an active station with available data from 1951 to 2013. Its MAR is 8.01 l/s/km² based on a MAD of 391.93 m³/s and a drainage area of 48,900 km², which is located approximately 16 km downstream of the Granite Canyon project site. The average watershed elevation is 1,300 masl. The gauge has 0.07% glacier content and 0.96% lake content.

Stewart River at Mayo (09DC002) is an inactive station with data from 1949 to 1979. Its MAR is 11.61 l/s/km² based on a MAD of 366.77 m³/s and a drainage area of 31,600 km², which is located approximately 105 km and 40 km downstream of the Two Mile Canyon and Fraser Falls project sites respectively. The average watershed elevation is 1,225 masl. The gauge has 0.6% glacier content and 0.50% lake content.

From these regional long-term stations, the unit runoff appears to decrease as the gauge locations lower in elevation. This agrees with the general trend of an increase in rainfall with an increase in elevation, which include the effects of glacier melt. This does not register local runoff influences, but provides an overall picture of how the unit runoff changes on a regional scale.

Figure 2.1 shows the WS gauge location in respect to the project dam locations and ***Table 2.1*** summaries the WSC gauge characteristics.

Figure 2.1 – WSC Gauge Locations

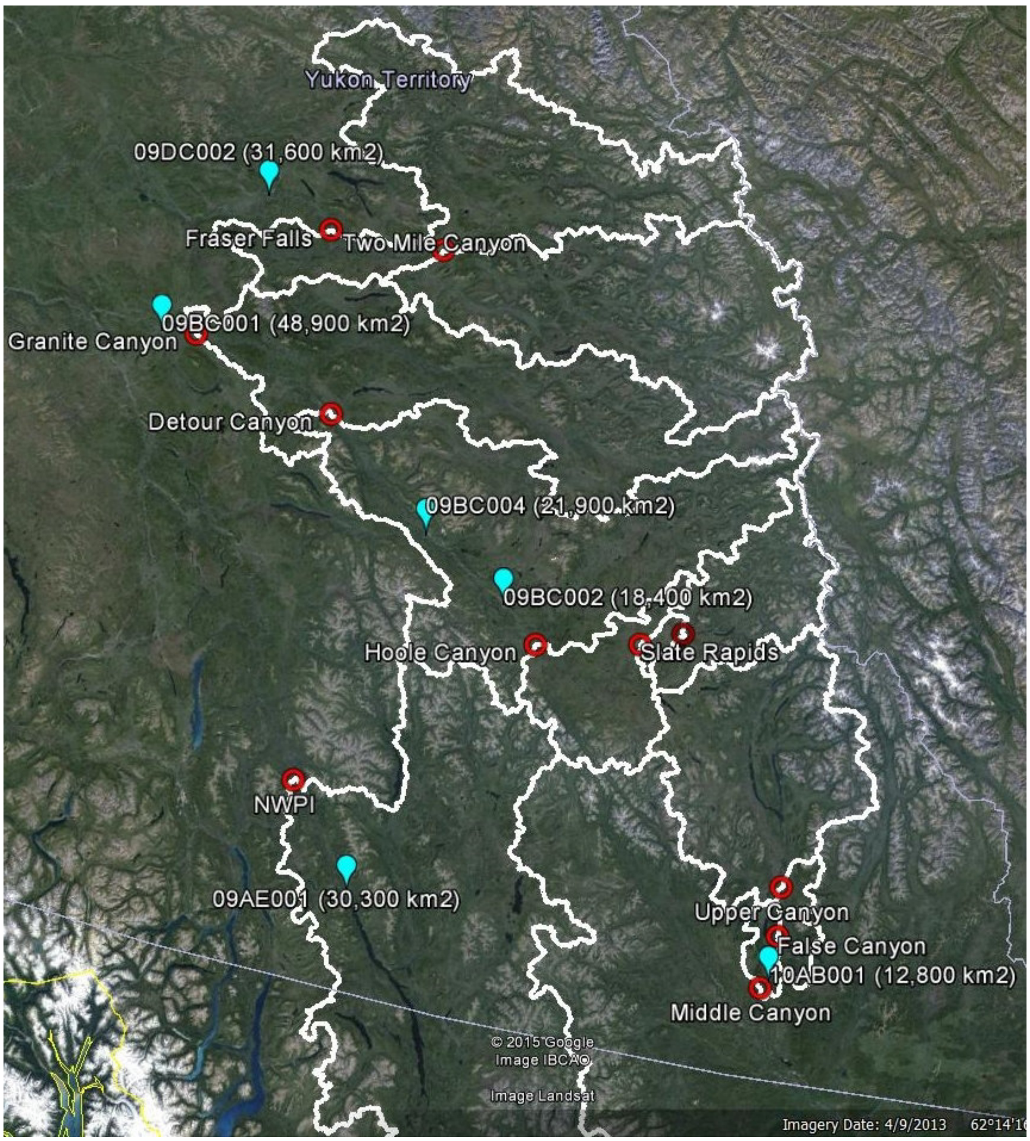


Table 2.1 – WSC Gauge Characteristics

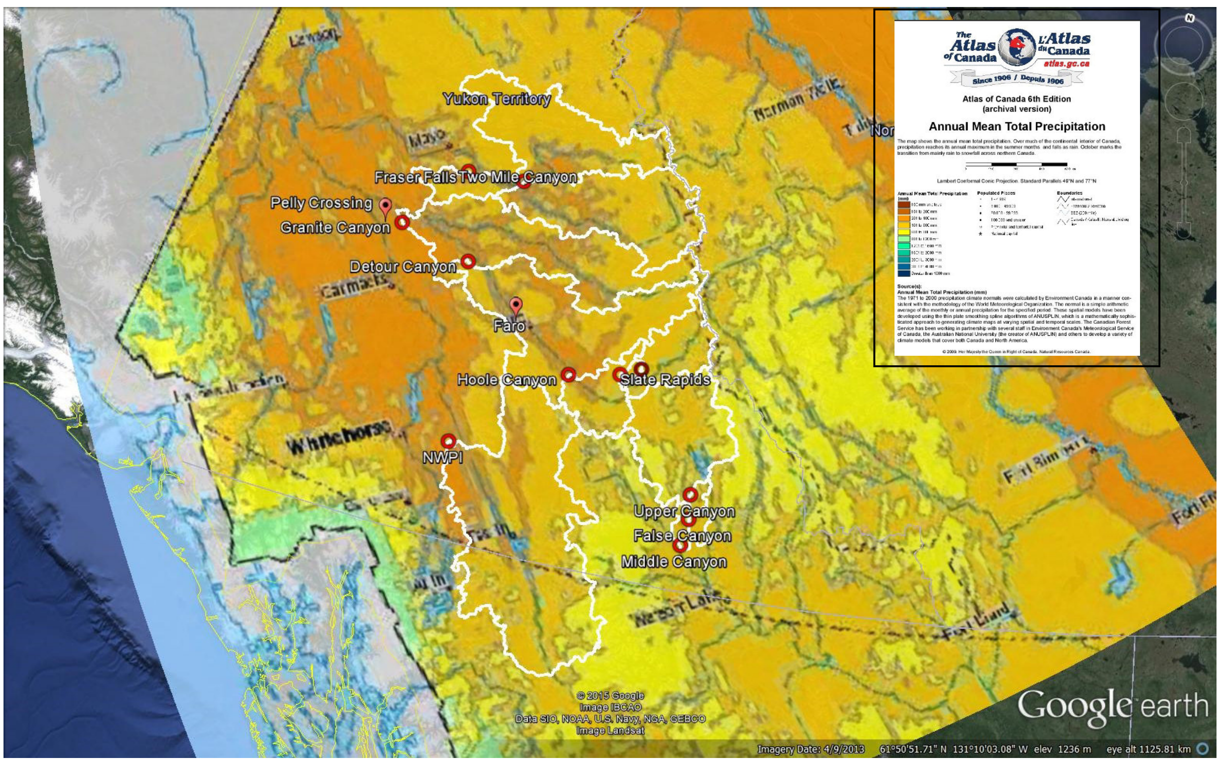
WSC Gauge	Period	No. of Years	Drainage Area (km^2)	Gauge Elevation (masl)	Average Elevation (masl)	Glacier Content (%)	Lake Content (%)	MAD (m^3/s)	MAR (m^3/s)
09AE001	1944 - 1994	50	30,300	693	1,475	0	2.49	304.46	10.05
10AB001	1963 - 2013	51	12,800	675	1,250	0.12	1.99	160.97	12.58
09BC002	1954 – 1977 2011-2013	27	18,400	678	1,175	0.08	0.94	186.97	10.16
09BC004	1972 - 2013	42	21,900	640	1,175	0.07	0.95	201.24	9.19
09BC001	1951 - 2013	63	48,900	474	1,300	0.07	0.96	391.93	8.01
09DC002	1949 - 1979	31	31,600	519	1,225	0.60	0.50	369.63	11.70

2.2 Mean Annual Precipitation

The mean annual precipitation for the eleven (11) project watersheds and six (6) WSC stream flow gauge watersheds was determined by Midgard. The precipitation map was taken from the Atlas of Canada 6th edition. The mean precipitation was calculated by Environment Canada using 1971 to 2000 precipitation climate normals, see ***Figure 2.2***.

The spatial variability in annual precipitation is extensive due to orographic enhancement on windward slopes and rain shadow effects in leeward areas. The proportion of precipitation falling as snow varies with elevation, with large snowpacks accumulating on upper mountain slopes.

Figure 2.2 – Mean Annual Precipitation



Midgard determined the mean annual precipitation for each of the project and WSC gauge watersheds. All of the watersheds lie within mean precipitation ranges of 200 mm up to 800 mm annually. A 'weighted' average of precipitation was calculated based on area between the Atlas of Canada map and the gauge and project watershed boundaries. JEM did verify the catchment area and mean precipitation results that are summarized in ***Table 2.2***.

Table 2.2 – Mean Annual Precipitation

Watershed / Gauge	River	Mountain Range	Area (km^2)	Aspect southwest	Precipitation Data			
					200 mm to 400 mm (km^2)	400 mm to 600 mm (km^2)	600 mm to 800 mm (km^2)	Average Rainfall (mm)
NWPI Canyon	Teslin River	Cassiar	32,622	southwest	6,558	25,205	858	565
Upper Canyon	Frances River	Selwyn	11,014	southwest	186	8,087	2,740	646
False Canyon	Frances River	Selwyn	12,136	southwest	186	9,210	2,740	642
Middle Canyon	Frances River	Selwyn	12,901	southwest	186	9,975	2,740	640
Fortin Lake	Pelly River	Selwyn	4,997	southwest	0	3,597	1,400	656
State Rapids	Pelly River	Selwyn	5,357	southwest	0	3,957	1,400	652
Hoole Canyon	Pelly River	Selwyn	9,876	southwest	4,748	3,728	1,400	532
Detour Canyon	Pelly River	Mackenzie	28,353	southwest	5,653	21,300	1,400	570
Granite Canyon	Pelly River	Mackenzie	45,665	southwest	18,876	24,831	1,959	568
Two Mile Canyon	Stewart River	Mackenzie	14,127	west	0	14,127	0	600
Fraser Falls	Stewart River	Mackenzie	30,452	west	1,108	28,681	663	597
09AE001	Teslin River	Cassiar	30.300	southwest				567
10AB001	Frances River	Selwyn	12,800	southwest				640
09BC002	Pelly River	Selwyn	18,400	southwest				526
09BC004	Pelly River	Mackenzie	21,900	southwest				578
09BC001	Pelly River	Mackenzie	48,900	southwest				531
09DC002	Stewart River	Mackenzie	31,600	southwest				597

3.0 LONG TERM HYDROLOGICAL ANALYSIS

In order to estimate long-term environmental impacts and water availability for hydropower generation, a daily estimate of discharge at each of the proposed project dam locations is required. A number of factors are typically taken into account when transferring flow data from one location to another. These factors include:

Drainage Area: Larger catchments have more ground storage and therefore a smoother hydrograph than smaller catchments, which tend to be more reactive to precipitation.

Elevation Relationships: A catchment with a relatively large high elevation basin has more unit runoff during summer and fall than a catchment with much of its area at lower elevations. The average elevation of a catchment is a good indicator of this relationship.

Aspect: The direction that a catchment faces determines if it is on the lee or weather side of dominant weather patterns. Leeside catchments have a much stronger orographic effect due to spillover of precipitation into the higher elevations, although they will generally have less unit runoff than the weather side.

Orographic effects: Precipitation and runoff increase with elevation as warm moist air masses are lifted up mountain slopes causing condensation and precipitation. This estimate is not uniform across all months, but represents an expected increase on an annual basis.

Glacier Content: Catchments with a large glacier component will have a prolonged late summer runoff, which increases the unit-runoff of the catchment overall. Catchment boundaries are also undetermined as it is possible for glaciers to slope in opposite directions of the ground beneath them.

Lakes/Wetlands Content: Lakes are able to store water for a duration proportional to their size and inversely proportional to the size of their outlet. This tends to smooth out a hydrograph and reduces the intensity of storms. The magnitude of this effect depends on both the size of the lake and the percent of the catchment above it.

These factors affect three main properties of a watersheds' flow response:

1. MAD: This is the long-term (> 20 years) average discharge at the proposed dam location. It is often expressed as the Mean Annual Runoff ("MAR"), or unit area runoff, over the drainage area expressed in $l/s/km^2$ or mm/yr^2. This latter measure puts the volume of runoff into a regional context.

2. MAR: Colder catchments farther from the coast store winter precipitation as snow, which is released during the summer.

3. Daily Streamflow and Flow Duration Curve ("FDC"): This measure captures the above characteristics as well as the way a catchment reacts to a storm event or to snowmelt.

3.1 Synthetic Flow Data Set Derivation

As there is no flow gauges installed at the dam locations, the flows of the WSC gauge requires transposition. A regression analysis is the most accurate way to transpose flow data from one location to another. This methodology regresses short term flow data recorded at dam locations against regional long term WSC gauge data over a coincident period of record. This can be done annually or monthly resulting in a degree of relationship between the two sites. As there is no available flow data collected at any of the proposed dam locations, a regression analysis on coincidental flow data could not be performed.

As the WSC gauges are all located on the same rivers where the dam locations are proposed and the aspect, glacier content and lake content do not vary widely between gauge and dam, a more general approach has been completed using Drainage Area ("DA") and mean annual runoff ("MAR") factors.

The first applied scaling factor was the DA, which is the dam watershed area divided by the watershed area of the respective WSC gauge. The second factor was the MAR, which is the mean average annual flow divided by the drainage area. In order to estimate the MAR factor, the mean annual precipitation between the gauge and dam locations were compared. The mean annual precipitation increases with altitude as determined in ***Table 2.2***. Therefore, if a WSC gauge is located downstream of the proposed dam location, the dam watershed MAR would be expected to be higher due to the subtraction of watershed area lower in elevation. In the same respect, if a WSC gauge is located upstream of the proposed dam location, the dam watershed MAR would be expected to be lower due to the addition of watershed area lower in elevation.

The factors are summarized in ***Table 3.1***.

3.2 Average Monthly and Yearly Flows

The factors determined in ***Table 3.1*** were applied to each day of available flow data downloaded from the Water Survey of Canada Archived Historical Hydrometric Data Online. The daily flow strings for each proposed dam location are attached in ***Appendix A*** of this report. The average monthly and yearly flows are summarized in ***Table 3.2***.

3.3 Uncertainty

Given the difficulty of flow measurement and gauging of mountain streams, there are a couple potential sources of uncertainty:

1. Velocity-area measurements have an uncertainty inherent in the average velocity of cells, instrument calibration, surging velocity during flow measurement and depth of cells; and
2. Discharge can vary significantly over the course of flow measurement due to a change in morphology of the gauge site as well as a natural deviation of the actual discharge from the rating curve. There is also uncertainty in the extrapolation of the rating curve due to lack of measurements at very low and very high flows.

It is difficult to quantify all of the components leading to uncertainty in the actual discharge measurement. The WSC technologists visit the sites a number of times each year taking manual instream measurements to re-calibrate or extend the stage-discharge curves. There is typically a 5-20% error in the discharge measurements, but estimation beyond that require an in-depth site specific monitoring program of its own. It was assumed that the WSC gauge data has been reviewed by qualified professionals and was taken as ‘correct’ at the time of this report.

Additionally, it is important to note that development of the synthetic daily flow set is not based on any site specific flow data collection. Typically, regulatory recommendations in other provinces require a minimum of one year with two or more years preferred.

Therefore, there is an inherently high level of uncertainty of the behavior of the watershed during extreme peak flow events and can only rely on much larger watersheds nearby with longer term records. Reliance on such estimates has a high level of uncertainty as peak flows tend to have a non-linear inverse scaling with watershed drainage area due to a general decrease in storage effects, increase in the potential for greater storm intensity, and general decrease in time of concentration with decreases in watershed drainage area. Smaller watersheds tend to exhibit larger unit peak discharges than larger watersheds.

Error in gauge measurements or the behavior of peak events were not taken into account in the determination of the long term synthetic flow data sets.

Table 3.1 – DA and MAR Factors

Watershed	WSC Gauge	Drainage Area Factor			Rainfall / MAR Factor			Combined Factor
		Dam Area (km^2)	Gauge Area (km^2)	Factor	Dam Mean Rainfall (mm)	Gauge Mean Rainfall (mm)	Factor	
NWPI Canyon	09AE001	32,622	30,300	1.077	565	567	0.996	1.073
Upper Canyon	10AB001	11,014	12,800	0.860	646	640	0.869	0.869
False Canyon	10AB001	12,136	12,800	0.948	642	640	0.951	0.951
Middle Canyon	10AB001	12,901	12,800	1.008	640	640	1.000	1.008
Fortin Lake	09BC002	4,997	18,400	0.272	656	526	1.124*	0.305
State Rapids	09BC002	5,357	18,400	0.291	652	526	1.120*	0.326
Hoole Canyon	09BC002	9,876	18,400	0.537	532	526	1.006*	0.540
Detour Canyon	09BC004	28,353	21,900	1.295	570	578	0.986	1.277
Granite Canyon	09BC001	45,665	48,900	0.934	568	531	1.035*	0.966
Two Mile Canyon	09DC002	14,127	31,600	0.447	600	597	1.003*	0.448
Fraser Falls	09DC002	30,452	31,600	0964	597	597	1.000	0.964

** Note – In the cases where the rainfall factor is greater than 1.00, only 50% of the increase was taken into account in the overall combined factor. This provides for a more conservative approach until site specific data can be collected.*

Table 3.2 – Average Monthly and Yearly Flows

Watershed	Flow (m^3/s)												
	January	February	March	April	May	June	July	August	September	October	November	December	Annual Average*
NWPI Canyon	107.87	91.55	84.29	80.08	272.15	952.52	777.72	444.97	348.92	332.71	228.10	145.69	326.64
Upper Canyon	30.40	24.05	20.92	24.44	166.97	492.23	318.32	192.25	161.59	126.66	68.92	43.49	139.81
False Canyon	33.29	26.33	22.91	26.76	182.84	539.01	348.58	210.52	176.95	138.70	75.47	47.62	153.10
Middle Canyon	35.28	27.91	24.27	28.36	193.76	571.20	369.39	223.10	187.52	146.98	79.98	50.46	162.24
Fortin Lake	7.06	5.68	5.18	4.98	94.74	176.50	90.47	64.74	57.30	37.85	16.91	11.12	57.05
State Rapids	7.55	6.07	5.53	5.32	101.22	188.57	96.66	69.17	61.22	40.44	18.07	11.88	60.96
Hoole Canyon	12.5	10.05	9.16	8.81	167.59	312.23	160.05	114.53	10137	66.95	29.91	19.66	100.93
Detour Canyon	41.59	33.40	29.17	36.99	571.03	887.96	475.07	319.10	310.84	213.92	91.96	59.00	256.93
Granite Canyon	69.06	55.45	49.65	64.83	777.87	1,295.00	717.26	485.28	451.60	319.02	145.94	99.12	378.75
Two Mile Canyon	19.21	15.70	13.96	17.12	291.06	640.92	377.72	245.87	187.87	116.66	48.47	28.12	165.66
Fraser Falls	41.29	33.75	30.01	36.81	625.83	1378.09	812.18	528.67	403.95	250.85	104.21	60.46	356.20

** Note – The MAD or annual average flow is determined by averaging complete years of data and not by averaging the monthly averages.*

3.4 Peak Flow Statistics

Statistical flood frequency analysis was carried out to estimate design floods at the dam locations. The frequency analysis was based on the long-term synthetic annual average daily peak flows. Daily average peak flows were used since the synthetic record does not contain instantaneous flood maximums. The frequency analysis was carried out using Environment Canada's Consolidated Frequency Analysis v. 3 (CFA-3) software package and the results are shown in ***Table 3.3***.

Table 3.3 – Average Daily Peak Flows

Name	Average Daily Peak Flow (m^3/s) Return Period					
	1:5	1:10	1:50	1:100	1:200	1:500
NWPI Canyon	1,400	1,580	1,930	2,070	2,200	2,370
Upper Canyon	769	859	1,030	1,100	1,160	1,240
False Canyon	842	941	1,130	1,200	1,270	1,350
Middle Canyon	893	997	1,200	1,270	1,350	1,430
Fortin Lake	427	517	776	917	1,080	1,340
State Rapids	456	552	829	980	1,150	1,430
Hoole Canyon	755	914	1,370	1,620	1,910	2,370
Detour Canyon	1,600	1,780	2,120	2,260	2,390	2,550
Granite Canyon	2,330	2,700	3,550	3,930	4,310	4,850
Two Mile Canyon	1,260	1,460	1,930	2,160	2,400	2,740
Fraser Falls	2,710	3,130	4,160	4,640	5,160	5,890

4.0 CONCLUSIONS AND RECOMMENDATIONS

Several observations can be made from the results in ***Table 2.4***:

- The months with the lowest average discharge is March for seven of the catchments and April for the four most southern catchments. The minimum average annual flow occurred in 1951, 1958, 1974, 1989 and 2010 depending on the reference gauge and available complete years.

- The month with the largest average discharge in all cases is June. The maximum average annual flow occurred in 1962, 1964 and 1991 depending on the reference gauge and available complete years.

- The largest variance of flows (expressed as standard deviation divided by average monthly flow, analogous to non-firmness from an energy perspective) occurs in June and the smallest variance (most firm) occurs in March or April.

It is recommended that an instream flow monitoring program at dam locations is established. After a year or two of dam specific flow data is collected, a regression analysis is recommended. This will allow for a more detailed regression analysis to be completed thereby determining MAD, MAR, peak flows and low flows values with a higher certainty than the current approach. Revisiting hydrology data every 5 years following will enable the following:

1. Additional calibration of the long term synthetic flow sets; and
2. Trending of climate change and the site specific effects.

Overall, the resulting synthetic dataset is considered to be a fairly good representation of site specific hydrology with the available data at the time of this report.

5.0 REFERENCES

Scudder, F.G.E., "Environment of the Yukon", Department of Zoology, University of British Columbia, p. 31 - 35.

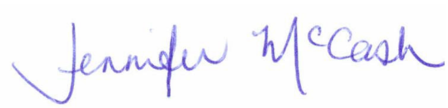
Atlas of Canada 6th Edition (Archival Version), "Annual Mean Total Precipitation Map".

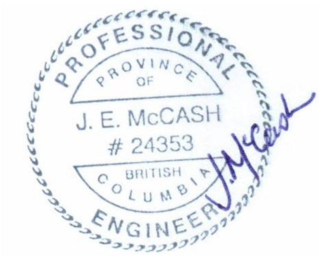
Water Survey of Canada, Archived Historical Hydrometric Data Online, Daily Flow values.

This concludes the hydrology review of the eleven (11) Yukon proposed project sites. Should you have any further questions, please do not hesitate to contact the undersigned.

Very truly yours,

JEM ENERGY LTD.
Per:





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APPENDIX A
DAILY FLOW STRINGS

Synthetic NWPI Teslin	1944	1945	1946	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	
					379.09		238.59	352.71	284.72			248.18	353.56	192.19	315.18	346.21	413.63	446.19	374.20	370.93	287.97	312.41	341.08	321.60	357.46	304.10	285.92	346.38	323.76	335.81	324.25	372.79	353.32	197.99	358.03	317.17	357.70	251.28	270.54	263.12	326.55	350.23	340.01	389.76	273.30	322.06	373.04	414.45	310.16	347.92	326.64
Jan 1			202.77		76.28	136.25	74.99	47.96	100.20	95.70		69.84	94.20	113.72	64.69	103.31	151.27	165.22	196.33	152.34	141.61	84.43	150.20	106.96	115.87	131.96	115.87	88.08	113.72	90.23	130.89	106.96	123.38	110.50	118.01	103.31	167.36	167.36	82.61	124.45	105.14	99.24	156.63	133.03	140.54	136.25	119.08	201.69	146.98	138.40	121.65
2			203.84		71.99	135.18	72.95	47.96	97.20	94.20		69.84	94.20	113.72	63.83	102.67	150.20	167.36	196.33	149.12	139.47	83.57	149.12	106.00	115.87	129.81	115.87	87.22	111.57	89.37	128.74	104.49	122.30	106.96	119.08	100.85	165.22	166.29	80.46	126.59	104.60	99.02	154.49	131.96	140.54	136.25	118.01	195.26	146.98	137.32	120.52
3			205.98		68.34	134.10	72.31	47.96	97.20	92.69		68.66	94.20	113.72	63.19	101.49	149.12	166.29	195.26	145.91	138.40	82.61	146.98	103.85	114.79	127.67	115.87	86.26	109.43	88.40	126.59	101.81	122.30	105.46	119.08	100.85	163.07	163.07	78.32	125.52	104.07	98.81	152.34	131.96	140.54	136.25	118.01	189.89	145.91	137.32	119.39
4			189.89		64.69	134.10	71.34	47.96	95.70	91.73		67.70	94.20	115.87	62.22	99.67	146.98	166.29	195.26	145.91	138.40	82.07	145.91	102.99	113.72	126.59	115.87	85.40	107.28	87.76	124.45	100.20	123.38	103.31	118.01	100.85	162.00	160.93	77.24	123.38	104.07	98.59	150.20	130.89	139.47	137.32	118.01	184.53	145.91	136.25	118.14
5			173.80		60.72	133.03	70.49	47.96	94.20	91.19		66.84	94.20	115.87	61.69	97.84	145.91	164.14	193.11	145.91	136.25	80.78	144.83	100.85	111.57	124.45	115.87	84.75	113.72	86.90	122.30	99.02	125.52	101.17	118.01	103.85	160.93	159.85	75.10	122.30	104.07	98.16	149.12	130.89	139.47	136.25	116.94	180.24	144.83	135.18	116.96
6			171.65		60.19	131.96	70.16	47.96	92.69	90.55		66.52	94.20	116.94	60.72	96.56	144.83	155.56	193.11	142.69	135.18	79.60	144.83	99.99	111.57	124.45	114.79	84.75	102.99	85.93	120.16	98.38	126.59	99.99	118.01	105.46	158.78	158.78	72.95	121.23	104.60	97.63	148.05	129.81	139.47	135.18	116.94	181.31	143.76	134.10	115.90
7			170.58		59.54	131.96	69.31	47.96	91.19	89.58		65.66	93.87	116.94	60.19	94.73	144.83	154.49	192.04	142.69	134.10	78.96	142.69	98.16	110.50	122.30	113.72	84.11	100.85	85.08	118.01	98.38	126.59	98.16	116.94	103.64	156.63	158.78	70.81	120.16	105.14	97.09	145.91	129.81	139.47	134.10	115.87	184.53	142.69	133.03	115.04
8					59.22	130.89	68.66	47.96	89.58	88.72		64.69	93.55	118.01	59.54	93.55	145.91	155.56	192.04	139.47	131.96	78.96	139.47	96.88	110.50	120.16	111.57	82.07	98.70	84.11	116.94	98.70	124.45	97.20	116.94	103.31	154.49	158.78	68.66	120.16	105.14	96.56	143.76	129.81	139.47	131.96	114.79	188.82	141.61	130.89	112.98
9					75.96	129.81	67.70	47.96	88.08	88.08		63.83	93.55	118.01	58.90	92.69	148.05	156.63	192.04	139.47	131.96	77.78	138.40	95.38	109.43	119.08	108.36	80.46	97.20	82.61	115.87	98.70	122.30	95.70	116.94	103.64	152.34	158.78	67.59	120.16	105.14	96.34	142.69	129.81	139.47	129.81	113.72	189.89	141.61	129.81	112.70
10					74.78	129.81	66.84	47.96	88.08	87.54		63.51	93.55	116.94	58.36	91.19	150.20	152.34	190.96	139.47	130.89	76.60	136.25	93.87	109.43	116.94	107.28	79.60	96.02	82.07	112.65	98.70	121.23	94.20	118.01	100.52	148.05	158.78	66.52	120.16	105.14	96.02	140.54	128.74	138.40	128.74	112.65	188.82	140.54	128.74	111.73
11					73.49	128.74	66.19	47.74	86.58	87.22		62.55	93.23	118.01	58.04	90.55	150.20	142.69	188.82	136.25	130.89	75.96	134.10	92.37	108.36	115.87	106.32	78.10	95.05	82.07	110.50	98.16	121.23	93.55	118.01	100.52	143.76	158.78	65.44	119.08	105.14	95.48	138.40	128.74	138.40	127.67	111.57	185.60	138.40	127.67	110.57
12					71.99	127.67	64.37	47.74	85.08	86.90		61.37	93.23	118.01	57.72	89.58	151.27	143.76	184.53	136.25	128.74	75.31	131.96	90.87	106.64	114.79	106.00	76.28	94.52	81.75	109.43	97.20	122.30	92.69	118.01	100.20	141.61	157.71	64.37	116.94	105.14	94.41	137.32	128.74	138.40	126.59	110.50	183.45	137.32	127.67	109.70
13					71.34	126.59	63.51	47.74	85.08	86.58		60.72	93.23	118.01	57.40	88.08	153.42	144.83	184.53	134.10	128.74	74.99	128.74	89.90	105.67	114.79	105.67	76.28	94.20	81.75	108.36	96.56	122.30	91.73	118.01	97.52	139.47	154.49	64.37	115.87	104.92	93.87	136.25	128.74	138.40	125.52	109.43	184.53	136.25	126.59	109.09
14					70.16	126.59	61.69	47.74	85.08	86.26		60.72	93.23	116.94	57.40	87.54	154.49	145.91	183.45	134.10	127.67	74.78	126.59	88.72	104.49	113.72	105.14	76.60	93.55	81.11	106.32	95.70	121.23	91.19	118.01	97.20	140.54	150.20	64.37	113.72	104.07	93.34	134.10	128.74	137.32	124.45	109.43	184.53	135.18	126.59	108.44
15					69.31	125.52	60.51	47.74	85.08	85.93		60.72	93.23	115.87	57.40	86.26	154.49	143.76	182.38	134.10	126.59	74.45	123.38	88.40	103.64	112.65	104.49	76.60	93.55	80.25	103.85	95.05	120.16	91.19	120.16	96.56	141.61	148.05	64.37	112.65	103.53	92.80	133.03	127.67	137.32	123.38	108.36	185.60	133.03	125.52	107.78
16					68.34	124.45	59.54	47.74	85.08	85.72		60.51	93.01	115.87	57.40	85.08	153.42	145.91	182.38	130.89	124.45	73.49	121.23	87.22	103.31	111.57	104.17	76.28	93.87	79.28	100.52	94.73	121.23	90.87	120.16	93.55	141.61	145.91	64.37	111.57	103.53	92.26	131.96	127.67	137.32	122.30	107.28	187.75	131.96	124.45	107.14
17					67.48	124.45	58.36	47.74	83.57	85.40		60.19	92.69	114.79	57.40	84.43	154.49	142.69	180.24	130.89	123.38	73.17	118.01	85.40	102.99	110.50	103.85	75.96	94.20	78.96	100.20	94.20	122.30	90.55	118.01	93.55	142.69	144.83	64.37	110.50	103.53	91.73	129.81	126.59	137.32	121.23	106.75	186.67	131.96	123.38	106.48

30	321.85	351.89		461.32	370.13	267.14	145.91	507.45	413.04	201.69	295.03	257.48	231.73	172.73	434.50	373.35	401.24	513.89	376.57	340.09	306.83	370.13	306.83	573.97	656.58	391.59	262.84	328.29	388.37	300.39	370.13	340.09	328.29	203.84	270.35	389.44	437.72	223.15	404.46	284.30	308.98	345.45	311.12	328.29	224.22	207.06	663.01	321.85	257.48	409.82	345.96
Oct 1		351.89		461.32	370.13	269.28	143.76	516.03	413.04	199.55	296.10	257.48	230.66	172.73	434.50	364.76	401.24	528.91	376.57	333.65	303.61	364.76	310.05	568.60	635.12	492.43	262.84	328.29	383.00	296.10	361.55	340.09	328.29	205.98	273.57	402.31	425.92	214.57	398.02	284.30	306.83	346.53	316.49	326.14	227.44	199.55	659.79	322.92	264.99	414.11	347.62
2		351.89		459.17	367.98	268.21	143.76	513.89	409.82	196.33	302.54	256.41	225.30	175.95	428.06	358.33	394.80	525.69	379.78	331.51	303.61	373.35	310.05	565.38	643.70	507.45	262.84	331.51	379.78	290.74	361.55	340.09	328.29	205.98	272.50	401.24	420.55	214.57	401.24	280.01	305.76	348.67	315.41	326.14	226.37	202.77	656.58	326.14	264.99	420.55	347.44
3		355.11		443.08	367.98	266.06	142.69	532.13	413.04	192.04	290.74	254.26	215.64	178.09	428.06	361.55	386.22	519.25	376.57	331.51	310.05	376.57	313.27	565.38	638.34	510.67	262.84	331.51	370.13	285.37	361.55	336.87	328.29	204.91	272.50	410.90	418.41	215.64	392.66	275.72	303.61	355.11	317.56	327.21	224.22	200.62	653.36	329.36	269.28	413.04	346.44
4		361.55		443.08	364.76	262.84	141.61	550.36	406.60	204.91	291.81	253.19	216.71	179.16	424.84	361.55	376.57	516.03	376.57	325.07	306.83	379.78	315.41	562.17	631.90	525.69	261.77	331.51	367.98	290.74	358.33	333.65	328.29	207.06	275.72	411.97	425.92	217.79	388.37	273.57	301.47	364.76	318.63	326.14	230.66	196.33	652.28	330.43	274.65	415.19	347.13
5		367.98		440.94	361.55	261.77	143.76	537.49	404.46	201.69	296.10	252.12	217.79	179.16	413.04	358.33	376.57	513.89	376.57	321.85	301.47	383.00	321.85	558.95	607.23	547.15	269.28	333.65	361.55	299.32	355.11	331.51	328.29	208.13	274.65	425.92	421.62	216.71	395.88	278.94	301.47	363.69	330.43	322.92	232.81	203.84	644.77	332.58	278.94	416.26	347.35
6		370.13		437.72	358.33	259.63	143.76	547.15	401.24	202.77	293.96	253.19	214.57	178.09	409.82	358.33	376.57	516.03	373.35	321.85	300.39	391.59	325.07	558.95	598.64	570.75	262.84	333.65	358.33	300.39	358.33	325.07	328.29	207.06	275.72	440.94	417.33	216.71	402.31	278.94	305.76	374.42	329.36	321.85	242.46	204.91	641.56	336.87	295.03	428.06	348.92
7		370.13		434.50	355.11	258.55	142.69	543.93	394.80	200.62	282.16	253.19	209.20	175.95	401.24	358.33	373.35	516.03	370.13	321.85	301.47	401.24	325.07	555.73	586.84	573.97	261.77	331.51	355.11	300.39	355.11	318.63	331.51	208.13	276.79	455.96	410.90	218.86	389.44	282.16	303.61	389.44	330.43	321.85	246.75	208.13	642.63	340.09	305.76	435.57	348.47
8		370.13		428.06	351.89	260.70	140.54	543.93	398.02	201.69	280.01	252.12	208.13	174.87	394.80	358.33	370.13	510.67	367.98	318.63	302.54	416.26	325.07	552.51	577.19	573.97	263.92	328.29	343.31	300.39	355.11	315.41	328.29	213.49	284.30	469.90	407.68	223.15	384.08	278.94	307.90	406.60	334.72	321.85	247.83	209.20	645.85	336.87	314.34	450.59	348.96
9		370.13		419.48	349.74	260.70	139.47	543.93	401.24	199.55	275.72	252.12	209.20	175.95	391.59	355.11	364.76	504.23	370.13	315.41	301.47	424.84	325.07	547.15	565.38	573.97	264.99	328.29	336.87	302.54	351.89	313.27	325.07	214.57	287.52	484.92	403.39	224.22	391.59	272.50	303.61	416.26	336.87	320.78	248.90	198.47	655.50	333.65	320.78	454.88	348.49
10		376.57		413.04	346.53	261.77	138.40	550.36	401.24	198.47	276.79	251.04	205.98	174.87	388.37	351.89	364.76	504.23	367.98	313.27	298.25	428.06	325.07	537.49	555.73	570.75	263.92	328.29	325.07	306.83	355.11	310.05	321.85	215.64	286.45	491.36	396.95	223.15	390.51	275.72	301.47	432.35	343.31	318.63	254.26	203.84	655.50	330.43	322.92	455.96	348.14
11		383.00		404.46	343.31	261.77	141.61	552.51	401.24	196.33	273.57	251.04	207.06	172.73	379.78	351.89	361.55	492.43	376.57	313.27	300.39	431.28	325.07	525.69	547.15	565.38	262.84	325.07	325.07	310.05	351.89	306.83	318.63	218.86	288.59	501.01	392.66	224.22	389.44	276.79	293.96	444.15	342.23	319.71	254.26	205.98	644.77	331.51	324.00	464.54	347.42
12		383.00		398.02	340.09	259.63	139.47	543.93	391.59	196.33	273.57	251.04	207.06	172.73	379.78	349.74	361.55	485.99	373.35	313.27	300.39	431.28	325.07	522.47	534.27	565.38	260.70	325.07	318.63	325.07	349.74	303.61	315.41	218.86	288.59	504.23	390.51	225.30	380.86	271.43	295.03	449.52	337.94	320.78	255.33	202.77	644.77	328.29	328.29	472.05	346.08
13		386.22		394.80	336.87	252.12	137.32	537.49	386.22	194.18	271.43	251.04	204.91	170.58	373.35	349.74	351.89	479.56	367.98	315.41	301.47	434.50	325.07	519.25	525.69	565.38	260.70	325.07	313.27	328.29	346.53	301.47	315.41	225.30	292.88	509.60	386.22	221.00	375.49	270.35	295.03	453.81	340.09	324.00	255.33	203.84	660.87	315.41	328.29	464.54	344.69
14		391.59		388.37	333.65	246.75	135.18	534.27	391.59	195.26	267.14	251.04	202.77	170.58	367.98	349.74	349.74	474.19	367.98	315.41	299.32	434.50	325.07	504.23	519.25	562.17	256.41	325.07	306.83	340.09	346.53	297.18	313.27	223.15	293.96	511.74	383.00	217.79	372.27	270.35	289.67	457.03	343.31	319.71	262.84	204.91	661.94	318.63	331.51	460.25	343.44
15		398.02		386.22	331.51	244.61	137.32	532.13	383.00	196.33	266.06	249.97	208.13	172.73	358.33	346.53	355.11	470.98	370.13	313.27	298.25	434.50	325.07	492.43	513.89	565.38	248.90	321.85	301.47	340.09	343.31	296.10	310.05	224.22	297.18	519.25	378.71	212.42	370.13	269.28	291.81	455.96	343.31	324.00	267.14	201.69	643.70	312.20	332.58	461.32	342.01
16		419.48		383.00	328.29	241.39	133.03	534.27	379.78	197.40	264.99	245.68	204.91	174.87	355.11	346.53	358.33	461.32	370.13	313.27	297.18	431.28	325.07	482.78	504.23	555.73	243.53	318.63	299.32	340.09	340.09	292.88	303.61	225.30	299.32	509.60	378.71	212.42	366.91	261.77	290.74	459.17	334.72	326.14	268.21	198.47	642.63	305.76	335.80	466.68	340.18
17		443.08		376.57	321.85	239.24	133.03	532.13	373.35	194.18	257.48	241.39	203.84	174.87	349.74	349.74	349.74	461.32	367.98	313.27	296.10	428.06	325.07	474.19	489.21	543.93	237.10	318.63	295.03	340.09	336.87	289.67	301.47	230.66	300.39	513.89	381.93	216.71	363.69	259.63	289.67	465.61	336.87	328.29	268.21	197.40	643.70	298.25	339.02	464.54	338.68
18		464.54		373.35	315.41	230.66	133.03	534.27	367.98	193.11	254.26	236.02	200.62	174.87	340.09	349.74	346.53	446.30	370.13	313.27	289.67	419.48	325.07	461.32	479.56	537.49	236.02	315.41	290.74	340.09	333.65	288.59	299.32	229.59	293.96	517.11	384.08	215.64	360.47	260.70	284.30	487.07	336.87	328.29	263.92	196.33	634.05	290.74	332.58	457.03	336.11
19		470.98		367.98	310.05	230.66	131.96	534.27	364.76	192.04	249.97	231.73	197.40	174.87	340.09	346.53	355.11	428.06	364.76	310.05	281.08	419.48	321.85	455.96	470.98	534.27	234.95	313.27	285.37	340.09	331.51	287.52	298.25	230.66	297.18	512.82	379.78	216.71	357.25	259.63	278.94	499.94	340.09	329.36	262.84	193.11	626.54	290.74	335.80	459.17	334.30
20		477.41		361.55	303.61	228.51	130.89	525.69	364.76	190.96	240.32	227.44	195.26	173.80	336.87	340.09	364.76	424.84	364.76	310.05	276.79	416.26	321.85	449.52	455.96	534.27	232.81	303.61	281.08	349.74	328.29	285.37	298.25	236.02	295.03	511.74	380.86	214.57	354.04	257.48	277.86	509.60	332.58	329.36	258.55	192.04	607.23	287.52	337.94	453.81	331.91
21		474.19		355.11	300.39	227.44	128.74	516.03	361.55	190.96	234.95	223.15	194.18	173.80	333.65	340.09	361.55	424.84	367.98	310.05	273.57	416.26	321.85	443.08	443.08	532.13	232.81	301.47	278.94	351.89	328.29	284.30	296.10	242.46	293.96	510.67	384.08	210.28	347.60	256.41	276.79	521.40	330.43	324.00	256.41	189.89	593.28	274.65	331.51	455.96	329.63
22		470.98		349.74	296.10	227.44	127.67	532.13	355.11	190.96	228.51	221.00	193.11	172.73	325.07	336.87	355.11	404.46	364.76	306.83	272.50	413.04	313.27	431.28	434.50	507.45	230.66	297.18	274.65	351.89	325.07	283.23	292.88	247.83	292.88	511.74	384.08	211.35	346.53	256.41	270.35	527.84	331.51	329.36	249.97	187.75	605.08	269.28	332.58	447.37	326.84
23		467.76		346.53	292.88	222.08	125.52	522.47	349.74	190.96	229.59	216.71	192.04	170.58	318.63	333.65	349.74	391.59	361.55	306.83	271.43	406.60	315.41	422.70	422.70	495.65	227.44	293.96	267.14	351.89	325.07	277.86	292.88	243.53	293.96	509.60	381.93	210.28	340.09	253.19	266.06	536.42	333.65	327.21	254.26	185.60	588.99	266.06	328.29	443.08	323.37
24		467.76		340.09	290.74	216.71	124.45	525.69	346.53	189.89	217.79	215.64	188.82	169.51	315.41	333.65	340.09	386.22	355.11	306.83	270.35	394.80	315.41	419.48	416.26	489.21	226.37	289.67	258.55	355.11	321.85	273.57	291.81	256.41	292.88	502.09	379.78	209.20	332.58	247.83	266.06	543.93	329.36	322.92	256.41	183.45	578.26	259.63	328.29	442.01	320.51
25		464.54		336.87	289.67	211.35	122.30	528.91	346.53	188.82	216.71	211.35	186.67	168.44	306.83	328.29	336.87	370.13	351.89	310.05	269.28	386.22	306.83	409.82	406.60	477.41	222.08	287.52	253.19	355.11	318.63	269.28	289.67	256.41	286.45	495.65	377.64	216.71	329.36	232.81	266.06	546.07	322.92	312.20	244.61	181.31	557.87	256.41	330.43	430.21	316.06
26		461.32		333.65	287.52	209.20	118.01	522.47	346.53	186.67	209.20	205.98	181.31	167.36	303.61	318.63	333.65	364.76	351.89	306.83	268.21	383.00	303.61	404.46	398.02	467.76	214.57	286.45	247.83	355.11	318.63	267.14	288.59	258.55	281.08	493.50	387.29	208.13	324.00	233.88	256.41	554.66	320.78	310.05	240.32	180.24	541.78	248.90	327.21	431.28	312.71
27		449.52		328.29	284.30	204.91	118.01	519.25	340.09	185.60	202.77	198.47	181.31	166.29	299.32	306.83	321.85	364.76	349.74	302.54	268.21	373.35	296.10	388.37	391.59	459.17	209.20	281.08	242.46	351.89	310.05	266.06	287.52	257.48	281.08	491.36	388.37	198.47	321.85	237.10	251.04	561.09	316.49	307.90	244.61	179.16	522.47	245.68	325.07	428.06	308.46
28		440.94		321.85	278.94	196.33	116.94	516.03	331.51	185.60	195.26	194.18	182.38	166.29	297.18	303.61	315.41	361.55	346.53	298.25	270.35	361.55	292.88	376.57	379.78	455.96	202.77	273.57	240.32	355.11	297.18	263.92	285.37	257.48	277.86	483.85	389.44	203.84	319.71	233.88	247.83	568.60	310.05	304.69	247.83	175.95	498.87	244.61	332.58	423.77	304.69
29		428.06		318.63	278.94	198.47	115.87	510.67	331.51	183.45	193.11	183.45	181.31	166.29	289.67	301.47	313.27	355.11	340.09	296.10	278.94	351.89	291.81	361.55	364.76	446.30	199.55	263.92	239.24	361.55	283.23	262.84	284.30	262.84	274.65	478.48	392.66	205.98	307.90	226.37	242.46	560.02	305.76	305.76	237.10	173.80	485.99	237.10	334.72	417.33	300.51
30		449.52		313.27	280.01	199.55	115.87	504.23	328.29	181.31	192.04	175.95	180.24	165.22	286.45	295.03	310.05	343.31	331.51	289.67	277.86	349.74	286.45	351.89	351.89	437.72	198.47	260.70	238.17	358.33	285.37	259.63	280.01	269.28	272.50	467.76	387.29	200.62	303.61	222.08	240.32	548.22	300.39	301.47	233.88	171.65	463.47	233.88	332.58	413.04	296.66
31		413.04		300.39	273.57	197.40	114.79	504.23	318.63	180.24	189.89	164.14	179.16	168.44	283.23	288.59	306.83	340.09	325.07	284.30	277.86	343.31	280.01	343.31	343.31	428.06	193.11	258.55	231.73	358.33	283.23	256.41	271.43	258.55	269.28	464.54	385.15	190.96	296.10	217.79	234.95	538.56	293.96	292.88	237.10	170.58	452.74	228.51	334.72	396.95	290.92
Nov 1		409.82		295.03	277.86	188.82	113.72	504.23	313.27	178.09	186.67	159.85	179.16	166.29	275.72	283.23	303.61	328.29	321.85	281.08	273.57	336.87	277.86	336.87	331.51	422.70	190.96	255.33	227.44	358.33	281.08	253.19	261.77	252.12	259.63	459.17	381.93	193.11	291.81	211.35	230.66	527.84	299.32	291.81	238.17	169.51	437.72	225.30	336.87	393.73	286.96
2		409.82		289.67	281.08	186.67	112.65	497.80	306.83	177.02	183.45	153.42	179.16	167.36	269.28	277.86	296.10	333.65	315.41	280.01	271.43	328.29	273.57	333.65	318.63	413.04	188.82	249.97	223.15	358.33	272.50	246.75	255.33	253.19	258.55	453.81	373.35	196.33	285.37	203.84	229.59	516.03	291.81	288.59	230.66	168.44	430.21	221.00	328.29	387.29	282.65
3		406.60		297.18	284.30	185.60	112.65	497.80	298.25	177.02	179.16	149.12	181.31	165.22	263.92	275.72	287.52	333.65	310.05	272.50	273.57	318.63	267.14	333.65	313.27	406.60	187.75	244.61	216.71	355.11	261.77	243.53	251.04	248.90	251.04	450.59	370.13	193.11	278.94	201.69	223.15	507.45	280.01	285.37	229.59	164.14	420.55	217.79	322.92	376.57	278.60
4		406.60		281.08	287.52	184.53	111.57	479.56	289.67	172.73	182.38	144.83	180.24	167.36	257.48	264.99	280.01	331.51	310.05	268.21	263.92	313.27	258.55	325.07	306.83	404.46	186.67	239.24	213.49	351.89	244.61	240.32	246.75	249.97	243.53	447.37	370.13	188.82	276.79	200.62	216.71	498.87	275.72	283.23	228.51	163.07	413.04	215.64	329.36	356.18	274.02
5		404.46		274.65	291.81	182.38	111.57	477.41	277.86	170.58	179.16	139.47	179.16	168.44	256.41	266.06	272.50	328.29	299.32	269.28	262.84	310.05	254.26	315.41	313.27	391.59	182.38	236.02	210.28	346.53	231.73	233.88	242.46	249.97	238.17	434.50	359.40	184.53	269.28	197.40	212.42	492.43	270.35	280.01	227.44	160.93	410.90	213.49	326.14	341.16	269.75
6		386.22		267.14	306.83	174.87	113.72	474.19	275.72	169.51	178.09	138.40	175.95	163.07	248.90	260.70	268.21	321.85	295.03	267.14	260.70	310.05	244.61	310.05	313.27	388.37	177.02	233.88	204.91	346.53	221.00	232.81	240.32	245.68	234.95	428.06	350.82	182.38	259.63	193.11	210.28	477.41	272.50	275.72	226.37	159.85	400.17	210.28	317.56	343.31	265.77
7		370.13		264.99	321.85	168.44	110.50	459.17	273.57	169.51	170.58	135.18	178.09	162.00	239.24	256.41	262.84	313.27	282.16	262.84	256.41	302.54	242.46	302.54	310.05	376.57	173.80	230.66	195.26	343.31	218.86	231.73	238.17	232.81	228.51	425.92	346.53	178.09	258.55	187.75	200.62	479.56	259.63	272.50	215.64	157.71	383.00	207.06	316.49	342.23	260.74
8		351.89		263.92	333.65	172.73	108.36	455.96	268.21	167.36	173.80	131.96	179.16	160.93	231.73	253.19	255.33	310.05	281.08	262.84	248.90	296.10	236.02	299.32	300.39	361.55	170.58	226.37	185.60	331.51	218.86	230.66	234.95	224.22	223.15	418.41	347.60	179.16	255.33	181.31	192.04	476.34	258.55	271.43	209.20	155.56	383.00	203.84	312.20	321.85	256.59
9		340.09		261.77	346.53	172.73	108.36	437.72	262.84	166.29	168.44	130.89	178.09	154.49	227.44	249.97	247.83	299.32	269.28	258.55	248.90	285.37	231.73	296.10	293.96	355.11	167.36	222.08	182.38	328.29	216.71	230.66	230.66	229.59	216.71	406.60	339.02	174.87	247.83	178.09	188.82	465.61	255.33	263.92	202.77	153.42	375.49	199.55	311.12	324.00	252.14
10		328.29		259.63	355.11	165.22	108.36	431.28	259.63	162.00	163.07	127.67	175.95	157.71	226.37	247.83	243.53	286.45	261.77	254.26	243.53	289.67	225.30	290.74	287.52	346.53	164.14	216.71	179.16	321.85	213.49	227.44	228.51	228.51	214.57	405.53	334.72	170.58	242.46	175.95	185.60	450.59	253.19	261.77	198.47	151.27	369.06	194.18	308.98	329.36	248.41
11		325.07		257.48	358.33	157.71	105.67	422.70	254.26	164.14	160.93	126.59	174.87	156.63	223.15	243.53	245.68	283.23	257.48	249.97	242.46	288.59	221.00	283.23	285.37	333.65	162.00	211.35	177.02	313.27	213.49	225.30	224.22	217.79	212.42	401.24	328.29	171.65	236.02	171.65	181.31	438.79	253.19	257.48	196.33	149.12	359.40	192.04	298.25	312.20	244.28
12		321.85		246.75	364.76	160.93	103.85	404.46	244.61	159.85	154.49	123.38	173.80	154.49	223.15	240.32	245.68	280.01	251.04	243.53	238.17	283.23	215.64	276.79	282.16	328.29	156.63	208.13	174.87	306.83	207.06	222.08	219.93	217.79	211.35	391.59	326.14	168.44	231.73	168.44	178.09	425.92	252.12	252.12	193.11	148.05	352.96	190.96	300.39	303.61	240.20
13		318.63		245.68	361.55	165.22	102.67	398.02	239.24	155.56	152.34	120.16	171.65	153.42	211.35	236.02	242.46	274.65	243.53	241.39	237.10	283.23	212.42	264.99	276.79	325.07	155.56	207.06	172.73	297.18	202.77	221.00	218.86	211.35	212.42	376.57	321.85	169.51	226.37	158.78	174.87	410.90	245.68	249.97	189.89	146.98	346.53	189.89	296.10	296.10	236.08
14		315.41		244.61	358.33	155.56	101.17	383.00	234.95	153.42	150.20	118.01	169.51	151.27	198.47	231.73	233.88	267.14	233.88	238.17	236.02	283.23	211.35	243.53	267.14	318.63	155.56	204.91	170.58	290.74	200.62	217.79	215.64	204.91	210.28	370.13	316.49	167.36	223.15	155.56	171.65	406.60	246.75	247.83	188.82	145.91	351.89	187.75	288.59	289.67	231.83
15		303.61		241.39	355.11	152.34	100.20	376.57	226.37	153.42	146.98	115.87	168.44	148.05	196.33	232.81	234.95	266.06	225.30	232.81	234.95	282.16	209.20	219.93	263.92	318.63	155.56	202.77	168.44	283.23	198.47	214.57	212.42	210.28	209.20	366.91	312.20	160.93	218.86	159.85	166.29	393.73	241.39	242.46	187.75	144.83	345.45	186.67	280.01	281.08	228.10
16		292.88		234.95	355.11	152.34	92.37	364.76	222.08	152.34	145.91	114.79	165.22	144.83	193.11	230.66	233.88	263.92	219.93	232.81	232.81	281.08	207.06	202.77	259.63	313.27	154.49	198.47	164.14	277.86	196.33	207.06	214.57	200.62	208.13	362.62	307.90	156.63	214.57	164.14	162.00	384.08	241.39	232.81	186.67	144.83	332.58	186.67	268.21	274.65	223.96
17		286.45		228.51	351.89	150.20	90.55	351.89	224.22	148.05	141.61	113.72	163.07	142.69	187.75	227.44	231.73	260.70	223.15	230.66	231.73	253.19	203.84	199.55	254.26	295.03	153.42	195.26	160.93	261.77	194.18	203.84	209.20	198.47	200.62	348.67	302.54	156.63	212.42	166.29	159.85	376.57	239.24	228.51	188.82	143.76	324.00	185.60	266.06	262.84	219.40
18		280.01		225.30	349.74	148.05	88.72	351.89	225.30	142.69	139.47	112.65	160.93	140.54	184.53	223.15	229.59	259.63	223.15	239.24	230.66	230.66	200.62	196.33	243.53	286.45	152.34	194.18	157.71	254.26	192.04	199.55	208.13	198.47	199.55	341.16	295.03	152.34	211.35	165.22	157.71	360.47	230.66	222.08	185.60	143.76	325.07	183.45	270.35	248.90	215.88
19		272.50		219.93	346.53	148.05	86.90	333.65	221.00	142.69	136.25	111.57	162.00	136.25	182.38	216.71	227.44	249.97	223.15	236.02	228.51	229.59	197.40	193.11	241.39	281.08	151.27	193.11	154.49	251.04	190.96	195.26	204.91	192.04	208.13	335.80	291.81	149.12	207.06	164.14	155.56	354.04	230.66	219.93	181.31	142.69	288.59	181.31	266.06	244.61	212.04
20		266.06		214.57	340.09	146.98	85.08	328.29	219.93	141.61	135.18	110.50	155.56	133.03	178.09	212.42	225.30	244.61	218.86	238.17	223.15	228.51	194.18	189.89	240.32	270.35	150.20	189.89	152.34	247.83	188.82	194.18	201.69	183.45	205.98	327.21	288.59	149.12	202.77	154.49	153.42	345.45	225.30	214.57	183.45	142.69	281.08	180.24	257.48	237.10	208.29
21		259.63		214.57	328.29	144.83	83.25	318.63	218.86	143.76	134.10	108.36	156.63	131.96	175.95	211.35	218.86	237.10	219.93	233.88	217.79	227.44	190.96	184.53	234.95	266.06	149.12	189.89	149.12	242.46	186.67	192.04	200.62	187.75	201.69	317.56	277.86	149.12	198.47	151.27	150.20	337.94	223.15	211.35	178.09	141.61	284.30	179.16	246.75	231.73	204.99
22		254.26		213.49	325.07	146.98	81.43	310.05	214.57	140.54	130.89	107.28	149.12	131.96	170.58	207.06	214.57	225.30	218.86	219.93	210.28	226.37	188.82	182.38	229.59	260.70	148.05	187.75	148.05	240.32	185.60	189.89	198.47	175.95	199.55	315.41	278.94	154.49	195.26	148.05	148.05	327.21	221.00	208.13	183.45	141.61	286.45	178.09	238.17	222.08	201.67
23		248.90		212.42	318.63	140.54	79.60	292.88	212.42	139.47	129.81	106.32	148.05	131.96	167.36	202.77	212.42	219.93	202.77	223.15	204.91	225.30	185.60	180.24	224.22	253.19	144.83	186.67	145.91	239.24	181.31	187.75	195.26	185.60	192.04	312.20	277.86	150.20	193.11	144.83	145.91	319.71	217.79	203.84	180.24	140.54	287.52	177.02	231.73	212.42	198.26
24				211.35	313.27	143.76	77.78	283.23	211.35	140.54	127.67	105.46	148.05	130.89	165.22	198.47	207.06	217.79	199.55	225.30	197.40	221.00	182.38	178.09	221.00	241.39	143.76	179.16	143.76	234.95	173.80	185.60	189.89	184.53	192.04	308.98	276.79	148.05	190.96	130.89	143.76	311.12	214.57	199.55	175.95	140.54	280.01	175.95	216.71	205.98	193.52
25				210.28	310.05	143.76	75.96	277.86	209.20	139.47	124.45	104.17	144.83	130.89	163.07	193.11	205.98	215.64	200.62	223.15	190.96	217.79	180.24	175.95	216.71	239.24	142.69	175.95	140.54	229.59	168.44	182.38	184.53	184.53	190.96	301.47	263.92	145.91	184.53	128.74	141.61	300.39	213.49	195.26	174.87	140.54	272.50	174.87	213.49	208.13	190.48
26				209.20	303.61	143.76	74.13	267.14	209.20	138.40	121.23	103.31	143.76	127.67	160.93	197.40	207.06	211.35	201.69	222.08	183.45	209.20	179.16	172.73	213.49	232.81	142.69	174.87	139.47	225.30	164.14	181.31	178.09	187.75	187.75	296.10	263.92	144.83	180.24	127.67	139.47	293.96	212.42	190.96	173.80	139.47	269.28	173.80	211.35	207.06	188.05
27				208.13	301.47	149.12	72.31	261.77	204.91	136.25	121.23	102.67	140.54	125.52	158.78	186.67	207.06	209.20	201.69	207.06	180.24	207.06	175.95	170.58	211.35	227.44	141.61	173.80	138.40	223.15	158.78	179.16	171.65	185.60	187.75	291.81	266.06	141.61	175.95	127.67	136.25	288.59	211.35	186.67	171.65	139.47	266.06	171.65	207.06	207.06	185.44
28				207.06	299.32	150.20	70.49	254.26	199.55	137.32	118.01	101.49	140.54	121.23	156.63	174.87	203.84	208.13	197.40	207.06	175.95	203.84	173.80	167.36	208.13	221.00	138.40	172.73	136.25	215.64	156.63	178.09	166.29	182.38	185.60	284.30	254.26	141.61	172.73	126.59	134.10	282.16	212.42	184.53	171.65	138.40	260.70	170.58	203.84	204.91	182.39
29				205.98	298.25	151.27	68.66	241.39	189.89	136.25	115.87	100.85	138.40	116.94	154.49	173.80	196.33	205.98	196.33	203.84	170.58	200.62	170.58	164.14	205.98	216.71	136.25	172.73	134.10	214.57	154.49	177.02	162.00	179.16	182.38	264.99	251.04	139.47	171.65	126.59	133.03	273.57	204.91	183.45	171.65	138.40	258.55	169.51	200.62	203.84	179.30
30				204.91	296.10	148.05	66.84	226.37	182.38	135.18	113.72	100.20	136.25	112.65	152.34	172.73	195.26	203.84	196.33	200.62	167.36	199.55	169.51	162.00	202.77	212.42	130.89	171.65	133.03	213.49	149.12	175.95	157.71	179.16	180.24	267.14	253.19	137.32	171.65	125.52	130.89	268.21	204.91	181.31	168.44	138.40	257.48	167.36	198.47	201.69	177.03
Dec 1				202.77	293.96	146.98	65.66	222.08	174.87		112.65	99.67	135.18	109.43	152.34	177.02	193.11	205.98	196.33	198.47	160.93	199.55	166.29	159.85	200.62	209.20	128.74	170.58	130.89	212.42	145.91	174.87	156.63	181.31	178.09	263.92	252.12	137.32	171.65	125.52	128.74	257.48	200.62	180.24	167.36	137.32	248.90	165.22	195.26	200.62	175.97
2				200.62	291.81	143.76	64.37	221.00	170.58		109.43	98.38	134.10	106.32	149.12	181.31	192.04	203.84	194.18	198.47	156.63	197.40	164.14	157.71	196.33	204.91	127.67	168.44	129.81	209.20	144.83	171.65	153.42	182.38	171.65	258.55	244.61	137.32	170.58	124.45	126.59	253.19	201.69	178.09	170.58	138.40	247.83	165.22	193.11	198.47	174.00
3				197.40	289.67	142.69	63.19	218.86	164.14		108.36	97.84	133.03	103.31	148.05	182.38	190.96	201.69	193.11	194.18	152.34	194.18	162.00	156.63	194.18	201.69	127.67	167.36	128.74	204.91	142.69	168.44	150.20	175.95	169.51	255.33	244.61	131.96	168.44	123.38	125.52	248.90	198.47	175.95	167.36	139.47	246.75	164.14	190.96	195.26	171.78
4				195.26	287.52	140.54	62.01	212.42	159.85		106.32	97.52	133.03	100.20	145.91	181.31	188.82	200.62	190.96	190.96	149.12	193.11	159.85	153.42	190.96	194.18	126.59	167.36	127.67	201.69	138.40	165.22	149.12	170.58	168.44	252.12	238.17	131.96	163.07	123.38	123.38	244.61	193.11	172.73	169.51	140.54	246.75	164.14	188.82	192.04	169.42
5				193.11	285.37	141.61	60.72	203.84	154.49		104.17	97.20	135.18	98.38	144.83	182.38	186.67	200.62	188.82	188.82	144.83	190.96	157.71	152.34	188.82	182.38	123.38	165.22	126.59	198.47	136.25	164.14	146.98	167.36	164.14	249.97	237.10	130.89	159.85	122.30	121.23	241.39	188.82	169.51	166.29	142.69	246.75	163.07	186.67	188.82	167.20
6				187.75	283.23	139.47	59.54	197.40	150.20		103.31	97.20	121.23	96.02	142.69	181.31	185.60	194.18	186.67	186.67	141.61	188.82	154.49	150.20	187.75	175.95	120.16	162.00	124.45	196.33	134.10	162.00	144.83	170.58	160.93	243.53	227.44	128.74	155.56	121.23	120.16	237.10	184.53	167.36	163.07	141.61	246.75	163.07	183.45	184.53	164.23
7				182.38	281.08	140.54	58.36	188.82	146.98		100.85	97.20	121.23	94.20	140.54	180.24	184.53	195.26	184.53	185.60	138.40	186.67	152.34	149.12	182.38	171.65	118.01	159.85	123.38	194.18	134.10	159.85	140.54	173.80	163.07	233.88	222.08	125.52	154.49	120.16	118.01	232.81	182.38	165.22	160.93	139.47	245.68	162.00	181.31	179.16	162.02
8				177.02	278.94	136.25	57.07	182.38	142.69		100.20	97.20	118.01	92.69	139.47	179.16	183.45	195.26	177.02	182.38	134.10	183.45	150.20	146.98	181.31	168.44	118.01	156.63	121.23	190.96	134.10	158.78	135.18	173.80	155.56	225.30	223.15	123.38	153.42	118.01	116.94	225.30	181.31	164.14	159.85	137.32	242.46	160.93	177.02	174.87	159.38
9				172.73	277.86	131.96	55.89	172.73	138.40		97.20	96.56	116.94	91.19	137.32	179.16	181.31	216.71	172.73	180.24	131.96	182.38	149.12	145.91	178.09	167.36	119.08	153.42	120.16	188.82	134.10	156.63	131.96	171.65	154.49	224.22	217.79	121.23	153.42	116.94	115.87	218.86	177.02	163.07	158.78	136.25	239.24	160.93	174.87	173.80	157.75
10				168.44	275.72	126.59	54.71	167.36	134.10		96.34	96.56	115.87	89.37	136.25	178.09	180.24	216.71	179.16	179.16	128.74	181.31	145.91	144.83	174.87	166.29	118.01	151.27	119.08	187.75	134.10	152.34	129.81	169.51	150.20	222.08	213.49	120.16	152.34	115.87	114.79	214.57	174.87	162.00	157.71	133.03	236.02	160.93	173.80	171.65	155.91
11				163.07	245.68	126.59	53.43	157.71	130.89		94.20	96.56	118.01	86.90	135.18	177.02	179.16	217.79	177.02	175.95	126.59	180.24	144.83	143.76	172.73	165.22	116.94	146.98	118.01	183.45	131.96	150.20	128.74	166.29	144.83	221.00	216.71	119.08	152.34	115.87	113.72	211.35	171.65	160.93	156.63	131.96	234.95	160.93	172.73	170.58	153.62
12				158.78	218.86	124.45	52.25	154.49	127.67		92.69	96.34	118.01	85.72	134.10	175.95	179.16	218.86	174.87	174.87	121.23	178.09	142.69	142.69	170.58	164.14	113.72	145.91	116.94	179.16	129.81	148.05	127.67	166.29	142.69	221.00	216.71	118.01	152.34	113.72	112.65	207.06	168.44	158.78	155.56	130.89	234.95	159.85	171.65	168.44	151.45
13				155.56	195.26	121.23	51.07	150.20	124.45		90.87	96.02	118.01	84.75	131.96	174.87	179.16	215.64	177.02	172.73	120.16	177.02	140.54	140.54	170.58	163.07	109.43	141.61	116.94	179.16	126.59	144.83	126.59	166.29	139.47	217.79	211.35	112.65	151.27	112.65	111.57	204.91	166.29	156.63	153.42	129.81	233.88	157.71	170.58	166.29	149.10
14				151.27	170.58	116.94	49.78	145.91	121.23		88.08	95.70	118.01	82.93	130.89	173.80	177.02	212.42	174.87	170.58	116.94	175.95	139.47	138.40	167.36	159.85	108.36	139.47	114.79	175.95	124.45	142.69	125.52	162.00	136.25	217.79	205.98	110.50	150.20	111.57	110.50	200.62	164.14	154.49	151.27	128.74	233.88	158.78	169.51	163.07	146.49
15				146.98	149.12	113.72	48.60	139.47	119.08		86.58	95.70	118.01	81.43	127.67	169.51	175.95	209.20	172.73	168.44	114.79	174.87	136.25	138.40	164.14	155.56	108.36	136.25	113.72	172.73	123.38	140.54	124.45	158.78	134.10	214.57	207.06	109.43	148.05	110.50	109.43	195.26	162.00	153.42	150.20	127.67	233.88	157.71	168.44	159.85	144.04
16				142.69	148.05	110.50	48.60	136.25	116.94		85.08	95.70	118.01	79.93	126.59	166.29	173.80	209.20	169.51	167.36	112.65	172.73	134.10	136.25	163.07	152.34	108.36	135.18	111.57	170.58	123.38	139.47	124.45	149.12	130.89	212.42	207.06	106.21	144.83	110.50	108.36	190.96	159.85	150.20	149.12	125.52	234.95	156.63	167.36	157.71	142.18
17				139.47	148.05	107.28	48.60	134.10	115.87		84.75	95.38	118.01	78.64	124.45	163.07	173.80	207.06	166.29	165.22	109.43	170.58	133.03	134.10	160.93	149.12	107.28	134.10	109.43	168.44	122.30	138.40	123.38	145.91	128.74	211.35	208.13	105.14	141.61	111.57	107.28	187.75	157.71	148.05	148.05	124.45	234.95	156.63	165.22	156.63	140.65
18				134.10	146.98	104.82	48.60	127.67	113.72		83.57	95.05	116.94	77.46	122.30	160.93	173.80	207.06	164.14	164.14	108.36	169.51	130.89	133.03	157.71	145.91	106.32	131.96	108.36	165.22	121.23	136.25	123.38	142.69	127.67	210.28	205.98	101.92	138.40	110.50	106.75	184.53	155.56	146.98	146.98	123.38	234.95	156.63	163.07	154.49	138.92
19				130.89	145.91	101.81	48.60	126.59	112.65		82.61	94.73	114.79	75.96	121.23	164.14	171.65	204.91	164.14	162.00	106.32	168.44	127.67	130.89	154.49	142.69	103.31	129.81	106.32	162.00	121.23	136.25	122.30	140.54	127.67	207.06	198.47	100.85	135.18	109.43	105.67	182.38	153.42	145.91	145.91	124.45	234.95	155.56	160.93	152.34	137.28
20		188.82		127.67	145.91	99.34	48.60	123.38	110.50		82.07	94.73	113.72	75.31	119.08	165.22	169.51	204.91	164.14	160.93	103.31	167.36	127.67	128.74	152.34	140.54	99.99	125.52	104.49	158.78	121.23	135.18	122.30	139.47	127.67	203.84	199.55	100.85	133.03	109.43	104.07	181.31	151.27	144.83	144.83	125.52	233.88	153.42	158.78	150.20	137.09
21		187.75		123.38	144.83	97.20	48.28	121.23	108.36		80.46	94.73	114.79	74.45	118.01	166.29	170.58	205.98	160.93	157.71	101.81	165.22	124.45	127.67	151.27	139.47	97.84	123.38	102.67	156.63	121.23	134.10	122.30	135.18	121.23	195.26	195.26	97.63	130.89	109.43	103.85	178.09	149.12	143.76	143.76	126.59	228.51	152.34	156.63	149.12	135.31
22		186.67		120.16	143.76	94.73	48.28	118.01	106.32		78.96	94.52	114.79	73.49	115.87	166.29	169.51	204.91	160.93	156.63	100.20	164.14	122.30	126.59	150.20	138.40	96.34	123.38	101.17	153.42	121.23	133.03	122.30	134.10	121.23	193.11	192.04	95.48	129.81	108.36	103.64	174.87	146.98	142.69	143.76	125.52	226.37	152.34	154.49	146.98	134.01
23		186.67		115.87	142.69	92.37	48.28	115.87	104.82		78.10	94.52	114.79	72.63	114.79	166.29	170.58	204.91	157.71	154.49	97.20	162.00	121.23	125.52	148.05	137.32	95.38	122.30	99.34	152.34	120.16	131.96	121.23	131.96	118.01	192.04	192.04	93.34	128.74	108.36	103.42	171.65	144.83	142.69	142.69	124.45	225.30	152.34	152.34	145.91	132.76
24		188.82		112.65	142.69	90.55	48.28	113.72	103.31		76.82	94.52	114.79	71.67	113.72	165.22	173.80	204.91	157.71	153.42	96.56	160.93	120.16	124.45	145.91	136.25	94.52	122.30	98.38	151.27	119.08	130.89	121.23	128.74	116.94	187.75	190.96	91.19	128.74	107.28	103.21	169.51	143.76	142.69	141.61	123.38	223.15	152.34	150.20	143.76	131.78
25		189.89		109.43	141.61	88.08	48.28	110.50	101.81		75.96	94.52	114.79	70.81	112.65	162.00	172.73	203.84	157.71	152.34	94.73	158.78	118.01	122.30	144.83	135.18	94.20	121.23	97.84	149.12	118.01	129.81	121.23	128.74	115.87	185.60	188.82	89.05	127.67	107.28	102.99	166.29	142.69	142.69	141.61	122.30	219.93	153.42	148.05	143.76	130.62
26		192.04		105.14	137.32	85.72	48.28	109.43	100.20		75.63	94.52	113.72	70.16	111.57	158.78	172.73	200.62	157.71	150.20	93.55	157.71	116.94	121.23	141.61	133.03	93.55	121.23	96.56	146.98	116.94	128.74	120.16	127.67	113.72	181.31	184.53	87.97	126.59	106.21	102.78	164.14	141.61	143.76	140.54	121.23	216.71	153.42	145.91	142.69	129.21
27		194.18		101.17	140.54	83.90	48.28	106.32	99.67		74.99	94.52	113.72	68.98	109.43	158.78	169.51	200.62	154.49	149.12	91.19	156.63	115.87	120.16	139.47	130.89	92.37	121.23	95.70	144.83	116.94	127.67	120.16	127.67	112.65	179.16	181.31	87.97	124.45	105.14	102.56	163.07	139.47	143.76	140.54	120.16	214.57	152.34	143.76	141.61	128.12
28		195.26		97.52	139.47	82.07	48.28	104.82	98.70		73.81	94.52	113.72	68.02	108.36	159.85	165.22	200.62	154.49	146.98	90.55	154.49	113.72	119.08	138.40	126.59	91.73	120.16	94.20	142.69	115.87	127.67	119.08	124.45	111.57	178.09	178.09	86.90	122.30	104.71	101.92	162.00	137.32	143.76	139.47	121.23	212.42	151.27	142.69	140.54	126.91
29		197.40		94.20	138.40	80.25	48.28	103.31	97.84		72.95	94.52	113.72	67.16	107.28	154.49	168.44	199.55	152.34	145.91	89.37	153.42	111.57	118.01	136.25	124.45	91.41	116.94	92.69	139.47	113.72	126.59	118.01	121.23	110.50	177.02	174.87	85.83	122.30	105.03	100.85	160.93	135.18	142.69	139.47	122.30	210.28	150.20	141.61	139.47	125.70
30		198.47		86.90	137.32	78.10	48.28	100.20	97.20		72.31	94.20	113.72	66.84	106.00	153.42	171.65	197.40	152.34	144.83	88.08	152.34	110.50	118.01	134.10	120.16	90.87	115.87	91.73	136.25	110.50	126.59	115.87	121.23	108.36	173.80	171.65	84.75	122.30	105.35	99.77	159.85	134.10	142.69	138.40	121.23	207.06	149.12	140.54	138.40	124.44
31		200.62		80.78	136.25	75.96	48.28	100.20	96.56		70.49	94.20	113.72	65.87	104.82	151.27	168.44	197.40	152.34	142.69	85.72	150.20	109.43	116.94	133.03	116.94	89.58	114.79	91.19	138.40	108.36	125.52	112.65	118.01	106.32	169.51	169.51	83.68	122.30	105.46	99.77	158.78	133.03	141.61	137.32	120.16	203.84	148.05	139.47	137.32	123.12

Synthetic Upper Canyon Frances	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	
		161.47			138.82	151.45	126.19	147.27	133.71	152.02	143.40	127.48	152.08	156.81	147.38	114.67	146.81	117.77	123.21	98.28	115.00	121.26	136.10	145.64	133.71	180.59	96.19	135.70	180.66	175.03	140.15	140.60	112.09	109.14	122.14	100.13	133.91	179.62	146.80	121.99	115.26	124.15	166.10	155.58	166.06	177.32	146.84	105.59	166.29	165.90	156.56	139.81
Jan 1		36.91	36.91		39.34	33.96	34.92	45.51	32.22	27.01	22.06	30.23	36.91	28.49	29.01	24.15	31.44	32.92	38.22	33.44	35.61	35.52	27.27	21.71	48.20	29.53	35.18	29.53	36.91	55.59	33.61	42.21	35.18	34.92	24.75	33.18	26.06	33.26	57.24	46.29	30.66	32.22	39.08	42.65	41.69	43.77	50.46	31.96	35.96	36.57	40.56	35.53
2		36.91	36.91		39.34	32.74	33.96	43.77	31.70	26.32	21.97	29.96	36.65	27.53	29.01	23.88	31.27	31.96	38.22	33.18	35.18	35.35	27.36	21.54	47.77	29.44	34.74	28.84	36.39	54.72	33.35	41.86	35.18	34.65	24.58	32.57	25.97	33.18	56.72	45.68	30.23	32.22	38.91	42.82	41.34	43.34	50.20	31.88	35.44	36.30	40.04	35.17
3		36.91	36.91		38.82	31.96	32.22	41.78	31.70	25.80	21.37	29.79	36.65	27.01	29.01	23.71	29.96	31.27	38.13	33.00	34.31	35.18	27.45	21.37	47.60	29.36	34.57	28.66	36.04	53.85	33.18	41.52	35.09	34.39	24.49	32.22	25.62	32.92	56.02	45.08	29.79	32.14	38.39	41.78	40.82	42.65	49.51	31.88	34.83	36.13	39.61	34.74
4		36.91	36.91		38.39	31.44	30.75	39.34	31.44	25.80	20.93	29.53	35.44	25.80	29.01	23.62	29.53	30.75	37.35	33.00	33.87	34.92	27.27	21.19	47.25	29.27	34.39	28.23	35.61	52.98	33.00	41.17	35.09	34.05	24.32	31.79	25.36	32.66	54.98	44.47	29.36	32.14	38.30	41.60	40.39	41.95	48.46	31.61	34.31	35.96	39.17	34.31
5		36.91	31.96		38.13	30.23	29.53	36.91	31.44	25.53	19.89	29.53	34.92	24.58	29.01	23.36	29.27	30.23	37.17	33.18	33.00	34.31	26.92	21.02	46.90	29.18	34.22	27.88	35.26	52.11	32.83	40.82	35.09	33.79	24.06	31.27	25.01	32.05	54.02	43.95	28.92	32.05	38.22	41.17	40.04	41.69	48.20	31.27	33.79	35.78	38.82	33.78
6		36.91	30.75		37.87	29.79	28.75	36.39	30.75	25.10	19.19	29.27	34.39	24.15	29.53	23.10	29.01	30.49	36.48	33.09	31.27	33.44	26.49	20.84	46.55	29.10	34.05	27.79	35.00	51.50	32.48	40.47	34.65	33.53	23.88	30.83	24.84	31.44	53.07	43.43	28.40	32.05	38.13	40.91	39.87	41.34	47.94	31.18	33.26	35.61	38.39	33.40
7		36.91	30.75		37.61	29.27	27.79	35.18	29.96	24.84	18.93	29.01	33.96	23.97	29.53	22.76	29.01	30.75	36.22	33.00	29.96	32.48	26.40	20.67	46.12	28.66	34.05	27.53	34.74	50.90	32.22	40.21	34.31	33.26	23.62	30.66	24.58	30.40	52.55	42.91	27.88	31.96	37.61	40.47	39.69	41.17	47.77	31.09	32.74	35.44	38.04	33.05
8		36.91	30.75		37.17	28.75	26.58	34.39	29.27	24.58	18.67	28.49	33.70	24.15	29.53	22.41	29.01	30.75	35.61	33.00	28.66	31.61	26.40	20.58	45.60	28.23	34.13	27.19	34.39	50.29	31.96	39.87	33.87	33.00	23.36	30.31	24.32	30.57	52.11	42.38	27.36	31.96	36.83	39.34	38.91	40.73	46.21	31.01	32.22	35.26	37.69	32.66
9		36.91	30.75		36.91	28.31	25.53	33.96	28.49	24.58	18.41	28.05	33.70	24.32	29.53	22.50	28.75	30.75	34.92	32.92	27.79	30.66	26.23	20.50	44.56	27.45	34.31	26.92	34.13	49.68	31.70	39.52	33.53	32.74	23.10	29.96	24.06	29.79	51.59	41.86	26.84	31.88	36.39	38.82	38.48	40.30	45.42	30.92	31.70	35.09	37.26	32.30
10		36.91	30.75		36.91	28.05	25.10	31.96	27.79	24.32	18.41	27.01	33.70	24.49	29.53	22.76	28.05	30.23	34.13	32.31	27.19	30.40	25.97	20.50	43.43	27.27	33.87	26.58	33.87	49.07	31.44	39.26	33.18	32.48	22.93	29.70	23.88	28.92	51.16	41.34	26.40	31.79	35.87	38.48	37.87	40.04	44.47	30.40	31.18	34.92	36.91	31.90
11		36.91	30.75		36.39	27.53	24.58	28.31	27.27	23.88	18.41	25.80	33.70	24.23	28.75	23.02	27.27	29.79	33.70	31.96	26.49	30.40	25.97	20.50	42.56	26.92	33.44	26.23	33.61	48.64	31.18	38.91	32.74	32.22	22.76	29.36	23.62	27.53	50.72	40.82	25.88	31.70	35.35	37.87	37.43	39.69	43.86	29.88	30.75	34.74	36.57	31.44
12		36.91	30.75		36.39	27.27	24.15	25.53	26.84	23.62	18.41	24.84	33.70	23.88	28.49	23.45	27.01	29.01	33.35	30.92	26.06	30.31	26.06	20.50	41.69	26.49	33.00	26.06	33.35	48.20	30.92	38.56	32.40	31.96	22.58	29.01	23.36	27.62	49.77	40.30	25.36	31.70	35.26	37.00	36.74	39.52	43.34	29.62	30.23	34.65	36.13	31.07
13		36.91	30.75		35.87	27.01	23.36	25.10	26.32	23.10	18.41	24.15	33.70	23.36	28.49	23.62	26.58	28.49	33.18	30.23	25.80	29.96	26.23	20.41	40.82	26.23	32.83	25.88	33.09	47.77	30.66	38.22	32.05	31.70	22.41	28.75	23.10	27.71	48.90	39.78	24.93	31.61	35.44	36.65	36.04	39.08	42.82	29.44	29.79	34.48	35.78	30.76
14		36.91	30.75		35.70	27.01	22.67	24.84	25.80	22.84	18.41	23.62	33.96	23.36	28.31	23.88	26.32	28.31	33.18	29.36	25.53	29.62	26.32	20.41	39.95	26.14	32.57	25.62	32.92	47.34	30.49	37.87	31.70	31.44	22.23	28.49	22.93	27.01	48.03	39.26	24.41	31.61	35.52	36.39	35.35	38.82	42.30	29.27	29.27	34.31	35.44	30.49
15		36.91	30.75		35.44	27.01	22.15	24.58	25.36	22.67	18.41	23.36	34.22	23.45	28.31	24.23	25.80	28.31	33.00	28.49	25.19	29.27	26.75	20.41	39.08	26.06	32.31	25.36	32.83	46.90	30.31	37.52	31.44	31.27	22.06	28.14	22.76	25.88	47.16	38.74	23.97	31.53	35.61	36.13	34.65	38.48	41.95	28.92	28.84	34.13	35.09	30.23
16		36.91	30.75		35.18	26.84	21.63	24.84	25.36	22.67	18.24	23.10	34.22	23.62	28.05	24.15	25.80	28.31	32.83	28.23	24.84	28.66	26.75	20.41	38.22	25.97	32.31	25.19	32.57	46.38	30.05	37.17	31.09	31.01	21.89	27.97	22.41	25.10	46.03	38.22	23.62	31.53	35.52	35.78	34.39	37.78	41.52	28.75	28.40	33.96	34.74	29.98
17		36.91	30.75		34.92	26.84	21.19	25.36	25.10	22.15	17.98	22.84	34.39	23.88	27.79	23.97	25.80	28.49	32.14	27.97	24.58	28.31	26.58	20.50	37.35	25.97	32.14	24.93	32.22	45.86	29.79	36.83	30.75	30.75	21.71	27.62	22.23	25.10	45.34	37.69	23.28	31.53	35.26	35.96	34.13	37.78	40.91	28.40	27.97	33.79	34.39	29.76
18		36.91	30.75		34.39	26.84	20.67	25.53	24.84	21.63	17.72	22.84	34.39	23.88	27.53	23.62	25.53	28.75	31.27	27.79	24.32	27.79	26.23	20.50	36.48	25.88	31.88	24.75	32.05	45.34	29.62	36.48	30.49	30.57	21.54	27.45	22.06	24.67	43.86	37.17	22.84	31.44	34.92	36.22	34.13	37.69	40.47	28.23	27.45	33.61	34.05	29.49

30	185.00	125.94	181.52	113.78	126.81	203.24	173.71	210.19	125.07	104.22	145.91	118.99	151.99	112.91	180.66	98.14	92.06	155.47	138.97	87.72	143.31	102.49	134.62	125.94	144.18	161.55
Oct 1	181.52	124.20	179.79	117.25	126.81	199.76	169.36	223.21	124.20	108.57	141.57	120.73	151.99	112.04	179.79	97.28	90.33	154.60	138.10	88.59	142.44	101.62	135.49	121.59	143.31	160.68
2	179.79	121.59	179.79	118.12	126.81	193.68	165.02	231.90	123.33	109.44	138.10	126.81	151.99	111.17	177.18	95.54	89.46	154.60	136.36	90.33	140.70	100.75	137.23	119.86	144.18	158.94
3	178.92	120.73	177.18	117.25	125.07	187.60	159.81	242.32	121.59	110.30	133.75	125.07	152.86	110.30	174.58	95.54	89.46	158.07	133.75	90.33	138.97	99.01	137.23	118.99	146.78	155.47
4	174.58	118.12	174.58	118.12	125.07	186.74	156.34	248.40	120.73	109.44	130.28	120.73	152.86	108.57	171.97	98.14	89.46	162.42	127.67	91.20	138.10	98.14	137.23	121.59	150.26	151.99
5	169.36	117.25	178.92	125.07	122.46	185.00	152.86	253.61	118.99	108.57	126.81	116.38	151.99	107.70	171.97	99.01	92.06	165.02	120.73	92.93	135.49	98.14	137.23	124.20	152.86	150.26
6	166.76	115.52	179.79	133.75	119.86	178.92	151.13	245.80	117.25	105.09	123.33	115.52	151.13	106.83	167.63	99.01	91.20	169.36	116.38	94.67	130.28	97.28	135.49	126.81	152.86	149.39
7	161.55	114.65	179.79	134.62	118.99	173.71	148.52	242.32	116.38	102.49	118.99	118.12	151.13	105.09	162.42	101.62	92.06	174.58	115.52	95.54	126.81	95.54	131.15	125.07	153.73	147.65
8	158.94	112.04	178.92	140.70	116.38	165.89	147.65	237.98	113.78	99.01	115.52	119.86	149.39	103.36	159.81	103.36	90.33	179.79	112.91	95.54	126.81	95.54	128.54	125.07	154.60	148.52
9	154.60	112.04	177.18	143.31	113.78	163.28	150.26	233.64	112.04	96.41	113.78	123.33	147.65	103.36	157.20	106.83	90.33	183.26	112.04	94.67	122.46	94.67	127.67	126.81	154.60	148.52
10	152.86	112.04	173.71	144.18	113.78	158.07	150.26	229.29	109.44	93.80	110.30	122.46	145.05	104.22	152.86	113.78	90.33	186.74	108.57	93.80	115.52	94.67	125.94	127.67	152.86	149.39
11	151.99	111.17	170.23	145.91	119.86	155.47	145.91	224.95	106.83	91.20	108.57	118.12	143.31	105.09	147.65	118.12	94.67	190.21	105.96	92.93	114.65	94.67	123.33	125.94	151.99	150.26
12	150.26	110.30	167.63	145.05	118.12	151.13	142.44	218.00	105.09	89.46	106.83	115.52	141.57	103.36	145.05	123.33	97.28	191.95	104.22	92.93	115.52	92.93	121.59	124.20	154.60	151.13
13	148.52	112.04	162.42	141.57	116.38	147.65	139.83	206.71	103.36	87.72	105.09	112.91	139.83	103.36	139.83	128.54	100.75	190.21	103.36	92.93	112.91	92.06	119.86	122.46	155.47	155.47
14	145.91	112.04	159.81	139.83	113.78	143.31	138.97	199.76	100.75	85.55	103.36	112.04	138.97	102.49	138.10	131.15	103.36	188.47	100.75	92.06	110.30	92.06	116.38	121.59	153.73	160.68
15	145.05	112.04	156.34	136.36	112.04	141.57	137.23	193.68	98.14	83.64	100.75	111.17	137.23	99.88	132.89	135.49	105.96	186.74	103.36	92.06	108.57	91.20	114.65	121.59	151.13	163.28
16	145.05	112.04	153.73	136.36	112.04	138.97	132.89	187.60	92.06	82.60	98.14	111.17	135.49	98.14	130.28	137.23	106.83	183.26	105.09	91.20	105.09	91.20	112.04	124.20	150.26	164.15
17	145.05	111.17	148.52	134.62	109.44	135.49	130.28	181.52	90.33	81.64	95.54	110.30	133.75	96.41	127.67	135.49	105.96	180.66	105.09	85.81	102.49	88.59	109.44	128.54	148.52	165.89
18	143.31	111.17	145.91	132.02	107.70	132.89	126.81	176.31	92.06	78.95	90.33	110.30	131.15	95.54	125.07	134.62	108.57	177.18	105.96	83.29	100.75	85.46	106.83	131.15	145.91	165.89
19	141.57	111.17	138.10	130.28	105.96	129.41	126.81	171.97	89.46	78.95	88.59	109.44	128.54	93.80	123.33	137.23	109.44	176.31	105.96	85.20	99.88	84.60	105.96	133.75	143.31	165.02
20	139.83	112.04	130.28	125.07	105.96	126.81	125.07	166.76	85.38	77.21	87.72	109.44	125.94	90.33	120.73	138.10	108.57	174.58	104.22	84.94	98.14	83.47	104.22	137.23	142.44	163.28
21	138.10	111.17	131.15	124.20	103.36	124.20	119.86	158.94	82.60	73.56	83.12	105.96	121.59	90.33	115.52	137.23	106.83	168.50	99.01	83.73	96.41	83.03	101.62	141.57	141.57	162.42
22	137.23	109.44	131.15	118.99	100.75	120.73	112.04	155.47	81.38	70.61	82.86	105.09	118.99	90.33	112.91	135.49	103.36	159.81	99.88	82.68	95.54	80.34	98.14	144.18	138.97	154.60
23	135.49	106.83	129.41	113.78	98.14	117.25	110.30	153.73	83.12	71.57	81.90	105.09	113.78	87.72	110.30	135.49	102.49	156.34	101.62	82.16	92.93	79.91	95.54	148.52	135.49	147.65
24	131.15	105.96	128.54	105.96	96.41	114.65	105.96	149.39	80.95	72.52	81.12	103.36	108.57	85.55	108.57	132.02	102.49	155.47	100.75	80.95	89.46	79.21	91.20	152.86	132.89	145.05
25	130.28	104.22	126.81	103.36	97.28	108.57	104.22	144.18	77.99	72.78	80.17	104.22	108.57	83.64	106.83	129.41	98.14	151.99	103.36	79.04	89.46	78.43	87.72	158.07	131.15	145.05
26	126.81	102.49	124.20	99.01	94.67	105.09	102.49	135.49	75.48	70.35	77.47	104.22	104.22	82.42	103.36	126.81	93.80	147.65	103.36	75.65	86.59	77.04	85.55	164.15	128.54	144.18
27	123.33	97.28	122.46	96.41	92.06	105.09	100.75	130.28	71.57	68.87	76.52	103.36	99.88	79.91	100.75	125.07	93.80	144.18	100.75	74.52	82.34	76.43	84.25	165.89	124.20	138.97
28	121.59	97.28	121.59	94.67	92.06	105.09	99.88	129.41	70.09	66.62	76.52	103.36	95.54	78.69	98.14	122.46	95.54	141.57	99.88	72.09	81.29	73.83	82.08	157.20	120.73	134.62
29	119.86	97.28	118.99	92.06	89.46	104.22	99.01	126.81	69.14	64.45	76.26	102.49	91.20	77.47	95.54	118.12	92.06	139.83	94.67	70.35	80.77	67.75	80.34	149.39	118.12	132.02
30	117.25	93.80	118.12	89.46	85.81	102.49	99.01	125.07	68.87	62.19	75.74	100.75	89.46	76.26	91.20	115.52	89.46	133.75	91.20	69.48	78.95	62.53	79.04	142.44	112.91	128.54
31	114.65	81.12	117.25	87.72	81.90	97.28	98.14	123.33	68.87	59.49	73.30	98.14	88.59	73.83	88.59	114.65	88.59	127.67	92.93	68.61	78.43	60.36	78.60	137.23	111.17	125.07
Nov 1	115.52	81.12	114.65	84.86	81.90	95.54	100.75	118.12	68.61	59.06	72.78	94.67	86.07	73.30	87.72	111.17	86.33	126.81	93.80	67.75	77.30	58.19	78.17	137.23	106.83	121.59
2	113.78	81.12	111.17	82.42	81.90	93.80	103.36	116.38	66.44	59.06	72.35	95.54	82.42	71.31	86.07	108.57	83.38	123.33	90.33	68.61	76.43	56.45	74.69	137.23	102.49	120.73
3	107.70	81.12	107.70	79.91	80.95	91.20	105.96	110.30	62.71	58.02	71.31	96.41	79.91	70.09	83.64	106.83	76.95	121.59	90.33	69.48	75.56	55.59	72.96	136.36	104.22	117.25
4	106.83	81.12		78.69	78.69	88.59	110.30	104.22	60.28	56.28	67.66	96.41	77.47	68.87	81.12	104.22	73.83	118.99	89.46	70.35	75.56	55.41	70.35	135.49	100.75	115.52
5	103.36	81.12		76.26	76.69	86.33	112.04	100.75	56.54	54.37	61.49	94.67	75.04	66.44	78.69	97.28	68.87	114.65	86.07	68.61	74.69	54.28	67.75	137.23	97.28	112.91
6	88.59	81.12		73.83	76.00	84.60	112.91	96.41	55.33	52.89	54.11	90.33	73.83	65.14	77.47	94.67	66.44	112.04	85.64	65.14	71.22	52.98	65.14	136.36	94.67	109.44
7	83.64	81.12		72.52	73.83	82.42	109.44	92.06	54.37	51.68	44.30	84.07	73.83	63.92	76.26	93.80	63.66	112.91	84.25	63.84	67.75	52.11	63.40	134.62	91.20	108.57
8	83.64	81.12		71.31	73.56	80.95	105.96	87.72	54.11	50.64	41.78	81.64	71.31	62.45	73.83	92.93	61.49	110.30	83.38	62.53	65.14	51.24	61.67	124.20	87.72	105.09
9	83.64	81.12		70.09	71.57	78.69	103.36	83.64	53.59	49.68	39.87	82.60	70.09	61.49	71.31	93.80	61.23	107.70	82.51	60.80	61.67	50.38	59.93	113.78	83.38	100.75
10	83.64	81.12		67.66	70.87	76.95	99.88	79.91	53.15	49.16	39.61	81.38	68.87	61.23	70.09	91.20	59.23	103.36	81.64	59.93	59.93	50.38	58.19	105.96	78.17	99.01
11	83.64	81.12		66.44	68.87	75.74	95.54	77.21	52.63	49.16	39.87	78.17	67.66	60.02	68.87	86.07	59.06	99.01	79.91	59.49	59.06	50.38	57.32	102.49	74.69	96.41
12	83.64	81.12		65.14	67.92	73.83	91.20	74.52	52.89	48.72	41.34	73.83	67.66	59.06	66.44	81.12	58.80	92.06	78.17	59.06	58.19	50.38	56.45	97.28	71.22	93.80
13	83.64	81.12		63.92	66.44	72.52	86.07	71.83	51.68	48.72	41.78	71.31	66.44	57.76	65.14	78.17	58.80	90.33	75.56	59.49	57.32	49.94	55.59	92.06	68.61	90.33
14	83.64	81.12		62.71	65.14	70.87	78.69	69.14	51.16	48.72	42.30	69.40	66.44	57.06	63.92	73.83	58.54	85.99	74.69	59.93	56.89	49.07	55.15	87.72	66.88	86.85
15	83.64	81.12		61.49	63.92	68.87	72.52	66.44	50.20	48.46	43.08	67.66	65.14	56.11	61.49	70.09	57.58	82.51	74.69	59.49	56.45	47.77	54.72	85.99	64.27	84.25
16	63.92	81.12		60.97	62.71	67.14	68.87	64.45	49.68	47.68	42.82	65.92	61.49	54.11	60.97	66.44	56.54	79.04	74.69	58.63	56.45	46.03	52.98	84.25	60.80	82.51
17	63.92	81.12		60.54	61.49	66.18	66.44	62.45	49.42	46.73	42.04	62.71	59.06	52.89	59.06	63.92	56.11	76.00	73.83	57.76	56.02	43.43	51.24	83.38	59.06	81.64
18	63.92	81.12		59.06	61.23	64.45	65.40	60.54	49.16	45.77	40.56	59.06	57.76	51.68	57.76	61.49	55.85	72.96	72.09	56.45	55.59	42.56	49.51	81.64	56.45	79.91
19	63.92	81.12		58.54	59.23	62.71	64.97	58.54	48.99	44.73	39.34	56.54	56.54	50.38	56.54	60.28	55.59	70.35	70.79	54.72	54.72	41.69	47.77	76.43	54.72	78.17
20	63.92	81.12		58.02	58.54	61.49	64.97	56.54	48.72	44.56	37.87	56.28	55.33	49.16	55.33	59.06	55.33	67.75	68.61	52.11	52.98	41.26	46.03	74.69	52.11	76.43
21	63.92	57.76		57.06	57.58	60.97	65.14	55.33	47.25	44.56	37.35	55.33	54.11	49.16	54.11	57.76	55.07	64.71	67.31	51.24	50.38	40.39	44.30	72.09	50.38	76.00
22	63.92	57.76		55.59	56.54	59.49	65.92	54.11	46.21	44.30	37.17	55.07	54.11	46.99	52.89	57.06	54.63	61.67	65.14	49.51	48.20	39.95	42.56	69.48	48.64	75.65
23	63.92	57.76		55.07	56.11	58.80	66.44	52.89	44.30	44.03	37.35	54.63	54.11	46.21	51.68	56.80	54.11	59.06	64.71	49.07	46.90	39.78	42.12	68.61	47.77	75.48
24	63.92	57.76		54.63	54.37	58.02	67.66	49.16	43.08	43.08	37.61	54.37	52.89	45.25	50.38	56.54	52.89	56.45	65.14	48.64	46.03	39.43	41.69	67.75	46.03	75.30
25	63.92	57.76		54.11	54.11	56.54	68.87	50.38	41.78	42.04	38.39	54.11	51.68	44.56	49.16	56.28	51.42	54.72	64.27	48.90	45.42	39.08	40.82	66.88	45.16	75.13
26	63.92	57.76		53.59	53.33	56.11	69.14	49.68	41.34	41.60	38.65	53.85	51.68	44.03	48.72	56.28	51.16	53.41	64.01	49.16	45.16	38.65	40.39	66.01	44.30	74.95
27	63.92	57.76		53.15	52.37	55.07	69.14	48.72	40.82	40.82	38.82	53.59	50.64	43.77	46.73	56.11	49.94	52.81	63.84	49.51	44.30	38.22	39.08	66.01	43.43	75.13
28	63.92	57.76		52.11	51.68	54.11	68.87	47.68	40.30	39.61	38.82	52.89	49.94	43.25	46.21	55.85	49.42	52.29	63.58	49.94	43.43	38.22	37.78	65.14	42.56	74.69
29	63.92	57.76		51.68	51.42	53.85	67.66	47.25	39.87	38.82	38.65	52.63	49.16	42.82	44.73	55.07	49.16	53.68	62.97	50.38	42.56	37.78	36.48	65.14	41.69	73.83
30	63.92	57.76		51.16	50.38	53.59	66.44	46.47	39.34	37.35	38.13	50.20	47.94	42.04	43.77	54.63	48.99	53.94	62.36	51.24	42.12	36.91	35.61	64.27	40.82	72.96
Dec 1	54.11	57.76		50.38	49.42	52.89	63.92	46.21	39.08	36.91	37.35	49.16	45.51	41.78	42.30	54.37	48.72	53.41	60.80	50.38	41.69	36.74	33.00	63.40	39.95	71.22
2	54.11	57.76		49.16	49.16	52.11	61.49	46.03	38.65	36.91	36.91	48.99	44.30	40.82	41.78	54.11	46.99	52.55	59.49	47.77	41.69	36.48	29.96	60.80	39.08	67.75
3	54.11	57.76		49.16	48.99	51.85	59.06	45.51	37.87	36.65	36.65	48.72	42.82	40.30	40.56	54.11	46.73	49.94	56.45	45.16	41.69	36.48	28.66	59.06	38.22	66.01
4	54.11	57.76		48.72	48.46	51.68	56.54	45.25	36.91	36.13	36.39	48.72	42.30	39.87	39.61	53.85	46.47	47.25	55.59	44.30	41.69	36.39	27.79	57.32	38.22	63.40
5	54.11	57.76		48.72	47.25	51.68	55.33	44.99	36.91	35.87	36.13	48.72	42.04	39.08	38.82	52.89	46.47	44.73	54.72	43.43	41.69	36.39	27.10	55.59	37.35	61.67
6	54.11	45.51		48.72	46.73	51.42	54.11	44.99	36.91	35.70	35.87	48.99	41.78	38.13	37.87	51.68	45.77	42.56	53.41	42.56	41.69	36.39	26.92	54.72	37.35	59.06
7	54.11	45.51		48.20	46.73	50.90	51.68	44.99	36.91	35.18	35.70	48.99	41.78	36.91	36.91	50.90	44.73	42.12	51.68	42.82	39.08	36.48	26.49	53.85	36.48	55.59
8	54.11	45.51		47.25	46.03	50.20	50.38	44.99	36.91	34.39	35.70	48.99	41.60	36.65	36.39	49.16	44.03	41.17	50.81	43.08	38.22	36.48	26.06	53.85	36.48	54.72
9	54.11	45.51		46.73	46.03	49.94	49.68	44.99	36.65	34.22	35.70	47.94	41.08	36.39	35.87	48.72	41.78	40.82	50.55	42.56	37.78	36.57	25.88	52.98	35.61	52.98
10	54.11	45.51		46.21	44.30	49.68	49.16	44.99	36.39	33.96	35.44	47.25	37.35	35.87	35.44	48.46	39.34	41.17	50.38	41.69	37.78	36.48	25.80	52.98	35.61	51.94
11	54.11	45.51		46.21	43.77	49.42	47.94	44.99	34.65	33.70	35.18	46.47	36.91	35.44	34.39	48.20	38.13	41.69	50.20	41.95	37.35	36.39	25.71	52.11	34.74	48.64
12	54.11	45.51		46.21	43.08	49.16	47.25	44.99	33.96	33.44	34.92	45.51	36.65	34.92	32.22	47.94	36.91	42.12	49.68	41.69	36.91	35.78	25.88	52.11	34.74	46.90
13	54.11	45.51		45.77	42.82	48.99	46.73	44.99	33.70	33.18	34.39	44.30	36.65	34.65	31.96	47.25	36.39	42.38	49.51	40.99	36.48	35.18	25.19	52.11	34.31	45.16
14	54.11	45.51		45.77	42.04	48.99	46.47	44.73	32.92	32.92	34.22	43.08	35.70	34.65	31.44	46.21	35.18	42.73	49.07	39.95	36.48	34.74	24.75	52.11	33.87	43.43
15	54.11	45.51		45.25	41.78	48.72	46.47	44.56	32.74	32.48	33.96	42.30	34.92	34.39	31.01	46.03	34.65	42.30	48.90	39.08	36.48	34.31	24.32	51.24	33.44	41.69
16	54.11	45.51		44.73	41.34	47.94	46.03	44.30	32.48	31.44	33.18	41.78	34.39	33.18	30.49	45.51	34.39	41.69	48.64	39.08	36.48	33.87	23.88	51.24	33.00	40.82
17	54.11	45.51		44.30	40.82	47.25	45.51	43.77	32.48	30.49	32.92	41.34	34.39	31.96	29.96	44.99	34.22	41.08	48.03	39.52	36.48	33.00	23.54	51.24	32.57	40.39
18	54.11	45.51		44.03	40.56	46.73	45.25	41.78	32.22	29.53	32.92	40.82	34.39	31.44	29.53	44.73	34.22	39.95	47.77	39.08	36.48	32.14	23.45	50.38	32.14	39.52
19	54.11	45.51		43.77	40.13	45.77	44.99	39.34	31.96	28.05	32.92	40.56	34.39	30.75	29.01	44.30	34.39	38.91	46.90	38.65	36.48	31.70	23.36	50.38	32.14	39.08
20	54.11	45.51		43.51	39.61	45.25	44.73	36.91	31.70	27.01	32.92	40.30	34.39	30.49	28.31	43.25	34.65	37.35	45.60	38.22	36.48	31.53	23.28	50.38	31.70	38.65
21	54.11	36.91		43.25	39.34	44.30	44.73	36.13	31.01	26.58	32.92	40.13	33.70	30.23	27.79	41.69	34.92	37.69	44.30	37.35	36.30	31.27	23.28	50.38	31.27	38.22
22	54.11	36.91		43.08	38.82	44.03	44.99	35.70	29.96	26.06	32.92	39.87	32.92	29.96	27.27	40.56	34.65	38.04	42.99	35.61	35.61	31.27	23.36	50.38	31.09	38.22
23	54.11	36.91		42.30	38.13	43.25	44.99	35.18	29.27	25.53	32.92	39.61	32.74	29.79	27.01	39.08	34.39	38.04	42.12	34.31	35.44	30.83	23.36	50.38	30.92	38.04
24	54.11	36.91		41.78	37.87	42.82	45.25	34.92	28.31	25.10	32.92	39.61	32.22	29.79	26.84	38.13	34.92	38.22	41.26	33.87	35.61	30.40	23.45	49.51	30.66	37.52
25	54.11	36.91		41.60	37.17	41.78	45.51	34.65	28.05	24.58	31.96	39.34	31.96	29.79	26.32	37.87	35.44	38.91	40.82	33.44	35.61	29.96	23.45	49.51	30.40	37.35
26	54.11	36.91		41.34	36.91	41.08	46.03	34.65	27.79	23.88	31.27	39.34	31.96	29.53	25.53	36.91	34.65	38.04	39.52	33.87	35.61	29.53	23.28	49.51	30.23	37.00
27	54.11	36.91		41.08	36.65	40.30	46.21	34.65	27.79	23.36	30.75	39.34	31.96	29.53	25.10	35.70	34.39	37.61	38.65	34.74	35.18	28.66	23.02	49.51	30.05	36.65
28	54.11	36.91		40.82	36.13	39.34	46.47	34.39	27.79	22.84	30.23	38.82	31.96	29.53	24.84	35.18	34.39	37.35	37.78	34.74	35.09	27.97	22.58	49.51	29.88	36.57
29	54.11	36.91		40.56	35.44	38.13	46.73	34.39	27.79	22.67	29.96	37.87	31.70	29.53	24.84	33.44	34.39	37.69	36.48	35.18	35.18	27.62	22.41	48.64	29.79	36.30
30	54.11	36.91		40.13	34.92	37.17	46.73	33.96	27.79	22.41	29.96	37.35	31.44	29.53	24.84	32.74	34.22	38.13	35.61	35.61	35.44	27.27	22.06	48.64	29.62	36.04
31	54.11	36.91		39.61	34.39	36.91	46.73	33.18	27.53	22.15	30.23	36.91	30.23	29.27	24.58	31.96	33.70	38.13	33.87	35.18	35.61	27.19	21.80	48.64	29.53	35.61

30	67.75	181.52	224.08	140.70	124.20	171.10	138.10	153.73	125.07	84.68	169.36	340.47	220.61	135.49	133.75	142.44	182.39	168.50	182.39	243.19	168.50	98.14	201.50	145.91	169.36	152.10
Oct 1	67.75	179.79	221.48	138.10	125.07	170.23	133.75	150.26	124.20	87.72	166.76	345.68	214.53	132.02	133.75	140.70	181.52	172.84	179.79	238.85	167.63	99.88	199.76	143.31	166.76	151.31
2	66.70	179.79	218.00	137.23	124.20	166.76	130.28	144.18	123.33	90.33	163.28	343.07	210.19	128.54	132.02	141.57	181.52	174.58	178.92	233.64	167.63	100.75	195.42	141.57	162.42	150.17
3	68.87	179.79	215.40	137.23	125.94	166.76	128.54	139.83	121.59	91.20	160.68	336.12	206.71	126.81	132.89	141.57	179.79	175.44	177.18	230.16	167.63	100.75	190.21	138.10	158.07	148.98
4	74.95	179.79	210.19	138.97	128.54	168.50	126.81	136.36	118.99	91.20	158.07	327.44	202.37	124.20	133.75	138.97	177.18	175.44	173.71	226.69	165.02	100.75	185.87	134.62	155.47	147.78
5	76.78	176.31	208.45	138.97	133.75	175.44	125.07	132.89	115.52	89.46	155.47	317.88	198.89	121.59	133.75	139.83	175.44	175.44	170.23	228.42	165.89	100.75	181.52	131.15	153.73	147.01
6	77.47	172.84	208.45	138.10	136.36	190.21	123.33	130.28	113.78	88.59	152.86	310.94	194.55	118.99	136.36	142.44	172.84	176.31	168.50	231.90	167.63	100.75	177.18	128.54	151.13	146.10
7	78.17	166.76	211.05	132.89	137.23	202.37	122.46	127.67	111.17	87.72	150.26	302.25	191.08	119.86	141.57	145.05	169.36	175.44	166.76	228.42	167.63	100.75	172.84	125.94	148.52	144.93
8	78.52	164.15	210.19	132.89	137.23	215.40	120.73	125.94	108.57	86.85	148.52	293.57	187.60	117.25	148.52	144.18	166.76	173.71	165.02	223.21	163.28	100.75	169.36	124.20	145.05	143.76
9	79.99	159.81	206.71	132.02	135.49	226.69	118.99	124.20	104.22	85.99	145.05	284.01	185.00	116.38	152.86	144.18	164.15	170.23	162.42	218.00	158.07	100.75	166.76	121.59	139.83	142.49
10	81.56	155.47	203.24	129.41	134.62	232.77	117.25	122.46	99.01	84.77	141.57	273.59	181.52	114.65	155.47	142.44	161.55	168.50	160.68	211.05	147.65	101.62	164.15	118.99	137.23	140.64
11	81.64	151.13	201.50	126.81	133.75	234.50	116.38	121.59	98.14	83.38	137.23	264.90	178.92	109.44	157.20	140.70	159.81	165.02	160.68	204.11	145.05	102.49	160.68	115.52	134.62	139.10
12	83.38	148.52	202.37	123.33	132.02	232.77	114.65	118.99	97.28	81.73	133.75	257.09	174.58	107.70	158.07	138.97	158.94	163.28	158.07	199.76	141.57	103.36	157.20	113.78	131.15	137.49
13	83.03	145.91	200.63	118.12	131.15	229.29	112.91	116.38	82.68	79.99	131.15	254.48	170.23	106.83	157.20	137.23	157.20	161.55	156.34	194.55	132.02	102.49	154.60	110.30	128.54	135.22
14	80.95	139.83	198.03	112.04	129.41	224.95	111.17	113.78	79.47	78.60	129.41	251.01	166.76	105.96	155.47	136.36	153.73	160.68	154.60	188.47	125.07	102.49	151.13	108.57	125.07	133.10
15	74.52	132.02	198.89	104.22	128.54	219.74	107.70	109.44	76.43	77.65	125.94	244.06	162.42	104.22	154.60	134.62	151.13	159.81	153.73	182.39	119.86	102.49	147.65	107.70	122.46	130.87
16	71.13	130.28	198.03	97.28	127.67	214.53	101.62	105.09	80.08	76.34	123.33	238.85	158.94	102.49	152.86	132.89	148.52	157.20	151.99	176.31	118.12	102.49	144.18	106.83	121.59	128.94
17	70.96	127.67	188.47	94.67	127.67	209.32	98.14	101.62	81.90	75.13	121.59	231.03	155.47	102.49	150.26	129.41	142.44	154.60	148.52	172.84	117.25	101.62	141.57	105.96	118.12	126.61
18	71.74	123.33	180.66	90.33	126.81	202.37	98.14	99.01	83.55	74.43	119.86	223.21	151.99	103.36	146.78	123.33	137.23	151.13	145.91	169.36	118.99	103.36	140.70	104.22	115.52	124.50
19	72.00	117.25	181.52	87.72	125.07	197.16	97.28	97.28	83.47	73.65	117.25	217.13	147.65	103.36	144.18	117.25	138.10	148.52	142.44	164.15	118.99	104.22	138.97	99.88	113.78	122.79
20	71.13	111.17	181.52	85.55	121.59	190.21	96.41	93.80	83.12	73.48	117.25	209.32	145.05	102.49	140.70	111.17	136.36	145.05	138.97	159.81	117.25	102.49	135.49	96.41	111.17	120.48
21	70.61	112.04	178.92	82.95	120.73	185.00	95.54	85.38	79.30	74.78	117.25	204.11	142.44	102.49	136.36	110.30	132.02	143.31	135.49	155.47	114.65	100.75	132.02	95.54	110.30	118.10
22	70.53	108.57	168.50	81.21	119.86	178.92	93.80	80.25	77.13	77.30	115.52	197.16	139.83	102.49	128.54	105.09	131.15	141.57	132.89	151.13	112.04	99.01	129.41	92.06	109.44	115.38
23	70.53	103.36	159.81	79.47	118.12	171.10	92.06	74.17	77.65	78.34	114.65	191.08	137.23	101.62	125.94	105.09	129.41	139.83	130.28	146.78	110.30	95.54	125.94	88.59	107.70	113.16
24	69.48	102.49	158.07	77.73	116.38	163.28	91.20	67.83	77.99	78.17	113.78	184.13	134.62	100.75	121.59	101.62	127.67	138.97	127.67	143.31	108.57	94.67	123.33	85.12	105.96	110.89
25	68.44	101.62	151.13	76.00	114.65	160.68	89.46	66.01	77.91	77.65	112.04	178.92	132.89	99.01	116.38	97.28	125.94	136.36	122.46	135.49	106.83	92.93	120.73	80.95	104.22	108.84
26	68.35	96.41	145.91	74.69	112.91	156.34	88.59	64.01	77.91	77.13	108.57	171.10	130.28	98.14	112.91	98.14	124.20	132.02	115.52	125.07	105.09	91.20	118.99	78.34	103.36	106.29
27	66.70	92.06	142.44	72.96	111.17	152.86	86.85	55.59	76.08	76.69	105.96	165.89	122.46	97.28	117.25	98.14	121.59	124.20	117.25	116.38	103.36	89.46	117.25	75.82	102.49	103.67
28	63.14	92.06	139.83	71.65	110.30	147.65	84.51	52.46	74.87	75.82	102.49	159.81	114.65	95.54	111.17	97.28	118.99	113.78	116.38	115.52	101.62	85.12	114.65	73.39	99.01	101.25
29	60.80	90.33	138.10	70.35	108.57	140.70	79.47	49.25	73.65	74.17	103.36	156.34	100.75	95.54	105.96	96.41	117.25	92.06	113.78	113.78	98.14	81.21	112.91	70.96	98.14	98.23
30	60.36	87.72	132.89	69.05	106.83	136.36	76.87	47.16	72.78	73.91	99.88	145.05	96.41	94.67	98.14	96.41	114.65	90.33	111.17	112.04	97.28	82.08	111.17	68.70	96.41	95.64
31	59.93	85.81	130.28	68.18	104.22	133.75	55.85	45.42	71.65	62.71	97.28	138.10	92.06	89.46	93.80	95.54	112.91	87.72	110.30	109.44	94.67	81.56	108.57	66.88	94.67	92.67
Nov 1	60.45	81.82	128.54	67.14	104.22	129.41	52.81	43.51	70.79	58.45	92.93	135.49	92.93	85.03	94.67	92.06	112.04	88.59	110.30	108.57	91.20	76.34	102.49	65.92	93.80	90.97
2	60.54	80.77	125.07	66.10	102.49	125.94	49.77	41.69	69.92	65.75	93.80	133.75	92.93	84.25	95.54	92.06	110.30	90.33	108.57	106.83	90.33	76.95	97.28	64.79	92.06	89.75
3	60.36	79.04	122.46	65.05	100.75	121.59	55.50	39.78	68.79	70.26	91.20	132.02	96.41	85.64	96.41	90.33	108.57	94.67	106.83	104.22	91.20	76.95	92.06	64.18	91.20	88.62
4	59.93	78.17	120.73	64.01	99.88	118.12	57.24	36.30	67.92	69.22	93.80	131.15	99.88	87.72	94.67	87.72	105.96	97.28	104.22	101.62	89.46	76.87	87.72	63.58	88.59	86.96
5	59.06	76.87	118.12	62.97	96.41	114.65	65.92	34.65	67.14	68.44	92.93	129.41	101.62	86.85	88.59	86.33	104.22	95.54	103.36	99.88	85.64	77.30	83.03	63.06	79.56	84.90
6	58.19	76.00	115.52	62.01	92.06	111.17	57.76	33.09	66.36	67.66	88.59	125.94	103.36	86.85	84.77	84.77	102.49	94.67	99.88	97.28	83.38	75.22	78.78	62.45	79.64	82.48
7	57.32	75.13	114.65	61.06	90.33	108.57	50.38	32.31	65.49	65.57	86.59	125.07	102.49	85.90	81.12	82.34	100.75	93.80	98.14	95.54	81.56	75.65	74.69	61.84	79.91	80.51
8	56.02	74.69	113.78	60.10	89.46	105.96	45.08	31.44	64.45	63.06	85.55	124.20	101.62	84.25	77.65	78.78	98.14	91.20	96.41	94.67	82.51	74.69	70.87	61.23	80.08	78.63
9	54.72	72.96	112.04	59.15	88.59	103.36	44.38	31.01	63.75	59.76	84.51	122.46	99.88	84.16	74.52	75.65	95.54	88.59	95.54	92.93	77.30	74.87	67.22	60.71	79.38	76.79
10	53.85	71.22	111.17	58.19	82.34	100.75	33.79	30.49	62.97	51.50	83.73	119.86	98.14	83.73	71.57	68.53	94.67	86.85	92.93	92.06	76.00	75.48	63.75	60.10	78.43	74.65
11	52.11	69.48	107.70	57.50	82.42	98.14	31.70	31.35	62.19	47.07	82.77	111.17	97.28	83.21	68.53	66.18	92.93	85.81	88.59	91.20	75.13	74.69	60.45	59.58	77.47	72.87
12	50.81	67.75	105.96	56.80	83.29	95.54	40.39	32.05	61.23	41.26	81.03	110.30	95.54	82.60	65.49	62.71	91.20	84.77	84.25	89.46	73.83	72.52	57.32	59.06	76.43	71.31
13	49.51	66.01	104.22	56.11	74.69	92.93	38.65	33.00	60.45	39.52	79.82	108.57	94.67	81.99	62.97	61.67	89.46	82.25	80.25	87.72	72.96	70.44	54.37	58.45	75.48	69.61
14	49.07	65.14	101.62	55.41	72.09	90.33	41.86	34.05	59.49	37.69	79.56	107.70	92.93	81.38	60.45	58.63	88.59	81.21	80.77	86.85	71.65	68.18	51.59	57.67	74.61	68.29
15	48.64	63.40	99.88	54.72	70.35	87.72	40.47	35.09	58.80	37.61	79.30	106.83	92.06	80.77	58.45	55.93	86.85	80.25	84.51	86.42	70.35	68.61	48.90	56.63	73.65	67.08
16	48.64	62.97	98.14	54.11	68.61	85.12	43.51	36.83	57.84	37.87	77.65	106.83	90.33	80.17	56.37	55.50	85.38	79.30	86.33	85.72	69.31	67.75	46.38	54.98	72.70	65.57
17	48.20	62.53	95.54	53.50	67.75	83.38	46.64	38.39	56.72	38.22	72.44	105.09	89.46	79.47	52.89	54.98	83.64	78.34	85.38	85.03	67.75	66.79	44.03	52.98	71.83	64.35
18	48.20	62.10	93.80	52.89	66.88	81.64	49.33	39.52	55.59	39.00	70.26	103.36	87.72	78.86	51.94	54.72	82.16	77.39	82.86	84.60	66.88	58.28	42.04	50.11	70.96	63.06
19	48.64	60.80	92.06	52.29	66.01	79.47	45.95	40.73	54.46	39.78	70.09	101.62	86.85	78.17	51.07	54.63	80.51	76.43	81.38	83.90	64.97	54.63	41.43	46.90	70.09	61.80
20	48.20	59.49	89.46	51.68	65.31	77.73	42.12	41.86	53.41	41.34	70.09	101.62	85.64	77.47	50.11	55.93	78.86	75.04	79.91	83.47	63.40	52.63	40.91	46.29	69.22	60.79
21	47.94	58.19	88.59	50.98	64.45	76.00	46.29	44.03	52.55	41.86	69.83	99.88	84.60	76.78	47.07	56.80	77.91	71.83	77.30	82.77	61.67	52.20	41.86	49.59	68.35	59.57
22	47.68	56.45	86.85	50.29	63.92	74.26	47.07	45.08	51.94	42.30	68.61	97.28	83.29	76.08	45.68	57.93	76.87	72.18	75.74	81.73	60.80	52.81	44.73	54.89	67.49	58.89
23	47.42	55.15	85.12	49.59	63.23	72.52	45.60	45.95	51.07	42.65	66.96	94.67	81.82	75.48	44.90	57.84	75.91	70.87	73.30	81.38	59.06	53.33	49.16	58.71	66.62	58.32
24	47.16	53.85	83.38	48.90	62.53	70.79	43.43	47.07	50.46	42.56	65.14	98.14	80.34	74.95	44.03	57.58	74.87	68.09	72.18	81.12	57.76	54.72	52.72	59.32	65.84	57.70
25	46.90	52.11	81.64	48.20	61.67	69.05	42.30	47.60	49.68	42.12	61.49	100.75	78.60	74.43	42.82	57.41	73.65	67.31	70.44	80.77	56.89	55.41	55.15	58.71	64.97	57.11
26	46.47	51.68	79.91	47.77	61.06	67.31	40.73	48.20	49.07	41.69	60.36	98.14	77.21	73.83	41.43	56.37	72.44	65.66	69.40	80.43	55.59	60.62	56.02	58.19	64.18	56.61
27	46.03	51.68	79.04	47.34	60.45	66.01	39.78	47.60	48.46	41.26	58.45	91.20	76.26	73.13	41.26	56.02	71.31	64.88	65.66	80.08	54.02	61.14	54.72	57.58	63.40	55.81
28	45.60	51.50	78.17	46.90	59.84	64.71	40.21	47.07	47.68	40.65	56.89	89.46	75.30	72.44	40.82	55.59	70.18	63.92	64.71	79.73	50.81	61.49	53.41	56.98	62.62	55.13
29	45.16	51.24	77.73	46.47	59.23	63.40	38.91	46.55	47.16	39.95	55.85	87.72	74.43	71.83	40.30	55.24	68.61	60.88	63.66	79.38	49.33	61.49	52.11	56.45	61.84	54.48
30	44.30	49.51	77.30	46.03	58.63	62.10	38.30	45.86	46.55	39.08	55.50	86.85	73.56	71.22	39.95	54.54	67.66	58.19	62.01	79.04	48.03	61.32	50.81	55.85	61.23	53.72
Dec 1	43.43	48.64	75.56	45.51	58.02	60.62	38.39	45.08	46.03	38.39	55.85	85.20	72.61	70.53	39.26	53.85	66.53	55.93	60.36	78.78	47.34	60.36	49.59	55.33	60.62	52.65
2	42.99	48.46	74.69	44.99	57.41	59.06	37.61	44.21	45.42	37.78	55.85	83.12	71.57	69.83	38.74	53.24	64.36	54.80	58.71	78.60	46.12	59.76	48.38	54.72	60.02	51.71
3	42.56	48.20	74.26	44.47	56.80	57.76	38.56	43.34	45.08	37.52	54.80	82.34	70.44	69.14	38.13	52.72	59.93	54.46	57.15	78.43	42.38	58.45	47.25	54.20	59.41	50.81
4	42.12	48.03	73.83	43.95	56.19	56.45	38.30	43.08	44.56	37.09	53.50	82.86	69.40	68.44	37.87	52.03	58.02	54.63	56.63	78.26	38.74	56.63	46.12	53.68	58.80	50.08
5	41.69	47.60	73.39	43.43	55.59	55.15	37.09	42.56	44.03	36.65	52.37	82.60	68.35	67.75	37.61	51.24	59.49	54.63	56.02	76.95	38.56	55.85	44.99	53.07	58.19	49.49
6	40.82	47.51	72.96	42.99	54.89	54.02	38.74	41.60	43.69	36.22	51.33	81.56	67.31	66.96	37.35	50.38	60.80	54.28	54.46	76.00	39.69	55.41	43.86	52.55	57.58	48.72
7	39.95	47.42	72.09	42.56	54.20	52.89	37.52	40.21	43.17	35.78	49.94	79.38	66.27	66.01	37.00	49.77	60.19	54.11	54.20	74.17	40.56	54.37	42.82	52.03	56.98	47.97
8	39.08	46.90	71.22	42.12	53.50	51.76	37.87	39.08	42.82	35.35	48.46	78.86	65.31	65.14	36.83	49.07	59.06	53.76	54.02	72.87	41.08	53.41	42.04	51.50	56.28	47.41
9	38.65	46.47	70.35	41.69	52.81	50.64	38.91	38.22	42.30	35.00	48.29	78.17	64.27	64.27	36.48	48.55	58.45	53.41	53.85	71.48	41.69	52.03	41.43	50.98	55.59	46.90
10	38.22	46.29	69.92	41.26	52.11	49.51	38.74	36.83	41.78	34.22	48.12	78.60	63.32	63.40	36.39	47.86	57.76	53.24	53.85	69.31	42.30	51.42	40.91	50.46	54.89	46.36
11	38.04	46.03	69.48	40.91	51.68	48.64	39.43	36.22	41.26	34.05	48.12	79.04	62.36	62.36	36.13	47.16	56.37	52.98	53.68	68.61	41.60	50.81	40.56	49.94	54.11	45.87
12	37.87	45.16	68.61	40.56	51.24	47.77	40.21	35.35	40.73	33.53	47.42	77.82	61.67	61.14	36.04	46.47	55.50	52.63	53.07	65.84	41.78	50.11	40.21	49.51	53.33	45.32
13	37.35	44.73	68.18	40.21	50.81	46.81	39.69	34.74	40.30	33.00	47.07	76.60	60.71	59.93	35.87	46.12	53.94	52.11	52.72	65.14	40.91	48.81	40.04	48.99	52.46	44.80
14	36.91	44.30	67.75	39.87	50.38	45.95	39.95	33.87	39.78	32.57	46.73	74.52	59.76	58.63	35.61	45.77	53.41	51.68	52.29	64.45	40.13	48.29	39.87	48.46	51.68	44.27
15	36.48	43.86	67.75	39.52	49.94	44.99	40.99	33.26	39.26	32.05	45.95	72.09	58.89	57.32	35.52	44.82	52.55	51.07	51.50	63.14	40.04	47.77	39.61	48.03	50.81	43.76
16	35.61	43.43	66.88	39.08	49.42	44.21	39.69	32.22	39.00	31.53	45.68	70.96	58.02	55.59	35.26	44.73	51.50	49.94	50.72	61.58	39.95	46.64	39.43	47.51	49.94	43.16
17	35.18	43.17	66.44	38.65	48.90	43.43	39.17	31.35	38.65	31.18	44.90	71.22	57.32	54.28	35.18	44.56	50.55	48.90	49.68	60.10	39.26	45.42	39.26	47.07	49.07	42.66
18	34.74	42.82	66.01	38.22	48.38	42.73	38.74	30.49	38.30	30.75	42.47	70.09	56.80	52.98	34.92	44.38	49.68	48.46	48.90	57.58	39.00	44.90	39.08	46.55	48.20	42.08
19	33.87	42.38	65.14	37.87	47.86	42.04	38.65	29.88	37.87	30.40	40.04	69.92	56.11	51.24	34.83	43.95	49.07	47.86	47.94	56.98	38.56	44.30	38.91	46.12	47.25	41.53
20	33.44	42.04	64.27	37.52	47.34	41.34	38.48	29.36	37.61	29.88	39.69	68.44	55.41	49.68	34.57	43.51	48.46	47.16	47.07	56.19	37.96	43.51	38.74	45.60	46.21	40.99
21	33.18	41.95	63.40	37.17	46.90	40.65	38.65	28.66	37.26	29.44	40.04	67.75	54.89	48.12	34.48	43.08	47.86	46.47	46.21	56.02	37.26	42.73	38.48	45.16	45.16	40.36
22	32.92	41.86	62.97	36.83	46.47	40.04	37.52	28.05	37.00	29.10	40.39	67.75	54.20	46.55	34.22	42.65	47.34	45.95	45.68	55.76	36.74	41.78	38.30	44.73	44.21	39.95
23	32.66	41.78	62.53	36.48	46.03	39.43	37.35	27.62	36.48	28.66	40.47	67.75	53.41	44.82	34.13	42.21	46.64	45.25	45.51	55.15	36.39	41.08	38.13	44.30	43.17	39.52
24	32.40	41.69	61.67	36.13	45.60	38.82	37.00	27.27	36.04	28.31	40.47	65.66	52.63	42.99	33.87	41.69	46.12	44.90	45.25	54.54	35.87	40.39	37.96	43.86	42.21	39.11
25	32.05	41.26	60.80	35.78	45.16	38.22	36.65	26.92	35.61	27.88	40.21	65.49	51.94	41.26	33.61	41.34	45.42	44.64	45.42	54.02	35.52	39.78	37.78	43.43	41.26	38.75
26	31.79	39.95	59.93	35.44	44.73	37.69	36.39	26.84	35.18	27.62	39.52	65.66	51.16	39.52	33.44	40.91	45.08	44.38	45.25	52.72	35.18	39.08	37.61	42.91	40.39	38.34
27	31.44	39.08	59.06	35.00	44.30	37.17	36.13	26.92	34.74	27.27	38.74	66.01	50.38	37.78	33.18	40.47	44.82	44.30	44.73	51.85	34.83	38.39	37.43	42.56	39.52	37.96
28	31.09	38.22	58.63	34.65	43.86	36.65	36.22	26.92	34.48	27.10	36.57	64.45	49.51	36.04	33.00	40.13	44.47	44.12	44.47	51.59	34.39	37.78	37.26	42.12	38.65	37.55
29	30.66	38.04	57.76	34.39	43.43	36.13	35.87	26.32	34.22	26.75	35.52	62.71	48.46	34.31	32.83	39.78	44.03	43.43	43.95	51.16	33.00	37.52	37.00	41.69	37.78	37.09
30	30.40	37.61	57.32	34.13	42.99	35.61	35.52	25.71	33.79	26.49	35.00	59.76	47.86	32.66	32.57	39.43	43.51	42.82	43.69	50.90	32.66	37.09	36.83	41.26	36.91	36.70
31	29.96	37.35	56.45	33.87	42.56	35.18	35.26	25.19	33.53	26.14	33.26	58.11	46.90	31.01	32.31	39.17	42.82	42.12	43.69	50.64	32.14	36.30	36.65	40.73	35.87	36.22

Synthetic False Canyon Frances	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	
		176.81			152.01	165.85	138.18	161.27	146.42	166.47	157.03	139.60	166.53	171.71	161.38	125.57	160.76	128.97	134.92	107.63	125.93	132.79	149.03	159.48	146.42	197.76	105.33	148.60	197.83	191.66	153.47	153.96	122.75	119.51	133.74	109.65	146.63	196.69	160.75	133.58	126.21	135.95	181.88	170.36	181.84	194.17	160.79	115.62	182.10	181.67	171.44	153.10
Jan 1		40.42	40.42		43.08	37.19	38.23	49.84	35.29	29.58	24.16	33.10	40.42	31.20	31.77	26.44	34.43	36.05	41.85	36.62	38.99	38.90	29.86	23.78	52.79	32.34	38.52	32.34	40.42	60.87	36.81	46.22	38.52	38.23	27.11	36.33	28.53	36.43	62.68	50.69	33.57	35.29	42.80	46.70	45.65	47.93	55.26	35.00	39.38	40.04	44.42	38.91
2		40.42	40.42		43.08	35.86	37.19	47.93	34.71	28.82	24.06	32.81	40.14	30.15	31.77	26.15	34.24	35.00	41.85	36.33	38.52	38.71	29.96	23.59	52.31	32.24	38.04	31.58	39.85	59.92	36.52	45.84	38.52	37.95	26.92	35.67	28.44	36.33	62.11	50.03	33.10	35.29	42.61	46.89	45.27	47.46	54.97	34.90	38.80	39.76	43.85	38.51
3		40.42	40.42		42.51	35.00	35.29	45.75	34.71	28.25	23.40	32.62	40.14	29.58	31.77	25.96	32.81	34.24	41.75	36.14	37.57	38.52	30.05	23.40	52.12	32.15	37.85	31.39	39.47	58.97	36.33	45.46	38.42	37.66	26.82	35.29	28.06	36.05	61.35	49.36	32.62	35.19	42.04	45.75	44.70	46.70	54.21	34.90	38.14	39.57	43.37	38.05
4		40.42	40.42		42.04	34.43	33.67	43.08	34.43	28.25	22.92	32.34	38.80	28.25	31.77	25.87	32.34	33.67	40.90	36.14	37.09	38.23	29.86	23.21	51.74	32.05	37.66	30.91	38.99	58.02	36.14	45.08	38.42	37.28	26.63	34.81	27.77	35.76	60.20	48.70	32.15	35.19	41.94	45.56	44.23	45.94	53.07	34.62	37.57	39.38	42.89	37.57
5		40.42	35.00		41.75	33.10	32.34	40.42	34.43	27.96	21.78	32.34	38.23	26.92	31.77	25.58	32.05	33.10	40.71	36.33	36.14	37.57	29.48	23.02	51.36	31.96	37.47	30.53	38.61	57.07	35.95	44.70	38.42	37.00	26.35	34.24	27.39	35.10	59.16	48.13	31.67	35.10	41.85	45.08	43.85	45.65	52.79	34.24	37.00	39.18	42.51	37.00
6		40.42	33.67		41.47	32.62	31.48	39.85	33.67	27.49	21.02	32.05	37.66	26.44	32.34	25.30	31.77	33.38	39.95	36.24	34.24	36.62	29.01	22.83	50.98	31.86	37.28	30.43	38.33	56.40	35.57	44.32	37.95	36.71	26.15	33.76	27.20	34.43	58.11	47.55	31.10	35.10	41.75	44.80	43.65	45.27	52.50	34.14	36.43	38.99	42.04	36.58
7		40.42	33.67		41.18	32.05	30.43	38.52	32.81	27.20	20.73	31.77	37.19	26.25	32.34	24.92	31.77	33.67	39.66	36.14	32.81	35.57	28.91	22.64	50.50	31.39	37.28	30.15	38.04	55.73	35.29	44.04	37.57	36.43	25.87	33.57	26.92	33.29	57.54	46.98	30.53	35.00	41.18	44.32	43.46	45.08	52.31	34.05	35.86	38.80	41.66	36.19
8		40.42	33.67		40.71	31.48	29.10	37.66	32.05	26.92	20.45	31.20	36.90	26.44	32.34	24.54	31.77	33.67	38.99	36.14	31.39	34.62	28.91	22.54	49.93	30.91	37.38	29.77	37.66	55.07	35.00	43.65	37.09	36.14	25.58	33.19	26.63	33.48	57.07	46.41	29.96	35.00	40.33	43.08	42.61	44.61	50.60	33.95	35.29	38.61	41.28	35.76
9		40.42	33.67		40.42	31.01	27.96	37.19	31.20	26.92	20.16	30.72	36.90	26.63	32.34	24.63	31.48	33.67	38.23	36.05	30.43	33.57	28.72	22.45	48.79	30.05	37.57	29.48	37.38	54.40	34.71	43.27	36.71	35.86	25.30	32.81	26.35	32.62	56.49	45.84	29.39	34.90	39.85	42.51	42.13	44.13	49.74	33.86	34.71	38.42	40.80	35.36
10		40.42	33.67		40.42	30.72	27.49	35.00	30.43	26.63	20.16	29.58	36.90	26.82	32.34	24.92	30.72	33.10	37.38	35.38	29.77	33.29	28.44	22.45	47.55	29.86	37.09	29.10	37.09	53.74	34.43	42.99	36.33	35.57	25.11	32.53	26.15	31.67	56.02	45.27	28.91	34.81	39.28	42.13	41.47	43.85	48.70	33.29	34.14	38.23	40.42	34.93
11		40.42	33.67		39.85	30.15	26.92	31.01	29.86	26.15	20.16	28.25	36.90	26.54	31.48	25.20	29.86	32.62	36.90	35.00	29.01	33.29	28.44	22.45	46.60	29.48	36.62	28.72	36.81	53.26	34.14	42.61	35.86	35.29	24.92	32.15	25.87	30.15	55.54	44.70	28.34	34.71	38.71	41.47	40.99	43.46	48.03	32.72	33.67	38.04	40.04	34.43
12		40.42	33.67		39.85	29.86	26.44	27.96	29.39	25.87	20.16	27.20	36.90	26.15	31.20	25.68	29.58	31.77	36.52	33.86	28.53	33.19	28.53	22.45	45.65	29.01	36.14	28.53	36.52	52.79	33.86	42.23	35.48	35.00	24.73	31.77	25.58	30.24	54.50	44.13	27.77	34.71	38.61	40.52	40.23	43.27	47.46	32.43	33.10	37.95	39.57	34.02
13		40.42	33.67		39.28	29.58	25.58	27.49	28.82	25.30	20.16	26.44	36.90	25.58	31.20	25.87	29.10	31.20	36.33	33.10	28.25	32.81	28.72	22.35	44.70	28.72	35.95	28.34	36.24	52.31	33.57	41.85	35.10	34.71	24.54	31.48	25.30	30.34	53.55	43.56	27.30	34.62	38.80	40.14	39.47	42.80	46.89	32.24	32.62	37.76	39.18	33.68
14		40.42	33.67		39.09	29.58	24.82	27.20	28.25	25.01	20.16	25.87	37.19	25.58	31.01	26.15	28.82	31.01	36.33	32.15	27.96	32.43	28.82	22.35	43.75	28.63	35.67	28.06	36.05	51.83	33.38	41.47	34.71	34.43	24.35	31.20	25.11	29.58	52.60	42.99	26.73	34.62	38.90	39.85	38.71	42.51	46.32	32.05	32.05	37.57	38.80	33.38
15		40.42	33.67		38.80	29.58	24.25	26.92	27.77	24.82	20.16	25.58	37.47	25.68	31.01	26.54	28.25	31.01	36.14	31.20	27.58	32.05	29.29	22.35	42.80	28.53	35.38	27.77	35.95	51.36	33.19	41.09	34.43	34.24	24.16	30.82	24.92	28.34	51.64	42.42	26.25	34.52	38.99	39.57	37.95	42.13	45.94	31.67	31.58	37.38	38.42	33.10
16		40.42	33.67		38.52	29.39	23.68	27.20	27.77	24.82	19.97	25.30	37.47	25.87	30.72	26.44	28.25	31.01	35.95	30.91	27.20	31.39	29.29	22.35	41.85	28.44	35.38	27.58	35.67	50.79	32.91	40.71	34.05	33.95	23.97	30.63	24.54	27.49	50.41	41.85	25.87	34.52	38.90	39.18	37.66	41.37	45.46	31.48	31.10	37.19	38.04	32.83
17		40.42	33.67		38.23	29.39	23.21	27.77	27.49	24.25	19.69	25.01	37.66	26.15	30.43	26.25	28.25	31.20	35.19	30.63	26.92	31.01	29.10	22.45	40.90	28.44	35.19	27.30	35.29	50.22	32.62	40.33	33.67	33.67	23.78	30.24	24.35	27.49	49.65	41.28	25.49	34.52	38.61	39.38	37.38	41.37	44.80	31.10	30.63	37.00	37.66	32.59
18		40.42	33.67		37.66	29.39	22.64	27.96	27.20	23.68	19.40	25.01	37.66	26.15	30.15	25.87	27.96	31.48	34.24	30.43	26.63	30.43	28.72	22.45	39.95	28.34	34.90	27.11	35.10	49.65	32.43	39.95	33.38	33.48	23.59	30.05	24.16	27.01	48.03	40.71	25.01	34.43	38.23	39.66	37.38	41.28	44.32	30.91	30.05	36.81	37.28	32.29
19		40.42	33.67		37.19	29.39	22.07	28.53	27.20	23.21	19.12	24.82	37.66	26.15	29.86	25.58	27.96	31.48	34.05	30.24	26.35	29.01	28.34	22.45	38.99	28.34	34.71	26.92	34.81	49.17	32.24	39.57	33.00	33.19	23.40	29.67	23.87	26.63	46.89	40.14	24.63	34.43	38.04	40.04	37.28	40.80	43.75	30.72	29.58	36.62	36.90	32.02
20		40.42	33.67		37.19	29.39	21.59	29.10	26.92	22.92	19.02	24.82	37.47	25.96	29.86	25.87	27.96	31.20	33.86	29.96	26.15	28.06	28.34	22.35	38.52	28.53	34.43	26.63	34.62	48.70	32.05	38.99	32.72	32.91	23.30	29.48	23.59	26.63	46.32	39.18	24.25	34.43	37.76	39.76	37.19	40.33	43.18	30.43	29.20	36.43	36.52	31.80
21		40.42	33.67		36.90	29.39	21.02	29.39	26.92	22.64	18.83	24.82	37.19	25.58	29.86	26.15	27.96	31.48	33.95	29.67	26.15	27.11	28.25	22.35	38.04	28.44	34.43	26.35	34.33	48.22	31.77	38.42	32.43	32.72	23.11	29.10	23.40	26.54	45.65	38.61	23.78	34.33	37.47	39.76	37.00	39.95	41.85	30.34	28.72	36.24	36.14	31.57
22		40.42	33.67		36.62	29.39	20.73	29.58	26.82	22.64	18.83	24.82	36.33	25.30	29.58	26.54	27.96	31.77	34.05	29.58	25.68	25.87	28.34	22.35	37.57	28.44	34.24	26.15	34.14	47.74	31.58	38.04	32.05	32.43	22.92	28.91	23.30	26.73	45.08	38.04	23.30	34.33	37.19	39.66	36.90	39.66	40.04	30.15	28.34	36.14	35.76	31.34
23		40.42	33.67		36.33	29.39	20.45	29.58	26.73	22.35	19.12	24.54	35.86	25.01	29.58	26.63	27.77	31.77	33.86	29.48	25.20	24.73	28.44	22.35	37.09	28.53	33.95	25.96	33.86	47.36	31.39	37.66	31.77	32.24	22.73	28.63	23.02	26.82	44.61	37.47	22.83	34.33	37.09	39.47	36.81	39.47	39.66	30.05	27.96	35.95	35.48	31.13
24		40.42	33.67		36.05	29.39	20.16	29.58	26.73	22.35	19.40	23.97	35.00	24.82	29.39	26.54	27.20	31.20	33.29	29.48	24.73	23.59	28.44	22.35	36.33	28.63	33.76	25.87	33.57	46.98	31.20	37.28	31.48	32.05	22.54	28.34	22.92	26.63	44.13	36.90	22.73	34.24	36.24	38.33	36.62	38.99	39.18	29.86	27.58	35.76	35.10	30.84
25		40.42	33.67		35.57	29.39	19.97	29.39	26.63	22.07	19.40	23.40	34.43	24.54	29.10	26.15	26.92	30.72	32.53	29.39	24.25	21.88	28.44	22.35	35.67	28.72	33.48	25.68	33.29	46.60	30.91	36.90	31.20	31.77	22.45	28.15	22.73	26.35	43.56	36.33	22.54	34.24	35.86	36.81	36.52	38.33	38.42	29.77	27.30	35.57	34.71	30.50
26		40.42	33.67		35.00	29.39	19.69	29.10	26.54	22.07	19.40	22.92	33.67	24.35	28.82	25.49	26.15	29.58	31.39	29.29	24.06	20.92	28.44	22.35	35.48	28.82	33.76	25.39	33.10	46.03	30.63	36.43	30.91	31.58	22.26	27.96	22.54	26.15	43.08	35.76	22.26	34.14	35.57	35.95	36.52	36.90	37.85	29.67	27.11	35.38	34.33	30.17
27		40.42	33.67		34.43	29.10	19.40	28.82	26.44	22.35	19.40	22.07	32.34	24.35	28.53	24.82	25.87	29.39	30.43	29.29	23.78	20.26	28.34	22.45	35.19	28.72	33.48	25.20	33.00	45.46	30.43	35.95	30.63	31.29	22.07	27.77	22.35	25.87	42.51	35.19	22.07	34.14	35.29	35.29	36.52	36.52	37.28	29.39	26.82	35.29	34.05	29.87
28		40.42	33.67		34.43	28.82	19.12	28.53	26.25	22.92	19.40	21.59	32.05	24.54	28.53	24.63	25.58	29.10	29.77	29.20	23.78	19.97	28.15	22.45	34.90	28.63	33.29	25.01	32.81	44.89	30.24	35.48	30.34	31.10	21.88	27.49	22.26	26.35	42.04	34.71	21.88	34.14	35.00	34.81	36.52	36.05	36.71	29.20	26.63	35.10	33.67	29.67
29		40.42	33.67		33.95	28.53	18.83	28.25	26.15	23.40	19.40	21.02	31.77	24.63	28.82	24.54	25.20	29.39	29.29	29.10	23.78	19.40	28.15	22.45	34.62	28.63	32.81	24.82	32.62	44.32	30.05	34.90	30.05	30.91	21.78	27.30	22.07	26.25	41.56	34.24	21.78	34.05	34.81	34.52	36.52	35.57	36.33	28.91	26.35	34.90	33.38	29.47

30	202.58	137.91	198.78	124.59	138.86	222.55	190.22	230.16	136.96	114.13	159.78	130.30	166.44	123.64	197.83	107.47	100.82	170.24	152.17	96.06	156.93	112.23	147.42	137.91	157.88	176.90	74.18	198.78	245.38	154.08	136.01	187.36	151.22	168.34	136.96	92.73	185.46	372.83	241.58	148.37	146.47	155.98	199.73	184.51	199.73	266.30	184.51	107.47	220.65	159.78	185.46	166.56
Oct 1	198.78	136.01	196.88	128.40	138.86	218.75	185.46	244.43	136.01	118.89	155.03	132.20	166.44	122.69	196.88	106.52	98.91	169.29	151.22	[illegible]	[illegible]	[illegible]	[illegible]	133.15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2	196.88	133.15	196.88	129.35	138.86	212.09	180.71	253.94	135.05	119.84	151.22	138.86	166.44	121.74	194.02	104.62	97.96	169.29	149.32	[illegible]	[illegible]	[illegible]	[illegible]	131.25	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3	195.92	132.20	194.02	128.40	136.96	205.43	175.00	265.35	133.15	120.79	146.47	136.96	167.39	120.79	191.17	104.62	97.96	173.10	146.47	[illegible]	[illegible]	[illegible]	[illegible]	130.30	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4	191.17	129.35	191.17	129.35	136.96	204.48	171.20	272.01	132.20	119.84	142.66	132.20	167.39	118.89	188.32	107.47	97.96	177.85	139.81	[illegible]	[illegible]	[illegible]	[illegible]	133.15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5	185.46	128.40	195.92	136.96	134.10	202.58	167.39	277.72	130.30	118.89	138.86	127.45	166.44	117.93	188.32	108.42	100.82	180.71	132.20	[illegible]	[illegible]	[illegible]	[illegible]	136.01	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6	182.61	126.49	196.88	146.47	131.25	195.92	165.49	269.16	128.40	115.08	135.05	126.49	165.49	116.98	183.56	108.42	99.86	185.46	127.45	[illegible]	[illegible]	[illegible]	[illegible]	138.86	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
7	176.90	125.54	196.88	147.42	130.30	190.22	162.64	265.35	127.45	112.23	130.30	129.35	165.49	115.08	177.85	111.28	100.82	191.17	126.49	[illegible]	[illegible]	[illegible]	[illegible]	136.96	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8	174.05	122.69	195.92	154.08	127.45	181.66	161.68	260.60	124.59	108.42	126.49	131.25	163.59	113.18	175.00	113.18	98.91	196.88	123.64	[illegible]	[illegible]	[illegible]	[illegible]	136.96	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
9	169.29	122.69	194.02	156.93	124.59	178.80	164.54	255.84	122.69	105.57	124.59	135.05	161.68	113.18	172.15	116.98	98.91	200.68	122.69	[illegible]	[illegible]	[illegible]	[illegible]	138.86	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10	167.39	122.69	190.22	157.88	124.59	173.10	164.54	251.09	119.84	102.72	120.79	134.10	158.83	114.13	167.39	124.59	98.91	204.48	118.89	[illegible]	[illegible]	[illegible]	[illegible]	139.81	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
11	166.44	121.74	186.41	159.78	131.25	170.24	159.78	246.33	116.98	99.86	118.89	129.35	156.93	115.08	161.68	129.35	103.67	208.29	116.03	[illegible]	[illegible]	[illegible]	[illegible]	137.91	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
12	164.54	120.79	183.56	158.83	129.35	165.49	155.98	238.72	115.08	97.96	116.98	126.49	155.03	113.18	158.83	135.05	106.52	210.19	114.13	[illegible]	[illegible]	[illegible]	[illegible]	136.01	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
13	162.64	122.69	177.85	155.03	127.45	161.68	153.13	226.36	113.18	96.06	115.08	123.64	153.13	113.18	153.13	140.76	110.33	208.29	113.18	[illegible]	[illegible]	[illegible]	[illegible]	134.10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
14	159.78	122.69	175.00	153.13	124.59	156.93	152.17	218.75	110.33	93.68	113.18	122.69	152.17	112.23	151.22	143.61	113.18	206.39	110.33	[illegible]	[illegible]	[illegible]	[illegible]	133.15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
15	158.83	122.69	171.20	149.32	122.69	155.03	150.27	212.09	107.47	91.59	110.33	121.74	150.27	109.38	145.52	148.37	116.03	204.48	113.18	[illegible]	[illegible]	[illegible]	[illegible]	133.15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
16	158.83	122.69	168.34	149.32	122.69	152.17	145.52	205.43	100.82	90.45	107.47	121.74	148.37	107.47	142.66	150.27	116.98	200.68	115.08	[illegible]	[illegible]	[illegible]	[illegible]	136.01	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
17	158.83	121.74	162.64	147.42	119.84	148.37	142.66	198.78	98.91	89.40	104.62	120.79	146.47	105.57	139.81	148.37	116.03	197.83	115.08	[illegible]	[illegible]	[illegible]	[illegible]	140.76	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
18	156.93	121.74	159.78	144.57	117.93	145.52	138.86	193.07	100.82	86.45	98.91	119.84	143.61	104.62	136.96	147.42	118.89	194.02	116.03	[illegible]	[illegible]	[illegible]	[illegible]	143.61	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
19	155.03	121.74	151.22	142.66	116.03	141.71	138.86	188.32	97.96	86.45	97.01	119.84	140.76	102.72	135.05	150.27	119.84	193.07	116.03	[illegible]	[illegible]	[illegible]	[illegible]	146.47	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
20	153.13	122.69	142.66	136.96	116.03	138.86	136.96	182.61	93.49	84.55	96.06	119.84	137.91	98.91	132.20	151.22	118.89	191.17	114.13	[illegible]	[illegible]	[illegible]	[illegible]	150.27	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
21	151.22	121.74	143.61	136.01	113.18	136.01	131.25	174.05	90.45	80.56	91.02	116.03	133.15	98.91	126.49	150.27	116.98	184.51	108.42	[illegible]	[illegible]	[illegible]	[illegible]	155.03	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
22	150.27	119.84	143.61	130.30	110.33	132.20	122.69	170.24	89.12	77.32	90.73	115.08	130.30	98.91	123.64	148.37	113.18	175.00	109.38	[illegible]	[illegible]	[illegible]	[illegible]	157.88	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
23	148.37	116.98	141.71	124.59	107.47	128.40	120.79	168.34	91.02	78.37	89.69	115.08	124.59	96.06	120.79	148.37	112.23	171.20	111.28	[illegible]	[illegible]	[illegible]	[illegible]	162.64	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
24	143.61	116.03	140.76	116.03	105.57	125.54	116.03	163.59	88.64	79.42	88.83	113.18	118.89	93.68	118.89	144.57	112.23	170.24	110.33	[illegible]	[illegible]	[illegible]	[illegible]	167.39	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
25	142.66	114.13	138.86	113.18	106.52	118.89	114.13	157.88	85.41	79.70	87.79	114.13	118.89	91.59	116.98	141.71	107.47	166.44	113.18	[illegible]	[illegible]	[illegible]	[illegible]	173.10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
26	138.86	112.23	136.01	108.42	103.67	115.08	112.23	148.37	82.65	77.04	84.84	114.13	114.13	90.26	113.18	138.86	102.72	161.68	113.18	[illegible]	[illegible]	[illegible]	[illegible]	179.76	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
27	135.05	106.52	134.10	105.57	100.82	115.08	110.33	142.66	78.37	75.42	83.79	113.18	109.38	87.50	110.33	136.96	102.72	157.88	110.33	[illegible]	[illegible]	[illegible]	[illegible]	181.66	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
28	133.15	106.52	133.15	103.67	100.82	115.08	109.38	141.71	76.75	72.95	83.79	113.18	104.62	86.17	107.47	134.10	104.62	155.03	109.38	[illegible]	[illegible]	[illegible]	[illegible]	172.15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
29	131.25	106.52	130.30	100.82	97.96	114.13	108.42	138.86	75.71	70.57	83.51	112.23	99.86	84.84	104.62	129.35	100.82	153.13	103.67	[illegible]	[illegible]	[illegible]	[illegible]	163.59	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
30	128.40	102.72	129.35	97.96	93.97	112.23	108.42	136.96	75.42	68.10	82.93	110.33	97.96	83.51	99.86	126.49	97.96	146.47	99.86	76.09	86.45	68.48	86.55	155.98	123.64	140.76	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
31	125.54	88.83	128.40	96.06	89.69	106.52	107.47	135.05	75.42	65.15	80.27	107.47	97.01	80.84	97.01	125.54	97.01	139.81	101.77	75.14	85.88	66.10	86.07	150.27	121.74	136.96	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Nov 1	126.49	88.83	125.54	92.92	89.69	104.62	110.33	129.35	75.14	64.67	79.70	103.67	94.25	80.27	96.06	121.74	94.54	138.86	102.72	74.18	84.65	63.72	85.60	150.27	116.98	133.15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2	124.59	88.83	121.74	90.26	89.69	102.72	113.18	127.45	72.76	64.67	79.23	104.62	90.26	78.08	94.25	118.89	91.30	135.05	98.91	75.14	83.70	61.82	81.79	150.27	112.23	132.20	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3	117.93	88.83	117.93	87.50	88.64	99.86	116.03	120.79	68.67	63.53	78.08	105.57	87.50	76.75	91.59	116.98	84.27	133.15	98.91	76.09	82.74	60.87	79.89	149.32	114.13	128.40	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
4	116.98	88.83		86.17	86.17	97.01	120.79	114.13	66.01	61.63	74.09	105.57	84.84	75.42	88.83	114.13	80.84	130.30	97.96	77.04	82.74	60.68	77.04	148.37	110.33	126.49	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5	113.18	88.83		83.51	83.98	94.54	122.69	110.33	61.92	59.54	67.34	103.67	82.17	72.76	86.17	106.52	75.42	125.54	94.25	75.14	81.79	59.44	74.18	150.27	106.52	123.64	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
6	97.01	88.83		80.84	83.22	92.64	123.64	105.57	60.58	57.92	59.25	98.91	80.84	71.33	84.84	103.67	72.76	122.69	93.78	71.33	77.99	58.02	71.33	149.32	103.67	119.84	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
7	91.59	88.83		79.42	80.84	90.26	119.84	100.82	59.54	56.59	48.51	92.07	80.84	70.00	83.51	102.72	69.71	123.64	92.26	69.90	74.18	57.07	69.43	147.42	99.86	118.89	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
8	91.59	88.83		78.08	80.56	88.64	116.03	96.06	59.25	55.45	45.75	89.40	78.08	68.38	80.84	101.77	67.34	120.79	91.30	68.48	71.33	56.11	67.53	136.01	96.06	115.08	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
9	91.59	88.83		76.75	78.37	86.17	113.18	91.59	58.68	54.40	43.65	90.45	76.75	67.34	78.08	102.72	67.05	117.93	90.35	66.58	67.53	55.16	65.63	124.59	91.30	110.33	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10	91.59	88.83		74.09	77.61	84.27	109.38	87.50	58.21	53.83	43.37	89.12	75.42	67.05	76.75	99.86	64.86	113.18	89.40	65.63	65.63	55.16	63.72	116.03	85.60	108.42	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
11	91.59	88.83		72.76	75.42	82.93	104.62	84.55	57.64	53.83	43.65	85.60	74.09	65.72	75.42	94.25	64.67	108.42	87.50	65.15	64.67	55.16	62.77	112.23	81.79	105.57	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
12	91.59	88.83		71.33	74.38	80.84	99.86	81.60	57.92	53.36	45.27	80.84	74.09	64.67	72.76	88.83	64.39	100.82	85.60	64.67	63.72	55.16	61.82	106.52	77.99	102.72	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
13	91.59	88.83		70.00	72.76	79.42	94.25	78.65	56.59	53.36	45.75	78.08	72.76	63.25	71.33	85.60	64.39	98.91	82.74	65.15	62.77	54.69	60.87	100.82	75.14	98.91	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
14	91.59	88.83		68.67	71.33	77.61	86.17	75.71	56.02	53.36	46.32	75.99	72.76	62.49	70.00	80.84	64.10	94.16	81.79	65.63	62.30	53.74	60.39	96.06	73.23	95.11	53.74	71.33	111.28	60.68	78.94	98.91	45.84	37.28	65.15	41.28	87.12	117.93	101.77	89.12	66.20	64.20	97.01	88.93	88.45	95.11	78.46	74.66	56.49	63.15	81.70	74.78
15	91.59	88.83		67.34	70.00	75.42	79.42	72.76	54.97	53.07	47.17	74.09	71.33	61.44	67.34	76.75	63.06	90.35	81.79	65.15	61.82	52.31	59.92	94.16	70.38	92.26	53.26	69.43	109.38	59.92	77.04	96.06	44.32	38.42	64.39	41.18	86.83	116.98	100.82	88.45	64.01	61.25	95.11	87.88	92.54	94.63	77.04	75.14	53.55	62.01	80.65	73.46
16	70.00	88.83		66.77	68.67	73.52	75.42	70.57	54.40	52.21	46.89	72.19	67.34	59.25	66.77	72.76	61.92	86.55	81.79	64.20	61.82	50.41	58.02	92.26	66.58	90.35	53.26	68.95	107.47	59.25	75.14	93.21	47.65	40.33	63.34	41.47	85.03	116.98	98.91	87.79	61.73	60.77	93.49	86.83	94.54	93.87	75.90	74.18	50.79	60.20	79.61	71.80
17	70.00	88.83		66.29	67.34	72.47	72.76	68.38	54.12	51.17	46.03	68.67	64.67	57.92	64.67	70.00	61.44	83.22	80.84	63.25	61.35	47.55	56.11	91.30	64.67	89.40	52.79	68.48	104.62	58.59	74.18	91.30	51.07	42.04	62.11	41.85	79.32	115.08	97.96	87.02	57.92	60.20	91.59	85.79	93.49	93.11	74.18	73.14	48.22	58.02	78.65	70.46
18	70.00	88.83		64.67	67.05	70.57	71.62	66.29	53.83	50.12	44.42	64.67	63.25	56.59	63.25	67.34	61.15	79.89	78.94	61.82	60.87	46.60	54.21	89.40	61.82	87.50	52.79	68.00	102.72	57.92	73.23	89.40	54.02	43.27	60.87	42.70	76.94	113.18	96.06	86.36	56.88	59.92	89.97	84.74	90.73	92.64	73.23	63.82	46.03	54.88	77.70	69.05
19	70.00	88.83		64.10	64.86	68.67	71.14	64.10	53.64	48.98	43.08	61.92	61.92	55.16	61.92	66.01	60.87	77.04	77.51	59.92	59.92	45.65	52.31	83.70	59.92	85.60	53.26	66.58	100.82	57.26	72.28	87.02	50.31	44.61	59.63	43.56	76.75	111.28	95.11	85.60	55.92	59.82	88.17	83.70	89.12	91.88	71.14	59.82	45.37	51.36	76.75	67.68
20	70.00	88.83		63.53	64.10	67.34	71.14	61.92	53.36	48.79	41.47	61.63	60.58	53.83	60.58	64.67	60.58	74.18	75.14	57.07	58.02	45.18	50.41	81.79	57.07	83.70	52.79	65.15	97.96	56.59	71.52	85.12	46.13	45.84	58.49	45.27	76.75	111.28	93.78	84.84	54.88	61.25	86.36	82.17	87.50	91.40	69.43	57.64	44.80	50.69	75.80	66.57
21	70.00	63.25		62.49	63.06	66.77	71.33	60.58	51.74	48.79	40.90	60.58	59.25	53.83	59.25	63.25	60.30	70.86	73.71	56.11	55.16	44.23	48.51	78.94	55.16	83.22	52.50	63.72	97.01	55.83	70.57	83.22	50.69	48.22	57.54	45.84	76.47	109.38	92.64	84.08	51.55	62.20	85.31	78.65	84.65	90.64	67.53	57.16	45.84	54.31	74.85	65.23
22	70.00	63.25		60.87	61.92	65.15	72.19	59.25	50.60	48.51	40.71	60.30	59.25	51.45	57.92	62.49	59.82	67.53	71.33	54.21	52.79	43.75	46.60	76.09	53.26	82.84	52.21	61.82	95.11	55.07	70.00	81.32	51.55	49.36	56.88	46.32	75.14	106.52	91.21	83.32	50.03	63.44	84.17	79.04	82.93	89.50	66.58	57.83	48.98	60.11	73.90	64.49
23	70.00	63.25		60.30	61.44	64.39	72.76	57.92	48.51	48.22	40.90	59.82	59.25	50.60	56.59	62.20	59.25	64.67	70.86	53.74	51.36	43.56	46.13	75.14	52.31	82.65	51.93	60.39	93.21	54.31	69.24	79.42	49.93	50.31	55.92	46.70	73.33	103.67	89.59	82.65	49.17	63.34	83.13	77.61	80.27	89.12	64.67	58.40	53.83	64.29	72.95	63.86
24	70.00	63.25		59.82	59.54	63.53	74.09	53.83	47.17	47.17	41.18	59.54	57.92	49.55	55.16	61.92	57.92	61.82	71.33	53.26	50.41	43.18	45.65	74.18	50.41	82.46	51.64	58.97	91.30	53.55	68.48	77.51	47.55	51.55	55.26	46.60	71.33	107.47	87.98	82.08	48.22	63.06	81.98	74.57	79.04	88.83	63.25	59.92	57.73	64.96	72.09	63.18
25	70.00	63.25		59.25	59.25	61.92	75.42	55.16	45.75	46.03	42.04	59.25	56.59	48.79	53.83	61.63	56.30	59.92	70.38	53.55	49.74	42.80	44.70	73.23	49.46	82.27	51.36	57.07	89.40	52.79	67.53	75.61	46.32	52.12	54.40	46.13	67.34	110.33	86.07	81.51	46.89	62.87	80.65	73.71	77.13	88.45	62.30	60.68	60.39	64.29	71.14	62.54
26	70.00	63.25		58.68	58.40	61.44	75.71	54.40	45.27	45.56	42.32	58.97	56.59	48.22	53.36	61.63	56.02	58.49	70.10	53.83	49.46	42.32	44.23	72.28	48.51	82.08	50.88	56.59	87.50	52.31	66.86	73.71	44.61	52.79	53.74	45.65	66.10	107.47	84.55	80.84	45.37	61.73	79.32	71.90	75.99	88.07	60.87	66.39	61.35	63.72	70.29	61.99
27	70.00	63.25		58.21	57.35	60.30	75.71	53.36	44.70	44.70	42.51	58.68	55.45	47.93	51.17	61.44	54.69	57.83	69.90	54.21	48.51	41.85	42.80	72.28	47.55	82.27	50.41	56.59	86.55	51.83	66.20	72.28	43.56	52.12	53.07	45.18	64.01	99.86	83.51	80.08	45.18	61.35	78.08	71.05	71.90	87.69	59.16	66.96	59.92	63.06	69.43	61.11
28	70.00	63.25		57.07	56.59	59.25	75.42	52.21	44.13	43.37	42.51	57.92	54.69	47.36	50.60	61.15	54.12	57.26	69.62	54.69	47.55	41.85	41.37	71.33	46.60	81.79	49.93	56.40	85.60	51.36	65.53	70.86	44.04	51.55	52.21	44.51	62.30	97.96	82.46	79.32	44.70	60.87	76.85	70.00	70.86	87.31	55.64	67.34	58.49	62.39	68.57	60.38
29	70.00	63.25		56.59	56.30	58.97	74.09	51.74	43.65	42.51	42.32	57.64	53.83	46.89	48.98	60.30	53.83	58.78	68.95	55.16	46.60	41.37	39.95	71.33	45.65	80.84	49.46	56.11	85.12	50.88	64.86	69.43	42.61	50.98	51.64	43.75	61.15	96.06	81.51	78.65	44.13	60.49	75.14	66.67	69.71	86.93	54.02	67.34	57.07	61.82	67.72	59.66
30	70.00	63.25		56.02	55.16	58.68	72.76	50.88	43.08	40.90	41.75	54.97	52.50	46.03	47.93	59.82	53.64	59.06	68.29	56.11	46.13	40.42	38.99	70.38	44.70	79.89	48.51	54.21	84.65	50.41	64.20	68.00	41.94	50.22	50.98	42.80	60.77	95.11	80.56	77.99	43.75	59.73	74.09	63.72	67.91	86.55	52.60	67.15	55.64	61.15	67.05	58.82
Dec 1	59.25	63.25		55.16	54.12	57.92	70.00	50.60	42.80	40.42	40.90	53.83	49.84	45.75	46.32	59.54	53.36	58.49	66.58	55.16	45.65	40.23	36.14	69.43	43.75	77.99	47.55	53.26	82.74	49.84	63.53	66.39	42.04	49.36	50.41	42.04	61.15	93.30	79.51	77.23	42.99	58.97	72.85	61.25	66.10	86.26	51.83	66.10	54.31	60.58	66.39	57.65
2	59.25	63.25		53.83	53.83	57.07	67.34	50.41	42.32	40.42	40.42	53.64	48.51	44.70	45.75	59.25	51.45	57.54	65.15	52.31	45.65	39.95	32.81	66.58	42.80	74.18	47.08	53.07	81.79	49.27	62.87	64.67	41.18	48.41	49.74	41.37	61.15	91.02	78.37	76.47	42.42	58.30	70.48	60.01	64.29	86.07	50.50	65.43	52.98	59.92	65.72	56.62
3	59.25	63.25		53.83	53.64	56.78	64.67	49.84	41.47	40.14	40.14	53.36	46.89	44.13	44.42	59.25	51.17	54.69	61.82	49.46	45.65	39.95	31.39	64.67	41.85	72.28	46.60	52.79	81.32	48.70	62.20	63.25	42.23	47.46	49.36	41.09	60.01	90.16	77.13	75.71	41.75	57.73	65.63	59.63	62.58	85.88	46.41	64.01	51.74	59.35	65.05	55.63
4	59.25	63.25		53.36	53.07	56.59	61.92	49.55	40.42	39.57	39.85	53.36	46.32	43.65	43.37	58.97	50.88	51.74	60.87	48.51	45.65	39.85	30.43	62.77	41.85	69.43	46.13	52.60	80.84	48.13	61.54	61.82	41.94	47.17	48.79	40.61	58.59	90.73	75.99	74.95	41.47	56.97	63.53	59.82	62.01	85.69	42.42	62.01	50.50	58.78	64.39	54.84
5	59.25	63.25		53.36	51.74	56.59	60.58	49.27	40.42	39.28	39.57	53.36	46.03	42.80	42.51	57.92	50.88	48.98	59.92	47.55	45.65	39.85	29.67	60.87	40.90	67.53	45.65	52.12	80.37	47.55	60.87	60.39	40.61	46.60	48.22	40.14	57.35	90.45	74.85	74.18	41.18	56.11	65.15	59.82	61.35	84.27	42.23	61.15	49.27	58.11	63.72	54.19
6	59.25	49.84		53.36	51.17	56.30	59.25	49.27	40.42	39.09	39.28	53.64	45.75	41.75	41.47	56.59	50.12	46.60	58.49	46.60	45.65	39.85	29.48	59.92	40.90	64.67	44.70	52.02	79.89	47.08	60.11	59.16	42.42	45.56	47.84	39.66	56.21	89.31	73.71	73.33	40.90	55.16	66.58	59.44	59.63	83.22	43.46	60.68	48.03	57.54	63.06	53.35
7	59.25	49.84		52.79	51.17	55.73	56.59	49.27	40.42	38.52	39.09	53.64	45.75	40.42	40.42	55.73	48.98	46.13	56.59	46.89	42.80	39.95	29.01	58.97	39.95	60.87	43.75	51.93	78.94	46.60	59.35	57.92	41.09	44.04	47.27	39.18	54.69	86.93	72.57	72.28	40.52	54.50	65.91	59.25	59.35	81.22	44.42	59.54	46.89	56.97	62.39	52.52
8	59.25	49.84		51.74	50.41	54.97	55.16	49.27	40.42	37.66	39.09	53.64	45.56	40.14	39.85	53.83	48.22	45.08	55.64	47.17	41.85	39.95	28.53	58.97	39.95	59.92	42.80	51.36	77.99	46.13	58.59	56.68	41.47	42.80	46.89	38.71	53.07	86.36	71.52	71.33	40.33	53.74	64.67	58.87	59.16	79.80	44.99	58.49	46.03	56.40	61.63	51.92
9	59.25	49.84		51.17	50.41	54.69	54.40	49.27	40.14	37.47	39.09	52.50	44.99	39.85	39.28	53.36	45.75	44.70	55.35	46.60	41.37	40.04	28.34	58.02	38.99	58.02	42.32	50.88	77.04	45.65	57.83	55.45	42.61	41.85	46.32	38.33	52.88	85.60	70.38	70.38	39.95	53.17	64.01	58.49	58.97	78.27	45.65	56.97	45.37	55.83	60.87	51.36
10	59.25	49.84		50.60	48.51	54.40	53.83	49.27	39.85	37.19	38.80	51.74	40.90	39.28	38.80	53.07	43.08	45.08	55.16	45.65	41.37	39.95	28.25	58.02	38.99	56.88	41.85	50.69	76.56	45.18	57.07	54.21	42.61	40.33	45.75	37.47	52.69	86.07	69.33	69.43	39.85	52.40	63.25	58.30	58.97	75.90	46.32	56.30	44.80	55.26	60.11	50.77
11	59.25	49.84		50.60	47.93	54.12	52.50	49.27	37.95	36.90	38.52	50.88	40.42	38.80	37.66	52.79	41.75	45.65	54.97	45.94	40.90	39.85	28.15	57.07	38.04	53.26	41.66	50.41	76.09	44.80	56.59	53.26	43.18	39.66	45.18	37.28	52.69	86.55	68.29	68.29	39.57	51.64	61.73	58.02	58.78	75.14	45.56	55.64	44.42	54.69	59.25	50.23
12	59.25	49.84		50.60	47.17	53.83	51.74	49.27	37.19	36.62	38.23	49.84	40.14	38.23	35.29	52.50	40.42	46.13	54.40	45.65	40.42	39.18	28.34	57.07	38.04	51.36	41.47	49.46	75.14	44.42	56.11	52.31	44.04	38.71	44.61	36.71	51.93	85.22	67.53	66.96	39.47	50.88	60.77	57.64	58.11	72.09	45.75	54.88	44.04	54.21	58.40	49.63
13	59.25	49.84		50.12	46.89	53.64	51.17	49.27	36.90	36.33	37.66	48.51	40.14	37.95	35.00	51.74	39.85	46.41	54.21	44.89	39.95	38.52	27.58	57.07	37.57	49.46	40.90	48.98	74.66	44.04	55.64	51.26	43.46	38.04	44.13	36.14	51.55	83.89	66.48	65.63	39.28	50.50	59.06	57.07	57.73	71.33	44.80	53.45	43.85	53.64	57.45	49.06
14	59.25	49.84		50.12	46.03	53.64	50.88	48.98	36.05	36.05	37.47	47.17	39.09	37.95	34.43	50.60	38.52	46.79	53.74	43.75	39.95	38.04	27.11	57.07	37.09	47.55	40.42	48.51	74.18	43.65	55.16	50.31	43.75	37.09	43.56	35.67	51.17	81.60	65.43	64.20	38.99	50.12	58.49	56.59	57.26	70.57	43.94	52.88	43.65	53.07	56.59	48.48
15	59.25	49.84		49.55	45.75	53.36	50.88	48.79	35.86	35.57	37.19	46.32	38.23	37.66	33.95	50.41	37.95	46.32	53.55	42.80	39.95	37.57	26.63	56.11	36.62	45.65	39.95	48.03	74.18	43.27	54.69	49.27	44.89	36.43	42.99	35.10	50.31	78.94	64.48	62.77	38.90	49.08	57.54	55.92	56.40	69.14	43.85	52.31	43.37	52.60	55.64	47.92
16	59.25	49.84		48.98	45.27	52.50	50.41	48.51	35.57	34.43	36.33	45.75	37.66	36.33	33.38	49.84	37.66	45.65	53.26	42.80	39.95	37.09	26.15	56.11	36.14	44.70	38.99	47.55	73.23	42.80	54.12	48.41	43.46	35.29	42.70	34.52	50.03	77.70	63.53	60.87	38.61	48.98	56.40	54.69	55.54	67.43	43.75	51.07	43.18	52.02	54.69	47.26
17	59.25	49.84		48.51	44.70	51.74	49.84	47.93	35.57	33.38	36.05	45.27	37.66	35.00	32.81	49.27	37.47	44.99	52.60	43.27	39.95	36.14	25.77	56.11	35.67	44.23	38.52	47.27	72.76	42.32	53.55	47.55	42.89	34.33	42.32	34.14	49.17	77.99	62.77	59.44	38.52	48.79	55.35	53.55	54.40	65.82	42.99	49.74	42.99	51.55	53.74	46.71
18	59.25	49.84		48.22	44.42	51.17	49.55	45.75	35.29	32.34	36.05	44.70	37.66	34.43	32.34	48.98	37.47	43.75	52.31	42.80	39.95	35.19	25.68	55.16	35.19	43.27	38.04	46.89	72.28	41.85	52.98	46.79	42.42	33.38	41.94	33.67	46.51	76.75	62.20	58.02	38.23	48.60	54.40	53.07	53.55	63.06	42.70	49.17	42.80	50.98	52.79	46.08
19	59.25	49.84		47.93	43.94	50.12	49.27	43.08	35.00	30.72	36.05	44.42	37.66	33.67	31.77	48.51	37.66	42.61	51.36	42.32	39.95	34.71	25.58	55.16	35.19	42.80	37.09	46.41	71.33	41.47	52.40	46.03	42.32	32.72	41.47	33.29	43.85	76.56	61.44	56.11	38.14	48.13	53.74	52.40	52.50	62.39	42.23	48.51	42.61	50.50	51.74	45.48
20	59.25	49.84		47.65	43.37	49.55	48.98	40.42	34.71	29.58	36.05	44.13	37.66	33.38	31.01	47.36	37.95	40.90	49.93	41.85	39.95	34.52	25.49	55.16	34.71	42.32	36.62	46.03	70.38	41.09	51.83	45.27	42.13	32.15	41.18	32.72	43.46	74.95	60.68	54.40	37.85	47.65	53.07	51.64	51.55	61.54	41.56	47.65	42.42	49.93	50.60	44.88
21	59.25	40.42		47.36	43.08	48.51	48.98	39.57	33.95	29.10	36.05	43.94	36.90	33.10	30.43	45.75	38.23	41.28	48.51	40.90	39.76	34.24	25.49	55.16	34.24	41.85	36.33	45.94	69.43	40.71	51.36	44.51	41.18	31.39	40.80	32.24	43.85	74.18	60.11	52.69	37.76	47.17	52.40	50.88	50.60	61.35	40.80	46.79	42.13	49.46	49.46	44.19
22	59.25	40.42		47.17	42.51	48.22	49.27	39.09	32.81	28.53	36.05	43.65	36.05	32.81	29.86	44.42	37.95	41.66	47.08	38.99	38.99	34.24	25.58	55.16	34.05	41.85	36.05	45.84	68.95	40.33	50.88	43.85	41.09	30.72	40.52	31.86	44.23	74.18	59.35	50.98	37.47	46.70	51.83	50.31	50.03	61.06	40.23	45.75	41.94	48.98	48.41	43.74
23	59.25	40.42		46.32	41.75	47.36	49.27	38.52	32.05	27.96	36.05	43.37	35.86	32.62	29.58	42.80	37.66	41.66	46.13	37.57	38.80	33.76	25.58	55.16	33.86	41.66	35.76	45.75	68.48	39.95	50.41	43.18	40.90	30.24	39.95	31.39	44.32	74.18	58.49	49.08	37.38	46.22	51.07	49.55	49.84	60.39	39.85	44.99	41.75	48.51	47.27	43.28
24	59.25	40.42		45.75	41.47	46.89	49.55	38.23	31.01	27.49	36.05	43.37	35.29	32.62	29.39	41.75	38.23	41.85	45.18	37.09	38.99	33.29	25.68	54.21	33.57	41.09	35.48	45.65	67.53	39.57	49.93	42.51	40.52	29.86	39.47	31.01	44.32	71.90	57.64	47.08	37.09	45.65	50.50	49.17	49.55	59.73	39.28	44.23	41.56	48.03	46.22	42.82
25	59.25	40.42		45.56	40.71	45.75	49.84	37.95	30.72	26.92	35.00	43.08	35.00	32.62	28.82	41.47	38.80	42.04	44.70	36.62	38.99	32.81	25.68	54.21	33.29	40.90	35.10	45.18	66.58	39.18	49.46	41.85	40.14	29.39	38.99	30.53	44.04	71.71	56.88	45.18	36.81	45.27	49.74	48.89	49.74	59.16	38.90	43.56	41.37	47.55	45.18	42.43
26	59.25	40.42		45.27	40.42	44.99	50.41	37.95	30.43	26.15	34.24	43.08	35.00	32.34	27.96	40.42	37.95	41.66	43.27	37.09	38.99	32.34	25.49	54.21	33.10	40.52	34.81	43.75	65.63	38.80	48.98	41.28	39.85	29.39	38.52	30.24	43.27	71.90	56.02	43.27	36.62	44.80	49.36	48.60	49.55	57.73	38.52	42.80	41.18	46.98	44.23	41.98
27	59.25	40.42		44.99	40.14	44.13	50.60	37.95	30.43	25.58	33.67	43.08	35.00	32.34	27.49	39.09	37.66	41.18	42.32	38.04	38.52	31.39	25.20	54.21	32.91	40.14	34.43	42.80	64.67	38.33	48.51	40.71	39.57	29.48	38.04	29.86	42.42	72.28	55.16	41.37	36.33	44.32	49.08	48.51	48.98	56.78	38.14	42.04	40.99	46.60	43.27	41.57
28	59.25	40.42		44.70	39.57	43.08	50.88	37.66	30.43	25.01	33.10	42.51	35.00	32.34	27.20	38.52	37.66	40.90	41.37	38.04	38.42	30.63	24.73	54.21	32.72	40.04	34.05	41.85	64.20	37.95	48.03	40.14	39.66	29.48	37.76	29.67	40.04	70.57	54.21	39.47	36.14	43.94	48.70	48.32	48.70	56.49	37.66	41.37	40.80	46.13	42.32	41.12
29	59.25	40.42		44.42	38.80	41.75	51.17	37.66	30.43	24.82	32.81	41.47	34.71	32.34	27.20	36.62	37.66	41.28	39.95	38.52	38.52	30.24	24.54	53.26	32.62	39.76	33.57	41.66	63.25	37.66	47.55	39.57	39.28	28.82	37.47	29.29	38.90	68.67	53.07	37.57	35.95	43.56	48.22	47.55	48.13	56.02	36.14	41.09	40.52	45.65	41.37	40.62
30	59.25	40.42		43.94	38.23	40.71	51.17	37.19	30.43	24.54	32.81	40.90	34.43	32.34	27.20	35.86	37.47	41.75	38.99	38.99	38.80	29.86	24.16	53.26	32.43	39.47	33.29	41.18	62.77	37.38	47.08	38.99	38.90	28.15	37.00	29.01	38.33	65.43	52.40	35.76	35.67	43.18	47.65	46.89	47.84	55.73	35.76	40.61	40.33	45.18	40.42	40.19
31	59.25	40.42		43.37	37.66	40.42	51.17	36.33	30.15	24.25	33.10	40.42	33.10	32.05	26.92	35.00	36.90	41.75	37.09	38.52	38.99	29.77	23.87	53.26	32.34	38.99	32.81	40.90	61.82	37.09	46.60	38.52	38.61	27.58	36.71	28.63	36.43	63.63	51.36	33.95	35.38	42.89	46.89	46.13	47.84	55.45	35.19	39.76	40.14	44.61	39.28	39.67

Synthetic Middle Canyon Frances	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
		187.37			161.09	175.75	146.43	170.90	155.17	176.41	166.41	147.94	176.48	181.96
Jan 1		42.84	42.84		45.66	39.41	40.52	52.81	37.39	31.35	25.60	35.07	42.84	33.06
2		42.84	42.84		45.66	38.00	39.41	50.80	36.79	30.54	25.50	34.77	42.53	31.95
3		42.84	42.84		45.05	37.09	37.39	48.48	36.79	29.93	24.79	34.57	42.53	31.35
4		42.84	42.84		44.55	36.49	35.68	45.66	36.49	29.93	24.29	34.27	41.12	29.93
5		42.84	37.09		44.25	35.07	34.27	42.84	36.49	29.63	23.08	34.27	40.52	28.52
6		42.84	35.68		43.94	34.57	33.36	42.23	35.68	29.13	22.27	33.97	39.91	28.02
7		42.84	35.68		43.64	33.97	32.25	40.82	34.77	28.83	21.97	33.66	39.41	27.82
8		42.84	35.68		43.14	33.36	30.84	39.91	33.97	28.52	21.67	33.06	39.11	28.02
9		42.84	35.68		42.84	32.86	29.63	39.41	33.06	28.52	21.37	32.55	39.11	28.22
10		42.84	35.68		42.84	32.55	29.13	37.09	32.25	28.22	21.37	31.35	39.11	28.42
11		42.84	35.68		42.23	31.95	28.52	32.86	31.65	27.72	21.37	29.93	39.11	28.12
12		42.84	35.68		42.23	31.65	28.02	29.63	31.14	27.41	21.37	28.83	39.11	27.72
13		42.84	35.68		41.63	31.35	27.11	29.13	30.54	26.81	21.37	28.02	39.11	27.11
14		42.84	35.68		41.42	31.35	26.31	28.83	29.93	26.51	21.37	27.41	39.41	27.11
15		42.84	35.68		41.12	31.35	25.70	28.52	29.43	26.31	21.37	27.11	39.71	27.21
16		42.84	35.68		40.82	31.14	25.10	28.83	29.43	26.31	21.17	26.81	39.71	27.41
17		42.84	35.68		40.52	31.14	24.59	29.43	29.13	25.70	20.86	26.51	39.91	27.72
18		42.84	35.68		39.91	31.14	23.99	29.63	28.83	25.10	20.56	26.51	39.91	27.72
19		42.84	35.68		39.41	31.14	23.38	30.24	28.83	24.59	20.26	26.31	39.91	27.72
20		42.84	35.68		39.41	31.14	22.88	30.84	28.52	24.29	20.16	26.31	39.71	27.52
21		42.84	35.68		39.11	31.14	22.27	31.14	28.52	23.99	19.96	26.31	39.41	27.11
22		42.84	35.68		38.80	31.14	21.97	31.35	28.42	23.99	19.96	26.31	38.50	26.81
23		42.84	35.68		38.50	31.14	21.67	31.35	28.32	23.69	20.26	26.00	38.00	26.51
24		42.84	35.68		38.20	31.14	21.37	31.35	28.32	23.69	20.56	25.40	37.09	26.31
25		42.84	35.68		37.70	31.14	21.17	31.14	28.22	23.38	20.56	24.79	36.49	26.00
26		42.84	35.68		37.09	31.14	20.86	30.84	28.12	23.38	20.56	24.29	35.68	25.80
27		42.84	35.68		36.49	30.84	20.56	30.54	28.02	23.69	20.56	23.38	34.27	25.80
28		42.84	35.68		36.49	30.54	20.26	30.24	27.82	24.29	20.56	22.88	33.97	26.00
29		42.84	35.68		35.98	30.24	19.96	29.93	27.72	24.79	20.56	22.27	33.66	26.10
30		42.84	35.68		35.68	29.93	19.65	29.63	27.52	25.70	20.56	21.97	33.06	26.51
31		42.84	35.68		35.38	29.63	19.45	29.43	27.41	25.70	20.56	21.67	32.55	26.51
Feb 1		37.09	27.41		35.07	29.43	19.35	29.43	26.51	25.70	20.26	21.67	32.25	26.31
2		37.09	27.41		34.77	28.83	19.25	29.63	26.31	26.31	19.96	21.67	31.95	26.00
3		37.09	27.41		34.57	28.52	19.05	29.93	26.31	26.81	19.96	21.67	31.65	25.70
4		37.09	27.41		34.27	28.22	18.85	30.24	26.31	26.81	19.96	21.67	31.35	25.70
5		37.09	27.41		33.97	28.02	18.75	29.93	26.10	26.81	19.96	21.67	31.35	25.80
6		37.09	27.41		33.66	27.52	18.65	29.43	26.00	26.81	19.96	21.67	31.14	25.80
7		37.09	27.41		33.36	27.41	18.65	29.13	26.00	26.81	19.86	21.67	30.84	25.80
8		37.09	27.41		33.06	26.81	18.55	29.13	25.70	26.61	19.65	21.67	30.84	25.80
9		37.09	27.41		32.86	26.51	18.55	29.13	25.70	26.31	19.65	21.37	30.54	25.80
10		37.09	27.41		32.55	26.31	18.44	29.13	26.31	26.00	19.15	20.86	30.54	25.70
11		37.09	27.41		31.95	25.70	18.44	29.13	26.41	25.70	18.55	20.06	29.93	25.50
12		37.09	27.41		31.35	25.40	18.44	28.52	26.61	25.50	18.55	19.65	29.93	25.50
13		37.09	27.41		31.14	25.30	18.24	28.42	26.81	25.40	18.55	18.85	29.63	25.50
14		37.09	27.41		30.84	25.10	18.24	28.02	27.01	25.30	18.24	18.55	29.43	25.10
15		37.09	27.41		30.54	24.59	18.14	27.41	27.21	25.10	18.55	18.24	29.63	25.10

Synthetic Middle Canyon Frances	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
	171.02	133.07	170.36	136.67	142.98	114.05	133.45	140.72	157.93	169.01	155.16	209.57	111.62	157.48	209.65	203.11
Jan 1	33.66	28.02	36.49	38.20	44.35	38.80	41.32	41.22	31.65	25.20	55.94	34.27	40.82	34.27	42.84	64.51
2	33.66	27.72	36.28	37.09	44.35	38.50	40.82	41.02	31.75	25.00	55.43	34.17	40.32	33.46	42.23	63.50
3	33.66	27.52	34.77	36.28	44.25	38.30	39.81	40.82	31.85	24.79	55.23	34.07	40.11	33.26	41.83	62.49
4	33.66	27.41	34.27	35.68	43.34	38.30	39.31	40.52	31.65	24.59	54.83	33.97	39.91	32.76	41.32	61.48
5	33.66	27.11	33.97	35.07	43.14	38.50	38.30	39.81	31.24	24.39	54.43	33.87	39.71	32.35	40.92	60.47
6	34.27	26.81	33.66	35.38	42.33	38.40	36.28	38.80	30.74	24.19	54.02	33.76	39.51	32.25	40.62	59.77
7	34.27	26.41	33.66	35.68	42.03	38.30	34.77	37.70	30.64	23.99	53.52	33.26	39.51	31.95	40.32	59.06
8	34.27	26.00	33.66	35.68	41.32	38.30	33.26	36.69	30.64	23.89	52.91	32.76	39.61	31.55	39.91	58.36
9	34.27	26.10	33.36	35.68	40.52	38.20	32.25	35.58	30.44	23.79	51.70	31.85	39.81	31.24	39.61	57.65
10	34.27	26.41	32.55	35.07	39.61	37.49	31.55	35.28	30.14	23.79	50.39	31.65	39.31	30.84	39.31	56.95
11	33.36	26.71	31.65	34.57	39.11	37.09	30.74	35.28	30.14	23.79	49.39	31.24	38.80	30.44	39.01	56.44
12	33.06	27.21	31.35	33.66	38.70	35.88	30.24	35.18	30.24	23.79	48.38	30.74	38.30	30.24	38.70	55.94
13	33.06	27.41	30.84	33.06	38.50	35.07	29.93	34.77	30.44	23.69	47.37	30.44	38.10	30.04	38.40	55.43
14	32.86	27.72	30.54	32.86	38.50	34.07	29.63	34.37	30.54	23.69	46.36	30.34	37.80	29.73	38.20	54.93
15	32.86	28.12	29.93	32.86	38.30	33.06	29.23	33.97	31.04	23.69	45.36	30.24	37.49	29.43	38.10	54.43
16	32.55	28.02	29.93	32.86	38.10	32.76	28.83	33.26	31.04	23.69	44.35	30.14	37.49	29.23	37.80	53.82
17	32.25	27.82	29.93	33.06	37.29	32.45	28.52	32.86	30.84	23.79	43.34	30.14	37.29	28.93	37.39	53.22
18	31.95	27.41	29.63	33.36	36.28	32.25	28.22	32.25	30.44	23.79	42.33	30.04	36.99	28.72	37.19	52.61
19	31.65	27.11	29.63	33.36	36.08	32.05	27.92	30.74	30.04	23.79	41.32	30.04	36.79	28.52	36.89	52.11
20	31.65	27.41	29.63	33.06	35.88	31.75	27.72	29.73	30.04	23.79	40.82	30.04	36.49	28.22	36.69	51.60
21	31.65	27.72	29.63	33.36	35.98	31.45	27.72	28.72	29.93	23.69	40.32	30.14	36.49	27.92	36.38	51.10
22	31.35	28.12	29.63	33.66	36.08	31.35	27.21	27.41	30.04	23.69	39.81	30.14	36.28	27.72	36.18	50.60
23	31.35	28.22	29.43	33.66	35.88	31.24	26.71	26.21	30.14	23.69	39.31	30.24	35.98	27.52	35.88	50.19
24	31.14	28.12	28.83	33.06	35.28	31.24	26.21	25.00	30.14	23.69	38.50	30.34	35.78	27.41	35.58	49.79
25	30.84	27.72	28.52	32.55	34.47	31.14	25.70	23.18	30.14	23.69	37.80	30.44	35.48	27.21	35.28	49.39
26	30.54	27.01	27.72	31.35	33.26	31.04	25.50	22.17	30.14	23.69	37.59	30.54	35.78	26.91	35.07	48.78
27	30.24	26.31	27.41	31.14	32.25	31.04	25.20	21.47	30.04	23.79	37.29	30.44	35.48	26.71	34.97	48.18
28	30.24	26.10	27.11	30.84	31.55	30.94	25.20	21.17	29.83	23.79	36.99	30.34	35.28	26.51	34.77	47.57
29	30.54	26.00	26.71	31.14	31.04	30.84	25.20	20.56	29.83	23.79	36.69	30.34	34.77	26.31	34.57	46.97
30	30.84	25.80	26.71	31.65	30.64	30.74	25.20	20.16	29.93	23.79	36.49	30.24	34.27	26.21	34.37	46.36
31	31.14	25.40	26.51	32.25	30.24	30.64	24.89	19.86	29.83	23.79	36.28	30.24	33.76	26.10	34.07	46.87
Feb 1	31.14	24.29	26.31	32.55	30.04	30.44	24.79	19.75	29.23	23.79	35.78	30.24	33.26	25.90	33.76	46.56
2	30.84	23.38	26.10	32.86	29.73	30.34	24.79	19.65	28.72	23.79	34.77	29.83	32.45	25.70	33.46	46.26
3	29.63	23.08	25.80	32.86	29.53	30.34	24.49	19.55	27.72	23.79	33.76	29.63	32.45	25.50	33.16	45.96
4	28.52	22.98	25.70	32.86	29.23	30.24	24.19	19.35	26.10	23.79	32.76	29.43	32.45	25.40	33.06	45.66
5	27.72	22.88	25.30	33.06	29.43	30.24	24.19	19.25	25.50	23.79	31.75	29.23	32.45	25.20	32.86	45.36
6	27.41	22.88	24.79	33.36	29.53	30.04	24.19	19.15	25.10	23.79	31.55	29.03	32.45	25.00	32.66	45.05
7	27.41	22.98	24.59	33.06	29.63	29.73	23.99	19.15	23.48	23.79	31.35	28.93	32.45	24.79	32.45	44.75
8	27.41	23.28	23.99	32.55	29.53	29.03	23.69	19.15	23.08	23.79	31.14	28.93	32.76	24.59	32.25	44.55
9	27.41	23.28	23.69	31.95	28.72	28.72	23.38	19.05	22.68	23.79	30.94	29.03	32.35	24.49	32.15	44.35
10	27.11	23.08	23.28	31.35	28.22	28.22	23.28	18.85	22.38	23.79	30.74	29.03	32.25	24.39	32.05	44.15
11	27.11	22.58	22.98	31.65	28.12	27.72	23.28	18.44	22.17	23.79	30.64	28.93	32.05	24.29	31.75	43.74
12	27.11	21.97	22.88	31.95	27.92	27.41	23.18	18.34	22.27	23.79	30.54	28.83	31.85	24.19	31.45	43.44
13	27.11	21.97	22.88	31.95	28.02	27.31	23.18	18.24	22.48	23.79	30.34	28.72	31.65	24.19	31.35	43.14
14	27.11	22.27	22.88	31.95	28.22	27.21	22.68	18.14	22.48	23.79	30.24	28.62	31.45	24.09	31.14	42.84
15	27.11	22.27	22.88	31.35	28.42	27.21	22.17	18.24	22.38	23.79	29.83	28.62	31.24	23.99	31.04	42.53

Synthetic Middle Canyon Frances	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Average
	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	
	162.64	163.15	130.08	126.65	141.73	116.20	155.39	208.44	170.36	141.56	133.75	144.07	192.75	180.54	192.70	205.77	170.40	122.53	192.97	192.52	181.68	162.24
Jan 1	39.01	48.98	40.82	40.52	28.72	38.50	30.24	38.60	66.42	53.72	35.58	37.39	45.36	49.49	48.38	50.80	58.56	37.09	41.73	42.43	47.07	41.23
2	38.70	48.58	40.82	40.21	28.52	37.80	30.14	38.50	65.82	53.02	35.07	37.39	45.15	49.69	47.98	50.29	58.26	36.99	41.12	42.13	46.46	40.81
3	38.50	48.18	40.72	39.91	28.42	37.39	29.73	38.20	65.01	52.31	34.57	37.29	44.55	48.48	47.37	49.49	57.45	36.99	40.42	41.93	45.96	40.32
4	38.30	47.77	40.72	39.51	28.22	36.89	29.43	37.90	63.80	51.60	34.07	37.29	44.45	48.28	46.87	48.68	56.24	36.69	39.81	41.73	45.46	39.81
5	38.10	47.37	40.72	39.21	27.92	36.28	29.03	37.19	62.69	51.00	33.56	37.19	44.35	47.77	46.46	48.38	55.94	36.28	39.21	41.53	45.05	39.20
6	37.70	46.97	40.21	38.90	27.72	35.78	28.83	36.49	61.58	50.39	32.96	37.19	44.25	47.47	46.26	47.98	55.64	36.18	38.60	41.32	44.55	38.76
7	37.39	46.67	39.81	38.60	27.41	35.58	28.52	35.28	60.98	49.79	32.35	37.09	43.64	46.97	46.06	47.77	55.43	36.08	38.00	41.12	44.15	38.36
8	37.09	46.26	39.31	38.30	27.11	35.18	28.22	35.48	60.47	49.19	31.75	37.09	42.73	45.66	45.15	47.27	53.62	35.98	37.39	40.92	43.74	37.89
9	36.79	45.86	38.90	38.00	26.81	34.77	27.92	34.57	59.87	48.58	31.14	36.99	42.23	45.05	44.65	46.77	52.71	35.88	36.79	40.72	43.24	37.48
10	36.49	45.56	38.50	37.70	26.61	34.47	27.72	33.56	59.36	47.98	30.64	36.89	41.63	44.65	43.94	46.46	51.60	35.28	36.18	40.52	42.84	37.02
11	36.18	45.15	38.00	37.39	26.41	34.07	27.41	31.95	58.86	47.37	30.04	36.79	41.02	43.94	43.44	46.06	50.90	34.67	35.68	40.32	42.43	36.49
12	35.88	44.75	37.59	37.09	26.21	33.66	27.11	32.05	57.75	46.77	29.43	36.79	40.92	42.94	42.63	45.86	50.29	34.37	35.07	40.21	41.93	36.05
13	35.58	44.35	37.19	36.79	26.00	33.36	26.81	32.15	56.74	46.16	28.93	36.69	41.12	42.53	41.83	45.36	49.69	34.17	34.57	40.01	41.53	35.69
14	35.38	43.94	36.79	36.49	25.80	33.06	26.61	31.35	55.74	45.56	28.32	36.69	41.22	42.23	41.02	45.05	49.08	33.97	33.97	39.81	41.12	35.38
15	35.18	43.54	36.49	36.28	25.60	32.66	26.41	30.04	54.73	44.95	27.82	36.59	41.32	41.93	40.21	44.65	48.68	33.56	33.46	39.61	40.72	35.08
16	34.87	43.14	36.08	35.98	25.40	32.45	26.00	29.13	53.42	44.35	27.41	36.59	41.22	41.53	39.91	43.84	48.18	33.36	32.96	39.41	40.32	34.79
17	34.57	42.73	35.68	35.68	25.20	32.05	25.80	29.13	52.61	43.74	27.01	36.59	40.92	41.73	39.61	43.84	47.47	32.96	32.45	39.21	39.91	34.53
18	34.37	42.33	35.38	35.48	25.00	31.85	25.60	28.62	50.90	43.14	26.51	36.49	40.52	42.03	39.61	43.74	46.97	32.76	31.85	39.01	39.51	34.22
19	34.17	41.93	34.97	35.18	24.79	31.45	25.30	28.22	49.69	42.53	26.10	36.49	40.32	42.43	39.51	43.24	46.36	32.55	31.35	38.80	39.11	33.94
20	33.97	41.32	34.67	34.87	24.69	31.24	25.00	28.22	49.08	41.53	25.70	36.49	40.01	42.13	39.41	42.73	45.76	32.25	30.94	38.60	38.70	33.70
21	33.66	40.72	34.37	34.67	24.49	30.84	24.79	28.12	48.38	40.92	25.20	36.38	39.71	42.13	39.21	42.33	44.35	32.15	30.44	38.40	38.30	33.45
22	33.46	40.32	33.97	34.37	24.29	30.64	24.69	28.32	47.77	40.32	24.69	36.38	39.41	42.03	39.11	42.03	42.43	31.95	30.04	38.30	37.90	33.21
23	33.26	39.91	33.66	34.17	24.09	30.34	24.39	28.42	47.27	39.71	24.19	36.38	39.31	41.83	39.01	41.83	42.03	31.85	29.63	38.10	37.59	32.99
24	33.06	39.51	33.36	33.97	23.89	30.04	24.29	28.22	46.77	39.11	24.09	36.28	38.40	40.62	38.80	41.32	41.53	31.65	29.23	37.90	37.19	32.68
25	32.76	39.11	33.06	33.66	23.79	29.83	24.09	27.92	46.16	38.50	23.89	36.28	38.00	39.01	38.70	40.62	40.72	31.55	28.93	37.70	36.79	32.32
26	32.45	38.60	32.76	33.46	23.58	29.63	23.89	27.72	45.66	37.90	23.58	36.18	37.70	38.10	38.70	39.11	40.11	31.45	28.72	37.49	36.38	31.97
27	32.25	38.10	32.45	33.16	23.38	29.43	23.69	27.41	45.05	37.29	23.38	36.18	37.39	37.39	38.70	38.70	39.51	31.14	28.42	37.39	36.08	31.66
28	32.05	37.59	32.15	32.96	23.18	29.13	23.58	27.92	44.55	36.79	23.18	36.18	37.09	36.89	38.70	38.20	38.90	30.94	28.22	37.19	35.68	31.45
29	31.85	36.99	31.85	32.76	23.08	28.93	23.38	27.82	44.04	36.28	23.08	36.08	36.89	36.59	38.70	37.70	38.50	30.64	27.92	36.99	35.38	31.23
30	31.65	36.28	31.65	32.55	22.98	28.72	23.28	27.62	43.64	35.78	22.88	36.08	36.59	36.28	38.60	37.19	38.40	30.54	27.72	36.79	34.97	31.07
31	31.35	35.88	31.35	32.25	22.78	28.52	23.18	27.52	43.24	35.28	22.68	35.98	36.59	36.28	38.30	36.99	38.20	30.24	27.41	36.59	34.67	30.90
Feb 1	31.04	35.28	31.04	32.05	22.68	28.32	23.08	27.41	42.73	34.77	22.58	35.98	36.59	36.28	38.00	37.09	38.20	30.14	27.21	36.49	34.27	30.40
2	30.84	34.67	30.84	31.85	22.48	28.12	22.88	27.11	42.33	34.27	22.38	35.88	36.08	36.49	37.80	37.19	38.20	30.14	27.01	36.28	33.97	30.18
3	30.64	34.07	30.54	31.65	22.38	27.92	22.78	27.11	41.83	33.87	22.27	35.68	35.78	36.69	37.39	37.09	38.20	30.04	26.71	36.08	33.56	29.96
4	30.44	33.46	30.34	31.45	22.27	27.72	22.68	26.61	41.12	33.46	22.17	35.48	35.48	36.69	36.38	37.09	38.20	30.04	26.51	35.88	33.26	29.72
5	30.24	32.86	30.04	30.74	22.17	27.31	22.48	26.71	40.62	33.06	22.07	35.28	35.18	36.59	35.88	36.99	38.00	29.93	26.51	35.78	32.96	29.52
6	30.04	32.05	29.83	30.74	22.07	27.11	22.38	26.71	40.01	32.66	21.97	35.07	34.67	36.49	35.38	36.89	37.80	29.93	26.41	35.58	32.55	29.34
7	29.83	31.24	29.53	30.74	21.97	26.91	22.27	26.81	39.61	32.25	21.77	34.87	34.27	36.38	34.77	36.89	37.49	29.93	26.31	35.38	32.25	29.14
8	29.63	30.24	29.33	30.54	21.97	26.71	22.17	26.91	38.70	31.85	21.77	34.47	34.07	36.18	34.67	36.79	37.09	29.83	26.21	35.28	31.95	28.95
9	29.43	29.43	29.13	30.34	21.87	26.41	22.07	26.51	37.90	31.45	21.57	34.07	33.56	35.88	34.77	36.38	36.69	29.63	26.10	35.07	31.65	28.71
10	29.23	28.52	28.83	29.93	21.87	26.21	21.87	26.10	36.99	31.04	21.47	33.66	33.26	35.58	34.57	35.98	36.28	29.33	26.00	34.87	31.35	28.46
11	29.03	27.21	28.62	29.93	21.77	26.00	21.77	26.31	36.28	30.64	21.47	33.26	33.26	35.58	34.67	35.07	35.68	29.23	25.90	34.77	31.04	28.22
12	28.83	26.61	28.42	29.73	21.67	25.80	21.67	26.61	35.48	30.24	21.37	33.06	33.06	34.77	34.47	34.37	35.48	29.03	25.90	34.57	30.64	28.02
13	28.62	26.10	28.22	29.43	21.57	25.60	21.57	26.81	34.87	29.93	21.27	32.76	33.06	34.67	34.57	34.27	35.18	28.83	25.80	34.37	30.34	27.89
14	28.52	25.50	28.02	29.33	21.47	25.40	21.47	26.41	34.37	29.63	21.17	32.55	32.86	34.47	34.07	34.17	35.18	28.62	25.70	34.27	30.04	27.73
15	28.42	25.20	27.82	29.13	21.37	25.20	21.27	26.10	33.66	29.33	21.17	32.35	32.76	34.47	33.56	34.17	34.97	28.52	25.70	34.17	29.73	27.58

14	169.33	130.02	185.45	162.27	132.03	166.30	161.26	231.81	116.92	99.28	119.94	130.02	161.26	118.93	160.25	152.19	119.94	218.71	116.92	106.84	128.00	106.84	135.06	141.10	178.40	186.46	93.94	162.27	229.80	130.02	150.18	261.04	129.01	132.03	92.22	91.21	150.18	291.28	193.52	122.96	180.41	158.24	178.40	186.46	179.40	218.71	145.14	118.93	175.37	125.99	145.14	154.46
15	168.32	130.02	181.42	158.24	130.02	164.29	159.25	224.76	113.89	97.06	116.92	129.01	159.25	115.91	154.21	157.23	122.96	216.70	119.94	106.84	125.99	105.83	133.04	141.10	175.37	189.48	86.48	153.20	230.81	120.95	149.17	255.00	124.98	126.99	88.69	90.11	146.14	283.22	188.48	120.95	179.40	156.22	175.37	185.45	178.40	211.66	139.09	118.93	171.34	124.98	142.11	151.87
16	168.32	130.02	178.40	158.24	130.02	161.26	154.21	217.70	106.84	95.85	113.89	129.01	157.23	113.89	151.18	159.25	123.97	212.66	121.95	105.83	121.95	105.83	130.02	144.13	174.37	190.49	82.55	151.18	229.80	112.88	148.16	248.95	117.92	121.95	92.93	88.59	143.12	277.17	184.44	118.93	177.39	154.21	172.35	182.43	176.38	204.60	137.07	118.93	167.31	123.97	141.10	149.62
17	168.32	129.01	172.35	156.22	126.99	157.23	151.18	210.65	104.82	94.74	110.87	128.00	155.22	111.88	148.16	157.23	122.96	209.64	121.95	99.58	118.93	102.80	126.99	149.17	172.35	192.51	82.34	148.16	218.71	109.86	148.16	242.90	113.89	117.92	95.04	87.18	141.10	268.10	180.41	118.93	174.37	150.18	165.29	179.40	172.35	200.57	136.07	117.92	164.29	122.96	137.07	146.92
18	166.30	129.01	169.33	153.20	124.98	154.21	147.15	204.60	106.84	91.62	104.82	126.99	152.19	110.87	145.14	156.22	125.99	205.61	122.96	96.66	116.92	99.18	123.97	152.19	169.33	192.51	83.25	143.12	209.64	104.82	147.15	234.84	113.89	114.90	96.96	86.38	139.09	259.03	176.38	119.94	170.33	143.12	159.25	175.37	169.33	196.54	138.08	119.94	163.28	120.95	134.05	144.48
19	164.29	129.01	160.25	151.18	122.96	150.18	147.15	199.56	103.81	91.62	102.80	126.99	149.17	108.85	143.12	159.25	126.99	204.60	122.96	98.87	115.91	98.17	122.96	155.22	166.30	191.50	83.55	136.07	210.65	101.80	145.14	228.79	112.88	112.88	96.86	85.47	136.07	251.97	171.34	119.94	167.31	136.07	160.25	172.35	165.29	190.49	138.08	120.95	161.26	115.91	132.03	142.49
20	162.27	130.02	151.18	145.14	122.96	147.15	145.14	193.52	99.08	89.60	101.80	126.99	146.14	104.82	140.10	160.25	125.99	202.59	120.95	98.57	113.89	96.86	120.95	159.25	165.29	189.48	82.55	129.01	210.65	99.28	141.10	220.73	111.88	108.85	96.46	85.27	136.07	242.90	168.32	118.93	163.28	129.01	158.24	168.32	161.26	185.45	136.07	118.93	157.23	111.88	129.01	139.82
21	160.25	129.01	152.19	144.13	119.94	144.13	139.09	184.44	95.85	85.37	96.46	122.96	141.10	104.82	134.05	159.25	123.97	195.53	114.90	97.16	111.88	96.35	117.92	164.29	164.29	188.48	81.94	130.02	207.63	96.25	140.10	214.68	110.87	99.08	92.02	86.78	136.07	236.85	165.29	118.93	158.24	128.00	153.20	166.30	157.23	180.41	133.04	116.92	153.20	110.87	128.00	137.05
22	159.25	126.99	152.19	138.08	116.92	140.10	130.02	180.41	94.44	81.94	96.15	121.95	138.08	104.82	131.03	157.23	119.94	185.45	115.91	95.95	110.87	93.23	113.89	167.31	161.26	179.40	81.84	125.99	195.53	94.24	139.09	207.63	108.85	93.13	89.50	89.70	134.05	228.79	162.27	118.93	149.17	121.95	152.19	164.29	154.21	175.37	130.02	114.90	150.18	106.84	126.99	133.89
23	157.23	123.97	150.18	132.03	113.89	136.07	128.00	178.40	96.46	83.05	95.04	121.95	132.03	101.80	128.00	157.23	118.93	181.42	117.92	95.35	107.84	92.73	110.87	172.35	157.23	171.34	81.84	119.94	185.45	92.22	137.07	198.55	106.84	86.07	90.11	90.91	133.04	221.74	159.25	117.92	146.14	121.95	150.18	162.27	151.18	170.33	128.00	110.87	146.14	102.80	124.98	131.32
24	152.19	122.96	149.17	122.96	111.88	133.04	122.96	173.36	93.94	84.16	94.14	119.94	125.99	99.28	125.99	153.20	118.93	180.41	116.92	93.94	103.81	91.92	105.83	177.39	154.21	168.32	80.63	118.93	183.44	90.21	135.06	189.48	105.83	78.72	90.51	90.71	132.03	213.67	156.22	116.92	141.10	117.92	148.16	161.26	148.16	166.30	125.99	109.86	143.12	98.77	122.96	128.68
25	151.18	120.95	147.15	119.94	112.88	125.99	120.95	167.31	90.51	84.46	93.03	120.95	125.99	97.06	123.97	150.18	113.89	176.38	119.94	91.72	103.81	91.01	101.80	183.44	152.19	168.32	79.42	117.92	175.37	88.19	133.04	186.46	103.81	76.60	90.41	90.11	130.02	207.63	154.21	114.90	135.06	112.88	146.14	158.24	142.11	157.23	123.97	107.84	140.10	93.94	120.95	126.30
26	147.15	118.93	144.13	114.90	109.86	121.95	118.93	157.23	87.59	81.64	89.90	120.95	120.95	95.65	119.94	147.15	108.85	171.34	119.94	87.79	100.49	89.40	99.28	190.49	149.17	167.31	79.32	111.88	169.33	86.68	131.03	181.42	102.80	74.28	90.41	89.50	125.99	198.55	151.18	113.89	136.07	113.89	144.13	153.20	134.05	145.14	121.95	105.83	138.08	90.91	119.94	123.34
27	143.12	112.88	142.11	111.88	106.84	121.95	116.92	151.18	83.05	79.93	88.80	119.94	115.91	92.73	116.92	145.14	108.85	167.31	116.92	86.48	95.55	88.69	97.77	192.51	144.13	161.26	77.41	106.84	165.29	84.66	129.01	177.39	100.79	64.51	88.29	89.00	122.96	192.51	142.11	112.88	136.07	113.89	141.10	144.13	136.07	135.06	119.94	103.81	136.07	87.99	118.93	120.30
28	141.10	112.88	141.10	109.86	106.84	121.95	115.91	150.18	81.34	77.31	88.80	119.94	110.87	91.31	113.89	142.11	110.87	164.29	115.91	83.65	94.34	85.67	95.25	182.43	140.10	156.22	73.27	106.84	162.27	83.15	128.00	171.34	98.07	60.88	86.88	87.99	118.93	185.45	133.04	110.87	129.01	112.88	138.08	132.03	135.06	134.05	117.92	98.77	133.04	85.17	114.90	117.49
29	139.09	112.88	138.08	106.84	103.81	120.95	114.90	147.15	80.23	74.79	88.49	118.93	105.83	89.90	110.87	137.07	106.84	162.27	109.86	81.64	93.73	78.62	93.23	173.36	137.07	153.20	70.55	104.82	160.25	81.64	125.99	163.28	92.22	57.15	85.47	86.07	119.94	181.42	116.92	110.87	122.96	111.88	136.07	106.84	132.03	132.03	113.89	94.24	131.03	82.34	113.89	113.99
30	136.07	108.85	137.07	103.81	99.58	118.93	114.90	145.14	79.93	72.16	87.89	116.92	103.81	88.49	105.83	134.05	103.81	155.22	105.83	80.63	91.62	72.57	91.72	165.29	131.03	149.17	70.05	101.80	154.21	80.13	123.97	158.24	89.20	54.73	84.46	85.77	115.91	168.32	111.88	109.86	113.89	111.88	133.04	104.82	129.01	130.02	112.88	95.25	129.01	79.72	111.88	110.98
31	133.04	94.14	136.07	101.80	95.04	112.88	113.89	143.12	79.93	69.04	85.07	113.89	102.80	85.67	102.80	133.04	102.80	148.16	107.84	79.62	91.01	70.05	91.21	159.25	129.01	145.14	69.54	99.58	151.18	79.12	120.95	155.22	64.81	52.71	83.15	72.77	112.88	160.25	106.84	103.81	108.85	110.87	131.03	101.80	128.00	126.99	109.86	94.64	125.99	77.61	109.86	107.54
Nov 1	134.05	94.14	133.04	98.47	95.04	110.87	116.92	137.07	79.62	68.54	84.46	109.86	99.88	85.07	101.80	129.01	100.18	147.15	108.85	78.62	89.70	67.53	90.71	159.25	123.97	141.10	70.15	94.94	149.17	77.91	120.95	150.18	61.28	50.50	82.14	67.83	107.84	157.23	107.84	98.67	109.86	106.84	130.02	102.80	128.00	125.99	105.83	88.59	118.93	76.50	108.85	105.56
2	132.03	94.14	129.01	95.65	95.04	108.85	119.94	135.06	77.10	68.54	83.96	110.87	95.65	82.75	99.88	125.99	96.76	143.12	104.82	79.62	88.69	65.51	86.68	159.25	118.93	140.10	70.25	93.73	145.14	76.70	118.93	146.14	57.75	48.38	81.14	76.30	108.85	155.22	107.84	97.77	110.87	106.84	128.00	104.82	125.99	123.97	104.82	89.30	112.88	75.19	106.84	104.15
3	124.98	94.14	124.98	92.73	93.94	105.83	122.96	128.00	72.77	67.33	82.75	111.88	92.73	81.34	97.06	123.97	89.30	141.10	104.82	80.63	87.69	64.51	84.66	158.24	120.95	136.07	70.05	91.72	142.11	75.49	116.92	141.10	64.40	46.16	79.82	81.54	105.83	153.20	111.88	99.38	111.88	104.82	125.99	109.86	123.97	120.95	105.83	89.30	106.84	74.48	105.83	102.84
4	123.97	94.14		91.31	91.31	102.80	128.00	120.95	69.95	65.31	78.51	111.88	89.90	79.93	94.14	120.95	85.67	138.08	103.81	81.64	87.69	64.30	81.64	157.23	116.92	134.05	69.54	90.71	140.10	74.28	115.91	137.07	66.42	42.13	78.82	80.33	108.85	152.19	115.91	101.80	109.86	101.80	122.96	112.88	120.95	117.92	103.81	89.20	101.80	73.78	102.80	100.92
5	119.94	94.14		88.49	89.00	100.18	130.02	116.92	65.61	63.09	71.36	109.86	87.08	77.10	91.31	112.88	79.93	133.04	99.88	79.62	86.68	62.99	78.62	159.25	112.88	131.03	68.54	89.20	137.07	73.07	111.88	133.04	76.50	40.21	77.91	79.42	107.84	150.18	117.92	100.79	102.80	100.18	120.95	110.87	119.94	115.91	99.38	89.70	96.35	73.17	92.32	98.52
6	102.80	94.14		85.67	88.19	98.17	131.03	111.88	64.20	61.38	62.79	104.82	85.67	75.59	89.90	109.86	77.10	130.02	99.38	75.59	82.65	61.48	75.59	158.24	109.86	126.99	67.53	88.19	134.05	71.96	106.84	129.01	67.02	38.40	77.00	78.51	102.80	146.14	119.94	100.79	98.37	98.37	118.93	109.86	115.91	112.88	96.76	87.28	91.42	72.47	92.42	95.72
7	97.06	94.14		84.16	85.67	95.65	126.99	106.84	63.09	59.97	51.40	97.56	85.67	74.18	88.49	108.85	73.88	131.03	97.77	74.08	78.62	60.47	73.58	156.22	105.83	125.99	66.52	87.18	133.04	70.85	104.82	125.99	58.46	37.49	75.99	76.10	100.49	145.14	118.93	99.68	94.14	95.55	116.92	108.85	113.89	110.87	94.64	87.79	86.68	71.76	92.73	93.43
8	97.06	94.14		82.75	85.37	93.94	122.96	101.80	62.79	58.76	48.48	94.74	82.75	72.47	85.67	107.84	71.36	128.00	96.76	72.57	75.59	59.47	71.56	144.13	101.80	121.95	65.01	86.68	132.03	69.75	103.81	122.96	52.31	36.49	74.79	73.17	99.28	144.13	117.92	97.77	90.11	91.42	113.89	105.83	111.88	109.86	95.75	86.68	82.24	71.06	92.93	91.25
9	97.06	94.14		81.34	83.05	91.31	119.94	97.06	62.19	57.65	46.26	95.85	81.34	71.36	82.75	108.85	71.06	124.98	95.75	70.55	71.56	58.46	69.54	132.03	96.76	116.92	63.50	84.66	130.02	68.64	102.80	119.94	51.50	35.98	73.98	69.34	98.07	142.11	115.91	97.66	86.48	87.79	110.87	102.80	110.87	107.84	89.70	86.88	78.01	70.45	92.12	89.11
10	97.06	94.14		78.51	82.24	89.30	115.91	92.73	61.68	57.05	45.96	94.44	79.93	71.06	81.34	105.83	68.74	119.94	94.74	69.54	69.54	58.46	67.53	122.96	90.71	114.90	62.49	82.65	129.01	67.53	95.55	116.92	39.21	35.38	73.07	59.77	97.16	139.09	113.89	97.16	83.05	79.52	109.86	100.79	107.84	106.84	88.19	87.59	73.98	69.75	91.01	86.63
11	97.06	94.14		77.10	79.93	87.89	110.87	89.60	61.08	57.05	46.26	90.71	78.51	69.65	79.93	99.88	68.54	114.90	92.73	69.04	68.54	58.46	66.52	118.93	86.68	111.88	60.47	80.63	124.98	66.72	95.65	113.89	36.79	36.38	72.16	54.63	96.05	129.01	112.88	96.56	79.52	76.80	107.84	99.58	102.80	105.83	87.18	86.68	70.15	69.14	89.90	84.56
12	97.06	94.14		75.59	78.82	85.67	105.83	86.48	61.38	56.54	47.98	85.67	78.51	68.54	77.10	94.14	68.23	106.84	90.71	68.54	67.53	58.46	65.51	112.88	82.65	108.85	58.96	78.62	122.96	65.92	96.66	110.87	46.87	37.19	71.06	47.87	94.04	128.00	110.87	95.85	75.99	72.77	105.83	98.37	97.77	103.81	85.67	84.16	66.52	68.54	88.69	82.75
13	97.06	94.14		74.18	77.10	84.16	99.88	83.35	59.97	56.54	48.48	82.75	77.10	67.02	75.59	90.71	68.23	104.82	87.69	69.04	66.52	57.95	64.51	106.84	79.62	104.82	57.45	76.60	120.95	65.11	86.68	107.84	44.85	38.30	70.15	45.86	92.63	125.99	109.86	95.14	73.07	71.56	103.81	95.45	93.13	101.80	84.66	81.74	63.09	67.83	87.59	80.78
14	97.06	94.14		72.77	75.59	82.24	91.31	80.23	59.36	56.54	49.08	80.53	77.10	66.22	74.18	85.67	67.93	99.78	86.68	69.54	66.02	56.95	64.00	101.80	77.61	100.79	56.95	75.59	117.92	64.30	83.65	104.82	48.58	39.51	69.04	43.74	92.32	124.98	107.84	94.44	70.15	68.03	102.80	94.24	93.73	100.79	83.15	79.12	59.87	66.92	86.58	79.24
15	97.06	94.14		71.36	74.18	79.93	84.16	77.10	58.26	56.24	49.99	78.51	75.59	65.11	71.36	81.34	66.82	95.75	86.68	69.04	65.51	55.43	63.50	99.78	74.58	97.77	56.44	73.58	115.91	63.50	81.64	101.80	46.97	40.72	68.23	43.64	92.02	123.97	106.84	93.73	67.83	64.91	100.79	93.13	98.07	100.29	81.64	79.62	56.74	65.71	85.47	77.85
16	74.18	94.14		70.75	72.77	77.91	79.93	74.79	57.65	55.33	49.69	76.50	71.36	62.79	70.75	77.10	65.61	91.72	86.68	68.03	65.51	53.42	61.48	97.77	70.55	95.75	56.44	73.07	113.89	62.79	79.62	98.77	50.50	42.73	67.13	43.94	90.11	123.97	104.82	93.03	65.41	64.40	99.08	92.02	100.18	99.48	80.43	78.62	53.82	63.80	84.36	76.09
17	74.18	94.14		70.25	71.36	76.80	77.10	72.47	57.35	54.22	48.78	72.77	68.54	61.38	68.54	74.18	65.11	88.19	85.67	67.02	65.01	50.39	59.47	96.76	68.54	94.74	55.94	72.57	110.87	62.09	78.62	96.76	54.12	44.55	65.82	44.35	84.06	121.95	103.81	92.22	61.38	63.80	97.06	90.91	99.08	98.67	78.62	77.51	51.10	61.48	83.35	74.67
18	74.18	94.14		68.54	71.06	74.79	75.89	70.25	57.05	53.12	47.07	68.54	67.02	59.97	67.02	71.36	64.81	84.66	83.65	65.51	64.51	49.39	57.45	94.74	65.51	92.73	55.94	72.06	108.85	61.38	77.61	94.74	57.25	45.86	64.51	45.25	81.54	119.94	101.80	91.52	60.27	63.50	95.35	89.80	96.15	98.17	77.61	67.63	48.78	58.16	82.34	73.18
19	74.18	94.14		67.93	68.74	72.77	75.39	67.93	56.85	51.91	45.66	65.61	65.61	58.46	65.61	69.95	64.51	81.64	82.14	63.50	63.50	48.38	55.43	88.69	63.50	90.71	56.44	70.55	106.84	60.68	76.60	92.22	53.32	47.27	63.19	46.16	81.34	117.92	100.79	90.71	59.26	63.40	93.43	88.69	94.44	97.36	75.39	63.40	48.08	54.43	81.34	71.72
20	74.18	94.14		67.33	67.93	71.36	75.39	65.61	56.54	51.70	43.94	65.31	64.20	57.05	64.20	68.54	64.20	78.62	79.62	60.47	61.48	47.87	53.42	86.68	60.47	88.69	55.94	69.04	103.81	59.97	75.79	90.21	48.88	48.58	61.99	47.98	81.34	117.92	99.38	89.90	58.16	64.91	91.52	87.08	92.73	96.86	73.58	61.08	47.47	53.72	80.33	70.54
21	74.18	67.02		66.22	66.82	70.75	75.59	64.20	54.83	51.70	43.34	64.20	62.79	57.05	62.79	67.02	63.90	75.09	78.11	59.47	58.46	46.87	51.40	83.65	58.46	88.19	55.64	67.53	102.80	59.16	74.79	88.19	53.72	51.10	60.98	48.58	81.03	115.91	98.17	89.10	54.63	65.92	90.41	83.35	89.70	96.05	71.56	60.57	48.58	57.55	79.32	69.13
22	74.18	67.02		64.51	65.61	69.04	76.50	62.79	53.62	51.40	43.14	63.90	62.79	54.53	61.38	66.22	63.40	71.56	75.59	57.45	55.94	46.36	49.39	80.63	56.44	87.79	55.33	65.51	100.79	58.36	74.18	86.17	54.63	52.31	60.27	49.08	79.62	112.88	96.66	88.29	53.02	67.23	89.20	83.76	87.89	94.84	70.55	61.28	51.91	63.70	78.31	68.34
23	74.18	67.02		63.90	65.11	68.23	77.10	61.38	51.40	51.10	43.34	63.40	62.79	53.62	59.97	65.92	62.79	68.54	75.09	56.95	54.43	46.16	48.88	79.62	55.43	87.59	55.03	64.00	98.77	57.55	73.37	84.16	52.91	53.32	59.26	49.49	77.71	109.86	94.94	87.59	52.11	67.13	88.09	82.24	85.07	94.44	68.54	61.88	57.05	68.13	77.31	67.68
24	74.18	67.02		63.40	63.09	67.33	78.51	57.05	49.99	49.99	43.64	63.09	61.38	52.51	58.46	65.61	61.38	65.51	75.59	56.44	53.42	45.76	48.38	78.62	53.42	87.38	54.73	62.49	96.76	56.74	72.57	82.14	50.39	54.63	58.56	49.39	75.59	113.89	93.23	86.98	51.10	66.82	86.88	79.02	83.76	94.14	67.02	63.50	61.18	68.84	76.40	66.96
25	74.18	67.02		62.79	62.79	65.61	79.93	58.46	48.48	48.78	44.55	62.79	59.97	51.70	57.05	65.31	59.67	63.50	74.58	56.74	52.71	45.36	47.37	77.61	52.41	87.18	54.43	60.47	94.74	55.94	71.56	80.13	49.08	55.23	57.65	48.88	71.36	116.92	91.21	86.38	49.69	66.62	85.47	78.11	81.74	93.73	66.02	64.30	64.00	68.13	75.39	66.27
26	74.18	67.02		62.19	61.88	65.11	80.23	57.65	47.98	48.28	44.85	62.49	59.97	51.10	56.54	65.31	59.36	61.99	74.28	57.05	52.41	44.85	46.87	76.60	51.40	86.98	53.92	59.97	92.73	55.43	70.85	78.11	47.27	55.94	56.95	48.38	70.05	113.89	89.60	85.67	48.08	65.41	84.06	76.20	80.53	93.33	64.51	70.35	65.01	67.53	74.48	65.70
27	74.18	67.02		61.68	60.78	63.90	80.23	56.54	47.37	47.37	45.05	62.19	58.76	50.80	54.22	65.11	57.95	61.28	74.08	57.45	51.40	44.35	45.36	76.60	50.39	87.18	53.42	59.97	91.72	54.93	70.15	76.60	46.16	55.23	56.24	47.87	67.83	105.83	88.49	84.86	47.87	65.01	82.75	75.29	76.20	92.93	62.69	70.96	63.50	66.82	73.58	64.76
28	74.18	67.02		60.47	59.97	62.79	79.93	55.33	46.77	45.96	45.05	61.38	57.95	50.19	53.62	64.81	57.35	60.68	73.78	57.95	50.39	44.35	43.84	75.59	49.39	86.68	52.91	59.77	90.71	54.43	69.44	75.09	46.67	54.63	55.33	47.17	66.02	103.81	87.38	84.06	47.37	64.51	81.44	74.18	75.09	92.52	58.96	71.36	61.99	66.12	72.67	63.98
29	74.18	67.02		59.97	59.67	62.49	78.51	54.83	46.26	45.05	44.85	61.08	57.05	49.69	51.91	63.90	57.05	62.29	73.07	58.46	49.39	43.84	42.33	75.59	48.38	85.67	52.41	59.47	90.21	53.92	68.74	73.58	45.15	54.02	54.73	46.36	64.81	101.80	86.38	83.35	46.77	64.10	79.62	70.65	73.88	92.12	57.25	71.36	60.47	65.51	71.76	63.22
30	74.18	67.02		59.36	58.46	62.19	77.10	53.92	45.66	43.34	44.25	58.26	55.64	48.78	50.80	63.40	56.85	62.59	72.37	59.47	48.88	42.84	41.32	74.58	47.37	84.66	51.40	57.45	89.70	53.42	68.03	72.06	44.45	53.22	54.02	45.36	64.40	100.79	85.37	82.65	46.36	63.30	78.51	67.53	71.96	91.72	55.74	71.16	58.96	64.81	71.06	62.33
Dec 1	62.79	67.02		58.46	57.35	61.38	74.18	53.62	45.36	42.84	43.34	57.05	52.81	48.48	49.08	63.09	56.54	61.99	70.55	58.46	48.38	42.63	38.30	73.58	46.36	82.65	50.39	56.44	87.69	52.81	67.33	70.35	44.55	52.31	53.42	44.55	64.81	98.87	84.26	81.84	45.56	62.49	77.20	64.91	70.05	91.42	54.93	70.05	57.55	64.20	70.35	61.09
2	62.79	67.02		57.05	57.05	60.47	71.36	53.42	44.85	42.84	42.84	56.85	51.40	47.37	48.48	62.79	54.53	60.98	69.04	55.43	48.38	42.33	34.77	70.55	45.36	78.62	49.89	56.24	86.68	52.21	66.62	68.54	43.64	51.30	52.71	43.84	64.81	96.46	83.05	81.03	44.95	61.78	74.68	63.60	68.13	91.21	53.52	69.34	56.14	63.50	69.65	60.00
3	62.79	67.02		57.05	56.85	60.17	68.54	52.81	43.94	42.53	42.53	56.54	49.69	46.77	47.07	62.79	54.22	57.95	65.51	52.41	48.38	42.33	33.26	68.54	44.35	76.60	49.39	55.94	86.17	51.60	65.92	67.02	44.75	50.29	52.31	43.54	63.60	95.55	81.74	80.23	44.25	61.18	69.54	63.19	66.32	91.01	49.19	67.83	54.83	62.89	68.94	58.96
4	62.79	67.02		56.54	56.24	59.97	65.61	52.51	42.84	41.93	42.23	56.54	49.08	46.26	45.96	62.49	53.92	54.83	64.51	51.40	48.38	42.23	32.25	66.52	44.35	73.58	48.88	55.74	85.67	51.00	65.21	65.51	44.45	49.99	51.70	43.04	62.09	96.15	80.53	79.42	43.94	60.37	67.33	63.40	65.71	90.81	44.95	65.71	53.52	62.29	68.23	58.11
5	62.79	67.02		56.54	54.83	59.97	64.20	52.21	42.84	41.63	41.93	56.54	48.78	45.36	45.05	61.38	53.92	51.91	63.50	50.39	48.38	42.23	31.45	64.51	43.34	71.56	48.38	55.23	85.17	50.39	64.51	64.00	43.04	49.39	51.10	42.53	60.78	95.85	79.32	78.62	43.64	59.47	69.04	63.40	65.01	89.30	44.75	64.81	52.21	61.58	67.53	57.43
6	62.79	52.81		56.54	54.22	59.67	62.79	52.21	42.84	41.42	41.63	56.85	48.48	44.25	43.94	59.97	53.12	49.39	61.99	49.39	48.38	42.23	31.24	63.50	43.34	68.54	47.37	55.13	84.66	49.89	63.70	62.69	44.95	48.28	50.70	42.03	59.57	94.64	78.11	77.71	43.34	58.46	70.55	62.99	63.19	88.19	46.06	64.30	50.90	60.98	66.82	56.53
7	62.79	52.81		55.94	54.22	59.06	59.97	52.21	42.84	40.82	41.42	56.85	48.48	42.84	42.84	59.06	51.91	48.88	59.97	49.69	45.36	42.33	30.74	62.49	42.33	64.51	46.36	55.03	83.65	49.39	62.89	61.38	43.54	46.67	50.09	41.53	57.95	92.12	76.90	76.60	42.94	57.75	69.85	62.79	62.89	86.07	47.07	63.09	49.69	60.37	66.12	55.66
8	62.79	52.81		54.83	53.42	58.26	58.46	52.21	42.84	39.91	41.42	56.85	48.28	42.53	42.23	57.05	51.10	47.77	58.96	49.99	44.35	42.33	30.24	62.49	42.33	63.50	45.36	54.43	82.65	48.88	62.09	60.07	43.94	45.36	49.69	41.02	56.24	91.52	75.79	75.59	42.73	56.95	68.54	62.39	62.69	84.56	47.67	61.99	48.78	59.77	65.31	55.02
9	62.79	52.81		54.22	53.42	57.95	57.65	52.21	42.53	39.71	41.42	55.64	47.67	42.23	41.63	56.54	48.48	47.37	58.66	49.39	43.84	42.43	30.04	61.48	41.32	61.48	44.85	53.92	81.64	48.38	61.28	58.76	45.15	44.35	49.08	40.62	56.04	90.71	74.58	74.58	42.33	56.34	67.83	61.99	62.49	82.95	48.38	60.37	48.08	59.16	64.51	54.43
10	62.79	52.81		53.62	51.40	57.65	57.05	52.21	42.23	39.41	41.12	54.83	43.34	41.63	41.12	56.24	45.66	47.77	58.46	48.38	43.84	42.33	29.93	61.48	41.32	60.27	44.35	53.72	81.14	47.87	60.47	57.45	45.15	42.73	48.48	39.71	55.84	91.21	73.48	73.58	42.23	55.53	67.02	61.78	62.49	80.43	49.08	59.67	47.47	58.56	63.70	53.80
11	62.79	52.81		53.62	50.80	57.35	55.64	52.21	40.21	39.11	40.82	53.92	42.84	41.12	39.91	55.94	44.25	48.38	58.26	48.68	43.34	42.23	29.83	60.47	40.32	56.44	44.15	53.42	80.63	47.47	59.97	56.44	45.76	42.03	47.87	39.51	55.84	91.72	72.37	72.37	41.93	54.73	65.41	61.48	62.29	79.62	48.28	58.96	47.07	57.95	62.79	53.23
12	62.79	52.81		53.62	49.99	57.05	54.83	52.21	39.41	38.80	40.52	52.81	42.53	40.52	37.39	55.64	42.84	48.88	57.65	48.38	42.84	41.53	30.04	60.47	40.32	54.43	43.94	52.41	79.62	47.07	59.47	55.43	46.67	41.02	47.27	38.90	55.03	90.31	71.56	70.96	41.83	53.92	64.40	61.08	61.58	76.40	48.48	58.16	46.67	57.45	61.88	52.60
13	62.79	52.81		53.12	49.69	56.85	54.22	52.21	39.11	38.50	39.91	51.40	42.53	40.21	37.09	54.83	42.23	49.19	57.45	47.57	42.33	40.82	29.23	60.47	39.81	52.41	43.34	51.91	79.12	46.67	58.96	54.33	46.06	40.32	46.77	38.30	54.63	88.90	70.45	69.54	41.63	53.52	62.59	60.47	61.18	75.59	47.47	56.64	46.46	56.85	60.88	51.99
14	62.79	52.81		53.12	48.78	56.85	53.92	51.91	38.20	38.20	39.71	49.99	41.42	40.21	36.49	53.62	40.82	49.59	56.95	46.36	42.33	40.32	28.72	60.47	39.31	50.39	42.84	51.40	78.62	46.26	58.46	53.32	46.36	39.31	46.16	37.80	54.22	86.48	69.34	68.03	41.32	53.12	61.99	59.97	60.68	74.79	46.56	56.04	46.26	56.24	59.97	51.38
15	62.79	52.81		52.51	48.48	56.54	53.92	51.70	38.00	37.70	39.41	49.08	40.52	39.91	35.98	53.42	40.21	49.08	56.74	45.36	42.33	39.81	28.22	59.47	38.80	48.38	42.33	50.90	78.62	45.86	57.95	52.21	47.57	38.60	45.56	37.19	53.32	83.65	68.33	66.52	41.22	52.01	60.98	59.26	59.77	73.27	46.46	55.43	45.96	55.74	58.96	50.78

Synthetic Fortin Lake Dam Pelly	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	2011	2012	2013	Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
							59.73	63.21	75.52	62.82	72.58	47.90	46.12	57.05	58.76	51.64	54.40	47.94	60.17	53.15	44.78							57.05
Jan 1						7.93	9.49	10.53	10.37	9.49	12.60	6.41	7.78	7.78	6.56	4.55	8.64	7.96	6.47	6.93	3.33							7.93
2						7.78	9.43	10.53	10.37	9.49	12.60	6.41	6.74	7.78	6.56	4.39	8.64	7.99	6.22	6.74	3.30							7.81
3						7.60	9.34	10.53	10.37	9.49	12.60	6.41	6.22	7.69	6.56	4.24	8.64	8.09	5.95	6.47	3.26							7.72
4						7.51	9.25	10.53	10.37	9.49	12.60	6.41	5.89	7.69	6.56	4.06	8.54	8.21	5.80	6.32	3.20							7.65
5						7.38	9.15	10.53	10.37	9.49	12.60	6.41	5.43	7.60	6.56	3.94	8.48	8.30	5.61	6.04	3.17							7.57
6						7.26	9.06	10.53	10.37	9.49	12.60	6.41	5.19	7.45	6.56	3.84	8.12	8.24	5.61	5.95	3.11							7.49
7						7.14	8.97	10.53	10.37	9.49	12.60	6.41	5.00	7.35	6.56	3.72	7.78	8.03	5.52	5.92	3.11							7.41
8						7.08	8.91	10.53	10.37	9.49	11.75	6.41	4.91	7.26	6.56	3.69	7.45	7.69	5.43	5.89	3.08							7.28
9						6.96	8.82	10.53	10.37	9.49	11.75	6.41	4.85	7.26	6.56	3.63	6.93	7.35	5.28	5.89	3.02							7.19
10						6.84	8.73	10.53	10.37	9.49	11.75	6.41	4.79	7.17	6.53	3.60	6.47	7.17	5.10	5.83	2.98							7.11
11						6.71	8.64	10.53	10.37	9.49	11.75	6.41	4.79	7.08	6.53	3.57	6.32	6.99	4.91	5.80	2.92							7.05
12						6.62	8.54	10.53	10.37	9.49	11.75	6.41	4.79	6.99	6.50	3.54	6.22	6.93	4.76	5.74	2.85							7.00
13						6.56	8.48	10.53	10.37	9.49	11.75	6.41	4.85	6.93	6.50	3.54	6.13	6.93	4.67	5.71	2.81							6.98
14						6.44	8.39	10.53	10.37	9.49	11.75	6.41	4.85	6.93	6.47	3.54	6.10	6.99	4.58	5.55	2.76							6.95
15						6.35	8.30	10.53	10.37	9.49	11.75	6.41	4.85	6.84	6.47	3.54	6.04	7.08	4.55	5.40	2.72							6.92
16						6.29	8.21	10.53	10.37	9.49	11.75	6.41	4.91	6.84	6.47	3.57	6.10	7.17	4.55	5.19	2.66							6.91
17						6.19	8.18	10.53	10.37	9.49	11.75	6.41	4.97	6.74	6.44	3.60	6.10	7.26	4.58	5.07	2.59							6.89
18						6.16	8.12	10.53	10.37	9.49	11.75	6.41	5.00	6.65	6.44	3.63	6.13	7.35	4.58	5.00	2.55							6.89
19						6.07	8.09	10.53	10.37	9.49	11.75	6.41	5.00	6.65	6.41	3.69	6.16	7.26	4.49	5.00	2.51							6.87
20						6.01	7.99	10.53	10.37	9.49	11.75	6.41	5.00	6.56	6.41	3.72	6.22	7.26	4.45	5.00	2.49							6.86
21						5.95	7.96	10.53	10.37	9.49	11.75	6.41	5.00	6.47	6.41	3.81	6.32	7.17	4.39	5.03	2.44							6.84
22						5.92	7.87	10.53	10.37	9.49	11.75	6.41	5.00	6.47	6.41	3.88	6.35	7.17	4.33	5.07	2.42							6.84
23						5.89	7.78	10.53	10.37	9.49	11.75	6.41	5.00	6.41	6.41	3.94	6.41	7.08	4.24	5.03	2.39							6.82
24						5.83	7.51	10.53	10.37	9.49	11.75	6.41	5.00	6.41	6.41	3.97	6.44	7.08	4.27	5.00	2.35							6.80
25						5.80	7.45	10.53	10.37	9.49	11.75	6.41	5.07	6.32	6.41	3.97	6.44	7.20	4.33	4.91	2.33							6.80
26						5.77	7.38	10.53	10.37	9.49	11.75	6.41	5.07	6.22	6.38	4.00	6.41	7.26	4.39	4.85	2.31							6.79
27						5.71	7.35	10.53	10.37	9.49	11.75	6.41	5.07	6.22	6.35	3.97	6.35	7.26	4.49	4.82	2.26							6.77
28						5.68	7.26	10.53	10.37	9.49	11.75	6.41	5.07	6.13	6.32	3.97	6.29	7.17	4.58	4.82	2.25							6.75
29						5.65	7.17	10.53	10.37	9.49	11.75	6.41	5.07	6.04	6.29	3.94	6.22	7.08	4.58	4.85	2.22							6.73
30						5.58	7.05	10.53	10.37	9.49	11.75	6.41	5.07	5.95	6.26	3.88	6.19	7.08	4.61	4.91	2.18							6.71
31						5.52	6.99	10.53	10.37	9.49	11.75	6.41	5.00	5.89	6.22	3.81	6.13	7.08	4.67	4.97	2.17							6.69
Feb 1						5.52	6.93	6.56	6.93	8.30	9.34	4.85	5.00	5.89	6.19	3.72	6.04	7.17	4.58	5.00	2.15							5.89
2						5.46	6.84	6.56	6.93	8.30	9.34	4.85	5.00	5.89	6.19	3.66	6.04	7.17	4.55	5.00	2.14							5.87
3						5.43	6.74	6.56	6.93	8.30	9.34	4.67	5.00	5.89	6.16	3.60	6.04	7.08	4.45	4.91	2.14							5.83
4						5.37	6.65	6.56	6.93	8.30	9.34	4.49	5.00	5.80	6.16	3.57	6.04	6.96	4.36	4.85	2.14							5.78
5						5.34	6.62	6.56	6.93	8.30	9.34	4.49	5.00	5.80	6.13	3.54	6.04	6.99	4.33	4.76	2.13							5.77
6						5.31	6.56	6.56	6.93	8.30	9.34	4.49	5.00	5.71	6.10	3.54	6.01	7.08	4.33	4.64	2.13							5.75
7						5.25	6.47	6.56	6.93	8.30	9.34	4.49	5.00	5.71	6.10	3.54	5.98	7.17	4.39	4.58	2.14							5.75
8						5.22	6.44	6.56	6.93	8.30	9.34	4.49	5.00	5.71	6.07	3.54	5.95	7.26	4.45	4.55	2.15							5.75
9						5.19	6.41	6.56	6.93	8.30	9.34	4.49	5.00	5.71	6.07	3.54	5.92	7.26	4.49	4.49	2.16							5.74
10						5.13	6.35	6.56	6.93	8.30	9.34	4.49	5.00	5.71	6.04	3.57	5.89	7.29	4.49	4.49	2.16							5.73
11						5.10	6.22	6.56	6.93	8.30	9.34	4.49	5.00	5.61	6.01	3.63	5.83	7.26	4.45	4.49	2.17							5.71
12						5.03	6.22	6.56	6.93	8.30	9.34	4.49	5.00	5.61	5.98	3.69	5.77	7.26	4.39	4.49	2.18							5.70
13						5.00	6.19	6.56	6.93	8.30	9.34	4.49	5.00	5.52	5.95	3.75	5.74	7.26	4.33	4.49	2.18							5.69
14						4.97	6.16	6.56	6.93	8.30	9.34	4.49	5.00	5.52	5.92	3.78	5.68	7.20	4.27	4.49	2.18							5.67
15						4.91	6.13	6.56	6.93	8.30	9.34	4.49	5.00	5.52	5.89	3.81	5.65	7.17	4.15	4.49	2.16							5.66
16						4.91	6.04	6.56	6.93	8.30	9.34	4.49	5.00	5.52	5.86	3.88	5.61	7.17	4.12	4.49	2.14							5.65
17						4.85	6.04	6.56	6.93	8.30	9.34	4.49	5.00	5.52	5.83	3.97	5.58	7.14	4.09	4.49	2.12							5.64
18						4.85	6.04	6.56	6.93	8.30	9.34	4.49	5.00	5.43	5.83	4.00	5.58	7.08	4.06	4.49	2.09							5.63
19						4.82	5.95	6.56	6.93	8.30	9.34	4.49	5.00	5.43	5.80	4.06	5.55	7.17	4.00	4.49	2.07							5.62
20						4.79	5.95	6.56	6.93	8.30	9.34	4.49	5.00	5.43	5.80	4.06	5.52	7.20	3.97	4.52	2.07							5.62
21						4.76	5.89	6.56	6.93	8.30	9.34	4.49	5.00	5.43	5.77	4.06	5.52	7.26	4.00	4.55	2.07							5.62
22						4.73	5.83	6.56	6.93	8.30	9.34	4.49	5.00	5.43	5.77	4.06	5.52	7.26	4.06	4.58	2.06							5.62
23						4.70	5.80	6.56	6.93	8.30	9.34	4.49	5.00	5.37	5.74	4.03	5.52	6.96	4.09	4.58	2.07							5.59
24						4.67	5.74	6.56	6.93	8.30	9.34	4.49	5.00	5.37	5.71	4.00	5.58	6.65	4.12	4.55	2.07							5.57
25						4.67	5.71	6.56	6.93	8.30	9.34	4.49	5.00	5.37	5.71	3.94	5.61	6.35	4.15	4.49	2.07							5.54
26						4.64	5.65	6.56	6.93	8.30	9.34	4.49	5.00	5.37	5.71	3.81	5.65	6.04	4.12	4.49	2.07							5.51
27						4.58	5.61	6.56	6.93	8.30	9.34	4.49	5.00	5.37	5.71	3.78	5.74	6.04	4.06	4.49	2.07							5.50
28						4.58	5.61	6.56	6.93	8.30	9.34	4.49	5.00	5.37	5.71	3.66	5.74	6.04	4.03	4.49	2.04							5.49
29							5.61				9.34				5.71				3.97									6.16
Mar 1						4.52	5.61	6.56	6.93	7.26	7.60	4.49	5.00	5.28	5.71	3.60	5.71	6.04	3.97	4.49	2.00							5.30
2						4.49	5.61	6.56	6.93	7.26	7.60	4.49	5.00	5.28	5.71	3.60	5.65	6.04	3.97	4.55	2.00							5.29
3						4.49	5.58	6.56	6.93	7.26	7.60	4.49	5.00	5.19	5.74	3.57	5.61	5.95	3.97	4.58	2.00							5.28
4						4.45	5.58	6.56	6.93	7.26	7.60	4.49	5.00	5.19	5.74	3.60	5.61	5.74	3.97	4.58	1.99							5.27
5						4.39	5.49	6.56	6.93	7.26	7.60	4.49	5.00	5.19	5.74	3.66	5.65	5.52	3.97	4.58	1.97							5.25
6						4.39	5.43	6.56	6.93	7.26	7.60	4.49	5.00	5.19	5.77	3.78	5.71	5.43	4.00	4.55	1.93							5.25
7						4.39	5.43	6.56	6.93	7.26	7.60	4.49	5.00	5.10	5.77	3.88	5.71	5.37	4.00	4.52	1.91							5.24
8						4.36	5.40	6.56	6.93	7.26	7.60	4.49	5.00	5.10	5.77	3.97	5.71	5.40	4.00	4.49	1.91							5.25
9						4.33	5.34	6.56	6.93	7.26	7.14	4.49	5.00	5.10	5.80	4.06	5.71	5.43	4.00	4.49	1.90							5.22
10						4.30	5.28	6.56	6.93	7.26	7.26	4.49	5.00	5.00	5.80	4.09	5.71	5.52	4.03	4.52	1.90							5.23
11						4.24	5.28	6.56	6.93	7.26	7.26	4.49	5.00	5.00	5.80	4.12	5.71	5.61	4.00	4.55	1.89							5.23
12						4.21	5.28	6.56	6.93	7.26	7.26	4.49	5.00	5.00	5.83	4.09	5.71	5.61	4.00	4.58	1.89							5.23
13						4.18	5.22	6.56	6.93	7.26	7.26	4.49	5.00	5.00	5.83	4.06	5.71	5.61	4.00	4.55	1.90							5.22
14						4.15	5.19	6.56	6.93	7.26	7.26	4.49	5.00	4.91	5.83	4.00	5.71	5.61	4.03	4.52	1.90							5.21
15						4.12	5.10	6.56	6.93	7.26	7.26	4.49	5.00	4.91	5.83	3.94	5.71	5.61	4.06	4.45	1.91							5.20
16						4.12	5.10	6.56	6.93	7.26	7.26	4.49	5.00	4.85	5.83	3.81	5.71	5.61	4.12	4.45	1.91							5.19
17						4.12	5.10	6.56	6.93	7.26	7.26	4.49	5.00	4.85	5.83	3.72	5.71	5.52	4.15	4.45	1.93							5.18
18						4.12	5.10	6.56	6.93	7.26	7.26	4.49	5.00	4.85	5.83	3.63	5.71	5.43	4.15	4.42	1.93							5.17
19						4.09	5.10	6.56	6.93	7.26	7.26	4.49	5.00	4.85	5.83	3.51	5.71	5.37	4.21	4.36	1.95							5.15
20						4.06	5.10	6.56	6.93	7.26	7.26	4.49	5.00	4.85	5.83	3.45	5.71	5.19	4.21	4.33	1.97							5.14
21						4.06	5.13	6.56	6.93	7.26	7.26	4.49	5.00	4.85	5.83	3.42	5.68	5.00	4.18	4.33	1.98							5.12
22						4.03	5.13	6.56	6.93	7.26	7.26	4.49	5.00	4.76	5.83	3.36	5.68	4.85	4.18	4.33	1.99							5.10
23						4.03	5.13	6.56	6.93	7.26	7.26	4.49	5.00	4.76	5.83	3.30	5.65	4.67	4.15	4.36	2.00							5.09
24						4.03	5.13	6.56	6.93	7.26	7.26	4.49	5.00	4.76	5.86	3.30	5.65	4.49	4.12	4.42	2.00							5.08
25						4.03	5.13	6.56	6.93	7.26	7.26	4.49	5.00	4.76	5.89	3.30	5.61	4.45	4.12	4.49	2.02							5.08
26						4.00	5.13	6.56	6.93	7.26	7.26	4.49	5.00	4.76	5.92	3.30	5.58	4.45	4.15	4.55	2.03							5.09
27						4.00	5.13	6.56	6.93	7.26	7.26	4.49	5.00	4.76	5.95	3.30	5.58	4.45	4.12	4.61	2.03							5.09
28						4.00	5.13	6.56	6.93	7.26	7.26	4.49	5.00	4.76	5.95	3.30	5.55	4.45	4.12	4.64	2.06							5.09
29						4.03	5.13	6.56	6.93	7.26	7.26	4.49	4.97	4.67	5.98	3.33	5.55	4.45	4.06	4.67	2.07							5.09
30						4.03	5.13	6.56	6.93	7.26	7.26	4.49	4.97	4.67	6.01	3.36	5.52	4.45	3.97	4.64	2.07							5.08
31						4.06	5.13	6.56	6.93	7.26	7.26	4.49	4.97	4.67	6.04	3.36	5.52	4.45	3.97	4.61	2.08							5.08
Apr 1							5.19	5.89	6.93	6.41	7.26	5.19	4.91	4.67	6.04	3.42	5.52	4.45	3.97	4.58	2.08				0.23	0.30	0.41	4.30
2							5.19	5.89	6.93	6.41	7.26	5.19	4.91	4.67	6.07	3.48	5.49	4.49	3.97	4.49	2.09				0.23	0.30	0.41	4.30
3							5.19	5.89	6.93	6.41	7.26	5.19	4.91	4.67	6.10	3.51	5.49	4.55	3.97	4.49	2.10				0.23	0.30	0.41	4.31
4							5.19	5.89	6.93	6.41	7.26	5.19	4.91	4.61	6.10	3.57	5.46	4.67	3.97	4.49	2.13				0.23	0.30	0.41	4.32
5							5.19	5.89	6.93	6.41	7.26	5.19	4.91	4.61	6.13	3.63	5.43	4.85	3.97	4.49	2.16				0.23	0.30	0.41	4.33
6							5.19	5.89	6.93	6.41	7.26	5.19	4.88	4.61	6.16	3.72	5.43	4.97	3.97	4.58	2.17				0.23	0.30	0.41	4.35
7							5.19	5.89	6.93	6.41	7.26	5.19	4.88	4.67	6.16	3.78	5.43	5.10	3.97	4.64	2.22				0.23	0.30	0.42	4.37
8							5.19	5.89	6.93	6.41	7.26	5.19	4.88	4.67	6.19	3.84	5.43	5.19	3.97	4.67	2.25				0.23	0.30	0.42	4.38
9							5.19	5.89	6.93	6.41	7.26	5.19	4.85	4.67	6.19	3.94	5.43	5.28	3.94	4.67	2.29				0.23	0.30	0.42	4.39
10							5.19	5.89	6.93	6.41	7.26	5.19	4.85	4.67	6.22	3.97	5.43	5.37	3.91	4.67	2.33				0.23	0.30	0.42	4.40
11							5.19	5.89	6.93	6.41	7.26	5.19	4.91	4.67	6.26	4.09	5.43	5.40	3.91	4.70	2.41				0.23	0.31	0.42	4.42
12							5.22	5.89	6.93	6.41	7.26	5.19	5.00	4.67	6.29	4.18	5.40	5.43	3.91	4.70	2.44				0.23	0.31	0.42	4.44
13							5.22	5.89	6.93	6.41	7.26	5.19	5.10	4.67	6.32	4.33	5.40	5.46	3.88	4.73	2.52				0.23	0.31	0.41	4.46
14							5.28	5.89	6.93	6.41	7.26	5.19	5.19	4.67	6.35	4.45	5.37	5.49	3.88	4.76	2.60				0.23	0.32	0.41	4.48
15							5.37	5.89	6.93	6.41	7.26	5.19	5.28	4.67	6.41	4.61	5.37	5.52	3.94	4.79	2.69				0.22	0.32	0.42	4.52
16							5.49	5.89	6.93	6.41	7.26	5.19	5.37	4.67	6.47	4.76	5.43	5.61	3.94	4.82	2.82				0.22	0.32	0.42	4.56
17							5.61	5.89	6.93	6.41	7.26	5.19	5.52	4.67	6.53	4.91	5.52	5.71	3.94	4.82	2.94				0.22	0.32	0.42	4.60
18							5.80	5.89	6.93	6.41	7.26	5.19	5.61	4.67	6.59	5.10	5.71	5.89	3.94	4.85	3.04				0.22	0.32	0.43	4.66
19							6.01	5.89	6.93	6.41	7.26	5.19	5.80	4.76	6.68	5.37	5.89	6.13	3.94	4.97	3.20				0.22	0.33	0.42	4.74
20							6.47	5.89	6.93	6.41	7.26	5.19	5.89	4.85	6.74	5.58	6.13	6.41	3.94	5.10	3.42				0.21	0.33	0.42	4.84
21							6.93	5.89	6.93	6.41	7.26	5.61	5.92	5.00	6.80	5.80	6.53	6.47	3.97	5.19	3.66				0.21	0.33	0.42	4.96
22							7.45	5.89	6.93	6.41	7.26	7.78	6.04	5.37	6.87	6.04	6.93	6.56	3.97	5.43	3.84				0.21	0.33	0.42	5.21
23							8.30	5.89	6.93	6.41	7.26	7.78	6.13	5.71	6.96	6.47	7.69	6.65	3.97	5.65	4.12				0.21	0.34	0.42	5.38
24							9.15	5.89	6.93	6.41	7.26	7.78	6.22	6.04	7.02	6.74	6.74	6.74	3.97	5.89	4.33				0.21	0.35	0.42	5.45
25							9.95	5.89	6.93	6.41	7.26	7.78	6.41	6.56	7.08	7.11	7.51	6.93	3.97	6.22	4.85				0.21	0.35	0.43	5.66
26							11.50	5.89	6.93	6.41	7.26	7.78	6.53	7.51	7.23	7.51	8.30	7.51	3.97	6.53	5.00				0.22	0.36	0.43	5.94
27							12.97	5.89	6.93	6.41	7.26	7.78	6.65	8.64	7.35	7.96	9.06	8.12	4.00	6.93	5.37				0.22	0.37	0.43	6.24
28							15.20	5.89	6.93	6.41	7.26	7.78	6.84	10.10	7.51	8.54	9.86	8.82	4.06	7.45	5.80				0.22	0.36	0.42	6.64
29							17.27	5.89	6.93	6.41	7.26	7.78	6.93	11.84	7.63	9.06	10.62	10.53	4.12	8.12	6.26				0.22	0.38	0.42	7.09
30							21.60	5.89	6.93	6.41	7.26	7.78	7.17	13.40	7.78	9.86	11.41	12.54	4.24	8.91	6.74				0.23	0.39	0.42	7.72
May 1		6.04		10.53	27.65		34.48	5.95	6.93	6.41	7.26	7.78	7.45	15.56	7.87	10.71	12.17	13.82	4.33	10.80	7.26				0.23	0.43	0.42	9.72
2		6.41		11.23	28.50		51.87	6.13	6.93	6.41	7.26	7.78	7.78	18.16	8.30	11.75	12.97	16.60	4.45	13.82	7.78				0.23	0.45	0.42	11.20
3		6.84		11.75	29.38		65.60	6.47	6.93	6.41	7.26	7.78	8.12	21.18	7.87	12.97	13.82	18.31	4.58	16.60	8.48				0.24		0.42	13.05
4		7.45		12.54	29.38		83.00	6.74	6.93	6.41	7.26	7.78	8.48	24.20	8.21	14.52	14.68	22.46	4.91	20.75	9.34				0.24		0.43	14.78
5		8.03		14.10	30.24		101.00	7.69	6.93	6.41	7.26	7.78	8.64	28.07	8.64	16.32	15.56	25.05	5.37	25.94	10.19			105.27	0.24		0.44	20.91
6		8.64		15.04	31.12		121.75	8.64	6.93	45.47	7.26	7.78	12.97	32.95	9.06	19.01	16.51	29.38	6.93	31.43	11.32			72.01	0.25		0.46	23.57
7		9.49		15.99	32.04		127.85	9.86	6.93	45.47	7.26	7.78	19.86	38.14	9.49	22.73	17.45	33.56	9.49	38.14	12.54			95.81	0.27		0.46	26.70
8		10.37		17.27	33.56		151.96	12.08	7.26	45.47	7.26	7.78	30.24	43.63	9.95	28.16	18.83	38.75	12.97	46.69	13.91			102.83	0.28		0.47	30.46
9		11.66		18.58	38.14		165.08	14.68	8.48	45.47	7.26	51.87	43.33	50.96	11.93	37.23	20.23	44.85	17.27	52.18	16.08			115.04		0.45	0.48	36.73
10		12.97		20.23	40.89		176.37	19.01	10.80	45.47	7.26	51.87	77.81	59.50	14.68	42.72	22.12	50.04	25.94	57.67	18.16			120.83	0.34	0.46	0.49	39.80
11		14.52		21.94	46.99		180.64	22.89	14.68	45.47	7.26	51.87	120.83	68.35	19.86	53.09	24.44	58.89	36.31	62.55	20.81			114.12	0.36	0.45	0.52	44.86
12		16.23		24.20	44.85		184.00	27.22	18.16	45.47	7.26	51.87	138.23	77.81	25.94	64.08	39.06	69.27	44.85	66.21	23.40	0.64		102.83	0.39	0.44	0.58	46.65
13		18.58		27.65	44.55		179.73	32.04	21.27	45.47	7.26	51.87	190.10	90.63	34.48	75.06	66.52	80.86	62.25	70.79	27.65	0.73		100.08	0.39	0.44	0.66	53.44
14		22.46		32.04	43.94	39.97	171.18	38.14	28.96	45.47	7.26	51.87	224.58	108.02	43.33	84.22	116.56	112.29	86.35	79.64	32.04		0.65	106.19	0.40	0.46	0.77	61.53
15		27.65		36.62	44.55	74.76	155.62	52.48	38.14	45.47	7.26	51.87	207.49	124.50	60.42	93.37	133.95	111.37	89.71	107.10	38.75			106.19	0.41	0.47	0.83	69.96
16		34.48		40.58	50.35	94.29	143.41	72.01	50.04	45.47	15.56	51.87	181.56	119.31	55.53	101.00	163.25	108.93	89.10	166.91	50.04	0.80	0.57	115.04	0.42	0.48	0.80	70.07
17		49.74		54.92	61.03		138.23	103.75	63.16	164.16	15.56	51.87	155.62	133.95	56.45	103.75	181.56	130.60	86.35	223.66	59.81	0.76		123.58	0.45	0.48	0.90	85.23

18		98.56		131.21	65.60		138.23	151.96	74.45	174.54	15.56	51.87	147.69	141.58	65.91	110.46	175.45	148.60	96.73	256.62	84.52	0.72	0.66	134.87	0.52	0.46	0.85	94.48
19		111.37		183.08	70.49		145.24	197.73	94.90	195.29	15.56	51.87	150.43	133.04	99.47	116.56	166.91	152.87	94.29	258.45	101.00	0.70			0.62	0.45	0.92	106.42
20		102.83		191.93	79.03		156.53	225.50	115.04	221.22	15.56	51.87	149.52	126.02	135.79	119.31	159.89	174.54	115.04	228.85	122.66	0.69			0.71	0.45	0.96	113.36
21		108.02		245.33	101.00		166.91	228.24	141.58	248.08	15.56	51.87	140.06	132.12	192.54	116.56	156.53	197.12	172.71	197.73	142.50	0.68	0.75	194.37	0.77	0.45	0.90	123.02
22		108.02	207.49	314.29	129.68		170.27	217.87	158.06	283.47	15.56	70.79	128.77	142.50	253.26	118.39	155.62	230.68	228.85	187.35	165.99	0.68	0.79	203.83	0.81	0.46	0.83	139.77
23		113.21	243.80	353.96	141.58		179.73	209.93	184.91	323.44	15.56	94.29	120.83	157.14	291.10	133.95	160.81	243.80	241.06	176.37	193.46	0.68	0.81	203.83	0.85	0.50	0.78	151.46
24		118.39	244.41	372.27	143.41		184.91	218.48	232.51	353.96	62.86	108.02	112.29	170.27	287.74	156.53	168.44	223.05	230.68	158.98	209.93	0.68	0.83	209.02	0.89	0.55	0.75	158.79
25		131.21	243.80	372.27	150.43		197.12	256.62	285.91	366.16	63.77	115.65	102.83	177.89	266.08	184.91	172.10	208.10	205.66	151.96	236.79	0.68	0.84	205.66	0.94	0.63	0.77	163.95
26		145.24	241.97	372.27	164.16		213.29	311.24	329.55	360.06	66.82	126.94	93.37	186.74	262.72	198.64	158.06	211.76	191.02	163.25	261.81	0.71	0.84	252.35	0.95	0.72	0.83	172.61
27		135.79	240.14	366.16	179.73		214.21	344.80	372.27	305.14	69.88	144.33	88.18	196.20	274.01	190.10	144.33	228.24	203.83	183.08	283.47	0.75	0.80	314.29	0.93	0.78	0.95	179.30
28		132.12	239.23	357.01	172.71		191.93	353.96	411.93	251.43	89.71	160.81	88.18	205.66	274.01	158.98	135.79	236.79	261.81	205.66	267.91	0.80	0.79	317.34	0.90	0.82	1.06	180.69
29		125.41	232.51	296.29	164.16	202.92	180.64	353.96	436.34	219.39	109.85	185.83	91.54	228.85	259.98	134.87	136.40	231.60	341.75	236.79	227.33	0.86	0.76	291.10	0.88	0.85	1.15	180.46
30		116.56	230.68	292.02	155.62	199.56	178.81	357.01	448.55	200.47	151.35	215.12	98.56	270.35	243.80	120.83	142.50	228.24	405.83	238.62	201.39	0.90	0.73	267.91	0.86	0.88	1.22	183.40
31		109.85	228.24	257.53	146.77	196.20	178.81	338.70	463.81	184.91	196.20	244.41	108.93	329.55	238.62	121.75	146.77	228.24	472.96	214.21	198.64	0.94	0.72	271.27	0.86	0.90	1.27	187.73
Jun 1		104.66	214.21	261.81	138.23	186.74	176.37	323.44	457.70	175.45	251.43	271.27	122.66	393.63	244.41	126.02	150.43	223.66	524.83	191.02	201.39	0.99	0.72	270.35	0.86	0.91	1.29	192.86
2		111.37	210.85	262.72	133.95	182.17	179.73	332.60	439.40	165.99	308.19	285.00	140.06	439.40	245.33	136.40	152.87	238.62	509.58	204.75	199.56	1.03	0.72	272.18	0.86	0.90	1.26	198.29
3		113.21	195.29	262.72	131.21	192.54	186.74	335.65	418.04	159.89	369.21	285.00	162.33	436.34	247.16	150.43	156.53	259.98	466.86	236.79	223.66	1.05	0.73	265.16	0.85	0.89	1.21	202.29
4		118.39	189.18	263.64	134.87	211.76	197.12	341.75	396.68	158.98	427.19	283.47	182.17	408.88	248.99	150.43	175.45	264.55	421.09	254.79	252.35	1.07	0.76	252.35	0.84	0.88	1.18	205.34
5		126.94	193.46	266.08	138.23	227.33	200.47	344.80	393.63	163.25	479.06	266.99	199.56	384.47	250.52	146.16	209.93	251.43	314.29	246.24	273.10	1.09	0.81	241.06	0.82	0.88	1.15	204.68
6		132.12	217.87	267.91	142.50	233.43	191.93	341.75	396.68	167.52	527.89	235.87	222.14	353.96	249.60	156.53	259.98	236.79	274.62	225.50	258.45	1.08	0.81	223.66	0.77	0.89	1.09	204.67
7		130.60	241.97	274.01	146.77	235.87	188.27	347.85	396.68	165.99	613.32	206.58	235.87	335.65	246.24	172.10	311.24	232.51	251.43	215.12	225.50	1.03	0.79	201.39	0.73	0.92	1.02	206.90
8		130.60	277.37	273.10	151.35	241.06	191.93	360.06	375.32	166.91	595.01	189.18	241.06	317.34	243.80	180.64	311.24	235.87	254.18	214.21	195.29	0.97	0.78	191.93	0.71	0.96	0.95	205.45
9		155.62	298.12	276.45	153.79	256.62	193.46	390.57	369.21	163.25	570.60	181.56	241.97	301.47	242.89	187.35	261.81	249.60	250.52	222.14	172.71	0.93	0.79		0.69	1.01	0.90	205.76
10		173.62	308.19	279.81	146.77	261.81	191.93	433.29	405.83	169.35	530.94	184.91	247.16	273.10	238.62	196.20	214.21	257.53	269.43	240.14	157.14	0.92	0.80		0.69	1.04	0.87	207.37
11		210.85	281.64	280.73	146.77	254.79	191.02	454.65	411.93	173.62	509.58	191.93	252.35	253.26	237.70	199.56	184.00	265.16	293.85	244.41	146.16	0.90	0.82		0.69	1.07	0.86	207.53
12		229.77	259.37	280.73	138.23	251.43	183.08	439.40	402.78	174.54	485.17	193.46	254.79	244.41	239.23	197.73	164.16	277.37	314.29	244.41	141.58	0.87	0.80		0.69	1.08	0.84	204.81
13		246.24	252.35	267.91	129.68	241.06	176.98	390.57	384.47	177.89	476.01	182.17	254.79	230.68	236.79	193.46	154.70	274.01	323.44	241.97	151.35	0.84	0.79		0.70	1.08	0.82	199.63
14		220.31	250.52	266.08	120.83	243.80	181.56	341.75	381.42	198.64	466.86	165.08	251.43	209.93	230.68	184.00	148.60	256.62	317.34	231.60	167.52	0.82	0.78		0.70	1.08	0.82	193.55
15		191.93	251.43	247.16	112.29	245.33	180.64	294.76	393.63	228.24	451.60	150.43	254.79	197.73	215.12	175.45	147.69	225.50	311.24	217.87	172.10	0.79	0.77		0.68	1.10	0.81	186.76
16		176.98	250.52	226.41	101.92	241.06	177.89	255.70	402.78	243.80	414.98	139.14	258.45	194.37	205.66	166.91	142.50	202.92	295.37	205.66	172.71	0.78	0.76		0.66	1.09	0.81	179.19
17		172.10	249.60	176.37	106.19	230.68	176.98	230.68	442.45	229.77	375.32	132.12	258.45	195.29	197.73	156.53	138.23	190.10	274.62	197.12	174.54	0.79	0.75		0.63	1.04	0.79	172.35
18		174.54	235.87	150.43	105.27	209.93	181.56	209.93	482.11	215.12	335.65	129.68	252.35	202.31	192.54	147.69	129.68	186.74	253.26	191.02	185.83	0.81	0.74		0.62	0.98	0.77	167.02
19		179.73	223.05	152.87	91.54	191.93	198.64	191.93	472.96	210.85	304.22	126.02	240.14	205.66	189.18	133.95	123.58	188.27	229.77	184.00	217.87	0.84	0.72		0.61	0.93	0.75	162.40
20		184.91	216.04	162.33	90.63	175.45	209.93	183.08	445.50	207.49	279.81	118.39	228.85	207.49	185.83	121.75	120.22	191.93	214.21	172.10	222.14	0.86	0.71		0.62	0.90	0.73	157.68
21		194.37	208.10	175.45	85.13	160.81	215.12	173.62	421.09	203.83	265.16	110.46	214.21	207.49	180.64	111.37	116.56	191.93	214.21	162.33	215.12	0.86	0.72		0.64	0.88	0.71	153.23
22		211.76	209.02	184.91	78.42	149.52	210.85	179.73	411.93	215.12	254.79	102.83	201.39	206.58	177.89	99.47	115.04	189.18	206.58	155.62	197.12	0.84	0.73		0.67	0.87	0.69	150.46
23		223.66	213.29	193.46	74.45	143.41	204.75	195.29	402.78	236.79	258.45	97.64	191.02	201.39	177.89	89.10	112.29	183.08	192.54	148.60	185.83	0.82	0.74		0.69	0.85	0.67	149.18
24		243.80	218.48	197.73	70.49	138.23	204.75	180.64	399.73	247.16	256.62	95.81	180.64	194.37	184.00	79.95	113.21	184.91	183.08	140.06	171.18	0.81	0.74		0.71	0.84	0.66	147.54
25		258.45	207.49	177.89	68.35	134.87	197.12	164.16	418.04	245.33	243.80	94.90	170.27	186.74	185.83	71.40	119.31	199.56	171.18	133.95	155.62	0.78	0.73		0.71	0.83	0.65	144.32
26		279.20	182.17	166.91	67.44	133.04	190.10	157.14	424.17	233.43	224.58	93.37	161.72	174.54	178.81	63.16	120.83	202.31	161.72	128.77	140.06	0.76	0.73		0.69	0.81	0.64	139.48
27		279.81	170.27	160.81	67.44	133.04	181.56	160.81	387.52	215.12	219.39	95.81	155.62	160.81	174.54	57.06	119.31	191.93	173.62	121.75	126.94	0.75	0.74		0.67	0.79	0.63	134.57
28		285.00	162.33	148.60	67.44	130.60	174.54	161.72	350.91	203.83	213.29	97.64	155.62	170.27	182.17	52.18	115.65	180.64	226.41	116.56	117.48	0.75	0.73		0.66	0.76	0.62	132.66
29		285.91	162.33	149.52	67.44	130.60	174.54	167.52	314.29	191.02	197.73	100.08	158.98	172.71	193.46	48.21	108.02	165.08	286.83	114.12	112.29	0.76	0.72		0.66	0.74	0.60	132.17
30		286.83	164.16	150.43	67.44	140.06	183.08	163.25	274.62	182.17	180.64	103.75	158.98	184.00	190.10	45.77	101.92	147.69	332.60	115.65	107.10	0.76			0.66	0.72	0.59	136.79
Jul 1	90.63	323.44	165.99	143.41	62.25	142.50	180.64	153.79	251.43	177.89	165.08	108.02	155.62	204.75	184.91	43.33	101.92	132.12	326.50	117.48	101.00	0.76			0.68	0.69	0.58	133.42
2	90.63	323.44	149.52	133.04	61.33	140.97	173.62	145.24	236.79	175.45	156.53	111.37	150.43	201.39	179.73	42.11	100.08	117.48	266.08	118.39	93.37	0.75			0.73	0.69	0.58	126.79
3	91.54	323.44	131.21	133.95	60.42	133.95	165.99	134.87	223.05	172.71	147.69	114.12	142.50	182.17	167.52	43.33	97.64	105.27	223.05	120.22	87.27	0.74			0.74	0.76	0.56	120.19
4	91.54	292.02	121.75	134.87	68.05	128.77	152.87	127.85	206.58	169.35	140.06	116.56	132.12	164.16	155.62	45.77	97.64	96.73	201.39	127.85	83.30	0.72			0.73	0.83	0.55	114.31
5	91.54	270.35	114.12	136.40	64.69	119.31	140.06	120.22	193.46	167.52	133.95	116.56	123.58	151.35	146.16	52.48	102.83	91.54	178.81	126.02	78.73	0.70			0.71	0.83	0.54	108.90
6	88.18	256.62	108.02	139.14	62.55	115.04	126.94	114.12	191.93	164.16	129.68	113.21	119.31	140.06	138.23	60.72	102.83	89.10	159.89	121.75	74.45	0.69			0.69	0.80	0.52	104.75
7	84.83	227.33	100.08	140.97	64.38	108.93	118.39	108.93	192.54	162.33	125.41	109.85	116.56	131.21	144.33	65.30	117.48	85.13	145.24	115.65	71.71	0.69			0.66	0.76	0.51	101.57
8	81.78	228.24	94.29	140.97	75.37	103.75	108.93	105.27	191.93	158.98	122.66	105.27	113.21	120.83	156.53	72.01	121.75	82.39	133.04	109.85	69.57	0.67			0.64	0.72	0.49	99.97
9	79.64	216.04	87.27	138.23	75.37	96.73	102.83	101.00	186.74	158.06	120.83	102.83	108.02	115.04	151.96	75.37	114.12	78.73	125.41	102.83	67.44	0.65			0.62	0.69	0.48	96.28
10	80.56	200.47	83.61	133.04	63.47	101.00	96.73	98.56	179.73	155.62	124.50	100.08	104.66	108.02	144.33	75.98	107.10	75.98	116.56	99.47	66.52	0.62			0.60	0.67	0.47	92.73
11	103.75	183.08	77.81	123.58	62.55	96.73	91.54	94.29	171.18	146.77	139.14	96.73	102.83	102.83	136.40	78.42	101.00	71.40	109.85	96.73	65.60	0.60			0.58	0.67	0.47	90.18
12	120.22	162.33	75.37	113.21	58.89	93.37	85.13	91.54	159.89	141.58	181.56	94.29	101.00	101.00	140.06	83.00	98.56	68.96	102.83	91.54	66.52	0.58			0.56	0.68	0.48	89.33
13	124.50	155.62	78.42	104.66	58.59	84.83	79.64	95.81	152.87	129.68	198.64	91.54	97.64	100.08	148.60	152.87	95.81	68.35	95.81	87.27	68.66	0.60			0.54	0.69	0.48	90.89
14	126.02	143.41	81.47	94.90	57.67	80.86	77.20	103.75	142.50	126.94	181.56	88.18	91.54	97.64	151.96	250.52	94.29	68.66	89.71	85.13	68.66	0.61			0.52	0.70	0.47	92.19
15	126.94	134.87	77.20	104.66	57.98	79.95	77.50	116.56	137.31	129.68	165.08	84.22	86.05	94.90	149.52	265.16	90.63	70.18	83.91	82.08	68.66	0.60			0.50	0.70	0.45	91.41
16	122.66	130.60	72.01	106.19	60.42	78.42	72.32	125.41	131.21	125.41	151.35	80.56	81.78	96.73	144.33	228.85	86.35	72.93	79.34	86.05	65.60	0.59			0.50	0.69	0.44	88.03
17	114.12	131.21	68.05	107.10	60.11	77.20	69.88	123.58	130.60	118.39	138.23	78.11	76.89	95.81	141.58	188.27	81.78	75.06	75.98	96.73	63.16	0.57			0.52	0.68	0.43	84.56
18	103.75	134.87	64.69	105.27	57.98	75.67	69.88	118.39	129.68	111.37	128.77	83.61	73.23	91.54	140.97	157.14	78.42	77.20	73.84	95.81	60.72	0.56			0.55	0.68	0.42	81.40
19	93.37	134.87	66.21	89.71	57.67	71.40	68.05	110.46	126.94	108.93	125.41	101.00	72.01	89.71	135.79	137.31	75.98	82.08	70.79	94.29	58.59	0.55			0.58	0.69	0.42	78.91
20	94.90	133.95	70.79	83.00	56.45	70.18	72.62	103.75	125.41	110.46	126.02	115.65	70.79	86.35	128.77	120.22	79.95	80.25	68.35	89.71	57.67	0.54			0.60	0.70	0.42	77.90
21	96.73	125.41	72.01	81.17	54.01	64.69	78.73	96.73	120.83	115.04	136.40	126.02	70.18	81.47	118.39	105.27	129.68	75.37	67.44	85.74	57.06	0.56			0.62	0.68	0.43	78.43
22	111.37	117.48	77.20	83.30	51.87	64.38	83.00	92.46	116.56	120.22	148.60	124.50	68.05	77.20	111.37	94.29	237.70	70.79	80.86	81.47	57.06	0.59			0.63	0.66	0.46	82.88
23	133.04	113.21	74.45	94.29	43.33	63.16	85.13	88.18	114.12	123.58	168.44	120.83	64.08	74.45	103.75	84.83	274.62	66.52	99.47	78.73	57.06	0.63			0.62	0.63	0.50	85.11
24	139.14	102.83	78.42	94.90	42.41	62.25	89.71	84.22	110.46	123.58	175.45	119.31	59.81	72.01	95.81	79.64	254.18	62.25	98.56	75.06	56.76	0.65			0.61	0.61	0.51	83.17
25	140.06	94.29	77.20	97.64	39.06	63.47	89.71	77.20	105.27	118.39	172.10	116.56	57.06	69.88	89.71	74.15	217.87	58.89	101.92	71.40	56.45	0.65			0.59	0.59	0.50	79.62
26	134.87	89.10	75.06	90.63	39.36	63.47	90.63	71.40	101.92	112.29	155.62	115.04	55.84	68.66	83.61	72.32	186.74	56.76	104.66	68.96	60.72	0.63			0.56	0.57	0.49	76.00
27	126.02	83.91	71.40	90.63	36.31	63.47	94.90	66.82	97.64	105.27	143.41	120.22	54.31	69.88	78.11	74.15	169.35	54.62	108.02	67.44	66.21	0.61			0.55	0.56	0.48	73.77
28	115.65	83.30	69.57	81.17	33.56	64.69	108.02	62.86	97.64	100.08	126.94	123.58	51.87	72.93	74.76	81.17	162.33	50.96	104.66	65.60	69.27	0.58			0.55	0.55	0.47	72.11
29	107.10	77.81	66.21	78.42	32.95	64.69	128.77	58.59	96.73	94.29	119.31	120.22	50.96	78.73	72.62	87.27	151.96	49.43	113.21	64.99	69.88	0.56			0.58	0.54	0.46	71.45
30	99.47	74.45	65.91	71.71	31.12	78.42	132.12	54.92	92.46	88.18	112.29	113.21	50.65	85.13	72.32	86.35	139.14	46.08	123.58	64.08	68.35	0.53			0.62	0.52	0.44	70.08
31	94.90	72.62	63.47	67.44	28.50	77.20	127.85	52.18	89.10	82.39	111.37	105.27	51.57	89.10	72.93	84.22	126.02	43.94	133.95	62.25	68.05	0.51			0.63	0.50	0.43	68.26
Aug 1	91.54	69.57	60.42	63.77	25.94	76.28	120.22	50.04	86.35	77.81	114.12	97.64	52.79	94.29	72.93	83.61	114.12	42.11	133.95	60.11	67.13	0.49			0.62			71.99
2	91.54	69.57	58.59	60.72	24.44	78.42	110.46	48.82	87.27	75.06	117.48	90.63	54.01	94.29	81.17	86.35	104.66	41.19	125.41	57.67	66.82	0.48			0.62			70.68
3	86.35	68.66	56.15	57.37	24.11	83.30	104.66	47.60	87.27	75.67	118.39	83.91	52.79	91.54	98.56	89.71	95.81	39.36	116.56	55.84	67.44	0.46			0.60			69.66
4	83.91	68.66	51.57	54.92	25.42	86.05	95.81	46.38	84.83	78.42	119.31	78.11	51.26	88.18	111.37	87.27	89.71	38.14	110.46	55.23	68.05	0.45			0.58			68.44
5	78.73	69.27	50.65	54.31	27.40	85.44	89.71	46.38	82.39	79.34	119.31	72.62	50.04	84.83	119.31	82.69	83.91	38.75	104.66	57.06	76.28	0.44			0.56			67.57
6	77.50	70.18	49.74	53.40	27.92	83.00	86.35	45.16	79.64	79.03	124.50	67.44	50.04	80.25	121.75	76.28	78.42	38.45	99.47	71.40	88.18	0.43			0.54			67.35
7	74.76	71.40	47.91	53.09	32.04	86.35	81.47	44.24	78.73	76.59	130.60	64.69	48.52	75.37	118.39	72.93	72.62	37.84	96.73	88.18	94.29	0.42			0.52			67.29
8	71.71	72.01	47.60	52.79	33.56	109.85	75.67	43.33	77.81	72.32	132.12	61.33	46.99	71.10	112.29	74.15	68.35	37.53	97.64	85.13	95.81	0.42			0.50			66.96
9	68.35	79.03	45.16	50.04	39.97	125.41	70.79	45.47	76.28	71.10	132.12	59.50	45.47	68.05	104.66	76.28	65.91	36.62	102.83	81.47	94.90	0.42			0.48			66.97
10	64.69	101.00	45.16	47.30	43.94	125.41	68.05	45.47	75.06	69.27	135.79	57.06	45.16	64.08	95.81	79.95	67.74	35.09	101.00	77.20	93.37	0.42			0.47			66.89
11	61.94	136.40	45.16	45.77	51.26	124.50	66.82	43.94	72.01	70.49	140.06	56.15	44.85	61.03	88.18	80.86	72.93	34.18	98.56	72.32	93.37	0.42			0.47			67.90
12	59.50	153.79	43.94	45.47	51.87	118.39	65.60	42.72	71.40	75.37	137.31	54.31	46.08	60.11	81.17	83.00	79.03	33.56	93.37	68.35	92.46	0.43			0.50			67.73
13	56.45	154.70	42.41	43.33	52.48	109.85	62.55	43.02	72.32	74.76	132.12	53.70	46.69	65.30	75.37	86.05	88.18	33.26	87.27	65.60	89.10	0.45			0.53			66.76
14	52.79	153.79	41.50	40.58	46.69	91.54	60.11	44.24	69.27	72.62	125.41	52.18	46.69	75.06	70.49	86.35	87.27	34.18	80.86	65.60	83.91	0.47			0.56			64.44
15	50.96	150.43	39.67	39.36	44.85	99.47	58.59	48.82	65.60	69.88	126.02	50.96	45.77	73.23	65.91	89.10	84.83	33.87	75.67	71.40	79.64	0.47			0.55			63.70
16	49.13	150.43	39.06	38.75	39.97	96.73	57.67	52.79	61.33	65.91	134.87	48.52	43.63	70.49	61.64	92.46	83.61	34.48	71.71	79.95	75.37	0.46			0.53			63.02
17	47.60	146.77	37.23	36.62	41.50	98.56	58.89	60.11	58.89	61.33	139.14	47.60	42.11	68.05	59.20	98.56	83.91	36.01	68.66	88.18	72.01	0.45			0.53			63.13
18	48.82	137.31	34.79	35.70	45.16	102.83	64.99	66.82	57.67	57.37	137.31	45.77	40.89	64.99	57.98	105.27	94.29	38.45	66.21	90.63	69.88	0.44			0.52			63.66
19	52.18	126.02	31.73	34.79	68.05	89.10	75.67	66.21	60.72	54.31	133.04	43.94	40.28	61.64	60.11	106.19	108.02	42.11	63.77	90.63	68.66	0.42			0.53			64.27
20	60.42	114.12	30.82	33.87	80.56	102.83	79.34	62.86	62.25	51.57	128.77	42.72	38.14	57.37	64.69	108.02	108.02	44.55	62.86	94.29	67.44	0.41			0.53			65.06
21	62.25	110.46	30.51	32.95	81.47	102.83	83.61	58.89	60.42	50.04	124.50	41.50	38.14	54.31	68.35	117.48	105.27	44.85	62.86	96.73	66.82	0.41			0.55			65.01
22	62.25	108.02	30.82	32.04	80.56	109.85	89.10	54.62	58.59	49.74	120.22	40.58	36.01	51.87	70.18	128.77	100.08	44.24	60.11	96.73	68.05	0.41			0.58			64.93
23	61.03	102.83	30.82	30.33	75.98	114.12	92.46	50.96	57.06	50.65	117.48	39.36	35.70	49.13	70.49	139.14	95.81	46.38	57.37	96.73	70.18	0.40			0.61			64.57
24	63.16	94.29	31.43	29.72	71.10	111.37	91.54	47.60	60.11	49.13	115.04	38.75	34.79	47.60	70.18	142.50	91.54	46.38	56.45	94.90	72.93	0.40			0.63			63.54
25	61.03	86.35	31.43	29.54	67.44	108.02	87.27	46.08	62.86	47.60	111.37	37.23	34.79	45.47	68.35	138.23	89.10	47.30	54.31	92.46	76.89	0.39			0.64			61.92
26	58.89	81.78	32.04	28.26	64.69	102.83	81.78	44.85	69.27	46.08	107.10	36.62	34.18	44.55	67.44	130.60	87.27	46.38	52.48	91.54	76.28	0.39			0.63			60.26
27	56.45	75.37	34.18	27.13	63.77	94.90	76.59	44.85	75.67	45.77	108.93	36.31	34.18	44.55	64.69	124.50	84.83	45.47	51.26	94.29	74.45	0.39			0.61			59.09
28	54.31	69.57	36.31	26.27	60.72	93.37	71.71	45.16	76.89	45.16	123.58	36.31	34.18	44.24	62.55	120.22	81.47	44.55	50.35	99.47	72.01	0.38			0.60			58.67
29	50.96	64.69	37.53	25.14	61.64	89.10	68.05	51.26	77.50	44.24	140.97	38.14	34.48	46.99	60.42	115.65	77.50	43.02	49.43	103.75	69.27	0.38			0.58			58.73
30	52.79	60.11	39.06	24.62	69.27	85.44	64.99	57.37	76.89	43.02	149.52	41.50	31.73	50.96	57.98	111.37	73.23	41.50	48.82	105.27	66.21	0.37			0.57			58.81
31	52.48	55.84	44.55	23.16	70.18	82.39	63.47	60.72	73.54	41.50	148.60	48.52	31.12	50.35	56.45	105.27	70.18	39.97	48.21	103.75	62.55	0.37			0.56			57.99
Sep 1	52.18	54.62	61.03	22.82	66.21	77.81	60.72	64.69	70.49	40.28	144.33	60.42	30.42	49.43	55.53	99.47	67.74	38.14	47.60	100.08	59.81	0.36			0.55			57.60
2	52.18	54.01	68.05	22.12	64.99	75.67	57.67	68.66	68.66	39.06	140.97	77.81	29.90	49.13	55.53	97.64	65.30	36.62	46.99	96.73	56.76	0.36						60.22
3	50.04	52.79	69.88	21.42	61.94	74.15	56.76	69.88	65.60	37.84	137.31	83.30	29.29	50.65	55.84	99.47	63.47	35.40	45.77	93.37	54.92	0.36						59.52
4	47.60	50.96	69.88	21.08	60.72	72.93	56.45	69.88	62.55	36.31	131.21	83.30	29.20	54.31	56.45	105.27	61.94	34.48	44.55	91.54	54.31	0.37						58.88
5	45.47	48.21	66.82	18.83	56.45	70.18	58.89	71.71	59.50	36.31	124.50	81.17	29.81	57.06	57.98	109.85	61.33	34.48	44.24	91.54	52.79	0.37						58.07
6	42.72	47.30	62.55	19.19	53.40	67.44	63.47	69.88	57.98	35.70	120.83	77.81	31.12	58.89	61.03	112.29	61.94	34.48	45.47	94.29	51.26	0.36						57.70
7	40.28	45.77	62.55	19.19	54.31	65.30	67.44	66.52	55.84	36.31	115.65	74.45	32.34	61.03	70.49	109.85	64.08	34.48	46.08	94.90	49.13	0.37						57.56
8	38.45	44.55	56.76	17.97	53.70	63.77	69.88	66.21	55.23	42.11	111.37	70.79	34.79	59.81	81.17	106.19	67.44	34.79	47.30	96.73	46.99	0.37						57.56
9	35.70	43.33	56.76	17.97	53.09	62.86	72.93	66.82	55.23	54.31	106.19	67.44	38.14	57.98	89.10	101.92	69.57	34.79	47.91	100.08	45.16	0.38						58.07
10	35.40	42.72	48.82	17.97	51.26	62.86	75.67	68.66	55.53	62.86	101.00	64.08	39.36	55.84	95.81	101.92	69.27	35.09	46.69	102.83	43.02	0.40						58.05
11	34.79	42.41	45.77	17.97	49.43	61.64	81.78	69.88	56.15	69.88	95.81	60.42	38.75	54.92	105.27	107.10	68.05	35.40	46.08	103.75	40.89	0.41						58.48
12	34.48	38.45	45.77	18.49	49.74	61.64	91.54	68.66	57.06	80.25	91.54	57.98	38.14	56.15	109.85	109.85	66.52	35.70	46.08	100.08	39.06	0.42						58.97
13	34.48	37.23	41.50	19.35	49.43	60.42	99.47	66.82	55.84	89.71	86.35	55.23	36.92	57.06	112.29	120.83	65.30	36.01	46.69	95.81	37.84	0.43						59.32
14	34.48	36.31	39.67	18.83	45.77	61.33	109.85	64.99	54.62	111.37	84.83	53.70	35.70	55.84	108.93	143.41	64.99	36.01	46.69	89.71	38.45	0.43						60.72
15	34.48	34.48	39.06	19.01	44.24	62.55	108.93	62.55	53.40	126.94	83.00	50.96	34.79	56.76	102.83	151.96	66.21	36.31	46.38	84.22	39.67	0.44						60.87
16	34.48	34.18	37.84	18.67	45.16	63.47	108.93	60.42	52.18	139.14	80.56	49.74	33.87	58.28	96.73	146.16	67.74	36.31	50.04	79.03	39.67	0.46						60.59
17	34.48	32.65	37.84	18.31	43.33	62.55	105.27	58.89	51.26	138.23	79.34	47.60	34.18	57.98	91.54	137.31	68.66	36.01	53.70	74.76	39.97	0.48						59.29
18	34.48	31.73	37.84	17.64	41.50	62.55	101.00	56.45	50.96	134.87	76.89	46.08	34.48	59.20	87.27	126.94	68.96	36.01	54.62	70.79	39.97	0.51						57.76
19	34.48	33.56	37.84	16.69	43.63	64.99	93.37	56.15	51.87	127.85	74.76	46.08	34.18	61.64	84.22	117.48	69.27	35.40	54.31	67.44	39.67	0.52						56.61
20	34.79	34.79	39.06	17.03	45.16	66.21	87.27	57.06	57.06	123.58	72.01	47.60	34.48	62.25	81.47	108.93	69.27	34.79	53.09	64.08	39.36	0.52						55.90
21	34.79	36.01	39.06	16.08	45.77	66.21	80.25	60.11	64.69	123.58	70.18	51.87	34.48	63.16	78.42	101.92	71.40	34.48	50.96	61.03	38.75	0.52						55.62
22	35.09	36.31	55.23	16.51	46.69	64.99	75.06	62.25	69.27	123.58	68.05	58.89	35.09	63.16	75.06	94.90	74.76	34.18	49.13	58.59	37.84	0.52						56.14
23	35.40	35.09	55.23	15.71	45.77	64.99	72.01	66.52	69.88	123.58	68.05	67.44	34.18	61.94	72.62	89.10	74.45	34.18	46.69	57.06	37.23	0.52						55.80
24	36.31	34.18	55.23	15.47	45.77	64.69	69.88	74.45	68.96	118.39	64.99	72.62	33.87	60.11	70.49	85.74	71.71	36.31	43.63	55.84	36.01	0.51						55.23
25	38.75	34.18	50.96	14.68	46.38	63.77	66.82	78.73	67.74	112.29	63.47	73.54	33.56	58.89	70.49	81.78	69.88	45.16	40.89	55.23	35.40	0.50						54.68
26	42.41	36.31	46.99	15.71	45.47	64.99	63.77	87.27	68.35	107.10	61.33	73.54	33.26	57.98	72.93	79.64	67.13	51.87	38.75	54.31	35.70	0.49						54.79
27	46.69	40.58	41.50	16.23	43.94	64.69	61.33	94.90	66.82	101.00	60.42	72.93	33.26	57.67	74.45	76.59	65.60	54.62	36.62	53.40	38.14	0.48						54.63
28	53.70	41.19	41.50	16.84	45.16	64.69	59.20	96.73	64.69	95.81	59.50	72.01	34.18	57.06	75.67	72.01	64.99	55.23	35.09	51.87	40.89	0.47						54.48
29	62.25	41.50	38.14	17.12	43.33	62.86	56.76	88.18	62.55	90.63	58.28	70.79	34.79	56.15	75.67	67.44	66.82	54.62	34.18	50.35	41.19	0.47						53.37
30	71.10	39.06	34.18	17.45	43.33	61.64	55.23	78.73	60.11	87.27	57.67	68.66	36.31	57.37	75.67	64.69	72.93	51.87	34.79	48.52	39.97	0.46						52.59
Oct 1	68.05	38.14	33.56		39.67	59.81	62.86	75.06	57.37	85.74	56.45	64.08	36.31	57.06	75.98	61.64	82.39	49.13	34.48	46.99	37.53	0.46						53.46
2	62.25	35.40	33.87		40.58	60.72	65.30	72.01	54.92	82.39	55.84	60.42	36.62	54.92	73.23	59.50	95.81	46.99	34.18	45.16	35.40	0.47						52.67
3	59.50	33.56	34.18		41.50	60.72	64.99	72.32	52.48	81.78	54.31	57.06	37.53	53.09	70.49	57.06	104.66	45.16	33.87	43.33	32.95	0.47						51.95
4	51.26	32.04	34.48		42.11	61.64	64.69	79.34	50.96	78.73	53.70	54.31	38.45	51.57	68.05	56.45	108.02	43.02	32.65	41.50	30.82	0.48						51.15
5	52.18	30.82	32.95		43.02	64.99	71.40	94.29	50.35	75.67	53.40	53.70	42.11	49.13	64.99	55.53	104.66	41.19	31.73	40.28	28.50	0.48						51.49

6	47.30	29.11	32.34		41.50	62.86	71.10	101.00	48.52	72.01	53.09	54.31	46.08	46.69	62.86	54.31	94.90	39.97	31.73	38.14	28.07	0.49						50.30
7	40.58	28.50	31.73			52.48	69.27	96.73	46.08	68.66	52.48	57.06	54.92	44.24	60.42	54.01	86.35	38.14	31.12	36.62	29.81	0.50						48.99
8	37.53	27.40	31.73			49.43	63.77	89.10	45.16	64.99	51.57	64.08	57.67	41.19	57.06	54.92	80.86	36.31	30.24	35.70	31.43	0.49						47.53
9	40.89	26.46	32.34			34.18	59.20	82.69	44.24	61.94	50.96	74.45	56.15	39.36	53.40	54.62	75.06	34.79	28.35	35.09	33.26	0.48						45.89
10	39.06	24.11	31.73				57.06	72.01	43.33	60.11	50.35	75.98	54.92	39.06	49.13	54.92	72.32	33.26	23.59	33.56	35.09	0.46						44.74
11	35.09	22.82	29.54				54.01	65.30	41.80	58.89	50.04	70.79	52.48	38.14	46.38	53.70	70.49	32.04	18.83	32.65	36.31	0.45						42.62
12	34.48	22.31					51.26	57.67	39.36	57.67	50.65	64.08	50.04	39.36	45.16	52.79	66.21	30.82	19.71	32.65	36.31	0.44						41.72
13	35.40	20.23					47.91	56.45	36.31	57.06	54.92	57.98	46.69	39.97	42.72	50.65	60.11	29.63	24.01	32.34	35.09	0.43						40.44
14	31.43	17.45					45.16	58.89	31.73	56.76	54.62	55.84	44.24	42.11	40.89	48.82	55.84	29.38	24.38	31.73	32.95	0.43						39.04
15	32.34	16.51					43.94	57.98	31.43	54.62	54.62	55.23	40.28	40.58	39.36	46.38	51.87	28.68	25.05	30.24	31.43	0.42						37.83
16	31.43	16.51					43.33	55.53	30.51	54.31	51.87	53.09	39.97	39.97	36.62	43.02	48.82	28.59	25.42	28.96	30.82	0.42						36.62
17	30.82	16.08					43.33	54.31	29.81	54.31	51.87	50.35	37.84	38.45	35.40	38.75	45.77	26.79	25.75	26.94	29.81	0.41						35.38
18	28.44	15.65					42.72	52.48	28.96	54.62	51.87	48.21	35.70	36.31	34.48	36.62	43.02	23.34	25.14	25.14	29.54	0.40						34.04
19	28.77	15.04					42.11	47.60	27.65	54.92	51.87	47.91	34.48	37.53	33.56	37.53	39.97	22.03	24.62	23.77	29.63	0.39						33.30
20	28.77	14.62					40.89	42.11	26.36	52.48	51.87	46.69	32.95	34.18	32.34	36.62	37.23	17.70	23.77	22.37	30.06	0.38						31.74
21	28.44	14.01					38.14	37.23	25.66	50.04	43.33	45.77	31.43	33.87	31.12	35.09	34.48	16.60	22.46	21.18	29.81	0.36						29.95
22	28.07	12.54					35.09	35.70	24.38	48.52	43.33	44.24	30.24	32.95	31.12	29.63	32.34	16.51	21.79	20.38	29.99	0.35						28.73
23	28.77	11.41					33.87	38.45	23.34	47.30	43.33	43.33	24.20	31.43	32.34	23.86	31.12	16.42	21.18	19.96	29.38	0.34						27.78
24	28.77	9.49					33.26	36.92	22.37	46.08	43.33	42.11	17.27	27.46	32.65	23.16	30.06	16.60	20.66	19.86	28.44	0.33						26.60
25	29.81	8.12					31.43	32.95	21.42	45.16	43.33	40.28	13.82	29.29	29.38	22.89	28.96	16.84	20.23	19.62	27.65	0.32						25.64
26	29.48	7.45					30.51	29.63	20.75	44.85	28.50	39.36	13.82	27.74	27.83	22.73	27.98	17.27	20.05	19.44	28.07	0.32						24.21
27	26.70	6.99					29.38	29.20	19.86	42.11	28.50	38.45	14.25	26.46	22.73	22.82	26.94	17.36	19.86	19.25	28.68							24.68
28	19.44	6.47					29.11	29.90	19.62	38.45	28.50	38.45	16.42	26.36	22.46	22.89	25.94	17.55	19.35	19.10	29.02							24.06
29	17.79	6.04					28.50	28.87	18.67	37.23	28.50	38.14	17.64	24.96	21.60	23.07	25.48	17.64	18.67	19.01	28.26							23.53
30	17.27	5.80					27.65	28.87	17.88	34.48	28.50	37.53	17.55	24.72	21.18	23.34	25.23	17.27	18.16	18.31	26.09							22.93
31	14.34	5.52					27.65	29.20	17.27	31.12	28.50	38.45	17.36	22.21	20.75	23.68	25.05	17.27	17.70	17.55	27.22							22.40
Nov 1	14.01						27.65	25.05	14.68	29.29	14.68	32.95	17.27	19.53	19.96	23.68	24.53	17.12	17.27	16.51	26.36							21.28
2	13.21						27.22	25.05	14.68	28.96	14.68	30.24	17.27	17.97	19.25	23.77	24.01	16.75	16.42	15.04	24.96							20.59
3	12.45						24.20	25.05	14.68	25.48	14.68	28.07	17.12	17.27	18.58	23.68	23.50	16.42	15.71	14.25	24.11							19.70
4	12.45						24.20	25.05	14.68	25.48	14.68	26.36	17.03	17.27	17.88	23.34	22.98	16.23	15.29	13.64	26.79							19.58
5	12.08						24.20	25.05	14.68	25.48	14.68	24.90	16.84	16.42	17.27	22.55	22.46	16.08	14.68	13.06	25.94							19.15
6	12.02						24.20	25.05	14.68	25.48	18.16	23.86	16.69	15.99	16.94	22.03	21.70	16.17	14.34	12.79	23.34							18.96
7	12.02						24.20	25.05	14.68	25.48	18.16	22.89	16.42	15.56	16.60	21.18	20.90	16.42	13.82	12.45	19.71							18.47
8	12.02						24.20	25.05	14.68	25.48	18.16	21.79	16.23	15.13	16.23	20.38	20.05	15.90	13.49	12.27	17.27							18.02
9	12.02						24.20	25.05	14.68	25.48	18.16	21.42	15.71	14.52	15.90	20.05	19.19	15.56	13.30	12.27	15.13							17.67
10	11.93						24.20	25.05	14.68	25.48	18.16	20.57	15.56	13.82	15.56	19.86	18.31	15.47	13.12	12.27	14.52							17.41
11	11.93						24.20	25.05	14.68	25.48	18.16	19.86	15.38	13.49	15.38	19.53	17.79	15.38	13.06	12.27	14.01							17.23
12	11.93						24.20	25.05	14.68	25.48	18.16	19.71	14.95	13.12	15.20	19.01	17.27	15.04	13.06	12.17	13.82							17.05
13	12.02						24.20	25.05	14.68	25.48	18.16	19.19	14.77	12.79	15.04	18.31	16.75	14.77	12.97	12.08	13.82							16.88
14	11.93						24.20	25.05	14.68	25.48	18.16	19.01	14.62	12.45	14.86	17.45	15.56	14.62	12.88	11.93	13.82							16.67
15	11.93						24.20	25.05	14.68	25.48	18.16	18.83	14.25	12.08	14.62	16.94	15.71	14.43	12.88	11.41	13.73							16.52
16	11.93						24.20	25.05	14.68	25.48	14.68	18.74	14.01	11.84	14.43	16.42	15.47	14.16	12.88	11.05	13.73							16.17
17	11.93						24.20	25.05	14.68	25.48	14.68	18.67	13.82	11.50	14.25	15.81	15.20	14.01	12.97	10.47	13.64							16.02
18	11.84						24.20	25.05	14.68	25.48	14.68	18.58	13.64	11.23	14.10	15.56	14.86	13.82	12.97	10.10	13.58							15.90
19	11.84						24.20	25.05	14.68	25.48	14.68	18.49	13.40	10.98	13.91	15.47	14.52	13.73	12.79	9.49	13.21							15.75
20	11.75						24.20	25.05	14.68	25.48	14.68	18.31	13.12	10.71	13.73	15.56	14.16	13.49	12.69	9.43	13.06							15.63
21	11.75						24.20	25.05	14.68	25.48	14.68	18.22	13.06	10.53	13.58	15.56	14.16	13.21	12.60	9.34	12.60							15.54
22	11.66						24.20	25.05	14.68	25.48	14.68	18.22	12.79	10.37	13.40	15.90	14.10	12.97	12.27	9.34	12.17							15.45
23	11.56						24.20	25.05	14.68	25.48	14.68	18.22	12.54	10.19	13.21	16.08	14.01	12.69	12.17	9.43	12.02							15.39
24	11.56						24.20	25.05	14.68	25.48	14.68	18.22	12.36	10.01	13.06	16.42	13.91	12.45	12.08	9.43	11.93							15.34
25	11.50						24.20	25.05	14.68	25.48	14.68	18.31	12.17	9.86	12.88	16.75	13.91	12.08	12.08	9.49	11.93							15.32
26	11.41						24.20	25.05	14.68	25.48	14.68	18.40	12.02	9.76	12.79	16.94	13.82	11.66	12.08	9.49	11.93							15.27
27	11.41						24.20	25.05	14.68	25.48	14.68	18.49	11.84	9.67	12.36	17.03	13.73	11.05	12.17	9.49	12.02							15.21
28	11.32						24.20	25.05	14.68	25.48	14.68	18.58	11.66	9.58	12.08	17.12	13.30	10.62	12.17	9.49	12.08							15.13
29	11.32						24.20	25.05	14.68	25.48	14.68	18.67	11.50	9.43	11.75	17.03	13.06	10.53	12.02	9.34	12.08							15.05
30	11.23						24.20	25.05	14.68	25.48	14.68	18.74	11.32	9.15	11.50	16.42	12.79	10.47	11.84	9.06	12.02							14.91
Dec 1						14.25	15.56	15.56	12.08	16.94	14.68	18.83	11.14	9.06	11.23	15.56	11.75	10.47	11.75	8.73	11.84							13.09
2						14.16	15.56	15.56	12.08	16.94	12.02	19.01	11.05	8.97	11.05	14.95	10.71	10.47	11.75	8.15	11.41							12.74
3						14.01	15.56	15.56	12.08	16.94	10.19	19.10	10.89	8.82	10.80	14.34	9.58	10.37	11.75	7.17	11.14							12.39
4						13.73	15.56	15.56	12.08	16.94	10.19	19.35	10.71	8.64	10.53	14.01	9.15	10.28	11.75	6.77	10.89							12.26
5						13.49	15.56	15.56	12.08	16.94	10.19	19.53	10.47	8.54	10.28	13.82	9.15	10.19	11.66	6.56	10.71							12.17
6						13.30	15.56	15.56	12.08	16.94	10.19	19.71	10.37	8.39	10.01	13.82	9.06	10.10	11.50	6.41	10.62							12.10
7						13.12	15.56	15.56	12.08	16.94	10.19	19.77	10.28	8.21	9.76	13.82	9.15	10.01	11.41	6.22	10.62							12.05
8						12.97	15.56	15.56	12.08	16.94	10.19	19.86	10.19	8.03	9.49	13.82	9.25	10.01	10.89	6.13	10.71							11.98
9						12.79	15.56	15.56	12.08	16.94	10.19	19.86	10.01	7.87	9.25	13.40	9.43	9.95	10.53	5.95	10.89							11.89
10						12.54	15.56	15.56	12.08	16.94	10.19	20.14	9.86	7.78	8.97	12.97	9.49	9.67	10.37	5.89	11.05							11.82
11						12.27	15.56	15.56	12.08	16.94	10.19	20.29	9.67	7.69	8.82	12.27	9.49	9.43	10.28	5.71	11.14							11.71
12						12.08	15.56	15.56	12.08	16.94	10.19	20.57	9.58	7.60	8.64	12.02	9.49	8.48	10.01	5.52	11.14							11.59
13						11.93	15.56	15.56	12.08	16.94	10.19	20.75	9.49	7.51	8.48	11.41	9.49	8.12	9.34	5.37	11.05							11.45
14						11.75	15.56	15.56	12.08	16.94	10.19	20.75	9.43	7.45	8.21	11.14	9.43	7.96	8.97	5.00	10.71							11.32
15						11.56	15.56	15.56	12.08	16.94	10.19	20.75	9.34	7.35	7.96	10.47	9.34	7.78	8.82	4.76	10.47							11.18
16						11.23	15.56	15.56	12.08	16.94	10.19	20.75	9.25	7.26	7.78	9.86	9.25	7.78	8.73	4.58	10.28							11.07
17						11.14	15.56	15.56	12.08	16.94	10.19	20.90	9.15	7.17	7.60	9.49	9.15	7.72	8.73	4.49	9.95							10.99
18						11.05	15.56	15.56	12.08	16.94	10.19	20.90	9.06	7.08	7.45	8.97	8.97	7.69	8.48	4.49	9.67							10.88
19						10.98	15.56	15.56	12.08	16.94	10.19	20.75	8.91	6.99	7.17	8.91	8.97	7.60	8.21	4.49	9.58							10.81
20						10.80	15.56	15.56	12.08	16.94	10.19	20.57	8.82	6.93	6.93	8.73	8.97	7.35	7.96	4.49	9.49							10.71
21						10.71	15.56	15.56	12.08	16.94	10.19	20.29	8.64	6.87	6.74	8.64	8.97	7.17	7.78	4.33	9.43							10.62
22						10.62	15.56	15.56	12.08	16.94	10.19	19.86	8.54	6.84	6.56	8.48	8.97	6.93	7.72	3.97	9.43							10.52
23						10.53	15.56	15.56	12.08	16.94	10.19	19.19	8.48	6.80	6.41	8.39	8.97	6.84	7.69	3.81	9.25							10.42
24						10.47	15.56	15.56	12.08	16.94	10.19	18.31	8.39	6.77	6.13	8.39	8.82	6.74	7.66	3.72	9.06							10.30
25						10.28	15.56	15.56	12.08	16.94	10.19	17.27	8.30	6.74	5.89	8.39	8.64	6.74	7.60	3.63	8.82							10.16
26						10.19	15.56	15.56	12.08	16.94	10.19	16.08	8.21	6.71	5.71	8.39	8.54	6.74	7.60	3.60	8.73							10.05
27						10.10	15.56	15.56	12.08	16.94	10.19	14.34	8.21	6.68	5.52	8.48	8.48	6.74	7.57	3.51	8.64							9.91
28						10.01	15.56	15.56	12.08	16.94	10.19	12.97	8.12	6.62	5.37	8.48	8.39	6.74	7.51	3.45	8.60							9.79
29						9.86	15.56	15.56	12.08	16.94	10.19	11.66	8.03	6.59	5.19	8.64	8.30	6.74	7.45	3.45	8.54							9.67
30						9.76	15.56	15.56	12.08	16.94	10.19	10.37	7.96	6.59	4.91	8.73	8.21	6.65	7.26	3.42	8.51							9.55
31						9.67	15.56	15.56	12.08	16.94	10.19	8.64	7.87	6.56	4.67	8.73	8.12	6.56	7.08	3.36	8.42							9.38

Synthetic Slate Rapids Pelly	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	2011	2012	2013	Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
							63.81	67.54	80.69	67.12	77.55	51.18	49.27	60.95	62.78	55.17	58.12	51.22	64.28	56.78	47.85							60.96
Jan 1						8.48	10.14	11.25	11.08	10.14	13.46	6.85	8.31	8.31	7.01	4.86	9.23	8.51	6.91	7.40	3.55							8.47
2						8.31	10.07	11.25	11.08	10.14	13.46	6.85	7.20	8.31	7.01	4.69	9.23	8.54	6.65	7.20	3.52							8.35
3						8.12	9.98	11.25	11.08	10.14	13.46	6.85	6.65	8.22	7.01	4.53	9.23	8.64	6.36	6.91	3.49							8.24
4						8.02	9.88	11.25	11.08	10.14	13.46	6.85	6.29	8.22	7.01	4.34	9.13	8.77	6.19	6.75	3.42							8.17
5						7.89	9.78	11.25	11.08	10.14	13.46	6.85	5.80	8.12	7.01	4.21	9.06	8.87	6.00	6.46	3.39							8.09
6						7.76	9.68	11.25	11.08	10.14	13.46	6.85	5.54	7.95	7.01	4.11	8.67	8.80	6.00	6.36	3.33							8.00
7						7.63	9.58	11.25	11.08	10.14	13.46	6.85	5.35	7.86	7.01	3.98	8.31	8.57	5.90	6.32	3.33							7.91
8						7.56	9.52	11.25	11.08	10.14	12.55	6.85	5.25	7.76	7.01	3.94	7.95	8.22	5.80	6.29	3.29							7.78
9						7.43	9.42	11.25	11.08	10.14	12.55	6.85	5.18	7.76	7.01	3.88	7.40	7.86	5.64	6.29	3.23							7.69
10						7.30	9.32	11.25	11.08	10.14	12.55	6.85	5.12	7.66	6.98	3.85	6.91	7.66	5.44	6.23	3.19							7.60
11						7.17	9.23	11.25	11.08	10.14	12.55	6.85	5.12	7.56	6.98	3.81	6.75	7.47	5.25	6.19	3.12							7.53
12						7.07	9.13	11.25	11.08	10.14	12.55	6.85	5.12	7.47	6.94	3.78	6.65	7.40	5.09	6.13	3.04							7.48
13						7.01	9.06	11.25	11.08	10.14	12.55	6.85	5.18	7.40	6.94	3.78	6.55	7.40	4.99	6.10	3.00							7.46
14						6.88	8.97	11.25	11.08	10.14	12.55	6.85	5.18	7.40	6.91	3.78	6.52	7.47	4.89	5.93	2.95							7.42
15						6.78	8.87	11.25	11.08	10.14	12.55	6.85	5.18	7.30	6.91	3.78	6.46	7.56	4.86	5.77	2.91							7.39
16						6.72	8.77	11.25	11.08	10.14	12.55	6.85	5.25	7.30	6.91	3.81	6.52	7.66	4.86	5.54	2.84							7.38
17						6.62	8.74	11.25	11.08	10.14	12.55	6.85	5.31	7.20	6.88	3.85	6.52	7.76	4.89	5.41	2.77							7.36
18						6.59	8.67	11.25	11.08	10.14	12.55	6.85	5.35	7.11	6.88	3.88	6.55	7.86	4.89	5.35	2.72							7.36
19						6.49	8.64	11.25	11.08	10.14	12.55	6.85	5.35	7.11	6.85	3.94	6.59	7.76	4.79	5.35	2.68							7.34
20						6.42	8.54	11.25	11.08	10.14	12.55	6.85	5.35	7.01	6.85	3.98	6.65	7.76	4.76	5.35	2.66							7.32
21						6.36	8.51	11.25	11.08	10.14	12.55	6.85	5.35	6.91	6.85	4.08	6.75	7.66	4.69	5.38	2.61							7.31
22						6.32	8.41	11.25	11.08	10.14	12.55	6.85	5.35	6.91	6.85	4.14	6.78	7.66	4.63	5.41	2.59							7.31
23						6.29	8.31	11.25	11.08	10.14	12.55	6.85	5.35	6.85	6.85	4.21	6.85	7.56	4.53	5.38	2.55							7.29
24						6.23	8.02	11.25	11.08	10.14	12.55	6.85	5.35	6.85	6.85	4.24	6.88	7.56	4.56	5.35	2.51							7.27
25						6.19	7.95	11.25	11.08	10.14	12.55	6.85	5.41	6.75	6.85	4.24	6.88	7.69	4.63	5.25	2.49							7.26
26						6.16	7.89	11.25	11.08	10.14	12.55	6.85	5.41	6.65	6.81	4.27	6.85	7.76	4.69	5.18	2.46							7.25
27						6.10	7.86	11.25	11.08	10.14	12.55	6.85	5.41	6.65	6.78	4.24	6.78	7.76	4.79	5.15	2.42							7.24
28						6.06	7.76	11.25	11.08	10.14	12.55	6.85	5.41	6.55	6.75	4.24	6.72	7.66	4.89	5.15	2.41							7.22
29						6.03	7.66	11.25	11.08	10.14	12.55	6.85	5.41	6.46	6.72	4.21	6.65	7.56	4.89	5.18	2.37							7.19
30						5.97	7.53	11.25	11.08	10.14	12.55	6.85	5.41	6.36	6.68	4.14	6.62	7.56	4.92	5.25	2.33							7.16
31						5.90	7.47	11.25	11.08	10.14	12.55	6.85	5.35	6.29	6.65	4.08	6.55	7.56	4.99	5.31	2.32							7.15
Feb 1						5.90	7.40	7.01	7.40	8.87	9.98	5.18	5.35	6.29	6.62	3.98	6.46	7.66	4.89	5.35	2.30							6.29
2						5.84	7.30	7.01	7.40	8.87	9.98	5.18	5.35	6.29	6.62	3.91	6.46	7.66	4.86	5.35	2.29							6.27
3						5.80	7.20	7.01	7.40	8.87	9.98	4.79	5.35	6.29	6.59	3.85	6.46	7.56	4.76	5.25	2.29							6.23
4						5.74	7.11	7.01	7.40	8.87	9.98	4.79	5.35	6.19	6.59	3.81	6.46	7.43	4.66	5.18	2.29							6.18
5						5.71	7.07	7.01	7.40	8.87	9.98	4.79	5.35	6.19	6.55	3.78	6.46	7.47	4.63	5.09	2.28							6.16
6						5.67	7.01	7.01	7.40	8.87	9.98	4.79	5.35	6.10	6.52	3.78	6.42	7.56	4.63	4.96	2.28							6.15
7						5.61	6.91	7.01	7.40	8.87	9.98	4.79	5.35	6.10	6.52	3.78	6.39	7.66	4.69	4.89	2.29							6.14
8						5.57	6.88	7.01	7.40	8.87	9.98	4.79	5.35	6.10	6.49	3.78	6.36	7.76	4.76	4.86	2.30							6.14
9						5.54	6.85	7.01	7.40	8.87	9.98	4.79	5.35	6.10	6.49	3.78	6.32	7.76	4.79	4.79	2.31							6.13
10						5.48	6.78	7.01	7.40	8.87	9.98	4.79	5.35	6.10	6.46	3.81	6.29	7.79	4.79	4.79	2.31							6.12
11						5.44	6.65	7.01	7.40	8.87	9.98	4.79	5.35	6.00	6.42	3.88	6.23	7.76	4.76	4.79	2.32							6.10
12						5.38	6.65	7.01	7.40	8.87	9.98	4.79	5.35	6.00	6.39	3.94	6.16	7.76	4.69	4.79	2.33							6.09
13						5.35	6.62	7.01	7.40	8.87	9.98	4.79	5.35	5.90	6.36	4.01	6.13	7.76	4.63	4.79	2.33							6.08
14						5.31	6.59	7.01	7.40	8.87	9.98	4.79	5.35	5.90	6.32	4.04	6.06	7.69	4.56	4.79	2.33							6.06
15						5.25	6.55	7.01	7.40	8.87	9.98	4.79	5.35	5.90	6.29	4.08	6.03	7.66	4.43	4.79	2.31							6.04
16						5.25	6.46	7.01	7.40	8.87	9.98	4.79	5.35	5.90	6.26	4.14	6.00	7.66	4.40	4.79	2.29							6.03
17						5.18	6.46	7.01	7.40	8.87	9.98	4.79	5.35	5.90	6.23	4.24	5.97	7.63	4.37	4.79	2.26							6.03
18						5.18	6.46	7.01	7.40	8.87	9.98	4.79	5.35	5.80	6.23	4.27	5.97	7.56	4.34	4.79	2.23							6.01
19						5.15	6.36	7.01	7.40	8.87	9.98	4.79	5.35	5.80	6.19	4.34	5.93	7.66	4.27	4.79	2.22							6.01
20						5.12	6.36	7.01	7.40	8.87	9.98	4.79	5.35	5.80	6.19	4.34	5.90	7.69	4.24	4.82	2.21							6.00
21						5.09	6.29	7.01	7.40	8.87	9.98	4.79	5.35	5.80	6.16	4.34	5.90	7.76	4.27	4.86	2.21							6.00
22						5.05	6.23	7.01	7.40	8.87	9.98	4.79	5.35	5.80	6.16	4.34	5.90	7.76	4.34	4.89	2.20							6.00
23						5.02	6.19	7.01	7.40	8.87	9.98	4.79	5.35	5.74	6.13	4.30	5.90	7.43	4.37	4.89	2.21							5.97
24						4.99	6.13	7.01	7.40	8.87	9.98	4.79	5.35	5.74	6.10	4.27	5.97	7.11	4.40	4.86	2.21							5.95
25						4.99	6.10	7.01	7.40	8.87	9.98	4.79	5.35	5.74	6.10	4.21	6.00	6.78	4.43	4.79	2.22							5.92
26						4.96	6.03	7.01	7.40	8.87	9.98	4.79	5.35	5.74	6.10	4.08	6.03	6.46	4.40	4.79	2.22							5.89
27						4.89	6.00	7.01	7.40	8.87	9.98	4.79	5.35	5.74	6.10	4.04	6.13	6.46	4.34	4.79	2.21							5.88
28						4.89	6.00	7.01	7.40	8.87	9.98	4.79	5.35	5.74	6.10	3.91	6.13	6.46	4.30	4.79	2.18							5.87
29							6.00				9.98				6.10				4.24									6.58
Mar 1						4.82	6.00	7.01	7.40	7.76	8.12	4.79	5.35	5.64	6.10	3.85	6.10	6.46	4.24	4.79	2.14							5.66
2						4.79	6.00	7.01	7.40	7.76	8.12	4.79	5.35	5.64	6.10	3.85	6.03	6.46	4.24	4.86	2.13							5.66
3						4.79	5.97	7.01	7.40	7.76	8.12	4.79	5.35	5.54	6.13	3.81	6.00	6.36	4.24	4.89	2.13							5.64
4						4.76	5.97	7.01	7.40	7.76	8.12	4.79	5.35	5.54	6.13	3.85	6.00	6.13	4.24	4.89	2.12							5.63
5						4.69	5.87	7.01	7.40	7.76	8.12	4.79	5.35	5.54	6.13	3.91	6.03	5.90	4.24	4.89	2.11							5.61
6						4.69	5.80	7.01	7.40	7.76	8.12	4.79	5.35	5.54	6.16	4.04	6.10	5.80	4.27	4.86	2.06							5.61
7						4.69	5.80	7.01	7.40	7.76	8.12	4.79	5.35	5.44	6.16	4.14	6.10	5.74	4.27	4.82	2.04							5.60
8						4.66	5.77	7.01	7.40	7.76	8.12	4.79	5.35	5.44	6.16	4.24	6.10	5.77	4.27	4.79	2.04							5.60
9						4.63	5.71	7.01	7.40	7.76	7.63	4.79	5.35	5.44	6.19	4.34	6.10	5.80	4.27	4.79	2.03							5.58
10						4.60	5.64	7.01	7.40	7.76	7.76	4.79	5.35	5.35	6.19	4.37	6.10	5.90	4.30	4.82	2.03							5.59
11						4.53	5.64	7.01	7.40	7.76	7.76	4.79	5.35	5.35	6.19	4.40	6.10	6.00	4.27	4.86	2.02							5.59
12						4.50	5.64	7.01	7.40	7.76	7.76	4.79	5.35	5.35	6.23	4.37	6.10	6.00	4.27	4.89	2.02							5.59
13						4.47	5.57	7.01	7.40	7.76	7.76	4.79	5.35	5.35	6.23	4.34	6.10	6.00	4.27	4.86	2.03							5.58
14						4.43	5.54	7.01	7.40	7.76	7.76	4.79	5.35	5.25	6.23	4.27	6.10	6.00	4.30	4.82	2.03							5.57
15						4.40	5.44	7.01	7.40	7.76	7.76	4.79	5.35	5.25	6.23	4.21	6.10	6.00	4.34	4.76	2.04							5.55
16						4.40	5.44	7.01	7.40	7.76	7.76	4.79	5.35	5.18	6.23	4.08	6.10	6.00	4.40	4.76	2.04							5.54
17						4.40	5.44	7.01	7.40	7.76	7.76	4.79	5.35	5.18	6.23	3.98	6.10	5.90	4.43	4.76	2.06							5.53
18						4.40	5.44	7.01	7.40	7.76	7.76	4.79	5.35	5.18	6.23	3.88	6.10	5.80	4.43	4.73	2.07							5.52
19						4.37	5.44	7.01	7.40	7.76	7.76	4.79	5.35	5.18	6.23	3.75	6.10	5.74	4.50	4.66	2.09							5.51
20						4.34	5.44	7.01	7.40	7.76	7.76	4.79	5.35	5.18	6.23	3.68	6.10	5.54	4.50	4.63	2.11							5.49
21						4.34	5.48	7.01	7.40	7.76	7.76	4.79	5.35	5.18	6.23	3.65	6.06	5.35	4.47	4.63	2.11							5.47
22						4.30	5.48	7.01	7.40	7.76	7.76	4.79	5.35	5.09	6.23	3.59	6.06	5.18	4.47	4.63	2.12							5.45
23						4.30	5.48	7.01	7.40	7.76	7.76	4.79	5.35	5.09	6.23	3.52	6.03	4.99	4.43	4.66	2.13							5.43
24						4.30	5.48	7.01	7.40	7.76	7.76	4.79	5.35	5.09	6.26	3.52	6.03	4.79	4.40	4.73	2.14							5.43
25						4.30	5.48	7.01	7.40	7.76	7.76	4.79	5.35	5.09	6.29	3.52	6.00	4.76	4.40	4.79	2.16							5.43
26						4.27	5.48	7.01	7.40	7.76	7.76	4.79	5.35	5.09	6.32	3.52	5.97	4.76	4.43	4.86	2.17							5.43
27						4.27	5.48	7.01	7.40	7.76	7.76	4.79	5.35	5.09	6.36	3.52	5.97	4.76	4.40	4.92	2.17							5.44
28						4.27	5.48	7.01	7.40	7.76	7.76	4.79	5.35	5.09	6.36	3.52	5.93	4.76	4.40	4.96	2.20							5.44
29						4.30	5.48	7.01	7.40	7.76	7.76	4.79	5.31	4.99	6.39	3.55	5.93	4.76	4.34	4.99	2.21							5.44
30						4.30	5.48	7.01	7.40	7.76	7.76	4.79	5.31	4.99	6.42	3.59	5.90	4.76	4.24	4.96	2.22							5.43
31						4.34	5.48	7.01	7.40	7.76	7.76	4.79	5.31	4.99	6.46	3.59	5.90	4.76	4.24	4.92	2.22							5.43
Apr 1							5.54	6.29	7.40	6.85	7.76	5.54	5.25	4.99	6.46	3.65	5.90	4.76	4.24	4.89	2.22				0.25	0.32	0.44	4.60
2							5.54	6.29	7.40	6.85	7.76	5.54	5.25	4.99	6.49	3.72	5.87	4.79	4.24	4.79	2.23				0.25	0.32	0.44	4.60
3							5.54	6.29	7.40	6.85	7.76	5.54	5.25	4.99	6.52	3.75	5.87	4.86	4.24	4.79	2.24				0.25	0.32	0.44	4.61
4							5.54	6.29	7.40	6.85	7.76	5.54	5.25	4.92	6.52	3.81	5.84	4.99	4.24	4.79	2.28				0.25	0.32	0.44	4.61
5							5.54	6.29	7.40	6.85	7.76	5.54	5.25	4.92	6.55	3.88	5.80	5.18	4.24	4.79	2.31				0.24	0.32	0.44	4.63
6							5.54	6.29	7.40	6.85	7.76	5.54	5.22	4.92	6.59	3.98	5.80	5.31	4.24	4.89	2.32				0.24	0.32	0.44	4.65
7							5.54	6.29	7.40	6.85	7.76	5.54	5.22	4.99	6.59	4.04	5.80	5.44	4.24	4.96	2.37				0.24	0.32	0.45	4.67
8							5.54	6.29	7.40	6.85	7.76	5.54	5.22	4.99	6.62	4.11	5.80	5.54	4.24	4.99	2.40				0.25	0.32	0.45	4.68
9							5.54	6.29	7.40	6.85	7.76	5.54	5.18	4.99	6.62	4.21	5.80	5.64	4.21	4.99	2.45				0.25	0.32	0.45	4.69
10							5.54	6.29	7.40	6.85	7.76	5.54	5.18	4.99	6.65	4.24	5.80	5.74	4.17	4.99	2.49				0.25	0.33	0.45	4.70
11							5.54	6.29	7.40	6.85	7.76	5.54	5.25	4.99	6.68	4.37	5.80	5.77	4.17	5.02	2.58				0.24	0.33	0.44	4.72
12							5.57	6.29	7.40	6.85	7.76	5.54	5.35	4.99	6.72	4.47	5.77	5.80	4.17	5.02	2.61				0.24	0.33	0.44	4.74
13							5.57	6.29	7.40	6.85	7.76	5.54	5.44	4.99	6.75	4.63	5.77	5.84	4.14	5.05	2.70				0.24	0.33	0.44	4.76
14							5.64	6.29	7.40	6.85	7.76	5.54	5.54	4.99	6.78	4.76	5.74	5.87	4.14	5.09	2.78				0.24	0.34	0.44	4.79
15							5.74	6.29	7.40	6.85	7.76	5.54	5.64	4.99	6.85	4.92	5.74	5.90	4.21	5.12	2.88				0.24	0.34	0.45	4.82
16							5.87	6.29	7.40	6.85	7.76	5.54	5.74	4.99	6.91	5.09	5.80	6.00	4.21	5.15	3.01				0.24	0.34	0.45	4.87
17							6.00	6.29	7.40	6.85	7.76	5.54	5.90	4.99	6.98	5.25	5.90	6.10	4.21	5.15	3.14				0.24	0.34	0.45	4.92
18							6.19	6.29	7.40	6.85	7.76	5.54	6.00	4.99	7.04	5.44	6.10	6.29	4.21	5.18	3.25				0.23	0.35	0.45	4.98
19							6.42	6.29	7.40	6.85	7.76	5.54	6.19	5.09	7.14	5.74	6.29	6.55	4.21	5.31	3.42				0.23	0.35	0.45	5.07
20							6.91	6.29	7.40	6.85	7.76	5.54	6.29	5.18	7.20	5.97	6.55	6.85	4.21	5.44	3.65				0.23	0.35	0.45	5.17
21							7.40	6.29	7.40	6.85	7.76	6.00	6.32	5.35	7.27	6.19	6.98	6.91	4.24	5.54	3.91				0.23	0.35	0.45	5.30
22							7.95	6.29	7.40	6.85	7.76	8.31	6.46	5.74	7.34	6.46	7.40	7.01	4.24	5.80	4.11				0.23	0.35	0.45	5.56
23							8.87	6.29	7.40	6.85	7.76	8.31	6.55	6.10	7.43	6.91	8.22	7.11	4.24	6.03	4.40				0.23	0.36	0.45	5.75
24							9.78	6.29	7.40	6.85	7.76	8.31	6.65	6.46	7.50	7.20	7.20	7.20	4.24	6.29	4.63				0.23	0.37	0.45	5.82
25							10.63	6.29	7.40	6.85	7.76	8.31	6.85	7.01	7.56	7.60	8.02	7.40	4.24	6.65	5.18				0.23	0.38	0.45	6.04
26							12.29	6.29	7.40	6.85	7.76	8.31	6.98	8.02	7.73	8.02	8.87	8.02	4.24	6.98	5.35				0.23	0.39	0.46	6.34
27							13.86	6.29	7.40	6.85	7.76	8.31	7.11	9.23	7.86	8.51	9.68	8.67	4.27	7.40	5.74				0.23	0.39	0.45	6.67
28							16.24	6.29	7.40	6.85	7.76	8.31	7.30	10.79	8.02	9.13	10.53	9.42	4.34	7.95	6.19				0.24	0.39	0.45	7.09
29							18.45	6.29	7.40	6.85	7.76	8.31	7.40	12.65	8.15	9.68	11.35	11.25	4.40	8.67	6.68				0.24	0.40	0.45	7.58
30							23.08	6.29	7.40	6.85	7.76	8.31	7.66	14.31	8.31	10.53	12.19	13.40	4.53	9.52	7.20				0.24	0.42	0.45	8.25
May 1		6.46		11.25	29.54		36.84	6.36	7.40	6.85	7.76	8.31	7.95	16.63	8.41	11.44	13.01	14.77	4.63	11.54	7.76				0.25	0.46	0.44	10.38
2		6.85		12.00	30.45		55.42	6.55	7.40	6.85	7.76	8.31	8.31	19.40	8.87	12.55	13.86	17.74	4.76	14.77	8.31				0.25	0.48	0.45	11.97
3		7.30		12.55	31.39		70.09	6.91	7.40	6.85	7.76	8.31	8.67	22.63	8.41	13.86	14.77	19.56	4.89	17.74	9.06				0.25		0.45	13.94
4		7.95		13.40	31.39		88.68	7.20	7.40	6.85	7.76	8.31	9.06	25.85	8.77	15.52	15.68	23.99	5.25	22.17	9.98				0.25		0.46	15.80
5		8.57		15.06	32.31		107.91	8.22	7.40	6.85	7.76	8.31	9.23	29.99	9.23	17.44	16.63	26.77	5.74	27.71	10.89			112.47	0.26		0.47	22.34
6		9.23		16.07	33.25		130.08	9.23	7.40	48.58	7.76	8.31	13.86	35.21	9.68	20.31	17.64	31.39	7.40	33.58	12.10			76.94	0.26		0.49	25.18
7		10.14		17.08	34.23		136.60	10.53	7.40	48.58	7.76	8.31	21.22	40.75	10.14	24.29	18.65	35.86	10.14	40.75	13.40			102.37	0.29		0.49	28.52
8		11.08		18.45	35.86		162.35	12.91	7.76	48.58	7.76	8.31	32.31	46.62	10.63	30.09	20.11	41.40	13.86	49.88	14.87			109.87	0.30		0.50	32.55
9		12.45		19.85	40.75		176.37	15.68	9.06	48.58	7.76	55.42	46.29	54.44	12.75	39.77	21.61	47.92	18.45	55.75	17.18			122.91		0.48	0.51	39.24
10		13.86		21.61	43.69		188.43	20.31	11.54	48.58	7.76	55.42	83.13	63.57	15.68	45.64	23.64	53.47	27.71	61.62	19.40			129.10	0.36	0.49	0.53	42.52
11		15.52		23.44	50.21		193.00	24.45	15.68	48.58	7.76	55.42	129.10	73.03	21.22	56.73	26.11	62.92	38.80	66.83	22.23			121.93	0.39	0.48	0.56	47.93
12		17.34		25.85	47.92		196.59	29.08	19.40	48.58	7.76	55.42	147.68	83.13	27.71	68.46	41.73	74.00	47.92	70.74	25.01	0.68		109.87	0.42	0.47	0.62	49.84
13		19.85		29.54	47.60		192.02	34.23	22.72	48.58	7.76	55.42	203.11	96.83	36.84	80.20	71.07	86.39	66.51	75.63	29.54	0.78		106.93	0.42	0.47	0.71	57.09
14		23.99		34.23	46.95	42.71	182.89	40.75	30.94	48.58	7.76	55.42	239.94	115.41	46.29	89.98	124.54	119.97	92.26	85.09	34.23		0.70	113.45	0.43	0.49	0.82	65.74
15		29.54		39.12	47.60	79.87	166.27	56.07	40.75	48.58	7.76	55.42	221.69	133.01	64.55	99.76	143.12	118.99	95.85	114.43	41.40			113.45	0.44	0.50	0.89	74.74
16		36.84		43.36	53.79	100.74	153.23	76.94	53.47	48.58	16.63	55.42	193.98	127.47	59.33	107.91	174.42	116.39	95.20	178.33	53.47	0.86	0.60	122.91	0.45	0.51	0.86	74.87
17		53.14		58.68	65.20		147.68	110.84	67.48	175.39	16.63	55.42	166.27	143.12	60.31	110.84	193.98	139.53	92.26	238.97	63.90	0.81		132.03	0.48	0.51	0.96	91.06

18		105.30		140.19	70.09		147.68	162.35	79.55	186.48	16.63	55.42	157.79	151.27	70.42	118.02	187.46	158.77	103.35	274.18	90.31	0.77	0.70	144.10	0.55	0.49	0.91	100.95
19		118.99		195.61	75.31		155.18	211.26	101.39	208.65	16.63	55.42	160.72	142.14	106.28	124.54	178.33	163.33	100.74	276.13	107.91	0.75			0.66	0.48	0.99	113.70
20		109.87		205.06	84.44		167.24	240.92	122.91	236.36	16.63	55.42	159.75	134.64	145.08	127.47	170.83	186.48	122.91	244.51	131.06	0.73			0.76	0.48	1.03	121.12
21		115.41		262.11	107.91		178.33	243.86	151.27	265.05	16.63	55.42	149.64	141.16	205.71	124.54	167.24	210.60	184.52	211.26	152.25	0.73	0.80	207.67	0.82	0.48	0.96	131.43
22		115.41	221.69	335.79	138.56		181.91	232.77	168.87	302.87	16.63	75.63	137.58	152.25	270.59	126.49	166.27	246.46	244.51	200.17	177.35	0.72	0.84	217.78	0.86	0.50	0.88	149.34
23		120.95	260.48	378.17	151.27		192.02	224.30	197.56	345.57	16.63	100.74	129.10	167.90	311.02	143.12	171.81	260.48	257.55	188.43	206.69	0.72	0.86	217.78	0.91	0.53	0.83	161.82
24		126.49	261.14	397.73	153.23		197.56	233.42	248.42	378.17	67.16	115.41	119.97	181.91	307.43	167.24	179.96	238.31	246.46	169.85	224.30	0.72	0.88	223.32	0.95	0.59	0.80	169.66
25		140.19	260.48	397.73	160.72		210.60	274.18	305.47	391.21	68.14	123.56	109.87	190.06	284.28	197.56	183.87	222.34	219.73	162.35	252.99	0.73	0.89	219.73	1.00	0.67	0.82	175.17
26		155.18	258.53	397.73	175.39		227.88	332.53	352.09	384.69	71.40	135.62	99.76	199.52	280.70	212.23	168.87	226.25	204.08	174.42	279.72	0.76	0.89	269.61	1.02	0.77	0.89	184.42
27		145.08	256.57	391.21	192.02		228.86	368.39	397.73	326.01	74.66	154.20	94.22	209.63	292.76	203.11	154.20	243.86	217.78	195.61	302.87	0.80	0.85	335.79	1.00	0.83	1.01	191.56
28		141.16	255.59	381.43	184.52		205.06	378.17	440.12	268.63	95.85	171.81	94.22	219.73	292.76	169.85	145.08	252.99	279.72	219.73	286.24	0.85	0.84	339.05	0.96	0.87	1.13	193.06
29		133.99	248.42	316.56	175.39	216.80	193.00	378.17	466.20	234.40	117.36	198.54	97.80	244.51	277.76	144.10	145.73	247.44	365.13	252.99	242.88	0.91	0.81	311.02	0.94	0.91	1.23	192.81
30		124.54	246.46	311.99	166.27	213.21	191.04	381.43	479.24	214.19	161.70	229.84	105.30	288.85	260.48	129.10	152.25	243.86	433.60	254.94	215.17	0.96	0.77	286.24	0.92	0.94	1.30	195.95
31		117.36	243.86	275.15	156.81	209.63	191.04	361.87	495.54	197.56	209.63	261.14	116.39	352.09	254.94	130.08	156.81	243.86	505.32	228.86	212.23	1.01	0.77	289.82	0.92	0.96	1.36	200.58
Jun 1		111.82	228.86	279.72	147.68	199.52	188.43	345.57	489.02	187.46	268.63	289.82	131.06	420.56	261.14	134.64	160.72	238.97	560.74	204.08	215.17	1.05	0.77	288.85	0.92	0.97	1.38	206.06
2		118.99	225.27	280.70	143.12	194.63	192.02	355.35	469.46	177.35	329.27	304.50	149.64	469.46	262.11	145.73	163.33	254.94	544.44	218.75	213.21	1.10	0.77	290.80	0.92	0.96	1.35	211.85
3		120.95	208.65	280.70	140.19	205.71	199.52	358.61	446.64	170.83	394.47	304.50	173.44	466.20	264.07	160.72	167.24	277.76	498.80	252.99	238.97	1.12	0.78	283.30	0.91	0.95	1.30	216.13
4		126.49	202.13	281.67	144.10	226.25	210.60	365.13	423.82	169.85	456.42	302.87	194.63	436.86	266.03	160.72	187.46	282.65	449.90	272.22	269.61	1.14	0.81	269.61	0.90	0.94	1.27	219.39
5		135.62	206.69	284.28	147.68	242.88	214.19	368.39	420.56	174.42	511.84	285.26	213.21	410.77	267.66	156.16	224.30	268.63	335.79	263.09	291.78	1.16	0.87	257.55	0.88	0.94	1.23	218.69
6		141.16	232.77	286.24	152.25	249.40	205.06	365.13	423.82	178.98	564.00	252.01	237.34	378.17	266.68	167.24	277.76	252.99	293.41	240.92	276.13	1.15	0.86	238.97	0.82	0.95	1.17	218.67
7		139.53	258.53	292.76	156.81	252.01	201.15	371.65	423.82	177.35	655.28	220.71	252.01	358.61	263.09	183.87	332.53	248.42	268.63	229.84	240.92	1.10	0.84	215.17	0.78	0.98	1.09	221.06
8		139.53	296.34	291.78	161.70	257.55	205.06	384.69	400.99	178.33	635.72	202.13	257.55	339.05	260.48	193.00	332.53	252.01	271.57	228.86	208.65	1.04	0.83	205.06	0.76	1.03	1.01	219.51
9		166.27	318.51	295.37	164.31	274.18	206.69	417.30	394.47	174.42	609.64	193.98	258.53	322.10	259.51	200.17	279.72	266.68	267.66	237.34	184.52	1.00	0.84		0.74	1.08	0.96	219.84
10		185.50	329.27	298.95	156.81	279.72	205.06	462.94	433.60	180.94	567.26	197.56	264.07	291.78	254.94	209.63	228.86	275.15	287.87	256.57	167.90	0.98	0.85		0.73	1.11	0.93	221.56
11		225.27	300.91	299.93	156.81	272.22	204.08	485.76	440.12	185.50	544.44	205.06	269.61	270.59	253.96	213.21	196.59	283.30	313.95	261.14	156.16	0.96	0.87		0.73	1.14	0.92	221.73
12		245.49	277.11	299.93	147.68	268.63	195.61	469.46	430.34	186.48	518.36	206.69	272.22	261.14	255.59	211.26	175.39	296.34	335.79	261.14	151.27	0.93	0.86		0.74	1.16	0.89	218.82
13		263.09	269.61	286.24	138.56	257.55	189.09	417.30	410.77	190.06	508.58	194.63	272.22	246.46	252.99	206.69	165.29	292.76	345.57	258.53	161.70	0.90	0.84		0.75	1.15	0.88	213.29
14		235.38	267.66	284.28	129.10	260.48	193.98	365.13	407.51	212.23	498.80	176.37	268.63	224.30	246.46	196.59	158.77	274.18	339.05	247.44	178.98	0.87	0.83		0.75	1.16	0.88	206.79
15		205.06	268.63	264.07	119.97	262.11	193.00	314.93	420.56	243.86	482.50	160.72	272.22	211.26	229.84	187.46	157.79	240.92	332.53	232.77	183.87	0.85	0.82		0.73	1.17	0.87	199.54
16		189.09	267.66	241.90	108.89	257.55	190.06	273.20	430.34	260.48	443.38	148.66	276.13	207.67	219.73	178.33	152.25	216.80	315.58	219.73	184.52	0.84	0.81		0.70	1.17	0.86	191.45
17		183.87	266.68	188.43	113.45	246.46	189.09	246.46	472.72	245.49	400.99	141.16	276.13	208.65	211.26	167.24	147.68	203.11	293.41	210.60	186.48	0.85	0.80		0.67	1.11	0.84	184.15
18		186.48	252.01	160.72	112.47	224.30	193.98	224.30	515.10	229.84	358.61	138.56	269.61	216.15	205.71	157.79	138.56	199.52	270.59	204.08	198.54	0.87	0.79		0.66	1.04	0.82	178.44
19		192.02	238.31	163.33	97.80	205.06	212.23	205.06	505.32	225.27	325.03	134.64	256.57	219.73	202.13	143.12	132.03	201.15	245.49	196.59	232.77	0.89	0.77		0.66	0.99	0.80	173.51
20		197.56	230.82	173.44	96.83	187.46	224.30	195.61	475.98	221.69	298.95	126.49	244.51	221.69	198.54	130.08	128.45	205.06	228.86	183.87	237.34	0.92	0.76		0.66	0.97	0.78	168.46
21		207.67	222.34	187.46	90.96	171.81	229.84	185.50	449.90	217.78	283.30	118.02	228.86	221.69	193.00	118.99	124.54	205.06	228.86	173.44	229.84	0.91	0.77		0.68	0.94	0.76	163.72
22		226.25	223.32	197.56	83.79	159.75	225.27	192.02	440.12	229.84	272.22	109.87	215.17	220.71	190.06	106.28	122.91	202.13	220.71	166.27	210.60	0.90	0.78		0.72	0.93	0.74	160.76
23		238.97	227.88	206.69	79.55	153.23	218.75	208.65	430.34	252.99	276.13	104.32	204.08	215.17	190.06	95.20	119.97	195.61	205.71	158.77	198.54	0.88	0.79		0.74	0.91	0.72	159.39
24		260.48	233.42	211.26	75.31	147.68	218.75	193.00	427.08	264.07	274.18	102.37	193.00	207.67	196.59	85.42	120.95	197.56	195.61	149.64	182.89	0.86	0.79		0.76	0.90	0.71	157.64
25		276.13	221.69	190.06	73.03	144.10	210.60	175.39	446.64	262.11	260.48	101.39	181.91	199.52	198.54	76.29	127.47	213.21	182.89	143.12	166.27	0.83	0.79		0.76	0.88	0.70	154.19
26		298.30	194.63	178.33	72.05	142.14	203.11	167.90	453.16	249.40	239.94	99.76	172.79	186.48	191.04	67.48	129.10	216.15	172.79	137.58	149.64	0.81	0.78		0.73	0.87	0.68	149.02
27		298.95	181.91	171.81	72.05	142.14	193.98	171.81	414.04	229.84	234.40	102.37	166.27	178.33	186.48	60.96	129.10	205.06	185.50	130.08	135.62	0.80	0.79		0.71	0.84	0.67	143.78
28		304.50	173.44	158.77	72.05	139.53	186.48	172.79	374.91	217.78	227.88	104.32	166.27	181.91	194.63	55.75	123.56	193.00	241.90	124.54	125.51	0.80	0.78		0.71	0.82	0.66	141.73
29		305.47	173.44	159.75	72.05	139.53	186.48	178.98	335.79	204.08	211.26	106.93	169.85	184.52	206.69	51.51	115.41	176.37	306.45	121.93	119.97	0.81	0.76		0.71	0.79	0.64	141.21
30		306.45	175.39	160.72	72.05	149.64	195.61	174.42	293.41	194.63	193.00	110.84	169.85	196.59	203.11	48.90	108.89	157.79	355.35	123.56	114.43	0.81			0.71	0.77	0.63	146.15
Jul 1	96.83	345.57	177.35	153.23	66.51	152.25	193.00	164.31	268.63	190.06	176.37	115.41	166.27	218.75	197.56	46.29	108.89	141.16	348.83	125.51	107.91	0.81			0.73	0.74	0.62	142.54
2	96.83	345.57	159.75	142.14	65.53	150.62	185.50	155.18	252.99	187.46	167.24	118.99	160.72	215.17	192.02	44.99	106.93	125.51	284.28	126.49	99.76	0.80			0.78	0.74	0.62	135.46
3	97.80	345.57	140.19	143.12	64.55	143.12	177.35	144.10	238.31	184.52	157.79	121.93	152.25	194.63	178.98	46.29	104.32	112.47	238.31	128.45	93.24	0.79			0.79	0.81	0.60	128.41
4	97.80	311.99	130.08	144.10	72.70	137.58	163.33	136.60	220.71	180.94	149.64	124.54	141.16	175.39	166.27	48.90	104.32	103.35	215.17	136.60	89.00	0.77			0.78	0.89	0.58	122.13
5	97.80	288.85	121.93	145.73	69.11	127.47	149.64	128.45	206.69	178.98	143.12	124.54	132.03	161.70	156.16	56.07	109.87	97.80	191.04	134.64	84.11	0.74			0.76	0.89	0.57	116.35
6	94.22	274.18	115.41	148.66	66.83	122.91	135.62	121.93	205.06	175.39	138.56	120.95	127.47	149.64	147.68	64.88	109.87	95.20	170.83	130.08	79.55	0.74			0.73	0.86	0.56	111.91
7	90.63	242.88	106.93	150.62	68.79	116.39	126.49	116.39	205.71	173.44	133.99	117.36	124.54	140.19	154.20	69.77	125.51	90.96	155.18	123.56	76.61	0.74			0.71	0.81	0.54	108.52
8	87.37	243.86	100.74	150.62	80.52	110.84	116.39	112.47	205.06	169.85	131.06	112.47	120.95	129.10	167.24	76.94	130.08	88.02	142.14	117.36	74.33	0.72			0.69	0.77	0.53	106.81
9	85.09	230.82	93.24	147.68	80.52	103.35	109.87	107.91	199.52	168.87	129.10	109.87	115.41	122.91	162.35	80.52	121.93	84.11	133.99	109.87	72.05	0.69			0.66	0.74	0.51	102.86
10	86.07	214.19	89.33	142.14	67.81	107.91	103.35	105.30	192.02	166.27	133.01	106.93	111.82	115.41	154.20	81.18	114.43	81.18	124.54	106.28	71.07	0.66			0.64	0.72	0.50	99.08
11	110.84	195.61	83.13	132.03	66.83	103.35	97.80	100.74	182.89	156.81	148.66	103.35	109.87	109.87	145.73	83.79	107.91	76.29	117.36	103.35	70.09	0.64			0.62	0.72	0.50	96.35
12	128.45	173.44	80.52	120.95	62.92	99.76	90.96	97.80	170.83	151.27	193.98	100.74	107.91	107.91	149.64	88.68	105.30	73.68	109.87	97.80	71.07	0.62			0.60	0.72	0.51	95.44
13	133.01	166.27	83.79	111.82	62.59	90.63	85.09	102.37	163.33	138.56	212.23	97.80	104.32	106.93	158.77	163.33	102.37	73.03	102.37	93.24	73.35	0.64			0.58	0.74	0.51	97.11
14	134.64	153.23	87.05	101.39	61.62	86.39	82.48	110.84	152.25	135.62	193.98	94.22	97.80	104.32	162.35	267.66	100.74	73.35	95.85	90.96	73.35	0.65			0.55	0.75	0.50	98.50
15	135.62	144.10	82.48	111.82	61.94	85.42	82.81	124.54	146.71	138.56	176.37	89.98	91.94	101.39	159.75	283.30	96.83	74.98	89.65	87.70	73.35	0.64			0.54	0.75	0.48	97.67
16	131.06	139.53	76.94	113.45	64.55	83.79	77.26	133.99	140.19	133.99	161.70	86.07	87.37	103.35	154.20	244.51	92.26	77.92	84.76	91.94	70.09	0.63			0.53	0.74	0.47	94.05
17	121.93	140.19	72.70	114.43	64.22	82.48	74.66	132.03	139.53	126.49	147.68	83.46	82.15	102.37	151.27	201.15	87.37	80.20	81.18	103.35	67.48	0.61			0.55	0.73	0.46	90.35
18	110.84	144.10	69.11	112.47	61.94	80.85	74.66	126.49	138.56	118.99	137.58	89.33	78.24	97.80	150.62	167.90	83.79	82.48	78.89	102.37	64.88	0.60			0.59	0.72	0.45	86.97
19	99.76	144.10	70.74	95.85	61.62	76.29	72.70	118.02	135.62	116.39	133.99	107.91	76.94	95.85	145.08	146.71	81.18	87.70	75.63	100.74	62.59	0.59			0.62	0.74	0.45	84.31
20	101.39	143.12	75.63	88.68	60.31	74.98	77.59	110.84	133.99	118.02	134.64	123.56	75.63	92.26	137.58	128.45	85.42	85.74	73.03	95.85	61.62	0.58			0.64	0.74	0.45	83.23
21	103.35	133.99	76.94	86.72	57.70	69.11	84.11	103.35	129.10	122.91	145.73	134.64	74.98	87.05	126.49	112.47	138.56	80.52	72.05	91.61	60.96	0.59			0.66	0.72	0.46	83.79
22	118.99	125.51	82.48	89.00	55.42	68.79	88.68	98.78	124.54	128.45	158.77	133.01	72.70	82.48	118.99	100.74	253.96	75.63	86.39	87.05	60.96	0.64			0.67	0.70	0.49	88.55
23	142.14	120.95	79.55	100.74	46.29	67.48	90.96	94.22	121.93	132.03	179.96	129.10	68.46	79.55	110.84	90.63	293.41	71.07	106.28	84.11	60.96	0.68			0.66	0.68	0.53	90.93
24	148.66	109.87	83.79	101.39	45.32	66.51	95.85	89.98	118.02	132.03	187.46	127.47	63.90	76.94	102.37	85.09	271.57	66.51	105.30	80.20	60.64	0.69			0.65	0.65	0.55	88.86
25	149.64	100.74	82.48	104.32	41.73	67.81	95.85	82.48	112.47	126.49	183.87	124.54	60.96	74.66	95.85	79.22	232.77	62.92	108.89	76.29	60.31	0.69			0.63	0.63	0.54	85.07
26	144.10	95.20	80.20	96.83	42.06	67.81	96.83	76.29	108.89	119.97	166.27	122.91	59.66	73.35	89.33	77.26	199.52	60.64	111.82	73.68	64.88	0.67			0.60	0.61	0.53	81.20
27	134.64	89.65	76.29	96.83	38.80	67.81	101.39	71.40	104.32	112.47	153.23	128.45	58.03	74.66	83.46	79.22	180.94	58.36	115.41	72.05	70.74	0.65			0.58	0.60	0.51	78.82
28	123.56	89.00	74.33	86.72	35.86	69.11	115.41	67.16	104.32	106.93	135.62	132.03	55.42	77.92	79.87	86.72	173.44	54.44	111.82	70.09	74.00	0.62			0.59	0.58	0.50	77.04
29	114.43	83.13	70.74	83.79	35.21	69.11	137.58	62.59	103.35	100.74	127.47	128.45	54.44	84.11	77.59	93.24	162.35	52.81	120.95	69.44	74.66	0.60			0.62	0.57	0.49	76.34
30	106.28	79.55	70.42	76.61	33.25	83.79	141.16	58.68	98.78	94.22	119.97	120.95	54.12	90.96	77.26	92.26	148.66	49.23	132.03	68.46	73.03	0.57			0.66	0.55	0.47	74.88
31	101.39	77.59	67.81	72.05	30.45	82.48	136.60	55.75	95.20	88.02	118.99	112.47	55.10	95.20	77.92	89.98	134.64	46.95	143.12	66.51	72.70	0.55			0.68	0.54	0.46	72.93
Aug 1	97.80	74.33	64.55	68.14	27.71	81.50	128.45	53.47	92.26	83.13	121.93	104.32	56.40	100.74	77.92	89.33	121.93	44.99	143.12	64.22	71.72	0.53			0.67			76.92
2	97.80	74.33	62.59	64.88	26.11	83.79	118.02	52.16	93.24	80.20	125.51	96.83	57.70	100.74	86.72	92.26	111.82	44.01	133.99	61.62	71.40	0.51			0.66			75.52
3	92.26	73.35	59.99	61.29	25.75	89.00	111.82	50.86	93.24	80.85	126.49	89.65	56.40	97.80	105.30	95.85	102.37	42.06	124.54	59.66	72.05	0.50			0.64			74.42
4	89.65	73.35	55.10	58.68	27.16	91.94	102.37	49.55	90.63	83.79	127.47	83.46	54.77	94.22	118.99	93.24	95.85	40.75	118.02	59.01	72.70	0.48			0.62			73.12
5	84.11	74.00	54.12	58.03	29.28	91.28	95.85	49.55	88.02	84.76	127.47	77.59	53.47	90.63	127.47	88.35	89.65	41.40	111.82	60.96	81.50	0.47			0.60			72.19
6	82.81	74.98	53.14	57.05	29.83	88.68	92.26	48.25	85.09	84.44	133.01	72.05	53.47	85.74	130.08	81.50	83.79	41.08	106.28	76.29	94.22	0.46			0.58			71.96
7	79.87	76.29	51.18	56.73	34.23	92.26	87.05	47.27	84.11	81.83	139.53	69.11	51.84	80.52	126.49	77.92	77.59	40.43	103.35	94.22	100.74	0.45			0.55			71.89
8	76.61	76.94	50.86	56.40	35.86	117.36	80.85	46.29	83.13	77.26	141.16	65.53	50.21	75.96	119.97	79.22	73.03	40.10	104.32	90.96	102.37	0.45			0.53			71.54
9	73.03	84.44	48.25	53.47	42.71	133.99	75.63	48.58	81.50	75.96	141.16	63.57	48.58	72.70	111.82	81.50	70.42	39.12	109.87	87.05	101.39	0.44			0.51			71.55
10	69.11	107.91	48.25	50.53	46.95	133.99	72.70	48.58	80.20	74.00	145.08	60.96	48.25	68.46	102.37	85.42	72.37	37.49	107.91	82.48	99.76	0.44			0.50			71.47
11	66.18	145.73	48.25	48.90	54.77	133.01	71.40	46.95	76.94	75.31	149.64	59.99	47.92	65.20	94.22	86.39	77.92	36.51	105.30	77.26	99.76	0.45			0.50			72.54
12	63.57	164.31	46.95	48.58	55.42	126.49	70.09	45.64	76.29	80.52	146.71	58.03	49.23	64.22	86.72	88.68	84.44	35.86	99.76	73.03	98.78	0.46			0.53			72.36
13	60.31	165.29	45.32	46.29	56.07	117.36	66.83	45.97	77.26	79.87	141.16	57.38	49.88	69.77	80.52	91.94	94.22	35.54	93.24	70.09	95.20	0.48			0.57			71.33
14	56.40	164.31	44.34	43.36	49.88	97.80	64.22	47.27	74.00	77.59	133.99	55.75	49.88	80.20	75.31	92.26	93.24	36.51	86.39	70.09	89.65	0.50			0.59			68.85
15	54.44	160.72	42.38	42.06	47.92	106.28	62.59	52.16	70.09	74.66	134.64	54.44	48.90	78.24	70.42	95.20	90.63	36.19	80.85	76.29	85.09	0.50			0.58			68.06
16	52.49	160.72	41.73	41.40	42.71	103.35	61.62	56.40	65.53	70.42	144.10	51.84	46.62	75.31	65.85	98.78	89.33	36.84	76.61	85.42	80.52	0.49			0.57			67.33
17	50.86	156.81	39.77	39.12	44.34	105.30	62.92	64.22	62.92	65.53	148.66	50.86	44.99	72.70	63.25	105.30	89.65	38.47	73.35	94.22	76.94	0.48			0.56			67.44
18	52.16	146.71	37.17	38.14	48.25	109.87	69.44	71.40	61.62	61.29	146.71	48.90	43.69	69.44	61.94	112.47	100.74	41.08	70.74	96.83	74.66	0.46			0.56			68.01
19	55.75	134.64	33.91	37.17	72.70	95.20	80.85	70.74	64.88	58.03	142.14	46.95	43.03	65.85	64.22	113.45	115.41	44.99	68.14	96.83	73.35	0.45			0.56			68.66
20	64.55	121.93	32.93	36.19	86.07	109.87	84.76	67.16	66.51	55.10	137.58	45.64	40.75	61.29	69.11	115.41	115.41	47.60	67.16	100.74	72.05	0.44			0.57			69.51
21	66.51	118.02	32.60	35.21	87.05	109.87	89.33	62.92	64.55	53.47	133.01	44.34	40.75	58.03	73.03	125.51	112.47	47.92	67.16	103.35	71.40	0.44			0.59			69.46
22	66.51	115.41	32.93	34.23	86.07	117.36	95.20	58.36	62.59	53.14	128.45	43.36	38.47	55.42	74.98	137.58	106.93	47.27	64.22	103.35	72.70	0.44			0.62			69.37
23	65.20	109.87	32.93	32.41	81.18	121.93	98.78	54.44	60.96	54.12	125.51	42.06	38.14	52.49	75.31	148.66	102.37	49.55	61.29	103.35	74.98	0.43			0.65			68.98
24	67.48	100.74	33.58	31.75	75.96	118.99	97.80	50.86	64.22	52.49	122.91	41.40	37.17	50.86	74.98	152.25	97.80	49.55	60.31	101.39	77.92	0.43			0.67			67.89
25	65.20	92.26	33.58	31.56	72.05	115.41	93.24	49.23	67.16	50.86	118.99	39.77	37.17	48.58	73.03	147.68	95.20	50.53	58.03	98.78	82.15	0.42			0.68			66.15
26	62.92	87.37	34.23	30.19	69.11	109.87	87.37	47.92	74.00	49.23	114.43	39.12	36.51	47.60	72.05	139.53	93.24	49.55	56.07	97.80	81.50	0.41			0.67			64.38
27	60.31	80.52	36.51	28.98	68.14	101.39	81.83	47.92	80.85	48.90	116.39	38.80	36.51	47.60	69.11	133.01	90.63	48.58	54.77	100.74	79.55	0.41			0.66			63.14
28	58.03	74.33	38.80	28.07	64.88	99.76	76.61	48.25	82.15	48.25	132.03	38.80	36.51	47.27	66.83	128.45	87.05	47.60	53.79	106.28	76.94	0.41			0.64			62.68
29	54.44	69.11	40.10	26.86	65.85	95.20	72.70	54.77	82.81	47.27	150.62	40.75	36.84	50.21	64.55	123.56	82.81	45.97	52.81	110.84	74.00	0.40			0.62			62.74
30	56.40	64.22	41.73	26.31	74.00	91.28	69.44	61.29	82.15	45.97	159.75	44.34	33.91	54.44	61.94	118.99	78.24	44.34	52.16	112.47	70.74	0.40			0.61			62.83
31	56.07	59.66	47.60	24.74	74.98	88.02	67.81	64.88	78.57	44.34	158.77	51.84	33.25	53.79	60.31	112.47	74.98	42.71	51.51	110.84	66.83	0.39			0.60			61.96
Sep 1	55.75	58.36	65.20	24.39	70.74	83.13	64.88	69.11	75.31	43.03	154.20	64.55	32.50	52.81	59.33	106.28	72.37	40.75	50.86	106.93	63.90	0.39			0.58			61.54
2	55.75	57.70	72.70	23.64	69.44	80.85	61.62	73.35	73.35	41.73	150.62	83.13	31.95	52.49	59.33	104.32	69.77	39.12	50.21	103.35	60.64	0.38						64.34
3	53.47	56.40	74.66	22.89	66.18	79.22	60.64	74.66	70.09	40.43	146.71	89.00	31.30	54.12	59.66	106.28	67.81	37.82	48.90	99.76	58.68	0.39						63.59
4	50.86	54.44	74.66	22.53	64.88	77.92	60.31	74.66	66.83	38.80	140.19	89.00	31.20	58.03	60.31	112.47	66.18	36.84	47.60	97.80	58.03	0.39						62.91
5	48.58	51.51	71.40	20.11	60.31	74.98	62.92	76.61	63.57	38.80	133.01	86.72	31.85	60.96	61.94	117.36	65.53	36.84	47.27	97.80	56.40	0.39						62.04
6	45.64	50.53	66.83	20.51	57.05	72.05	67.81	74.66	61.94	38.14	129.10	83.13	33.25	62.92	65.20	119.97	66.18	36.84	48.58	100.74	54.77	0.39						61.65
7	43.03	48.90	66.83	20.51	58.03	69.77	72.05	71.07	59.66	38.80	123.56	79.55	34.56	65.20	75.31	117.36	68.46	36.84	49.23	101.39	52.49	0.39						61.50
8	41.08	47.60	60.64	19.20	57.38	68.14	74.66	70.74	59.01	44.99	118.99	75.63	37.17	63.90	86.72	113.45	72.05	37.17	50.53	103.35	50.21	0.39						61.50
9	38.14	46.29	60.64	19.20	56.73	67.16	77.92	71.40	59.01	58.03	113.45	72.05	40.75	61.94	95.20	108.89	74.33	37.17	51.18	106.93	48.25	0.40						62.05
10	37.82	45.64	52.16	19.20	54.77	67.16	80.85	73.35	59.33	67.16	107.91	68.46	42.06	59.66	102.37	108.89	74.00	37.49	49.88	109.87	45.97	0.42						62.02
11	37.17	45.32	48.90	19.20	52.81	65.85	87.37	74.66	59.99	74.66	102.37	64.55	41.40	58.68	112.47	114.43	72.70	37.82	49.23	110.84	43.69	0.44						62.48
12	36.84	41.08	48.90	19.76	53.14	65.85	97.80	73.35	60.96	85.74	97.80	61.94	40.75	59.99	117.36	117.36	71.07	38.14	49.23	106.93	41.73	0.45						63.01
13	36.84	39.77	44.34	20.67	52.81	64.55	106.28	71.40	59.66	95.85	92.26	59.01	39.45	60.96	119.97	129.10	69.77	38.47	49.88	102.37	40.43	0.46						63.38
14	36.84	38.80	42.38	20.11	48.90	65.53	117.36	69.44	58.36	118.99	90.63	57.38	38.14	59.66	116.39	153.23	69.44	38.47	49.88	95.85	41.08	0.46						64.88
15	36.84	36.84	41.73	20.31	47.27	66.83	116.39	66.83	57.05	135.62	88.68	54.44	37.17	60.64	109.87	162.35	70.74	38.80	49.55	89.98	42.38	0.47						65.04
16	36.84	36.51	40.43	19.95	48.25	67.81	116.39	64.55	55.75	148.66	86.07	53.14	36.19	62.27	103.35	156.16	72.37	38.80	53.47	84.44	42.38	0.49						64.74
17	36.84	34.88	40.43	19.56	46.29	66.83	112.47	62.92	54.77	147.68	84.76	50.86	36.51	61.94	97.80	146.71	73.35	38.47	57.38	79.87	42.71	0.52						63.34
18	36.84	33.91	40.43	18.84	44.34	66.83	107.91	60.31	54.44	144.10	82.15	49.23	36.84	63.25	93.24	135.62	73.68	38.47	58.36	75.63	42.71	0.55						61.71
19	36.84	35.86	40.43	17.83	46.62	69.44	99.76	59.99	55.42	136.60	79.87	49.23	36.51	65.85	89.98	125.51	74.00	37.82	58.03	72.05	42.38	0.56						60.48
20	37.17	37.17	41.73	18.19	48.25	70.74	93.24	60.96	60.96	132.03	76.94	50.86	36.84	66.51	87.05	116.39	74.00	37.17	56.73	68.46	42.06	0.56						59.73
21	37.17	38.47	41.73	17.18	48.90	70.74	85.74	64.22	69.11	132.03	74.98	55.42	36.84	67.48	83.79	108.89	76.29	36.84	54.44	65.20	41.40	0.56						59.43
22	37.49	38.80	59.01	17.64	49.88	69.44	80.20	66.51	74.00	132.03	72.70	62.92	37.49	67.48	80.20	101.39	79.87	36.51	52.49	62.59	40.43	0.56						59.98
23	37.82	37.49	59.01	16.79	48.90	69.44	76.94	71.07	74.66	132.03	72.70	72.05	36.51	66.18	77.59	95.20	79.55	36.51	49.88	60.96	39.77	0.55						59.62
24	38.80	36.51	59.01	16.53	48.90	69.11	74.66	79.55	73.68	126.49	69.44	77.59	36.19	64.22	75.31	91.61	76.61	38.80	46.62	59.66	38.47	0.55						59.01
25	41.40	36.51	54.44	15.68	49.55	68.14	71.40	84.11	72.37	119.97	67.81	78.57	35.86	62.92	75.31	87.37	74.66	48.25	43.69	59.01	37.82	0.53						58.43
26	45.32	38.80	50.21	16.79	48.58	69.44	68.14	93.24	73.03	114.43	65.53	78.57	35.54	61.94	77.92	85.09	71.72	55.42	41.40	58.03	38.14	0.52						58.54
27	49.88	43.36	44.34	17.34	46.95	69.11	65.53	101.39	71.40	107.91	64.55	77.92	35.54	61.62	79.55	81.83	70.09	58.36	39.12	57.05	40.75	0.51						58.37
28	57.38	44.01	44.34	18.00	48.25	69.11	63.25	103.35	69.11	102.37	63.57	76.94	36.51	60.96	80.85	76.94	69.44	59.01	37.49	55.42	43.69	0.50						58.20
29	66.51	44.34	40.75	18.29	46.29	67.16	60.64	94.22	66.83	96.83	62.27	75.63	37.17	59.99	80.85	72.05	71.40	58.36	36.51	53.79	44.01	0.50						57.02
30	75.96	41.73	36.51	18.65	46.29	65.85	59.01	84.11	64.22	93.24	61.62	73.35	38.80	61.29	80.85	69.11	77.92	55.42	37.17	51.84	42.71	0.49						56.19
Oct 1	72.70	40.75	35.86		42.38	63.90	67.16	80.20	61.29	91.61	60.31	68.46	38.80	60.96	81.18	65.85	88.02	52.49	36.84	50.21	40.10	0.49						57.12
2	66.51	37.82	36.19		43.36	64.88	69.77	76.94	58.68	88.02	59.66	64.55	39.12	58.68	78.24	63.57	102.37	50.21	36.51	48.25	37.82	0.50						56.27
3	63.57	35.86	36.51		44.34	64.88	69.44	77.26	56.07	87.37	58.03	60.96	40.10	56.73	75.31	60.96	111.82	48.25	36.19	46.29	35.21	0.51						55.51
4	54.77	34.23	36.84		44.99	65.85	69.11	84.76	54.44	84.11	57.38	58.03	41.08	55.10	72.70	60.31	115.41	45.97	34.88	44.34	32.93	0.51						54.65
5	55.75	32.93	35.21		45.97	69.44	76.29	100.74	53.79	80.85	57.05	57.38	44.99	52.49	69.44	59.33	111.82	44.01	33.91	43.03	30.45	0.51						55.02

6	50.53	31.10	34.56		44.34	67.16	75.96	107.91	51.84	76.94	56.73	58.03	49.23	49.88	67.16	58.03	101.39	42.71	33.91	40.75	29.99	0.52						53.75
7	43.36	30.45	33.91			56.07	74.00	103.35	49.23	73.35	56.07	60.96	58.68	47.27	64.55	57.70	92.26	40.75	33.25	39.12	31.85	0.53						52.34
8	40.10	29.28	33.91			52.81	68.14	95.20	48.25	69.44	55.10	68.46	61.62	44.01	60.96	58.68	86.39	38.80	32.31	38.14	33.58	0.52						50.78
9	43.69	28.27	34.56			36.51	63.25	88.35	47.27	66.18	54.44	79.55	59.99	42.06	57.05	58.36	80.20	37.17	30.29	37.49	35.54	0.51						49.03
10	41.73	25.75	33.91				60.96	76.94	46.29	64.22	53.79	81.18	58.68	41.73	52.49	58.68	77.26	35.54	25.20	35.86	37.49	0.49						47.80
11	37.49	24.39	31.56				57.70	69.77	44.66	62.92	53.47	75.63	56.07	40.75	49.55	57.38	75.31	34.23	20.11	34.88	38.80	0.48						45.53
12	36.84	23.83					54.77	61.62	42.06	61.62	54.12	68.46	53.47	42.06	48.25	56.40	70.74	32.93	21.06	34.88	38.80	0.47						44.58
13	37.82	21.61					51.18	60.31	38.80	60.96	58.68	61.94	49.88	42.71	45.64	54.12	64.22	31.66	25.66	34.56	37.49	0.46						43.21
14	33.58	18.65					48.25	62.92	33.91	60.64	58.36	59.66	47.27	44.99	43.69	52.16	59.66	31.39	26.05	33.91	35.21	0.46						41.71
15	34.56	17.64					46.95	61.94	33.58	58.36	58.36	59.01	43.03	43.36	42.06	49.55	55.42	30.65	26.77	32.31	33.58	0.45						40.42
16	33.58	17.64					46.29	59.33	32.60	58.03	55.42	56.73	42.71	42.71	39.12	45.97	52.16	30.55	27.16	30.94	32.93	0.44						39.13
17	32.93	17.18					46.29	58.03	31.85	58.03	55.42	53.79	40.43	41.08	37.82	41.40	48.90	28.62	27.52	28.79	31.85	0.44						37.80
18	30.38	16.72					45.64	56.07	30.94	58.36	55.42	51.51	38.14	38.80	36.84	39.12	45.97	24.94	26.86	26.86	31.56	0.43						36.36
19	30.74	16.07					44.99	50.86	29.54	58.68	55.42	51.18	36.84	40.10	35.86	40.10	42.71	23.54	26.31	25.40	31.66	0.42						35.58
20	30.74	15.62					43.69	44.99	28.17	56.07	55.42	49.88	35.21	36.51	34.56	39.12	39.77	18.91	25.40	23.90	32.11	0.40						33.91
21	30.38	14.96					40.75	39.77	27.42	53.47	46.29	48.90	33.58	36.19	33.25	37.49	36.84	17.74	23.99	22.63	31.85	0.39						31.99
22	29.99	13.40					37.49	38.14	26.05	51.84	46.29	47.27	32.31	35.21	33.25	31.66	34.56	17.64	23.28	21.78	32.05	0.37						30.70
23	30.74	12.19					36.19	41.08	24.94	50.53	46.29	46.29	25.85	33.58	34.56	25.49	33.25	17.54	22.63	21.32	31.39	0.36						29.68
24	30.74	10.14					35.54	39.45	23.90	49.23	46.29	44.99	18.45	29.34	34.88	24.74	32.11	17.74	22.07	21.22	30.38	0.35						28.42
25	31.85	8.67					33.58	35.21	22.89	48.25	46.29	43.03	14.77	31.30	31.39	24.45	30.94	18.00	21.61	20.96	29.54	0.35						27.39
26	31.49	7.95					32.60	31.66	22.17	47.92	30.45	42.06	14.77	29.63	29.73	24.29	29.90	18.45	21.42	20.77	29.99	0.34						25.87
27	28.53	7.47					31.39	31.20	21.22	44.99	30.45	41.08	15.22	28.27	24.29	24.39	28.79	18.55	21.22	20.57	30.65							26.37
28	20.77	6.91					31.10	31.95	20.96	41.08	30.45	41.08	17.54	28.17	23.99	24.45	27.71	18.75	20.67	20.41	31.00							25.71
29	19.01	6.46					30.45	30.84	19.95	39.77	30.45	40.75	18.84	26.67	23.08	24.65	27.22	18.84	19.95	20.31	30.19							25.14
30	18.45	6.19					29.54	30.84	19.10	36.84	30.45	40.10	18.75	26.41	22.63	24.94	26.96	18.45	19.40	19.56	27.87							24.50
31	15.32	5.90					29.54	31.20	18.45	33.25	30.45	41.08	18.55	23.73	22.17	25.30	26.77	18.45	18.91	18.75	29.08							23.94
Nov 1	14.96						29.54	26.77	15.68	31.30	15.68	35.21	18.45	20.86	21.32	25.30	26.21	18.29	18.45	17.64	28.17							22.74
2	14.12						29.08	26.77	15.68	30.94	15.68	32.31	18.45	19.20	20.57	25.40	25.66	17.90	17.54	16.07	26.67							22.00
3	13.30						25.85	26.77	15.68	27.22	15.68	29.99	18.29	18.45	19.85	25.30	25.10	17.54	16.79	15.22	25.75							21.05
4	13.30						25.85	26.77	15.68	27.22	15.68	28.17	18.19	18.45	19.10	24.94	24.55	17.34	16.33	14.57	28.62							20.92
5	12.91						25.85	26.77	15.68	27.22	15.68	26.60	18.00	17.54	18.45	24.09	23.99	17.18	15.68	13.95	27.71							20.46
6	12.84						25.85	26.77	15.68	27.22	19.40	25.49	17.83	17.08	18.09	23.54	23.18	17.28	15.32	13.66	24.94							20.26
7	12.84						25.85	26.77	15.68	27.22	19.40	24.45	17.54	16.63	17.74	22.63	22.33	17.54	14.77	13.30	21.06							19.73
8	12.84						25.85	26.77	15.68	27.22	19.40	23.28	17.34	16.17	17.34	21.78	21.42	16.99	14.41	13.11	18.45							19.25
9	12.84						25.85	26.77	15.68	27.22	19.40	22.89	16.79	15.52	16.99	21.42	20.51	16.63	14.21	13.11	16.17							18.87
10	12.75						25.85	26.77	15.68	27.22	19.40	21.97	16.63	14.77	16.63	21.22	19.56	16.53	14.02	13.11	15.52							18.60
11	12.75						25.85	26.77	15.68	27.22	19.40	21.22	16.43	14.41	16.43	20.86	19.01	16.43	13.95	13.11	14.96							18.41
12	12.75						25.85	26.77	15.68	27.22	19.40	21.06	15.97	14.02	16.24	20.31	18.45	16.07	13.95	13.01	14.77							18.22
13	12.84						25.85	26.77	15.68	27.22	19.40	20.51	15.78	13.66	16.07	19.56	17.90	15.78	13.86	12.91	14.77							18.03
14	12.75						25.85	26.77	15.68	27.22	19.40	20.31	15.62	13.30	15.88	18.65	16.63	15.62	13.76	12.75	14.77							17.81
15	12.75						25.85	26.77	15.68	27.22	19.40	20.11	15.22	12.91	15.62	18.09	16.79	15.42	13.76	12.19	14.67							17.65
16	12.75						25.85	26.77	15.68	27.22	15.68	20.02	14.96	12.65	15.42	17.54	16.53	15.13	13.76	11.80	14.67							17.28
17	12.75						25.85	26.77	15.68	27.22	15.68	19.95	14.77	12.29	15.22	16.89	16.24	14.96	13.86	11.18	14.57							17.12
18	12.65						25.85	26.77	15.68	27.22	15.68	19.85	14.57	12.00	15.06	16.63	15.88	14.77	13.86	10.79	14.51							16.99
19	12.65						25.85	26.77	15.68	27.22	15.68	19.76	14.31	11.74	14.87	16.53	15.52	14.67	13.66	10.14	14.12							16.82
20	12.55						25.85	26.77	15.68	27.22	15.68	19.56	14.02	11.44	14.67	16.63	15.13	14.41	13.56	10.07	13.95							16.70
21	12.55						25.85	26.77	15.68	27.22	15.68	19.46	13.95	11.25	14.51	16.63	15.13	14.12	13.46	9.98	13.46							16.61
22	12.45						25.85	26.77	15.68	27.22	15.68	19.46	13.66	11.08	14.31	16.99	15.06	13.86	13.11	9.98	13.01							16.51
23	12.36						25.85	26.77	15.68	27.22	15.68	19.46	13.40	10.89	14.12	17.18	14.96	13.56	13.01	10.07	12.84							16.44
24	12.36						25.85	26.77	15.68	27.22	15.68	19.46	13.20	10.69	13.95	17.54	14.87	13.30	12.91	10.07	12.75							16.39
25	12.29						25.85	26.77	15.68	27.22	15.68	19.56	13.01	10.53	13.76	17.90	14.87	12.91	12.91	10.14	12.75							16.36
26	12.19						25.85	26.77	15.68	27.22	15.68	19.66	12.84	10.43	13.66	18.09	14.77	12.45	12.91	10.14	12.75							16.32
27	12.19						25.85	26.77	15.68	27.22	15.68	19.76	12.65	10.33	13.20	18.19	14.67	11.80	13.01	10.14	12.84							16.25
28	12.10						25.85	26.77	15.68	27.22	15.68	19.85	12.45	10.24	12.91	18.29	14.21	11.35	13.01	10.14	12.91							16.17
29	12.10						25.85	26.77	15.68	27.22	15.68	19.95	12.29	10.07	12.55	18.19	13.95	11.25	12.84	9.98	12.91							16.08
30	12.00						25.85	26.77	15.68	27.22	15.68	20.02	12.10	9.78	12.29	17.54	13.66	11.18	12.65	9.68	12.84							15.93
Dec 1						15.22	16.63	16.63	12.91	18.09	15.68	20.11	11.90	9.68	12.00	16.63	12.55	11.18	12.55	9.32	12.65							13.98
2						15.13	16.63	16.63	12.91	18.09	12.84	20.31	11.80	9.58	11.80	15.97	11.44	11.18	12.55	8.70	12.19							13.61
3						14.96	16.63	16.63	12.91	18.09	10.89	20.41	11.64	9.42	11.54	15.32	10.24	11.08	12.55	7.66	11.90							13.24
4						14.67	16.63	16.63	12.91	18.09	10.89	20.67	11.44	9.23	11.25	14.96	9.78	10.99	12.55	7.24	11.64							13.10
5						14.41	16.63	16.63	12.91	18.09	10.89	20.86	11.18	9.13	10.99	14.77	9.78	10.89	12.45	7.01	11.44							13.00
6						14.21	16.63	16.63	12.91	18.09	10.89	21.06	11.08	8.97	10.69	14.77	9.68	10.79	12.29	6.85	11.35							12.93
7						14.02	16.63	16.63	12.91	18.09	10.89	21.13	10.99	8.77	10.43	14.77	9.78	10.69	12.19	6.65	11.35							12.87
8						13.86	16.63	16.63	12.91	18.09	10.89	21.22	10.89	8.57	10.14	14.77	9.88	10.69	11.64	6.55	11.44							12.80
9						13.66	16.63	16.63	12.91	18.09	10.89	21.22	10.69	8.41	9.88	14.31	10.07	10.63	11.25	6.36	11.64							12.70
10						13.40	16.63	16.63	12.91	18.09	10.89	21.52	10.53	8.31	9.58	13.86	10.14	10.33	11.08	6.29	11.80							12.62
11						13.11	16.63	16.63	12.91	18.09	10.89	21.68	10.33	8.22	9.42	13.11	10.14	10.07	10.99	6.10	11.90							12.51
12						12.91	16.63	16.63	12.91	18.09	10.89	21.97	10.24	8.12	9.23	12.84	10.14	9.06	10.69	5.90	11.90							12.38
13						12.75	16.63	16.63	12.91	18.09	10.89	22.17	10.14	8.02	9.06	12.19	10.14	8.67	9.98	5.74	11.80							12.24
14						12.55	16.63	16.63	12.91	18.09	10.89	22.17	10.07	7.95	8.77	11.90	10.07	8.51	9.58	5.35	11.44							12.10
15						12.36	16.63	16.63	12.91	18.09	10.89	22.17	9.98	7.86	8.51	11.18	9.98	8.31	9.42	5.09	11.18							11.95
16						12.00	16.63	16.63	12.91	18.09	10.89	22.17	9.88	7.76	8.31	10.53	9.88	8.31	9.32	4.89	10.99							11.82
17						11.90	16.63	16.63	12.91	18.09	10.89	22.33	9.78	7.66	8.12	10.14	9.78	8.25	9.32	4.79	10.63							11.74
18						11.80	16.63	16.63	12.91	18.09	10.89	22.33	9.68	7.56	7.95	9.58	9.58	8.22	9.06	4.79	10.33							11.63
19						11.74	16.63	16.63	12.91	18.09	10.89	22.17	9.52	7.47	7.66	9.52	9.58	8.12	8.77	4.79	10.24							11.54
20						11.54	16.63	16.63	12.91	18.09	10.89	21.97	9.42	7.40	7.40	9.32	9.58	7.86	8.51	4.79	10.14							11.44
21						11.44	16.63	16.63	12.91	18.09	10.89	21.68	9.23	7.34	7.20	9.23	9.58	7.66	8.31	4.63	10.07							11.35
22						11.35	16.63	16.63	12.91	18.09	10.89	21.22	9.13	7.30	7.01	9.06	9.58	7.40	8.25	4.24	10.07							11.24
23						11.25	16.63	16.63	12.91	18.09	10.89	20.51	9.06	7.27	6.85	8.97	9.58	7.30	8.22	4.08	9.88							11.13
24						11.18	16.63	16.63	12.91	18.09	10.89	19.56	8.97	7.24	6.55	8.97	9.42	7.20	8.18	3.98	9.68							11.00
25						10.99	16.63	16.63	12.91	18.09	10.89	18.45	8.87	7.20	6.29	8.97	9.23	7.20	8.12	3.88	9.42							10.86
26						10.89	16.63	16.63	12.91	18.09	10.89	17.18	8.77	7.17	6.10	8.97	9.13	7.20	8.12	3.85	9.32							10.74
27						10.79	16.63	16.63	12.91	18.09	10.89	15.32	8.77	7.14	5.90	9.06	9.06	7.20	8.09	3.75	9.23							10.59
28						10.69	16.63	16.63	12.91	18.09	10.89	13.86	8.67	7.07	5.74	9.06	8.97	7.20	8.02	3.68	9.19							10.46
29						10.53	16.63	16.63	12.91	18.09	10.89	12.45	8.57	7.04	5.54	9.23	8.87	7.20	7.95	3.68	9.13							10.33
30						10.43	16.63	16.63	12.91	18.09	10.89	11.08	8.51	7.04	5.25	9.32	8.77	7.11	7.76	3.65	9.10							10.20
31						10.33	16.63	16.63	12.91	18.09	10.89	9.23	8.41	7.01	4.99	9.32	8.67	7.01	7.56	3.59	9.00							10.02

Synthetic Hoole Canyon Pelly	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	2011	2012	2013	Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	
							105.66	111.82	133.60	111.13	128.40	84.74	81.59	100.92	103.95	91.35	96.24	84.81	106.44	94.02	79.22							100.93
Jan 1						14.03	16.79	18.62	18.35	16.79	22.29	11.34	13.76	13.76	11.61	8.04	15.28	14.09	11.44	12.25	5.88							14.02
2						13.76	16.68	18.62	18.35	16.79	22.29	11.34	11.93	13.76	11.61	7.77	15.28	14.14	11.01	11.93	5.83							13.82
3						13.44	16.52	18.62	18.35	16.79	22.29	11.34	11.01	13.60	11.61	7.50	15.28	14.30	10.53	11.44	5.78							13.65
4						13.28	16.36	18.62	18.35	16.79	22.29	11.34	10.42	13.60	11.61	7.18	15.11	14.52	10.26	11.17	5.67							13.54
5						13.06	16.19	18.62	18.35	16.79	22.29	11.34	9.61	13.44	11.61	6.96	15.01	14.68	9.93	10.69	5.61							13.39
6						12.85	16.03	18.62	18.35	16.79	22.29	11.34	9.18	13.17	11.61	6.80	14.36	14.57	9.93	10.53	5.51							13.25
7						12.63	15.87	18.62	18.35	16.79	22.29	11.34	8.85	13.01	11.61	6.59	13.76	14.20	9.77	10.47	5.51							13.10
8						12.52	15.76	18.62	18.35	16.79	20.78	11.34	8.69	12.85	11.61	6.53	13.17	13.60	9.61	10.42	5.45							12.88
9						12.31	15.60	18.62	18.35	16.79	20.78	11.34	8.58	12.85	11.61	6.42	12.25	13.01	9.34	10.42	5.35							12.73
10						12.09	15.44	18.62	18.35	16.79	20.78	11.34	8.47	12.69	11.55	6.37	11.44	12.69	9.01	10.31	5.27							12.58
11						11.88	15.28	18.62	18.35	16.79	20.78	11.34	8.47	12.52	11.55	6.32	11.17	12.36	8.69	10.26	5.17							12.47
12						11.71	15.11	18.62	18.35	16.79	20.78	11.34	8.47	12.36	11.50	6.26	11.01	12.25	8.42	10.15	5.04							12.39
13						11.61	15.01	18.62	18.35	16.79	20.78	11.34	8.58	12.25	11.50	6.26	10.85	12.25	8.26	10.09	4.97							12.34
14						11.39	14.84	18.62	18.35	16.79	20.78	11.34	8.58	12.25	11.44	6.26	10.80	12.36	8.10	9.82	4.89							12.29
15						11.23	14.68	18.62	18.35	16.79	20.78	11.34	8.58	12.09	11.44	6.26	10.69	12.52	8.04	9.55	4.82							12.24
16						11.12	14.52	18.62	18.35	16.79	20.78	11.34	8.69	12.09	11.44	6.32	10.80	12.69	8.04	9.18	4.71							12.22
17						10.96	14.47	18.62	18.35	16.79	20.78	11.34	8.80	11.93	11.39	6.37	10.80	12.85	8.10	8.96	4.59							12.19
18						10.90	14.36	18.62	18.35	16.79	20.78	11.34	8.85	11.77	11.39	6.42	10.85	13.01	8.10	8.85	4.51							12.18
19						10.74	14.30	18.62	18.35	16.79	20.78	11.34	8.85	11.77	11.34	6.53	10.90	12.85	7.94	8.85	4.43							12.15
20						10.63	14.14	18.62	18.35	16.79	20.78	11.34	8.85	11.61	11.34	6.59	11.01	12.85	7.88	8.85	4.40							12.13
21						10.53	14.09	18.62	18.35	16.79	20.78	11.34	8.85	11.44	11.34	6.75	11.17	12.69	7.77	8.91	4.32							12.11
22						10.47	13.93	18.62	18.35	16.79	20.78	11.34	8.85	11.44	11.34	6.86	11.23	12.69	7.67	8.96	4.28							12.10
23						10.42	13.76	18.62	18.35	16.79	20.78	11.34	8.85	11.34	11.34	6.96	11.34	12.52	7.50	8.91	4.22							12.07
24						10.31	13.28	18.62	18.35	16.79	20.78	11.34	8.85	11.34	11.34	7.02	11.39	12.52	7.56	8.85	4.16							12.03
25						10.26	13.17	18.62	18.35	16.79	20.78	11.34	8.96	11.17	11.34	7.02	11.39	12.74	7.67	8.69	4.13							12.03
26						10.20	13.06	18.62	18.35	16.79	20.78	11.34	8.96	11.01	11.28	7.07	11.34	12.85	7.77	8.58	4.08							12.01
27						10.09	13.01	18.62	18.35	16.79	20.78	11.34	8.96	11.01	11.23	7.02	11.23	12.85	7.94	8.53	4.01							11.98
28						10.04	12.85	18.62	18.35	16.79	20.78	11.34	8.96	10.85	11.17	7.02	11.12	12.69	8.10	8.53	3.99							11.95
29						9.99	12.69	18.62	18.35	16.79	20.78	11.34	8.96	10.69	11.12	6.96	11.01	12.52	8.10	8.58	3.93							11.90
30						9.88	12.47	18.62	18.35	16.79	20.78	11.34	8.96	10.53	11.07	6.86	10.96	12.52	8.15	8.69	3.85							11.86
31						9.77	12.36	18.62	18.35	16.79	20.78	11.34	8.85	10.42	11.01	6.75	10.85	12.52	8.26	8.80	3.84							11.83
Feb 1						9.77	12.25	11.61	12.25	14.68	16.52	8.58	8.85	10.42	10.96	6.59	10.69	12.69	8.10	8.85	3.81							10.41
2						9.66	12.09	11.61	12.25	14.68	16.52	8.58	8.85	10.42	10.96	6.48	10.69	12.69	8.04	8.85	3.79							10.39
3						9.61	11.93	11.61	12.25	14.68	16.52	8.26	8.85	10.42	10.90	6.37	10.69	12.52	7.88	8.69	3.79							10.31
4						9.50	11.77	11.61	12.25	14.68	16.52	7.94	8.85	10.26	10.90	6.32	10.69	12.31	7.72	8.58	3.79							10.23
5						9.45	11.71	11.61	12.25	14.68	16.52	7.94	8.85	10.26	10.85	6.26	10.69	12.36	7.67	8.42	3.77							10.21
6						9.39	11.61	11.61	12.25	14.68	16.52	7.94	8.85	10.09	10.80	6.26	10.63	12.52	7.67	8.20	3.77							10.17
7						9.28	11.44	11.61	12.25	14.68	16.52	7.94	8.85	10.09	10.80	6.26	10.58	12.69	7.77	8.10	3.79							10.17
8						9.23	11.39	11.61	12.25	14.68	16.52	7.94	8.85	10.09	10.74	6.26	10.53	12.85	7.88	8.04	3.81							10.17
9						9.18	11.34	11.61	12.25	14.68	16.52	7.94	8.85	10.09	10.74	6.26	10.47	12.85	7.94	7.94	3.82							10.15
10						9.07	11.23	11.61	12.25	14.68	16.52	7.94	8.85	10.09	10.69	6.32	10.42	12.90	7.94	7.94	3.82							10.14
11						9.01	11.01	11.61	12.25	14.68	16.52	7.94	8.85	9.93	10.63	6.42	10.31	12.85	7.88	7.94	3.84							10.10
12						8.91	11.01	11.61	12.25	14.68	16.52	7.94	8.85	9.93	10.58	6.53	10.20	12.85	7.77	7.94	3.86							10.09
13						8.85	10.96	11.61	12.25	14.68	16.52	7.94	8.85	9.77	10.53	6.64	10.15	12.85	7.67	7.94	3.86							10.07
14						8.80	10.90	11.61	12.25	14.68	16.52	7.94	8.85	9.77	10.47	6.69	10.04	12.74	7.56	7.94	3.86							10.04
15						8.69	10.85	11.61	12.25	14.68	16.52	7.94	8.85	9.77	10.42	6.75	9.99	12.69	7.34	7.94	3.82							10.01
16						8.69	10.69	11.61	12.25	14.68	16.52	7.94	8.85	9.77	10.36	6.86	9.93	12.69	7.29	7.94	3.79							9.99
17						8.58	10.69	11.61	12.25	14.68	16.52	7.94	8.85	9.77	10.31	7.02	9.88	12.63	7.23	7.94	3.75							9.98
18						8.58	10.69	11.61	12.25	14.68	16.52	7.94	8.85	9.61	10.31	7.07	9.88	12.52	7.18	7.94	3.70							9.96
19						8.53	10.53	11.61	12.25	14.68	16.52	7.94	8.85	9.61	10.26	7.18	9.82	12.69	7.07	7.94	3.67							9.95
20						8.47	10.53	11.61	12.25	14.68	16.52	7.94	8.85	9.61	10.26	7.18	9.77	12.74	7.02	7.99	3.65							9.94
21						8.42	10.42	11.61	12.25	14.68	16.52	7.94	8.85	9.61	10.20	7.18	9.77	12.85	7.07	8.04	3.65							9.94
22						8.37	10.31	11.61	12.25	14.68	16.52	7.94	8.85	9.61	10.20	7.18	9.77	12.85	7.18	8.10	3.64							9.94
23						8.31	10.26	11.61	12.25	14.68	16.52	7.94	8.85	9.50	10.15	7.13	9.77	12.31	7.23	8.10	3.65							9.89
24						8.26	10.15	11.61	12.25	14.68	16.52	7.94	8.85	9.50	10.09	7.07	9.88	11.77	7.29	8.04	3.65							9.85
25						8.26	10.09	11.61	12.25	14.68	16.52	7.94	8.85	9.50	10.09	6.96	9.93	11.23	7.34	7.94	3.67							9.80
26						8.20	9.99	11.61	12.25	14.68	16.52	7.94	8.85	9.50	10.09	6.75	9.99	10.69	7.29	7.94	3.67							9.75
27						8.10	9.93	11.61	12.25	14.68	16.52	7.94	8.85	9.50	10.09	6.69	10.15	10.69	7.18	7.94	3.65							9.74
28						8.10	9.93	11.61	12.25	14.68	16.52	7.94	8.85	9.50	10.09	6.48	10.15	10.69	7.13	7.94	3.61							9.72
29							9.93				16.52				10.09				7.02									10.89
Mar 1						7.99	9.93	11.61	12.25	12.85	13.44	7.94	8.85	9.34	10.09	6.37	10.09	10.69	7.02	7.94	3.55							9.37
2						7.94	9.93	11.61	12.25	12.85	13.44	7.94	8.85	9.34	10.09	6.37	10.09	10.69	7.02	8.04	3.53							9.37
3						7.94	9.88	11.61	12.25	12.85	13.44	7.94	8.85	9.18	10.15	6.32	9.93	10.53	7.02	8.10	3.53							9.34
4						7.88	9.88	11.61	12.25	12.85	13.44	7.94	8.85	9.18	10.15	6.37	9.93	10.15	7.02	8.10	3.51							9.32
5						7.77	9.72	11.61	12.25	12.85	13.44	7.94	8.85	9.18	10.15	6.48	9.99	9.77	7.02	8.10	3.49							9.29
6						7.77	9.61	11.61	12.25	12.85	13.44	7.94	8.85	9.18	10.20	6.69	10.09	9.61	7.07	8.04	3.41							9.29
7						7.77	9.61	11.61	12.25	12.85	13.44	7.94	8.85	9.01	10.20	6.86	10.09	9.50	7.07	7.99	3.38							9.28
8						7.72	9.55	11.61	12.25	12.85	13.44	7.94	8.85	9.01	10.20	7.02	10.09	9.55	7.07	7.94	3.38							9.28
9						7.67	9.45	11.61	12.25	12.85	12.63	7.94	8.85	9.01	10.26	7.18	10.09	9.61	7.07	7.94	3.36							9.23
10						7.61	9.34	11.61	12.25	12.85	12.85	7.94	8.85	8.85	10.26	7.23	10.09	9.77	7.13	7.99	3.36							9.25
11						7.50	9.34	11.61	12.25	12.85	12.85	7.94	8.85	8.85	10.26	7.29	10.09	9.93	7.07	8.04	3.35							9.25
12						7.45	9.34	11.61	12.25	12.85	12.85	7.94	8.85	8.85	10.31	7.23	10.09	9.93	7.07	8.10	3.35							9.25
13						7.40	9.23	11.61	12.25	12.85	12.85	7.94	8.85	8.85	10.31	7.18	10.09	9.93	7.07	8.04	3.36							9.24
14						7.34	9.18	11.61	12.25	12.85	12.85	7.94	8.85	8.69	10.31	7.07	10.09	9.93	7.13	7.99	3.36							9.21
15						7.29	9.01	11.61	12.25	12.85	12.85	7.94	8.85	8.69	10.31	6.96	10.09	9.93	7.18	7.88	3.38							9.19
16						7.29	9.01	11.61	12.25	12.85	12.85	7.94	8.85	8.58	10.31	6.75	10.09	9.93	7.29	7.88	3.38							9.18
17						7.29	9.01	11.61	12.25	12.85	12.85	7.94	8.85	8.58	10.31	6.59	10.09	9.77	7.34	7.88	3.41							9.16
18						7.29	9.01	11.61	12.25	12.85	12.85	7.94	8.85	8.58	10.31	6.42	10.09	9.61	7.34	7.83	3.42							9.14
19						7.23	9.01	11.61	12.25	12.85	12.85	7.94	8.85	8.58	10.31	6.21	10.09	9.50	7.45	7.72	3.45							9.12
20						7.18	9.01	11.61	12.25	12.85	12.85	7.94	8.85	8.58	10.31	6.10	10.09	9.18	7.45	7.67	3.49							9.09
21						7.18	9.07	11.61	12.25	12.85	12.85	7.94	8.85	8.58	10.31	6.05	10.04	8.85	7.40	7.67	3.50							9.06
22						7.13	9.07	11.61	12.25	12.85	12.85	7.94	8.85	8.42	10.31	5.94	10.04	8.58	7.40	7.67	3.51							9.03
23						7.13	9.07	11.61	12.25	12.85	12.85	7.94	8.85	8.42	10.31	5.83	9.99	8.26	7.34	7.72	3.53							9.00
24						7.13	9.07	11.61	12.25	12.85	12.85	7.94	8.85	8.42	10.36	5.83	9.99	7.94	7.29	7.83	3.55							8.98
25						7.13	9.07	11.61	12.25	12.85	12.85	7.94	8.85	8.42	10.42	5.83	9.93	7.88	7.29	7.94	3.58							8.99
26						7.07	9.07	11.61	12.25	12.85	12.85	7.94	8.85	8.42	10.47	5.83	9.88	7.88	7.34	8.04	3.59							9.00
27						7.07	9.07	11.61	12.25	12.85	12.85	7.94	8.85	8.42	10.53	5.83	9.88	7.88	7.29	8.15	3.59							9.00
28						7.07	9.07	11.61	12.25	12.85	12.85	7.94	8.85	8.42	10.53	5.83	9.82	7.88	7.29	8.20	3.64							9.01
29						7.13	9.07	11.61	12.25	12.85	12.85	7.94	8.80	8.26	10.58	5.88	9.82	7.88	7.18	8.26	3.65							9.00
30						7.13	9.07	11.61	12.25	12.85	12.85	7.94	8.80	8.26	10.63	5.94	9.77	7.88	7.02	8.20	3.67							8.99
31						7.18	9.07	11.61	12.25	12.85	12.85	7.94	8.80	8.26	10.69	5.94	9.77	7.88	7.02	8.15	3.68							9.00
Apr 1							9.18	10.42	12.25	11.34	12.85	9.18	8.69	8.26	10.69	6.05	9.77	7.88	7.02	8.10	3.68				0.41	0.53	0.73	7.61
2							9.18	10.42	12.25	11.34	12.85	9.18	8.69	8.26	10.74	6.15	9.72	7.94	7.02	7.94	3.70				0.41	0.53	0.73	7.61
3							9.18	10.42	12.25	11.34	12.85	9.18	8.69	8.26	10.80	6.21	9.72	8.04	7.02	7.94	3.71				0.41	0.53	0.73	7.63
4							9.18	10.42	12.25	11.34	12.85	9.18	8.69	8.15	10.80	6.32	9.66	8.26	7.02	7.94	3.77				0.41	0.53	0.73	7.64
5							9.18	10.42	12.25	11.34	12.85	9.18	8.69	8.15	10.85	6.42	9.61	8.58	7.02	7.94	3.82				0.41	0.53	0.73	7.66
6							9.18	10.42	12.25	11.34	12.85	9.18	8.64	8.15	10.90	6.59	9.61	8.80	7.02	8.10	3.84				0.41	0.53	0.73	7.70
7							9.18	10.42	12.25	11.34	12.85	9.18	8.64	8.26	10.90	6.69	9.61	9.01	7.02	8.20	3.93				0.40	0.53	0.74	7.73
8							9.18	10.42	12.25	11.34	12.85	9.18	8.64	8.26	10.96	6.80	9.61	9.18	7.02	8.26	3.97				0.41	0.53	0.74	7.75
9							9.18	10.42	12.25	11.34	12.85	9.18	8.58	8.26	10.96	6.96	9.61	9.34	6.96	8.26	4.05				0.41	0.54	0.74	7.77
10							9.18	10.42	12.25	11.34	12.85	9.18	8.58	8.26	11.01	7.02	9.61	9.50	6.91	8.26	4.13				0.41	0.54	0.74	7.79
11							9.18	10.42	12.25	11.34	12.85	9.18	8.69	8.26	11.07	7.23	9.61	9.55	6.91	8.31	4.26				0.40	0.54	0.74	7.82
12							9.23	10.42	12.25	11.34	12.85	9.18	8.85	8.26	11.12	7.40	9.55	9.61	6.91	8.31	4.32				0.40	0.55	0.73	7.85
13							9.23	10.42	12.25	11.34	12.85	9.18	9.01	8.26	11.17	7.67	9.55	9.66	6.86	8.37	4.46				0.40	0.55	0.73	7.89
14							9.34	10.42	12.25	11.34	12.85	9.18	9.18	8.26	11.23	7.88	9.50	9.72	6.86	8.42	4.60				0.40	0.56	0.73	7.93
15							9.50	10.42	12.25	11.34	12.85	9.18	9.34	8.26	11.34	8.15	9.50	9.77	6.96	8.47	4.77				0.40	0.56	0.74	7.99
16							9.72	10.42	12.25	11.34	12.85	9.18	9.50	8.26	11.44	8.42	9.61	9.93	6.96	8.53	4.98				0.39	0.56	0.74	8.06
17							9.93	10.42	12.25	11.34	12.85	9.18	9.77	8.26	11.55	8.69	9.77	10.09	6.96	8.53	5.20				0.39	0.57	0.75	8.14
18							10.26	10.42	12.25	11.34	12.85	9.18	9.93	8.26	11.66	9.01	10.09	10.42	6.96	8.58	5.38				0.39	0.57	0.75	8.24
19							10.63	10.42	12.25	11.34	12.85	9.18	10.26	8.42	11.82	9.50	10.42	10.85	6.96	8.80	5.67				0.38	0.58	0.74	8.39
20							11.44	10.42	12.25	11.34	12.85	9.18	10.42	8.58	11.93	9.88	10.85	11.34	6.96	9.01	6.05				0.38	0.58	0.74	8.57
21							12.25	10.42	12.25	11.34	12.85	9.93	10.47	8.85	12.04	10.26	11.55	11.44	7.02	9.18	6.48				0.38	0.58	0.74	8.78
22							13.17	10.42	12.25	11.34	12.85	13.76	10.69	9.50	12.15	10.69	12.25	11.61	7.02	9.61	6.80				0.37	0.59	0.74	9.21
23							14.68	10.42	12.25	11.34	12.85	13.76	10.85	10.09	12.31	11.44	13.60	11.77	7.02	9.99	7.29				0.37	0.59	0.74	9.52
24							16.19	10.42	12.25	11.34	12.85	13.76	11.01	10.69	12.42	11.93	11.93	11.93	7.02	10.42	7.67				0.38	0.61	0.75	9.64
25							17.60	10.42	12.25	11.34	12.85	13.76	11.34	11.61	12.52	12.58	13.28	12.25	7.02	11.01	8.58				0.38	0.63	0.75	10.01
26							20.35	10.42	12.25	11.34	12.85	13.76	11.55	13.28	12.79	13.28	14.68	13.28	7.02	11.55	8.85				0.38	0.64	0.75	10.50
27							22.94	10.42	12.25	11.34	12.85	13.76	11.77	15.28	13.01	14.09	16.03	14.36	7.07	12.25	9.50				0.39	0.65	0.75	11.04
28							26.88	10.42	12.25	11.34	12.85	13.76	12.09	17.87	13.28	15.11	17.44	15.60	7.18	13.17	10.26				0.39	0.64	0.75	11.74
29							30.55	10.42	12.25	11.34	12.85	13.76	12.25	20.94	13.50	16.03	18.79	18.62	7.29	14.36	11.07				0.39	0.67	0.74	12.55
30							38.22	10.42	12.25	11.34	12.85	13.76	12.69	23.70	13.76	17.44	20.19	22.19	7.50	15.76	11.93				0.40	0.70	0.74	13.66
May 1		10.69		18.62	48.91		61.00	10.53	12.25	11.34	12.85	13.76	13.17	27.53	13.93	18.95	21.54	24.45	7.67	19.11	12.85				0.41	0.77	0.74	17.19
2		11.34		19.86	50.42		91.77	10.85	12.25	11.34	12.85	13.76	13.76	32.12	14.68	20.78	22.94	29.37	7.88	24.45	13.76				0.41	0.79	0.74	19.82
3		12.09		20.78	51.98		116.06	11.44	12.25	11.34	12.85	13.76	14.36	37.46	13.93	22.94	24.45	32.39	8.10	29.37	15.01				0.42		0.74	23.09
4		13.17		22.19	51.98		146.83	11.93	12.25	11.34	12.85	13.76	15.01	42.81	14.52	25.69	25.96	39.73	8.69	36.71	16.52				0.42		0.75	26.16
5		14.20		24.94	53.49		178.67	13.60	12.25	11.34	12.85	13.76	15.28	49.66	15.28	28.88	27.53	44.32	9.50	45.88	18.03			186.23	0.43		0.78	37.00
6		15.28		26.61	55.06		215.38	15.28	12.25	80.43	12.85	13.76	22.94	58.30	16.03	33.63	29.20	51.98	12.25	55.60	20.03			127.39	0.44		0.81	41.69
7		16.79		28.29	56.68		226.18	17.44	12.25	80.43	12.85	13.76	35.14	67.48	16.79	40.22	30.88	59.38	16.79	67.48	22.19			169.50	0.47		0.82	47.23
8		18.35		30.55	59.38		268.82	21.38	12.85	80.43	12.85	13.76	53.49	77.19	17.60	49.82	33.31	68.55	22.94	82.59	24.61			181.91	0.49		0.83	53.89
9		20.62		32.87	67.48		292.03	25.96	15.01	80.43	12.85	91.77	76.65	90.15	21.11	65.86	35.79	79.35	30.55	92.31	28.45			203.50		0.79	0.85	64.97
10		22.94		35.79	72.33		312.00	33.63	19.11	80.43	12.85	91.77	137.65	105.26	25.96	75.57	39.14	88.53	45.88	102.02	32.12			213.76	0.60	0.81	0.87	70.41
11		25.69		38.81	83.13		319.56	40.49	25.96	80.43	12.85	91.77	213.76	120.92	35.14	93.93	43.24	104.18	64.24	110.66	36.81			201.89	0.64	0.80	0.93	79.36
12		28.72		42.81	79.35		325.50	48.15	32.12	80.43	12.85	91.77	244.53	137.65	45.88	113.36	69.09	122.53	79.35	117.14	41.40	1.12		181.91	0.69	0.78	1.02	82.53
13		32.87		48.91	78.81		317.94	56.68	37.62	80.43	12.85	91.77	336.30	160.32	61.00	132.79	117.68	143.05	110.12	125.23	48.91	1.29		177.05	0.69	0.78	1.17	94.53
14		39.73		56.68	77.73	70.71	302.83	67.48	51.23	80.43	12.85	91.77	397.29	191.09	76.65	148.98	206.20	198.65	152.76	140.89	56.68		1.15	187.85	0.71	0.81	1.36	108.85
15		48.91		64.78	78.81	132.25	275.30	92.85	67.48	80.43	12.85	91.77	367.06	220.24	106.88	165.18	236.97	197.03	158.70	189.47	68.55			187.85	0.73	0.83	1.48	123.76
16		61.00		71.79	89.07	166.80	253.71	127.39	88.53	80.43	27.53	91.77	321.18	211.06	98.24	178.67	288.79	192.71	157.62	295.27	88.53	1.42	1.00	203.50	0.74	0.85	1.42	123.96
17		87.99		97.16	107.96		244.53	183.53	111.74	290.41	27.53	91.77	275.30	236.97	99.86	183.53	321.18	231.03	152.76	395.67	105.80	1.34		218.62	0.79	0.84	1.59	150.78

18		174.36		232.11	116.06		244.53	268.82	131.71	308.77	27.53	91.77	261.26	250.47	116.60	195.41	310.39	262.88	171.12	453.97	149.52	1.28	1.16	238.59	0.91	0.82	1.50	167.15
19		197.03		323.88	124.69		256.94	349.79	167.88	345.47	27.53	91.77	266.12	235.35	175.97	206.20	295.27	270.44	166.80	457.21	178.67	1.24			1.09	0.80	1.63	188.26
20		181.91		339.53	139.81		276.92	398.91	203.50	391.36	27.53	91.77	264.50	222.94	240.21	211.06	282.86	308.77	205.53	404.85	217.00	1.21			1.26	0.79	1.70	200.54
21		191.09		434.00	178.67		295.27	403.77	250.47	438.86	27.53	91.77	247.77	233.73	340.61	206.20	276.92	348.71	305.53	349.79	252.09	1.20	1.32	343.85	1.36	0.80	1.60	217.62
22		191.09	367.06	555.99	229.42		301.21	385.42	279.62	501.47	27.53	125.23	227.80	252.09	448.03	209.44	275.30	408.09	404.85	331.44	293.65	1.20	1.40	360.59	1.43	0.82	1.46	247.27
23		200.27	431.30	626.17	250.47		317.94	371.38	327.12	572.19	27.53	166.80	213.76	278.00	514.97	236.97	284.47	431.30	426.44	312.00	342.23	1.20	1.43	360.59	1.50	0.88	1.37	267.93
24		209.44	432.38	658.56	253.71		327.12	386.50	411.33	626.17	111.20	191.09	198.65	301.21	509.03	276.92	297.97	394.59	408.09	281.24	371.38	1.19	1.46	369.76	1.58	0.97	1.33	280.91
25		232.11	431.30	658.56	266.12		348.71	453.97	505.79	647.76	112.82	204.58	181.91	314.70	470.71	327.12	304.45	368.14	363.83	268.82	418.89	1.21	1.48	363.83	1.66	1.12	1.36	290.04
26		256.94	428.06	658.56	290.41		377.32	550.60	582.98	636.96	118.22	224.56	165.18	330.36	464.77	351.41	279.62	374.62	337.92	288.79	463.15	1.26	1.48	446.41	1.69	1.27	1.47	305.36
27		240.21	424.82	647.76	317.94		378.94	609.97	658.56	539.80	123.61	255.33	156.00	347.09	484.74	336.30	255.33	403.77	360.59	323.88	501.47	1.32	1.41	555.99	1.65	1.37	1.68	317.18
28		233.73	423.20	631.57	305.53		339.53	626.17	728.73	444.80	158.70	284.47	156.00	363.83	484.74	281.24	240.21	418.89	463.15	363.83	473.94	1.41	1.39	561.39	1.59	1.45	1.88	319.65
29		221.86	411.33	524.15	290.41	358.97	319.56	626.17	771.91	388.12	194.33	328.74	161.94	404.85	459.91	238.59	241.29	409.71	604.58	418.89	402.15	1.51	1.34	514.97	1.55	1.51	2.03	319.24
30		206.20	408.09	516.59	275.30	353.03	316.32	631.57	793.51	354.65	267.74	380.56	174.36	478.26	431.30	213.76	252.09	403.77	717.93	422.12	356.27	1.60	1.28	473.94	1.53	1.55	2.16	324.44
31		194.33	403.77	455.59	259.64	347.09	316.32	599.18	820.50	327.12	347.09	432.38	192.71	582.98	422.12	215.38	259.64	403.77	836.69	378.94	351.41	1.67	1.28	479.88	1.52	1.59	2.25	332.11
Jun 1		185.15	378.94	463.15	244.53	330.36	312.00	572.19	809.70	310.39	444.80	479.88	217.00	696.34	432.38	222.94	266.12	395.67	928.46	337.92	356.27	1.75	1.27	478.26	1.52	1.60	2.28	341.19
2		197.03	373.00	464.77	236.97	322.26	317.94	588.38	777.31	293.65	545.20	504.17	247.77	777.31	434.00	241.29	270.44	422.12	901.47	362.21	353.03	1.82	1.28	481.50	1.52	1.60	2.23	350.78
3		200.27	345.47	464.77	232.11	340.61	330.36	593.78	739.53	282.86	653.16	504.17	287.17	771.91	437.24	262.34	276.92	459.91	825.89	418.89	395.67	1.86	1.29	469.09	1.50	1.57	2.15	357.86
4		209.44	334.68	466.39	238.59	374.62	348.71	604.58	701.74	281.24	755.72	501.47	322.26	723.33	440.48	266.12	310.39	468.01	744.92	450.73	446.41	1.89	1.35	446.41	1.49	1.55	2.10	363.26
5		224.56	342.23	470.71	244.53	402.15	354.65	609.97	696.34	288.79	847.49	472.33	353.03	680.15	443.18	258.56	371.38	444.80	555.99	435.62	483.12	1.93	1.44	426.44	1.45	1.55	2.04	362.09
6		233.73	385.42	473.94	252.09	412.95	339.53	604.58	701.74	296.35	933.85	417.27	392.97	626.17	441.56	276.92	459.91	418.89	485.82	398.91	457.21	1.91	1.43	395.67	1.36	1.57	1.94	362.07
7		231.03	428.06	484.74	259.64	417.27	333.06	615.37	701.74	293.65	1085.00	365.44	417.27	593.78	435.62	304.45	550.60	411.33	444.80	380.56	398.91	1.82	1.39	356.27	1.30	1.62	1.81	366.02
8		231.03	490.68	483.12	267.74	426.44	339.53	636.96	663.95	295.27	1052.61	334.68	426.44	561.39	431.30	319.56	550.60	417.27	449.65	378.94	345.47	1.72	1.38	339.53	1.25	1.71	1.68	363.46
9		275.30	527.38	489.06	272.06	453.97	342.23	690.94	653.16	288.79	1009.43	321.18	428.06	533.32	429.68	331.44	463.15	441.56	443.18	392.97	305.53	1.65	1.40		1.23	1.79	1.59	364.00
10		307.15	545.20	495.00	259.64	463.15	339.53	766.52	717.93	299.59	939.25	327.12	437.24	483.12	422.12	347.09	378.94	455.59	476.64	424.82	278.00	1.63	1.41		1.21	1.85	1.55	366.85
11		373.00	498.24	496.62	259.64	450.73	337.92	804.30	728.73	307.15	901.47	339.53	446.41	448.03	420.50	353.03	325.50	469.09	519.83	432.38	258.56	1.59	1.44		1.21	1.89	1.52	367.13
12		406.47	458.83	496.62	244.53	444.80	323.88	777.31	712.54	308.77	858.28	342.23	450.73	432.38	423.20	349.79	290.41	490.68	555.99	432.38	250.47	1.54	1.42		1.22	1.91	1.48	362.31
13		435.62	446.41	473.94	229.42	426.44	313.08	690.94	680.15	314.70	842.09	322.26	450.73	408.09	418.89	342.23	273.68	484.74	572.19	428.06	267.74	1.49	1.39		1.24	1.91	1.46	353.16
14		389.74	443.18	470.71	213.76	431.30	321.18	604.58	674.75	351.41	825.89	292.03	444.80	371.38	408.09	325.50	262.88	453.97	561.39	409.71	296.35	1.44	1.37		1.24	1.92	1.45	342.40
15		339.53	444.80	437.24	198.65	434.00	319.56	521.45	696.34	403.77	798.90	266.12	450.73	349.79	380.56	310.39	261.26	398.91	550.60	385.42	304.45	1.41	1.36		1.21	1.94	1.44	330.39
16		313.08	443.18	400.53	180.29	426.44	314.70	452.35	712.54	431.30	734.13	246.15	457.21	343.85	363.83	295.27	252.09	358.97	522.53	363.83	305.53	1.39	1.35		1.16	1.94	1.43	317.00
17		304.45	441.56	312.00	187.85	408.09	313.08	408.09	782.71	406.47	663.95	233.73	457.21	345.47	349.79	276.92	244.53	336.30	485.82	348.71	308.77	1.40	1.32		1.12	1.84	1.39	304.90
18		308.77	417.27	266.12	186.23	371.38	321.18	371.38	852.88	380.56	593.78	229.42	446.41	357.89	340.61	261.26	229.42	330.36	448.03	337.92	328.74	1.44	1.31		1.09	1.73	1.36	295.46
19		317.94	394.59	270.44	161.94	339.53	351.41	339.53	836.69	373.00	538.18	222.94	424.82	363.83	334.68	236.97	218.62	333.06	406.47	325.50	385.42	1.48	1.28		1.09	1.65	1.32	287.30
20		327.12	382.18	287.17	160.32	310.39	371.38	323.88	788.11	367.06	495.00	209.44	404.85	367.06	328.74	215.38	212.68	339.53	378.94	304.45	392.97	1.52	1.26		1.10	1.60	1.28	278.94
21		343.85	368.14	310.39	150.60	284.47	380.56	307.15	744.92	360.59	469.09	195.41	378.94	367.06	319.56	197.03	206.20	339.53	378.94	287.17	380.56	1.51	1.28		1.13	1.56	1.25	271.08
22		374.62	369.76	327.12	138.73	264.50	373.00	317.94	728.73	380.56	450.73	181.91	356.27	365.44	314.70	175.97	203.50	334.68	365.44	275.30	348.71	1.48	1.29		1.19	1.53	1.22	266.17
23		395.67	377.32	342.23	131.71	253.71	362.21	345.47	712.54	418.89	457.21	172.74	337.92	356.27	314.70	157.62	198.65	323.88	340.61	262.88	328.74	1.46	1.30		1.23	1.51	1.19	263.91
24		431.30	386.50	349.79	124.69	244.53	362.21	319.56	707.14	437.24	453.97	169.50	319.56	343.85	325.50	141.43	200.27	327.12	323.88	247.77	302.83	1.43	1.31		1.26	1.48	1.17	261.01
25		457.21	367.06	314.70	120.92	238.59	348.71	290.41	739.53	434.00	431.30	167.88	301.21	330.36	328.74	126.31	211.06	353.03	302.83	236.97	275.30	1.38	1.30		1.25	1.46	1.15	255.31
26		493.92	322.26	295.27	119.30	235.35	336.30	278.00	750.32	412.95	397.29	165.18	286.09	308.77	316.32	111.74	213.76	357.89	286.09	227.80	247.77	1.34	1.29		1.21	1.43	1.13	246.75
27		495.00	301.21	284.47	119.30	235.35	321.18	284.47	685.55	388.12	369.50	169.50	295.27	308.77	308.77	100.94	307.15	339.53	315.38	215.38	228.56	1.32	1.30		1.18	1.39	1.11	238.07
28		504.17	287.17	262.88	119.30	231.03	308.77	286.09	620.77	360.59	377.32	172.74	275.30	301.21	322.26	92.31	204.58	319.56	400.53	206.20	207.82	1.33	1.29		1.17	1.35	1.09	234.67
29		505.79	287.17	264.50	119.30	231.03	308.77	296.35	555.99	337.92	349.79	177.05	281.24	305.53	342.23	85.29	191.09	292.03	507.41	201.89	198.65	1.34	1.27		1.18	1.31	1.07	233.81
30		507.41	290.41	266.12	119.30	247.77	323.88	288.79	485.82	322.26	319.56	183.53	281.24	325.50	336.30	80.97	180.29	261.26	588.38	204.58	189.47	1.35			1.17	1.27	1.05	241.99
Jul 1	160.32	572.19	293.65	253.71	110.12	252.09	319.56	272.06	444.80	314.70	292.03	191.09	275.30	362.21	327.12	76.65	180.29	233.73	577.59	207.82	178.67	1.35			1.20	1.22	1.03	236.02
2	160.32	572.19	264.50	235.35	108.50	249.39	307.15	256.94	418.89	310.39	276.92	197.03	266.12	356.27	317.94	74.49	177.05	207.82	470.71	209.44	165.18	1.33			1.29	1.22	1.02	224.30
3	161.94	572.19	232.11	236.97	106.88	236.97	293.65	238.59	394.59	305.53	261.26	201.89	252.09	322.26	296.35	76.65	172.74	186.23	394.59	212.68	154.38	1.30			1.31	1.34	0.99	212.62
4	161.94	516.59	215.38	238.59	120.38	227.80	270.44	226.18	365.44	299.59	247.77	206.20	233.73	290.41	275.30	80.97	172.74	171.12	356.27	226.18	147.37	1.27			1.29	1.48	0.97	202.21
5	161.94	478.26	201.89	241.29	114.44	211.06	247.77	212.68	342.23	296.35	236.97	206.20	218.62	267.74	258.56	92.85	181.91	161.94	316.32	222.94	139.27	1.23			1.25	1.47	0.95	192.65
6	156.00	453.97	191.09	246.15	110.66	203.50	224.56	201.89	339.53	290.41	229.42	200.27	211.06	247.77	244.53	107.42	181.91	157.62	282.86	215.38	131.71	1.22			1.21	1.42	0.92	185.30
7	150.06	402.15	177.05	249.39	113.90	192.71	209.44	192.71	340.61	287.17	221.86	194.33	206.20	232.11	255.33	115.52	207.82	150.60	256.94	204.58	126.85	1.23			1.18	1.35	0.89	179.68
8	144.67	403.77	166.80	249.39	133.33	183.53	192.71	186.23	339.53	281.24	217.00	186.23	200.27	213.76	276.92	127.39	215.38	145.75	235.35	194.33	123.07	1.18			1.14	1.28	0.87	176.84
9	140.89	382.18	154.38	244.53	133.33	171.12	178.67	181.91	330.36	279.62	213.76	181.91	191.09	203.50	268.82	133.33	201.89	139.27	221.86	181.91	119.30	1.14			1.10	1.22	0.85	170.32
10	142.51	354.65	147.91	235.35	112.28	178.67	171.12	174.36	317.94	275.30	220.24	177.05	185.15	191.09	255.33	134.41	189.47	134.41	206.20	175.97	117.68	1.10			1.06	1.19	0.83	164.05
11	183.53	323.88	137.65	218.62	110.66	171.12	161.94	166.80	302.83	259.64	246.15	171.12	181.91	181.91	241.29	138.73	178.67	126.31	194.33	171.12	116.06	1.06			1.03	1.19	0.83	159.53
12	212.68	287.17	133.33	200.27	104.18	165.18	150.60	161.94	282.86	250.47	321.18	166.80	178.67	178.67	247.77	146.83	174.36	121.99	181.91	161.94	117.68	1.03			0.99	1.19	0.85	158.02
13	220.24	275.30	138.73	185.15	103.64	150.06	140.89	169.50	270.44	229.42	351.41	161.94	172.74	177.05	262.88	270.44	169.50	120.92	169.50	154.38	121.46	1.05			0.96	1.22	0.84	160.79
14	222.94	253.71	144.13	167.88	102.02	143.05	136.57	183.53	252.09	224.56	321.18	156.00	161.94	172.74	268.82	443.18	166.80	121.46	158.70	150.60	121.46	1.08			0.92	1.24	0.82	163.10
15	224.56	238.59	136.57	185.15	102.56	141.43	137.11	206.20	242.91	229.42	292.03	148.98	152.22	167.88	264.50	469.09	160.32	124.15	148.45	145.21	121.46	1.06			0.89	1.24	0.80	161.71
16	217.00	231.03	127.39	187.85	106.88	138.73	127.93	221.86	232.11	221.86	267.74	142.51	144.67	171.12	255.33	404.85	152.76	129.01	140.35	152.22	116.06	1.04			0.89	1.22	0.78	155.73
17	201.89	232.11	120.38	189.47	106.34	136.57	121.18	218.62	231.03	209.44	244.53	138.19	136.03	169.50	250.47	333.06	144.67	132.79	134.41	171.12	111.74	1.01			0.91	1.20	0.76	149.59
18	183.53	238.59	114.44	186.23	102.56	133.87	123.61	209.44	229.42	197.03	227.80	147.91	129.55	161.94	249.39	278.00	138.73	136.57	130.63	169.50	107.42	1.00			0.98	1.20	0.74	144.00
19	165.18	238.59	117.14	158.70	102.02	126.31	120.38	195.41	224.56	192.71	221.86	178.67	127.39	158.70	240.21	242.91	134.41	145.21	125.23	166.80	103.64	0.98			1.03	1.23	0.74	139.60
20	167.88	236.97	125.23	146.83	99.86	124.15	128.47	183.53	221.86	195.41	222.94	204.58	125.23	152.76	227.80	212.68	141.43	141.97	120.92	158.70	102.02	0.96			1.06	1.23	0.74	137.81
21	171.12	221.86	127.39	143.59	95.54	114.44	139.27	171.12	213.76	203.50	241.29	222.94	124.15	144.13	209.44	186.23	229.42	133.33	119.30	151.68	100.94	0.98			1.10	1.20	0.76	138.74
22	197.03	207.82	136.57	147.37	91.77	113.90	146.83	163.56	206.20	212.68	262.88	220.24	120.38	136.57	197.03	166.80	420.50	125.23	143.05	144.13	100.94	1.05			1.12	1.16	0.81	146.62
23	235.35	200.27	131.71	166.80	76.65	111.74	150.60	156.00	201.89	218.62	297.97	213.76	113.36	131.71	183.53	150.06	485.82	117.68	175.97	139.27	100.94	1.12			1.10	1.12	0.88	150.56
24	246.15	181.91	138.73	167.88	75.03	110.12	158.70	148.98	195.41	218.62	310.39	211.06	105.80	127.39	169.50	140.89	449.65	110.12	174.36	132.79	100.40	1.15			1.07	1.08	0.90	147.12
25	247.77	166.80	136.57	172.74	69.09	112.28	158.70	136.57	186.23	209.44	304.45	206.20	100.94	123.61	158.70	131.17	385.42	104.18	180.29	126.31	99.86	1.14			1.04	1.04	0.89	140.86
26	238.59	157.62	132.79	160.32	69.63	112.28	158.70	126.31	180.29	198.65	275.30	203.50	98.78	121.46	147.91	127.93	330.36	100.40	185.15	121.99	107.42	1.11			1.00	1.01	0.87	134.44
27	222.94	148.45	126.31	160.32	64.24	112.28	167.88	118.22	172.74	186.23	253.71	212.68	96.08	123.61	138.19	131.17	299.59	96.62	191.09	119.30	117.14	1.08			0.96	0.99	0.85	130.51
28	204.58	147.37	123.07	143.59	59.38	114.44	191.09	111.20	172.74	177.05	224.56	218.62	91.77	129.01	132.25	143.59	287.17	90.15	185.15	116.06	122.53	1.03			0.98	0.97	0.83	127.57
29	189.47	137.65	117.14	138.73	58.30	114.44	227.80	103.64	171.12	166.80	211.06	212.68	90.15	139.27	128.47	154.38	268.82	87.45	200.27	114.98	123.61	0.99			1.02	0.95	0.81	126.40
30	175.97	131.71	116.60	126.85	55.06	138.73	233.73	97.16	163.56	156.00	198.65	200.27	89.61	150.60	127.93	152.76	246.15	81.51	218.62	113.36	120.92	0.95			1.10	0.92	0.78	123.98
31	167.88	128.47	112.28	119.30	50.42	136.57	226.18	92.31	157.62	145.75	197.03	186.23	91.23	157.62	129.01	148.98	222.94	77.73	236.97	110.12	120.38	0.91			1.12	0.89	0.76	120.75
Aug 1	161.94	123.07	106.88	112.82	45.88	134.95	212.68	88.53	152.76	137.65	201.89	172.74	93.39	166.80	129.01	147.91	201.89	74.49	236.97	106.34	118.76	0.87			1.10			127.36
2	161.94	123.07	103.64	107.42	43.24	138.73	195.41	86.37	154.38	132.79	207.82	160.32	95.54	166.80	143.59	152.76	185.15	72.87	221.86	102.02	118.22	0.84			1.09			125.04
3	152.76	121.46	99.32	101.48	42.64	147.37	185.15	84.21	154.38	133.87	209.44	148.45	93.39	161.94	174.36	158.70	169.50	69.63	206.20	98.78	119.30	0.82			1.06			123.23
4	148.45	121.46	91.23	97.16	44.97	152.22	169.50	82.05	150.06	138.73	211.06	138.19	90.69	156.00	197.03	154.38	158.70	67.48	195.41	97.70	120.38	0.80			1.03			121.07
5	139.27	122.53	89.61	96.08	48.47	151.14	158.70	82.05	145.75	140.35	211.06	128.47	88.53	150.06	211.06	146.29	148.45	68.55	185.15	100.94	134.95	0.78			0.99			119.53
6	137.11	124.15	87.99	94.47	49.39	146.83	152.76	79.89	140.89	139.81	220.24	119.30	88.53	141.97	215.38	134.95	138.73	68.01	175.97	126.31	156.00	0.76			0.95			119.15
7	132.25	126.31	84.75	93.93	56.68	152.76	144.13	78.27	139.27	135.49	231.03	114.44	85.83	133.33	209.44	129.01	128.47	66.94	171.12	156.00	166.80	0.75			0.91			119.04
8	126.85	127.39	84.21	93.39	59.38	194.33	133.87	76.65	137.65	127.93	233.73	108.50	83.13	125.77	198.65	131.17	120.92	66.40	172.74	150.60	169.50	0.74			0.88			118.45
9	120.92	139.81	79.89	88.53	70.71	221.86	125.23	80.43	134.95	125.77	233.73	105.26	80.43	120.38	185.15	134.95	116.60	64.78	181.91	144.13	167.88	0.74			0.85			118.47
10	114.44	178.67	79.89	83.67	77.73	221.86	120.38	80.43	132.79	122.53	240.21	100.94	79.89	113.36	169.50	141.43	119.84	62.08	178.67	136.57	165.18	0.74			0.83			118.33
11	109.58	241.29	79.89	80.97	90.69	220.24	118.22	77.73	127.39	124.69	247.77	99.32	79.35	107.96	156.00	143.05	129.01	60.46	174.36	127.93	165.18	0.74			0.84			120.12
12	105.26	272.06	77.73	80.43	91.77	209.44	116.06	75.57	126.31	133.33	242.91	96.08	81.51	106.34	143.59	146.83	139.81	59.38	165.18	120.92	163.56	0.76			0.88			119.81
13	99.86	273.68	75.03	76.65	92.85	194.33	110.66	76.11	127.93	132.25	233.73	95.00	82.59	115.52	133.33	152.22	156.00	58.84	154.38	116.06	157.62	0.80			0.95			118.10
14	93.39	272.06	73.41	71.79	82.59	161.94	106.34	78.27	122.53	128.47	221.86	92.31	82.59	132.79	124.69	152.76	154.38	60.46	143.05	116.06	148.45	0.83			0.98			114.00
15	90.15	266.12	70.17	69.63	79.35	175.97	103.64	86.37	116.06	123.61	222.94	90.15	80.97	129.55	116.60	157.62	150.06	59.92	133.87	126.31	140.89	0.82			0.97			112.68
16	86.91	266.12	69.09	68.55	70.71	171.12	102.02	93.39	108.50	116.60	238.59	85.83	77.19	124.69	109.04	163.56	147.91	61.00	126.85	141.43	133.33	0.81			0.95			111.49
17	84.21	259.64	65.86	64.78	73.41	174.36	104.18	106.34	104.18	108.50	246.15	84.21	74.49	120.38	104.72	174.36	148.45	63.70	121.46	156.00	127.39	0.79			0.93			111.67
18	86.37	242.91	61.54	63.16	79.89	181.91	114.98	118.22	102.02	101.48	242.91	80.97	72.33	114.98	102.56	186.23	166.80	68.01	117.14	160.32	123.61	0.77			0.93			112.61
19	92.31	222.94	56.14	61.54	120.38	157.62	133.87	117.14	107.42	96.08	235.35	77.73	71.25	109.04	106.34	187.85	191.09	74.49	112.82	160.32	121.46	0.75			0.93			113.69
20	106.88	201.89	54.52	59.92	142.51	181.91	140.35	111.20	110.12	91.23	227.80	75.57	67.48	101.48	114.44	191.09	191.09	78.81	111.20	166.80	119.30	0.73			0.94			115.10
21	110.12	195.41	53.98	58.30	144.13	181.91	147.91	104.18	106.88	88.53	220.24	73.41	67.48	96.08	120.92	207.82	186.23	79.35	111.20	171.12	118.22	0.73			0.97			115.00
22	110.12	191.09	54.52	56.68	142.51	194.33	157.62	96.62	103.64	87.99	212.68	71.79	63.70	91.77	124.15	227.80	177.05	78.27	106.34	171.12	120.38	0.72			1.03			114.87
23	107.96	181.91	54.52	53.66	134.41	201.89	163.56	90.15	100.94	89.61	207.82	69.63	63.16	86.91	124.69	246.15	169.50	82.05	101.48	171.12	124.15	0.71			1.07			114.22
24	111.74	166.80	55.60	52.58	125.77	197.03	161.94	84.21	106.34	86.91	203.50	68.55	61.54	84.21	124.15	252.09	161.94	82.05	99.86	167.88	129.01	0.70			1.12			112.41
25	107.96	152.76	55.60	52.25	119.30	191.09	154.38	81.51	111.20	84.21	197.03	65.86	61.54	80.43	120.92	244.53	157.62	83.67	96.08	163.56	136.03	0.70			1.13			109.54
26	104.18	144.67	56.68	49.99	114.44	181.91	144.67	79.35	122.53	81.51	189.47	64.78	60.46	78.81	119.30	231.03	154.38	82.05	92.85	161.94	134.95	0.69			1.11			106.60
27	99.86	133.33	60.46	47.99	112.82	167.88	135.49	79.35	133.87	80.97	192.71	64.24	60.46	78.81	114.44	220.24	150.06	80.43	90.69	166.80	131.71	0.68			1.09			104.54
28	96.08	123.07	64.24	46.48	107.42	165.18	126.85	79.89	136.03	79.89	218.62	64.24	60.46	78.27	110.66	212.68	144.13	78.81	89.07	175.97	127.39	0.67			1.06			103.79
29	90.15	114.44	66.40	44.48	109.04	157.62	120.38	90.69	137.11	78.27	249.39	67.48	61.00	83.13	106.88	204.58	137.11	76.11	87.45	183.53	122.53	0.67			1.03			103.89
30	93.39	106.34	69.09	43.56	122.53	151.14	114.98	101.48	136.03	76.11	264.50	73.41	56.14	90.15	102.56	197.03	129.55	73.41	86.37	186.23	117.14	0.66			1.01			104.04
31	92.85	98.78	78.81	40.97	124.15	145.75	112.28	107.42	130.09	73.41	262.88	85.83	55.06	89.07	99.86	186.23	124.15	70.71	85.29	183.53	110.66	0.65			0.99			102.58
Sep 1	92.31	96.62	107.96	40.38	117.14	137.65	107.42	114.44	124.69	71.25	255.33	106.88	53.82	87.45	98.24	175.97	119.84	67.48	84.21	177.05	105.80	0.64			0.97			101.89
2	92.31	95.54	120.38	39.14	114.98	133.87	102.02	121.46	121.46	69.09	249.39	137.65	52.90	86.91	98.24	172.74	115.52	64.78	83.13	171.12	100.40	0.64						106.53
3	88.53	93.39	123.61	37.89	109.58	131.17	100.40	123.61	116.06	66.94	242.91	147.37	51.82	89.61	98.78	175.97	112.28	62.62	80.97	165.18	97.16	0.64						105.30
4	84.21	90.15	123.61	37.30	107.42	129.01	99.86	123.61	110.66	64.24	232.11	147.37	51.66	96.08	99.86	186.23	109.58	61.00	78.81	161.94	96.08	0.65						104.16
5	80.43	85.29	118.22	33.31	99.86	124.15	104.18	126.85	105.26	64.24	220.24	143.59	52.74	100.94	102.56	194.33	108.50	61.00	78.27	161.94	93.39	0.65						102.72
6	75.57	83.67	110.66	33.95	94.47	119.30	112.28	123.61	102.56	63.16	213.76	137.65	55.06	104.18	107.96	198.65	109.58	61.00	80.43	166.80	90.69	0.65						102.07
7	71.25	80.97	110.66	33.95	96.08	115.52	119.30	117.68	98.78	64.24	204.58	131.71	57.22	107.96	124.69	194.33	113.36	61.00	81.51	167.88	86.91	0.65						101.83
8	68.01	78.81	100.40	31.79	95.00	112.82	123.61	117.14	97.70	74.49	197.03	125.23	61.54	105.80	143.59	187.85	119.30	61.54	83.67	171.12	83.13	0.65						101.83
9	63.16	76.65	100.40	31.79	93.93	111.20	129.01	118.22	97.70	96.08	187.85	119.30	67.48	102.56	157.62	180.29	123.07	61.54	84.75	177.05	79.89	0.67						102.74
10	62.62	75.57	86.37	31.79	90.69	111.20	133.87	121.46	98.24	111.20	178.67	113.36	69.63	98.78	169.50	180.29	122.53	62.08	82.59	181.91	76.11	0.70						102.69
11	61.54	75.03	80.97	31.79	87.45	109.04	144.67	123.61	99.32	123.61	169.50	106.88	68.55	97.16	186.23	189.47	120.38	62.62	81.51	183.53	72.33	0.73						103.45
12	61.00	68.01	80.97	32.71	87.99	109.04	161.94	121.46	100.94	141.97	161.94	102.56	67.48	99.32	194.33	194.33	117.68	63.16	81.51	177.05	69.09	0.74						104.33
13	61.00	65.86	73.41	34.22	87.45	106.88	175.97	118.22	98.78	158.70	152.76	97.70	65.32	100.94	198.65	213.76	115.52	63.70	82.59	169.50	66.94	0.75						104.94
14	61.00	64.24	70.17	33.31	80.97	108.50	194.33	114.98	96.62	197.03	150.06	95.00	63.16	98.78	192.71	253.71	114.98	63.70	82.59	158.70	68.01	0.77						107.42
15	61.00	61.00	69.09	33.63	78.27	110.66	192.71	110.66	94.47	224.56	146.83	90.15	61.54	100.40	181.91	268.82	117.14	64.24	82.05	148.98	70.17	0.78						107.68
16	61.00	60.46	66.94	33.04	79.89	112.28	192.71	106.88	92.31	246.15	142.51	87.99	59.92	103.10	171.12	258.56	119.84	64.24	88.53	139.81	70.17	0.82						107.19
17	61.00	57.76	66.94	32.39	76.65	110.66	186.23	104.18	90.69	244.53	140.35	84.21	60.46	102.56	161.94	242.91	121.46	63.70	95.00	132.25	70.71	0.86						104.88
18	61.00	56.14	66.94	31.20	73.41	110.66	178.67	99.86	90.15	238.59	136.03	81.51	61.00	104.72	154.38	224.56	121.99	63.70	96.62	125.23	70.71	0.90						102.18
19	61.00	59.38	66.94	29.53	77.19	114.98	165.18	99.32	91.77	226.18	132.25	81.51	60.46	109.04	148.98	207.82	122.53	62.62	96.08	119.30	70.17	0.92						100.14
20	61.54	61.54	69.09	30.12	79.89	117.14	154.38	100.94	100.94	218.62	127.39	84.21	61.00	110.12	144.13	192.71	122.53	61.54	93.93	113.36	69.63	0.93						98.89
21	61.54	63.70	69.09	28.45	80.97	117.14	141.97	106.34	114.44	218.62	124.15	91.77	61.00	111.74	138.73	180.29	126.31	61.00	90.15	107.96	68.55	0.92						98.40
22	62.08	64.24	97.70	29.20	82.59	114.98	132.79	110.12	122.53	218.62	120.38	104.18	62.08	111.74	132.79	167.88	132.25	60.46	86.91	103.64	66.94	0.93						99.32
23	62.62	62.08	97.70	27.80	80.97	114.98	127.39	117.68	123.61	218.62	120.38	119.30	60.46	109.58	128.47	157.62	131.71	60.46	82.59	100.94	65.86	0.92						98.71
24	64.24	60.46	97.70	27.37	80.97	114.44	123.61	131.71	121.99	209.44	114.98	128.47	59.92	106.34	124.69	151.68	126.85	64.24	77.19	98.78	63.70	0.90						97.71
25	68.55	60.46	90.15	25.96	82.05	112.82	118.22	139.27	119.84	198.65	112.28	130.09	59.38	104.18	124.69	144.67	123.61	79.89	72.33	97.70	62.62	0.88						96.74
26	75.03	64.24	83.13	27.80	80.43	114.98	112.82	154.38	120.92	189.47	108.50	130.09	58.84	102.56	129.01	140.89	118.76	91.77	68.55	96.08	63.16	0.86						96.92
27	82.59	71.79	73.41	28.72	77.73	114.44	108.50	167.88	118.22	178.67	106.88	129.01	58.84	102.02	131.71	135.49	116.06	96.62	64.78	94.47	67.48	0.84						96.64
28	95.00	72.87	73.41	29.80	79.89	114.44	104.72	171.12	114.44	169.50	105.26	127.39	60.46	100.94	133.87	127.39	114.98	97.70	62.08	91.77	72.33	0.83						96.37
29	110.12	73.41	67.48	30.28	76.65	111.20	100.40	156.00	110.66	160.32	103.10	125.23	61.54	99.32	133.87	119.30	118.22	96.62	60.46	89.07	72.87	0.83						94.41
30	125.77	69.09	60.46	30.88	76.65	109.04	97.70	139.27	106.34	154.38	102.02	121.46	64.24	101.48	133.87	114.44	129.01	91.77	61.54	85.83	70.71	0.82						93.03
Oct 1	120.38	67.48	59.38		70.17	105.80	111.20	132.79	101.48	151.68	99.86	113.36	64.24	100.94	134.41	109.04	145.75	86.91	61.00	83.13	66.40	0.82						94.58
2	110.12	62.62	59.92		71.79	107.42	115.52	127.39	97.16	145.75	98.78	106.88	64.78	97.16	129.55	105.26	169.50	83.13	60.46	79.89	62.62	0.82						93.17
3	105.26	59.38	60.46		73.41	107.42	114.98	127.93	92.85	144.67	96.08	100.94	66.40	93.93	124.69	100.94	185.15	79.89	59.92	76.65	58.30	0.84						91.91
4	90.69	56.68	61.00		74.49	109.04	114.44	140.35	90.15	139.27	95.00	96.08	68.01	91.23	120.38	99.86	191.09	76.11	57.76	73.41	54.52	0.84						90.50
5	92.31	54.52	58.30		76.11	114.98	126.31	166.80	89.07	133.87	94.47	95.00	74.49	86.91	114.98	98.24	185.15	72.87	56.14	71.25	50.42	0.85						91.10

6	83.67	51.50	57.22		73.41	111.20	125.77	178.67	85.83	127.39	93.93	96.08	81.51	82.59	111.20	96.08	167.88	70.71	56.14	67.48	49.66	0.87						88.99
7	71.79	50.42	56.14			92.85	122.53	171.12	81.51	121.46	92.85	100.94	97.16	78.27	106.88	95.54	152.76	67.48	55.06	64.78	52.74	0.88						86.66
8	66.40	48.47	56.14			87.45	112.82	157.62	79.89	114.98	91.23	113.36	102.02	72.87	100.94	97.16	143.05	64.24	53.49	63.16	55.60	0.87						84.09
9	72.33	46.80	57.22			60.46	104.72	146.29	78.27	109.58	90.15	131.71	99.32	69.63	94.47	96.62	132.79	61.54	50.15	62.08	58.84	0.84						81.19
10	69.09	42.64	56.14				100.94	127.39	76.65	106.34	89.07	134.41	97.16	69.09	86.91	97.16	127.93	58.84	41.73	59.38	62.08	0.82						79.15
11	62.08	40.38	52.25				95.54	115.52	73.95	104.18	88.53	125.23	92.85	67.48	82.05	95.00	124.69	56.68	33.31	57.76	64.24	0.79						75.40
12	61.00	39.46					90.69	102.02	69.63	102.02	89.61	113.36	88.53	69.63	79.89	93.39	117.14	54.52	34.87	57.76	64.24	0.78						73.81
13	62.62	35.79					84.75	99.86	64.24	100.94	97.16	102.56	82.59	70.71	75.57	89.61	106.34	52.41	42.48	57.22	62.08	0.76						71.54
14	55.60	30.88					79.89	104.18	56.14	100.40	96.62	98.78	78.27	74.49	72.33	86.37	98.78	51.98	43.13	56.14	58.30	0.75						69.06
15	57.22	29.20					77.73	102.56	55.60	96.62	96.62	97.70	71.25	71.79	69.63	82.05	91.77	50.74	44.32	53.49	55.60	0.75						66.93
16	55.60	29.20					76.65	98.24	53.98	96.08	91.77	93.93	70.71	70.71	64.78	76.11	86.37	50.58	44.97	51.23	54.52	0.74						64.79
17	54.52	28.45					76.65	96.08	52.74	96.08	91.77	89.07	66.94	68.01	62.62	68.55	80.97	47.39	45.56	47.66	52.74	0.72						62.58
18	50.31	27.69					75.57	92.85	51.23	96.62	91.77	85.29	63.16	64.24	61.00	64.78	76.11	41.29	44.48	44.48	52.25	0.70						60.21
19	50.90	26.61					74.49	84.21	48.91	97.16	91.77	84.75	61.00	66.40	59.38	66.40	70.71	38.97	43.56	42.05	52.41	0.69						58.91
20	50.90	25.86					72.33	74.49	46.64	92.85	91.77	82.59	58.30	60.46	57.22	64.78	65.86	31.31	42.05	39.57	53.17	0.67						56.16
21	50.31	24.78					67.48	65.86	45.40	88.53	76.65	80.97	55.60	59.92	55.06	62.08	61.00	29.37	39.73	37.46	52.74	0.64						52.98
22	49.66	22.19					62.08	63.16	43.13	85.83	76.65	78.27	53.49	58.30	55.06	52.41	57.22	29.20	38.54	36.06	53.06	0.62						50.83
23	50.90	20.19					59.92	68.01	41.29	83.67	76.65	76.65	42.81	55.60	57.22	42.21	55.06	29.04	37.46	35.30	51.98	0.60						49.14
24	50.90	16.79					58.84	65.32	39.57	81.51	76.65	74.49	30.55	48.58	57.76	40.97	53.17	29.37	36.54	35.14	50.31	0.59						47.06
25	52.74	14.36					55.60	58.30	37.89	79.89	76.65	71.25	24.45	51.82	51.98	40.49	51.23	29.80	35.79	34.71	48.91	0.57						45.36
26	52.14	13.17					53.98	52.41	36.71	79.35	50.42	69.63	24.45	49.07	49.23	40.22	49.50	30.55	35.46	34.39	49.66	0.56						42.83
27	47.23	12.36					51.98	51.66	35.14	74.49	50.42	68.01	25.21	46.80	40.22	40.38	47.66	30.71	35.14	34.06	50.74							43.66
28	34.39	11.44					51.50	52.90	34.71	68.01	50.42	68.01	29.04	46.64	39.73	40.49	45.88	31.04	34.22	33.79	51.34							42.56
29	31.47	10.69					50.42	51.07	33.04	65.86	50.42	67.48	31.20	44.16	38.22	40.81	45.07	31.20	33.04	33.63	49.99							41.63
30	30.55	10.26					48.91	51.07	31.63	61.00	50.42	66.40	31.04	43.72	37.46	41.29	44.64	30.55	32.12	32.39	46.15							40.56
31	25.37	9.77					48.91	51.66	30.55	55.06	50.42	68.01	30.71	39.30	36.71	41.89	44.32	30.55	31.31	31.04	48.15							39.63
Nov 1	24.78						48.91	44.32	25.96	51.82	25.96	58.30	30.55	34.55	35.30	41.89	43.40	30.28	30.55	29.20	46.64							37.65
2	23.37						48.15	44.32	25.96	51.23	25.96	53.49	30.55	31.79	34.06	42.05	42.48	29.64	29.04	26.61	44.16							36.43
3	22.02						42.81	44.32	25.96	45.07	25.96	49.66	30.28	30.55	32.87	41.89	41.56	29.04	27.80	25.21	42.64							34.85
4	22.02						42.81	44.32	25.96	45.07	25.96	46.64	30.12	30.55	31.63	41.29	40.65	28.72	27.04	24.13	47.39							34.65
5	21.38						42.81	44.32	25.96	45.07	25.96	44.05	29.80	29.04	30.55	39.89	39.73	28.45	25.96	23.10	45.88							33.87
6	21.27						42.81	44.32	25.96	45.07	32.12	42.21	29.53	28.29	29.96	38.97	38.38	28.61	25.37	22.62	41.29							33.55
7	21.27						42.81	44.32	25.96	45.07	32.12	40.49	29.04	27.53	29.37	37.46	36.98	29.04	24.45	22.02	34.87							32.67
8	21.27						42.81	44.32	25.96	45.07	32.12	38.54	28.72	26.77	28.72	36.06	35.46	28.12	23.86	21.70	30.55							31.88
9	21.27						42.81	44.32	25.96	45.07	32.12	37.89	27.80	25.69	28.12	35.46	33.95	27.53	23.54	21.70	26.77							31.25
10	21.11						42.81	44.32	25.96	45.07	32.12	36.38	27.53	24.45	27.53	35.14	32.39	27.37	23.21	21.70	25.69							30.80
11	21.11						42.81	44.32	25.96	45.07	32.12	35.14	27.21	23.86	27.21	34.55	31.47	27.21	23.10	21.70	24.78							30.48
12	21.11						42.81	44.32	25.96	45.07	32.12	34.87	26.45	23.21	26.88	33.63	30.55	26.61	23.10	21.54	24.45							30.17
13	21.27						42.81	44.32	25.96	45.07	32.12	33.95	26.13	22.62	26.61	32.39	29.64	26.13	22.94	21.38	24.45							29.86
14	21.11						42.81	44.32	25.96	45.07	32.12	33.63	25.86	22.02	26.29	30.88	27.53	25.86	22.78	21.11	24.45							29.49
15	21.11						42.81	44.32	25.96	45.07	32.12	33.31	25.21	21.38	25.86	29.96	27.80	25.53	22.78	20.19	24.29							29.23
16	21.11						42.81	44.32	25.96	45.07	25.96	33.14	24.78	20.94	25.53	29.04	27.37	25.05	22.78	19.54	24.29							28.61
17	21.11						42.81	44.32	25.96	45.07	25.96	33.04	24.45	20.35	25.21	27.96	26.88	24.78	22.94	18.52	24.13							28.34
18	20.94						42.81	44.32	25.96	45.07	25.96	32.87	24.13	19.86	24.94	27.53	26.29	24.45	22.94	17.87	24.02							28.12
19	20.94						42.81	44.32	25.96	45.07	25.96	32.71	23.70	19.43	24.61	27.37	25.69	24.29	22.62	16.79	23.37							27.85
20	20.78						42.81	44.32	25.96	45.07	25.96	32.39	23.21	18.95	24.29	27.53	25.05	23.86	22.46	16.68	23.10							27.65
21	20.78						42.81	44.32	25.96	45.07	25.96	32.23	23.10	18.62	24.02	27.53	25.05	23.37	22.29	16.52	22.29							27.50
22	20.62						42.81	44.32	25.96	45.07	25.96	32.23	22.62	18.35	23.70	28.12	24.94	22.94	21.70	16.52	21.54							27.34
23	20.46						42.81	44.32	25.96	45.07	25.96	32.23	22.19	18.03	23.37	28.45	24.78	22.46	21.54	16.68	21.27							27.22
24	20.46						42.81	44.32	25.96	45.07	25.96	32.23	21.86	17.71	23.10	29.04	24.61	22.02	21.38	16.68	21.11							27.15
25	20.35						42.81	44.32	25.96	45.07	25.96	32.39	21.54	17.44	22.78	29.64	24.61	21.38	21.38	16.79	21.11							27.09
26	20.19						42.81	44.32	25.96	45.07	25.96	32.55	21.27	17.27	22.62	29.96	24.45	20.62	21.38	16.79	21.11							27.02
27	20.19						42.81	44.32	25.96	45.07	25.96	32.71	20.94	17.11	21.86	30.12	24.29	19.54	21.54	16.79	21.27							26.91
28	20.03						42.81	44.32	25.96	45.07	25.96	32.87	20.62	16.95	21.38	30.28	23.54	18.79	21.54	16.79	21.38							26.77
29	20.03						42.81	44.32	25.96	45.07	25.96	33.04	20.35	16.68	20.78	30.12	23.10	18.62	21.27	16.52	21.38							26.63
30	19.86						42.81	44.32	25.96	45.07	25.96	33.14	20.03	16.19	20.35	29.04	22.62	18.52	20.94	16.03	21.27							26.38
Dec 1						25.21	27.53	27.53	21.38	29.96	25.96	33.31	19.70	16.03	19.86	27.53	20.78	18.52	20.78	15.44	20.94							23.15
2						25.05	27.53	27.53	21.38	29.96	21.27	33.63	19.54	15.87	19.54	26.45	18.95	18.52	20.78	14.41	20.19							22.54
3						24.78	27.53	27.53	21.38	29.96	18.03	33.79	19.27	15.60	19.11	25.37	16.95	18.35	20.78	12.69	19.70							21.93
4						24.29	27.53	27.53	21.38	29.96	18.03	34.22	18.95	15.28	18.62	24.78	16.19	18.19	20.78	11.98	19.27							21.69
5						23.86	27.53	27.53	21.38	29.96	18.03	34.55	18.52	15.11	18.19	24.45	16.19	18.03	20.62	11.61	18.95							21.53
6						23.54	27.53	27.53	21.38	29.96	18.03	34.87	18.35	14.84	17.71	24.45	16.03	17.87	20.35	11.34	18.79							21.41
7						23.21	27.53	27.53	21.38	29.96	18.03	34.98	18.19	14.52	17.27	24.45	16.19	17.71	20.19	11.01	18.79							21.31
8						22.94	27.53	27.53	21.38	29.96	18.03	35.14	18.03	14.20	16.79	24.45	16.36	17.71	19.27	10.85	18.95							21.19
9						22.62	27.53	27.53	21.38	29.96	18.03	35.14	17.71	13.93	16.36	23.70	16.68	17.60	18.62	10.53	19.27							21.04
10						22.19	27.53	27.53	21.38	29.96	18.03	35.63	17.44	13.76	15.87	22.94	16.79	17.11	18.35	10.42	19.54							20.90
11						21.70	27.53	27.53	21.38	29.96	18.03	35.90	17.11	13.60	15.60	21.70	16.79	16.68	18.19	10.09	19.70							20.72
12						21.38	27.53	27.53	21.38	29.96	18.03	36.38	16.95	13.44	15.28	21.27	16.79	15.01	17.71	9.77	19.70							20.51
13						21.11	27.53	27.53	21.38	29.96	18.03	36.71	16.79	13.28	15.01	20.19	16.79	14.36	16.52	9.50	19.54							20.26
14						20.78	27.53	27.53	21.38	29.96	18.03	36.71	16.68	13.17	14.52	19.70	16.68	14.09	15.87	8.85	18.95							20.03
15						20.46	27.53	27.53	21.38	29.96	18.03	36.71	16.52	13.01	14.09	18.52	16.52	13.76	15.60	8.42	18.52							19.78
16						19.86	27.53	27.53	21.38	29.96	18.03	36.71	16.36	12.85	13.76	17.44	16.36	13.76	15.44	8.10	18.19							19.58
17						19.70	27.53	27.53	21.38	29.96	18.03	36.98	16.19	12.69	13.44	16.79	16.19	13.66	15.44	7.94	17.60							19.44
18						19.54	27.53	27.53	21.38	29.96	18.03	36.98	16.03	12.52	13.17	15.87	15.87	13.60	15.01	7.94	17.11							19.25
19						19.43	27.53	27.53	21.38	29.96	18.03	36.71	15.76	12.36	12.69	15.76	15.87	13.44	14.52	7.94	16.95							19.12
20						19.11	27.53	27.53	21.38	29.96	18.03	36.38	15.60	12.25	12.25	15.44	15.87	13.01	14.09	7.94	16.79							18.95
21						18.95	27.53	27.53	21.38	29.96	18.03	35.90	15.28	12.15	11.93	15.28	15.87	12.69	13.76	7.67	16.68							18.79
22						18.79	27.53	27.53	21.38	29.96	18.03	35.14	15.11	12.09	11.61	15.01	15.87	12.25	13.66	7.02	16.68							18.60
23						18.62	27.53	27.53	21.38	29.96	18.03	33.95	15.01	12.04	11.34	14.84	15.87	12.09	13.60	6.75	16.36							18.43
24						18.52	27.53	27.53	21.38	29.96	18.03	32.39	14.84	11.98	10.85	14.84	15.60	11.93	13.55	6.59	16.03							18.22
25						18.19	27.53	27.53	21.38	29.96	18.03	30.55	14.68	11.93	10.42	14.84	15.28	11.93	13.44	6.42	15.60							17.98
26						18.03	27.53	27.53	21.38	29.96	18.03	28.45	14.52	11.88	10.09	14.84	15.11	11.93	13.44	6.37	15.44							17.78
27						17.87	27.53	27.53	21.38	29.96	18.03	25.37	14.52	11.82	9.77	15.01	15.01	11.93	13.39	6.21	15.28							17.54
28						17.71	27.53	27.53	21.38	29.96	18.03	22.94	14.36	11.71	9.50	15.01	14.84	11.93	13.28	6.10	15.22							17.31
29						17.44	27.53	27.53	21.38	29.96	18.03	20.62	14.20	11.66	9.18	15.28	14.68	11.93	13.17	6.10	15.11							17.11
30						17.27	27.53	27.53	21.38	29.96	18.03	18.35	14.09	11.66	8.69	15.44	14.52	11.77	12.85	6.05	15.06							16.89
31						17.11	27.53	27.53	21.38	29.96	18.03	15.28	13.93	11.61	8.26	15.44	14.36	11.61	12.52	5.94	14.90							16.59

Synthetic Detour Canyon Pelly	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	
		247.67	218.12	310.92	263.48	261.37	250.62	264.19	200.59	203.64	175.66	269.70	236.10	276.81	310.44	271.53	274.16	191.35	288.24	340.97	323.68	302.23	236.89	216.37	246.28	264.39	173.64	250.79	315.35	273.83	207.81	191.26	240.77	302.59	245.22	255.26	325.89	252.50	168.84	289.57	317.86	277.63	256.93
Jan 1		39.07	22.73	42.64	38.69	41.62	37.92	40.09	47.75	39.58	28.85	31.79	41.88	35.75	42.77	55.54	57.45	66.14	50.81	48.26	73.41	51.07	62.56	55.54	38.81	49.54	44.30	30.26	39.20	65.88	47.24	53.37	48.52	46.47	50.05	54.52	46.35	69.07	48.90	44.05	60.77	55.92	47.44
2		37.92	22.47	41.24	37.92	41.24	38.69	39.71	44.43	39.71	29.11	31.28	41.49	35.88	43.03	54.90	56.18	65.62	50.05	47.49	72.77	50.81	61.92	54.64	38.56	49.15	43.79	29.88	39.07	65.24	47.11	52.73	47.88	46.09	49.67	54.13	45.71	67.92	48.52	43.79	60.13	55.54	46.91
3		36.51	22.09	40.09	37.28	41.24	39.07	39.71	43.79	39.96	29.36	30.51	40.98	36.26	43.15	54.26	56.18	64.86	49.67	47.11	72.14	49.92	61.28	53.88	38.43	48.64	43.28	29.49	38.94	64.73	46.73	52.09	47.24	45.71	49.28	53.75	45.07	66.90	48.13	43.28	59.62	55.28	46.49
4		35.49	21.70	39.07	36.90	41.88	38.69	39.71	42.26	39.83	30.00	29.62	40.60	35.88	43.03	53.62	56.18	64.09	49.41	46.47	71.50	49.41	59.37	53.24	38.17	48.13	42.77	29.11	38.81	64.48	46.35	51.45	46.60	45.20	48.90	53.50	44.43	65.88	47.75	42.77	59.11	54.90	46.01
5		34.34	21.70	36.90	36.51	43.03	36.51	40.09	37.92	39.45	29.49	29.36	40.22	35.49	42.13	53.62	56.05	63.84	49.15	45.96	70.86	49.15	57.45	52.47	37.92	47.75	42.26	28.73	38.69	64.35	46.09	50.81	45.96	44.81	48.64	53.11	43.79	64.86	47.37	42.26	58.60	54.64	45.42
6		33.45	21.45	36.51	36.13	43.03	34.34	40.09	37.28	38.56	28.34	29.36	39.83	35.11	40.98	53.62	55.54	63.71	48.77	45.32	70.22	48.52	56.81	51.84	37.66	47.37	41.75	28.47	38.56	63.84	45.83	50.18	45.45	44.30	48.26	52.73	43.28	63.84	47.11	42.13	58.22	54.39	44.93
7		32.68	21.19	35.75	35.62	43.03	33.58	40.09	36.51	38.05	26.81	29.11	39.32	34.60	40.22	53.62	54.64	63.33	48.64	44.69	69.58	48.01	56.18	51.07	37.54	46.98	41.37	28.09	38.43	63.71	45.58	49.41	44.94	43.79	48.01	52.35	42.64	62.94	46.73	41.88	57.71	54.01	44.45
8		35.75	20.94	35.49	35.24	43.03	33.32	39.71	36.51	37.41	27.07	29.36	38.69	34.47	39.96	53.62	53.37	62.56	48.52	44.43	68.94	47.62	54.90	50.43	37.15	46.86	40.86	27.83	38.30	62.94	45.20	48.77	44.43	43.41	47.75	51.84	42.13	62.05	46.47	41.62	57.20	53.75	44.14
9		35.62	20.94	35.11	35.11	42.64	33.32	39.07	36.51	37.15	27.45	29.62	38.94	34.34	39.96	53.37	52.09	61.79	48.52	44.05	68.43	47.24	53.62	49.79	37.03	46.47	40.60	27.45	38.05	62.30	44.94	48.13	43.92	43.03	47.49	51.45	41.62	61.16	45.96	41.37	56.69	53.50	43.80
10		35.62	20.68	34.85	34.73	41.24	33.45	37.92	36.13	37.15	28.09	29.88	39.58	34.47	39.96	52.60	51.07	60.77	48.52	43.66	67.92	46.60	52.35	49.15	36.90	46.09	40.09	27.19	37.79	61.67	44.81	47.49	43.41	42.64	47.24	50.94	41.11	60.26	45.71	40.98	56.18	53.24	43.42
11		31.92	20.30	34.73	34.73	40.47	33.32	36.51	35.11	37.28	29.36	30.13	39.83	34.85	39.83	52.09	49.79	60.01	48.39	43.41	67.67	46.35	51.71	48.64	36.64	45.83	39.71	27.07	37.41	61.28	44.56	46.98	42.90	42.26	46.98	50.56	40.60	59.37	45.45	40.60	55.67	52.86	43.00
12		31.41	20.04	34.73	34.73	40.09	32.94	36.13	33.32	37.66	30.13	30.64	40.22	35.37	39.83	51.07	49.15	58.99	48.01	43.28	67.03	45.96	51.07	48.01	36.39	45.58	39.32	26.81	37.03	60.65	43.92	46.47	42.39	41.88	46.73	50.18	40.09	58.60	45.20	40.34	55.28	52.60	42.66
13		31.15	19.53	34.85	35.11	40.09	31.41	35.75	31.79	38.05	28.73	31.28	40.60	35.62	39.58	49.79	47.88	58.47	47.88	43.15	66.39	45.71	50.18	47.37	36.13	45.20	38.94	26.68	36.64	60.26	43.41	45.96	42.00	41.62	46.47	49.79	39.71	57.84	44.81	40.09	54.77	52.35	42.27
14		31.02	19.28	35.11	35.49	40.09	30.13	35.75	31.41	38.17	27.45	31.66	40.22	35.37	39.45	48.52	47.24	57.45	47.49	42.77	65.75	45.32	50.05	46.86	36.00	44.94	38.56	26.43	36.26	59.75	43.15	45.45	41.62	41.24	46.22	49.28	39.20	56.69	44.56	39.83	54.26	52.09	41.89
15		30.39	18.90	35.24	35.49	40.47	30.00	36.00	31.28	38.30	26.17	31.92	39.83	34.47	39.45	47.24	47.24	56.69	47.24	42.39	65.11	44.81	49.79	46.35	35.75	44.69	38.17	26.17	35.88	59.37	42.77	44.94	41.24	40.86	45.96	48.90	38.81	55.79	44.18	39.58	53.88	51.84	41.55
16		29.24	18.77	35.49	35.62	40.47	30.00	36.13	31.28	37.92	26.30	31.79	39.32	34.22	39.45	45.96	47.11	56.05	47.24	42.13	64.48	44.43	49.67	45.83	35.49	44.30	37.92	26.05	35.49	58.86	42.52	44.56	40.86	40.47	45.71	48.52	38.43	55.16	43.79	39.45	53.37	51.58	41.25
17		28.98	18.39	35.75	35.75	39.71	30.13	36.51	31.41	37.41	27.45	31.66	38.69	33.83	39.32	46.22	46.60	55.41	47.11	42.13	63.84	43.66	49.54	45.32	35.24	44.18	37.54	25.79	35.11	58.47	42.13	44.18	40.47	40.22	45.45	48.13	38.05	54.64	43.54	39.20	52.98	51.20	41.01
18		28.60	18.13	36.00	36.13	39.45	30.39	36.51	31.66	36.77	29.24	31.28	38.43	34.22	38.94	46.47	45.96	54.39	46.98	41.88	63.58	43.03	49.41	44.81	35.11	43.79	37.41	25.66	34.85	58.35	41.88	43.79	40.09	39.83	45.20	47.75	37.66	54.13	43.28	39.07	52.47	50.94	40.82
19		27.96	17.87	36.00	36.13	39.07	30.39	36.13	31.79	36.00	28.85	31.66	38.30	34.47	38.81	46.73	45.32	53.62	46.47	41.62	63.33	42.39	49.15	44.30	34.98	43.41	37.15	25.41	34.47	57.96	41.49	43.41	39.71	39.45	44.94	47.37	37.28	53.62	43.03	38.94	52.09	50.69	40.53
20		27.83	17.36	35.75	36.13	38.69	29.88	35.75	32.05	34.98	28.09	31.28	38.17	34.47	38.94	46.98	44.69	52.60	45.71	41.37	63.07	42.13	48.90	43.79	34.73	43.28	36.90	25.28	34.34	57.58	41.24	42.90	39.32	39.20	44.69	46.98	36.90	53.11	42.64	38.81	51.58	50.43	40.21
21		27.96	17.24	35.62	36.13	38.69	29.62	35.11	31.79	34.22	26.05	30.77	37.66	34.09	39.07	47.24	43.66	51.58	45.20	41.11	62.56	41.88	48.64	43.41	34.60	42.90	36.51	25.15	34.09	57.07	40.98	42.52	38.94	38.81	44.43	46.60	36.51	52.60	42.39	38.56	51.20	50.18	39.84
22		28.09	16.60	35.49	36.13	38.69	29.24	34.73	31.41	33.45	25.28	30.39	37.15	33.58	38.94	47.37	42.77	50.94	44.43	40.86	61.92	41.62	48.52	42.90	34.22	42.52	36.26	25.02	33.83	56.56	40.60	42.13	38.56	38.56	44.18	46.35	36.13	52.22	42.26	38.30	50.69	49.92	39.48
23		28.22	16.21	35.49	36.00	39.07	29.62	34.34	30.90	32.94	25.41	29.75	35.75	33.20	38.94	47.62	42.13	50.05	43.41	40.60	61.28	41.11	48.01	42.52	34.09	42.39	36.13	24.90	33.71	56.05	40.09	41.62	38.30	38.30	44.05	45.96	35.75	51.84	42.00	38.17	50.30	49.67	39.17
24		28.22	15.83	35.24	35.75	39.07	29.62	33.96	30.00	32.30	25.53	29.36	35.11	33.71	38.94	47.88	41.49	49.54	42.39	40.34	60.90	40.86	47.62	42.13	33.83	42.13	35.88	24.77	33.58	55.92	39.71	41.24	38.05	38.05	43.92	45.58	35.37	51.45	41.75	37.92	49.92	49.41	38.88
25		28.22	15.58	34.85	35.49	39.07	29.62	34.22	29.24	31.92	25.66	28.73	34.85	34.22	38.94	47.88	40.86	48.64	41.88	40.09	60.65	40.34	47.49	41.75	33.71	41.75	35.49	24.64	33.32	55.54	39.07	40.86	37.79	37.79	43.66	45.20	34.98	51.07	41.49	37.66	49.41	49.15	38.60
26		27.83	15.19	34.73	35.49	39.07	29.49	34.73	28.98	31.15	25.28	29.11	34.60	33.83	38.69	47.37	40.22	47.88	40.86	39.83	60.39	39.83	47.24	41.24	33.45	41.62	35.24	24.51	33.20	55.41	38.56	40.47	37.54	37.54	43.54	44.81	34.60	50.56	41.24	37.54	49.03	48.90	38.31
27		27.45	15.19	34.22	35.49	38.69	28.98	35.24	28.60	30.64	24.90	29.62	34.47	33.20	38.56	46.60	39.83	47.11	40.09	39.58	59.75	39.71	47.11	40.86	33.32	41.24	34.98	24.39	32.94	54.90	38.05	40.09	37.28	37.28	43.28	44.43	34.22	50.18	40.98	37.28	48.64	48.64	38.00
28	29.36	27.07	15.07	33.45	35.49	37.54	27.83	35.62	28.22	30.51	24.26	29.75	34.85	32.56	38.43	45.96	39.58	46.22	38.94	39.32	59.24	39.58	46.73	40.47	33.20	40.98	34.73	24.26	32.68	54.39	37.41	39.71	37.03	37.03	43.15	44.05	33.96	49.79	40.73	37.15	48.13	48.39	37.45
29		26.94	14.81	32.94	35.62	37.28	26.81	35.49	28.22	30.39	24.26	30.00	35.11	32.94	38.43	44.69	39.07	45.71	38.30	38.69	58.73	39.45	46.22	40.09	32.94	40.73	34.47	24.13	32.56	53.88	37.15	39.32	36.77	36.90	42.90	43.92	33.71	49.28	40.47	36.90	47.75	48.01	37.36
30		27.07	14.68	32.30	35.49	36.90	25.53	34.73	28.22	30.39	24.26	30.51	35.24	33.20	38.43	43.41	38.30	45.20	37.54	38.30	58.35	39.20	45.96	39.83	32.81	40.47	34.09	24.00	32.43	53.37	36.90	39.07	36.51	36.64	42.77	43.54	33.45	48.90	40.22	36.77	47.37	47.75	37.08
31		27.45	14.55	31.79	35.11	36.90	25.28	34.73	28.34	30.51	24.51	30.77	35.62	33.83	38.43	42.77	38.30	44.56	36.51	38.05	57.96	38.94	45.71	39.45	32.56	40.09	33.83	23.88	32.30	52.86	36.51	38.69	36.26	36.51	42.52	43.28	33.20	48.52	39.96	36.51	46.98	47.49	36.88
Feb 1		27.45	14.55	31.15	34.34	37.28	24.64	34.73	28.73	30.64	24.00	30.77	36.39	33.96	38.43	42.13	38.17	43.92	35.62	37.92	57.58	38.69	44.94	39.07	32.43	39.96	33.58	23.75	32.05	52.47	36.13	38.30	36.00	36.39	42.39	43.03	32.94	48.13	39.71	36.39	46.60	47.37	36.65
2		27.45	14.43	30.90	33.58	37.28	23.11	34.73	28.98	30.90	23.88	30.64	37.03	33.96	38.43	42.00	38.05	42.90	34.73	37.79	57.20	38.56	44.69	38.69	32.05	39.71	33.32	23.62	31.79	51.96	35.88	38.05	35.88	36.26	42.13	42.64	32.68	47.75	39.45	36.13	46.35	47.11	36.41
3		27.07	14.30	30.77	33.32	37.28	22.98	34.34	28.98	31.02	24.00	30.51	37.28	33.83	38.30	41.88	37.92	42.13	34.22	37.54	56.69	38.30	43.92	38.43	31.92	39.32	32.94	23.49	31.54	51.45	35.49	37.66	35.75	36.13	41.88	42.39	32.43	47.49	39.32	36.00	46.09	46.86	36.18
4		26.43	14.04	30.51	33.32	36.90	22.73	32.94	29.11	31.15	24.13	30.64	36.90	33.58	38.17	41.88	37.79	41.37	33.20	37.28	56.18	37.92	42.90	38.05	31.66	39.20	32.68	23.36	31.28	50.94	35.11	37.41	35.62	36.00	41.62	42.13	32.17	47.11	39.20	35.88	45.83	46.60	35.88
5		25.79	14.17	30.51	32.94	36.51	22.98	31.66	28.98	31.15	24.26	30.90	36.00	32.56	37.92	41.88	37.54	40.86	32.17	37.03	55.92	37.66	42.39	37.79	31.54	38.94	32.56	23.24	31.02	50.56	34.73	37.03	35.49	35.88	41.37	41.75	31.92	46.86	38.94	35.62	45.71	46.35	35.59
6		25.28	14.17	30.39	32.56	35.75	23.36	30.00	28.73	30.90	24.64	31.41	35.49	31.66	37.54	42.00	37.03	40.22	31.66	36.77	55.67	37.28	42.13	37.41	31.41	38.69	32.30	23.11	30.90	50.05	34.34	36.77	35.37	35.75	41.11	41.49	31.66	46.60	38.69	35.49	45.45	46.09	35.30
7		24.64	14.17	30.13	32.56	35.11	23.88	29.49	27.96	30.64	24.26	31.79	34.47	30.64	37.03	42.00	36.77	39.58	30.64	36.51	55.41	37.03	41.88	37.15	31.15	38.43	32.17	22.85	30.77	49.67	34.09	36.51	35.24	35.62	40.86	41.11	31.41	46.35	38.43	35.24	45.20	45.83	34.99
8		24.26	14.17	29.62	32.17	34.47	24.64	29.24	27.71	30.39	23.88	31.92	33.71	30.00	36.64	41.62	36.51	39.32	29.36	36.26	54.77	36.90	40.86	36.90	31.02	38.30	31.92	22.73	30.51	49.28	33.71	36.26	35.24	35.49	40.60	40.86	31.15	46.09	38.30	35.11	45.07	45.71	34.70
9		23.88	14.17	28.73	31.15	34.34	24.77	28.98	27.45	30.13	23.36	32.05	33.20	28.34	36.39	41.11	36.00	38.56	28.34	35.75	54.39	36.64	40.60	36.64	30.77	37.92	31.79	22.60	30.39	48.90	33.45	36.00	35.11	35.37	40.34	40.47	30.90	45.83	38.17	34.85	44.81	45.58	34.35
10		23.88	14.17	28.34	30.13	34.47	24.64	27.45	27.45	29.88	22.98	31.79	33.07	27.45	35.88	40.73	35.49	38.30	27.45	35.62	54.01	36.39	39.83	36.26	30.64	37.79	31.54	22.47	30.39	48.52	33.20	35.75	35.11	35.24	40.09	40.22	30.64	45.58	37.92	34.73	44.69	45.32	34.04
11		23.62	14.17	28.22	29.62	34.73	24.26	26.17	27.07	29.62	22.09	31.02	32.94	26.68	35.75	40.22	35.11	37.79	26.81	35.49	53.62	36.13	39.71	36.00	30.51	37.54	31.28	22.34	30.26	48.13	32.81	35.49	34.98	35.11	39.83	39.83	30.39	45.32	37.66	34.60	44.43	45.20	33.72
12		23.49	14.17	28.22	29.24	35.11	23.24	25.66	26.43	29.49	21.58	30.26	32.81	26.05	35.37	39.58	34.47	37.15	26.05	35.24	53.24	35.88	39.58	35.75	30.39	37.41	31.02	22.22	30.26	47.88	32.43	35.24	34.98	34.98	39.58	39.45	30.13	45.07	37.54	34.34	44.18	45.07	33.42

5	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	294.93	187.68	436.64	245.13	528.57	117.59	480.05	593.68	360.04	158.32	182.57	245.13	393.24	205.55	431.54	351.10	153.21	157.04	538.78	416.22	264.28	335.07
6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	292.37	182.57	417.49	283.44	488.99	112.86	427.71	561.76	349.83	150.66	182.57	238.75	375.36	215.77	411.11	333.23	153.21	151.93	508.14	406.00	254.07	334.18
7	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	288.54	178.74	404.73	348.55	451.97	109.93	389.41	563.04	342.17	144.27	177.47	228.54	363.87	220.88	407.28	317.91	153.21	148.10	477.50	399.62	245.13	323.14
8	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	300.03	174.91	394.51	404.73	422.60	107.12	356.21	573.26	330.68	139.16	178.74	219.60	360.04	219.60	421.32	306.42	150.66	145.55	450.69	374.08	238.75	316.94
9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	311.52	172.36	385.57	455.80	394.51	105.08	331.95	557.93	317.91	136.61	174.91	211.94	351.10	218.32	423.88	294.93	149.38	142.99	426.43	368.98	241.30	311.28
10	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	317.91	167.25	368.98	477.50	374.08	108.91	323.01	534.95	302.59	140.44	168.53	203.00	337.06	214.49	411.11	289.82	153.21	141.72	408.56	403.45	238.75	307.73
11	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	328.12	164.70	349.83	454.52	354.93	112.48	348.55	523.46	288.54	148.10	163.42	194.06	320.46	210.66	389.41	284.71	160.87	140.44	400.90	469.84	234.92	304.55
12	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	337.06	159.59	333.23	427.71	335.78	114.27	408.56	503.03	274.50	158.32	157.04	186.40	303.86	208.11	367.70	279.61	159.59	136.61	443.03	527.29	231.09	304.63
13	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	346.00	154.49	319.18	399.62	324.29	125.25	492.82	478.78	260.45	172.36	148.10	178.74	285.99	210.66	347.27	275.78	160.87	135.33	485.16	551.55	224.71	304.52
14	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	358.76	150.66	305.14	371.53	330.68	173.64	511.97	466.01	247.69	180.02	142.99	172.36	269.39	211.94	331.95	270.67	164.70	134.06	527.29	547.72	215.77	303.58
15	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	363.87	148.10	288.54	356.21	353.66	195.34	497.93	458.35	236.20	199.17	137.89	165.98	254.07	227.26	326.85	269.39	167.25	134.06	528.57	534.95	210.66	301.59
16	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	357.49	145.55	275.78	347.27	400.90	192.79	467.29	472.39	225.98	306.42	134.06	162.15	241.30	277.05	323.01	273.22	168.53	132.78	511.97	518.36	206.83	302.00
17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	346.00	142.99	268.12	328.12	445.58	183.85	435.37	536.23	214.49	338.34	131.50	157.04	229.81	321.74	312.80	275.78	167.25	131.50	497.93	494.10	205.55	300.75
18	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	329.40	139.16	261.73	306.42	460.90	185.13	407.28	601.34	206.83	335.78	130.23	154.49	219.60	328.12	298.76	284.71	172.36	128.95	490.27	469.84	203.00	298.48
19	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	314.08	136.61	252.79	284.71	488.99	178.74	386.85	619.22	205.55	335.78	131.50	150.66	210.66	326.85	283.44	300.03	181.30	128.95	491.54	448.14	205.55	298.73
20		416.22	319.18	292.37	255.35	265.56	524.74	278.33	278.33	144.27	190.23	408.56	289.82	379.19	531.12	374.08	287.27	144.27	178.74	469.84	303.86	298.76	134.06	245.13	268.12	529.85	172.36	365.15	616.66	200.45	339.61	132.78	148.10	206.83	334.51	269.39	310.25	191.51	131.50	499.20	425.15	214.49	301.59
21		437.92	315.35	287.27	251.52	255.35	552.83	265.56	279.61	140.44	186.40	426.43	273.22	393.24	550.27	430.26	278.33	144.27	190.23	446.86	306.42	283.44	132.78	241.30	259.18	542.61	160.87	349.83	615.39	197.89	348.55	132.78	146.82	208.11	366.42	256.62	353.66	218.32	137.89	519.63	407.28	236.20	305.55
22		434.09	315.35	284.71	248.96	246.41	534.95	254.07	283.44	137.89	183.85	434.09	263.01	400.90	541.34	449.41	274.50	144.27	206.83	432.81	305.14	275.78	132.78	240.03	259.18	536.23	155.76	334.51	624.33	205.55	366.42	140.44	144.27	214.49	371.53	246.41	395.79	254.07	145.55	559.21	389.41	278.33	308.44
23		434.09	324.29	279.61	257.90	238.75	509.42	242.58	291.10	134.06	180.02	428.98	256.62	402.17	519.63	449.41	264.28	144.27	240.03	414.94	294.93	266.84	137.89	243.86	257.90	518.36	151.93	323.01	638.37	233.64	404.73	151.93	140.44	232.37	358.76	238.75	400.90	269.39	154.49	592.41	376.64	324.29	310.34
24		430.26	334.51	273.22	273.22	238.75	481.33	232.37	298.76	131.50	177.47	428.98	256.62	402.17	492.82	440.47	256.62	146.82	265.56	397.07	280.88	259.18	142.99	254.07	250.24	495.37	149.38	315.35	657.52	241.30	487.71	157.04	136.61	257.90	338.34	242.58	399.62	279.61	158.32	629.43	367.70	360.04	312.68
25		418.77	353.66	268.12	273.22	243.86	459.63	224.71	310.25	128.95	174.91	431.54	263.01	402.17	468.56	418.77	254.07	149.38	269.39	384.30	266.84	254.07	145.55	265.56	271.95	474.95	145.55	305.14	708.59	236.20	543.89	162.15	132.78	266.84	317.91	259.18	455.80	280.88	159.59	644.75	358.76	394.51	315.82
26		412.39	358.76	260.45	270.67	250.24	437.92	218.32	315.35	126.40	173.64	428.98	266.84	398.34	443.03	399.62	250.24	150.66	254.07	385.57	254.07	248.96	148.10	271.95	328.12	454.52	144.27	298.76	778.81	228.54	615.39	171.08	128.95	269.39	302.59	264.28	520.91	280.88	163.42	639.65	351.10	403.45	318.75
27		416.22	352.38	255.35	261.73	264.28	416.22	213.22	319.18	125.50	173.64	431.54	275.78	391.96	412.39	386.85	248.96	144.27	238.75	418.77	241.30	242.58	153.21	271.95	344.72	439.20	141.72	301.31	812.01	224.71	638.37	178.74	127.67	277.05	292.37	255.35	598.79	283.44	169.81	620.49	343.44	430.26	320.38
28		430.26	344.72	255.35	254.07	268.12	390.68	208.11	314.08	125.38	172.36	431.54	357.49	372.81	391.96	375.36	246.41	141.72	229.81	466.01	231.09	241.30	153.21	273.22	346.00	426.43	139.16	306.42	834.99	222.15	644.75	174.91	130.23	303.86	303.86	246.41	683.06	289.82	176.19	597.51	334.51	463.46	324.36
29		448.14	344.72	254.07	245.13	271.95	365.15	203.00	303.86	123.46	169.81	425.15	547.72	354.93	390.68	362.59	242.58	139.16	224.71	469.84	218.32	238.75	150.66	275.78	371.53	416.22	137.89	324.29	846.48	223.43	597.51	167.25	134.06	339.61	339.61	236.20	729.02	301.31	183.85	571.98	326.85	497.93	329.64
30		455.80	335.78	251.52	236.20	283.44	343.44	199.17	292.37	122.06	165.98	418.77	607.73	342.17	385.57	354.93	237.47	140.44	242.58	457.07	205.55	236.20	148.10	278.33	421.32	403.45	136.61	344.72	799.24	229.81	606.45	163.42	132.78	380.47	349.83	225.98	750.72	307.69	186.40	550.27	317.91	510.70	330.69
31		459.63	333.23	246.41	229.81	287.27	324.29	195.34	278.33	121.67	163.42	403.45	582.19	328.12	394.51	356.21	234.92	132.78	300.03	445.58	204.28	232.37	151.93	279.61	540.06	390.68	134.06	360.04	748.17	234.92	657.52	163.42	132.78	399.62	353.66	218.32	743.06	310.25	182.57	534.95	312.80	494.10	331.62
Sep 1	231.09	448.14	321.74	241.30	223.43	280.88	308.97	194.06	266.84	123.21	162.15	388.13	563.04	317.91	423.88	357.49	238.75	132.78	354.93	435.37	208.11	234.92	159.59	283.44	854.14	379.19	134.06	376.64	685.61	233.64	735.40	160.87	131.50	408.56	343.44	211.94	709.87	305.14	177.47	506.87	310.25	481.33	334.43
2	224.71	430.26	307.69	236.20	217.05	275.78	294.93	191.51	254.07	125.38	163.42	371.53	524.74	306.42	435.37	360.04	245.13	131.50	352.38	430.26	217.05	234.92	167.25	289.82	914.14	363.87	131.50	407.28	643.48	231.09	731.57	162.15	130.23	411.11	335.78	208.11	662.63	298.76	174.91	485.16	298.76	477.50	329.89
3	220.88	418.77	292.37	237.47	211.94	268.12	282.16	188.96	243.86	124.35	167.25	361.32	482.61	297.48	444.30	360.04	248.96	130.23	343.44	423.88	231.09	238.75	171.08	315.35	891.16	349.83	130.23	421.32	600.07	228.54	726.46	169.81	130.23	411.11	329.40	204.28	616.66	291.10	174.91	469.84	289.82	478.78	324.24
4	218.32	412.39	278.33	240.03	208.11	265.56	270.67	185.13	236.20	122.44	171.08	353.66	446.86	292.37	459.63	358.76	252.79	130.23	342.17	427.71	247.69	246.41	173.64	361.32	834.99	333.23	128.95	414.94	568.15	225.98	681.78	187.68	135.33	404.73	331.95	203.00	579.64	283.44	173.64	454.52	282.16	488.99	319.39
5	217.05	408.56	268.12	241.30	204.28	259.18	259.18	183.85	229.81	120.78	177.47	354.93	417.49	293.65	467.29	362.59	250.24	128.95	361.32	431.54	278.33	256.62	174.91	445.58	766.04	320.46	126.52	398.34	547.72	229.81	658.80	190.23	140.44	390.68	338.34	201.72	549.00	273.22	173.64	441.75	277.05	476.22	316.50
6	220.88	416.22	260.45	241.30	200.45	248.96	248.96	178.74	225.98	119.38	181.30	370.25	390.68	301.31	458.35	356.21	240.03	130.23	417.49	481.33	300.03	255.35	176.19	483.88	709.87	314.08	124.61	379.19	537.51	236.20	623.05	190.23	150.66	372.81	335.78	200.45	520.91	261.73	183.85	436.64	270.67	455.80	314.48
7	222.15	430.26	254.07	242.58	197.89	241.30	241.30	174.91	224.71	119.38	183.85	403.45	370.25	314.08	436.64	354.93	233.64	128.95	496.65	549.00	308.97	252.79	173.64	476.22	662.63	307.69	124.10	357.49	546.44	237.47	593.68	186.40	169.81	356.21	326.85	197.89	495.37	251.52	187.68	446.86	264.28	435.37	313.79
8	224.71	434.09	248.96	245.13	194.06	233.64	233.64	167.25	228.54	128.95	185.13	435.37	349.83	324.29	412.39	363.87	236.20	127.67	534.95	611.56	307.69	251.52	172.36	460.90	616.66	301.31	123.59	347.27	560.49	238.75	537.51	188.96	183.85	344.72	315.35	200.45	481.33	240.03	185.13	445.58	259.18	416.22	311.88
9	222.15	451.97	243.86	246.41	196.62	227.26	228.54	159.59	234.92	144.27	188.96	439.20	330.68	333.23	390.68	358.76	241.30	127.67	574.53	643.48	306.42	252.79	169.81	439.20	571.98	293.65	124.10	339.61	579.64	250.24	514.53	190.23	183.85	339.61	311.52	209.39	477.50	229.81	181.30	441.75	264.28	398.34	310.80
10	220.88	466.01	234.92	256.62	200.45	222.15	223.43	154.49	237.47	146.82	194.06	426.43	316.63	340.89	372.81	352.38	251.52	127.67	598.79	651.14	305.14	256.62	168.53	417.49	532.40	284.71	124.10	334.51	597.51	265.56	469.84	201.72	178.74	351.10	308.97	214.49	488.99	220.88	177.47	446.86	277.05	380.47	309.49
11	218.32	473.67	229.81	275.78	203.00	219.60	220.88	148.10	238.75	162.15	203.00	407.28	303.86	339.61	365.15	356.21	250.24	128.95	591.13	653.69	303.86	268.12	167.25	403.45	495.37	278.33	124.61	340.89	587.30	283.44	428.98	227.26	172.36	358.76	308.97	218.32	511.97	213.22	173.64	449.41	298.76	371.53	308.93
12	220.88	469.84	217.05	287.27	206.83	220.88	218.32	141.72	248.96	183.85	217.05	386.85	293.65	338.34	361.32	353.66	250.24	128.95	588.58	660.07	305.14	278.33	168.53	398.34	472.39	283.44	127.55	351.10	563.04	288.54	391.96	248.96	167.25	352.38	310.25	219.60	528.57	208.11	169.81	467.29	339.61	366.42	309.55
13	222.15	448.14	205.55	303.86	213.22	224.71	215.77	136.61	268.12	206.83	225.98	367.70	285.99	342.17	348.55	361.32	254.07	127.67	623.05	661.35	308.97	285.99	171.08	399.62	451.97	285.99	130.23	376.64	542.61	284.71	363.87	259.18	163.42	358.76	306.42	242.58	545.17	206.83	167.25	477.50	370.25	354.93	311.83
14	225.98	422.60	196.62	320.46	214.49	242.58	213.22	136.61	271.95	225.98	227.26	353.66	277.05	344.72	335.78	368.98	263.01	127.55	657.52	672.84	316.63	293.65	176.19	420.05	448.14	280.88	132.78	389.41	541.34	280.88	334.51	261.73	162.15	374.08	308.97	296.20	568.15	214.49	162.15	468.56	379.19	343.44	315.53
15	224.71	397.07	199.17	326.85	214.49	289.82	208.11	136.61	271.95	263.01	224.71	342.17	268.12	347.27	321.74	377.91	275.78	128.95	657.52	666.46	306.42	300.03	178.74	437.92	471.12	278.33	135.33	383.02	529.85	284.71	317.91	264.28	162.15	394.51	310.25	306.42	570.70	220.88	158.32	457.07	384.30	335.78	317.39
16	232.37	375.36	199.17	352.38	217.05	326.85	205.55	136.61	291.10	283.44	218.32	337.06	255.35	339.61	307.69	379.19	287.27	127.67	651.14	640.92	296.20	306.42	180.02	436.64	526.02	273.22	139.16	370.25	504.31	302.59	302.59	254.07	163.42	412.39	305.14	312.80	556.66	229.81	154.49	440.47	389.41	328.12	317.82
17	247.69	352.38	200.45	379.19	222.15	330.68	203.00	137.89	310.25	279.61	211.94	333.23	246.41	338.34	293.65	374.08	296.20	127.67	639.65	612.83	289.82	308.97	183.85	428.98	574.53	261.73	142.99	357.49	501.76	319.18	296.20	251.52	167.25	407.28	294.93	315.35	549.00	241.30	150.66	423.88	388.13	326.85	317.12
18	254.07	333.23	200.45	416.22	232.37	331.95	200.45	136.61	326.85	278.33	205.55	328.12	240.03	333.23	282.16	370.25	293.65	127.04	666.46	588.58	280.88	312.80	187.68	412.39	592.41	246.41	146.82	349.83	532.40	349.83	288.54	242.58	168.53	394.51	282.16	324.29	577.09	243.86	148.10	411.11	375.36	325.57	317.59
19	254.07	314.08	199.17	434.09	232.37	324.29	197.89	136.61	337.06	279.61	197.89	317.91	232.37	329.40	269.39	366.42	284.71	126.65	679.22	566.87	270.67	306.42	191.51	391.96	579.64	234.92	150.66	349.83	559.21	374.08	285.99	234.92	167.25	388.13	269.39	339.61	606.45	245.13	145.55	395.79	360.04	329.40	315.63
20	248.96	297.48	196.62	448.14	228.54	317.91	199.17	136.61	340.89	274.50	192.79	307.69	228.54	333.23	259.18	356.21	274.50	125.89	661.35	549.00	268.12	294.93	192.79	371.53	550.27	229.81	153.21	356.21	620.49	388.13	285.99	227.26	163.42	381.74	257.90	339.61	662.63	243.86	142.99	379.19	347.27	333.23	313.52
21	240.03	285.99	192.79	440.47	224.71	315.35	199.17	135.33	335.78	270.67	187.68	296.20	224.71	340.89	250.24	348.55	265.56	127.42	647.31	551.55	280.88	288.54	195.34	351.10	517.08	224.71	151.93	365.15	700.93	389.41	283.44	225.98	160.87	379.19	248.96	338.34	689.44	241.30	139.16	367.70	337.06	346.00	311.97
22	231.09	273.22	187.68	440.47	224.71	317.91	197.89	135.33	326.85	260.45	183.85	288.54	223.43	348.55	245.13	339.61	260.45	127.04	623.05	569.43	296.20	278.33	201.72	334.51	482.61	222.15	150.66	377.91	693.27	386.85	275.78	219.60	162.15	374.08	238.75	335.78	674.12	240.03	136.61	363.87	330.68	377.91	308.53
23	220.88	264.28	183.85	434.09	222.15	337.06	195.34	134.06	319.18	248.96	178.74	283.44	219.60	354.93	243.86	333.23	263.01	131.50	593.68	575.81	293.65	270.67	209.39	317.91	451.97	219.60	146.82	406.00	669.01	383.02	266.84	220.88	164.70	375.36	231.09	334.51	643.48	241.30	135.33	362.59	329.40	400.90	305.05
24	206.83	256.62	181.30	422.60	218.32	390.68	194.06	131.50	310.25	237.47	177.47	277.05	214.49	353.66	259.18	325.57	269.39	131.50	566.87	564.32	282.16	261.73	217.05	305.14	422.60	217.05	144.27	421.32	654.97	380.47	256.62	232.37	172.36	372.81	222.15	333.23	610.28	256.62	134.06	362.59	320.46	417.49	302.07
25	197.89	252.79	182.57	404.73	215.77	462.18	191.51	131.50	300.03	228.54	174.91	278.33	206.83	349.83	278.33	315.35	277.05	132.78	549.00	542.61	266.84	254.07	238.75	293.65	399.62	211.94	141.72	453.24	644.75	381.74	247.69	237.47	195.34	370.25	218.32	329.40	577.09	270.67	135.33	372.81	312.80	414.94	300.98
26	192.79	247.69	187.68	390.68	211.94	481.33	191.51	130.23	288.54	218.32	174.91	279.61	200.45	348.55	296.20	306.42	270.67	135.33	532.40	522.19	255.35	248.96	260.45	282.16	385.57	210.66	142.99	466.01	658.80	389.41	241.30	232.37	204.28	371.53	213.22	324.29	546.44	284.71	135.33	381.74	306.42	406.00	298.94
27	188.96	242.58	192.79	372.81	210.66	466.01	190.23	128.95	277.05	210.66	174.91	277.05	194.06	348.55	300.03	296.20	263.01	137.89	519.63	499.20	250.24	247.69	274.50	273.22	371.53	210.66	142.99	472.39	697.10	384.30	233.64	219.60	208.11	371.53	210.66	321.74	519.63	312.80	135.33	388.13	300.03	391.96	295.93
28	185.13	236.20	200.45	356.21	213.22	440.47	188.96	128.95	268.12	201.72	176.19	270.67	188.96	344.72	300.03	287.27	255.35	137.89	510.70	472.39	243.86	243.86	287.27	268.12	353.66	211.94	144.27	466.01	757.11	375.36	228.54	219.60	211.94	372.81	214.49	326.85	496.65	329.40	139.16	386.85	294.93	376.64	293.16
29	181.30	228.54	203.00	352.38	214.49	416.22	188.96	126.14	259.18	195.34	177.47	255.35	185.13	337.06	297.48	279.61	251.52	139.16	503.03	445.58	232.37	242.58	297.48	263.01	334.51	213.22	145.55	446.86	841.37	362.59	224.71	218.32	210.66	368.98	219.60	330.68	482.61	349.83	142.99	377.91	288.54	361.32	290.30
30	177.47	222.15	203.00	344.72	220.88	390.68	187.68	124.99	252.79	190.23	181.30	250.24	182.57	340.89	294.93	277.05	245.13	141.72	494.10	427.71	233.64	243.86	306.42	260.45	316.63	215.77	146.82	421.32	909.04	349.83	223.43	223.43	205.55	365.15	228.54	326.85	474.95	363.87	149.38	366.42	283.44	347.27	288.39
Oct 1	173.64	217.05	203.00	344.72	222.15	372.81	186.40	124.35	248.96	188.96	197.89	247.69	182.57	344.72	289.82	275.78	241.30	145.55	490.27	421.32	240.03	242.58	287.27	259.18	294.93	218.32	146.82	406.00	980.54	334.51	222.15	222.15	203.00	365.15	245.13	312.80	478.78	357.49	153.21	353.66	277.05	331.95	286.94
2	169.81	210.66	195.34	346.00	218.32	356.21	186.40	123.72	243.86	183.85	214.49	246.41	182.57	344.72	285.99	283.44	237.47	145.55	494.10	408.56	247.69	247.69	273.22	251.52	278.33	222.15	145.55	383.02	1023.94	320.46	217.05	224.71	199.17	365.15	263.01	300.03	481.33	343.44	155.76	340.89	268.12	317.91	284.47
3	167.25	203.00	183.85	351.10	217.05	340.89	191.51	121.93	242.58	178.74	250.24	246.41	185.13	331.95	288.54	298.76	236.20	149.38	482.61	395.79	270.67	254.07	293.65	247.69	261.73	220.88	144.27	357.49	949.89	306.42	211.94	228.54	194.06	361.32	296.20	291.10	487.71	329.40	157.04	328.12	259.18	303.86	281.38
4	164.70	195.34	173.64	358.76	213.22	323.01	196.62	123.21	242.58	172.36	285.99	248.96	192.79	323.01	306.42	333.23	232.37	150.66	462.18	388.13	275.78	259.18	319.18	250.24	255.35	214.49	141.72	344.72	847.75	294.93	206.83	232.37	194.06	349.83	316.63	282.16	500.48	316.63	157.04	314.08	248.96	292.37	278.62
5	160.87	187.68	159.59	356.21	205.55	305.14	204.28	125.76	246.41	164.70	291.10	251.52	196.62	296.20	335.78	370.25	227.26	151.93	437.92	383.02	278.33	270.67	383.02	247.69	248.96	208.11	140.44	331.95	717.53	283.44	203.00	237.47	191.51	337.06	315.35	275.78	511.97	307.69	155.76	298.76	241.30	283.44	274.45
6	159.59	181.30	155.76	365.15	199.17	282.16	213.22	128.95	259.18	153.21	287.27	245.13	199.17	283.44	358.76	395.79	225.98	154.49	407.28	383.02	277.05	277.05	459.63	243.86	240.03	199.17	137.89	319.18	670.29	274.50	199.17	243.86	190.23	323.01	307.69	271.95	511.97	302.59	154.49	284.71	232.37	275.78	272.25
7	158.32	176.19	160.87	379.19	195.34	264.28	219.60	140.44	282.16	149.38	279.61	237.47	197.89	273.22	368.98	394.51	227.26	158.32	379.19	383.02	278.33	266.84	574.53	240.03	234.92	187.68	136.61	306.42	629.43	265.56	195.34	252.79	190.23	308.97	296.20	264.28	500.48	292.37	151.93	274.50	225.98	266.84	270.61
8	151.93	172.36	165.98	379.19	192.79	255.35	229.81	150.66	302.59	142.99	266.84	231.09	195.34	259.18	368.98	399.62	231.09	159.59	356.21	383.02	266.84	255.35	713.70	237.47	231.09	174.91	135.33	293.65	606.45	257.90	188.96	265.56	200.45	297.48	283.44	260.45	486.44	280.88	148.10	264.28	223.43	261.73	269.73
9	142.99	165.98	174.91	361.32	190.23	245.13	242.58	155.76	317.91	140.44	255.35	217.05	194.06	250.24	356.21	385.57	231.09	159.59	338.34	383.02	260.45	250.24	689.44	240.03	228.54	169.81	132.78	280.88	583.47	254.07	185.13	287.27	214.49	285.99	270.67	252.79	469.84	268.12	146.82	256.62	224.71	256.62	264.68
10	123.33	162.15	186.40	346.00	187.68	232.37	278.33	158.32	325.57	139.16	246.41	205.55	192.79	242.58	340.89	370.25	234.92	159.59	325.57	385.57	251.52	247.69	612.83	243.86	227.26	159.59	131.50	268.12	554.10	248.96	182.57	311.52	218.32	278.33	257.90	243.86	443.03	238.75	146.82	247.69	232.37	250.24	258.10
11	103.42	165.98	195.34	329.40	187.68	225.98	321.74	160.87	326.85	135.33	240.03	206.83	194.06	234.92	325.57	362.59	240.03	158.32	311.52	386.85	220.88	247.69	574.53	240.03	225.98	121.29	123.21	257.90	538.78	242.58	177.47	321.74	215.77	270.67	247.69	236.20	425.15	205.55	145.55	240.03	227.26	242.58	251.47

Synthetic Granite Canyon Pelly	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	
			263.39	299.96	331.77	276.27				396.06	436.24	555.98	485.38	547.06	296.69	298.86	408.73	402.22	332.57	375.06	336.40	419.36	380.69	320.57	443.22	367.24	358.37	340.63	405.04	302.85	305.74	295.38	396.57	332.12	407.33	472.07	398.48	415.80	278.07	417.33	504.49	489.42	458.72	339.32	312.85	385.08	330.48	252.18	342.33	479.83	402.62	323.58	272.50	339.70	437.29	344.25	360.23	497.23	386.89	248.94	445.74	478.60	436.00	378.75
Jan 1			43.78	41.84	57.50	57.50	51.70		59.63	84.85	93.06	76.63	93.06	84.85	68.42	48.13	57.21	68.13	71.71	54.70	65.71	67.07	65.71	51.70	60.21	82.14	68.42	66.49	66.49	76.92	74.41	57.50	71.51	54.12	65.71	86.97	90.84	98.57	112.10	67.65	76.83	115.00	86.49	103.40	100.50	79.63	80.89	78.18	61.37	98.57	138.19	94.51	110.17	96.64	68.71	114.03	100.50	77.50	125.63	79.73	71.51	107.27	102.44	78.84
2			43.20	41.07	57.21	56.92	51.70		58.85	83.50	93.06	76.63	93.06	84.85	68.42	46.48	56.92	68.42	73.35	54.70	65.71	64.84	60.21	51.41	59.63	79.63	67.84	67.84	65.71	74.70	74.70	57.79	69.58	53.83	66.20	86.68	87.94	98.57	111.13	67.16	76.34	114.03	86.01	105.34	99.54	78.95	79.34	77.02	60.30	95.67	136.26	93.93	108.23	95.67	68.32	112.10	99.54	76.73	124.66	78.47	71.03	106.30	101.47	78.08
3			42.42	40.20	56.92	56.05	51.41		57.98	82.34	93.06	76.63	93.06	84.85	68.42	45.13	56.63	69.77	74.12	54.70	65.42	61.56	56.05	50.06	57.98	77.21	67.84	68.42	65.71	73.35	75.38	57.89	68.61	53.15	66.58	86.01	87.55	98.57	110.17	66.68	75.38	113.07	85.04	104.37	98.57	78.37	78.76	75.57	59.24	92.77	135.29	92.29	106.30	93.74	68.03	111.13	98.57	76.15	122.73	77.31	70.55	104.37	101.47	77.28
4			41.84	39.14	56.63	54.99	51.41		57.21	81.56	93.06	76.63	93.06	84.85	68.42	43.00	56.34	69.77	74.41	54.70	65.42	59.63	54.70	49.77	55.86	76.05	68.42	67.07	65.71	72.29	75.67	59.14	68.42	52.67	66.10	85.91	87.17	97.60	109.20	66.20	74.89	112.10	84.08	100.50	97.60	77.79	77.50	74.41	58.18	90.84	134.33	91.23	105.34	92.77	67.84	109.20	97.60	75.38	121.76	76.25	70.06	103.40	100.50	76.56
5			41.36	38.56	56.63	54.70	51.41		56.63	80.69	93.06	76.63	93.06	84.85	68.42	42.13	56.05	69.00	73.93	53.92	65.13	57.98	54.21	49.58	53.63	73.35	68.42	63.20	65.71	69.77	75.38	59.92	66.68	51.80	64.75	86.49	87.36	97.60	108.23	66.20	74.41	111.13	83.40	98.57	96.64	77.12	75.96	72.96	57.02	89.87	133.36	88.91	103.40	91.81	67.65	108.23	96.64	74.60	119.83	75.18	69.58	102.44	100.50	75.76
6			41.07	38.08	56.34	54.21	50.93		55.86	79.92	93.06	76.63	93.06	84.85	68.42	41.07	55.86	68.42	71.13	52.28	65.13	57.50	53.92	49.29	52.28	70.64	68.42	59.34	65.71	68.42	74.41	53.15	62.81	51.22	64.26	86.68	87.55	96.64	107.27	66.20	73.93	110.17	83.11	96.64	95.67	76.54	75.09	71.51	56.44	88.91	132.39	88.04	102.44	89.87	67.45	106.30	95.67	73.83	118.86	74.22	68.81	101.47	99.54	74.82
7			40.78	37.79	56.34	53.63	50.64		54.99	79.34	93.06	76.63	93.06	84.85	68.42	40.20	55.57	66.20	66.78	51.41	64.55	57.21	53.34	49.00	51.70	68.42	69.00	57.21	65.71	68.42	73.44	50.25	61.85	50.83	63.78	86.01	87.75	94.71	106.30	66.20	73.44	109.20	82.72	95.19	94.71	75.96	74.22	70.16	55.86	87.94	131.43	86.97	101.47	88.91	67.26	104.37	94.71	73.15	116.93	73.25	67.65	100.50	99.54	74.02
8			40.49	37.21	56.34	53.05	50.93		54.70	78.57	93.06	76.63	93.06	84.85	68.42	39.91	55.28	63.78	62.43	50.64	63.49	56.92	53.05	48.71	51.41	67.07	69.00	56.92	64.26	68.42	72.00	48.32	61.37	50.54	64.26	85.52	87.75	92.77	106.30	65.71	72.96	108.23	82.43	93.74	93.74	75.09	73.06	69.29	55.28	86.01	129.49	85.81	100.50	86.97	67.07	102.44	93.74	72.48	115.97	72.29	66.68	98.57	98.57	73.23
9			40.20	36.92	56.34	52.28	50.93		54.21	77.99	93.06	76.63	93.06	84.85	68.42	39.72	54.99	62.91	58.27	50.35	61.27	55.86	52.57	47.93	50.93	66.49	68.42	57.21	62.91	68.42	71.03	50.06	61.56	50.73	64.26	85.04	87.36	90.84	105.34	65.71	72.48	108.23	82.14	92.77	92.77	74.41	72.19	68.52	54.70	83.11	128.53	84.65	99.54	86.01	66.78	100.50	92.77	71.80	114.03	71.42	66.20	97.60	97.60	72.56
10			39.91	36.43	56.34	51.99	50.93		53.92	77.41	93.06	76.63	93.06	84.85	68.42	39.72	54.70	61.56	55.86	49.58	60.50	54.99	52.28	46.77	50.64	66.20	67.84	57.50	60.50	67.36	70.55	54.12	61.75	51.22	63.78	84.27	86.78	88.91	104.37	65.71	72.00	107.27	81.66	90.84	91.81	73.54	71.32	67.45	54.12	80.21	127.56	83.88	98.57	85.04	66.58	98.57	91.81	71.13	113.07	70.55	65.71	96.64	97.60	71.96
11			39.91	36.14	56.05	51.41	50.64		53.34	76.92	93.06	76.63	93.06	84.85	68.42	39.43	54.50	60.21	53.34	49.00	60.21	54.21	51.70	46.29	50.64	66.20	65.71	57.50	59.92	65.71	70.55	57.02	61.66	52.09	64.26	84.08	85.04	87.94	103.40	65.23	71.51	106.30	81.18	89.87	90.84	72.96	70.55	66.68	53.54	77.31	126.60	82.92	97.60	84.08	66.29	96.64	90.84	70.45	111.13	69.68	65.23	95.67	96.64	71.35
12			39.91	35.85	56.05	50.64	50.64		52.86	76.34	93.06	76.63	93.06	84.85	68.42	39.43	54.21	58.85	51.99	49.00	60.21	51.70	50.64	45.42	50.64	66.20	65.71	57.21	59.92	63.20	70.55	55.08	62.04	52.18	64.75	83.11	83.11	86.97	102.44	65.23	71.32	106.30	80.79	88.91	90.36	72.38	69.68	65.42	52.96	74.41	124.66	81.95	95.67	83.11	66.10	95.67	89.87	69.77	110.17	68.90	64.94	94.51	96.35	70.71
13			39.91	35.56	56.05	49.77	50.06		52.57	76.05	93.06	76.63	93.06	84.85	68.42	39.43	53.92	57.50	50.64	49.00	60.21	49.58	49.29	44.65	50.64	66.20	65.71	55.28	59.63	60.98	70.55	48.32	62.91	52.18	64.75	82.24	80.21	86.01	101.47	65.23	70.93	105.34	80.31	87.94	89.87	71.61	69.19	64.36	52.38	71.51	123.70	80.98	94.71	82.14	65.91	93.74	88.91	69.10	109.20	68.13	64.55	93.45	95.86	69.94
14			39.91	35.56	56.05	49.29	49.77		51.99	75.57	93.06	76.63	93.06	84.85	68.42	39.91	53.63	56.34	49.00	49.00	60.50	47.64	47.93	44.07	50.64	65.71	65.71	53.34	59.92	59.34	71.03	42.52	63.78	52.09	63.78	81.37	79.24	85.04	99.54	64.75	70.55	105.34	79.92	86.97	88.91	71.03	68.32	63.10	51.80	69.58	122.73	80.21	93.74	80.21	65.71	92.77	87.94	68.32	108.23	67.45	64.26	92.39	95.29	69.25
15			39.91	35.27	56.05	48.71	49.77		51.70	74.70	93.06	76.63	93.06	84.85	68.42	40.20	53.34	55.57	47.64	49.00	60.79	46.00	46.00	43.49	51.22	65.91	65.71	51.99	60.21	58.56	71.51	40.88	65.13	51.70	62.81	81.08	78.28	84.08	97.60	64.75	70.16	104.37	79.63	86.01	87.94	70.16	67.55	61.94	51.22	67.65	120.80	79.34	92.77	79.24	65.42	91.81	86.97	67.65	107.27	66.78	64.17	91.32	94.80	68.68
16			39.91	34.98	55.86	48.13	49.77	72.48	51.41	73.93	93.06	76.63	93.06	84.85	68.42	40.20	53.34	54.99	46.29	49.58	60.98	44.36	45.42	43.00	51.70	67.07	66.20	51.70	60.50	58.85	71.51	40.88	65.71	50.45	62.33	78.28	77.31	83.11	96.64	64.75	69.58	103.40	79.24	85.52	86.97	69.68	66.78	60.98	50.83	66.68	119.83	78.76	91.81	78.28	65.23	89.87	86.01	66.97	106.30	66.10	63.88	90.36	94.22	68.28
17			39.91	34.79	55.86	47.64	49.77	71.13	51.22	73.35	93.06	76.63	93.06	84.85	68.42	40.49	53.05	55.28	44.65	50.06	61.27	44.36	45.13	42.42	51.99	68.13	65.71	51.70	62.14	59.14	71.03	41.94	66.68	49.58	61.85	77.31	77.31	82.14	95.67	64.26	69.39	102.44	78.86	85.04	86.49	69.10	66.29	60.01	50.45	66.20	118.86	77.60	90.84	77.31	64.94	88.91	85.04	66.29	105.34	65.42	63.39	89.29	93.74	67.94
18			39.91	34.50	55.86	47.06	49.77	69.77	50.93	72.29	93.06	76.63	93.06	84.85	68.42	41.07	53.05	56.92	43.78	50.93	61.56	44.65	45.13	42.13	52.28	68.42	65.13	51.99	62.43	59.92	70.55	44.45	66.10	48.71	62.33	76.15	77.31	80.21	93.74	64.26	69.00	101.47	78.47	84.94	86.01	68.52	65.42	59.14	50.06	65.71	116.93	76.34	89.87	76.34	64.65	86.97	84.08	65.71	104.37	64.84	62.91	88.33	93.16	67.58
19			39.91	34.21	55.86	46.48	49.77	68.42	50.64	71.42	93.06	76.63	93.06	84.85	68.42	41.55	52.86	57.98	42.42	52.28	60.98	44.65	45.13	41.55	53.05	68.42	64.84	52.28	60.98	60.21	69.58	43.97	65.71	47.84	62.81	74.41	77.31	78.28	91.81	63.78	68.81	100.50	78.18	84.85	85.04	68.03	64.94	58.18	49.67	65.04	115.97	75.76	88.91	75.38	64.46	86.01	83.11	65.13	103.40	64.46	62.52	87.26	92.68	67.14

31		303.44	158.49	126.60	139.16	64.84	76.63			226.13	328.57	230.00	284.12	163.32	183.61	115.00	200.04	186.51	106.30	207.77	174.91	111.13	102.44	198.11	202.94	124.66	247.39	273.49	177.81	278.32	265.75	167.18	177.81	154.62	169.12	391.38	273.49	241.59	115.97	201.01	274.45	143.02	220.33	224.20	205.84	157.52	119.83	126.60	251.26	477.39	97.60	222.27	115.97	118.86	259.96	157.52	98.57	144.96	148.82	92.97	132.39	140.13	246.43	188.78
Nov 1		336.30	155.59	109.20	137.23	63.49				229.03	191.34	217.44	276.38	135.29	164.28	112.10	158.49	170.08	125.63	200.04	174.91	109.20	102.44	182.65	191.34	120.80	248.36	270.59	179.75	275.42	250.29	167.18	169.12	153.65	162.35	376.89	258.99	224.20	115.00	193.28	274.45	138.19	208.74	202.94	173.95	169.12	123.70	120.80	241.59	473.53	95.09	224.20	86.97	125.63	242.56	107.27	97.60	138.19	135.29	92.77	121.76	155.59	239.66	181.32
2		328.57	153.65	101.47	134.33	62.91				232.90	191.34	210.67	248.36	122.73	158.49	111.13	153.65	161.39	137.23	198.11	172.02	108.23	101.47	172.02	186.51	119.83	234.83	262.86	178.78	270.59	227.10	167.18	166.22	152.69	152.69	372.06	183.61	212.60	114.03	185.54	275.42	137.23	197.14	178.78	159.45	176.85	127.56	122.73	231.93	425.21	93.64	177.81	72.48	129.49	224.20	77.31	97.60	141.09	122.73	93.26	115.97	164.28	233.86	173.28
3		315.04	153.65	93.06	131.43	61.85				242.56	191.34	203.91	233.86	122.73	145.92	109.20	150.76	155.59	142.06	197.14	171.05	106.30	101.47	176.85	180.71	115.97	184.58	257.06	169.12	250.29	188.44	164.28	164.28	151.72	149.79	362.39	150.76	202.94	113.07	179.75	276.38	136.26	183.61	173.95	144.96	181.68	130.46	125.63	227.10	338.23	92.29	155.59	64.75	131.43	186.51	65.71	98.57	160.42	114.03	94.22	115.00	171.05	230.00	165.91
4		315.04	150.76	87.55	130.46	60.79				238.70	191.34	201.97	231.93	122.73	134.33	106.30	147.86	150.76	142.06	193.28	170.08	106.30	101.47	183.61	176.85	116.93	190.38	253.19	133.36	250.29	159.45	162.35	164.28	151.72	146.89	338.23	127.56	193.28	110.17	172.02	277.35	136.26	164.28	172.98	134.33	185.54	132.39	132.39	222.27	386.55	90.55	144.96	60.88	132.39	167.18	62.81	102.44	172.02	110.17	99.54	115.00	176.85	226.13	163.04
5		303.44	150.76	82.14	128.53	60.21				229.03	191.34	198.11	226.13	158.49	125.63	105.34	146.89	147.86	142.06	190.38	170.08	105.34	101.47	177.81	173.95	115.97	202.94	247.39	120.80	246.43	154.62	152.69	162.35	151.72	143.02	304.41	115.97	183.61	107.27	164.28	276.38	135.29	154.62	172.02	133.36	189.41	132.39	135.29	222.27	415.54	89.20	142.06	63.78	133.36	156.55	63.78	105.34	193.28	108.23	102.44	115.00	178.78	222.27	161.51
6		279.28	147.86	79.34	125.63	59.34				229.03	191.34	163.32	215.50	158.49	120.80	104.37	145.92	145.92	139.16	187.48	170.08	104.37	101.47	172.98	171.05	117.90	204.87	237.73	116.93	240.63	153.65	150.76	154.62	151.72	140.13	285.08	104.37	175.88	105.34	156.55	275.42	134.33	147.86	171.05	134.33	193.28	134.33	137.23	227.10	429.07	92.77	155.59	69.58	132.39	149.79	65.71	110.17	220.33	106.30	104.37	115.97	180.71	218.40	159.58
7		279.28	147.86	77.99	124.66	58.85				221.30	191.34	148.82	177.81	158.49	117.90	102.44	144.96	144.96	137.23	186.51	167.18	104.37	100.50	162.35	170.08	115.00	200.04	227.10	115.00	233.86	153.65	149.79	144.96	152.69	134.33	270.59	100.50	171.05	103.40	152.69	270.59	133.36	144.96	167.18	135.29	194.24	141.09	139.16	231.93	418.44	126.60	191.34	75.38	131.43	147.86	72.48	115.00	234.83	106.30	107.27	117.90	181.68	215.50	158.46
8		272.52	150.76	76.63	121.76	58.27				211.64	191.34	138.19	177.81	158.49	114.03	101.47	144.96	144.96	135.29	180.71	162.35	104.37	98.57	142.06	168.15	110.17	186.51	219.37	113.07	224.20	153.65	149.79	139.16	149.79	130.46	265.75	99.54	164.28	100.50	144.96	267.69	132.39	143.02	162.35	137.23	195.21	143.99	137.23	227.10	407.81	144.96	223.23	80.21	129.49	145.92	83.11	122.73	247.39	106.30	110.17	122.73	181.68	213.57	157.14
9		269.62	150.76	76.05	118.86	57.50				191.34	191.34	134.33	177.81	158.49	112.10	99.54	144.96	143.99	134.33	170.08	162.35	104.37	98.57	99.54	168.15	109.20	184.58	211.64	113.07	214.54	153.65	146.89	135.29	146.89	130.46	260.92	100.50	157.52	96.64	141.09	262.86	129.49	137.23	156.55	138.19	193.28	143.02	136.26	222.27	397.18	156.55	242.56	84.08	127.56	144.96	96.64	128.53	251.26	107.27	114.03	127.56	182.65	212.60	155.25
10		259.96	152.69	75.28	115.97	57.21				191.34	191.34	125.63	177.81	158.49	109.20	98.57	144.96	142.06	131.43	162.35	161.39	104.37	96.35	87.55	167.18	108.23	180.71	207.77	112.10	208.74	153.65	143.02	134.33	145.92	130.46	260.92	103.40	152.69	93.74	139.16	257.06	123.70	135.29	155.59	139.16	190.38	142.06	134.33	219.37	386.55	167.18	213.57	87.94	125.63	143.99	110.17	136.26	251.26	109.20	118.86	136.26	181.68	212.60	153.63
11		232.90	153.65	74.41	115.00	56.63				191.34	191.34	125.63	177.81	170.08	108.23	97.60	143.99	137.23	127.56	157.52	158.49	104.37	95.77	84.85	167.18	105.34	172.02	204.87	112.10	202.94	151.72	139.16	134.33	145.92	129.49	251.26	108.23	146.89	91.81	137.23	251.26	116.93	132.39	154.62	137.23	186.51	140.13	133.36	217.44	376.89	175.88	170.06	89.87	123.70	143.99	121.76	143.02	250.29	113.07	120.80	145.92	179.75	212.60	151.57
12		230.96	154.62	73.93	114.03	56.63				191.34	191.34	125.63	177.81	170.08	106.30	95.77	142.06	132.39	122.73	150.76	157.52	104.37	95.77	82.92	167.18	104.37	167.18	203.91	112.10	198.11	149.79	138.19	134.33	146.89	127.56	236.76	133.36	143.99	89.87	136.26	246.43	114.03	128.53	153.65	135.29	180.71	136.26	130.46	215.50	367.22	175.88	130.46	92.77	121.76	144.96	135.29	147.86	248.36	117.90	123.70	155.59	177.81	212.60	150.17
13		230.96	154.62	73.35	112.10	56.05				191.34	191.34	125.63	177.81	170.08	106.30	94.42	139.16	125.63	117.90	145.92	154.62	104.37	95.48	82.34	165.25	104.37	161.39	202.94	112.10	193.28	145.92	138.19	134.33	145.92	126.60	233.86	158.49	142.06	87.94	134.33	241.59	108.23	124.66	151.72	134.33	176.85	134.33	128.53	213.57	357.56	174.91	102.44	94.71	118.86	146.89	143.02	152.69	246.43	122.73	124.66	164.28	173.95	211.64	148.90
14		197.14	155.59	72.48	111.13	55.86				191.34	191.34	125.63	177.81	170.08	105.34	93.06	137.23	120.80	112.10	139.16	153.65	104.37	95.48	82.34	165.25	102.44	158.49	200.04	112.10	190.38	140.13	139.16	134.33	143.99	122.73	231.93	169.12	140.13	86.97	133.36	231.93	103.40	118.86	146.89	133.36	172.98	132.39	126.60	212.60	347.90	174.91	99.54	96.64	116.93	149.79	151.72	154.62	243.53	130.46	125.63	173.95	170.08	211.64	147.27
15		155.59	155.59	72.00	109.20	55.57				191.34	191.34	125.63	177.81	170.08	104.37	91.71	136.26	117.90	106.30	135.29	150.76	104.37	95.77	84.27	164.28	101.47	158.49	195.21	112.10	187.48	137.23	137.23	135.29	141.09	117.90	222.27	170.08	138.19	86.97	131.43	227.10	97.60	108.23	144.96	132.39	167.18	127.56	125.63	207.77	338.23	174.91	98.57	98.57	114.03	155.59	154.62	155.59	240.63	137.23	125.63	181.68	166.22	210.67	145.06
16		141.09	155.59	71.71	108.23	55.57				191.34	191.34	125.63	177.81	170.08	104.37	90.26	131.43	117.90	102.44	130.46	147.86	104.37	95.77	84.85	162.35	100.50	153.65	190.38	112.10	182.65	131.43	130.46	136.26	140.13	114.03	207.77	169.12	137.23	86.01	130.46	222.27	92.77	96.64	143.99	130.46	161.39	125.63	123.70	202.94	332.43	171.05	97.60	100.50	112.10	162.35	157.52	156.55	238.70	141.09	124.66	183.61	162.35	210.67	142.94
17		115.97	155.59	71.42	106.30	54.99				191.34	191.34	125.63	177.81	170.08	103.40	88.91	130.46	117.90	99.54	125.63	146.89	104.37	95.77	86.20	162.35	99.54	147.86	180.71	110.17	178.78	126.60	125.63	134.33	139.16	109.20	193.28	168.15	137.23	86.01	129.49	217.44	94.71	86.97	144.96	128.53	158.49	124.66	121.76	200.04	326.64	168.15	97.60	102.44	109.20	170.08	158.49	156.55	235.80	145.92	122.73	182.65	158.49	208.74	140.83
18		103.40	155.59	71.13	105.34	54.99				191.34	191.34	125.63	177.81	170.08	102.44	87.55	128.53	118.86	98.57	121.76	144.96	104.37	95.48	87.26	160.42	98.57	137.23	172.02	106.30	176.85	123.70	123.70	132.39	139.16	102.44	183.61	165.25	138.19	86.49	128.53	212.60	97.60	72.48	147.86	125.63	155.59	121.76	118.86	197.14	320.84	165.25	100.50	103.40	107.27	176.85	157.52	155.59	233.86	151.72	120.80	181.68	154.62	205.84	138.94
19		104.37	155.59	71.13	104.37	54.99				191.34	191.34	125.63	177.81	170.08	100.50	86.20	125.63	117.90	98.57	118.86	142.06	104.37	95.00	87.55	158.49	97.60	127.56	165.25	105.34	174.91	121.76	122.73	126.60	138.19	97.60	175.88	160.42	140.13	86.49	127.56	210.67	99.54	65.71	154.62	124.66	155.59	121.76	116.93	193.28	315.04	163.32	102.44	104.37	105.34	183.61	155.59	155.59	230.96	155.59	118.86	180.71	150.76	203.91	137.60
20		101.47	158.49	70.84	101.47	54.70				191.34	191.34	125.63	177.81	170.08	99.54	84.85	124.66	115.00	98.57	117.90	139.16	104.37	94.42	87.84	158.49	96.64	124.66	160.42	104.37	171.05	120.80	118.86	115.97	136.26	93.74	173.95	155.59	143.02	86.49	125.63	206.81	105.34	61.85	160.42	123.70	155.59	119.83	115.97	190.38	308.28	160.42	105.34	105.34	103.40	190.38	151.72	154.62	229.03	157.52	115.97	178.78	146.89	200.04	136.32
21		103.40	155.59	70.35	99.54	54.70				191.34	191.34	125.63	177.81	170.08	99.54	82.14	122.73	109.20	99.54	115.00	137.23	104.37	93.35	87.26	157.52	98.57	122.73	154.62	105.34	166.22	119.83	117.90	114.03	133.36	89.87	173.95	152.69	143.99	86.01	124.66	202.94	108.23	60.88	163.32	122.73	155.59	117.90	113.07	186.51	303.44	158.49	119.83	106.30	101.47	195.21	144.96	153.65	227.10	158.49	114.03	175.88	143.99	196.18	135.28
22		103.40	153.65	69.77	98.57	54.70				191.34	191.34	125.63	177.81	170.08	98.57	81.56	120.80	106.30	100.50	114.03	134.33	104.37	93.06	86.20	155.59	98.57	118.86	150.76	105.34	163.32	118.86	116.93	113.07	131.43	86.97	172.02	149.79	144.96	85.52	123.70	201.01	114.03	62.81	164.28	120.80	157.52	115.97	111.13	183.61	297.64	156.55	139.16	107.27	99.54	199.07	140.13	151.72	225.17	160.42	113.07	173.95	140.13	192.31	134.56
23		100.50	153.65	69.19	97.60	54.70				191.34	191.34	125.63	177.81	170.08	98.57	80.50	119.83	106.30	102.44	112.10	131.43	104.37	91.90	85.62	153.65	100.50	115.00	147.86	106.30	157.52	117.90	118.86	115.00	130.46	84.08	171.05	146.89	145.92	84.56	121.76	197.14	115.97	77.31	163.32	118.86	158.49	115.00	110.17	178.78	291.85	154.62	158.49	108.23	98.57	202.94	136.26	148.82	222.27	161.39	112.10	171.05	138.19	187.48	134.06
24		99.54	153.65	68.71	96.35	54.50				191.34	191.34	125.63	177.81	170.08	97.60	79.34	117.90	106.30	106.30	112.10	128.53	104.37	91.71	85.14	151.72	99.54	108.23	144.96	106.30	153.65	117.90	122.73	114.03	127.56	81.18	165.25	144.96	146.89	83.88	119.83	193.28	118.86	89.87	161.39	116.93	157.52	114.03	107.27	173.95	286.05	152.69	163.32	109.20	97.60	204.87	133.36	146.89	220.33	161.39	110.17	169.12	136.26	182.65	133.12
25		98.57	150.76	68.42	95.77	54.50				191.34	191.34	125.63	177.81	170.08	97.60	77.99	115.00	106.30	109.20	114.03	122.73	104.37	92.19	84.85	148.82	98.57	101.47	143.99	104.37	148.82	115.97	123.70	113.07	125.63	79.24	161.39	143.99	146.89	83.11	118.86	191.34	119.83	106.30	156.55	115.00	156.55	115.97	106.30	169.12	280.25	150.76	170.08	110.17	96.15	205.84	129.49	143.99	217.44	160.42	107.27	167.18	134.33	178.78	132.13
26		97.60	147.86	67.84	94.42	54.50				191.34	191.34	125.63	177.81	170.08	97.60	76.63	114.03	105.34	115.97	111.13	118.86	104.37	93.35	85.14	147.86	98.57	93.06	142.06	100.50	144.96	114.03	121.76	108.23	123.70	78.76	152.69	143.02	148.82	82.63	116.93	188.44	118.86	116.93	152.69	114.03	154.62	117.90	104.37	162.35	274.45	147.86	169.12	111.13	94.71	205.84	127.56	142.06	214.54	159.45	105.34	165.25	132.39	174.91	130.73
27		97.60	144.96	67.36	93.06	54.21				191.34	191.34	125.63	177.81	158.49	97.60	76.05	114.03	105.34	118.86	109.20	114.03	104.37	93.55	85.62	144.96	98.57	90.26	142.06	92.48	143.02	110.17	119.83	99.54	118.86	78.28	150.76	143.02	153.65	82.14	115.97	185.54	117.90	132.39	147.86	111.13	150.76	122.73	102.44	154.62	264.79	146.89	168.15	112.10	93.74	204.87	125.63	139.16	211.64	158.49	104.37	162.35	130.46	172.02	129.22
28		96.35	142.06	66.78	91.71	53.92				191.34	191.34	125.63	177.81	158.49	97.60	74.99	113.07	102.44	122.73	107.27	113.07	104.37	94.13	87.26	143.99	99.54	88.91	142.06	88.91	140.13	108.23	118.86	97.60	114.03	78.76	149.79	142.06	154.62	81.66	114.03	183.61	116.93	142.06	144.96	109.20	146.89	126.60	101.47	144.96	257.06	143.99	168.15	112.10	92.77	202.94	124.66	136.26	208.74	156.55	103.40	160.42	128.53	169.12	128.08
29		95.77	139.16	66.20	90.26	53.92				191.34	191.34	125.63	177.81	158.49	97.60	73.93	109.20	98.57	125.63	104.37	112.10	104.37	93.84	87.84	141.09	100.50	90.26	142.06	87.84	138.19	107.27	118.86	95.19	106.30	79.24	148.82	142.06	155.59	80.69	112.10	181.68	115.97	143.99	143.02	108.23	142.06	129.49	99.54	140.13	249.33	142.06	167.18	113.07	91.81	201.01	122.73	134.33	205.84	154.62	102.44	158.49	127.56	166.22	126.85
30		93.06	137.23	65.71	88.91	53.92				191.34	191.34	125.63	177.81	158.49	97.60	72.48	106.30	94.42	127.56	102.44	111.13	104.37	93.06	87.84	137.23	101.47	92.48	142.06	87.84	135.29	107.27	117.90	94.71	102.44	80.21	147.86	141.09	156.55	79.73	111.13	177.81	115.00	143.02	141.09	107.27	138.19	127.56	98.57	135.29	241.59	140.13	166.22	113.07	90.84	199.07	121.76	131.43	201.97	151.72	101.47	156.55	125.63	162.35	125.48
Dec 1		90.84	134.33	65.13	87.55	53.34				137.23	109.20	112.10	177.81	131.43	97.60	72.00	105.34	93.06	127.56	97.60	110.17	104.37	92.48	87.55	131.43	101.47	92.48	139.16	87.55	134.33	107.27	113.07	95.19	99.54	80.21	144.96	139.16	155.59	79.24	109.20	173.95	114.03	139.16	139.16	105.34	133.36	122.73	96.64	136.26	235.80	138.19	163.32	113.07	89.87	197.14	120.80	128.53	199.07	148.82	99.54	154.62	123.70	158.49	120.82
2		88.91	131.43	64.55	86.97	53.34				137.23	109.20	112.10	177.81	131.43	97.60	71.42	104.37	91.90	125.63	90.84	110.17	104.37	90.26	85.91	125.63	101.47	90.26	138.19	87.55	127.56	107.27	112.10	95.67	97.60	79.73	140.13	137.23	154.62	79.24	107.27	172.02	113.07	134.33	140.13	101.47	125.63	119.83	95.09	137.23	230.00	136.26	157.52	114.03	88.91	195.21	119.83	126.60	195.21	143.99	98.57	151.72	121.76	154.62	118.98
3		86.20	127.56	64.07	85.33	53.34				137.23	109.20	112.10	130.46	131.43	99.54	70.84	101.47	91.90	121.76	87.55	110.17	103.40	87.55	84.56	124.66	98.57	87.55	137.23	87.55	124.66	106.30	106.30	95.19	97.60	81.18	137.23	133.36	153.65	79.24	105.34	169.12	112.10	133.36	141.09	99.54	119.83	115.97	94.03	138.19	224.20	134.33	153.65	114.03	87.94	192.31	118.86	123.70	191.34	140.13	96.64	149.79	119.83	151.72	116.49
4		83.50	124.66	63.49	84.85	53.34				137.23	109.20	112.10	115.00	131.43	99.54	70.35	99.54	92.48	115.00	85.33	109.20	102.44	84.85	82.14	115.97	93.84	80.69	135.29	87.55	117.90	105.34	103.40	91.81	97.60	83.11	136.26	131.43	152.69	78.76	102.44	164.28	111.13	131.43	140.13	96.64	115.97	114.03	92.56	139.16	218.40	132.39	148.82	114.03	86.97	189.41	117.90	121.76	187.48	136.26	95.67	147.86	118.86	148.82	114.23
5		80.69	120.80	63.20	84.27	53.34				137.23	109.20	112.10	115.00	131.43	99.54	69.77	98.57	93.06	104.37	84.56	109.20	102.44	82.14	80.69	109.20	88.13	75.28	134.33	85.14	113.07	102.44	100.50	85.04	97.60	86.01	135.29	128.53	150.76	78.28	100.50	162.35	109.20	130.46	138.19	94.71	110.17	112.10	91.13	140.13	212.60	130.46	143.99	114.03	86.01	186.51	116.93	118.86	184.58	133.36	94.71	145.92	117.90	146.89	112.25
6		77.99	117.90	62.91	82.34	53.34				137.23	109.20	112.10	115.00	131.43	100.50	69.19	97.60	93.06	101.47	82.63	108.23	101.47	79.34	79.63	106.30	84.27	72.48	134.33	82.92	109.20	100.50	99.54	81.18	98.57	87.94	131.43	126.60	146.89	77.31	96.06	159.45	108.23	132.39	136.26	92.77	107.27	110.17	89.78	139.16	207.77	128.53	142.06	114.03	85.04	183.61	115.97	116.93	179.75	130.46	94.22	143.99	117.90	145.92	110.67
7		76.05	114.03	62.62	81.56	53.34				137.23	109.20	112.10	115.00	131.43	100.50	68.71	95.77	91.71	100.50	82.14	107.27	101.47	76.63	79.34	106.30	84.27	71.13	132.39	80.69	104.37	98.57	99.54	78.28	98.57	89.87	129.49	126.60	144.96	76.34	94.71	154.62	107.27	134.33	134.33	90.84	104.37	109.20	88.33	138.19	201.01	126.60	140.13	114.03	84.08	180.71	115.00	114.03	176.85	127.56	94.13	143.02	116.93	144.96	109.38
8		73.93	109.20	62.43	79.34	53.34				137.23	109.20	112.10	115.00	131.43	101.47	68.13	93.06	86.20	99.54	81.85	106.30	101.47	73.93	79.34	106.30	82.63	71.13	131.43	79.63	100.50	95.67	99.54	76.34	98.57	91.81	127.56	125.63	143.99	74.41	93.74	152.69	107.27	134.33	128.53	88.91	102.44	108.23	86.97	137.23	196.18	124.66	138.19	113.07	83.11	177.81	115.00	112.10	173.95	124.66	93.26	141.09	116.93	143.99	108.03
9		71.71	105.34	62.14	78.86	53.05				137.23	109.20	112.10	115.00	131.43	101.47	67.55	91.71	82.14	98.57	80.96	106.30	101.47	71.42	79.34	104.37	81.56	71.13	129.49	78.86	98.57	95.19	96.54	75.38	97.60	93.74	126.60	124.66	141.09	73.44	92.77	151.72	106.30	133.36	127.56	88.91	101.47	107.27	85.62	135.29	190.38	122.73	137.23	113.07	82.34	173.95	114.03	109.20	172.02	121.76	92.48	139.16	115.97	143.02	106.83
10		69.77	101.47	61.56	77.21	52.86				137.23	109.20	112.10	115.00	131.43	103.40	67.07	90.26	80.98	97.60	79.92	102.44	100.50	70.35	79.63	102.44	79.92	71.42	127.56	78.28	95.67	94.71	94.71	74.41	95.67	95.67	125.63	121.76	138.19	73.44	91.81	149.79	104.37	129.49	124.66	89.39	99.54	107.27	84.36	132.39	187.48	121.76	135.29	113.07	81.56	171.05	113.07	107.27	169.12	118.86	91.61	138.19	115.97	142.06	105.57
11		68.42	95.77	61.27	76.63	52.57				137.23	109.20	112.10	115.00	131.43	103.40	66.49	88.91	81.27	94.42	79.63	93.06	99.54	68.42	79.63	99.54	79.92	71.71	122.73	78.28	95.67	93.84	94.71	74.41	93.74	96.64	122.73	119.83	136.26	73.44	91.32	147.86	103.40	125.63	123.70	89.58	99.54	106.30	83.01	128.53	183.61	119.83	132.39	112.10	80.89	168.15	113.07	105.34	167.18	115.97	90.84	136.26	115.00	141.09	104.21
12		66.49	91.71	60.98	76.05	52.28				137.23	109.20	112.10	115.00	131.43	103.40	65.91	87.55	82.14	89.20	79.34	88.91	95.77	67.36	79.63	98.57	79.92	73.93	120.80	76.92	95.67	93.55	94.71	74.89	89.87	98.57	118.86	118.86	134.33	73.93	90.84	145.92	102.44	123.70	122.73	89.68	98.57	106.30	81.76	125.63	179.75	118.86	130.46	112.10	80.21	165.25	112.10	103.40	164.28	114.03	89.87	134.33	115.00	140.13	103.09
13		64.55	87.55	60.79	75.28	51.99				137.23	109.20	112.10	115.00	131.43	104.37	65.42	86.20	83.50	84.85	79.05	86.20	89.49	65.91	79.34	98.57	80.21	74.99	117.90	74.70	94.71	92.77	94.71	75.38	86.30	99.54	116.93	117.90	133.36	73.93	90.84	144.96	101.47	118.86	122.73	89.87	98.57	105.34	80.50	122.73	175.88	116.93	129.49	111.13	79.63	163.32	112.10	101.47	162.35	112.10	88.91	133.36	114.03	138.19	101.97
14		62.91	83.50	60.50	74.41	51.99		82.63		137.23	109.20	112.10	115.00	131.43	105.34	64.84	84.85	85.62	82.63	78.86	84.85	86.97	65.13	78.57	98.57	81.56	76.05	112.10	72.00	93.74	92.29	92.77	75.38	81.85	100.50	115.00	116.93	132.39	73.93	90.84	143.02	100.50	116.93	123.70	89.97	97.60	105.34	79.24	121.76	172.98	115.00	127.56	111.13	79.05	160.42	111.13	99.54	159.45	110.17	87.94	131.43	113.07	137.23	100.64
15		60.98	79.34	60.21	72.29	51.99		82.14		137.23	109.20	112.10	115.00	131.43	106.30	64.26	83.50	88.91	81.27	77.41	84.27	85.33	63.78	76.92	98.57	81.85	76.63	106.30	71.13	91.81	92.29	90.84	74.89	77.70	101.47	108.23	116.93	130.46	73.93	90.84	141.09	99.54	115.97	123.70	90.07	97.60	103.40	78.26	120.80	169.12	114.03	126.60	110.17	78.47	157.52	111.13	97.60	157.52	108.23	86.97	130.46	113.07	136.26	99.59
16		58.85	73.93	60.21	71.13	51.70		79.92		137.23	109.20	112.10	115.00	95.77	108.23	63.78	82.14	90.26	79.34	75.76	82.92	84.85	63.20	75.28	99.54	79.92	75.28	101.47	71.42	89.87	91.81	83.11	74.22	77.21	102.44	106.30	116.93	129.49	73.44	90.36	139.16	98.57	115.97	120.80	90.16	96.54	102.44	77.12	119.83	167.18	112.10	125.63	110.17	77.89	154.62	110.17	95.67	154.62	106.30	85.04	128.53	112.10	135.29	97.83
17		57.50	71.13	59.92	69.77	51.70		77.70		137.23	109.20	112.10	115.00	95.77	110.17	63.20	80.69	91.71	77.70	74.12	82.14	84.85	62.62	72.77	100.50	77.99	73.93	95.77	72.48	88.13	90.84	79.24	71.51	77.31	103.40	105.34	114.03	127.56	72.96	89.87	136.26	97.60	117.90	118.86	90.26	95.77	101.47	75.96	116.93	165.25	111.13	124.66	109.20	77.31	151.72	110.17	93.74	152.69	104.37	84.56	127.56	111.13	134.33	96.78
18		56.05	68.42	59.92	68.71	51.70		76.05		137.23	109.20	112.10	115.00	95.77	110.17	62.62	79.92	93.06	74.70	73.06	80.98	84.85	62.43	70.64	100.50	74.41	72.48	91.71	77.31	85.04	90.36	77.31	67.65	77.31	104.37	103.40	111.13	125.63	71.51	88.91	135.29	96.64	118.86	117.90	90.36	95.38	99.54	74.70	115.00	163.32	110.17	122.73	109.20	76.73	148.82	109.20	92.00	149.79	102.44	84.08	125.63	111.13	133.36	95.69
[illegible]		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Synthetic Two Mile Canyon Stewart	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
		115.25	102.59	133.58				158.85			151.37	197.22	209.46	204.28	172.90	251.74	139.02	141.76	177.27	164.27	119.10	177.34	173.84	163.57	173.03	136.56	217.68	139.93	150.34	146.35	192.11	164.38
Jan 1		28.95	17.39	18.29	18.78			14.83	23.98		22.32	29.80	32.85	19.94	29.80	31.10	32.99	11.03	17.12	32.36	17.88	18.42	16.63	17.88	17.52	16.36	20.17	23.98	17.12	18.29	29.18	22.04
2		28.68	17.25	18.02	18.64			14.48	23.84		22.23	29.71	32.49	19.94	29.80	31.10	32.36	10.04	17.12	32.76	17.25	18.15	16.36	17.52	16.90	16.22	19.54	23.84	16.90	18.15	28.95	21.79
3		28.41	16.99	17.75	18.42			14.21	23.75		21.96	29.80	32.22	19.94	29.80	31.10	31.73	9.50	17.12	32.36	16.36	17.88	16.13	17.52	16.22	16.13	19.18	22.86	16.63	17.75	28.06	21.47
4		28.19	16.49	17.52	18.15			13.94	23.62		21.69	29.80	31.87	19.94	29.80	31.10	31.33	8.87	16.76	32.00	15.46	17.39	15.60	17.12	15.60	16.00	18.78	21.56	16.49	17.52	27.65	21.12
5		27.92	16.49	17.25	18.02			13.71	23.48		21.56	29.71	31.73	19.94	29.80	31.10	30.70	8.52	16.90	31.60	14.83	16.90	15.46	16.76	15.46	15.87	18.78	21.20	16.49	16.99	27.52	20.92
6		27.79	16.13	16.99	17.88			13.58	23.35		21.33	29.71	31.46	19.94	29.80	31.10	29.80	8.38	16.49	30.48	13.85	16.63	15.24	16.49	15.37	15.73	18.51	20.80	16.90	16.63	27.29	20.65
7		27.52	15.87	16.76	17.75			13.31	23.22		21.20	29.58	30.97	19.94	29.80	31.10	29.18	8.25	16.36	29.45	13.09	16.22	14.97	16.22	15.24	15.60	18.42	20.71	17.52	16.49	27.03	20.44
8		27.29	15.73	16.49	17.75			13.18	23.08		21.20	29.18	30.70	19.94	29.80	31.10	28.82	8.11	16.36	28.95	12.55	16.00	14.61	15.46	15.10	15.60	18.51	20.71	17.75	16.49	26.76	20.27
9		27.03	15.37	16.22	17.66			13.09	22.99		20.93	29.18	30.48	19.94	29.80	31.10	28.19	8.11	16.13	28.19	11.92	15.73	14.34	15.10	14.83	15.46	18.64	20.44	17.75	16.49	26.40	20.06
10		26.76	15.24	16.00	17.52			12.82	22.86		20.71	29.04	30.34	19.94	29.80	31.10	27.65	7.98	15.73	27.79	11.34	15.37	14.21	14.83	14.48	15.37	18.78	20.17	18.02	16.63	25.37	19.85
11		26.53	14.83	15.73	17.39			12.55	22.86		20.44	28.82	29.94	19.94	29.80	31.10	27.43	7.98	15.60	26.89	10.94	15.24	14.07	14.61	14.07	15.24	18.91	19.54	17.88	16.99	24.11	19.61
12		26.26	14.70	15.46	17.25			12.46	22.72		20.30	28.55	29.71	19.94	29.80	31.10	26.89	7.98	15.73	26.67	10.49	15.10	13.94	14.61	13.31	15.24	18.91	19.05	17.66	17.25	23.22	19.42
13		25.99	14.48	15.24	17.12			12.32	22.72		20.17	28.19	29.45	19.94	29.80	31.10	25.99	7.98	15.73	25.99	10.17	14.97	13.85	14.61	12.46	15.24	19.05	18.91	17.39	17.12	22.86	19.22
14		25.77	14.21	14.97	16.99			12.10	22.59		20.03	28.06	29.18	19.94	29.80	31.10	25.37	8.11	15.73	25.37	9.82	14.83	13.85	14.61	11.70	15.10	19.05	18.91	17.39	16.90	22.86	19.05
15		25.50	13.94	14.70	16.90			12.01	22.59		19.81	27.92	28.95	19.94	29.80	31.10	25.14	8.11	15.73	25.14	9.59	14.83	13.71	14.48	11.16	15.10	19.18	18.91	17.52	16.49	22.72	18.93
16		25.37	13.71	14.48	16.90			11.74	22.45		19.68	27.65	28.55	19.94	29.80	31.10	24.61	8.11	15.60	24.38	9.46	14.83	13.71	14.21	10.94	14.83	19.18	19.05	17.52	16.36	22.72	18.77
17		25.14	13.58	14.21	16.90			11.61	22.45		19.54	27.16	28.06	19.94	29.80	31.10	23.84	8.25	15.46	24.11	9.41	14.83	13.71	13.85	10.67	14.61	19.27	19.05	17.39	16.22	22.72	18.63
18		24.87	13.45	13.94	16.76			11.47	22.32		19.41	26.89	27.92	19.94	29.80	31.10	23.35	8.25	15.37	23.48	9.32	14.83	13.85	13.45	10.62	14.34	19.27	19.18	16.76	16.22	22.72	18.48
19		24.61	13.31	13.71	16.76			11.29	22.32		19.27	26.67	27.43	19.94	29.80	31.10	22.86	8.25	15.10	22.86	9.41	14.97	13.85	13.09	10.76	14.21	19.27	19.18	16.63	16.36	22.72	18.36
20		24.38	12.95	13.45	16.76			11.16	22.23	20.03	19.05	26.40	27.29	19.94	29.80	31.10	22.59	8.38	15.24	22.72	9.50	15.10	13.94	13.09	10.89	14.07	19.27	19.05	16.99	16.49	22.59	18.37
21		24.11	12.68	13.18	16.63			11.03	22.23	19.81	19.05	26.13	26.89	19.94	29.80	31.10	21.96	8.38	15.60	22.59	9.73	15.24	13.94	13.09	10.94	13.85	19.27	19.05	17.66	16.63	22.45	18.32
22		23.98	12.46	12.95	16.63			10.94	22.10	19.68	18.91	25.90	26.67	19.94	29.80	31.10	21.56	8.52	15.37	22.59	9.82	15.37	13.94	13.09	10.98	13.58	19.27	19.05	17.75	16.76	22.10	18.24
23		23.75	12.32	12.68	16.63			10.80	21.96	19.41	18.78	25.77	26.53	19.94	29.80	31.10	21.20	8.52	15.37	22.72	10.04	15.73	13.94	12.95	11.11	13.18	19.27	19.05	17.75	17.12	21.69	18.18
24	25.37	23.62	12.19	12.46	16.63			10.67	21.83	19.18	18.78	25.64	26.40	19.94	29.80	31.10	20.80	8.65	15.24	22.86	10.22	15.87	14.07	12.95	11.16	13.09	19.18	18.78	17.75	17.39	21.47	18.38
25	25.28	23.35	12.06	12.19	16.63			10.53	21.69	18.91	18.78	25.50	26.13	19.94	29.80	31.10	20.57	8.65	15.24	23.08	10.40	15.87	14.07	12.95	11.16	12.82	19.05	18.15	17.75	17.39	20.71	18.27
26	25.14	23.08	11.92	12.06	16.49			10.40	21.56	18.64	18.51	25.37	25.90	19.94	29.80	31.10	20.03	8.65	15.24	23.22	10.67	15.73	14.07	12.95	11.03	12.55	19.05	18.02	18.15	17.25	20.17	18.16
27	25.14	22.86	11.70	12.01	16.49			10.26	21.47	18.51	18.42	25.14	25.64	19.94	29.80	31.10	19.81	8.74	15.24	23.35	10.80	15.60	13.94	12.95	10.94	12.19	18.91	17.88	18.91	16.99	19.27	18.07
28	25.01	22.72	11.43	11.92	16.49			10.17	21.33	18.29	18.29	24.74	25.37	19.94	29.80	31.10	19.41	8.74	15.24	23.75	10.85	15.24	13.85	12.82	11.03	11.92	18.78	17.88	19.27	16.63	18.91	17.96
29	24.87	22.45	11.29	11.88	16.49			10.08	21.06	18.02	18.15	24.52	25.28	19.94	29.80	31.10	19.05	8.74	15.24	23.84	10.94	14.83	13.71	12.82	11.29	11.43	18.64	18.02	19.54	16.22	18.42	17.85
30	24.74	22.32	10.80	11.79	16.63			9.95	20.80	17.75	17.88	24.11	25.14	19.94	29.80	31.10	18.78	8.87	15.24	23.98	10.98	14.48	13.58	12.82	11.56	11.16	18.29	18.15	19.68	15.46	18.29	17.73
31	24.74	22.10	10.67	11.74	16.76			9.82	20.57	17.52	17.75	23.98	24.87	19.94	29.80	31.10	18.51	8.87	15.10	23.48	10.98	14.21	13.45	12.68	11.74	10.94	18.15	18.15	19.54	15.37	18.29	17.62
Feb 1	24.61	21.96	10.80	11.70	16.76			9.73	20.30	17.39	17.75	23.84	24.52	19.94	25.37	25.37	18.15	8.87	15.10	22.59	10.80	14.07	13.31	12.68	11.70	10.67	18.15	18.02	19.41	15.37	18.02	17.14
2	24.52	21.69	10.80	11.65	16.90			9.59	20.17	17.25	17.75	23.75	24.25	19.94	25.37	25.37	17.88	8.87	15.10	21.56	10.53	14.21	13.18	12.46	11.56	10.40	18.29	17.66	19.27	15.37	17.66	17.00
3	24.38	21.56	10.80	11.61	16.90			9.50	20.03	17.12	17.66	23.48	24.11	19.94	25.37	25.37	17.52	9.01	14.97	20.57	10.17	14.34	13.09	12.19	11.29	10.08	18.51	17.12	19.27	15.46	16.49	16.83
4	24.38	21.33	10.80	11.56	16.90			9.46	19.94	16.90	17.66	23.35	23.84	19.94	25.37	25.37	17.25	9.01	15.10	20.03	9.82	14.34	12.95	12.01	10.94	9.82	18.78	16.90	19.54	15.73	13.94	16.65
5	24.25	21.06	10.80	11.52	16.99			9.41	19.81	16.76	17.52	23.08	23.75	19.94	25.37	25.37	16.99	9.14	15.10	19.27	9.50	14.48	12.82	11.92	10.71	9.64	18.78	16.90	19.94	16.00	12.55	16.53
6	24.11	20.93	10.67	11.47	16.99			9.32	19.54	16.63	17.39	22.99	23.62	19.94	25.37	25.37	16.76	9.14	15.10	18.78	9.32	14.48	12.55	11.92	10.53	9.50	18.78	16.76	20.03	16.13	12.06	16.42
7	23.98	20.71	10.67	11.43	16.99			9.28	19.41	16.49	17.25	22.86	23.35	19.94	25.37	25.37	16.36	9.28	14.97	18.02	9.28	14.48	12.46	11.92	10.35	9.41	18.64	16.76	19.81	16.00	11.79	16.30
8	23.98	20.57	10.67	11.43	17.12			9.23	19.27	16.36	17.12	22.72	23.08	19.94	25.37	25.37	16.13	9.28	15.10	17.66	9.19	14.34	12.32	11.92	10.17	9.28	18.51	16.49	19.18	15.73	11.56	16.18
9	23.84	20.44	10.67	11.38	17.12			9.23	19.18	16.22	16.99	22.59	22.86	19.94	25.37	25.37	15.87	9.28	14.83	17.39	9.14	14.21	12.19	11.92	10.04	9.19	18.29	16.22	18.29	15.46	11.47	16.03
10	23.75	20.17	10.67	11.34	17.25			9.19	19.05	16.13	16.90	22.32	22.72	19.94	25.37	25.37	15.60	9.28	14.83	17.39	9.05	13.94	12.06	11.88	9.90	9.05	18.15	15.73	17.75	14.97	11.56	15.91
11	23.62	20.03	10.53	11.29	17.25			9.14	18.78	16.00	16.76	21.96	22.59	19.94	25.37	25.37	15.37	9.28	15.10	17.66	9.05	13.58	11.88	11.79	9.82	8.96	18.02	15.10	17.52	14.97	11.70	15.81
12	23.62	19.81	10.53	11.25	17.25			9.14	18.64	15.87	16.63	21.56	22.32	19.94	25.37	25.37	15.10	9.28	15.37	17.75	9.05	13.45	11.74	11.56	9.77	8.92	18.02	14.34	17.52	14.97	11.88	15.72
13	23.48	19.68	10.53	11.20	17.39			9.10	18.42	15.73	16.49	21.47	22.23	16.90	25.37	25.37	14.97	9.28	15.10	17.66	9.19	13.18	11.70	11.29	9.77	8.87	17.88	14.21	17.75	14.97	12.06	15.56
14	23.35	19.54	10.53	11.16	17.39			9.05	18.29	15.60	16.49	21.33	21.96	16.90	25.37	25.37	14.83	9.32	14.97	18.02	9.28	13.09	11.56	11.16	9.90	8.83	18.02	14.07	18.42	15.10	12.10	15.55
15	23.22	19.41	10.53	11.16	17.39			9.05	18.02	15.46	16.36	21.06	21.69	16.90	25.37	25.37	14.61	9.41	15.10	18.15	9.41	13.09	11.47	11.16	9.95	8.74	18.02	14.07	19.27	15.37	12.19	15.55
16	23.22	19.18	10.40	11.11	17.52			9.01	17.88	15.24	16.22	20.93	21.56	16.90	25.37	25.37	14.34	9.41	14.97	18.29	9.50	12.95	11.43	11.07	10.04	8.69	18.02	14.07	20.03	15.37	12.19	15.53
17	23.08	19.05	10.40	11.07	17.52			8.96	17.75	15.10	16.22	20.71	21.47	16.90	25.37	25.37	14.07	9.41	14.97	18.42	9.59	12.95	11.43	10.94	10.26	8.65	18.15	14.21	20.17	15.46	12.19	15.51
18	22.99	18.91	10.40	11.03	17.52			8.96	17.66	14.97	16.13	20.57	21.33	16.90	25.37	25.37	13.94	9.41	15.10	18.15	9.59	12.95	11.38	10.94	10.40	8.52	18.51	14.21	20.57	15.46	12.10	15.49
19	22.86	18.64	10.40	10.98	17.52			8.92	17.39	14.70	16.13	20.44	21.06	16.90	25.37	22.99	13.85	9.41	15.10	17.88	9.50	12.95	11.38	10.94	10.53	8.43	18.78	14.21	20.93	15.37	12.10	15.37
20	22.86	18.42	10.40	10.94	17.52			8.87	17.25	14.48	16.00	20.17	20.80	16.90	25.37	22.86	13.58	9.46	15.24	17.75	9.46	12.95	11.38	10.98	10.53	8.38	19.05	14.07	21.06	15.24	12.10	15.31
21	22.72	18.29	10.40	10.94	17.52			8.87	16.99	14.21	16.00	20.03	20.71	16.90	25.37	22.86	13.45	9.46	15.10	17.52	9.46	12.95	11.25	11.03	10.53	8.25	19.05	13.94	20.17	14.97	12.10	15.21
22	22.59	18.15	10.40	10.89	17.52			8.92	16.90	14.07	15.87	19.94	20.57	16.90	25.37	22.86	13.18	9.46	15.10	16.99	9.41	12.95	11.11	11.11	10.49	8.11	19.18	13.85	19.68	14.97	12.19	15.13
23	22.45	17.88	10.40	10.85	17.52			8.92	16.63	13.94	15.73	19.81	20.30	16.90	25.37	22.86	13.09	9.50	15.24	16.76	9.28	12.82	10.85	11.16	10.40	7.98	19.18	13.85	19.18	15.10	12.32	15.04
24	22.32	17.75	10.40	10.80	17.52			8.96	16.49	13.85	15.60	19.68	20.17	16.90	25.37	22.86	12.95	9.50	15.24	16.63	9.01	12.68	10.67	11.16	10.17	7.89	19.18	13.85	18.78	15.24	12.46	14.97
25	22.23	17.66	10.40	10.76	17.52			8.96	16.36	13.71	15.60	19.54	20.03	16.90	25.37	22.86	12.82	9.50	15.60	16.49	8.87	12.55	10.49	11.03	10.04	7.80	19.05	13.94	17.75	15.37	12.64	14.89
26	22.10	17.39	10.40	10.71	17.39			8.96	16.22	13.58	15.46	19.41	19.94	16.90	25.37	22.86	12.68	9.50	15.46	16.36	8.69	12.32	10.35	10.94	9.90	7.66	19.05	13.94	16.63	15.37	12.68	14.77
27	21.96	17.25	10.40	10.67	17.39			9.01	16.13	13.45	15.46	19.27	19.81	16.90	25.37	22.86	12.68	9.50	15.60	16.36	8.43	12.19	10.35	10.85	10.04	7.62	19.18	13.94	15.46	15.24	12.68	14.69
28	21.83	17.12	10.40	10.67	17.39			9.05	15.87	13.31	15.46	19.27	19.68	16.90	25.37	22.86	12.68	9.50	15.37	16.36	8.20	12.19	10.35	10.80	10.04	7.48	19.27	13.85	15.24	14.97	12.64	14.62
29				10.62				9.05				19.18				22.86				16.63				10.58				13.71				14.66
Mar 1	21.69	16.99	10.40	10.58	17.25		17.52	9.05	15.73	13.09	15.46	19.05	19.41	16.90	20.93	20.30	12.55	9.50	15.24	17.52	7.75	11.92	10.35	10.40	10.17	7.35	19.27	13.58	14.97	14.97	12.68	14.42
2	21.56	16.90	10.40	10.53	17.25		17.52	9.10	15.60	12.95	15.37	18.91	19.27	16.90	20.93	20.30	12.50	9.50	15.24	18.78	7.53	11.79	10.40	10.26	10.04	7.31	19.05	13.58	14.83	14.97	12.82	14.40
3	21.47	16.76	10.67	10.49	17.12		17.39	9.10	15.37	12.82	15.37	18.78	19.05	16.90	20.93	20.30	12.46	9.50	15.46	19.18	7.44	11.74	10.35	10.17	9.90	7.22	19.05	13.58	14.61	15.10	12.95	14.37
4	21.33	16.63	10.80	10.44	17.12		17.25	9.10	15.24	12.68	15.24	18.51	18.91	16.90	20.93	20.30	12.32	9.50	15.60	20.17	7.31	11.70	10.22	10.17	9.90	7.17	18.91	13.85	14.07	15.24	13.18	14.36
5	21.33	16.36	10.80	10.40	16.99		17.12	9.14	15.10	12.68	15.24	18.42	18.78	16.90	20.93	20.30	12.19	9.50	16.49	20.57	7.22	11.56	10.08	10.17	9.95	7.13	18.78	13.94	12.95	15.37	13.45	14.33
6	21.20	16.22	10.80	10.40	16.90		16.90	9.19	14.97	12.68	15.24	18.15	18.64	16.90	20.93	20.30	12.06	9.50	16.22	21.33	7.26	11.56	10.08	10.26	10.04	7.13	18.78	14.07	12.82	15.37	13.58	14.32
7	21.06	16.13	10.80	10.35	16.90		16.76	9.23	14.97	12.64	15.10	18.02	18.51	16.90	20.93	20.30	12.01	9.50	16.13	21.69	7.17	11.56	10.17	10.26	10.08	7.04	18.78	14.21	12.82	15.46	13.58	14.30
8	20.93	16.00	10.94	10.31	16.76		16.63	9.28	14.97	12.55	15.10	17.75	18.42	16.90	20.93	20.30	11.92	9.50	16.00	21.69	7.17	11.47	10.22	10.40	10.22	6.99	18.78	14.21	12.68	15.60	13.58	14.27
9	20.93	15.87	11.03	10.26	16.63		16.49	9.32	14.83	12.46	14.97	17.66	18.29	16.90	20.93	20.30	11.79	9.50	15.60	21.33	7.22	11.43	10.35	10.40	10.40	6.99	18.78	14.07	12.46	15.46	13.85	14.22
10	20.80	15.73	11.03	10.22	16.49		16.49	9.41	14.83	12.32	14.97	17.52	17.75	16.90	20.93	20.30	11.70	9.50	15.46	20.93	7.35	11.43	10.40	10.40	10.53	6.99	18.78	13.85	11.43	15.37	13.85	14.12
11	20.71	15.60	11.03	10.17	16.36		16.36	9.46	14.83	12.24	14.83	17.52	17.66	16.90	20.93	20.30	11.79	9.50	15.46	20.44	7.62	11.43	10.49	10.40	10.53	6.90	18.64	13.58	11.03	15.24	13.85	14.06
12	20.57	15.46	11.03	10.17	16.22		16.22	9.50	14.83	12.19	14.83	17.39	17.52	16.90	20.93	20.30	11.79	9.50	15.87	20.30	7.80	11.43	10.49	10.40	10.40	6.90	18.64	13.31	10.98	15.24	13.85	14.03
13	20.57	15.37	11.16	10.13	16.13		16.13	9.55	14.83	12.10	14.83	17.12	17.39	16.90	20.93	20.30	11.79	9.50	16.00	20.03	7.80	11.43	10.49	10.40	10.26	6.90	18.51	13.09	11.11	15.24	13.85	14.00
14	20.44	15.10	11.16	10.08	16.00		16.00	9.59	14.83	12.10	14.70	16.90	17.25	16.90	20.93	20.30	11.88	9.50	15.73	19.94	7.66	11.43	10.40	10.40	10.04	6.86	18.15	13.09	11.29	15.24	13.85	13.92
15	20.30	14.97	11.29	10.04	15.87		15.87	9.64	14.97	12.06	14.70	16.76	17.12	16.90	20.93	20.30	11.92	9.50	15.60	19.81	7.48	11.43	10.35	10.40	9.77	6.86	17.88	13.09	11.34	15.46	13.85	13.88
16	20.17	14.83	11.43	9.99	15.73		15.87	9.73	14.97	12.01	14.61	16.63	16.99	16.90	20.93	20.30	12.01	9.64	15.60	19.41	7.35	11.47	10.17	10.53	9.50	6.86	17.75	13.09	11.29	15.60	13.85	13.84
17	20.17	14.70	11.43	9.95	15.60		15.87	9.86	14.97	11.92	14.61	16.49	16.90	16.90	20.93	20.30	12.06	9.64	15.73	19.18	7.17	11.47	10.04	10.53	9.41	6.86	17.75	13.09	10.98	15.60	13.85	13.80
18	20.03	14.61	11.43	9.90	15.46		15.73	9.95	14.97	11.88	14.61	16.36	16.76	16.90	20.93	20.30	12.10	9.64	15.73	19.05	7.04	11.47	9.90	10.58	9.32	6.86	17.66	12.95	10.80	15.46	13.71	13.74
19	19.94	14.48	11.70	9.90	15.37		15.60	10.04	14.97	11.79	14.48	16.22	16.63	16.90	20.93	20.30	12.10	9.64	15.87	19.05	6.99	11.56	9.77	10.67	9.28	6.81	17.66	12.82	10.26	15.24	13.71	13.69
20	19.81	14.34	11.79	9.86	15.37		15.46	10.17	15.10	11.74	14.48	16.13	16.49	16.90	20.93	20.30	12.10	9.64	15.73	19.27	6.99	11.56	9.73	10.67	9.41	6.86	17.66	12.82	9.90	14.97	13.85	13.67
21	19.81	14.21	11.79	9.82	15.24		15.37	10.22	15.10	11.70	14.34	16.00	16.36	16.90	20.93	20.30	12.19	9.77	15.60	19.54	6.99	11.56	9.59	10.67	9.50	6.86	17.66	12.82	9.73	14.83	13.94	13.64
22	19.68	14.07	11.79	9.77	15.10		15.24	10.26	15.10	11.61	14.34	15.87	16.22	16.90	20.93	20.30	12.19	9.77	15.87	20.17	7.13	11.56	9.59	10.67	9.77	6.86	17.66	12.82	9.73	14.83	13.94	13.66
23	19.54	13.94	11.92	9.73	15.10		15.10	10.35	15.10	11.56	14.21	15.87	16.22	16.90	20.93	20.30	12.19	9.77	16.00	21.06	7.22	11.61	9.59	10.67	9.77	6.86	17.66	12.95	9.77	14.97	14.07	13.70
24	19.41	13.85	11.92	9.68	14.97		14.97	10.40	15.10	11.47	14.21	15.73	16.13	16.90	20.93	20.30	12.32	9.90	16.13	21.96	7.35	11.61	9.59	10.67	9.73	6.86	17.52	13.09	10.04	15.10	14.21	13.74
25	19.41	13.71	12.06	9.64	14.83		14.97	10.49	15.24	11.43	14.07	15.60	16.13	16.90	20.93	20.30	12.46	9.90	16.22	23.48	7.53	11.61	9.64	10.67	9.64	6.86	17.12	13.18	10.17	15.24	14.21	13.79
26	19.27	13.58	12.06	9.64	14.83		14.97	10.53	15.24	11.34	14.07	15.46	16.00	16.90	20.93	20.30	12.46	9.90	16.22	23.75	7.75	11.61	9.73	10.67	9.73	6.86	16.90	13.18	10.26	15.24	14.21	13.79
27	19.18	13.45	12.19	9.59	14.70		14.97	10.62	15.24	11.29	14.07	15.46	16.00	16.90	20.93	20.30	12.50	9.90	16.36	22.59	7.93	11.61	9.77	10.58	9.82	6.86	16.76	13.09	10.17	15.24	14.07	13.74
28	19.05	13.31	12.19	9.55	14.70		14.83	10.67	15.24	11.29	14.07	15.37	16.00	16.90	20.93	20.30	12.55	9.90	16.36	22.45	8.11	11.61	9.82	10.53	10.04	6.90	16.63	13.09	10.04	15.24	14.07	13.72
29	19.05	13.18	12.19	9.50	14.61		14.83	10.76	15.37	11.29	14.07	15.37	15.87	16.90	20.93	20.30	12.55	9.90	16.36	22.59	8.38	11.70	9.95	10.53	10.08	6.90	16.63	12.95	10.04	15.10	13.94	13.73
30	18.91	13.18	12.32	9.46	14.61		14.83	10.85	15.37	11.34	14.07	15.37	15.87	16.90	20.93	20.30	12.64	9.90	16.36	22.45	8.56	11.70	10.17	10.49	10.04	6.90	16.63	12.82	10.08	14.83	13.71	13.72
31	18.78	13.09	12.32	9.41	14.48		14.83	10.94	15.37	11.43	14.07	15.24	15.87	16.90	20.93	20.30	12.68	9.90	16.49	22.32	8.69	11.79	10.26	10.40	9.95	6.90	16.63	12.68	10.17	14.61	13.58	13.70
Apr 1	18.64	12.95	12.32	9.41	14.48		14.83	10.94	15.37	11.43	13.94	15.37	15.87	16.90	16.49	17.39	12.82	9.90	16.63	22.23	8.96	11.88	10.40	10.26	9.77	6.90	16.63	12.82	10.17	14.48	13.18	13.45
2	18.64	12.82	12.32	9.41	14.48		14.83	10.98	15.46	11.43	13.94	15.46	15.87	16.90	16.49	17.39	12.95	9.90	17.12	22.10	9.19	11.92	10.49	10.17	9.64	6.99	16.63	12.82	10.17	14.48	13.09	13.47
3	18.51	12.68	12.46	9.41	14.48		14.83	11.03	15.46	11.70	13.94	15.46	15.87	16.90	16.49	17.39	13.09	9.90	16.99	22.23	9.41	12.06	10.53	10.17	9.64	7.04	16.63	12.95	10.26	14.61	13.09	13.51
4	18.42	12.55	12.46		14.48		14.83	11.07	15.46	11.79	13.94	15.60	15.73	16.90	16.49	17.39	13.18	9.90	17.88	22.45	9.64	12.19	10.58	10.17	9.64	7.04	16.49	12.95	10.40	14.97	13.09	13.71
5	18.29	12.46	12.55		14.48		14.83	11.11	15.46	11.92	13.94	15.60	15.73	16.90	16.49	17.39	13.31	9.90	17.88	22.59	9.90	12.32	10.67	10.17	9.73	7.08	16.49	12.95	10.62	15.24	13.18	13.77
6	18.29	12.32	12.55		14.61		14.83	11.16	15.60	12.06	13.94	15.73	15.73	16.90	16.49	17.39	13.31	10.04	17.88	22.32	10.17	12.46	10.80	10.17	9.82	7.13	16.49	12.95	10.94	15.46	13.31	13.82
7	18.15	12.19	12.68		14.61		14.83	11.25	15.73	12.19	13.94	15.73	15.73	16.90	16.49	17.39	13.45	10.04	18.02	22.59	10.40	12.68	10.94	10.17	9.95	7.13	16.49	12.95	11.03	15.46	13.58	13.89
8	18.15	12.06	12.68		14.70		14.83	11.29	15.87	12.32	13.94	15.87	15.73	16.90	16.49	17.39	13.45	10.17	17.39	22.45	10.71	13.09	11.03	10.17	10.08	7.13	16.49	12.95	10.94	15.46	13.85	13.92
9	18.02	11.92	12.68		14.83		14.83	11.34	16.00	12.46	13.94	16.00	15.60	16.90	16.49	17.39	13.58	10.26	18.64	21.96	11.11	13.31	11.16	10.26	10.17	7.17	16.49	12.95	10.85	15.46	13.94	13.99
10	18.02	11.70	12.82		14.97		14.83	11.43	16.13	12.68	14.07	16.13	15.60	16.90	16.49	17.39	13.58	10.53	18.78	21.20	11.43	13.58	11.29	10.40	10.17	7.22	16.49	12.95	10.94	15.24	13.94	14.03
11	17.88	12.95	12.95		15.10		14.70	11.47	16.22	12.82	14.21	16.22	15.60	16.90	16.49	17.39	13.71	10.80	18.29	20.30	11.70	13.85	11.47	10.40	10.17	7.22	16.49	12.95	11.16	15.10	13.94	14.09
12	17.88	14.21	12.95		15.37		14.70	11.61	16.36	13.18	14.21	16.36	15.73	16.90	16.49	17.39	13.85	11.03	18.29	20.44	12.06	14.21	11.74	10.40	10.17	7.35	16.49	12.95	11.29	14.83	13.85	14.22
13	17.88	15.46	13.09		15.60		14.70	11.70	16.36	13.71	14.34	16.49	15.73	16.90	16.49	17.39	13.94	11.29	18.42	21.56	12.46	14.48	12.01	10.53	10.17	7.48	16.49	12.95	11.16	14.34	13.85	14.38
14	17.88	16.90	13.09		15.87		14.70	11.74	16.49	14.34	14.34	16.63	15.73	16.90	16.49	17.39	13.94	11.56	18.51	22.86	12.82	14.83	12.24	10.53	10.17	7.62	16.49	12.95	10.98	14.07	13.85	14.55
15	18.02	18.64	13.18		16.13		14.70	11.92	16.63	15.37	14.34	16.90	15.73	16.90	16.49	17.39	13.94	12.19	18.78	24.11	13.31	15.24	12.55	10.53	10.17	7.75	16.49	13.09	10.80	13.94	13.94	14.80
16	18.42	20.30	13.18		16.49		14.70	12.01	16.63	16.49	14.48	17.25	15.73	16.90	16.49	17.39	14.07	12.68	19.68	24.38	13.85	15.60	12.68	10.53	10.17	7.93	16.63	13.31	10.71	13.94	13.94	15.05
17	18.78	22.32	13.18		16.90		14.70	12.10	16.76	17.88	14.48	17.88	15.87	16.90	16.49	17.39	14.21	13.71	20.03	25.37	14.61	16.00	13.18	10.53	10.26	8.11	16.76	13.45	10.80	13.94	14.07	15.40
18	19.05	24.38	13.18		17.25		14.83	12.24	16.90	19.68	14.48	19.05	15.87	16.90	16.49	17.39	14.21	15.10	19.41	26.67	15.24	16.49	13.45	10.53	10.40	8.29	16.90	13.71	10.85	13.94	14.34	15.77
19	19.41	26.76	13.18		17.88		14.83	12.46	16.99	21.56	14.48	20.93	15.87	16.90	16.49	17.39	14.34	16.00	19.27	26.40	15.87	16.90	13.94	10.40	10.53	8.52	16.99	13.85	11.03	14.07	14.83	16.14
20	20.03	29.31	13.31		18.51		14.97	12.55	17.12	24.11	14.61	23.48	15.87	16.90	16.49	17.39	14.34	18.51	19.18	27.03	16.49	17.39	14.34	10.35	10.80	8.74	17.12	14.07	11.43	14.48	14.97	16.69
21	20.80	32.09	13.31		19.27		15.10	12.68	17.25	27.92	14.61	27.92	15.87	16.90	16.49	16.22	14.48	19.05	19.27	28.55	17.39	17.88	14.97	10.35	11.16	9.01	17.12	14.61	11.79	14.83	15.24	17.32
22	22.10	35.14	13.31		20.17		15.24	12.95	17.52	31.73	14.61	31.73	16.00	16.90	16.49	15.87	14.61	20.30	19.54	29.18	18.78	18.64	15.46	10.26	11.79	9.32	17.12	14.83	11.92	15.10	15.46	18.00
23	23.35	38.45	13.45		21.47		15.73	13.09	17.75	35.54	14.61	36.17	16.00	16.90	16.49	15.87	14.70	22.86	20.03	30.21	20.03	19.18	16.00	10.40	12.68	9.73	17.12	15.10	11.92	15.60	16.13	18.85
24	24.74	42.40	13.58		22.72		15.87	13.18	17.88	39.35	14.70	41.01	16.00	16.90	16.49	15.87	14.97	25.37	20.17	30.97	21.83	19.94	16.63	10.40	13.94	10.17	17.25	15.46	12.01	16.63	16.63	19.76
25	27.29	46.16	13.71		24.11		16.13	13.31	18.15	43.16	14.61	47.51	16.00	16.90	16.49	15.87	15.10	27.92	20.44	31.33	23.22	20.57	17.52	10.67	15.87	10.67	17.39	16.22	12.06	17.75	17.39	20.81
26	33.61	50.64	13.85		26.67		16.49	13.45	18.42	48.85	14.61	53.33	16.00	16.90	16.49	15.87	15.24	29.80	20.80	32.99	25.28	21.47	18.02	10.71	19.05	11.16	17.52	16.76	12.19	19.05	17.88	22.18
27	39.98	56.02	14.34		29.18		16.99	13.58	18.64	54.68	14.61	60.95	16.13	16.90	16.49	15.87	15.60	32.99	21.20	36.80	27.92	22.32	18.91	10.80	21.56	12.01	17.75	17.75	12.32	21.56	18.91	23.89
28	46.16	60.95	15.24		31.73		17.39	13.71	18.91	62.30	14.61	71.26	16.13	16.90	16.49	15.87	15.87	38.10	21.47	39.35	29.80	23.48	19.68	10.94	25.37	12.68	17.88	18.78	12.82	24.11	20.30	25.80
29	52.89	67.23	16.49		34.91		17.75	13.94	19.18	68.57	14.61	82.47	16.22	16.90	16.49	15.87	16.49	42.53	21.96	41.86	33.39	24.87	20.71	11.03	31.73	13.94	18.15	20.03	13.09	27.92	22.99	28.08
30	59.16	73.95	18.91		38.72		18.78	14.48	19.41	77.54	14.61	92.77	16.36	16.90	16.49	15.87	17.12	47.06	23.22	48.40	36.80	25.90	22.10	11.29	38.10	15.10	18.64	21.33	13.71	31.73	25.37	30.68
May 1	71.71	75.29	20.71		43.16	40.61	19.68	15.10	19.68	82.47	14.70	102.19	16.63	16.90	16.90	15.87	17.75	53.33	29.71	53.33	40.61	27.52	23.35	11.43	44.41	16.49	19.05	22.86	14.21	38.10	50.64	34.48
2	77.98	78.88	23.84		49.30	43.79	20.57	15.73	20.03	89.19	14.70	112.05	17.25	16.90	17.75	15.87	18.78	59.61	36.93	58.26	43.16	29.18	25.01	11.70	53.33	18.64	20.17	26.67	15.46	48.40	96.36	39.18
3	84.26	82.02	27.29		56.02	47.51	21.47	16.22	20.93	95.91	14.83	128.18	18.15	16.90	19.05	15.87	19.68	63.64	43.52	68.57	48.85	30.48	26.89	12.06	63.64	20.44	21.56	44.41	17.88	63.64	164.93	45.83
4	90.53	85.15	32.99		62.30	51.99	23.08	17.39	22.86	100.39	14.83	161.34	19.18	19.05	21.56	15.87	20.93	71.26	50.20	76.19	56.02	33.61	29.18	12.46	76.19	23.08	26.67	190.48	21.56	78.88	187.79	56.43
5	97.26	88.29	41.86		71.26	56.92	25.64	18.51	25.64	117.87	14.83	207.96	21.56	22.86	25.37	15.87	22.23	81.12	53.33	81.12	63.19	36.17	31.10	12.82	91.43	25.99	38.10	636.42	29.18	101.74	190.48	78.20
6	102.19	92.77	50.64		81.12	64.54	28.55	19.94	29.80	105.32	15.24	232.16	25.28	26.67	32.99	16.49	24.11	101.74	66.33	88.74	79.78	39.84	34.91	13.71	106.67	29.80	43.16	730.53	38.10	123.25	192.72	87.90
7	107.12	96.81	60.95		96.36	71.26	31.73	21.69	34.91	97.70	15.60	356.75	28.95	30.48	44.41	16.49	27.29	114.29	77.98	101.74	86.05	43.79	38.10	14.21	121.91	34.29	78.88	690.20	63.64	138.49	203.03	98.17
8	111.15	101.74	73.50		115.63	80.67	35.54	24.38	40.61	106.67	16.49	384.54	33.61	35.90	68.57	16.49	30.48	133.11	94.57	110.25	87.84	48.85	44.41	15.24	135.80	39.98	109.36	609.53	126.84	154.62	207.06	106.45
9	115.63	106.67	87.40		134.45	82.02	40.61	29.18	47.06	118.77	18.02	470.59	41.23	41.86	96.36	16.49	32.99	146.11	116.08	123.25	92.77	56.02	50.20	16.63	149.69	45.71	146.11	484.03	228.57	167.62	207.06	116.97
10	117.42	112.05	100.39		157.31	97.26	46.16	36.80	53.33	153.73	20.30	488.52	48.40	49.30	126.84	16.49	39.35	155.97	135.80	149.69	102.63	64.09	59.61	18.78	177.48	56.02	215.57	365.72	317.31	176.58	205.71	128.82
11	126.39	117.42	111.60		178.82	111.60	53.33	45.71	60.95	198.10	24.11	524.37	56.02	57.82	169.86	16.49	43.16	172.55	140.73	178.82	110.70	78.88	72.16	22.23	219.61	65.88	279.22	295.80	329.86	164.93	204.37	141.05
12	140.73	123.70	121.91		216.92	135.80	63.64	88.74	70.36	211.99	30.48	605.04	62.75	68.12	210.64	16.49	48.40	228.57	161.34	215.57	116.53	96.36	122.35	25.99	234.85	77.98	380.95	285.49	291.77	157.31	207.96	160.62
13	153.73	129.52	129.52		216.92	143.42	76.19	158.66	83.81	213.33	41.86	591.60	76.19	79.33	229.92	16.49	53.33	366.61	181.51	259.05	138.49	194.06	178.82	38.10	268.91	94.12	600.56	314.62	279.22	146.11	220.95	189.16
14	175.24	135.80	152.38		272.94	155.97	88.74	203.03	96.36	200.34	54.68	379.61	95.46	91.43	229.92	16.49	59.61	497.48	352.72	207.96	171.20	255.01	180.17	58.26	285.49	112.49	663.31	322.24	270.25	140.73	290.42	207.19
15	175.24	143.42	167.62		427.56	166.27	108.46	227.23	114.29	204.37	103.53	317.31	105.32	109.36	265.32	16.49	63.64	519.89	351.37	227.23	203.03	318.66	295.80	101.74	297.14	125.94	667.79	294.45	274.29	153.73	335.69	229.41
16	169.86	149.69	180.17		510.93	180.17	129.52	228.57	131.76	201.68	173.89	309.69	128.18	126.84	320.00	17.12	71.26	484.03	277.87	187.79	205.71	361.68	380.95	190.48	384.54	148.35	596.08	284.15	280.56	163.59	373.78	244.96
17	246.05	157.31	203.03		515.41	218.26	147.00	250.08	158.66	267.56	312.38	305.66	147.00	149.69	354.06	17.52	78.88	417.70	234.85	187.79	196.75	338.82	404.71	317.31	546.78	148.35	519.89	272.94	288.18	175.24	398.43	265.88
18	294.45	166.27	218.26		717.09	209.30	215.57	294.45	198.10	298.04	439.22	246.05	203.03	175.24	369.30	18.02	86.50	415.01	203.03	192.72	192.72	314.62	461.63	506.44	703.64	187.79	470.59	268.91	336.14	186.44	432.94	300.72
19	326.28	175.24	229.92		779.83	218.26	327.62	337.48	259.05	285.49	501.96	207.06	305.66	203.03	407.40	19.05	94.12	416.36	177.48	233.50	204.37	315.97	488.52	506.44	761.91	211.99	461.63	275.18	417.70	207.06	452.66	326.94
20	354.06	184.20	243.81		748.46	230.81	388.57	358.10	591.60	250.08	703.64	182.86	408.74	239.78	475.07	20.30	103.98	457.14	149.69	350.48	216.92	327.62	578.15	493.00	681.23	288.18	470.59	294.45	528.85	222.30	446.84	366.32
21	369.30	192.72	257.70		752.94	340.17	350.48	413.67	833.62	285.49	797.76	177.48	515.41	279.22	569.19	21.56	116.08	403.36	160.00	528.85	201.68	343.75	645.38	484.03	569.19	398.43	461.63	323.59	636.42	225.88	431.15	402.87
22	383.19	201.68	271.60		788.80	399.78	329.86	537.82	1021.85	342.86	968.07	196.75	551.26	327.62	685.72	25.37	152.38	327.62	178.82	685.72	186.44	392.16	708.12	461.63	519.89	488.52	452.66	360.34	703.64	228.57	425.32	443.47
23	399.78	211.99	282.80		811.21	432.94	324.93	681.23	1214.57	446.84	1093.56	247.40	533.33	380.95	793.28	27.92	196.75	275.18	216.92	815.69	203.03	452.66	699.16	431.60	501.96	555.74	470.59	416.36	685.72	230.81	432.05	482.23
24	446.84	222.30	289.52		766.39	519.89	324.93	752.94	1483.48	582.63	1178.71	297.14	510.93	444.15	963.59	30.48	290.42	256.36	281.91	748.46	259.94	528.85	699.16	444.15	452.66	587.12	510.93	457.14	658.82	230.81	457.14	522.59
25	457.14	232.16	294.45		721.57	573.67	337.48	676.75	1586.56	667.79	1030.81	358.99	618.49	528.85	1089.08	36.80	370.65	242.47	309.69	658.82	380.95	582.63	488.52	347.79	418.60	627.45	524.37	510.93	609.53	237.54	515.41	534.53

26	408.74	245.15	294.45		757.42	658.82	387.23	636.42	1649.30	712.61	761.91	528.85	851.54	622.97	847.06	50.64	384.54	227.23	304.76	703.64	439.22	528.85	497.48	314.62	441.46	672.27	533.33	493.00	587.12	253.67	614.01	546.94
27	349.13	256.36	294.45		878.43	690.20	433.84	596.08	1510.37	726.05	685.72	577.09	977.03	721.57	569.19	76.19	394.85	223.19	320.00	678.43	435.18	461.63	582.63	302.07	510.93	645.38	551.26	423.98	627.45	305.66	676.75	560.70
28	303.42	268.91	298.04		896.36	739.50	404.71	564.71	1192.16	739.50	609.53	528.85	1057.71	851.54	466.11	148.35	401.12	227.23	355.41	864.99	366.61	435.18	609.53	412.33	555.74	533.33	676.75	475.07	766.39	364.37	712.61	560.87
29	336.14	281.91	327.62		788.80	838.10	350.48	569.19	959.11	645.38	560.23	484.03	1012.89	941.18	404.71	248.74	444.15	232.16	432.94	851.54	265.32	461.63	609.53	654.34	605.04	426.22	806.72	627.45	824.65	390.81	757.42	571.28
30	374.23	297.14	327.62		542.30	864.99	337.48	479.55	838.10	551.26	528.85	440.56	1026.33	1003.92	358.10	569.19	506.44	223.19	542.30	829.13	222.30	519.89	627.45	860.51	658.82	381.85	936.70	537.82	833.62	399.78	779.83	579.98
31	413.67	314.62	323.59		542.30	856.02	327.62	439.22	761.91	493.00	475.07	484.03	950.14	1066.67	324.93	708.12	596.08	209.30	699.16	770.87	210.64	564.71	703.64	1057.71	560.23	412.33	1008.41	448.18	873.95	421.29	761.91	592.64
Jun 1	470.59	326.28	320.00		528.85	847.06	340.17	431.60	752.94	452.66	470.59	497.48	918.77	1093.56	331.21	882.92	667.79	207.96	860.51	784.32	239.78	582.63	676.75	1219.05	461.63	488.52	1066.67	395.74	968.07	428.91	793.28	616.88
2	578.15	338.82	313.28		452.66	609.53	347.79	421.29	797.76	461.63	395.74	488.52	959.11	1129.41	408.74	1115.97	739.50	236.19	1183.20	820.17	276.53	591.60	654.34	1281.80	435.18	488.52	1107.01	366.61	1048.74	412.33	864.99	644.17
3	730.53	350.48	309.69		397.09	600.56	351.37	408.74	847.06	493.00	367.96	475.07	1030.81	1102.52	484.03	1259.39	811.21	313.28	1228.01	851.54	315.97	569.19	784.32	1219.05	510.93	479.55	1151.82	388.57	1017.37	461.63	864.99	672.52
4	932.21	388.57	305.66		397.09	591.60	365.72	406.05	882.92	555.74	364.37	470.59	1210.09	999.44	479.55	1420.73	739.50	404.71	1236.98	869.47	374.23	569.19	891.88	1228.01	640.90	555.74	1174.23	366.61	918.77	564.71	869.47	709.14
5	1062.19	407.40	302.07		397.09	591.60	381.85	461.63	994.96	560.23	417.70	425.32	1308.69	914.29	488.52	1331.10	573.67	475.07	1120.45	873.95	376.92	739.50	743.98	1066.67	748.46	614.01	1232.50	528.85	873.95	560.23	900.84	714.44
6	1048.74	466.11	300.73		397.09	591.60	397.09	488.52	1021.85	663.31	551.26	410.98	1147.34	851.54	444.15	1461.07	470.59	578.15	923.25	891.88	406.05	1062.19	618.49	726.05	640.90	605.04	1344.54	501.96	860.51	663.31	873.95	713.61
7	1008.41	493.00	302.07		397.09	587.12	406.05	510.93	1026.33	712.61	627.45	389.47	891.88	1008.41	444.15	1523.81	439.22	627.45	833.62	856.02	479.55	1317.65	645.38	569.19	546.78	528.85	1393.84	437.87	815.69	735.02	797.76	711.75
8	1026.33	388.57	304.76		397.09	582.63	398.43	519.89	1021.85	717.09	663.31	392.16	981.51	1026.33	452.66	1649.30	416.36	627.45	873.95	847.06	515.41	1165.27	712.61	560.23	560.23	452.66	1268.35	418.60	779.83	663.31	748.46	704.39
9	860.51	410.98	305.66		421.29	564.71	440.56	528.85	1012.89	811.21	699.16	395.74	1196.64	873.95	470.59	1564.15	390.81	663.31	923.25	838.10	605.04	959.11	752.94	582.63	578.15	425.32	1089.08	466.11	757.42	654.34	748.46	706.72
10	708.12	457.14	311.04		436.53	555.74	519.89	442.80	1071.15	811.21	676.75	406.05	1434.18	936.70	466.11	1842.02	426.22	708.12	757.42	829.13	708.12	721.57	802.24	605.04	663.31	432.94	968.07	515.41	743.98	770.87	766.39	716.48
11	654.34	475.07	305.66		446.84	573.67	551.26	430.25	811.21	622.97	649.86	415.01	1649.30	1057.71	497.48	1774.79	587.12	784.32	640.90	784.32	788.80	676.75	842.58	703.64	806.72	403.36	914.29	546.78	708.12	806.72	757.42	722.24
12	667.79	560.23	304.76		444.15	591.60	694.68	528.85	761.91	510.93	618.49	442.80	1586.56	1071.15	546.78	1752.38	645.38	860.51	703.64	788.80	833.62	587.12	900.84	932.21	838.10	356.75	896.36	569.19	663.31	712.61	712.61	733.60
13	654.34	537.82	317.31		442.80	609.53	829.13	569.19	717.09	497.48	631.93	457.14	1407.29	999.44	560.23	1712.05	533.33	905.32	717.09	873.95	847.06	564.71	1035.30	1026.33	779.83	358.10	873.95	510.93	636.42	515.41	694.68	727.17
14	824.65	551.26	326.28		440.56	640.90	815.69	537.82	703.64	493.00	672.27	470.59	1232.50	959.11	605.04	1676.19	461.63	932.21	546.78	936.70	779.83	583.62	1183.20	896.36	712.61	404.71	802.24	416.36	636.42	475.07	752.94	715.64
15	864.99	533.33	342.86		436.53	618.49	569.19	542.30	676.75	493.00	708.12	501.96	1035.30	941.18	681.23	1622.41	457.14	959.11	475.07	847.06	699.16	609.53	1071.15	900.84	672.27	444.15	757.42	335.24	631.93	470.59	743.98	688.08
16	829.13	542.30	318.66		401.12	564.71	452.66	533.33	658.82	493.00	766.39	493.00	847.06	999.44	743.98	1461.07	475.07	986.00	475.07	788.80	654.34	627.45	887.40	923.25	631.93	439.22	743.98	304.76	622.97	501.96	622.97	659.66
17	851.54	510.93	298.04		371.99	475.07	398.43	533.33	627.45	475.07	739.50	501.96	851.54	1084.60	663.31	1371.43	470.59	990.48	533.33	748.46	614.01	622.97	752.94	860.51	596.08	441.46	761.91	307.00	618.49	510.93	537.82	637.37
18	896.36	515.41	312.38	448.18	371.99	421.29	412.33	528.85	560.23	442.80	672.27	501.96	950.14	1120.45	542.30	1317.65	435.18	941.18	609.53	685.72	555.74	578.15	739.50	788.80	564.71	466.11	811.21	358.10	609.53	493.00	484.03	615.57
19	972.55	515.41	333.89	399.78	365.72	390.81	448.18	569.19	528.85	426.22	627.45	506.44	972.55	1115.97	501.96	1169.75	457.14	923.25	658.82	645.38	493.00	569.19	788.80	708.12	533.33	528.85	891.88	417.70	587.12	479.55	475.07	612.97
20	990.48	578.15	345.10	381.85	337.48	380.95	533.33	596.08	542.30	418.60	528.85	524.37	950.14	1017.37	484.03	1115.97	444.15	941.18	654.34	614.01	442.80	600.56	829.13	663.31	497.48	546.78	941.18	457.14	560.23	519.89	488.52	610.51
21	1044.26	618.49	366.61	385.88	332.55	352.72	658.82	600.56	564.71	399.78	475.07	542.30	882.92	936.70	466.11	1093.56	380.95	820.17	618.49	582.63	395.74	605.04	824.65	640.90	515.41	533.33	941.18	422.63	546.78	501.96	510.93	600.07
22	900.84	654.34	380.95	390.81	327.62	349.13	699.16	748.46	739.50	373.33	426.22	582.63	856.02	873.95	519.89	1093.56	350.48	726.05	712.61	551.26	333.89	560.23	842.58	622.97	587.12	466.11	918.77	406.05	564.71	497.48	551.26	600.26
23	950.14	676.75	375.58	394.85	304.76	346.44	672.27	873.95	856.02	347.79	421.29	591.60	864.99	873.95	578.15	1115.97	329.86	614.01	618.49	528.85	298.04	537.82	838.10	582.63	609.53	428.91	878.43	415.01	605.04	431.60	587.12	598.32
24	1075.63	609.53	332.55	407.40	309.69	358.99	766.39	775.35	815.69	340.17	435.18	605.04	882.92	963.59	555.74	1214.57	327.62	528.85	555.74	533.33	270.25	640.90	815.69	493.00	569.19	435.18	829.13	404.71	551.26	384.54	614.01	593.61
25	1102.52	448.18	326.28	417.70	315.97	378.26	923.25	663.31	730.53	322.24	445.49	578.15	891.88	1151.82	542.30	1151.82	333.89	470.59	569.19	537.82	241.12	699.16	748.46	444.15	533.33	448.18	793.28	392.16	493.00	363.03	636.42	583.66
26	905.32	385.88	314.62	430.25	289.52	432.94	986.00	537.82	726.05	302.07	452.66	542.30	779.83	1223.53	587.12	1080.11	327.62	442.80	533.33	537.82	215.57	663.31	685.72	436.53	515.41	461.63	726.05	392.16	457.14	371.99	631.93	560.49
27	667.79	341.51	302.07	435.18	285.49	415.01	1026.33	510.93	717.09	276.53	435.18	528.85	699.16	1133.90	542.30	1133.90	317.31	448.18	484.03	519.89	190.48	649.86	596.08	428.91	569.19	582.63	672.27	404.71	437.87	379.61	605.04	533.61
28	591.60	312.38	295.80	444.15	282.80	375.58	1066.67	470.59	717.09	270.25	423.98	519.89	667.79	954.62	501.96	1142.86	323.59	461.63	533.33	533.33	173.89	618.49	510.93	497.48	578.15	523.59	658.82	418.60	445.49	380.95	605.04	519.40
29	578.15	284.15	280.56	445.49	285.49	338.82	1080.11	461.63	712.61	256.36	417.70	510.93	703.64	851.54	506.44	882.92	323.59	446.84	542.30	891.88	162.24	573.67	461.63	730.53	510.93	289.52	672.27	426.22	445.49	399.78	582.63	517.94
30	605.04	261.29	275.18	446.84	280.56	323.59	1089.08	542.30	717.09	247.40	402.47	555.74	726.05	797.76	497.48	708.12	369.30	457.14	622.97	761.91	153.73	528.85	419.94	941.18	461.63	275.18	667.79	412.33	445.49	470.59	537.82	516.19
Jul 1	699.16	252.77	376.92	426.22	436.53	320.00	1138.38	537.82	712.61	237.54	387.23	582.63	649.86	788.80	493.00	645.38	398.43	439.22	685.72	645.38	144.76	519.89	406.05	833.62	427.56	268.91	658.82	397.09	417.70	564.71	506.44	513.82
2	636.42	242.47	404.71	436.53	436.53	305.66	1201.12	519.89	712.61	230.81	365.72	636.42	569.19	712.61	528.85	601.53	427.56	408.74	587.12	546.78	140.73	515.41	448.18	618.49	410.98	250.08	645.38	389.47	375.58	564.71	479.55	496.14
3	622.97	241.12	408.74	470.59	444.15	297.14	1089.08	488.52	712.61	225.88	364.37	730.53	528.85	631.93	542.30	618.49	412.33	385.88	510.93	506.44	144.76	497.48	432.94	551.26	433.84	225.88	627.45	375.58	379.61	342.86	470.59	478.31
4	654.34	246.05	407.40	417.70	390.81	297.14	1021.85	488.52	699.16	224.54	335.24	811.21	510.93	569.19	596.08	582.63	488.52	361.68	470.59	470.59	153.73	510.93	374.23	524.37	519.89	207.96	627.45	358.10	333.89	537.82	497.48	473.45
5	690.20	247.40	379.61	404.71	384.54	295.80	968.07	452.66	694.68	219.61	320.00	712.61	506.44	497.48	663.31	582.63	493.00	351.37	432.94	443.15	166.27	519.89	374.23	475.07	587.12	189.13	636.42	327.62	326.28	551.26	497.48	464.26
6	703.64	241.12	370.65	430.25	315.97	298.04	856.02	440.56	690.20	214.68	309.69	578.15	537.82	457.14	609.53	631.93	452.66	349.13	390.81	418.60	168.96	501.96	380.95	426.22	569.19	178.82	578.15	318.66	314.62	506.44	497.48	443.16
7	730.53	225.88	360.34	417.70	318.66	314.62	658.82	415.01	672.27	207.96	291.77	533.33	591.60	466.11	560.23	672.27	497.48	343.75	350.48	410.08	169.86	546.78	374.23	389.47	519.89	182.86	542.30	305.66	300.73	448.18	497.48	429.56
8	775.35	213.33	358.10	419.94	320.90	363.03	609.53	413.67	672.27	204.37	304.76	506.44	569.19	506.44	560.23	717.09	461.63	336.14	322.24	418.60	190.48	519.89	345.10	363.03	475.07	223.19	510.93	298.83	288.18	412.33	501.96	424.89
9	658.82	203.03	354.06	390.81	309.69	342.86	560.23	399.78	658.82	201.68	327.62	488.52	524.37	493.00	528.85	712.61	403.36	336.14	304.76	406.05	199.44	493.00	315.97	346.44	423.98	248.74	470.59	267.56	281.91	385.88	582.63	407.14
10	591.60	192.72	350.48	332.55	299.38	313.28	524.37	479.55	649.86	205.71	320.90	466.11	506.44	437.87	488.52	645.38	355.41	355.41	290.42	380.95	209.30	457.14	293.11	332.55	397.09	247.40	442.80	248.74	280.56	361.68	622.97	389.69
11	658.82	182.86	347.79	329.86	297.14	355.41	519.89	730.53	645.38	209.30	307.00	441.46	501.96	407.40	466.11	672.27	318.66	371.99	279.22	361.68	225.88	404.71	280.56	308.35	394.85	236.19	428.91	238.43	282.80	343.75	591.60	391.64
12	752.94	167.62	293.11	308.35	294.45	537.82	484.03	636.42	636.42	214.68	303.42	393.50	501.96	388.57	448.18	950.14	302.07	425.32	276.53	356.75	227.23	385.88	275.18	282.80	398.43	228.57	416.36	246.05	284.15	324.93	528.85	395.83
13	802.24	160.00	253.67	284.15	297.77	510.93	493.00	537.82	546.78	211.99	299.38	358.99	484.03	401.12	425.32	1156.30	288.18	360.34	276.29	367.96	229.92	364.37	265.32	410.08	[illegible]	316.92	399.78	277.87	271.60	305.66	493.00	387.65
14	788.80	157.31	229.92	268.91	285.49	560.23	419.94	461.63	537.82	209.30	277.87	343.75	461.63	394.85	381.85	1017.37	282.80	301.04	290.42	361.68	341.51	345.10	302.07	251.43	470.59	213.33	387.23	328.52	255.01	304.76	484.03	378.26
15	730.53	158.66	214.68	268.91	297.14	519.89	410.08	403.36	533.33	205.71	261.29	324.93	393.28	364.37	381.85	820.17	274.29	284.15	307.00	351.37	358.10	329.86	351.37	241.12	524.37	210.64	375.58	379.61	238.43	317.31	506.44	369.82
16	685.72	157.31	192.72	375.58	297.14	439.22	384.54	375.58	519.89	198.10	270.25	314.62	515.41	331.21	371.99	717.09	276.53	279.22	285.49	340.17	281.91	326.28	427.56	233.50	493.00	207.96	366.61	350.48	220.95	358.10	528.85	358.80
17	564.71	155.97	198.10	415.01	297.14	378.26	373.33	346.44	533.33	191.82	274.29	304.76	484.03	311.04	347.79	640.90	290.42	380.95	267.56	320.90	241.12	324.93	564.71	228.57	452.66	210.64	350.48	329.86	207.06	479.55	493.00	350.61
18	537.82	158.66	195.41	367.96	294.45	341.51	367.96	343.75	537.82	182.86	279.22	299.38	444.15	331.21	326.28	587.12	318.66	309.69	259.94	313.28	213.33	331.21	645.38	222.30	417.70	209.30	337.48	328.52	196.75	515.41	452.66	344.10
19	515.41	160.00	186.44	355.41	297.14	313.28	364.37	324.93	528.85	180.17	271.60	293.11	416.36	358.10	327.62	549.13	288.18	[illegible]	251.43	294.45	200.34	314.62	654.34	227.23	387.23	198.10	329.86	327.62	191.82	479.55	424.43	333.21
20	497.48	164.93	177.48	342.86	297.14	299.38	352.72	317.31	519.89	171.20	263.98	[illegible]	380.95	349.13	381.85	257.70	327.62	271.60	271.60	285.49	195.41	313.28	537.82	203.03	361.68	189.13	323.59	322.24	189.13	422.63	441.91	326.71
21	497.48	168.96	168.96	318.66	342.86	291.77	345.10	351.37	510.93	167.62	252.77	564.71	374.23	327.62	378.26	488.52	257.70	274.29	367.96	[illegible]	186.44	358.10	452.66	200.34	354.06	187.79	351.37	309.69	189.13	373.33	515.41	327.79
22	497.48	163.59	169.86	288.18	343.75	290.42	331.21	375.58	528.85	162.24	239.78	528.85	385.88	312.38	358.99	510.93	303.42	256.36	259.94	268.91	176.58	717.09	404.71	199.44	381.85	200.34	314.62	294.45	194.06	338.82	501.96	337.45
23	475.07	157.31	172.55	274.29	345.10	307.00	289.52	370.65	533.33	161.34	236.19	546.78	384.54	308.35	333.89	591.60	309.69	236.19	253.67	251.43	167.62	968.07	375.58	224.54	402.47	213.33	519.89	276.53	200.34	323.59	479.55	344.84
24	466.11	153.73	171.20	255.01	346.44	410.08	257.70	393.50	524.37	155.97	246.05	555.74	365.72	308.35	320.90	555.74	365.72	211.99	266.67	232.16	161.34	752.94	350.48	276.53	375.58	219.61	519.89	255.01	207.06	328.52	493.00	338.81
25	452.66	151.04	176.58	252.77	307.00	475.07	248.74	440.56	515.41	151.04	261.29	466.11	369.30	300.73	308.35	515.41	358.99	196.75	314.62	219.61	163.59	537.82	317.31	275.18	346.44	250.08	501.96	239.78	234.85	376.92	497.48	329.79
26	452.66	147.00	172.55	255.01	282.80	441.46	245.15	461.63	497.48	153.73	276.53	555.74	365.72	315.97	302.07	493.00	326.28	199.44	332.55	207.06	155.97	452.66	285.49	242.47	324.93	436.53	466.11	242.47	250.08	419.94	475.07	330.18
27	426.22	152.38	172.55	263.98	259.05	383.19	243.81	402.47	493.00	155.97	284.15	748.46	351.37	333.89	285.49	484.03	324.93	187.79	307.00	199.44	155.97	403.36	261.29	214.68	309.69	510.93	433.84	270.25	238.43	423.98	440.11	326.51
28	395.74	154.62	171.20	256.36	247.40	338.82	237.54	370.65	479.55	163.59	286.84	793.28	335.24	351.37	281.91	461.63	336.14	181.51	291.77	187.79	180.17	361.68	250.08	200.34	300.73	457.14	406.05	305.66	225.88	385.88	412.33	316.42
29	369.30	166.27	167.62	259.05	243.81	305.66	224.54	327.62	461.63	158.66	289.52	954.62	326.28	380.95	281.91	428.91	312.38	178.82	304.76	180.17	196.75	327.62	242.47	204.37	294.45	392.16	374.23	305.66	216.92	349.13	391.71	310.26
30	346.44	219.61	167.62	261.29	238.43	280.56	213.33	311.04	445.49	153.73	288.18	1035.30	290.42	355.41	277.87	399.78	284.15	166.27	341.51	178.82	186.44	300.73	236.19	207.06	284.15	331.21	342.86	281.91	210.64	317.31	378.71	301.05
31	337.48	251.43	167.62	256.36	236.19	272.94	203.03	281.91	437.87	152.38	280.56	977.03	300.73	326.28	266.67	379.61	265.32	157.31	356.75	176.58	169.86	277.87	239.78	200.34	262.63	284.15	318.66	259.05	204.37	290.42	377.82	289.32
Aug 1	333.89	251.43	162.24	255.01	192.72	271.60	199.44	282.80	430.25	148.35	275.18	784.32	272.94	317.31	251.43	375.58	263.98	158.66	352.72	172.55	172.55	266.67	234.85	199.44	250.08	259.94	298.04	236.19	198.10	270.25	370.65	274.49
2	318.66	239.78	154.62	243.81	192.72	270.25	166.27	290.42	419.94	163.59	268.91	694.68	291.77	309.69	251.43	374.23	256.36	152.38	333.89	172.55	190.48	257.70	219.61	190.48	236.19	250.08	280.56	223.19	198.10	252.77	380.95	266.00
3	318.66	234.85	152.38	236.19	184.20	272.94	158.66	300.73	410.08	189.13	272.94	649.86	275.18	299.38	271.60	384.54	246.05	144.76	307.00	181.51	204.37	246.05	207.96	181.51	219.61	245.15	270.25	214.68	201.68	239.78	400.22	262.00
4	320.90	236.19	152.38	228.57	178.82	265.32	160.00	323.59	398.43	213.33	267.56	631.93	270.25	288.18	268.91	416.36	233.50	148.35	298.04	181.51	209.30	255.01	205.71	190.48	209.30	248.74	259.94	213.33	203.03	229.92	428.46	262.43
5	317.31	214.68	149.69	219.61	173.89	251.43	164.93	337.48	388.57	248.74	261.29	528.85	259.05	274.29	280.56	425.32	223.19	152.38	295.80	192.72	196.75	259.94	220.95	200.34	200.34	256.36	251.43	243.81	215.57	196.75	220.95	428.46	258.31
6	308.35	207.96	143.42	211.99	169.86	248.74	164.93	314.62	375.58	251.43	259.94	510.93	245.15	265.32	271.60	444.15	216.92	153.73	274.29	223.19	186.44	242.47	248.74	192.72	200.34	314.62	243.81	210.64	190.48	215.57	402.47	255.17
7	304.76	194.06	140.73	204.37	178.82	253.67	162.24	291.77	385.88	204.37	259.05	475.07	236.19	272.94	266.67	433.84	205.71	148.35	256.36	213.33	178.82	229.92	222.30	186.44	207.96	439.22	238.43	205.71	182.86	209.30	373.33	250.40
8	307.00	182.86	138.49	195.41	178.82	250.08	161.34	284.15	376.92	198.10	257.70	446.84	262.63	282.80	261.29	426.22	192.72	142.07	241.12	194.06	181.51	213.33	199.44	203.03	213.33	533.33	233.50	205.71	176.58	227.23	360.79	249.30
9	308.35	168.96	134.45	187.79	176.58	248.74	153.73	276.53	365.72	196.75	255.01	410.98	376.92	289.52	271.60	401.12	185.10	139.38	228.57	178.82	194.06	205.71	189.13	259.94	210.64	479.55	228.57	204.37	172.55	275.18	380.95	250.17
10	320.90	155.97	129.52	180.17	172.55	233.50	154.62	268.91	355.41	185.10	253.67	374.23	381.85	288.18	282.80	394.85	177.48	138.49	216.92	167.62	191.82	205.71	187.79	288.18	219.61	415.01	232.16	192.72	169.86	299.38	393.50	246.08
11	329.86	149.69	123.70	171.20	168.96	219.61	169.86	266.67	345.10	180.17	243.81	350.48	342.86	272.94	315.97	403.36	177.48	149.69	216.92	155.97	185.10	218.26	200.34	274.29	259.94	389.47	241.12	194.06	166.27	299.38	381.40	244.00
12	320.00	146.11	118.32	163.59	168.96	211.99	210.64	261.29	335.24	171.20	239.78	328.52	312.38	285.49	320.90	399.78	177.48	257.70	225.88	149.69	180.17	272.94	236.19	253.67	288.18	415.01	245.15	196.75	161.34	300.73	363.03	248.97
13	304.76	137.14	117.87	155.97	168.96	205.71	378.26	262.63	326.28	162.24	236.19	309.69	297.14	309.69	297.14	394.85	187.79	263.98	224.54	144.76	185.10	345.10	263.98	232.16	289.52	446.84	266.67	192.72	157.31	286.84	339.72	254.57
14	291.77	133.11	121.46	148.35	164.93	199.44	484.03	335.24	317.31	161.34	234.85	299.38	309.69	311.04	282.80	375.58	224.54	232.16	215.57	140.73	184.20	314.62	253.67	213.33	293.11	425.32	285.49	198.10	172.55	272.94	318.21	255.32
15	291.77	131.76	129.52	140.73	164.93	194.06	609.53	340.17	305.66	155.97	234.85	288.18	337.48	294.45	259.94	388.57	253.67	213.33	262.63	135.80	178.82	300.73	229.92	200.34	349.13	388.57	274.29	220.95	199.44	274.29	298.04	259.60
16	280.56	131.76	129.52	133.11	158.66	187.79	699.16	320.00	295.80	162.24	233.50	291.77	346.44	272.94	246.05	537.82	237.54	177.48	375.58	134.45	178.82	351.37	213.33	194.06	404.71	371.99	257.70	237.54	190.48	271.60	287.28	268.10
17	280.56	129.52	139.38	129.52	162.24	186.44	605.04	308.35	288.18	155.97	230.81	311.04	440.56	251.43	230.81	578.15	222.30	163.59	457.14	130.87	192.72	375.58	219.61	190.48	402.47	358.10	245.15	227.23	175.24	268.91	275.63	268.81
18	284.15	126.84	148.35	128.18	171.20	192.72	555.74	282.80	272.94	164.93	230.81	315.97	461.63	239.78	219.61	533.33	213.33	157.31	436.53	131.76	204.37	347.79	236.19	187.79	361.68	360.34	234.85	215.57	177.48	261.29	259.50	261.77
19	280.56	122.80	152.38	123.70	171.20	216.92	501.96	267.56	259.94	166.27	245.15	394.85	415.01	229.92	211.99	488.52	219.61	153.73	374.23	138.49	213.33	320.00	229.92	192.72	314.62	358.10	227.23	207.96	215.57	243.81	249.64	255.09
20	275.18	114.29	164.93	123.70	184.20	241.12	442.80	252.77	250.08	167.62	234.85	320.90	371.99	220.95	200.34	461.63	228.57	149.69	327.62	154.62	205.71	295.80	211.99	211.99	284.15	355.41	223.19	199.44	238.43	224.54	238.43	244.42
21	257.70	111.15	172.55	124.59	186.44	237.54	437.87	227.23	241.12	168.96	228.57	324.93	336.14	210.64	205.71	475.07	220.95	144.76	293.11	168.96	196.75	280.56	200.34	224.54	265.32	354.06	228.57	189.13	227.23	207.96	224.09	237.82
22	250.08	108.91	180.17	130.87	192.72	227.23	479.55	213.33	230.81	169.86	216.92	318.66	308.35	207.96	224.54	448.18	207.96	142.07	275.18	176.58	203.03	272.94	195.41	219.61	256.36	354.06	228.57	178.82	210.64	195.41	214.68	233.53
23	237.54	107.12	190.48	138.49	213.33	242.47	501.96	211.99	223.19	171.20	207.06	309.69	289.52	204.37	271.60	427.56	211.99	168.96	289.52	178.82	220.95	267.56	201.68	207.06	251.43	338.82	219.61	175.24	198.10	185.10	206.61	234.48
24	229.92	107.12	187.79	143.42	228.57	279.22	475.07	223.19	211.99	175.24	199.44	286.84	270.25	207.96	259.94	401.12	224.54	205.71	302.07	175.24	228.57	271.60	237.54	196.75	243.81	315.97	210.64	171.20	186.44	176.58	200.34	233.36
25	222.30	108.46	181.51	149.69	234.85	280.56	441.46	225.88	204.37	173.89	195.41	268.91	259.05	222.30	228.57	373.33	219.61	198.10	286.84	176.58	219.61	272.94	241.12	190.48	238.43	312.38	207.06	164.93	175.24	171.20	195.41	227.11
26	210.64	112.49	180.17	142.07	241.12	252.77	418.60	232.16	195.41	172.55	194.06	252.77	248.74	237.54	215.57	363.03	207.96	198.10	270.25	177.48	209.30	261.29	233.50	186.44	252.77	313.28	199.44	157.31	168.96	169.86	185.10	221.31
27	205.71	134.45	182.86	140.73	241.12	246.05	395.74	236.19	187.79	171.20	195.41	242.47	248.74	259.05	207.96	355.41	207.96	205.71	256.36	171.20	200.34	248.74	233.50	200.34	284.15	299.38	192.72	155.97	162.24	164.93	176.13	219.70
28	198.10	154.62	178.82	147.00	234.85	242.47	383.19	243.81	181.51	169.86	198.10	228.57	245.15	253.67	200.34	369.30	222.30	198.10	251.43	163.59	195.41	238.43	232.16	207.96	317.31	277.87	187.79	151.04	154.62	157.31	170.76	217.92
29	192.72	160.00	175.24	178.82	207.06	318.66	373.33	250.08	176.58	167.62	192.72	213.33	238.43	246.05	194.06	388.57	239.78	184.20	281.91	154.62	198.10	228.57	220.95	214.68	361.68	261.29	182.86	146.11	152.38	149.69	168.96	219.97
30	187.79	189.13	173.89	214.68	207.96	320.00	347.79	248.74	169.86	163.59	187.79	207.96	241.12	251.43	190.48	402.47	291.77	169.86	284.15	147.00	216.92	219.61	213.33	233.50	395.74	250.08	180.17	142.07	153.73	143.42	165.83	222.96
31	185.10	177.48	171.20	213.33	214.68	309.69	320.90	246.05	164.93	162.24	180.17	207.96	227.23	251.43	180.17	394.85	312.38	160.00	268.91	140.73	234.85	204.37	200.34	239.78	402.47	245.15	177.48	138.49	149.69	138.49	162.69	218.81
Sep 1	182.86	172.55	168.96	158.66	218.26	300.73	293.11	247.40	161.34	162.24	172.55	207.96	218.26	284.15	168.96	375.58	290.42	152.38	257.70	137.14	227.23	219.61	190.48	230.81	389.47	247.40	171.20	135.80	143.42	134.45	159.55	212.28
2	178.82	169.86	164.93	178.82	219.61	270.25	286.84	250.08	157.31	161.34	167.62	209.30	209.30	361.68	161.34	373.33	276.53	148.35	261.29	138.49	219.61	265.32	182.86	219.61	369.30	236.19	164.93	134.45	135.80	131.76	160.00	211.77
3	177.48	164.93	163.59	213.33	220.95	248.74	270.25	257.70	152.38	157.31	161.34	209.30	200.34	356.75	155.97	358.99	255.01	146.11	289.52	138.49	209.30	272.94	177.48	210.64	350.48	222.30	160.00	131.76	130.87	129.52	164.03	208.32
4	176.58	160.00	158.66	271.60	223.19	247.40	256.36	251.43	152.38	161.34	160.00	210.64	191.82	318.66	153.73	342.86	238.43	142.07	346.44	135.80	201.68	262.63	173.89	210.64	328.52	211.99	157.31	128.18	124.59	128.18	161.34	206.08
5	175.24	160.00	157.31	272.94	223.19	207.06	248.74	234.85	147.00	166.27	157.31	211.99	185.10	290.42	149.69	324.93	223.19	143.42	363.03	130.87	201.68	253.67	187.79	239.78	305.66	204.37	155.97	125.49	120.11	126.84	154.17	201.55
6	172.55	169.86	153.73	243.81	213.33	199.44	238.43	219.61	143.42	172.55	154.62	214.68	178.82	268.91	149.69	318.66	213.33	147.00	354.06	126.84	213.33	252.77	215.57	245.15	282.80	195.41	154.62	123.25	116.53	124.59	149.69	197.65
7	167.62	191.82	144.76	252.77	214.68	196.75	223.19	210.64	138.49	177.48	151.04	223.19	173.89	251.43	153.73	312.38	209.30	157.31	345.10	125.04	219.61	290.42	219.61	232.16	268.91	184.20	155.97	121.01	112.05	120.56	148.35	196.56
8	166.27	199.44	135.80	252.77	216.92	190.48	227.23	205.71	134.45	181.51	148.35	251.43	168.96	234.85	152.38	299.38	204.37	172.55	323.59	122.80	219.61	290.42	219.61	233.50	262.63	172.55	155.97	119.22	108.91	116.98	144.76	194.63
9	163.59	199.44	134.45	253.67	207.96	184.20	216.92	184.20	129.52	185.10	146.11	257.70	164.93	223.19	151.04	290.42	210.64	173.89	299.38	119.66	216.92	268.91	211.99	233.50	268.91	163.59	162.24	117.87	106.22	114.29	140.28	190.35
10	163.59	190.48	133.11	207.96	210.64	177.48	204.37	172.55	125.49	186.44	140.73	266.67	162.24	213.33	151.04	279.22	243.81	166.27	280.56	123.70	216.92	253.67	207.06	228.57	293.11	153.73	200.34	117.42	103.08	111.60	136.25	187.79
11	157.31	185.10	134.45	192.72	213.33	172.55	182.86	172.55	121.46	192.72	139.38	265.32	158.66	207.06	178.82	266.67	263.98	158.66	270.25	130.87	216.92	237.54	199.44	224.54	295.80	146.11	227.23	120.56	101.29	110.70	130.87	186.31
12	151.04	173.89	133.11	189.13	209.30	167.62	178.82	167.62	117.42	195.41	135.80	265.32	155.97	192.72	211.99	256.36	243.81	152.38	290.42	140.73	239.78	220.95	187.79	216.92	290.42	139.38	228.57	124.59	100.84	111.60	127.28	184.42
13	148.35	167.62	134.45	185.10	207.96	164.93	177.48	162.24	113.39	198.10	131.76	268.91	152.38	187.79	227.23	242.47	224.54	146.11	307.00	134.45	291.77	205.71	180.17	210.64	275.18	134.45	216.92	128.18	99.94	110.70	123.70	182.57
14	140.73	161.34	134.45	187.79	210.64	166.27	173.89	158.66	109.36	203.03	128.18	262.63	148.35	175.24	259.05	233.50	209.30	139.38	291.77	133.11	304.76	195.41	173.89	207.96	261.29	131.76	213.33	130.87	104.43	107.56	121.46	179.98
15	140.73	157.31	135.80	171.20	207.96	167.62	168.96	155.97	108.01	210.64	125.49	261.29	144.76	167.62	288.18	224.54	196.75	135.80	277.87	133.11	289.52	192.72	167.62	224.54	246.05	131.76	245.15	137.14	120.11	103.53	121.46	179.33
16	139.38	152.38	135.80	175.24	203.03	164.93	173.89	152.38	107.56	216.92	124.59	312.38	142.07	164.93	293.11	220.95	184.20	138.49	265.32	131.76	268.91	195.41	161.34	284.15	232.16	140.73	286.84	139.38	134.45	100.84	135.80	183.20
17	138.49	147.00	137.14	192.72	200.34	157.31	177.48	147.00	107.12	220.95	128.18	303.42	139.38	161.34	261.29	218.26	173.89	148.35	267.56	125.94	253.67	203.03	157.31	308.35	222.30	148.35	280.56	146.11	138.49	99.50	177.03	183.48
18	137.14	144.76	137.14	229.92	196.75	153.73	185.10	151.04	107.56	214.68	130.87	295.80	139.38	160.00	236.19	223.19	166.27	155.97	331.21	124.59	230.81	196.75	154.62	289.52	213.33	161.34	271.60	160.00	135.80	98.60	198.99	184.92
19	137.14	139.38	140.73	192.72	192.72	149.69	186.44	153.73	107.56	211.99	134.45	288.18	139.38	152.38	219.61	224.54	160.00	158.66	351.37	125.49	216.92	190.48	166.27	266.67	205.71	168.96	268.91	161.34	135.80	98.15	198.99	182.08
20	135.80	134.45	143.42	225.88	173.89	149.69	187.79	154.62	108.01	216.92	138.49	263.98	144.76	154.62	209.30	224.54	158.66	158.66	323.59	129.52	204.37	194.06	199.44	246.05	198.10	167.62	259.94	157.31	138.49	98.60	201.23	180.70
21	251.43	130.87	147.00	207.96	180.17	152.38	187.79	167.62	104.43	214.68	139.38	243.81	151.04	153.73	199.44	223.19	157.31	155.97	314.62	130.87	195.41	195.41	199.44	228.57	190.48	158.66	265.32	153.73	142.07	98.60	205.27	182.15
22	461.63	128.18	144.76	225.88	178.82	148.35	191.82	180.17	105.32	215.57	143.42	234.85	158.66	151.04	190.48	215.57	160.00	154.62	291.77	126.84	180.17	204.37	189.13	211.99	184.20	149.69	307.00	151.04	142.07	99.94	193.61	187.77
23	461.63	130.87	142.07	229.92	171.20	147.00	180.17	190.48	107.56	222.30	147.00	225.88	155.97	151.04	192.72	213.33	164.93	149.69	271.60	122.35	169.86	214.68	182.86	196.75	176.58	143.42	315.97	152.38	139.38	102.19	177.93	185.47
24	461.63	139.38	140.73	234.85	169.86	147.00	169.86	219.61	109.36	215.57	152.38	207.96	152.38	147.00	200.34	205.71	160.00	140.73	257.70	119.22	162.24	216.92	178.82	180.17	176.58	137.14	298.04	161.34	142.07	101.74	172.10	183.18
25	457.14	167.62	139.38	236.19	160.00	149.69	164.93	220.95	111.15	209.30	152.38	203.03	157.31	144.76	205.71	199.44	154.62	133.11	241.12	117.87	157.31	201.68	178.82	164.93	178.82	133.11	279.22	162.24	153.73	99.05	167.17	180.70
26	452.66	203.03	138.49	241.12	160.00	152.38	163.59	214.68	114.29	207.06	152.38	198.10	167.62	139.38	198.10	194.06	157.31	126.84	229.92	116.53	147.00	184.20	173.89	153.73	178.82	131.76	263.98	160.00	158.66	96.36	165.83	178.77
27	461.63	200.34	138.49	275.18	164.93	163.59	172.55	203.03	115.63	205.71	152.38	194.06	167.62	133.11	192.72	186.44	176.58	123.70	219.61	113.84	140.73	172.55	168.96	139.38	173.89	147.00	251.43	160.00	160.00	95.01	164.93	178.55
28	466.11	191.82	131.76	294.45	163.59	169.86	180.17	176.58	125.94	201.68	152.38	182.86	161.34	155.97	190.48	185.10	181.51	122.80	209.30	111.15	126.84	172.55	163.59	131.76	167.62	169.86	245.15	160.00	161.34	95.01	161.79	177.75
29	466.11	180.17	117.42	297.14	162.24	166.27	177.48	162.24	128.18	199.44	153.73	180.17	153.73	190.48	187.79	180.17	180.17	123.25	200.34	108.91	116.53	175.24	155.97	126.84	160.00	166.27	241.12	160.00	155.97	95.46	155.97	174.99
30	479.55	172.55	110.25	315.97	158.66	158.66	168.96	143.42	144.76	198.10	154.62	178.82	153.73	194.06	184.20	175.24	173.89	129.52	190.48	105.77	113.84	189.13	157.31	126.39	153.73	139.38	230.81	153.73	149.69	95.91	151.93	172.68
Oct 1	479.55	164.93	104.43	315.97	146.11	144.76	164.93	144.76	153.73	196.75	157.31	180.17	148.35	184.20	181.51	169.86	172.55	128.18	190.48	111.15	118.77	219.61	139.38	128.18	149.69	118.32	223.19	203.03	146.11	99.94	149.69	172.12
2	488.52	157.31	102.63	313.28	139.38	142.07	151.04	142.07	154.62	199.44	158.66	182.86	144.76	175.24	180.17	164.93	162.24	121.91	176.58	112.49	117.42	233.50	135.80	129.52	142.07	104.87	223.19	200.34	144.76	113.84	146.11	169.73
3	488.52	152.38	102.63	313.28	134.45	140.73	146.11	137.14	153.73	203.03	161.34	192.72	143.42	172.55	187.79	161.34	154.62	120.11	169.86	108.91	115.18	225.88	134.45	130.87	134.45	81.12	255.01	182.86	146.11	126.84	142.52	168.39
4	488.52	147.00	102.63	315.97	131.76	129.52	131.76	135.80	153.73	207.06	162.24	195.41	147.00	164.93	203.03	155.97	153.73	118.32	163.59	103.98	110.25	220.95	133.11	130.87	129.52	76.19	298.04	168.96	142.07	128.18	141.62	167.47
5	479.55	134.45	102.19	210.64	121.01	119.22	131.76	133.11	152.38	209.30	164.93	194.06	153.73	160.00	204.37	151.04	148.35	116.98	158.66	98.60	106.67	207.96	130.87	124.15	126.84	72.61	293.11	157.31	130.87	122.80	140.28	159.93
6	466.11	131.76	102.63	211.99	117.87	116.08	134.45	125.04	153.73	215.57	166.27	186.44	166.27	153.73	198.10	146.11	144.76	118.32	149.69	95.01	107.56	189.13	128.18	115.18	123.25	71.26	282.80	148.35	115.18	116.08	144.76	156.18
7	461.63	129.52	99.05	220.95	116.53	111.60	139.38	120.11	154.62	218.26	152.38	178.82	167.62	148.35	187.79	142.07	143.42	123.25	137.14	93.67	121.46	172.55	125.04	106.22	119.66	72.16	272.94	142.07	104.87	110.25	157.31	153.25
8	448.18	128.18	100.39	228.57	115.18	109.36	137.14	116.53	153.73	220.95	125.49	171.20	154.62	144.76	185.10	138.49	143.42	124.15	122.35	89.19	125.49	158.66	121.46	102.19	116.98	74.85	257.70	135.80	100.84	108.91	170.31	149.36
9	388.57	124.59	99.05	216.92	113.39	108.01	133.11	111.60	153.73	219.61	116.98	162.24	143.42	139.38	177.48	135.80	139.38	118.32	121.91	88.74	120.56	152.38	115.63	92.77	114.29	77.98	242.47	129.52	97.26	113.84	170.31	143.20
10	379.61	116.08	87.84	214.68	114.73	108.91	131.76	106.67	152.38	211.99	95.91	154.62	123.25	135.80	173.89	130.87	143.42	113.84	126.84	86.95	114.73	146.11	111.15	67.23	106.67	79.78	229.92	126.84	90.98	143.42	160.00	138.29
11	126.84	110.70	77.98	204.37	110.70	105.32	128.18	100.84	151.04	210.64	79.33	146.11	111.60	133.11	169.86	134.45	144.76	111.15	126.84	86.50	113.39	148.35	113.39	61.40	102.19	80.67	211.99	121.46	85.15	182.86	155.97	127.33
12	125.04	108.46	76.64	196.75	110.70	115.63	123.70	94.12	151.04	203.03	63.19	144.76	107.56	128.18	168.96	143.42	137.14	108.01	124.59	79.78	111.15	149.69	106.67	58.26	99.50	79.78	195.41	114.73	82.02	195.41	168.96	124.91
13	119.66	104.87	75.29	191.82	111.15	112.05	121.01	88.74	149.69	200.34	72.16	140.73	101.74	123.25	169.86	152.38	139.38	104.43	121.91	74.40	105.77	146.11	103.53	56.02	99.94	79.33	184.20	110.25	81.12	186.44	185.10	122.99
14	117.87	105.77	69.02	186.44	109.36	110.70	113.84	84.26	148.35	195.41	89.64	138.49	86.05	119.22	167.62	149.69	122.80	100.39	101.74	71.26	102.63	139.38	99.05	58.71	99.94	77.98	180.17	107.56	74.85	169.86	193.17	119.07
15	113.84	104.43	61.85	175.24	109.36	105.32	110.25	79.78	148.35	192.72	93.67	134.45	81.12	116.98	168.96	144.76	108.01	94.12	110.25	68.57	98.15	125.49	88.74	72.61	89.19	76.19	177.48	104.43	70.81	151.04	197.20	115.27
16	107.56	101.74	57.82	158.66	110.70	104.43	108.46	76.19	147.00	191.82	100.39	130.87	76.19	113.39	164.93	143.42	101.74	90.53	114.29	68.57	95.01	131.76	78.88	82.91	84.71	73.05	175.24	101.74	67.68	142.07	196.30	112.84
17	104.87	95.91	57.82	149.69	109.36	101.74	106.67	72.61	147.00	186.44	106.67	126.84	72.16	110.70	162.24	142.07	96.36	90.53	112.94	68.57	88.74	130.87	68.57	88.29	76.19	69.92	171.20	92.77	67.23	140.73	185.99	109.73
18	95.91	96.36	54.23	147.00	106.67	99.94	105.77	69.47		182.86	98.15	124.15	69.92	109.36	172.55	138.49	94.12	90.08	99.05	68.57	83.81	115.63	63.64	87.84	68.57	67.23	163.59	90.53	70.36	138.49	173.45	104.86
19	90.08	91.43	53.78	126.84	105.32	104.43	101.74	66.78		213.33	90.53	121.01	66.78	109.36	192.72	137.14	92.77	88.74	102.63	68.57	78.88	97.70	61.40	85.60	67.23	65.43	157.31	88.74	65.88	121.91	160.90	102.50
20	88.74	82.02	52.44	200.34	101.74	99.05	96.81	63.64		215.57	82.47	116.53	63.64	108.01	191.82	131.76	91.43	85.15	81.12	67.23	74.40	86.95	60.50	85.15	69.02	63.64	151.04	86.50	61.40	113.84	153.28	100.84
21	87.40	75.29	51.54	241.12	100.39	96.36	92.33	61.85		203.03	74.85	112.05	60.95	99.94	181.51	126.84	90.08	80.22	82.47	65.43	71.26	75.74	59.61	76.19	58.71	63.64	144.76	83.81	54.23	116.08	152.83	98.02

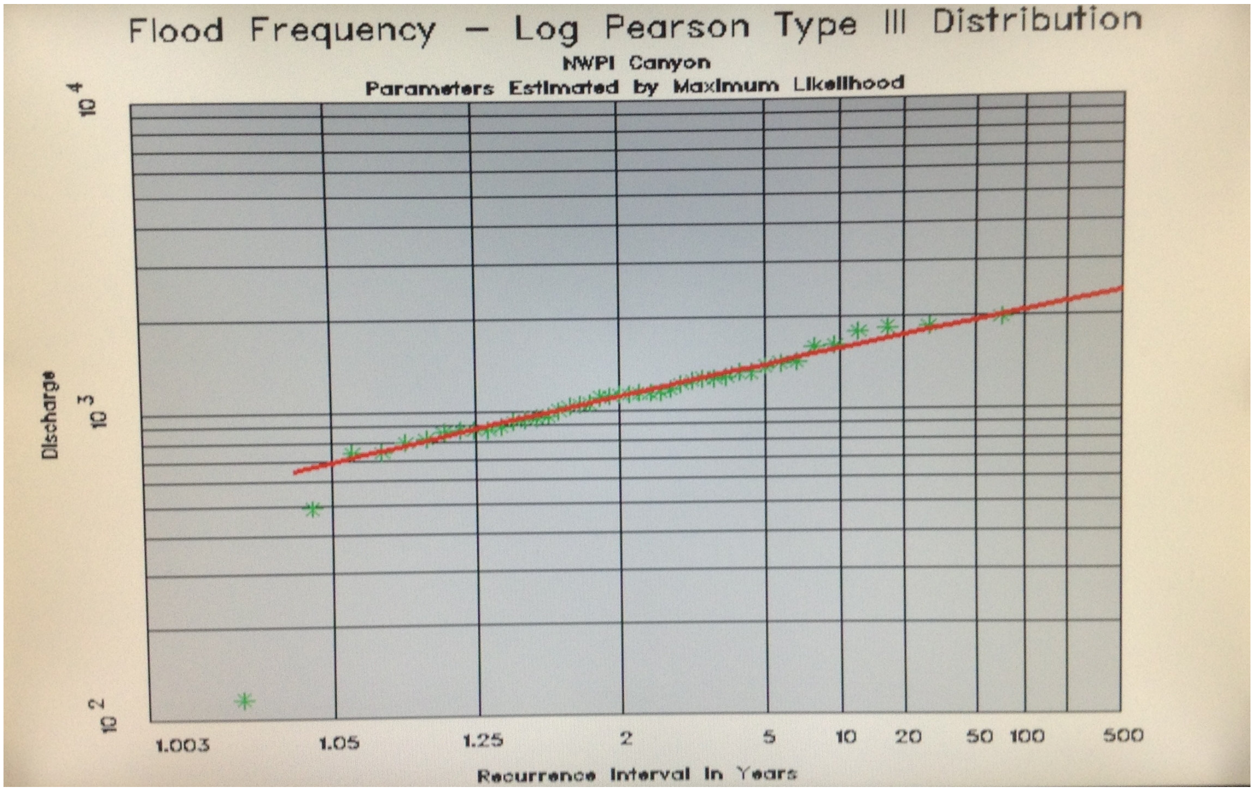
22	86.05	76.19	49.30	225.88	99.05	98.60	87.84	60.06		181.51	69.92	97.70	59.16	92.77	164.93	121.91	89.64	65.43	84.71	63.64	68.57	73.50	59.16	64.54	52.44	63.64	138.49	80.22	47.06	118.32	147.45	92.92
23	84.26	70.36	49.30	224.54	96.36	93.22	84.26	58.71		173.89	64.54	96.81	56.92	83.81	154.62	118.77	88.74	53.78	84.71	63.19	64.54	71.26	59.61	56.92	48.85	63.64	128.18	79.78	37.96	116.98	141.18	88.99
24	82.91	69.02	48.40	213.33	86.95	88.74	80.67	56.92		167.62	62.30	95.46	54.68	77.54	144.76	111.60	88.74	51.09	87.84	62.30	63.64	66.78	60.50	47.06	42.53	63.64	122.80	79.78	35.68	114.73	133.56	85.39
25	81.12	61.85	48.40	192.72	84.71	90.53	76.19	55.57		162.24	59.61	95.01	52.89	77.54	126.84	108.01	87.40	47.96	86.05	60.95	62.30	64.09	60.50	45.71	38.18	63.64	115.18	76.19	30.21	87.40	120.11	80.64
26	79.33	62.30	47.06	186.44	84.71	90.53	72.16	54.23		155.97	57.82	93.67	51.09	78.88	111.60	103.98	86.50	47.06	83.36	59.61	61.40	61.40	60.50	44.41	37.33	62.30	109.36	73.50	26.89	84.26	116.98	78.15
27	77.98	59.61	46.61	168.96	82.47	84.71	69.92	52.89		153.73	55.13	92.77	49.30	78.88	111.60	101.74	85.15	46.16	81.12	58.71	61.40	59.16	60.95	42.53	35.68	60.95	101.74	71.26	25.50	77.54	114.29	75.61
28	76.19	62.75	45.71	152.38	83.36	79.33	67.23	51.99		152.38	53.78	95.46	47.96	78.88	111.60	99.05	82.47	44.82	81.12	58.26	60.95	56.92	60.50	41.23	34.64	59.61	91.88	65.88	26.40	81.57	106.67	73.70
29	75.29	62.75	45.27	137.14	82.47	78.43	64.54	50.64		147.00	51.99	96.81	46.61	78.88	91.43	96.36	78.88	43.38	75.29	56.92	61.40	55.13	60.50	40.87	33.88	56.92	83.81	62.30	28.06	90.53	100.39	71.13
30	73.50	60.06	44.41	144.76	80.22	73.95	62.30	49.30		151.04	50.64	100.84	45.27	78.88	91.43	92.77	73.50	42.53	77.09	56.02	62.30	52.44	59.16	40.61	33.12	55.13	78.88	58.26	26.26	90.08	94.12	69.96
31	72.16	61.85	43.79	158.66	80.22	68.57	59.61	48.40		152.38	48.85	102.63	43.92	78.88	91.43	90.08	69.92	41.50	76.19	56.02	62.75	50.64	57.82	40.47	32.76	54.68	73.50	56.02	29.31	94.57	88.74	69.54
Nov 1	71.26	56.02	43.16	146.11	80.22		58.26	47.51		153.73	48.40	104.87	42.26	78.88	63.64	86.50	64.54	40.25	76.19	55.13	60.95	49.30	56.47	40.34	31.73	53.78	69.92	53.33	26.13	104.87	86.50	67.25
2	69.92	51.99	42.62	149.69	78.88		56.92	46.16		153.73	47.51	106.67	41.01	78.88	63.64	83.81	62.30	38.72	69.92	53.33	56.92	47.96	55.57	39.98	31.46	53.33	65.88	51.09	18.51	97.26	83.81	65.43
3	68.57	52.44	42.13	147.00	77.98		56.02	45.27		154.62	46.16	105.77	40.11	78.88	63.64	81.12	56.92	37.56	68.57	52.89	50.64	46.61	54.23	39.57	31.33	51.99	64.09	49.30	16.36	86.95	79.78	63.67
4	67.23	41.01	41.64	146.11	77.98		54.23	44.41		153.73	45.71	96.81	39.35	65.88	63.64	79.78	53.33	36.80	67.68	51.54	47.06	44.82	53.33	39.35	31.10	50.64	63.64	48.40	15.37	86.05	72.16	61.34
5	65.88	38.10	41.10	143.42	78.88		51.99	44.06		143.42	45.27	100.39	38.45	65.88	63.64	77.54	50.64	36.44	65.88	51.09	43.38	43.03	51.99	39.35	30.57	48.40	62.75	47.06	14.61	82.02	68.57	59.79
6	64.54	36.17	40.61	117.87	80.22		50.64	43.16		131.76	44.41	101.74	37.56	65.88	63.64	74.85	49.30	36.44	63.64	51.99	40.61	41.37	50.20	39.35	30.34	46.61	62.30	46.16	14.34	79.78	65.88	57.63
7	63.64	34.64	40.11	126.84	81.12		49.30	42.76		129.52	43.92	96.81	36.80	65.88	63.64	73.05	47.51	35.68	61.40	52.89	38.10	39.98	47.96	39.48	29.71	45.71	61.40	45.71	14.21	76.64	64.09	56.84
8	62.30	34.15	39.57	137.14	81.12		47.51	41.86		125.04	43.29	92.33	36.03	65.88	63.64	71.26	47.06	34.29	60.06	53.33	36.66	39.22	46.61	39.98	29.31	44.41	60.95	45.27	14.61	74.85	63.64	56.25
9	60.95	32.99	39.08	142.07	81.57		46.16	41.23		121.01	43.16	83.36	35.81	65.88	63.64	69.92	45.71	33.52	58.26	53.33	35.27	37.56	46.16	40.34	29.04	43.16	60.95	44.55	15.10	73.50	63.64	55.41
10	60.50	31.73	38.59	143.42	82.47		45.27	40.61		117.42	42.89	81.57	30.48	60.50	63.64	67.68	44.41	32.99	56.02	51.09	34.02	36.30	45.71	40.47	29.04	41.23	60.95	44.15	15.46	73.05	63.19	54.31
11	58.71	30.48	38.10	126.84	82.47		43.79	39.98		88.29	42.40	80.67	30.48	60.50	63.64	66.78	43.79	32.00	54.68	49.30	32.85	35.54	44.82	40.47	29.18	40.34	60.95	43.38	16.22	71.71	63.19	52.12
12	58.26	29.94	37.56	123.70	81.12		42.89	39.35		79.78	41.99	79.78	30.48	60.50	63.64	65.43	43.16	32.00	52.44	47.51	32.09	34.64	44.28	40.47	28.95	39.98	60.95	42.89	16.63	69.92	62.30	51.12
13	56.92	29.18	37.06	115.18	81.12		41.86	38.95		71.26	41.77	78.88	30.48	60.50	63.64	64.09	43.16	31.46	50.64	45.27	31.33	33.88	43.16	40.34	28.19	39.57	60.50	41.23	17.52	65.88	59.61	49.75
14	56.02	28.55	36.57	86.95	82.47		40.87	38.45		62.30	41.37	77.54	30.48	60.50	63.64	62.75	42.53	30.70	48.85	43.65	30.97	33.12	41.77	39.71	27.92	39.35	60.50	39.35	17.75	62.30	58.26	47.77
15	54.68	27.92	36.03	77.54	83.36		40.11	38.10		56.47	40.87	75.29	30.48	60.50	63.64	61.40	42.13	29.58	49.30	41.86	30.57	32.22	39.35	39.35	27.29	38.72	60.50	36.80	18.02	60.50	56.02	46.50
16	53.78	27.29	35.54	69.92	84.71		38.86	36.44		50.64	40.61	74.40	30.48	52.89	48.40	60.50	41.86	28.82	49.30	41.77	30.57	31.60	38.72	38.72	26.67	38.10	60.50	34.29	18.64	59.16	53.33	44.71
17	52.89	26.67	35.05	60.95	85.15		38.10	36.03		48.40	40.34	73.50	30.48	52.89	48.40	59.16	41.86	28.41	50.64	42.13	30.70	30.70	37.83	38.18	26.13	37.42	60.50	32.99	18.91	58.26	51.54	43.94
18	51.99	26.40	34.51	56.92	85.15		37.06	35.54		45.71	39.98	72.16	30.48	52.89	48.40	57.82	41.86	27.92	51.09	41.23	31.10	30.21	37.06	38.10	25.64	36.80	59.61	31.87	19.05	58.26	50.20	43.28
19	51.09	26.26	34.02	53.78	85.60		36.17	34.91		43.16	39.57	71.71	30.48	52.89	48.40	56.47	41.23	27.52	51.99	39.35	31.46	29.58	36.57	37.42	25.14	36.80	59.61	31.33	19.05	59.16	49.30	42.76
20	50.20	25.77	33.52	51.54	85.60		35.68	34.29		41.86	39.22	70.81	30.48	52.89	48.40	55.13	40.87	27.16	53.33	37.06	31.73	29.04	35.68	36.93	25.14	36.80	59.16	30.48	18.91	59.16	48.85	42.26
21	49.30	25.37	32.99	49.30	85.15		35.05	34.02		40.61	38.95	69.02	30.48	52.89	48.40	54.68	40.61	26.67	53.33	35.68	32.22	28.68	34.64	36.80	25.14	36.66	59.16	29.45	18.78	59.16	48.40	41.78
22	48.40	25.14	32.49	48.40	84.26		34.15	33.12		39.35	38.59	68.57	30.48	45.71	48.40	53.33	40.61	25.90	53.33	35.68	32.99	28.28	33.52	36.17	25.37	36.66	58.26	29.18	18.78	58.26	48.40	41.10
23	47.06	24.87	32.00	47.51	83.81		33.52	32.99		38.10	38.18	65.88	30.48	45.71	48.40	52.89	40.61	25.50	53.33	33.25	33.61	27.92	32.49	35.54	25.50	36.57	57.82	28.41	18.91	56.47	47.51	40.51
24	46.61	24.61	31.46	46.16	83.81		32.85	32.36		36.17	38.10	64.54	30.48	45.71	48.40	51.54	40.61	25.37	53.33	32.76	34.29	27.65	31.46	34.29	26.13	35.81	56.92	27.92	19.05	55.13	46.16	39.99
25	45.71	24.38	30.97	45.27	83.81		31.73	32.00		35.54	37.69	63.64	30.48	45.71	48.40	50.20	40.61	24.74	53.33	33.12	34.78	27.29	30.57	33.25	26.76	35.54	56.47	27.16	19.27	53.78	45.27	39.57
26	44.82	24.11	30.48	44.41	82.47		31.24	31.73		34.29	37.42	62.30	30.48	45.71	48.40	49.30	39.98	24.38	50.64	33.88	35.05	26.67	29.71	32.76	27.29	35.41	56.02	26.53	20.03	53.78	42.89	39.04
27	44.06	24.11	29.94	43.16	81.12		30.48	31.46		32.99	36.80	60.95	30.48	45.71	48.40	49.30	39.98	24.52	46.16	34.29	34.64	26.53	29.04	32.00	26.76	34.91	54.68	25.99	20.57	53.33	41.64	38.41
28	43.16	23.98	29.45	41.86	79.78		29.71	30.97		32.36	36.66	59.61	30.48	45.71	48.40	48.40	39.71	23.98	42.26	34.29	34.15	26.26	28.82	31.60	26.67	34.64	53.33	25.64	21.56	53.33	41.23	37.86
29	42.40	23.98	28.95	39.98	77.98		29.18	30.70		31.73	36.44	59.16	30.48	45.71	48.40	48.40	39.57	23.22	36.66	33.61	32.99	26.13	28.55	30.83	25.37	34.38	50.64	25.50	22.23	51.54	40.87	37.09
30	41.64	23.75	28.41	38.72	77.54		28.55	30.34		31.10	36.03	57.82	30.48	45.71	48.40	47.51	39.35	22.86	35.68	32.36	31.87	25.64	28.41	30.57	24.38	34.15	49.30	25.37	22.32	50.20	40.61	36.52
Dec 1	40.87	23.75	28.06	37.42			28.06	29.94		30.48	35.68	56.02	24.11	38.10	43.29	47.06	39.35	22.45	35.68	30.21	31.33	25.14	28.28	30.21	22.72	33.61	47.51	25.28	22.23	49.30	39.98	33.79
2	40.11	23.35	27.65	36.17			27.52	29.71		29.80	35.54	54.68	24.11	38.10	43.29	46.61	39.35	22.10	35.90	28.95	30.83	24.61	28.28	29.45	20.93	32.76	45.27	25.14	21.83	48.40	38.10	33.16
3	39.35	23.08	27.29	34.91			27.03	29.45		29.45	35.41	52.89	24.11	38.10	43.29	46.16	39.98	21.69	36.80	28.82	30.70	23.98	28.19	29.31	20.57	31.73	42.53	24.38	21.56	48.40	36.17	32.69
4	38.59	23.08	27.03	33.61			26.53	29.18		29.18	35.05	51.54	24.11	38.10	43.29	45.71	40.25	21.33	38.10	29.58	30.57	23.48	28.06	29.04	20.57	31.10	40.61	23.48	20.93	47.51	34.91	32.30
5	37.96	23.08	26.67	32.99			25.99	28.95		28.55	34.78	50.20	24.11	38.10	43.29	45.27	40.61	21.06	38.72	30.48	30.34	22.86	27.79	28.95	20.57	30.48	38.45	21.56	20.44	45.71	33.61	31.84
6	37.20	22.86	26.26	31.73			25.37	28.95		28.19	34.38	48.85	24.11	38.10	38.72	44.82	40.61	20.57	38.18	30.07	30.21	22.10	27.29	28.95	20.30	30.34	34.91	17.75	20.17	44.68	32.00	30.99
7	36.66	22.86	25.99	31.10			25.01	28.06		27.92	34.29	47.51	24.11	38.10	38.72	44.41	41.23	20.30	38.10	28.68	30.07	21.56	26.76	28.68	20.03	30.21	33.39	16.63	20.03	44.41	32.00	30.60
8	36.17	22.72	25.64	30.48			24.52	27.65		27.92	34.29	46.16	24.11	38.10	38.72	44.15	41.86	20.17	38.10	26.67	29.04	21.06	25.77	28.55	19.81	29.94	32.76	16.49	19.94	44.41	32.00	30.26
9	35.81	22.45	25.28	29.18			24.11	27.29		27.92	34.02	45.71	24.11	38.10	38.72	43.65	42.53	20.03	38.10	24.11	26.67	20.30	24.87	28.55	20.03	29.58	32.00	16.63	19.94	44.28	31.73	29.85
10	35.54	22.10	24.87	28.55			23.62	27.03		27.92	33.75	45.27	24.11	38.10	38.72	43.16	43.16	19.94	38.18	22.86	25.14	19.81	24.11	28.28	20.30	29.31	31.87	17.12	20.03	43.38	31.46	29.56
11	35.27	21.83	24.52	27.92			23.08	27.03		27.79	33.39	44.41	24.11	38.10	38.72	42.89	43.16	19.68	39.35	21.96	23.35	19.41	23.84	27.92	20.30	28.55	31.73	17.25	20.30	42.53	31.46	29.28
12	34.91	21.56	24.11	27.29			22.59	26.67		27.29	33.12	43.52	24.11	38.10	38.72	42.40	43.79	19.54	39.35	21.56	23.08	18.91	22.86	27.03	20.30	27.92	31.73	17.52	20.44	41.86	31.46	28.99
13	34.51	21.56	23.75	26.67			22.10	26.67		26.89	32.99	42.89	24.11	38.10	38.72	41.86	44.41	19.41	38.72	21.56	22.99	18.51	21.96	25.37	20.17	27.03	31.73	17.66	20.57	41.77	31.46	28.72
14	34.15	21.33	23.35	25.99			21.56	25.99		26.67	32.85	40.61	24.11	38.10	38.72	41.50	45.27	19.18	37.42	21.83	22.86	18.29	21.47	24.11	19.54	25.99	31.73	17.75	20.93	41.64	31.60	28.38
15	33.88	21.33	22.99	25.37			20.93	25.99		26.53	32.76	40.34	24.11	38.10	38.72	41.01	45.71	19.05	36.17	22.10	22.99	18.02	21.06	22.86	19.27	25.50	31.73	17.88	21.33	41.64	32.00	28.19
16	33.52	21.20	22.59	24.74			20.57	25.90		26.13	32.63	39.84	24.11	38.10	38.72	40.61	45.71	18.91	35.27	22.72	23.08	17.75	20.80	22.32	19.27	25.37	31.46	17.75	21.47	40.34	32.76	27.99
17	33.25	21.06	22.23	24.11			20.30	25.64		25.99	32.36	39.35	24.11	38.10	38.72	39.98	45.71	19.05	35.27	22.99	23.08	17.66	20.71	21.83	19.41	25.14	30.83	17.66	21.56	38.10	32.63	27.74
18	32.99	20.71	21.83	23.48			19.94	25.37		25.64	32.00	38.86	24.11	38.10	38.72	39.35	45.71	18.78	36.80	23.62	22.99	17.52	20.57	21.56	19.54	24.74	30.57	17.52	21.56	36.44	32.49	27.55
19	32.76	20.57	21.56	22.86			19.54	25.37		25.37	31.87	38.32	24.11	38.10	38.72	39.08	45.27	18.51	37.83	23.98	22.59	17.52	20.44	21.56	19.54	24.38	30.57	17.25	21.56	35.68	32.36	27.40
20	32.36	20.44	21.33	22.59			19.18	25.28		25.14	31.73	38.10	24.11	38.10	38.72	38.45	43.79	18.42	38.10	24.11	21.83	17.39	20.17	21.56	19.41	24.25	30.48	17.12	21.69	35.41	32.00	27.19
21	32.00	20.30	21.06	22.23			18.78	25.14		24.74	31.60	37.33	24.11	38.10	38.72	38.10	43.16	18.02	38.10	23.84	21.33	17.39	19.94	21.33	19.18	24.11	29.94	17.39	21.69	34.29	31.87	26.92
22	31.73	20.17	20.80	21.83			18.51	25.01		24.52	31.46	36.80	24.11	38.10	38.72	37.69	41.23	17.88	37.83	22.86	21.20	17.25	19.27	20.57	18.91	24.11	29.45	17.52	21.56	33.39	32.00	26.59
23	31.46	20.17	20.57	21.33			18.29	24.87		24.25	31.10	36.44	24.11	38.10	38.72	37.06	38.10	17.66	36.80	21.56	21.06	17.25	19.05	20.03	18.15	23.98	29.31	17.66	21.56	33.12	31.87	26.20
24	31.24	19.94	20.30	20.80			17.88	24.74		24.11	31.46	36.03	24.11	38.10	38.72	36.57	34.91	17.75	35.90	21.20	20.30	17.25	18.78	19.41	17.52	23.48	29.18	17.39	21.56	33.12	31.60	25.83
25	30.83	19.81	20.03	20.30			17.52	24.61		23.84	31.24	35.54	24.11	38.10	38.72	35.90	30.48	17.75	35.14	20.44	19.41	17.25	18.51	19.18	17.25	23.08	28.95	16.99	21.56	32.00	31.46	25.36
26	30.57	19.41	19.81	19.94			17.12	24.52		23.62	30.83	35.27	24.11	38.10	38.72	35.54	26.67	17.66	34.29	20.30	18.78	17.12	18.42	18.91	16.99	22.86	27.92	16.63	21.47	30.97	31.60	24.93
27	30.34	19.05	19.54	19.68			16.76	24.52		23.48	30.57	34.64	24.11	38.10	38.72	35.27	23.48	17.52	33.52	20.17	18.42	16.99	18.42	18.42	16.90	22.23	26.67	16.36	20.93	30.48	31.46	24.53
28	30.07	18.78	19.27	19.41			16.22	24.38		23.08	30.48	34.38	24.11	38.10	38.72	34.78	20.93	17.39	32.76	20.03	18.15	16.90	18.51	18.15	16.76	21.83	25.37	16.36	20.44	30.48	30.70	24.16
29	29.80	18.42	19.05	19.27			16.00	24.38		22.99	30.34	34.15	24.11	38.10	38.72	34.29	17.75	17.39	32.00	19.27	18.02	16.76	18.64	18.02	16.36	21.69	25.14	16.49	19.41	30.48	30.48	23.84
30	29.45	18.15	18.78	19.18			15.60	24.25		22.86	30.48	33.61	24.11	38.10	38.72	34.02	15.24	17.25	31.87	19.05	18.15	16.63	18.64	17.88	16.36	21.47	24.52	16.76	19.05	30.48	29.58	23.58
31	29.18	17.75	18.51	19.05			15.10	24.11		22.59	30.21	33.12	24.11	38.10	38.72	33.52	12.68	17.12	31.87	18.64	18.29	16.63	18.51	17.75	16.36	20.44	24.11	17.52	18.64	30.34	28.95	23.28

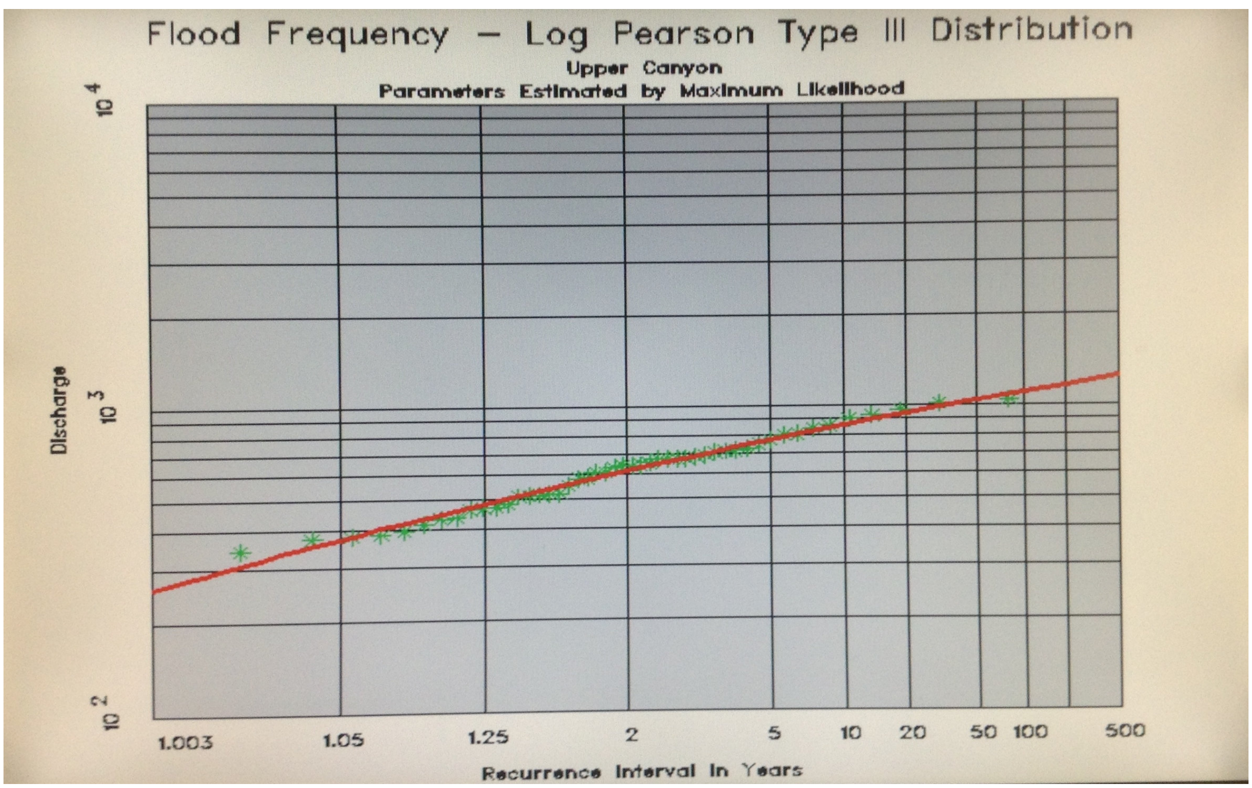
Synthetic Fraser Falls Stewart	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	Average
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
		247.81	220.60					341.56			325.46	424.06	450.37	439.25	371.78	541.29	298.91	304.81	381.16	353.20	256.09	381.32	373.79	351.71	372.05	293.62	468.06	300.89	323.26	314.68	413.07	356.20
Jan 1		62.25	37.39	39.32	40.38			31.90	51.56		47.99	64.08	70.64	42.88	64.08	66.88	70.93	23.71	36.81	69.58	38.45	39.61	35.75	38.45	37.68	35.17	43.37	51.56	36.81	39.32	62.73	47.38
2		61.67	37.10	38.74	40.09			31.13	51.27		47.80	63.89	69.87	42.88	64.08	66.88	69.58	21.59	36.81	70.44	37.10	39.03	35.17	37.68	36.33	34.88	42.02	51.27	36.33	39.03	62.25	46.85
3		61.10	36.52	38.16	39.61			30.55	51.07		47.22	64.08	69.29	42.88	64.08	66.88	68.23	20.43	36.81	69.58	35.17	38.45	34.69	37.68	34.88	34.69	41.25	49.15	35.75	38.16	60.33	46.17
4		60.61	35.46	37.68	39.03			29.97	50.79		46.64	64.08	68.52	42.88	64.08	66.88	67.36	19.08	36.04	68.81	33.25	37.39	33.54	36.81	33.54	34.40	40.38	46.35	35.46	37.68	59.46	45.41
5		60.04	35.46	37.10	38.74			29.49	50.50		46.35	63.89	68.23	42.88	64.08	66.88	66.01	18.31	36.33	67.94	31.90	36.33	33.25	36.04	33.25	34.11	40.38	45.58	35.46	36.52	59.17	44.97
6		59.75	34.69	36.52	38.45			29.20	50.21		45.87	63.89	67.65	42.88	64.08	66.88	64.08	18.02	35.46	65.53	29.78	35.75	32.76	35.46	33.05	33.82	39.80	44.71	36.33	35.75	58.69	44.41
7		59.17	34.11	36.04	38.16			28.62	49.92		45.58	63.60	66.59	42.88	64.08	66.88	62.73	17.73	35.17	63.31	28.14	34.88	32.19	34.88	32.76	33.54	39.61	44.52	37.68	35.46	58.11	43.94
8		58.69	33.82	35.46	38.16			28.33	49.63		45.58	62.73	66.01	42.88	64.08	66.88	61.96	17.44	35.17	62.25	26.98	34.40	31.42	33.25	32.48	33.54	39.80	44.52	38.16	35.46	57.53	43.58
9		58.11	33.05	34.88	37.97			28.14	49.44		45.00	62.73	65.53	42.88	64.08	66.88	60.61	17.44	34.69	60.61	25.63	33.82	30.84	32.48	31.90	33.25	40.09	43.94	38.16	35.46	56.76	43.13
10		57.53	32.76	34.40	37.68			27.56	49.15		44.52	62.45	65.24	42.88	64.08	66.88	59.46	17.15	33.82	59.75	24.38	33.05	30.55	31.90	31.13	33.05	40.38	43.37	38.74	35.75	54.54	42.67
11		57.05	31.90	33.82	37.39			26.98	49.15		43.94	61.96	64.37	42.88	64.08	66.88	58.98	17.15	33.54	57.82	23.51	32.76	30.26	31.42	30.26	32.76	40.67	42.02	38.45	36.52	51.85	42.16
12		56.47	31.61	33.25	37.10			26.79	48.86		43.65	61.39	63.89	42.88	64.08	66.88	57.82	17.15	33.82	57.34	22.55	32.48	29.97	31.42	28.62	32.76	40.67	40.96	37.97	37.10	49.92	41.76
13		55.89	31.13	32.76	36.81			26.50	48.86		43.37	60.61	63.31	42.88	64.08	66.88	55.89	17.15	33.82	55.89	21.88	32.19	29.78	31.42	26.79	32.76	40.96	40.67	37.39	36.81	49.15	41.32
14		55.41	30.55	32.19	36.52			26.02	48.57		43.08	60.33	62.73	42.88	64.08	66.88	54.54	17.44	33.82	54.54	21.10	31.90	29.78	31.42	25.15	32.48	40.96	40.67	37.39	36.33	49.15	40.96
15		54.83	29.97	31.61	36.33			25.83	48.57		42.59	60.04	62.25	42.88	64.08	66.88	54.06	17.44	33.82	54.06	20.62	31.90	29.49	31.13	24.00	32.48	41.25	40.67	37.68	35.46	48.86	40.70
16		54.54	29.49	31.13	36.33			25.25	48.28		42.31	59.46	61.39	42.88	64.08	66.88	52.91	17.44	33.54	52.42	20.33	31.90	29.49	30.55	23.51	31.90	41.25	40.96	37.68	35.17	48.86	40.37
17		54.06	29.20	30.55	36.33			24.96	48.28		42.02	58.40	60.33	42.88	64.08	66.88	51.27	17.73	33.25	51.85	20.24	31.90	29.49	29.78	22.94	31.42	41.44	40.96	37.39	34.88	48.86	40.05
18		53.48	28.91	29.97	36.04			24.67	47.99		41.73	57.82	60.04	42.88	64.08	66.88	50.21	17.73	33.05	50.50	20.04	31.90	29.78	28.91	22.84	30.84	41.44	41.25	36.04	34.88	48.86	39.73
19		52.91	28.62	29.49	36.04			24.28	47.99		41.44	57.34	58.98	42.88	64.08	66.88	49.15	17.73	32.48	49.15	20.24	32.19	29.78	28.14	23.13	30.55	41.44	41.25	35.75	35.17	48.86	39.48
20		52.42	27.85	28.91	36.04			24.00	47.80	43.08	40.96	56.76	58.69	42.88	64.08	66.88	48.57	18.02	32.76	48.86	20.43	32.48	29.97	28.14	23.42	30.26	41.44	40.96	36.52	35.46	48.57	39.51
21		51.85	27.27	28.33	35.75			23.71	47.80	42.59	40.96	56.18	57.82	42.88	64.08	66.88	47.22	18.02	33.54	48.57	20.91	32.76	29.97	28.14	23.51	29.78	41.44	40.96	37.97	35.75	48.28	39.39
22		51.56	26.79	27.85	35.75			23.51	47.51	42.31	40.67	55.70	57.34	42.88	64.08	66.88	46.35	18.31	33.05	48.57	21.10	33.05	29.97	28.14	23.61	29.20	41.44	40.96	38.16	36.04	47.51	39.22
23		51.07	26.50	27.27	35.75			23.22	47.22	41.73	40.38	55.41	57.05	42.88	64.08	66.88	45.58	18.31	33.05	48.86	21.59	33.82	29.97	27.85	23.90	28.33	41.44	40.96	38.16	36.81	46.64	39.10
24	54.54	50.79	26.21	26.79	35.75			22.94	46.93	41.25	40.38	55.12	56.76	42.88	64.08	66.88	44.71	18.60	32.76	49.15	21.97	34.11	30.26	27.85	24.00	28.14	41.25	40.38	38.16	37.39	46.16	39.52
25	54.35	50.21	25.92	26.21	35.75			22.65	46.64	40.67	40.38	54.83	56.18	42.88	64.08	66.88	44.23	18.60	32.76	49.63	22.36	34.11	30.26	27.85	24.00	27.56	40.96	39.03	38.16	37.39	44.52	39.28
26	54.06	49.63	25.63	25.92	35.46			22.36	46.35	40.09	39.80	54.54	55.70	42.88	64.08	66.88	43.08	18.60	32.76	49.92	22.94	33.82	30.26	27.85	23.71	26.98	40.96	38.74	39.03	37.10	43.37	39.05
27	54.06	49.15	25.15	25.83	35.46			22.07	46.16	39.80	39.61	54.06	55.12	42.88	64.08	66.88	42.59	18.79	32.76	50.21	23.22	33.54	29.97	27.85	23.51	26.21	40.67	38.45	40.67	36.52	41.44	38.85
28	53.77	48.86	24.57	25.63	35.46			21.88	45.87	39.32	39.32	53.19	54.54	42.88	64.08	66.88	41.73	18.79	32.76	51.07	23.32	32.76	29.78	27.56	23.71	25.63	40.38	38.45	41.44	35.75	40.67	38.62
29	53.48	48.28	24.28	25.54	35.46			21.68	45.29	38.74	39.03	52.71	54.35	42.88	64.08	66.88	40.96	18.79	32.76	51.27	23.51	31.90	29.49	27.56	24.28	24.57	40.09	38.74	42.02	34.88	39.61	38.38
30	53.19	47.99	23.22	25.34	35.75			21.39	44.71	38.16	38.45	51.85	54.06	42.88	64.08	66.88	40.38	19.08	32.76	51.56	23.61	31.13	29.20	27.56	24.86	24.00	39.32	39.03	42.31	33.25	39.32	38.11
31	53.19	47.51	22.94	25.25	36.04			21.10	44.23	37.68	38.16	51.56	53.48	42.88	64.08	66.88	39.80	19.08	32.48	50.50	23.61	30.55	28.91	27.27	25.25	23.51	39.03	39.03	42.02	33.05	39.32	37.88
Feb 1	52.91	47.22	23.22	25.15	36.04			20.91	43.65	37.39	38.16	51.27	52.71	42.88	54.54	54.54	39.03	19.08	32.48	48.57	23.22	30.26	28.62	27.27	25.15	22.94	39.03	38.74	41.73	33.05	38.74	36.85
2	52.71	46.64	23.22	25.06	36.33			20.62	43.37	37.10	38.16	51.07	52.13	42.88	54.54	54.54	38.45	19.08	32.48	46.35	22.65	30.55	28.33	26.79	24.86	22.36	39.32	37.97	41.44	33.05	37.97	36.55
3	52.42	46.35	23.22	24.96	36.33			20.43	43.08	36.81	37.97	50.50	51.85	42.88	54.54	54.54	37.68	19.37	32.19	44.23	21.88	30.84	28.14	26.21	24.28	21.68	39.80	36.81	41.44	33.25	35.46	36.18
4	52.42	45.87	23.22	24.86	36.33			20.33	42.88	36.33	37.97	50.21	51.27	42.88	54.54	54.54	37.10	19.37	32.48	43.08	21.10	30.84	27.85	25.83	23.51	21.10	40.38	36.33	42.02	33.82	29.97	35.81
5	52.13	45.29	23.22	24.77	36.52			20.24	42.59	36.04	37.68	49.63	51.07	42.88	54.54	54.54	36.52	19.66	32.48	41.44	20.43	31.13	27.56	25.63	23.03	20.72	40.38	36.33	42.88	34.40	26.98	35.54
6	51.85	45.00	22.94	24.67	36.52			20.04	42.02	35.75	37.39	49.44	50.79	42.88	54.54	54.54	36.04	19.66	32.48	40.38	20.04	31.13	26.98	25.63	22.65	20.43	40.38	36.04	43.08	34.69	25.92	35.31
7	51.56	44.52	22.94	24.57	36.52			19.95	41.73	35.46	37.10	49.15	50.21	42.88	54.54	54.54	35.17	19.95	32.19	38.74	19.95	31.13	26.79	25.63	22.26	20.24	40.09	36.04	42.59	34.40	25.34	35.04
8	51.56	44.23	22.94	24.57	36.81			19.85	41.44	35.17	36.81	48.86	49.63	42.88	54.54	54.54	34.69	19.95	32.48	37.97	19.76	30.84	26.50	25.63	21.88	19.95	39.80	35.46	41.25	33.82	24.86	34.78
9	51.27	43.94	22.94	24.48	36.81			19.85	41.25	34.88	36.52	48.57	49.15	42.88	54.54	54.54	34.11	19.95	31.90	37.39	19.66	30.55	26.21	25.63	21.59	19.76	39.32	34.88	39.32	33.25	24.67	34.48
10	51.07	43.37	22.94	24.38	37.10			19.76	40.96	34.69	36.33	47.99	48.86	42.88	54.54	54.54	33.54	19.95	31.90	37.39	19.47	29.97	25.92	25.54	21.30	19.47	39.03	33.82	38.16	32.19	24.86	34.20
11	50.79	43.08	22.65	24.28	37.10			19.66	40.38	34.40	36.04	47.22	48.57	42.88	54.54	54.54	33.05	19.95	32.48	37.97	19.47	29.20	25.54	25.34	21.10	19.27	38.74	32.48	37.68	32.19	25.15	33.99
12	50.79	42.59	22.65	24.19	37.10			19.66	40.09	34.11	35.75	46.35	47.99	42.88	54.54	54.54	32.48	19.95	33.05	38.16	19.47	28.91	25.25	24.86	21.01	19.18	38.74	30.84	37.68	32.19	25.54	33.81
13	50.50	42.31	22.65	24.09	37.39			19.56	39.61	33.82	35.46	46.16	47.80	36.33	54.54	54.54	32.19	19.95	32.48	37.97	19.76	28.33	25.15	24.28	21.01	19.08	38.45	30.55	38.16	32.19	25.92	33.46
14	50.21	42.02	22.65	24.00	37.39			19.47	39.32	33.54	35.46	45.87	47.22	36.33	54.54	54.54	31.90	20.04	32.19	38.74	19.95	28.14	24.86	24.00	21.30	18.98	38.74	30.26	39.61	32.48	26.02	33.44
15	49.92	41.73	22.65	24.00	37.39			19.47	38.74	33.25	35.17	45.29	46.64	36.33	54.54	54.54	31.42	20.24	32.48	39.03	20.24	28.14	24.67	24.00	21.39	18.79	38.74	30.26	41.44	33.05	26.21	33.44
16	49.92	41.25	22.36	23.90	37.68			19.37	38.45	32.76	34.88	45.00	46.35	36.33	54.54	54.54	30.84	20.24	32.19	39.32	20.43	27.85	24.57	23.80	21.59	18.70	38.74	30.26	43.08	33.05	26.21	33.39
17	49.63	40.96	22.36	23.80	37.68			19.27	38.16	32.48	34.88	44.52	46.16	36.33	54.54	54.54	30.26	20.24	32.19	39.61	20.62	27.85	24.57	23.51	22.07	18.60	39.03	30.55	43.37	33.25	26.21	33.35
18	49.44	40.67	22.36	23.71	37.68			19.27	37.97	32.19	34.69	44.23	45.87	36.33	54.54	54.54	29.97	20.24	32.48	39.03	20.62	27.85	24.48	23.51	22.36	18.31	39.80	30.55	44.23	33.25	26.02	33.32
19	49.15	40.09	22.36	23.61	37.68			19.18	37.39	31.61	34.69	43.94	45.29	36.33	54.54	49.44	29.78	20.24	32.48	38.45	20.43	27.85	24.48	23.51	22.65	18.12	40.38	30.55	45.00	33.05	26.02	33.04
20	49.15	39.61	22.36	23.51	37.68			19.08	37.10	31.13	34.40	43.37	44.71	36.33	54.54	49.15	29.20	20.33	32.76	38.16	20.33	27.85	24.48	23.61	22.65	18.02	40.96	30.26	45.29	32.76	26.02	32.92
21	48.86	39.32	22.36	23.51	37.68			19.08	36.52	30.55	34.40	43.08	44.52	36.33	54.54	49.15	28.91	20.33	32.48	37.68	20.33	27.85	24.19	23.71	22.65	17.73	40.96	29.97	43.37	32.19	26.02	32.70
22	48.57	39.03	22.36	23.42	37.68			19.18	36.33	30.26	34.11	42.88	44.23	36.33	54.54	49.15	28.33	20.33	32.48	36.52	20.24	27.85	23.90	23.90	22.55	17.44	41.25	29.78	42.31	32.19	26.21	32.53
23	48.28	38.45	22.36	23.32	37.68			19.18	35.75	29.97	33.82	42.59	43.65	36.33	54.54	49.15	28.14	20.43	32.76	36.04	19.95	27.56	23.32	24.00	22.36	17.15	41.25	29.78	41.25	32.48	26.50	32.35
24	47.99	38.16	22.36	23.22	37.68			19.27	35.46	29.78	33.54	42.31	43.37	36.33	54.54	49.15	27.85	20.43	32.76	35.75	19.37	27.27	22.94	24.00	21.88	16.96	41.25	29.78	40.38	32.76	26.79	32.18
25	47.80	37.97	22.36	23.13	37.68			19.27	35.17	29.49	33.54	42.02	43.08	36.33	54.54	49.15	27.56	20.43	33.54	35.46	19.08	26.98	22.55	23.71	21.59	16.77	40.96	29.97	38.16	33.05	27.18	32.02
26	47.51	37.39	22.36	23.03	37.39			19.27	34.88	29.20	33.25	41.73	42.88	36.33	54.54	49.15	27.27	20.43	33.25	35.17	18.70	26.50	22.26	23.51	21.30	16.48	40.96	29.97	35.75	33.05	27.27	31.75
27	47.22	37.10	22.36	22.94	37.39			19.37	34.69	28.91	33.25	41.44	42.59	36.33	54.54	49.15	27.27	20.43	33.54	35.17	18.12	26.21	22.26	23.32	21.59	16.38	41.25	29.97	33.25	32.76	27.27	31.59
28	46.93	36.81	22.36	22.94	37.39			19.47	34.11	28.62	33.25	41.44	42.31	36.33	54.54	49.15	27.27	20.43	33.05	35.17	17.64	26.21	22.26	23.22	21.59	16.09	41.44	29.78	32.76	32.19	27.18	31.45
29				22.84				19.47				41.25				49.15				35.75				22.74				29.49				31.53
Mar 1	46.64	36.52	22.36	22.74	37.10		37.68	19.47	33.82	28.14	33.25	40.96	41.73	36.33	45.00	43.65	26.98	20.43	32.76	37.68	16.67	25.63	22.26	22.36	21.88	15.80	41.44	29.20	32.19	32.19	27.27	31.00
2	46.35	36.33	22.36	22.65	37.10		37.68	19.56	33.54	27.85	33.05	40.67	41.44	36.33	45.00	43.65	26.89	20.43	32.76	40.38	16.19	25.34	22.36	22.07	21.59	15.71	40.96	29.20	31.90	32.19	27.56	30.97
3	46.16	36.04	22.94	22.55	36.81		37.39	19.56	33.05	27.56	33.05	40.38	40.96	36.33	45.00	43.65	26.79	20.43	33.25	41.25	16.00	25.25	22.26	21.88	21.30	15.52	40.96	29.20	31.42	32.48	27.85	30.91
4	45.87	35.75	23.22	22.45	36.81		37.10	19.56	32.76	27.27	32.76	39.80	40.67	36.33	45.00	43.65	26.50	20.43	33.54	43.37	15.71	25.15	21.97	21.88	21.30	15.42	40.67	29.78	30.26	32.76	28.33	30.87
5	45.87	35.17	23.22	22.36	36.52		36.81	19.66	32.48	27.27	32.76	39.61	40.38	36.33	45.00	43.65	26.21	20.43	35.46	44.23	15.52	24.86	21.68	21.88	21.39	15.32	40.38	29.97	27.85	33.05	28.91	30.81
6	45.58	34.88	23.22	22.36	36.33		36.33	19.76	32.19	27.27	32.76	39.03	40.09	36.33	45.00	43.65	25.92	20.43	34.88	45.87	15.61	24.86	21.68	22.07	21.59	15.32	40.38	30.26	27.56	33.05	29.20	30.78
7	45.29	34.69	23.22	22.26	36.33		36.04	19.85	32.19	27.18	32.48	38.74	39.80	36.33	45.00	43.65	25.83	20.43	34.69	46.64	15.42	24.86	21.88	22.07	21.68	15.13	40.38	30.55	27.56	33.25	29.20	30.75
8	45.00	34.40	23.51	22.16	36.04		35.75	19.95	32.19	26.98	32.48	38.16	39.61	36.33	45.00	43.65	25.63	20.43	34.40	46.64	15.42	24.67	21.97	22.36	21.97	15.03	40.38	30.55	27.27	33.54	29.20	30.69
9	45.00	34.11	23.71	22.07	35.75		35.46	20.04	31.90	26.79	32.19	37.97	39.32	36.33	45.00	43.65	25.34	20.43	33.54	45.87	15.52	24.57	22.26	22.36	22.36	15.03	40.38	30.26	26.79	33.25	29.78	30.57
10	44.71	33.82	23.71	21.97	35.46		35.46	20.24	31.90	26.50	32.19	37.68	38.16	36.33	45.00	43.65	25.15	20.43	33.25	45.00	15.80	24.57	22.36	22.36	22.65	15.03	40.38	29.78	24.57	33.05	29.78	30.37
11	44.52	33.54	23.71	21.88	35.17		35.17	20.33	31.90	26.31	31.90	37.68	37.97	36.33	45.00	43.65	25.34	20.43	33.25	43.94	16.38	24.57	22.55	22.36	22.65	14.84	40.09	29.20	23.71	32.76	29.78	30.23
12	44.23	33.25	23.71	21.88	34.88		34.88	20.43	31.90	26.21	31.90	37.39	37.68	36.33	45.00	43.65	25.34	20.43	34.11	43.65	16.77	24.57	22.55	22.36	22.36	14.84	40.09	28.62	23.61	32.76	29.78	30.17
13	44.23	33.05	24.00	21.78	34.69		34.69	20.53	31.90	26.02	31.90	36.81	37.39	36.33	45.00	43.65	25.34	20.43	34.40	43.08	16.77	24.57	22.55	22.36	22.07	14.84	39.80	28.14	23.90	32.76	29.78	30.09
14	43.94	32.48	24.00	21.68	34.40		34.40	20.62	31.90	26.02	31.61	36.33	37.10	36.33	45.00	43.65	25.54	20.43	33.82	42.88	16.48	24.57	22.36	22.36	21.59	14.74	39.03	28.14	24.28	32.76	29.78	29.94
15	43.65	32.19	24.28	21.59	34.11		34.11	20.72	32.19	25.92	31.61	36.04	36.81	36.33	45.00	43.65	25.63	20.43	33.54	42.59	16.09	24.57	22.26	22.36	21.01	14.74	38.45	28.14	24.38	33.25	29.78	29.85
16	43.37	31.90	24.57	21.49	33.82		34.11	20.91	32.19	25.83	31.42	35.75	36.52	36.33	45.00	43.65	25.83	20.72	33.54	41.73	15.80	24.67	21.88	22.65	20.43	14.74	38.16	28.14	24.28	33.54	29.78	29.76
17	43.37	31.61	24.57	21.39	33.54		34.11	21.20	32.19	25.63	31.42	35.46	36.33	36.33	45.00	43.65	25.92	20.72	33.82	41.25	15.42	24.67	21.59	22.65	20.24	14.74	38.16	28.14	23.61	33.54	29.78	29.67
18	43.08	31.42	24.57	21.30	33.25		33.82	21.39	32.19	25.54	31.42	35.17	36.04	36.33	45.00	43.65	26.02	20.72	33.82	40.96	15.13	24.67	21.30	22.74	20.04	14.74	37.97	27.85	23.22	33.25	29.49	29.54
19	42.88	31.13	25.15	21.30	33.05		33.54	21.59	32.19	25.34	31.13	34.88	35.75	36.33	45.00	43.65	26.02	20.72	34.11	40.96	15.03	24.86	21.01	22.94	19.95	14.65	37.97	27.56	22.07	32.76	29.49	29.43
20	42.59	30.84	25.34	21.20	33.05		33.25	21.88	32.48	25.25	31.13	34.69	35.46	36.33	45.00	43.65	26.02	20.72	33.82	41.44	15.03	24.86	20.91	22.94	20.24	14.74	37.97	27.56	21.30	32.19	29.78	29.39
21	42.59	30.55	25.34	21.10	32.76		33.05	21.97	32.48	25.15	30.84	34.40	35.17	36.33	45.00	43.65	26.21	21.01	33.54	42.02	15.03	24.86	20.62	22.94	20.43	14.74	37.97	27.56	20.91	31.90	29.97	29.34
22	42.31	30.26	25.34	21.01	32.48		32.76	22.07	32.48	24.96	30.84	34.11	34.88	36.33	45.00	43.65	26.21	21.01	34.11	43.37	15.32	24.86	20.62	22.94	21.01	14.74	37.97	27.56	20.91	31.90	29.97	29.37
23	42.02	29.97	25.63	20.91	32.48		32.48	22.26	32.48	24.86	30.55	34.11	34.88	36.33	45.00	43.65	26.21	21.01	34.40	45.29	15.52	24.96	20.62	22.94	21.01	14.74	37.97	27.85	21.01	32.19	30.26	29.45
24	41.73	29.78	25.63	20.82	32.19		32.19	22.36	32.48	24.67	30.55	33.82	34.69	36.33	45.00	43.65	26.50	21.30	34.69	47.22	15.80	24.96	20.62	22.94	20.91	14.74	37.68	28.14	21.59	32.48	30.55	29.53
25	41.73	29.49	25.92	20.72	31.90		32.19	22.55	32.76	24.57	30.26	33.54	34.69	36.33	45.00	43.65	26.79	21.30	34.88	50.50	16.19	24.96	20.72	22.94	20.72	14.74	36.81	28.33	21.88	32.76	30.55	29.65
26	41.44	29.20	25.92	20.72	31.90		32.19	22.65	32.76	24.38	30.26	33.25	34.40	36.33	45.00	43.65	26.79	21.30	34.88	51.07	16.67	24.96	20.91	22.94	20.91	14.74	36.33	28.33	22.07	32.76	30.55	29.64
27	41.25	28.91	26.21	20.62	31.61		32.19	22.84	32.76	24.28	30.26	33.25	34.40	36.33	45.00	43.65	26.89	21.30	35.17	48.57	17.06	24.96	21.01	22.74	21.10	14.74	36.04	28.14	21.88	32.76	30.26	29.54
28	40.96	28.62	26.21	20.53	31.61		31.90	22.94	32.76	24.28	30.26	33.05	34.40	36.33	45.00	43.65	26.98	21.30	35.17	48.28	17.44	24.96	21.10	22.65	21.59	14.84	35.75	28.14	21.59	32.76	30.26	29.51
29	40.96	28.33	26.21	20.43	31.42		31.90	23.13	33.05	24.28	30.26	33.05	34.11	36.33	45.00	43.65	26.98	21.30	35.17	48.57	18.02	25.15	21.39	22.65	21.68	14.84	35.75	27.85	21.59	32.48	29.97	29.52
30	40.67	28.33	26.50	20.33	31.42		31.90	23.32	33.05	24.38	30.26	33.05	34.11	36.33	45.00	43.65	27.18	21.30	35.17	48.28	18.41	25.15	21.88	22.55	21.59	14.84	35.75	27.56	21.68	31.90	29.49	29.50
31	40.38	28.14	26.50	20.24	31.13		31.90	23.51	33.05	24.57	30.26	32.76	34.11	36.33	45.00	43.65	27.27	21.30	35.46	47.99	18.70	25.34	22.07	22.36	21.39	14.84	35.75	27.27	21.88	31.42	29.20	29.46
Apr 1	40.09	27.85	26.50	20.24	31.13		31.90	23.51	33.05	24.57	29.97	33.05	34.11	36.33	35.46	37.39	27.56	21.30	35.75	47.80	19.27	25.54	22.36	22.07	21.01	14.84	35.75	27.56	21.88	31.13	28.33	28.91
2	40.09	27.56	26.50	20.24	31.13		31.90	23.61	33.25	24.57	29.97	33.25	34.11	36.33	35.46	37.39	27.85	21.30	36.81	47.51	19.76	25.63	22.55	21.88	20.72	15.03	35.75	27.56	21.88	31.13	28.14	28.96
3	39.80	27.27	26.79	20.24	31.13		31.90	23.71	33.25	25.15	29.97	33.25	34.11	36.33	35.46	37.39	28.14	21.30	36.52	47.80	20.24	25.92	22.65	21.88	20.72	15.13	35.75	27.85	22.07	31.42	28.14	29.04
4	39.61	26.98	26.79		31.13		31.90	23.80	33.25	25.34	29.97	33.54	33.82	36.33	35.46	37.39	28.33	21.30	38.45	48.28	20.72	26.21	22.74	21.88	20.72	15.13	35.46	27.85	22.36	32.19	28.14	29.49
5	39.32	26.79	26.98		31.13		31.90	23.90	33.25	25.63	29.97	33.54	33.82	36.33	35.46	37.39	28.62	21.30	38.45	48.57	21.30	26.50	22.94	21.88	20.91	15.23	35.46	27.85	22.84	32.76	28.33	29.60
6	39.32	26.50	26.98		31.42		31.90	24.00	33.54	25.92	29.97	33.82	33.82	36.33	35.46	37.39	28.62	21.59	38.45	47.99	21.88	26.79	23.22	21.88	21.10	15.32	35.46	27.85	23.51	33.25	28.62	29.72
7	39.03	26.21	27.27		31.42		31.90	24.19	33.82	26.21	29.97	33.82	33.82	36.33	35.46	37.39	28.91	21.59	38.74	48.57	22.36	27.27	23.51	21.88	21.39	15.32	35.46	27.85	23.71	33.25	29.20	29.86
8	39.03	25.92	27.27		31.61		31.90	24.28	34.11	26.50	29.97	34.11	33.82	36.33	35.46	37.39	28.91	21.88	37.39	48.28	23.03	28.14	23.71	21.88	21.68	15.32	35.46	27.85	23.51	33.25	29.78	29.92
9	38.74	25.63	27.27		31.90		31.90	24.38	34.40	26.79	29.97	34.40	33.54	36.33	35.46	37.39	29.20	22.07	40.09	47.22	23.90	28.62	24.00	22.07	21.88	15.42	35.46	27.85	23.32	33.25	29.97	30.08
10	38.74	25.15	27.56		32.19		31.90	24.57	34.69	27.27	30.26	34.69	33.54	36.33	35.46	37.39	29.20	22.65	40.38	45.58	24.57	29.20	24.28	22.36	21.88	15.52	35.46	27.85	23.51	32.76	29.97	30.17
11	38.45	27.85	27.85		32.48		31.61	24.67	34.88	27.56	30.55	34.88	33.54	36.33	35.46	37.39	29.49	23.22	39.32	43.65	25.15	29.78	24.67	22.36	21.88	15.52	35.46	27.85	24.00	32.48	29.97	30.29
12	38.45	30.55	27.85		33.05		31.61	24.96	35.17	28.33	30.55	35.17	33.82	36.33	35.46	37.39	29.78	23.71	39.32	43.94	25.92	30.55	25.25	22.36	21.88	15.80	35.46	27.85	24.28	31.90	29.78	30.57
13	38.45	33.25	28.14		33.54		31.61	25.15	35.17	29.49	30.84	35.46	33.82	36.33	35.46	37.39	29.97	24.28	39.61	46.35	26.79	31.13	25.83	22.65	21.88	16.09	35.46	27.85	24.00	30.84	29.78	30.92
14	38.45	36.33	28.14		34.11		31.61	25.25	35.46	30.84	30.84	35.75	33.82	36.33	35.46	37.39	29.97	24.86	39.80	49.15	27.56	31.90	26.31	22.65	21.88	16.38	35.46	27.85	23.61	30.26	29.78	31.28
15	38.74	40.09	28.33		34.69		31.61	25.63	35.75	33.05	30.84	36.33	33.82	36.33	35.46	37.39	29.97	26.21	40.38	51.85	28.62	32.76	26.98	22.65	21.88	16.67	35.46	28.14	23.22	29.97	29.97	31.82
16	39.61	43.65	28.33		35.46		31.61	25.83	35.75	35.46	31.13	37.10	33.82	36.33	35.46	37.39	30.26	27.27	42.31	52.42	29.78	33.54	27.27	22.65	21.88	17.06	35.75	28.62	23.03	29.97	29.97	32.37
17	40.38	47.99	28.33		36.33		31.61	26.02	36.04	38.45	31.13	38.45	34.11	36.33	35.46	37.39	30.55	29.49	43.08	54.54	31.42	34.40	28.33	22.65	22.07	17.44	36.04	28.91	23.22	29.97	30.26	33.12
18	40.96	52.42	28.33		37.10		31.90	26.31	36.33	42.31	31.13	40.96	34.11	36.33	35.46	37.39	30.55	32.48	41.73	57.34	32.76	35.46	28.91	22.65	22.36	17.83	36.33	29.49	23.32	29.97	30.84	33.90
19	41.73	57.53	28.33		38.45		31.90	26.79	36.52	46.35	31.13	45.00	34.11	36.33	35.46	37.39	30.84	34.40	41.44	56.76	34.11	36.33	29.97	22.36	22.65	18.31	36.52	29.78	23.71	30.26	31.90	34.70
20	43.08	63.02	28.62		39.80		32.19	26.98	36.81	51.85	31.42	50.50	34.11	36.33	35.46	37.39	30.84	39.80	41.25	58.11	35.46	37.39	30.84	22.26	23.22	18.79	36.81	30.26	24.57	31.13	32.19	35.88
21	44.71	69.00	28.62		41.44		32.48	27.27	37.10	60.04	31.42	60.04	34.11	36.33	35.46	34.88	31.13	40.96	41.44	61.39	37.39	38.45	32.19	22.26	24.00	19.37	36.81	31.42	25.34	31.90	32.76	37.23
22	47.51	75.55	28.62		43.37		32.76	27.85	37.68	68.23	31.42	68.23	34.40	36.33	35.46	34.11	31.42	43.65	42.02	62.73	40.38	40.09	33.25	22.07	25.34	20.04	36.81	31.90	25.63	32.48	33.25	38.71
23	50.21	82.68	28.91		46.16		33.82	28.14	38.16	76.42	31.42	77.77	34.40	36.33	35.46	34.11	31.61	49.15	43.08	64.95	43.08	41.25	34.40	22.36	27.27	20.91	36.81	32.48	25.63	33.54	34.69	40.52
24	53.19	91.16	29.20		48.86		34.11	28.33	38.45	84.61	31.61	88.18	34.40	36.33	35.46	34.11	32.19	54.54	43.37	66.59	46.93	42.88	35.75	22.36	29.97	21.88	37.10	33.25	25.83	35.75	35.75	42.49
25	58.69	99.26	29.49		51.85		34.69	28.62	39.03	92.80	31.42	102.15	34.40	36.33	35.46	34.11	32.48	60.04	43.94	67.36	49.92	44.23	37.68	22.94	34.11	22.94	37.39	34.88	25.92	38.16	37.39	44.75
26	72.28	108.89	29.78		57.34		35.46	28.91	39.61	105.04	31.42	114.68	34.40	36.33	35.46	34.11	32.76	64.08	44.71	70.93	54.35	46.16	38.74	23.03	40.96	24.00	37.68	36.04	26.21	40.96	38.45	47.68
27	85.96	120.46	30.84		62.73		36.52	29.20	40.09	117.57	31.42	131.06	34.69	36.33	35.46	34.11	33.54	70.93	45.58	79.12	60.04	47.99	40.67	23.22	46.35	25.83	38.16	38.16	26.50	46.35	40.67	51.36
28	99.26	131.06	32.76		68.23		37.39	29.49	40.67	133.95	31.42	153.22	34.69	36.33	35.46	34.11	34.11	81.91	46.16	84.61	64.08	50.50	42.31	23.51	54.54	27.27	38.45	40.38	27.56	51.85	43.65	55.48
29	113.71	144.55	35.46		75.07		38.16	29.97	41.25	147.44	31.42	177.32	34.88	36.33	35.46	34.11	35.46	91.45	47.22	90.01	71.79	53.48	44.52	23.71	68.23	29.97	39.03	43.08	28.14	60.04	49.44	60.37
30	127.20	159.01	40.67		83.26		40.38	31.13	41.73	166.72	31.42	199.48	35.17	36.33	35.46	34.11	36.81	101.19	49.92	104.08	79.12	55.70	47.51	24.28	81.91	32.48	40.09	45.87	29.49	68.23	54.54	65.97
May 1	154.19	161.90	44.52		92.80	87.31	42.31	32.48	42.31	177.32	31.61	219.72	35.75	36.33	36.33	34.11	38.16	114.68	63.89	114.68	87.31	59.17	50.21	24.57	95.50	35.46	40.96	49.15	30.55	81.91	108.89	74.14
2	167.68	169.61	51.27		106.00	94.15	44.23	33.82	43.08	191.77	31.61	240.92	37.10	36.33	38.16	34.11	40.38	128.17	79.41	125.28	92.80	62.73	53.77	25.15	114.68	40.09	43.37	57.34	33.25	104.08	207.19	84.25
3	181.17	176.35	58.69		120.46	102.15	46.16	34.88	45.00	206.23	31.90	275.61	39.03	36.33	40.96	34.11	42.31	136.84	93.57	147.44	105.04	65.53	57.82	25.92	136.84	43.94	46.35	95.50	38.45	136.84	354.63	98.54
4	194.66	183.10	70.93		133.95	111.79	49.63	37.39	49.15	215.86	31.90	346.92	41.25	40.96	46.35	34.11	45.00	153.22	107.93	163.82	120.46	72.28	62.73	26.79	163.82	49.63	57.34	409.56	46.35	169.61	403.78	121.34
5	209.12	189.84	90.01		153.22	122.39	55.12	39.80	55.12	253.45	31.90	447.14	46.35	49.15	54.54	34.11	47.80	174.42	114.68	174.42	135.88	77.77	66.88	27.56	196.59	55.89	81.91	1368.41	62.73	218.75	409.56	168.15
6	219.72	199.48	108.89		174.42	138.77	61.39	42.88	64.08	226.46	32.76	499.18	54.35	57.34	70.93	35.46	51.85	218.75	142.62	190.81	171.53	85.67	75.07	29.49	229.35	64.08	92.80	1570.78	81.91	265.01	414.38	189.01
7	230.32	208.15	131.06		207.19	153.22	68.23	46.64	75.07	210.08	33.54	767.08	62.25	65.53	95.50	35.46	58.69	245.74	167.68	218.75	185.02	94.15	81.91	30.55	262.12	73.72	169.61	1484.05	136.84	297.77	436.54	211.08
8	238.99	218.75	158.04		248.63	173.46	76.42	52.42	87.31	229.35	35.46	826.83	72.28	77.19	147.44	35.46	65.53	286.21	203.33	237.06	188.88	105.04	95.50	32.76	291.99	85.96	235.14	1310.59	272.72	332.47	445.22	228.88
9	248.63	229.35	187.92		289.10	176.35	87.31	62.73	101.19	255.37	38.74	1011.85	88.66	90.01	207.19	35.46	70.93	314.16	249.59	265.01	199.48	120.46	107.93	35.75	321.87	98.29	314.16	1040.76	491.47	360.41	445.22	251.51
10	252.48	240.92	215.86		338.25	209.12	99.26	79.12	114.68	330.54	43.65	1050.40	104.08	106.00	272.72	35.46	84.61	335.36	291.99	321.87	220.68	137.80	128.17	40.38	381.61	120.46	463.53	786.36	682.28	379.69	442.32	276.99
11	271.76	252.48	239.95		384.50	239.95	114.68	98.29	131.06	425.94	51.85	1127.49	120.46	124.31	365.23	35.46	92.80	371.01	302.59	384.50	238.03	169.61	155.15	47.80	472.20	141.66	600.37	636.02	709.26	354.63	439.43	303.28
12	302.59	265.97	262.12		466.42	291.99	136.84	190.81	151.30	455.82	65.53	1300.96	134.91	146.48	452.93	35.46	104.08	491.47	346.92	463.53	250.55	207.19	263.08	55.89	504.96	167.68	819.12	613.86	627.35	338.25	447.14	345.37
13	330.54	278.50	278.50		466.42	308.37	163.82	341.14	180.21	458.71	90.01	1272.05	163.82	170.57	494.36	35.46	114.68	788.28	390.29	557.00	297.77	417.27	384.50	81.91	578.20	202.37	1291.32	676.50	600.37	314.16	475.09	406.74
14	376.80	291.99	327.65		586.88	335.36	190.81	436.54	207.19	430.76	117.57	816.23	205.26	196.59	494.36	35.46	128.17	1069.67	758.41	447.14	368.12	548.33	387.40	125.28	613.86	241.88	1426.23	692.88	581.09	302.59	624.46	445.50
15	376.80	308.37	360.41		919.34	357.52	233.21	488.58	245.74	439.43	222.61	682.28	226.46	235.14	570.49	35.46	136.84	1117.86	755.52	488.58	436.54	685.17	636.02	218.75	638.91	270.79	1435.87	633.13	589.77	330.54	721.79	493.26
16	365.23	321.87	387.40		1098.58	387.40	278.50	491.47	283.32	433.65	373.90	665.90	275.61	272.72	688.06	36.81	153.22	1040.76	597.48	403.78	442.32	777.68	819.12	409.56	826.83	318.98	1281.68	610.97	603.26	351.74	803.70	526.72
17	529.06	338.25	436.54		1108.22	469.31	316.08	537.73	341.14	575.31	671.68	657.22	316.08	321.87	761.30	37.68	169.61	898.14	504.96	403.78	423.05	728.54	870.19	682.28	1175.68	318.98	1117.86	586.88	619.64	376.80	856.70	571.68
18	633.13	357.52	469.31		1541.87	450.03	463.53	633.13	425.94	640.84	944.40	529.06	436.54	376.80	794.06	38.74	185.99	892.36	436.54	414.38	414.38	676.50	992.58	1088.95	1512.96	403.78	1011.85	578.20	722.75	400.89	930.91	646.60
19	701.55	376.80	494.36		1676.79	469.31	704.44	725.64	557.00	613.86	1079.31	445.22	657.22	436.54	875.98	40.96	202.37	895.25	381.61	502.07	439.43	679.39	1050.40	1088.95	1638.24	455.82	992.58	591.69	898.14	445.22	973.31	702.98
20	761.30	396.07	524.24		1609.33	496.29	835.50	769.97	1272.05	537.73	1512.96	393.18	878.87	515.56	1021.49	43.65	223.57	982.94	321.87	753.59	466.42	704.44	1243.14	1060.04	1464.78	619.64	1011.85	633.13	1137.13	477.98	960.78	787.65
21	794.06	414.38	554.11		1618.97	731.43	753.59	889.47	1792.43	613.86	1715.33	381.61	1108.22	600.37	1223.86	46.35	249.59	867.30	344.03	1137.13	433.65	739.14	1387.69	1040.76	1223.86	856.70	992.58	695.77	1368.41	485.69	927.05	866.25
22	823.94	433.65	583.98		1696.06	859.59	709.26	1156.41	2197.17	737.21	2081.53	423.05	1185.32	704.44	1474.42	54.54	327.65	704.44	384.50	1474.42	400.89	843.21	1522.60	992.58	1117.86	1050.40	973.31	774.79	1512.96	491.47	914.52	953.54
23	859.59	455.82	608.08		1744.24	930.91	698.66	1464.78	2611.55	960.78	2351.36	531.95	1146.77	819.12	1705.70	60.04	423.05	591.69	466.42	1753.88	436.54	973.31	1503.33	928.02	1079.31	1194.95	1011.85	895.25	1474.42	496.29	928.98	1036.89
24	960.78	477.98	622.53		1647.88	1117.86	698.66	1618.97	3189.75	1252.77	2534.45	638.91	1098.58	955.00	2071.89	65.53	624.46	551.22	606.15	1609.33	558.93	1137.13	1503.33	955.00	973.31	1262.41	1098.58	982.94	1416.60	496.29	982.94	1123.67
25	982.94	499.18	633.13		1551.51	1233.50	725.64	1455.14	3411.39	1435.87	2216.44	771.90	1329.87	1137.13	2341.72	79.12	796.96	521.35	665.90	1416.60	819.12	1252.77	1050.40	747.81	900.07	1349.14	1127.49	1098.58	1310.59	510.75	1108.22	1149.34

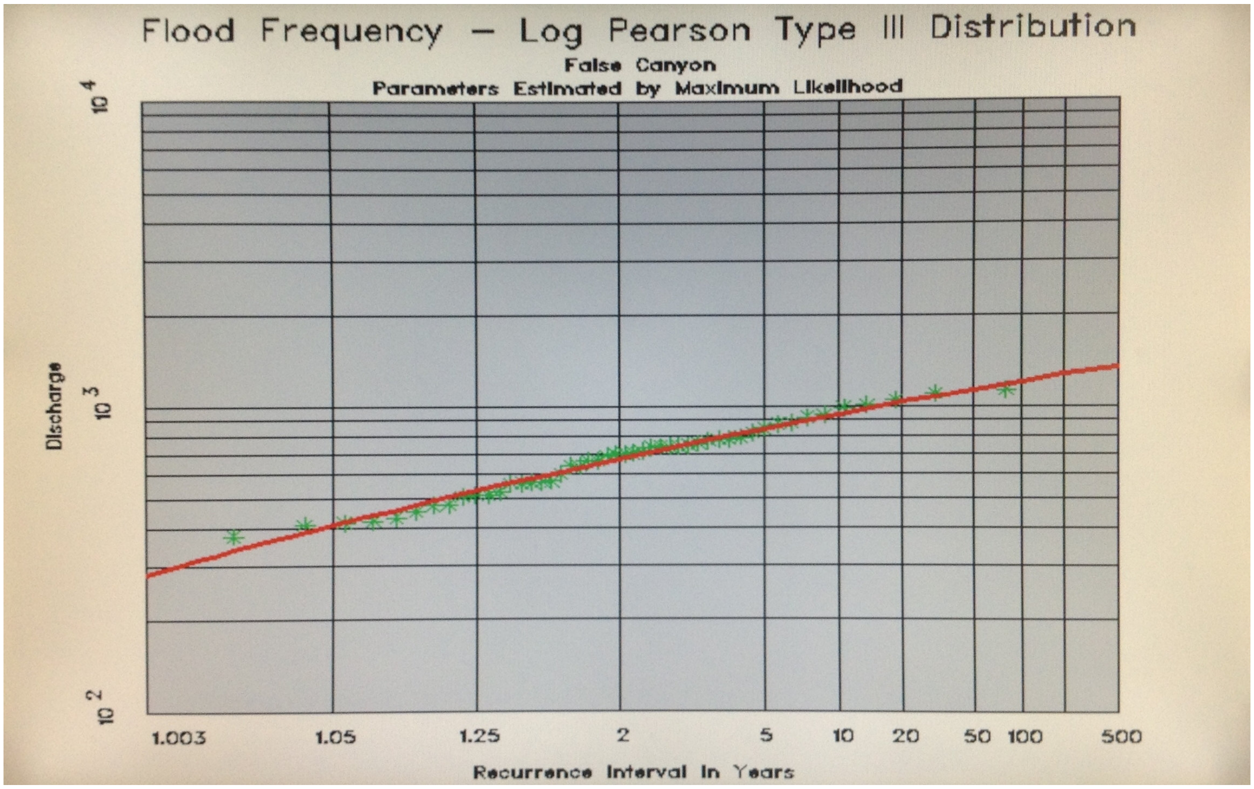
25	477.98	233.21	390.29	321.87	504.96	603.26	949.22	485.69	439.43	373.90	420.16	578.20	557.00	477.98	491.47	802.74	472.20	425.94	616.75	379.69	472.20	586.88	518.45	409.56	512.67	671.68	445.22	354.63	376.80	368.12	420.16	488.33
26	452.93	241.88	387.40	305.48	518.45	543.51	900.07	499.18	420.16	371.01	417.27	543.51	534.84	510.75	463.53	780.57	447.14	425.94	581.09	381.61	450.03	561.82	502.07	400.89	543.51	673.61	428.83	338.25	363.30	365.23	398.00	475.87
27	442.32	289.10	393.18	302.59	518.45	529.06	850.92	507.85	403.78	368.12	420.16	521.35	534.84	557.00	447.14	764.19	447.14	442.32	551.22	368.12	430.76	534.84	502.07	430.76	610.97	643.73	414.38	335.36	348.85	354.63	378.72	472.39
28	425.94	332.47	384.50	316.08	504.96	521.35	823.94	524.24	390.29	365.23	425.94	491.47	527.13	545.44	430.76	794.06	477.98	425.94	540.62	351.74	420.16	512.67	499.18	447.14	682.28	597.48	403.78	324.76	332.47	338.25	367.16	468.56
29	414.38	344.03	376.80	384.50	445.22	685.17	802.74	537.73	379.69	360.41	414.38	458.71	512.67	529.06	417.27	835.50	515.56	396.07	606.15	332.47	425.94	491.47	475.09	461.60	777.68	561.82	393.18	314.16	327.65	321.87	363.30	472.98
30	403.78	406.67	373.90	461.60	447.14	688.06	747.81	534.84	365.23	351.74	403.78	447.14	518.45	540.62	409.56	865.38	627.35	365.23	610.97	316.08	466.42	472.20	458.71	502.07	850.92	537.73	387.40	305.48	330.54	308.37	356.56	479.41
31	398.00	381.61	368.12	458.71	461.60	665.90	689.99	529.06	354.63	348.85	387.40	447.14	488.58	540.62	387.40	848.99	671.68	344.03	578.20	302.59	504.96	439.43	430.76	515.56	865.38	527.13	381.61	297.77	321.87	297.77	349.81	470.49
Sep 1	393.18	371.01	363.30	341.14	469.31	646.62	630.24	531.95	346.92	348.85	371.01	447.14	469.31	610.97	363.30	807.56	624.46	327.65	554.11	294.88	488.58	472.20	409.56	496.29	837.43	531.95	368.12	291.99	308.37	289.10	343.07	456.44
2	384.50	365.23	354.63	384.50	472.20	581.09	616.75	537.73	338.25	346.92	360.41	450.03	450.03	777.68	346.92	802.74	594.58	318.98	561.82	297.77	472.20	570.49	393.18	472.20	794.06	507.85	354.63	289.10	291.99	283.32	344.03	455.35
3	381.61	354.63	351.74	458.71	475.09	534.84	581.09	554.11	327.65	338.25	346.92	450.03	430.76	767.08	335.36	771.90	548.33	314.16	622.53	297.77	450.03	586.88	381.61	452.93	753.59	477.98	344.03	283.32	281.39	278.50	352.70	447.92
4	379.69	344.03	341.14	583.98	479.91	531.95	551.22	540.62	327.65	346.92	344.03	452.93	412.45	685.17	330.54	737.21	512.67	305.48	744.92	291.99	433.65	564.71	373.90	452.93	706.37	455.82	338.25	275.61	267.90	275.61	346.92	443.10
5	376.80	344.03	338.25	586.88	479.91	445.22	534.84	504.96	316.08	357.52	338.25	455.82	398.00	624.46	321.87	698.66	479.91	308.37	780.57	281.39	433.65	545.44	403.78	515.56	657.22	439.43	335.36	269.83	258.26	272.72	331.50	433.37
6	371.01	365.23	330.54	524.24	458.71	428.83	512.67	472.20	308.37	371.01	332.47	461.60	384.50	578.20	321.87	685.17	458.71	316.08	761.30	272.72	458.71	543.51	463.53	527.13	608.08	420.16	332.47	265.01	250.55	267.90	321.87	424.98
7	360.41	412.45	311.27	543.51	461.60	423.05	479.91	452.93	297.77	381.61	324.76	479.91	373.90	540.62	330.54	671.68	450.03	338.25	742.03	268.86	472.20	624.46	472.20	499.18	578.20	396.07	335.36	260.19	240.92	259.23	318.98	422.65
8	357.52	428.83	291.99	543.51	466.42	409.56	488.58	442.32	289.10	390.29	318.98	540.62	363.30	504.96	327.65	643.73	439.43	371.01	695.77	264.05	472.20	624.46	472.20	502.07	564.71	371.01	335.36	256.34	234.17	251.52	311.27	418.48
9	351.74	428.83	289.10	545.44	447.14	396.07	466.42	396.07	278.50	398.00	314.16	554.11	354.63	479.91	324.76	624.46	452.93	373.90	643.73	257.30	466.42	578.20	455.82	502.07	578.20	351.74	348.85	253.45	228.39	245.74	301.63	409.28
10	351.74	409.56	286.21	447.14	452.93	381.61	439.43	371.01	269.83	400.89	302.59	573.38	348.85	458.71	324.76	600.37	524.24	357.52	603.26	265.97	466.42	545.44	445.22	491.47	630.24	330.54	430.76	252.48	221.64	239.95	292.96	403.78
11	338.25	398.00	289.10	414.38	458.71	371.01	393.18	371.01	261.15	414.38	299.70	570.49	341.14	445.22	384.50	573.38	567.60	341.14	581.09	281.39	466.42	510.75	428.83	482.80	636.02	314.16	488.58	259.23	217.79	238.03	281.39	400.61
12	324.76	373.90	286.21	406.67	450.03	360.41	384.50	360.41	252.48	420.16	291.99	570.49	335.36	414.38	455.82	551.22	524.24	327.65	624.46	302.59	515.56	475.09	403.78	466.42	624.46	299.70	491.47	267.90	216.83	239.95	273.68	396.54
13	318.98	360.41	289.10	398.00	447.14	354.63	381.61	348.85	243.81	425.94	283.32	578.20	327.65	403.78	488.58	521.35	482.80	314.16	660.11	289.10	627.35	442.32	387.40	452.93	591.69	289.10	466.42	275.61	214.90	238.03	265.97	392.56
14	302.59	346.92	289.10	403.78	452.93	357.52	373.90	341.14	235.14	436.54	275.61	564.71	318.98	376.80	557.00	502.07	450.03	299.70	627.35	286.21	655.30	420.16	373.90	447.14	561.82	283.32	458.71	281.39	224.54	231.28	261.15	386.99
15	302.59	338.25	291.99	368.12	447.14	360.41	363.30	335.36	232.24	452.93	269.83	561.82	311.27	360.41	619.64	482.80	423.05	291.99	597.48	286.21	622.53	414.38	360.41	482.80	529.06	283.32	527.13	294.88	258.26	222.61	261.15	385.59
16	299.70	327.65	291.99	376.80	436.54	354.63	373.90	327.65	231.28	466.42	267.90	671.68	305.48	354.63	630.24	475.09	396.07	297.77	570.49	283.32	578.20	420.16	346.92	610.97	499.18	302.59	616.75	299.70	289.10	216.83	291.99	393.92
17	297.77	316.08	294.88	414.38	430.76	338.25	381.61	316.08	230.32	475.09	275.61	652.41	299.70	346.92	561.82	469.31	373.90	318.98	575.31	270.79	545.44	436.54	338.25	663.01	477.98	318.98	603.26	314.16	297.77	213.93	380.65	394.51
18	294.88	311.27	294.88	494.36	423.05	330.54	398.00	324.76	231.28	461.60	281.39	636.02	299.70	344.03	507.85	479.91	357.52	335.36	712.15	267.90	496.29	423.05	332.47	622.53	458.71	346.92	583.98	344.03	291.99	212.01	427.87	397.62
19	294.88	299.70	302.59	414.38	414.38	321.87	400.89	330.54	231.28	455.82	289.10	619.64	299.70	327.65	472.20	482.80	344.03	341.14	755.52	269.83	466.42	409.56	357.52	573.38	442.32	363.30	578.20	346.92	291.99	211.04	427.87	391.50
20	291.99	289.10	308.37	485.69	373.90	321.87	403.78	332.47	232.24	466.42	297.77	567.60	311.27	332.47	450.03	482.80	341.14	341.14	695.77	278.50	439.43	417.27	428.83	529.06	425.94	360.41	558.93	338.25	297.77	212.01	432.69	388.55
21	540.62	281.39	316.08	447.14	387.40	327.65	403.78	360.41	224.54	461.60	299.70	524.24	324.76	330.54	428.83	479.91	338.25	335.36	676.50	281.39	420.16	420.16	428.83	491.47	409.56	341.14	570.49	330.54	305.48	212.01	441.36	391.65
22	992.58	275.61	311.27	485.69	384.50	318.98	412.45	387.40	226.46	463.53	308.37	504.96	341.14	324.76	409.56	463.53	344.03	332.47	627.35	272.72	387.40	439.43	406.67	455.82	396.07	321.87	660.11	324.76	305.48	214.90	416.31	403.75
23	992.58	281.39	305.48	494.36	368.12	316.08	387.40	409.56	231.28	477.98	316.08	485.69	335.36	324.76	414.38	458.71	354.63	321.87	583.98	263.08	365.23	461.60	393.18	423.05	379.69	308.37	679.39	327.65	299.70	219.72	382.58	398.80
24	992.58	299.70	302.59	504.96	365.23	316.08	365.23	472.20	235.14	463.53	327.65	447.14	327.65	316.08	430.76	442.32	344.03	302.59	554.11	256.34	348.85	466.42	384.50	387.40	379.69	294.88	640.84	346.92	305.48	218.75	370.05	393.86
25	982.94	360.41	299.70	507.85	344.03	321.87	354.63	475.09	238.99	450.03	327.65	436.54	338.25	311.27	442.32	428.83	332.47	286.21	518.45	253.45	338.25	433.65	384.50	354.63	384.50	286.21	600.37	348.85	330.54	212.97	359.45	388.55
26	973.31	436.54	297.77	518.45	344.03	327.65	351.74	461.60	245.74	445.22	327.65	425.94	360.41	299.70	425.94	417.27	338.25	272.72	494.36	250.55	316.08	396.07	373.90	330.54	384.50	283.32	567.60	344.03	341.14	207.19	356.56	384.38
27	992.58	430.76	297.77	591.69	354.63	351.74	371.01	436.54	248.63	442.32	327.65	417.27	360.41	286.21	414.38	400.89	379.69	265.97	472.20	244.77	302.59	371.01	363.30	299.70	373.90	316.08	540.62	344.03	344.03	204.30	354.63	383.91
28	1002.22	412.45	283.32	633.13	351.74	365.23	387.40	379.69	270.79	433.65	327.65	393.18	346.92	335.36	409.56	398.00	390.29	264.05	450.03	238.99	272.72	371.01	351.74	283.32	360.41	365.23	527.13	344.03	346.92	204.30	347.89	382.20
29	1002.22	387.40	252.48	638.91	348.85	357.52	381.61	348.85	275.61	428.83	330.54	387.40	330.54	409.56	403.78	387.40	387.40	265.01	430.76	234.17	250.55	376.80	335.36	272.72	344.03	357.52	518.45	344.03	335.36	205.26	335.36	376.27
30	1031.13	371.01	237.06	679.39	341.14	341.14	363.30	308.37	311.27	425.94	332.47	384.50	330.54	417.27	396.07	376.80	373.90	278.50	409.56	227.43	244.77	406.67	338.25	271.76	330.54	299.70	496.29	330.54	321.87	206.23	326.68	371.29
Oct 1	1031.13	354.63	224.54	679.39	314.16	311.27	354.63	311.27	330.54	423.05	338.25	387.40	318.98	396.07	390.29	365.23	371.01	275.61	409.56	238.99	255.37	472.20	299.70	275.61	321.87	254.41	479.91	436.54	314.16	214.90	321.87	370.08
2	1050.40	338.25	220.68	673.61	299.70	305.48	324.76	305.48	332.47	428.83	341.14	393.18	311.27	376.80	387.40	354.63	348.85	262.12	379.69	241.88	252.48	502.07	291.99	278.50	305.48	225.50	479.91	430.76	311.27	244.77	314.16	364.95
3	1050.40	327.65	220.68	673.61	289.10	302.59	314.16	294.88	330.54	436.54	346.92	414.38	308.37	371.01	403.78	346.92	332.47	258.26	365.23	234.17	247.66	485.69	289.10	281.39	289.10	174.42	548.33	393.18	314.16	272.72	306.45	362.06
4	1050.40	316.08	220.68	679.39	283.32	278.50	283.32	291.99	330.54	445.22	348.85	420.16	316.08	354.63	436.54	335.36	330.54	254.41	351.74	223.57	237.06	475.09	286.21	281.39	278.50	163.82	640.84	363.30	305.48	275.61	304.52	360.10
5	1031.13	289.10	219.72	452.93	260.19	256.34	283.32	286.21	327.65	450.03	354.63	417.27	330.54	344.03	439.43	324.76	318.98	251.52	341.14	212.01	229.35	447.14	281.39	266.94	272.72	156.11	630.24	338.25	281.39	264.05	301.63	343.88
6	1002.22	283.32	220.68	455.82	253.45	249.59	289.10	268.86	330.54	463.53	357.52	400.89	357.52	330.54	425.94	314.16	311.27	254.41	321.87	204.30	231.28	406.67	275.61	247.66	265.01	153.22	608.08	318.98	247.66	249.59	311.27	335.82
7	992.58	278.50	212.97	475.09	250.55	239.95	299.70	258.26	332.47	469.31	327.65	384.50	360.41	318.98	403.78	305.48	308.37	265.01	294.88	201.41	261.15	371.01	268.86	228.39	257.30	155.15	586.88	305.48	225.50	237.06	338.25	329.51
8	963.67	275.61	215.86	491.47	247.66	235.14	294.88	250.55	330.54	475.09	269.83	368.12	332.47	311.27	398.00	297.77	308.37	266.94	263.08	191.77	269.83	341.14	261.15	219.72	251.52	160.93	554.11	291.99	216.83	234.17	366.19	321.15
9	835.50	267.90	212.97	466.42	243.81	232.24	286.21	239.95	330.54	472.20	251.52	348.85	308.37	299.70	381.61	291.99	299.70	254.41	262.12	190.81	259.23	327.65	248.63	199.48	245.74	167.68	521.35	278.50	209.12	244.77	366.19	307.91
10	816.23	249.59	188.88	461.60	246.70	234.17	283.32	229.35	327.65	455.82	206.23	332.47	265.01	291.99	373.90	281.39	308.37	244.77	272.72	186.95	246.70	314.16	238.99	144.55	229.35	171.53	494.36	272.72	195.63	308.37	344.03	297.34
11	272.72	238.03	167.68	439.43	238.03	226.46	275.61	216.83	324.76	452.93	170.57	314.16	239.95	286.21	365.23	289.10	311.27	238.99	272.72	185.99	243.81	318.98	243.81	132.02	219.72	173.46	455.82	261.15	183.10	393.18	335.36	273.78
12	268.86	233.21	164.79	423.05	238.03	248.63	265.97	202.37	324.76	436.54	135.88	311.27	231.28	275.61	363.30	308.37	294.88	232.24	267.90	171.53	238.99	321.87	229.35	125.28	213.93	171.53	420.16	246.70	176.35	420.16	363.30	268.58
13	257.30	225.50	161.90	412.45	238.99	240.92	260.19	190.81	321.87	430.76	155.15	302.59	218.75	265.01	365.23	327.65	299.70	224.54	262.12	159.97	227.43	314.16	222.61	120.46	214.90	170.57	396.07	237.06	174.42	400.89	398.00	264.45
14	253.45	227.43	148.41	400.89	235.14	238.03	244.77	181.17	318.98	420.16	192.73	297.77	185.02	256.34	360.41	321.87	264.05	215.86	218.75	153.22	220.68	299.70	212.97	126.24	214.90	167.68	387.40	231.28	160.93	365.23	415.34	256.03
15	244.77	224.54	132.99	376.80	235.14	226.46	237.06	171.53	318.98	414.38	201.41	289.10	174.42	251.52	363.30	311.27	232.24	202.37	237.06	147.44	211.04	269.83	190.81	156.11	191.77	163.82	381.61	224.54	152.26	324.76	424.02	247.85
16	231.28	218.75	124.31	341.14	238.03	224.54	233.21	163.82	316.08	412.45	215.86	281.39	163.82	243.81	354.63	308.37	218.75	194.66	245.74	147.44	204.30	283.32	169.61	178.28	182.13	157.08	376.80	218.75	145.51	305.48	422.09	242.63
17	225.50	206.23	124.31	321.87	235.14	218.75	229.35	156.11	316.08	400.89	229.35	272.72	155.15	238.03	348.85	305.48	207.19	194.66	242.85	147.44	190.81	281.39	147.44	189.84	163.82	150.33	368.12	199.48	144.55	302.59	399.92	235.94
18	206.23	207.19	116.60	316.08	229.35	214.90	227.43	149.37		393.18	211.04	266.94	150.33	235.14	371.01	297.77	202.37	193.70	212.97	147.44	180.21	248.63	136.84	188.88	147.44	144.55	351.74	194.66	151.30	297.77	372.94	225.47
19	193.70	196.59	115.64	272.72	226.46	224.54	218.75	143.59		458.71	194.66	260.19	143.59	235.14	414.38	294.88	199.48	190.81	220.68	147.44	169.61	210.08	132.02	184.06	144.55	140.70	338.25	190.81	141.66	262.12	345.96	220.39
20	190.81	176.35	112.75	430.76	218.75	212.97	208.15	136.84		463.53	177.32	250.55	136.84	232.24	412.45	283.32	196.59	183.10	174.42	144.55	159.97	186.95	130.10	183.10	148.41	136.84	324.76	185.99	132.02	244.77	329.58	216.83
21	187.92	161.90	110.82	518.45	215.86	207.19	198.52	132.99		436.54	160.93	240.92	131.06	214.90	390.29	272.72	193.70	172.50	177.32	140.70	153.22	162.86	128.17	163.82	126.24	136.84	311.27	180.21	116.60	249.59	328.61	210.75

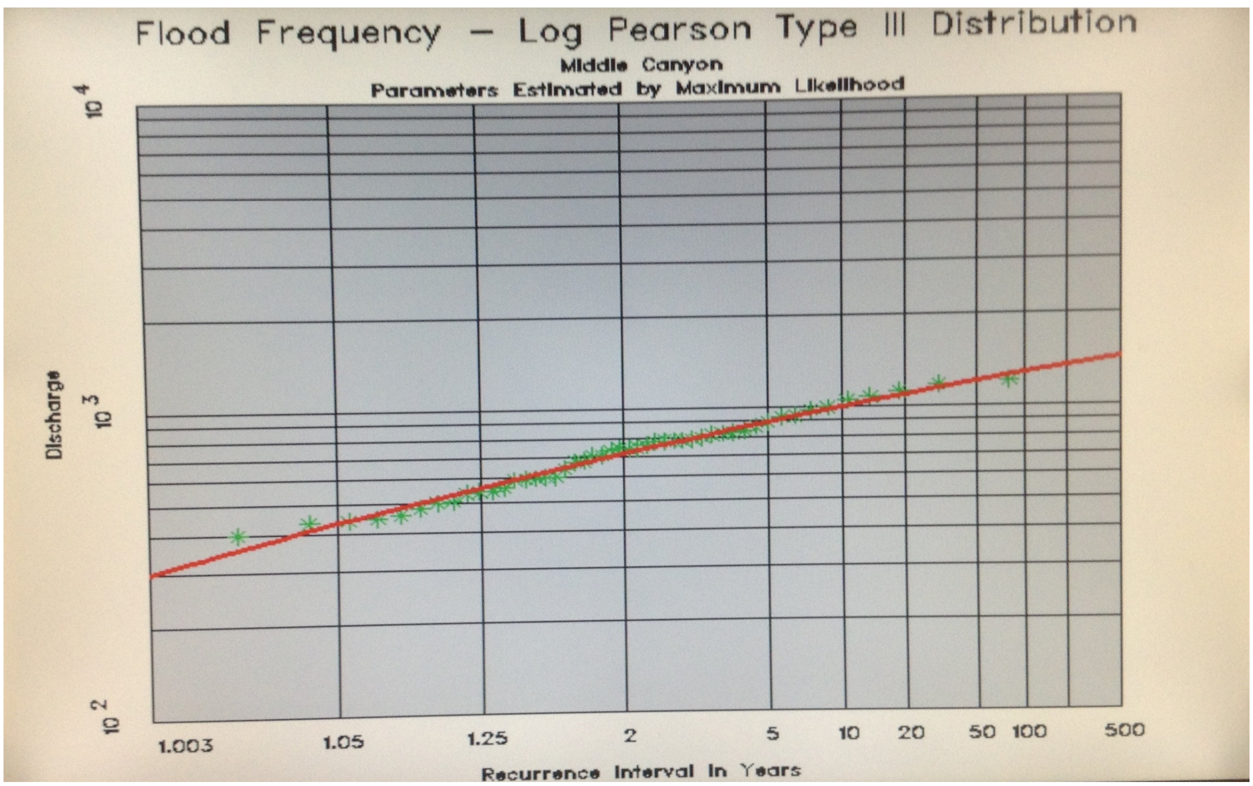
	22	185.02	163.82	106.00	485.69	212.97	212.01	188.88	129.13		390.29	150.33	210.08	127.20	199.48	354.63	262.12	192.73	140.70	182.13	136.84	147.44	158.04	127.20	138.77	112.75	136.84	297.77	172.50	101.19	254.41	317.05	199.80
	23	181.17	151.30	106.00	482.80	207.19	200.44	181.17	126.24		373.90	138.77	208.15	122.39	180.21	332.47	255.37	190.81	115.64	182.13	135.88	138.77	153.22	128.17	122.39	105.04	136.84	275.61	171.53	81.62	251.52	303.56	191.34
	24	178.28	148.41	104.08	458.71	186.95	190.81	173.46	122.39		360.41	133.95	205.26	117.57	166.72	311.27	239.95	190.81	109.86	188.88	133.95	136.84	143.59	130.10	101.19	91.45	136.84	264.05	171.53	76.71	246.70	287.17	183.60
	25	174.42	132.99	104.08	414.38	182.13	194.66	163.82	119.50		348.85	128.17	204.30	113.71	166.72	272.72	232.24	187.92	103.11	185.02	131.06	133.95	137.80	130.10	98.29	82.10	136.84	247.66	163.82	64.95	187.92	258.26	173.38
	26	170.57	133.95	101.19	400.89	182.13	194.66	155.15	116.60		335.36	124.31	201.41	109.86	169.61	239.95	223.57	185.99	101.19	179.24	128.17	132.02	132.02	130.10	95.50	80.27	133.95	235.14	158.04	57.82	181.17	251.52	168.04
	27	167.68	128.17	100.22	363.30	177.32	182.13	150.33	113.71		330.54	118.53	199.48	106.00	169.61	239.95	218.75	183.10	99.26	174.42	126.24	132.02	127.20	131.06	91.45	76.71	131.06	218.75	153.22	54.83	166.72	245.74	162.58
	28	163.82	134.91	98.29	327.65	179.24	170.57	144.55	111.79		327.65	115.64	205.26	103.11	169.61	239.95	212.97	177.32	96.37	174.42	125.28	131.06	122.39	130.10	88.66	74.49	128.17	197.55	141.66	56.76	175.39	229.35	158.47
	29	161.90	134.91	97.33	294.88	177.32	168.64	138.77	108.89		316.08	111.79	208.15	100.22	169.61	196.59	207.19	169.61	93.28	161.90	122.39	132.02	118.53	130.10	87.89	72.85	122.39	180.21	133.95	60.33	194.66	215.86	152.94
	30	158.04	129.13	95.50	311.27	172.50	159.01	133.95	106.00		324.76	108.89	216.83	97.33	169.61	196.59	199.48	158.04	91.45	165.75	120.46	133.95	112.75	127.20	87.31	71.22	118.53	169.61	125.28	56.47	193.70	202.37	150.43
	31	155.15	132.99	94.15	341.14	172.50	147.44	128.17	104.08		327.65	105.04	220.68	94.44	169.61	196.59	193.70	150.33	89.24	163.82	120.46	134.91	108.89	124.31	87.02	70.44	117.57	158.04	120.46	63.02	203.33	190.81	149.53
Nov 1		153.22	120.46	92.80	314.16	172.50		125.28	102.15		330.54	104.08	225.50	90.87	169.61	136.84	185.99	138.77	86.54	163.82	118.53	131.06	106.00	121.42	86.73	68.23	115.64	150.33	114.68	56.18	225.50	185.99	144.60
	2	150.33	111.79	91.65	321.87	169.61		122.39	99.26		330.54	102.15	229.35	88.18	169.61	136.84	180.21	133.95	83.26	150.33	114.68	122.39	103.11	119.50	85.96	67.65	114.68	141.66	109.86	39.80	209.12	180.21	140.69
	3	147.44	112.75	90.59	316.08	167.68		120.46	97.33		332.47	99.26	227.43	86.25	169.61	136.84	174.42	122.39	80.76	147.44	113.71	108.89	100.22	116.60	85.09	67.36	111.79	137.80	106.00	35.17	186.95	171.53	136.91
	4	144.55	88.18	89.53	314.16	167.68		116.60	95.50		330.54	98.29	208.15	84.61	141.66	136.84	171.53	114.68	79.12	145.51	110.82	101.19	96.37	114.68	84.61	66.88	108.89	136.84	104.08	33.05	185.02	155.15	131.89
	5	141.66	81.91	88.37	308.37	169.61		111.79	94.73		308.37	97.33	215.86	82.68	141.66	136.84	166.72	108.89	78.35	141.66	109.86	93.28	92.51	111.79	84.61	65.72	104.08	134.91	101.19	31.42	176.35	147.44	128.55
	6	138.77	77.77	87.31	253.45	172.50		108.89	92.80		283.32	95.50	218.75	80.76	141.66	136.84	160.93	106.00	78.35	136.84	111.79	87.31	88.95	107.93	84.61	65.24	100.22	133.95	99.26	30.84	171.53	141.66	123.92
	7	136.84	74.49	86.25	272.72	174.42		106.00	91.93		278.50	94.44	208.15	79.12	141.66	136.84	157.08	102.15	76.71	132.02	113.71	81.91	85.96	103.11	84.90	63.89	98.29	132.02	98.29	30.55	164.79	137.80	122.23
	8	133.95	73.43	85.09	294.88	174.42		102.15	90.01		268.86	93.09	198.52	77.48	141.66	136.84	153.22	101.19	73.72	129.13	114.68	78.83	84.32	100.22	85.96	63.02	95.50	131.06	97.33	31.42	160.93	136.84	120.96
	9	131.06	70.93	84.03	305.48	175.39		99.26	88.66		260.19	92.80	179.24	77.00	141.66	136.84	150.33	98.29	72.08	125.28	114.68	75.84	80.76	99.26	86.73	62.45	92.80	131.06	95.79	32.48	158.04	136.84	119.15
	10	130.10	68.23	82.97	308.37	177.32		97.33	87.31		252.48	92.22	175.39	65.53	130.10	136.84	145.51	95.50	70.93	120.46	109.86	73.14	78.06	98.29	87.02	62.45	88.66	131.06	94.92	33.25	157.08	135.88	116.77
	11	126.24	65.53	81.91	272.72	177.32		94.15	85.96		189.84	91.16	173.46	65.53	130.10	136.84	143.59	94.15	68.81	117.57	106.00	70.64	76.42	96.37	87.02	62.73	86.73	131.06	93.28	34.88	154.19	135.88	112.07
	12	125.28	64.37	80.76	265.97	174.42		92.22	84.61		171.53	90.30	171.53	65.53	130.10	136.84	140.70	92.80	68.81	112.75	102.15	69.00	74.49	95.21	87.02	62.25	85.96	131.06	92.22	35.75	150.33	133.95	109.93
	13	122.39	62.73	79.70	247.66	174.42		90.01	83.74		153.22	89.81	169.61	65.53	130.10	136.84	137.80	92.80	67.65	108.89	97.33	67.36	72.85	92.80	86.73	60.61	85.09	130.10	88.66	37.68	141.66	128.17	106.96
	14	120.46	61.39	78.64	186.95	177.32		87.89	82.68		133.95	88.95	166.72	65.53	130.10	136.84	134.91	91.45	66.01	105.04	93.86	66.59	71.22	89.81	85.38	60.04	84.61	130.10	84.61	38.16	133.95	125.28	102.70
	15	117.57	60.04	77.48	166.72	179.24		86.25	81.91		121.42	87.89	161.90	65.53	130.10	136.84	132.02	90.59	63.60	106.00	90.01	65.72	69.29	84.61	84.61	58.69	83.26	130.10	79.12	38.74	130.10	120.46	99.99
	16	115.64	58.69	76.42	150.33	182.13		83.55	78.35		108.89	87.31	159.97	65.53	130.10	136.84	130.10	90.01	61.96	106.00	89.81	65.72	67.94	83.26	83.26	57.34	81.91	130.10	73.72	40.09	127.20	114.68	96.13
	17	113.71	57.34	75.36	131.06	183.10		81.91	77.48		104.08	86.73	158.04	65.53	113.71	104.08	127.20	90.01	61.10	108.89	90.59	66.01	66.01	81.33	82.10	56.18	80.47	130.10	70.93	40.67	125.28	110.82	94.48
	18	111.79	56.76	74.20	122.39	183.10		79.70	76.42		98.29	85.96	155.15	65.53	113.71	104.08	124.31	90.01	60.04	109.86	88.66	66.88	64.95	79.70	81.91	55.12	79.12	128.17	68.52	40.96	125.28	107.93	93.05
	19	109.86	56.47	73.14	115.64	184.06		77.77	75.07		92.80	85.09	154.19	65.53	113.71	104.08	121.42	88.66	59.17	111.79	84.61	67.65	63.60	78.64	80.47	54.06	79.12	128.17	67.36	40.96	127.20	106.00	91.94
	20	107.93	55.41	72.08	110.82	184.06		76.71	73.72		90.01	84.32	152.26	65.53	113.71	104.08	118.53	87.89	58.40	114.68	79.70	68.23	62.45	76.71	79.41	54.06	79.12	127.20	65.53	40.67	127.20	105.04	90.88
	21	106.00	54.54	70.93	106.00	183.10		75.36	73.14		87.31	83.74	148.41	65.53	113.71	104.08	117.57	87.31	57.34	114.68	76.71	69.29	61.67	74.49	79.12	54.06	78.83	127.20	63.31	40.38	121.42	104.08	89.83
	22	104.08	54.06	69.87	104.08	181.17		73.43	71.22		84.61	82.97	147.44	65.53	98.29	104.08	114.68	87.31	55.70	114.68	76.71	70.93	60.81	72.08	77.77	54.54	78.83	125.28	62.73	40.38	125.28	104.08	88.37
	23	101.19	53.48	68.81	102.15	180.21		72.08	70.93		81.91	82.10	141.66	65.53	98.29	104.08	113.71	87.31	54.83	114.68	71.50	72.28	60.04	69.87	76.42	54.83	78.64	124.31	61.10	40.67	121.42	102.15	87.11
	24	100.22	52.91	67.65	99.26	180.21		70.64	69.58		77.77	81.91	138.77	65.53	98.29	104.08	110.82	87.31	54.54	114.68	70.44	73.72	59.46	67.65	73.72	56.18	77.00	122.39	60.04	40.96	118.53	99.26	85.98
	25	98.29	52.42	66.59	97.33	180.21		68.23	68.81		76.42	81.04	136.84	65.53	98.29	104.08	107.93	87.31	53.19	114.68	71.22	74.78	58.69	65.72	71.50	57.53	76.42	121.42	58.40	41.44	115.64	97.33	85.08
	26	96.37	51.85	65.53	95.50	177.32		67.17	68.23		73.72	80.47	133.95	65.53	98.29	104.08	106.00	85.96	52.42	108.89	72.85	75.36	57.34	63.89	70.44	58.69	76.13	120.46	57.05	43.08	115.64	92.22	83.95
	27	94.73	51.85	64.37	92.80	174.42		65.53	67.65		70.93	79.12	131.06	65.53	98.29	104.08	106.00	85.96	52.71	99.26	73.72	74.49	57.05	62.45	68.81	57.53	75.07	117.57	55.89	44.23	114.68	89.53	82.60
	28	92.80	51.56	63.31	90.01	171.53		63.89	66.59		69.58	78.83	128.17	65.53	98.29	104.08	104.08	85.38	51.56	90.87	73.72	73.43	56.47	61.96	67.94	57.34	74.49	114.68	55.12	46.35	114.68	88.66	81.41
	29	91.16	51.56	62.25	85.96	167.68		62.73	66.01		68.23	78.35	127.20	65.53	98.29	104.08	104.08	85.09	49.92	78.83	72.28	70.93	56.18	61.39	66.30	54.54	73.91	108.89	54.83	47.80	110.82	87.89	79.75
	30	89.53	51.07	61.10	83.26	166.72		61.39	65.24		66.88	77.48	124.31	65.53	98.29	104.08	102.15	84.61	49.15	76.71	69.58	68.52	55.12	61.10	65.72	52.42	73.43	106.00	54.54	47.99	107.93	87.31	78.52
Dec 1		87.89	51.07	60.33	80.47			60.33	64.37		65.53	76.71	120.46	51.85	81.91	93.09	101.19	84.61	48.28	76.71	64.95	67.36	54.06	60.81	64.95	48.86	72.28	102.15	54.35	47.80	106.00	85.96	72.65
	2	86.25	50.21	59.46	77.77			59.17	63.89		64.08	76.42	117.57	51.85	81.91	93.09	100.22	84.61	47.51	77.19	62.25	66.30	52.91	60.81	63.31	45.00	70.44	97.33	54.06	46.93	104.08	81.91	71.30
	3	84.61	49.63	58.69	75.07			58.11	63.31		63.31	76.13	113.71	51.85	81.91	93.09	99.26	85.96	46.64	79.12	61.96	66.01	51.56	60.61	63.02	44.23	68.23	91.45	52.42	46.35	104.08	77.77	70.29
	4	82.97	49.63	58.11	72.28			57.05	62.73		62.73	75.36	110.82	51.85	81.91	93.09	98.29	86.54	45.87	81.91	63.60	65.72	50.50	60.33	62.45	44.23	66.88	87.31	50.50	45.00	102.15	75.07	69.46
	5	81.62	49.63	57.34	70.93			55.89	62.25		61.39	74.78	107.93	51.85	81.91	93.09	97.33	87.31	45.29	83.26	65.53	65.24	49.15	59.75	62.25	44.23	65.53	82.68	46.35	43.94	98.29	72.28	68.47
	6	79.98	49.15	56.47	68.23			54.54	62.25		60.61	73.91	105.04	51.85	81.91	83.26	96.37	87.31	44.23	82.10	64.66	64.95	47.51	58.69	62.25	43.65	65.24	75.07	38.16	43.37	96.08	68.81	66.63
	7	78.83	49.15	55.89	66.88			53.77	60.33		60.04	73.72	102.15	51.85	81.91	83.26	95.50	88.66	43.65	81.91	61.67	64.66	46.35	57.53	61.67	43.08	64.95	71.79	35.75	43.08	95.50	68.81	65.80
	8	77.77	48.86	55.12	65.53			52.71	59.46		60.04	73.72	99.26	51.85	81.91	83.26	94.92	90.01	43.37	81.91	57.34	62.45	45.29	55.41	61.39	42.59	64.37	70.44	35.46	42.88	95.50	68.81	65.06
	9	77.00	48.28	54.35	62.73			51.85	58.69		60.04	73.14	98.29	51.85	81.91	83.26	93.86	91.45	43.08	81.91	51.85	57.34	43.65	53.48	61.39	43.08	63.60	68.81	35.75	42.88	95.21	68.23	64.18
	10	76.42	47.51	53.48	61.39			50.79	58.11		60.04	72.56	97.33	51.85	81.91	83.26	92.80	92.80	42.88	82.10	49.15	54.06	42.59	51.85	60.81	43.65	63.02	68.52	36.81	43.08	93.28	67.65	63.56
	11	75.84	46.93	52.71	60.04			49.63	58.11		59.75	71.79	95.50	51.85	81.91	83.26	92.22	92.80	42.31	84.61	47.22	50.21	41.73	51.27	60.04	43.65	61.39	68.23	37.10	43.65	91.45	67.65	62.96
	12	75.07	46.35	51.85	58.69			48.57	57.34		58.69	71.22	93.57	51.85	81.91	83.26	91.16	94.15	42.02	84.61	46.35	49.63	40.67	49.15	58.11	43.65	60.04	68.23	37.68	43.94	90.01	67.65	62.34
	13	74.20	46.35	51.07	57.34			47.51	57.34		57.82	70.93	92.22	51.85	81.91	83.26	90.01	95.50	41.73	83.26	46.35	49.44	39.80	47.22	54.54	43.37	58.11	68.23	37.97	44.23	89.81	67.65	61.75
	14	73.43	45.87	50.21	55.89			46.35	55.89		57.34	70.64	87.31	51.85	81.91	83.26	89.24	97.33	41.25	80.47	46.93	49.15	39.32	46.16	51.85	42.02	55.89	68.23	38.16	45.00	89.53	67.94	61.01
	15	72.85	45.87	49.44	54.54			45.00	55.89		57.05	70.44	86.73	51.85	81.91	83.26	88.18	98.29	40.96	77.77	47.51	49.44	38.74	45.29	49.15	41.44	54.83	68.23	38.45	45.87	89.53	68.81	60.62
	16	72.08	45.58	48.57	53.19			44.23	55.70		56.18	70.16	85.67	51.85	81.91	83.26	87.31	98.29	40.67	75.84	48.86	49.63	38.16	44.71	47.99	41.44	54.54	67.65	38.16	46.16	86.73	70.44	60.18
	17	71.50	45.29	47.80	51.85			43.65	55.12		55.89	69.58	84.61	51.85	81.91	83.26	85.96	98.29	40.96	75.84	49.44	49.63	37.97	44.52	46.93	41.73	54.06	66.30	37.97	46.35	81.91	70.16	59.65
	18	70.93	44.52	46.93	50.50			42.88	54.54		55.12	68.81	83.55	51.85	81.91	83.26	84.61	98.29	40.38	79.12	50.79	49.44	37.68	44.23	46.35	42.02	53.19	65.72	37.68	46.35	78.35	69.87	59.25
	19	70.44	44.23	46.35	49.15			42.02	54.54		54.54	68.52	82.39	51.85	81.91	83.26	84.03	97.33	39.80	81.33	51.56	48.57	37.68	43.94	46.35	42.02	52.42	65.72	37.10	46.35	76.71	69.58	58.92
	20	69.58	43.94	45.87	48.57			41.25	54.35		54.06	68.23	81.91	51.85	81.91	83.26	82.68	94.15	39.61	81.91	51.85	46.93	37.39	43.37	46.35	41.73	52.13	65.53	36.81	46.64	76.13	68.81	58.46
	21	68.81	43.65	45.29	47.80			40.38	54.06		53.19	67.94	80.27	51.85	81.91	83.26	81.91	92.80	38.74	81.91	51.27	45.87	37.39	42.88	45.87	41.25	51.85	64.37	37.39	46.64	73.72	68.52	57.89
	22	68.23	43.37	44.71	46.93			39.80	53.77		52.71	67.65	79.12	51.85	81.91	83.26	81.04	88.66	38.45	81.33	49.15	45.58	37.10	41.44	44.23	40.67	51.85	63.31	37.68	46.35	71.79	68.81	57.17
	23	67.65	43.37	44.23	45.87			39.32	53.48		52.13	66.88	78.35	51.85	81.91	83.26	79.70	81.91	37.97	79.12	46.35	45.29	37.10	40.96	43.08	39.03	51.56	63.02	37.97	46.35	71.22	68.52	56.34
	24	67.17	42.88	43.65	44.71			38.45	53.19		51.85	67.65	77.48	51.85	81.91	83.26	78.64	75.07	38.16	77.19	45.58	43.65	37.10	40.38	41.73	37.68	50.50	62.73	37.39	46.35	71.22	67.94	55.55
	25	66.30	42.59	43.08	43.65			37.68	52.91		51.27	67.17	76.42	51.85	81.91	83.26	77.19	65.53	38.16	75.55	43.94	41.73	37.10	39.80	41.25	37.10	49.63	62.25	36.52	46.35	68.81	67.65	54.52
	26	65.72	41.73	42.59	42.88			36.81	52.71		50.79	66.30	75.84	51.85	81.91	83.26	76.42	57.34	37.97	73.72	43.65	40.38	36.81	39.61	40.67	36.52	49.15	60.04	35.75	46.16	66.59	67.94	53.61
	27	65.24	40.96	42.02	42.31			36.04	52.71		50.50	65.72	74.49	51.85	81.91	83.26	75.84	50.50	37.68	72.08	43.37	39.61	36.52	39.61	39.61	36.33	47.80	57.34	35.17	45.00	65.53	67.65	52.74
	28	64.66	40.38	41.44	41.73			34.88	52.42		49.63	65.53	73.91	51.85	81.91	83.26	74.78	45.00	37.39	70.44	43.08	39.03	36.33	39.80	39.03	36.04	46.93	54.54	35.17	43.94	65.53	66.01	51.95
	29	64.08	39.61	40.96	41.44			34.40	52.42		49.44	65.24	73.43	51.85	81.91	83.26	73.72	38.16	37.39	68.81	41.44	38.74	36.04	40.09	38.74	35.17	46.64	54.06	35.46	41.73	65.53	65.53	51.26
	30	63.31	39.03	40.38	41.25			33.54	52.13		49.15	65.53	72.28	51.85	81.91	83.26	73.14	32.76	37.10	68.52	40.96	39.03	35.75	40.09	38.45	35.17	46.16	52.71	36.04	40.96	65.53	63.60	50.70
	31	62.73	38.16	39.80	40.96			32.48	51.85		48.57	64.95	71.22	51.85	81.91	83.26	72.08	27.27	36.81	68.52	40.09	39.32	35.75	39.80	38.16	35.17	43.94	51.85	37.68	40.09	65.24	62.25	50.06

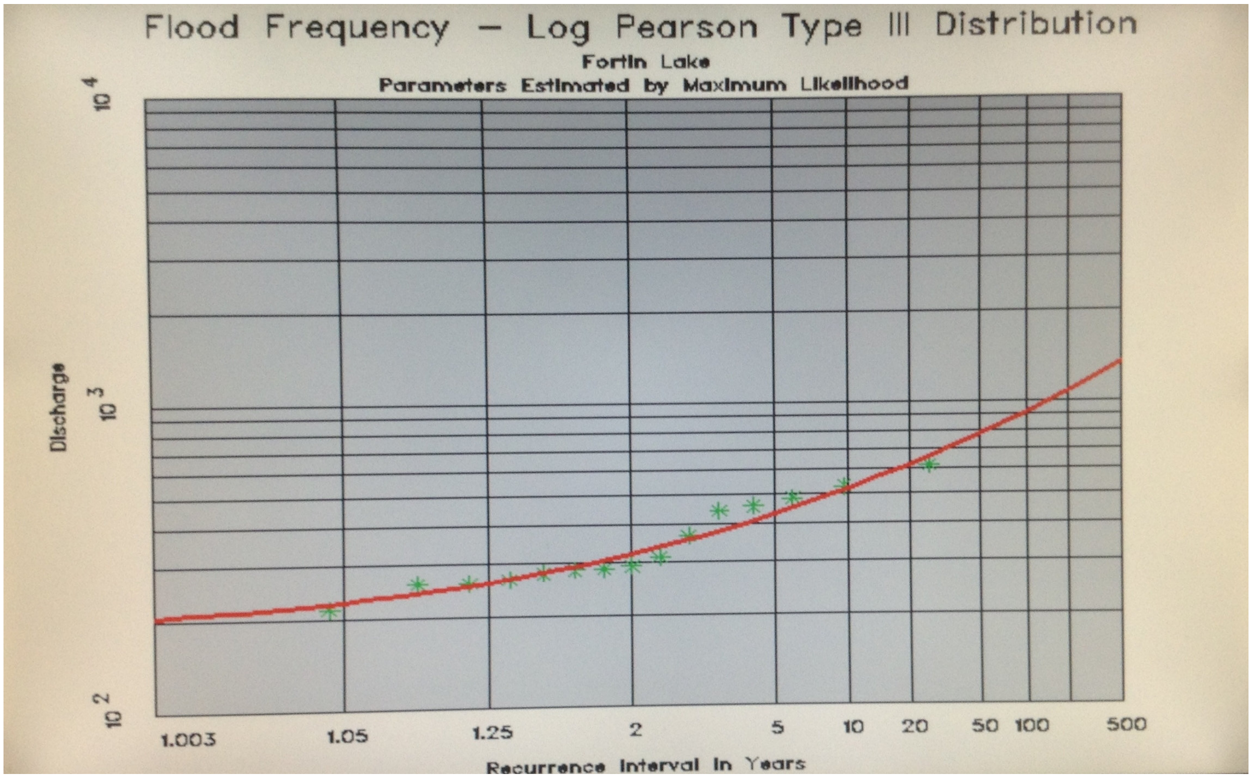
APPENDIX B
FLOOD FREQUENCY DISTRIBUTIONS


Flood Frequency — Log Pearson Type III Distribution
NWPI Canyon
Parameters Estimated by Maximum Likelihood
Discharge
10 4
10 3
10 2
1.003
1.05
1.25
2
5
10
20
50
100
500
Recurrence Interval In Years


Flood Frequency — Log Pearson Type III Distribution
Upper Canyon
Parameters Estimated by Maximum Likelihood
Discharge
10 4
10 3
10 2
1.003
1.05
1.25
2
5
10
20
50
100
500
Recurrence Interval In Years


Flood Frequency – Log Pearson Type III Distribution
False Canyon
Parameters Estimated by Maximum Likelihood
Discharge
10 4
10 3
10 2
1.003
1.05
1.25
2
5
10
20
50
100
500
Recurrence Interval in Years


Flood Frequency – Log Pearson Type III Distribution
Middle Canyon
Parameters Estimated by Maximum Likelihood
Discharge
10 4
10 3
10 2
1.003
1.05
1.25
2
5
10
20
50
100
500
Recurrence Interval in Years


Flood Frequency – Log Pearson Type III Distribution
Fortin Lake
Parameters Estimated by Maximum Likelihood
Discharge
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10 2
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10
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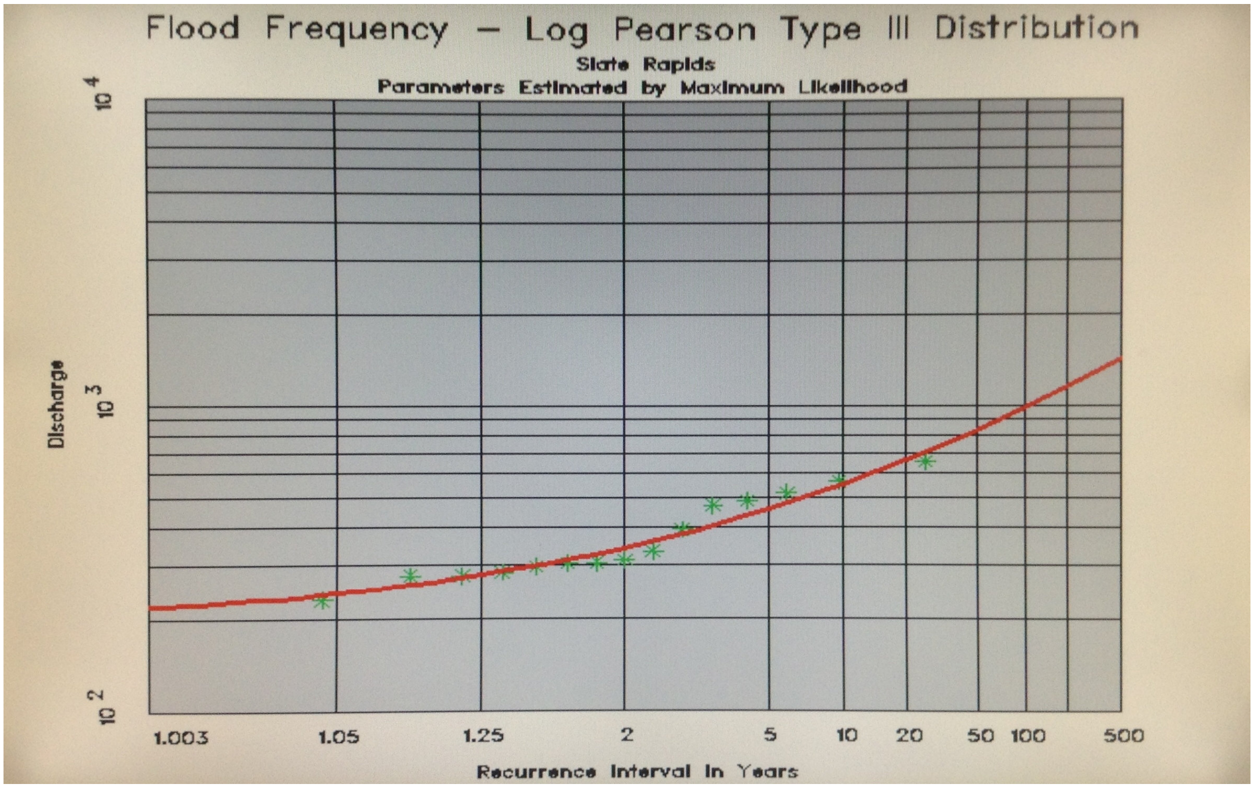
100
500
Recurrence Interval in Years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Slate Rapids
Parameters Estimated by Maximum Likelihood
Discharge
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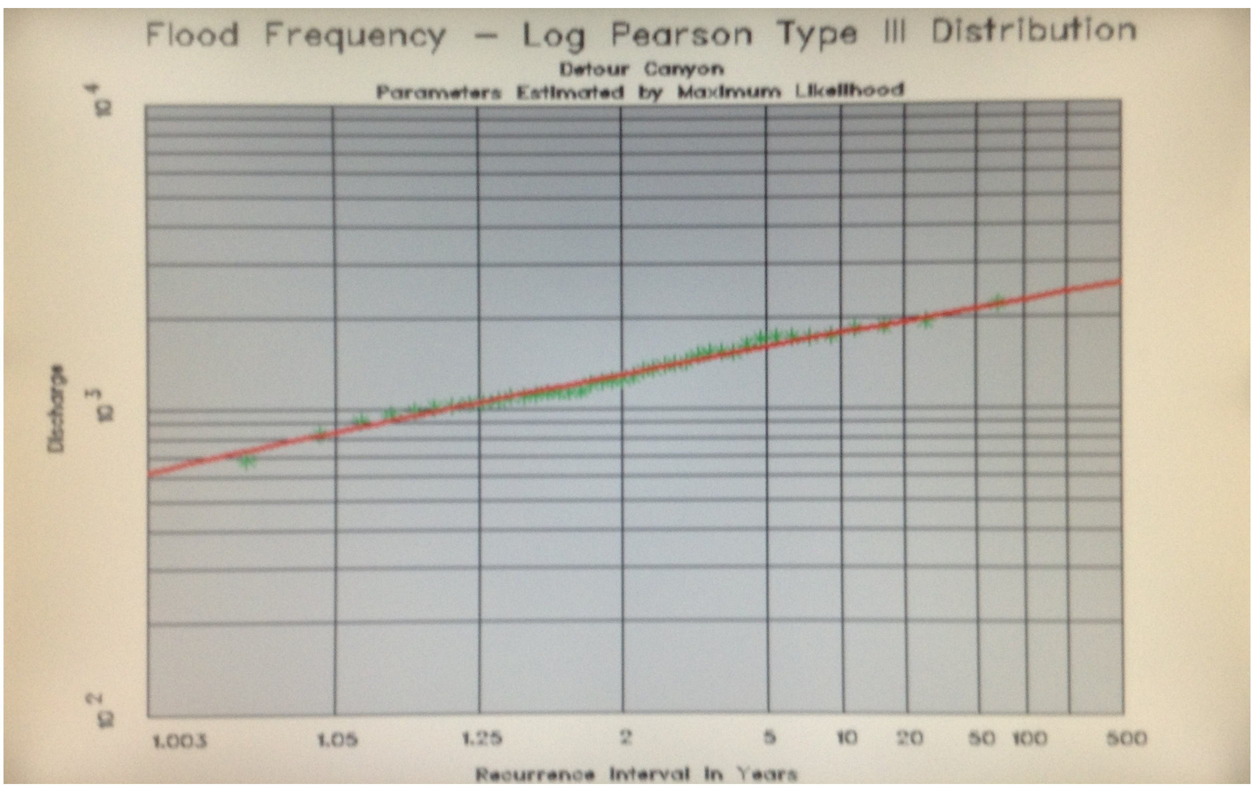
10 3
10 2
1.003
1.05
1.25
2
5
10
20
50
100
500
Recurrence Interval in Years


Flood Frequency — Log Pearson Type III Distribution
Hoole Canyon
Parameters Estimated by Maximum Likelihood
Discharge
10^4
10^3
10^2
1.003
1.05
1.25
2
5
10
20
50
100
500
Recurrence Interval in Years


Flood Frequency — Log Pearson Type III Distribution
Detour Canyon
Parameters Estimated by Maximum Likelihood
Discharge
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10^2
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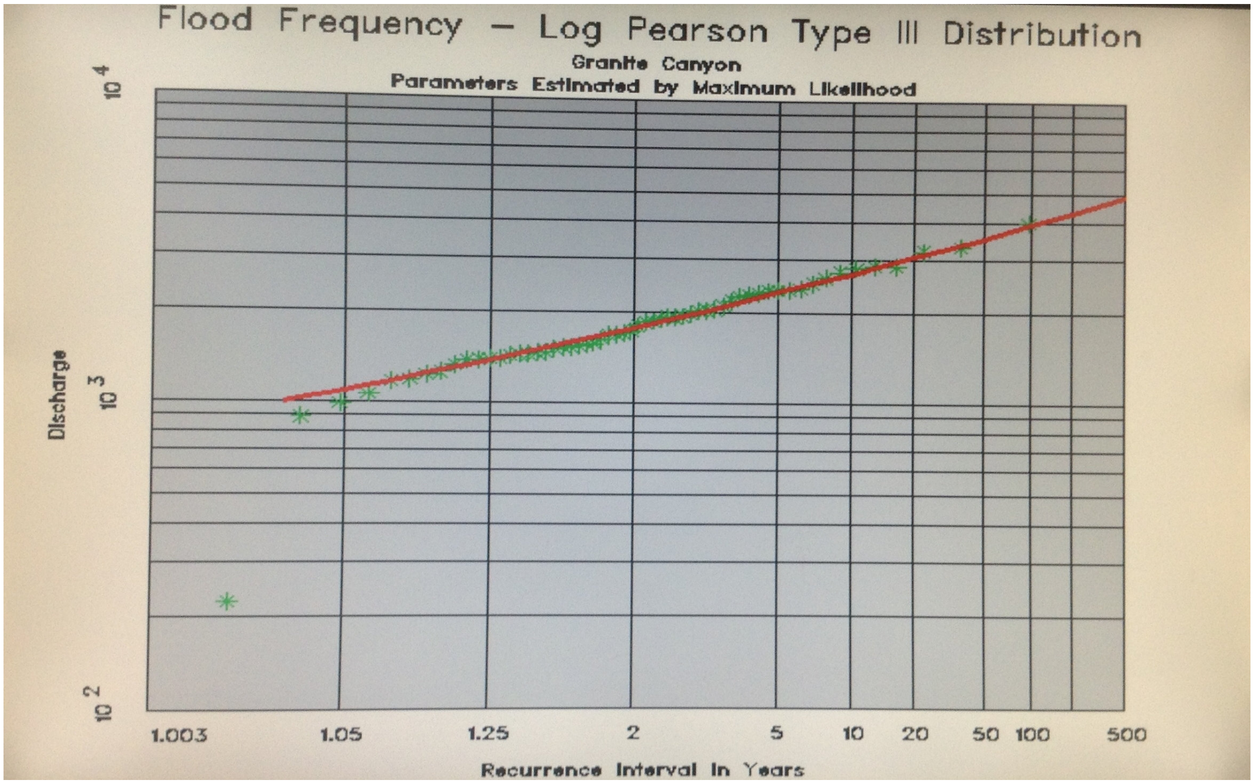
2
5
10
20
50
100
500
Recurrence Interval in Years


Flood Frequency – Log Pearson Type III Distribution
Granite Canyon
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10 3
10 2
1.003
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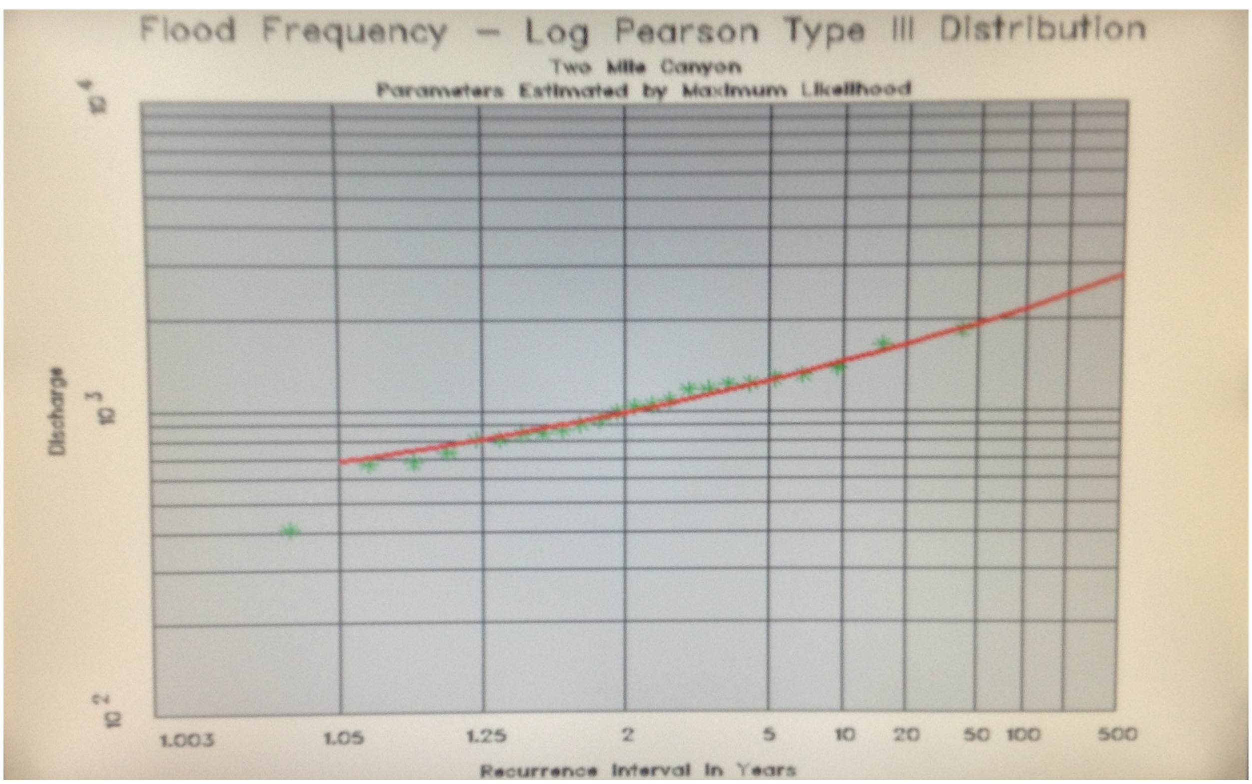
2
5
10
20
50
100
500
Recurrence Interval in Years


Flood Frequency – Log Pearson Type III Distribution
Two Mile Canyon
Parameters Estimated by Maximum Likelihood
Discharge
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10 3
10 2
1.003
1.05
1.25
2
5
10
20
50
100
500
Recurrence Interval in Years


Flood Frequency – Log Pearson Type III Distribution
Fraser Falls
Parameters Estimated by Maximum Likelihood
Discharge
10 4
10 3
10 2
1.003
1.05
1.25
2
5
10
20
50
100
500
Recurrence Interval in Years

C.2 Climate Change

SLR has performed a study of the climate change effects on the hydrology for the sites of interest identified in the Site Screening Inventory Part 1 & 2. The *Climate Change and Hydrology* report is attached thereafter.

global environmental solutions

Yukon Next Generation Hydro: Climate Change and Hydrology

Midgard Consulting Inc.

May 2015
SLR Project No.: 234.01009.00000

YUKON NEXT GENERATION HYDRO:

CLIMATE CHANGE AND HYDROLOGY

SLR Project No.: 234.01009.00000

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1.0 INTRODUCTION

> Water is linked inextricably with climate. The warming trend recorded over the past decades shows up in changing precipitation patterns, widespread melting of snow and ice, increases in atmospheric water vapour through increasing evaporation, and changes in soil moisture and runoff. However, it is difficult to pinpoint exactly how climate change is affecting the hydrologic cycle at the Yukon scale, among all the other variables that affect climate or water or both. While there is broad agreement that changes affecting Yukon water resources will occur as a result of climate change, they will vary from region to region.
>
> *—Yukon Water: A Summary of Climate Change Vulnerabilities (Environment Yukon 2011), p. 12*

It is not possible to predict and quantify how climate change will affect streamflow and water balances at the scale of individual hydroelectric projects. However, climate trends and projections for the Yukon Next Generation project area are available, and results from research and monitoring provide general guidance on hydrological changes that should be considered for future Yukon hydro development. This paper summarizes and discusses trends in climate and hydrological parameters for the project region, based on long-term reference climate and streamflow records, and on results of research on climate and hydrology. Major hydrological parameters potentially affected by climate change are then considered in relation to the Next Generation hydro options.

1.1 Climate Change Projections

It is clear that humans are influencing the climate system, mainly through emissions of greenhouse gases (IPCC 2013). General circulation models run under a range of assumptions about greenhouse gas emissions consistently predict that the current warming trend will continue and likely increase in magnitude over the next century (IPCC 2013). Model predictions for the Yukon show continued warming trends, especially in winter, and increases in precipitation (IPCC 2013; Werner et al. 2009). Projected increases in temperature for west-central Yukon are some of the largest for western North America. The projected increases in precipitation are much more uncertain, and would be expected to vary more within the region (Werner et al. 2009).

1.2 Climate Change and Hydroelectricity

There is a growing body of work, both at the international scale and for Canada and Alaska, on the hydroelectricity sector and climate change, focusing on planning and adaptation (Cherry et al. 2010; Mukheibir 2013; OURANOS 2008; Schaefli 2015). Hydro is susceptible to both positive and negative impacts from climate change, both as long-term trends and as short-term variability due to increases in extreme events. Impacts can be direct, through changes in hydrology, or indirect, such as through changes in demand and competition for supply. Adaptive responses include 1) improving information related to understanding and prediction of changes in climate and hydrology in the context of impacts on hydroelectric production (in general and at site-specific scales), and 2) incorporating flexibility into planning and operations.

Of particular relevance to the Yukon Next Generation Hydro project are the projections and planning framework developed for British Columbia, where modelling predicts that changes in streamflow by 2050 are likely to increase BC's annual hydropower potential by more than 10%, with a concurrent decrease in electricity demand of 2% due to warmer temperatures. A key point made is that uncertainties around projections are high and it is important to build in capacity for flexibility (Parkinson & Djilali 2015).

2.0 TRENDS AND VARIABILITY IN CLIMATE AND HYDROLOGY

This section presents information on climate and streamflow variability and trends relevant to planning hydroelectric developments in the Yukon. For reference, Table 1 lists the hydro sites under consideration, their locations within watersheds and permafrost zones, and most relevant climate and hydrometric monitoring stations.

Table 1. Hydro Sites and Climate and Hydrometric Stations

Sites	Watershed description	Permafrost zone for catchment area*	Climate stations	Active hydrometric stations
Two Mile Canyon, Fraser Falls	Fraser Falls is on the Stewart R., which joins the Yukon R. near Dawson, and Two Mile Canyon is on the Hess R., a tributary of the Stewart R.	Extensive discontinuous	Mayo	Stewart R. near Mayo; Stewart R. at the Mouth
Detour Canyon, Granite Canyon	On the mid to lower reaches of the Pelly R. which joins the Yukon R. downstream of Pelly Crossing	Extensive discontinuous for most of the Pelly watershed; the middle reaches are at the northern edge of the sporadic discontinuous zone	Mayo, Pelly Ranch	Pelly R. at Pelly Crossing;** Pelly R. below Vangorda Cr.
Hoole Canyon, Slate Rapids	On upper reaches of the Pelly River	Extensive discontinuous	Watson Lake, Whitehorse***	Pelly R. below Fortin Cr.; Pelly R. at Ross River
Middle and False Canyons	On the Frances River, which flows to the Liard R. upstream of Watson Lake (Mackenzie R. basin)	Extensive discontinuous in upper part of watershed; sporadic discontinuous around Middle Canyon	Watson Lake	Frances R. near Watson Lake; Liard R. at Upper Crossing

* Permafrost zones: sporadic discontinuous 10-50% cover; extensive discontinuous 50-90% cover (Goulding 2011).
**Pelly R. at Pelly Crossing is the only hydrometric station that is part of the Reference Hydrometric Basin Network.
***While the Faro meteorological station is closer, it is not included in the national datasets used for climate trend analysis.

2.1 Climate Variability

Climate change is not a steady progression. Temperature and precipitation vary naturally from year to year, and broad-scale oscillations of the atmospheric system in the Pacific Ocean influence the Yukon climate over a range of timeframes. These climate oscillations include El Niño-Southern Oscillation (ENSO) events that tend to occur on average every two to seven years and the Pacific Decadal Oscillation (PDO), an El Niño-like phenomenon where sea-surface temperatures, surface currents, and winds in the Pacific Ocean abruptly and unpredictably shift between contrasting “phases” every 20–30 years (Bonsal & Shabbar 2011).

These and other climate oscillations directly influence precipitation and temperature patterns across the Yukon and elsewhere. The PDO has a strong association with the hydrology of western North America (Brabets & Walvoord 2009; Monk et al. 2011). These climate oscillations themselves may be affected by climate change, with more prolonged and intense El Niño events in recent years. The PDO shifted to a warm phase in the late 1970s, coinciding with a shift toward more frequent El Niño events (Bonsal & Shabbar 2011). A shift to a cool phase of the PDO may have occurred around the late 1990s (Werner et al. 2009).

2.2 Temperature and Precipitation Trends

The national and Yukon analyses in this section all use the same datasets and statistical methods. Data are Environment Canada's homogenized Canadian monthly surface air temperatures (Environment Canada 2014; Vincent et al. 2012) and precipitation amounts (Mekis & Vincent 2011). The datasets include climate station records of length, continuity and quality suitable for analysis of climate trends, and they have been checked and adjusted to remove variations not related to climate (for example, methodological changes). Mayo and Watson Lake are the main stations of relevance to this assessment of options for Yukon hydro development, along with Pelly Ranch, which has a shorter record of consistent data. Whitehorse and Dawson trends are also presented to provide a more complete regional picture. Analyses are based on departures from 1961–1990 means. Linear trends were estimated using a non-parametric method (Sens slope estimates), and Mann-Kendall tests were used to test for significance. More in-depth discussion of Canadian trends, based on analysis of these datasets, can be found in Bush et al. (2014).

2.2.1 Temperature

Spatial patterns of trends in annual mean (Figure 1) and seasonal mean temperature changes for Canada (not shown) indicate that the magnitude of warming is comparatively high in the Yukon, and that this is largely due to the winter trends. Warming has been stronger in the north and west of Canada than in the east, and is weakest along the Atlantic coast (Bush et al. 2014). This is a North American pattern, considered to be linked to shifts in atmospheric-ocean circulation patterns (see the section on climate variability, above). Warming trends in winter and spring are strongest in western Canada. Fall warming is most noticeable across the Arctic (including west to Inuvik), while summer warming is more evenly distributed across the country (Bush et al. 2014).

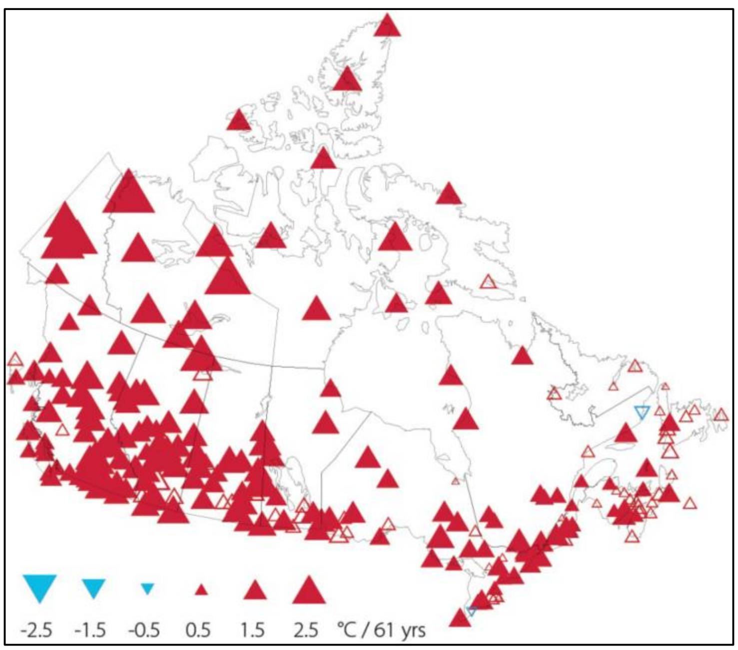


Figure 1. Trends in annual mean temperature across Canada, 1950–2010
Filled triangles indicate magnitude and direction of significant trends (P ≤ 0.05). From Bush et al. (2014) based on Vincent et al. (2012).

The seasonal pattern and average rate of warming at selected Yukon climate station locations since 1950 is shown in Figure 2. The rate of temperature increase was consistently greatest in winter. All locations also warmed significantly in the spring. There were no significant trends in the fall. The most noticeable broad-scale pattern within the Yukon is the trend to warmer summers in central Yukon (Dawson, Pelly Ranch and Mayo) concurrent with a lack of summer trends in the southern Yukon (Watson Lake and Whitehorse). Annual and seasonal mean temperature increases since 1950 for these Yukon climate stations are presented Figure 3, along with the comparable temperature means for the country as a whole.

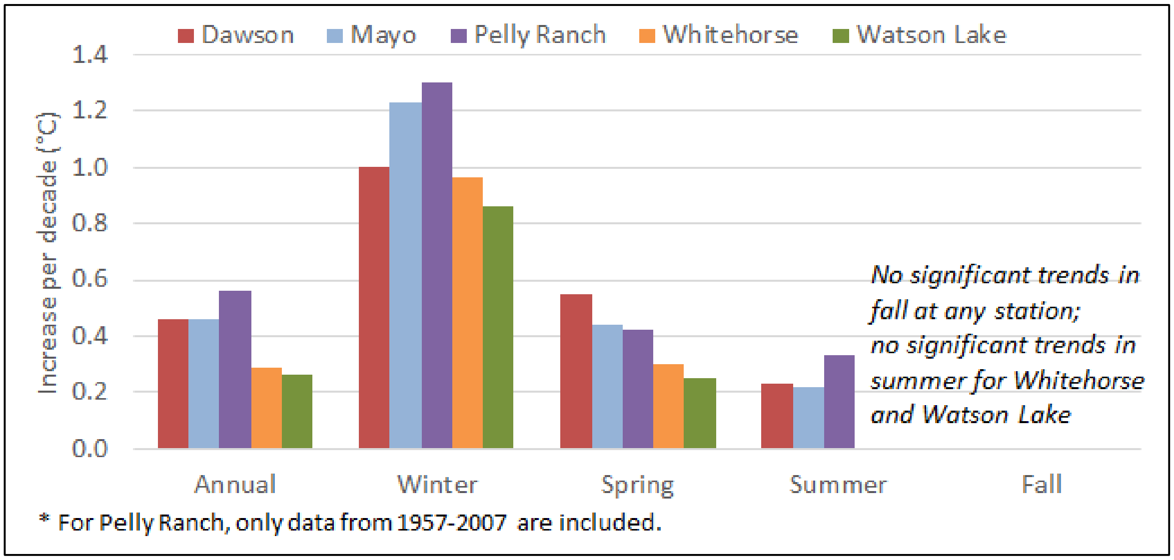
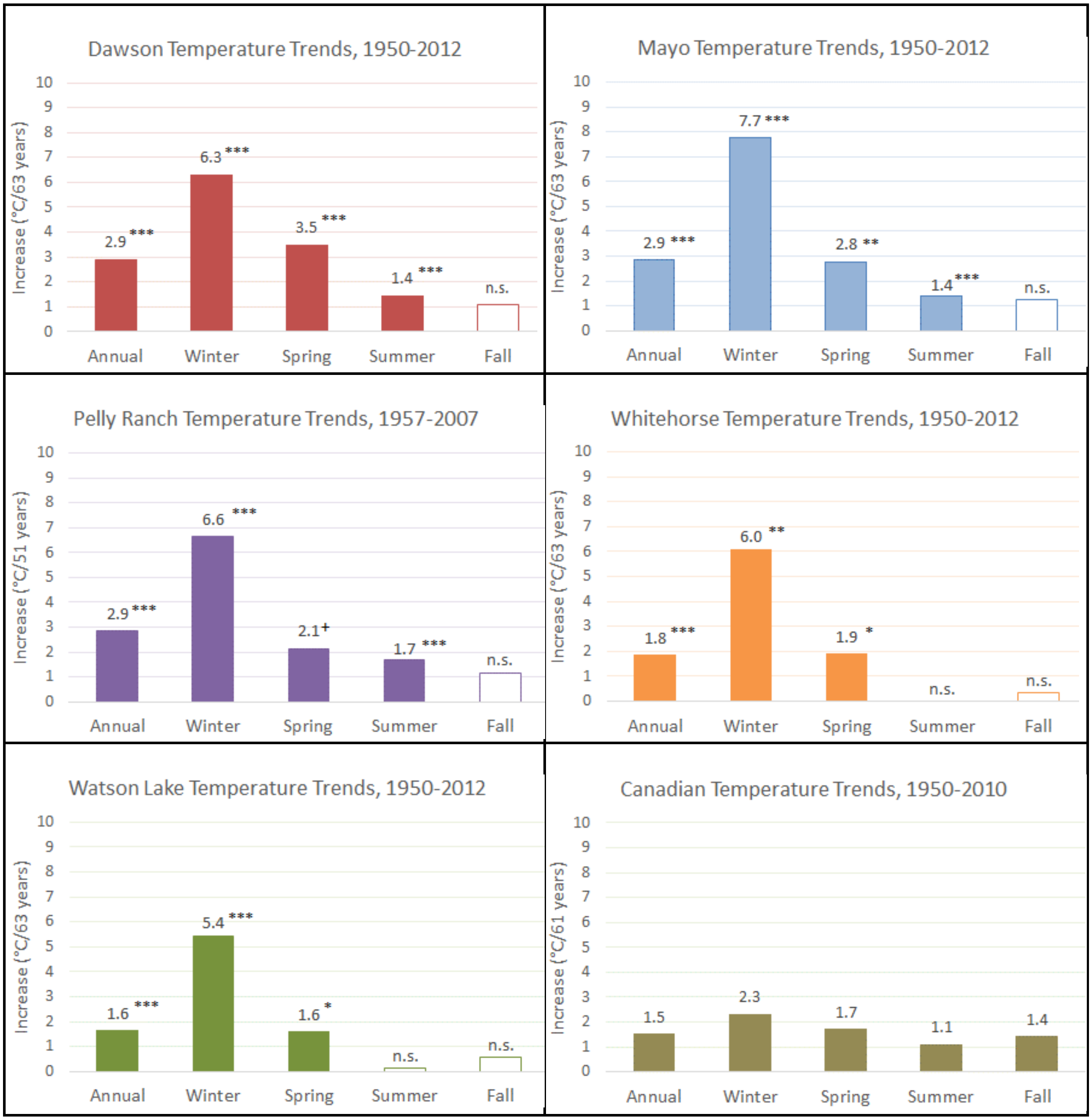


Figure 2. Rate of annual and seasonal warming in degrees per decade over the period 1950–2012 at selected Yukon stations

Season breakdown by months: winter Dec-Feb; spring Mar-May; summer June-Aug; fall Sept-Nov. Temperature increases over the period of record and statistical probabilities are in Appendix 1. Data from Environment Canada (2014); methods after Vincent et al. (2012).



Statistical significance: n.s. = P > 0.10; + = P ≤ 0.10; * = P ≤ 0.05; ** = P ≤ 0.01; *** = P ≤ 0.001

Figure 3. Annual and seasonal temperature trends since 1950 at selected Yukon stations and Canadian means

Yukon trends calculated from Adjusted and Homogenized Canadian Climate Data (Environment Canada 2014); statistical methodology and Canadian temperature trends from Vincent et al. (2012).

2.2.2 Precipitation

Annual rainfall in Canada increased by 12.5% from 1950 to 2009, and snowfall also increased slightly. As precipitation varies a lot from year to year, the trends are often not significant for individual stations. Seasonally, the biggest and most consistent increase across Canada is in spring rainfall (Mekis & Vincent 2011). Variability in winter precipitation, especially in western Canada, is strongly influenced by climate oscillations such as the El Niño Southern Oscillation (ENSO) and the Pacific Decadal Oscillation (Bonsal & Shabbar 2011; Bush et al. 2014) (see section on climate variability, above).

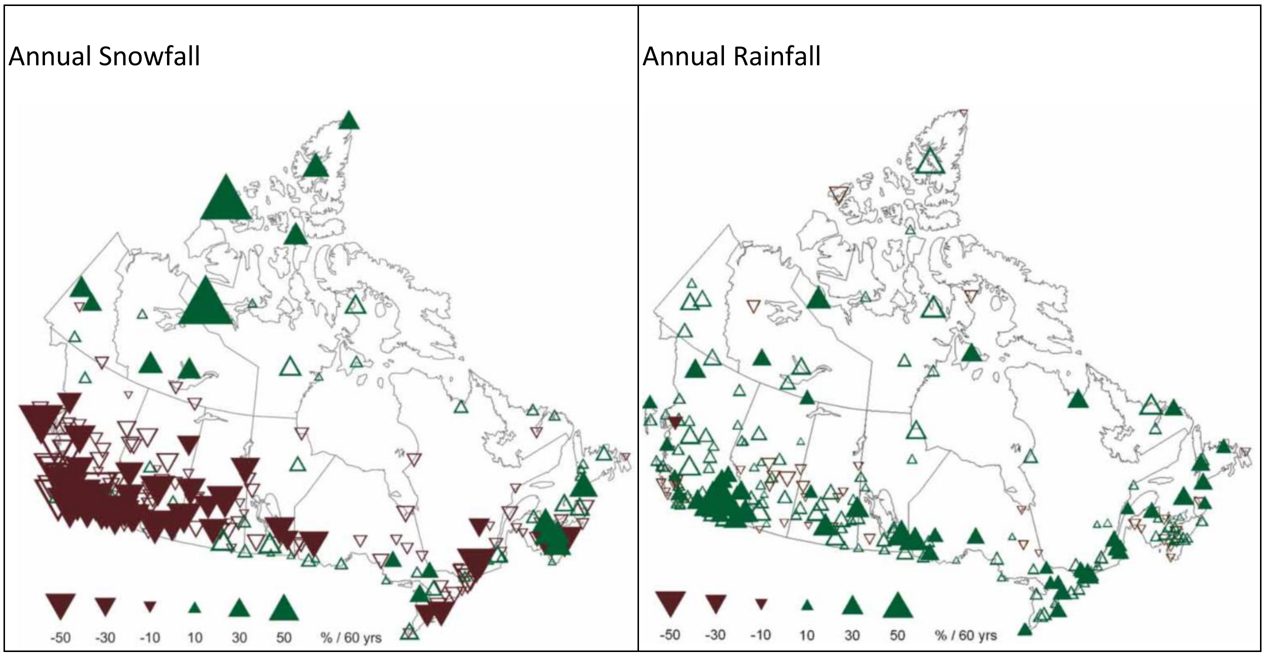


Figure 4. Trends in annual mean snowfall and rainfall across Canada, 1950–2009
Percent changes in annual mean snowfall and rainfall, based on deviations from 1961–1990 means (Mekis & Vincent 2011).

Changes in total annual mean precipitation since 1950 at selected Yukon stations are shown in Figure 5. Trends are not consistent, with only Mayo and Whitehorse showing significant increases over this period.

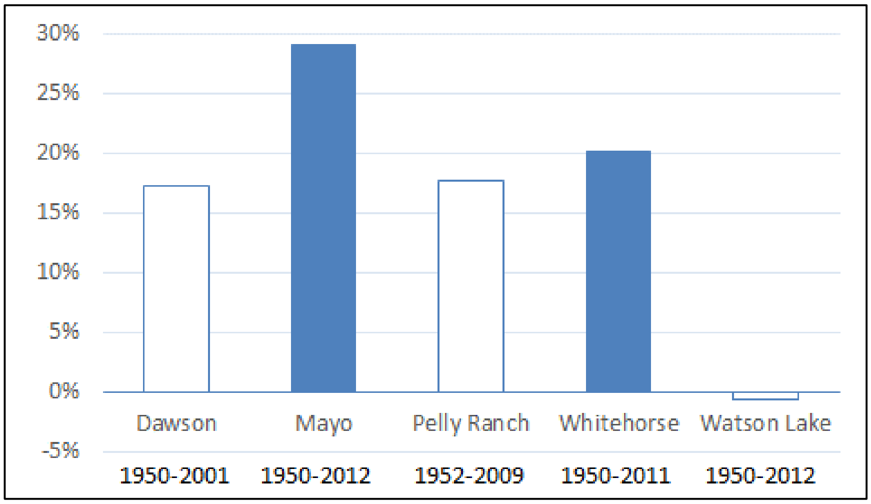


Figure 5. Changes in total annual mean precipitation at selected Yukon stations (various periods from 1950 to 2012)

Percent changes in annual precipitation, based on deviations from 1961–1990 means. Coloured bars (Mayo and Whitehorse) are the only statistically significant changes ($P \leq 0.05$). Data from Adjusted and Homogenized Canadian Climate Data (Environment Canada 2014).

Heavy rainfall events are also of significance for design and management of dams and reservoirs. As more frequent and severe extreme weather events are expected to accompany climate warming (IPCC 2013), the Yukon will likely experience increasing frequency and intensity of heavy rainfall events. Extreme precipitation events are currently projected to become about twice as frequent by mid-century over most of Canada (Bush et al. 2014). This pattern has not been detected in the climate records for Canada. Occurrence of heavy rainfall events across Canada in the 20th century did not increase or fluctuate on a decadal basis—increases in precipitation were instead related to increased numbers of small-to-moderate precipitation events (Vincent & Mekis 2006; Zhang et al. 2001). An analysis for 1950–2010 showed trends for heavy precipitation events (rainfall and snow) for some stations, but no trends in the Yukon (Figure 6).

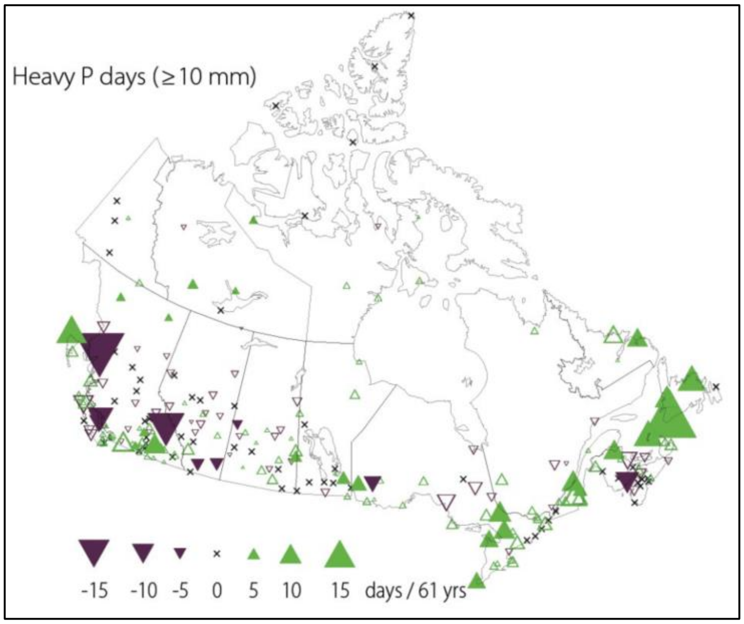


Figure 6. Trends in frequency of extreme precipitation events, 1950-2010
The trend analysis shows no change for Yukon sites (Bush et al. 2014).

2.3 Trends in Permafrost, Glaciers and Snow

2.3.1 Permafrost

Increases in winter air temperatures are the main driver behind the widespread warming of permafrost in northern Canada (Derksen et al. 2012). Changes in permafrost are also related to snow cover, as snow provides insulation. Sites with significant snow cover show less of a warming trend in ground temperatures. Permafrost temperatures measured in boreholes at numerous sites across Canada have all increased over the past two to three decades, but there is little information on ground temperature trends in central and southern Yukon (Smith 2011).

A recent repeat of a 1964 permafrost survey indicates that permafrost in the sporadic permafrost zone of southern Yukon and northern BC is thawing. This survey of permafrost conditions along the Alaska Highway corridor was redone in 2007/08 (James et al. 2013). Permafrost had thawed or was degrading at more than half of the 55 sites from Fort St. John to Whitehorse. In 1964, permafrost was present at 10 of the 18 sites between Watson Lake and Whitehorse, and in 2007/08 it was present at 6 sites. Where permafrost persisted, it was patchy, thin and warm (at or near 0°C). The researchers concluded that the southern limit of permafrost in BC and Yukon has shifted northward by 25 to 75 km since the 1960s.

The Next Generation hydro sites are in the extensive discontinuous permafrost zone or along the northern edge of the sporadic discontinuous zone (Table 1), zones that are vulnerable to permafrost degradation due to climate change (Hinzman et al. 2005). Permafrost conditions in the entire catchment area for each potential hydro site will have an impact on hydrology, including on base flows (see hydrology trends section below).

2.3.2 Glaciers

Increased melting of glaciers can also affect base flows. The Yukon has lost 22% of its glacial cover in the past 50 years, and the estimated average rate of thinning is 0.9 m per year water equivalent, a rate only exceeded in Alaska and Patagonia (Barrand & Sharp 2010). Increases in glacial melt rates are enhancing flows upstream of the Whitehorse hydro dam, and studies are underway to improve information that can be used to predict changes in Yukon R. flow related to glacier melt rates (Yukon Energy 2014). Initial results indicate that increased rates of melting of headwater glaciers will continue to enhance runoff for decades in the future and that the most likely response of Yukon River flow is an average increase in annual runoff, with higher flows in early spring and late fall (Northern Climate ExChange 2012). This response to climate change would extend the period of hydroelectric production from the Whitehorse dam. Although none of the Next Generation hydro sites are influenced by glaciers, future changes in Yukon River headwater glaciers are relevant to the projections of overall and seasonal hydroelectric generating capacity for the Yukon.

2.3.3 Snowpack

Snowmelt is the dominant hydrological event in the watersheds of all the potential hydro sites under consideration (see section on hydrology trends, below). Winter snow storage and subsequent melt are strongly related to timing and magnitude of spring flows (Dyer 2008).

Snowfall has increased since 1950 at some Yukon locations (Figure 4), and an overall increase in winter precipitation is projected for this region. However, at the same time, winter and spring temperatures are increasing, leading to more winter melting and earlier springs (Zhang et al. 2011). The net effect of these two trends can be anticipated to vary from site to site and over time.

There is a broad-scale trend to a strong decrease in the extent of snow cover in spring. The area covered by snow in the Northern Hemisphere, measured by satellite and ground observations, declined over the period 1967–2008 by 14% in May and by 46% in June (Brown et al. 2010). Spring snow cover duration was reduced by 10 days on average across Canada and Alaska over this time period (Brown et al. 2010).

Snow cover extent can be used to predict runoff patterns, but it needs to be augmented with additional information to estimate the amount of snow storage (Dyer 2008). Snow depths and snow water equivalent, which together provide information on water storage in the snowpack, are measured in March, April and May at 56 locations in the Yukon and are used each year to provide peak flow estimates for the Pelly, Stewart and Liard river basins (among others) (Environment Yukon 2015). Research has also been carried out in the Pelly and Stewart basins to improve understanding of the relationships between basin-level snow characteristics that can be detected through remote sensing and snowmelt hydrology (Ramage & Semmens 2012).

2.4 Hydrology Trends

Trends in temperature are marked and significant and follow similar patterns on a broad scale, while trends in precipitation are more variable and more specific to locations. Trends in hydrology are ultimately determined by changes in temperature and precipitation, but it is not a simple relationship. The effects of climate drivers interact, and streamflow is influenced by secondary drivers that are related to climate change—such as changes in permafrost and snowpack. Table 2 shows results from some relevant analyses of changes in hydrology in relation to climate change.

Table 2. Overview of Findings from Selected Hydrology Studies

Study scope	Years	Findings	Reference
Average, peak and low flows, Yukon hydrometric stations	Previous 3 decades	▪ Slight increases in annual mean flows and decreases in annual peak flows ▪ Significant increases in low flows, especially in the continuous permafrost zone, with greater variability in change in the discontinuous zones.	Janowicz (2008)
Low flows, Yukon and western NWT stations	Period of record (min. 25 years)	▪ The following sites relevant to this project were included in the analysis. All had increased annual low flows ($p<0.1$): o Pelly R. at Pelly Crossing; Pelly R. below Vangorda Cr.; Stewart R. at Mouth; Liard R. at Upper Crossing	Janowicz (2007)
Streamflow trends, Yukon River Basin (Yukon and Alaska)	1944–2005	▪ Annual discharge remained relatively unchanged except for glacier-fed rivers, where it increased ▪ Average winter flows increased at 15 of 21 sites ($p<0.1$), attributed to permafrost thaw	Brabets and Walvoord (2009)
Mackenzie River Basin (54 stations including Frances R.)	Various periods up to 2000	▪ General trends across the basin: o Increasing flows December-April o Increasing annual minimum flows o Weak decreasing trend in annual, early summer and late fall flows o Earlier onset of freshet	Abdul Aziz and Burn (2006)

A study based on results from research at the Wolf Creek Research Basin near Whitehorse used modeling to predict the impacts of future changes in temperature and precipitation on hydrology (Rasouli et al. 2014). The authors concluded that hydrology in mountain streams is very sensitive to warming, with increased temperatures leading to reductions in snow accumulation, annual runoff and peak streamflow, and to lengthening of the snow-free period. Changes in precipitation partly modulate these responses to warmer temperatures—increased precipitation somewhat offsets the warming, while decreased precipitation greatly enhances the effects of warming.

Changes in hydrology in the Arctic tend to be greater than predicted from changes in temperature and precipitation. This indicates that changes are not just related to changes in runoff, but also to changes in infiltration (Bring & Destouni 2011). Research on large northern rivers, including the Yukon and Mackenzie, suggests that, as permafrost thaws, deeper groundwater flow paths develop, leading to greater base flows and hydrological regimes dominated more by groundwater and less by surface flow. This change in regime is accompanied by changes in water chemistry, as well as changes in timing and magnitude of streamflow (Carey et al. 2013; Smith 2011).

Where a layer of permafrost is present, streamflow responds rapidly to rainfall and snowmelt because the permafrost acts as a barrier to water infiltration. Most water travels as overland flow to streams. This results in the type of annual streamflow pattern seen for the Frances River (Figure 7), with very low base flows in winter and a steep snow-melt peak and a rapid decline. The Pelly and Stewart rivers follow similar patterns (Figure 8). In areas where permafrost continues to degrade and active layers deepen, groundwater flow will become more significant, leading to more gradual responses to snowfall and rain, and a more uniform distribution of flow over the year (Hinzman et al. 2005). This is a pattern that is likely to develop to varying degrees at the candidate hydro sites.

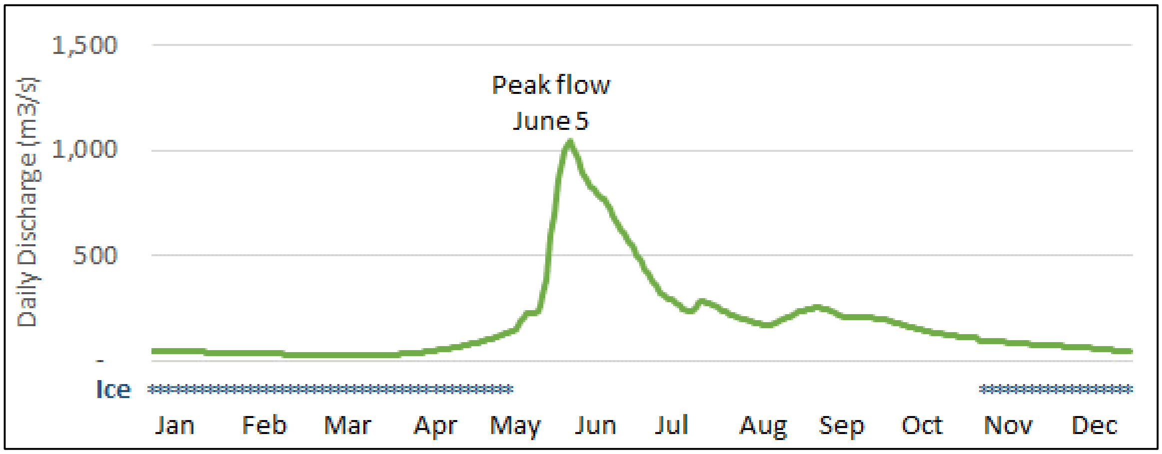


Figure 7. Daily discharge over 2013, Frances R. near Watson Lake
Data from Wateroffice (Government of Canada 2015).

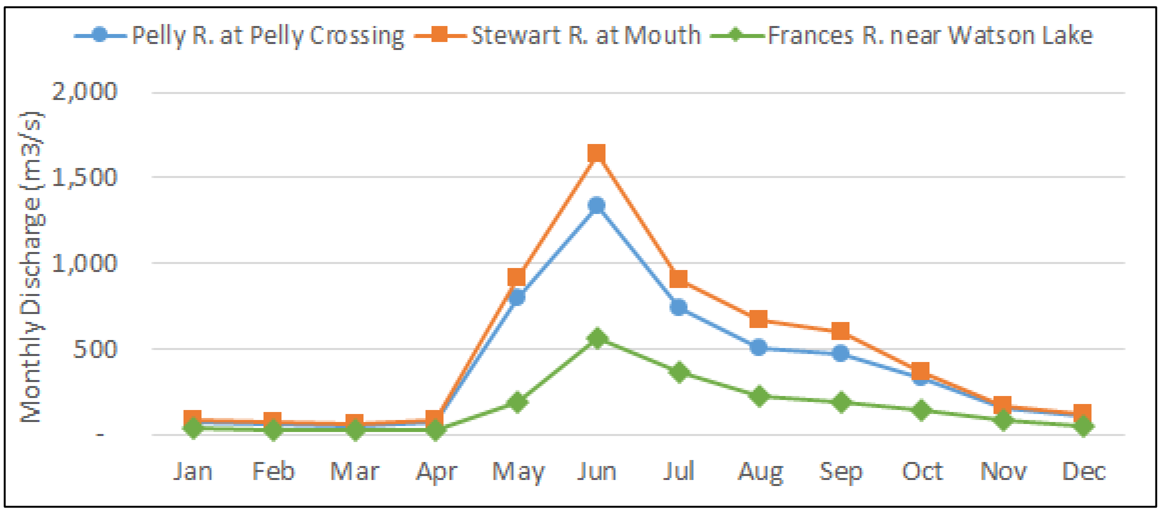


Figure 8. Monthly mean discharge, Pelly, Stewart and Frances rivers
Averaged over the following periods: Pelly R. 1951-2013; Stewart R. 1963-2013; Frances R. 1962-2013. Watershed areas for gauging stations (km^2): Pelly R. 48,900; Stewart R. 51,000; Frances R. 12,800. Data from Wateroffice (Government of Canada 2015).

Another factor that affects water balance, especially for lakes and reservoirs, and especially in the arid Yukon climate, is evaporation. Changes in evaporation rates can have a substantive impact on a water body—studies in the Experimental Lakes Area in Ontario showed that an increase in average air temperature from 14 to 16°C led to an increase in evaporation of 30% (Schindler & Smol 2006). Rates of evapotranspiration (evaporation plus plant transpiration) can increase with warmer temperatures, but are also related to other meteorological and ecological factors, such as the degree of cloudiness, aspect, and type of vegetation. Global-scale projections for future changes in evapotranspiration show an increase for northern latitudes (Goulding 2011). A study based on remote sensing data and modeling of trends over the entire Yukon River Basin (Yuan et al. 2012) found a significant increase in evapotranspiration over the 1982–2009 time period, offset in some areas by an increase in annual precipitation, and with a net drying trend in other areas. Both evapotranspiration and precipitation vary considerably from site to site.

3.0 HYDROLOGICAL PARAMETERS AND THEIR RELEVANCE TO YUKON NEXT GENERATION HYDRO SITES

This section is restricted to discussion of the hydrological parameters that affect the engineering design of the projects:

- Timing of peak inflows
- Peak flows
- Average flows

Current trends and future changes in these parameters reflect the trends and changes in climate and hydrology that are discussed in the previous sections.

Table 3 presents an overview of these three design parameters and their impact on project planning. Other parameters related to climate change impacts on the hydrological cycle, including sedimentation and water quality, are not considered in the design of the dams at this stage and will be studied in the future (A. Le and P. Helland, Midgard Consulting Inc., personal communication).

Table 3. Changes in Hydrological Parameters (Observed or Potential) and Relationship to Hydrological Modeling for Yukon Next Generation Hydro
In the Yukon, energy demand is higher in the winter, which makes winter energy more valuable. Summer energy demand is comparatively low and all the potential dams spill water from May to November.

Parameter	Expected or Potential Change	Action	Reason
Timing of peak inflow	Earlier freshet	No modification to hydrological models	An earlier freshet does not affect the height of the dams because water is spilled from May to November.
Peak flows	Changes in annual freshet peak flow (direction of change uncertain, but may decrease)	No modification to hydrological models	Peak flows are used to size the dams' freeboard and spillway and are not considered in the normal operation of the dams. The peak flows will be studied in detail in the future.
	Increased spring and summer peaks in flow from heavy rainfall events		
Average flows	Increased winter flows	No modification to hydrological models	Increased winter flows would provide more valuable energy. It is more conservative to size the dams with no adjustment to the hydrological model.
	Changes to annual and summer flows (direction of change uncertain)		Decreased or increased summer flows will not affect the dams' energy generation as water is spilled during the summer.

Input on dam design parameters from A. Le and P. Helland, Midgard Consulting Inc.

4.0 CONCLUSIONS

Future effects of climate change on hydrology cannot be quantified for this planning stage of the Yukon Next Generation Hydro project. There is no consistent trend in future average and peak runoff patterns that can be expected with a high degree of certainty. A review of the literature indicates that effects of climate change on hydrology may be favorable to winter energy generation in the Yukon through increases in base flows. To remain conservative, and because of the uncertainty attached to projections, the hydrological models used at this planning stage were not altered to reflect these potential effects.

Climate projections are in the form of a range of probable future conditions, based on models run under a range of emission scenarios and assumptions. The hydrological response to climate change in the water basins upstream of the Next Generation hydro sites will depend on the effectiveness of global greenhouse gas emissions reduction, the manner in which the various drivers and impacts on streamflow interact, and on how broad-scale patterns of directional change and variability will be manifested at the smaller spatial scales of these river basins. This paper summarizes the general trends that are occurring and likely to occur.

As work on the Next Generation hydro progresses towards the design phase, site-specific information on climate, permafrost, snow conditions and hydrology will be needed so that hydrological projections and construction and operational plans can be adapted to take climate change into account.

Both climate stations and hydrological stations should be installed at proposed hydroelectric sites to improve the understanding of relations between climate and hydrological parameters and to improve predictive capacity. Survey and monitoring of snowpack (such as snow depth, snow water equivalent and snow cover extent) and permafrost conditions and trends in the project watersheds are also important for forecasting hydrological response to changes in climate. Down-scaled climate model projections are needed for the catchment areas of proposed sites. Cherry et al. (2010) provides a useful template for information needs and climate change projections studies related to hydro development, based on work in Southeast Alaska.

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C.3 Synthetic Daily Flows

The average flows of the synthetic daily flow strings for each project have been obtained by JEM and are shown below.

Figure C-1: Detour Canyon Average Daily Flow

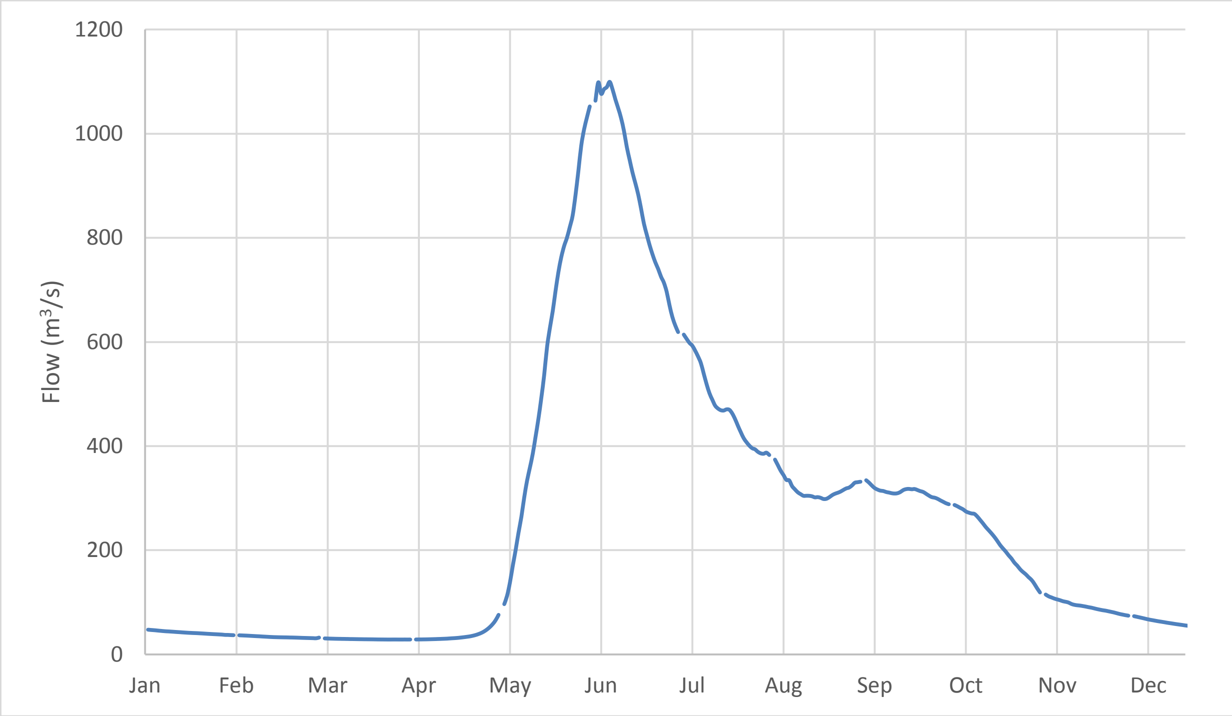

Figure C-2: False Canyon Average Daily Flow

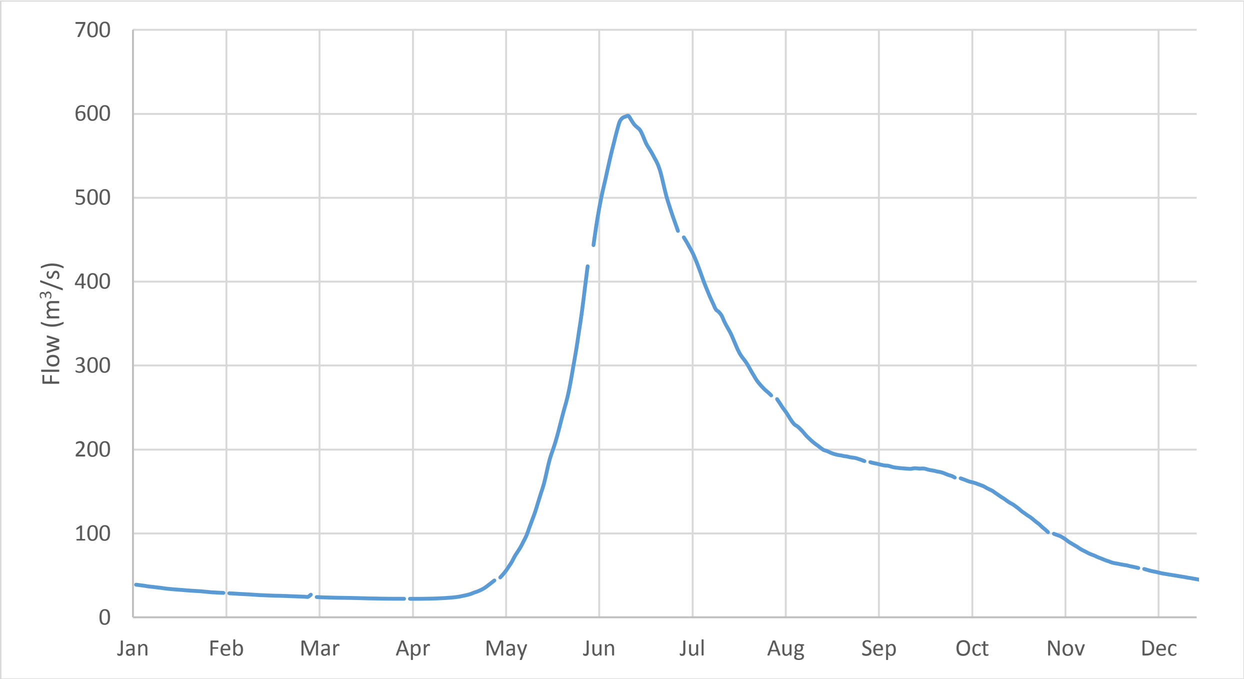

Figure C-3: Fortin Lake Average Daily Flow

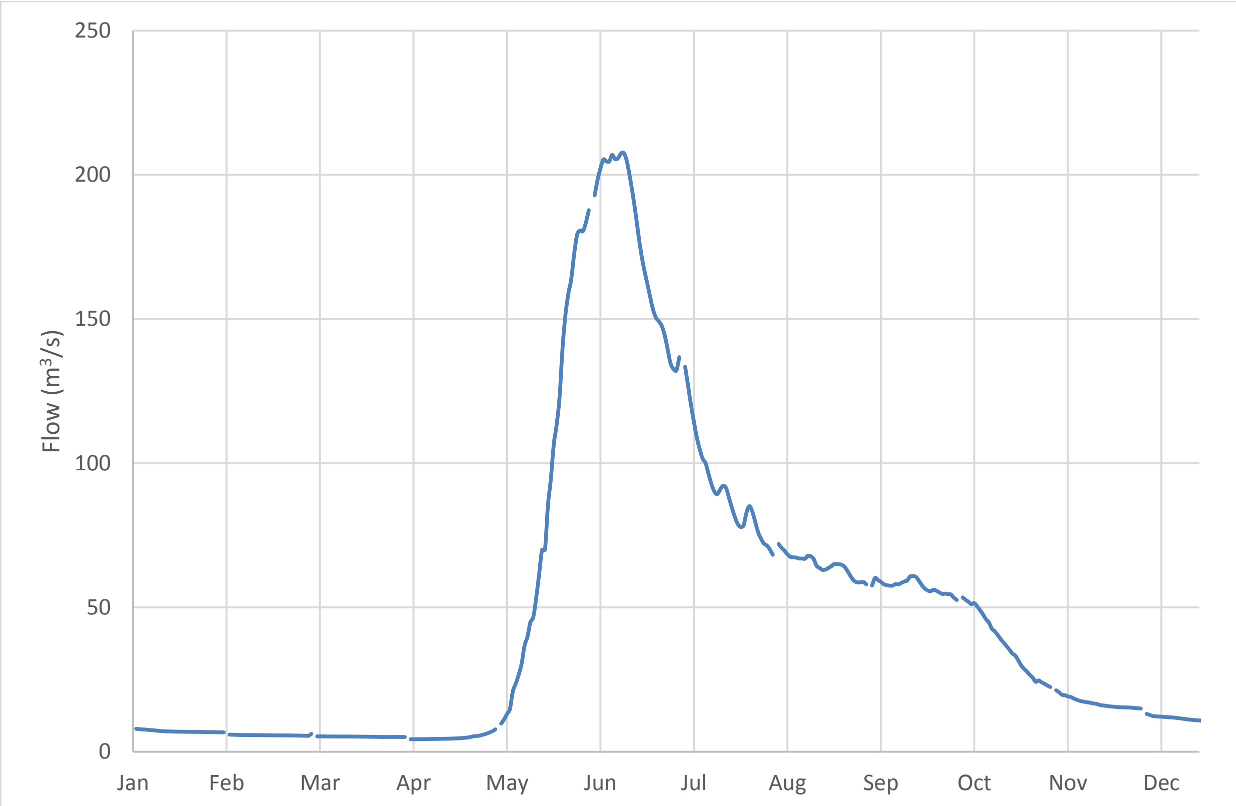

Figure C-4: Fraser Falls Average Daily Flow

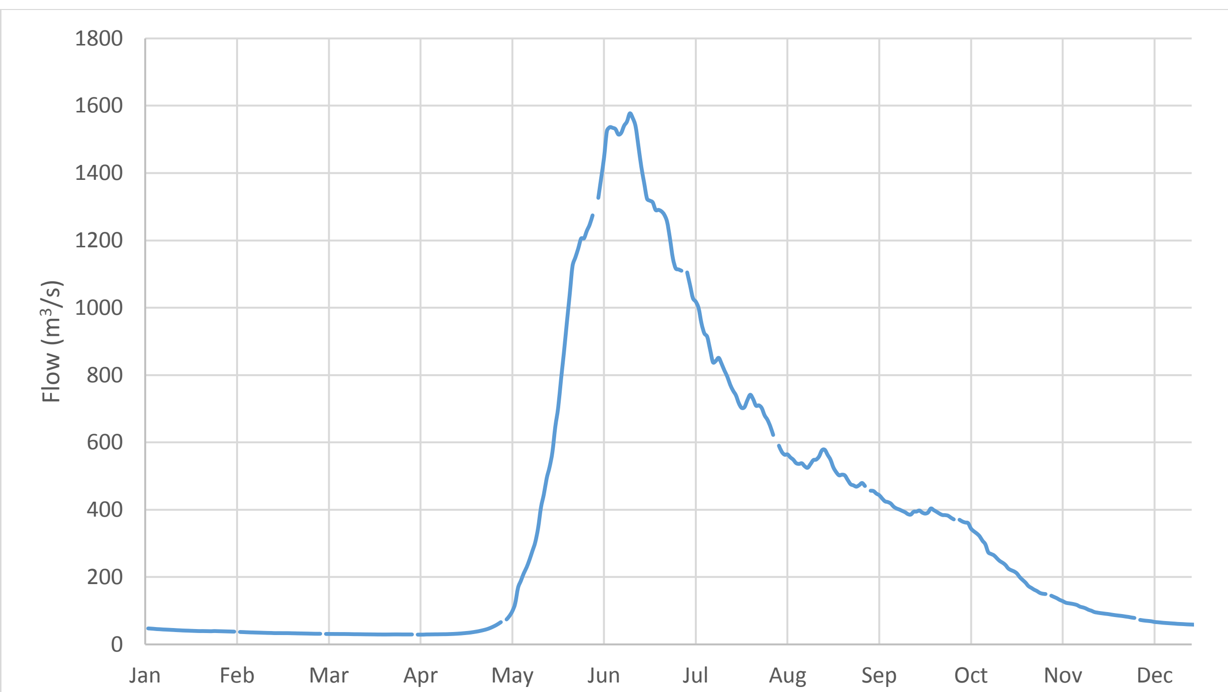

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Figure C-5: Granite Canyon Average Daily Flow

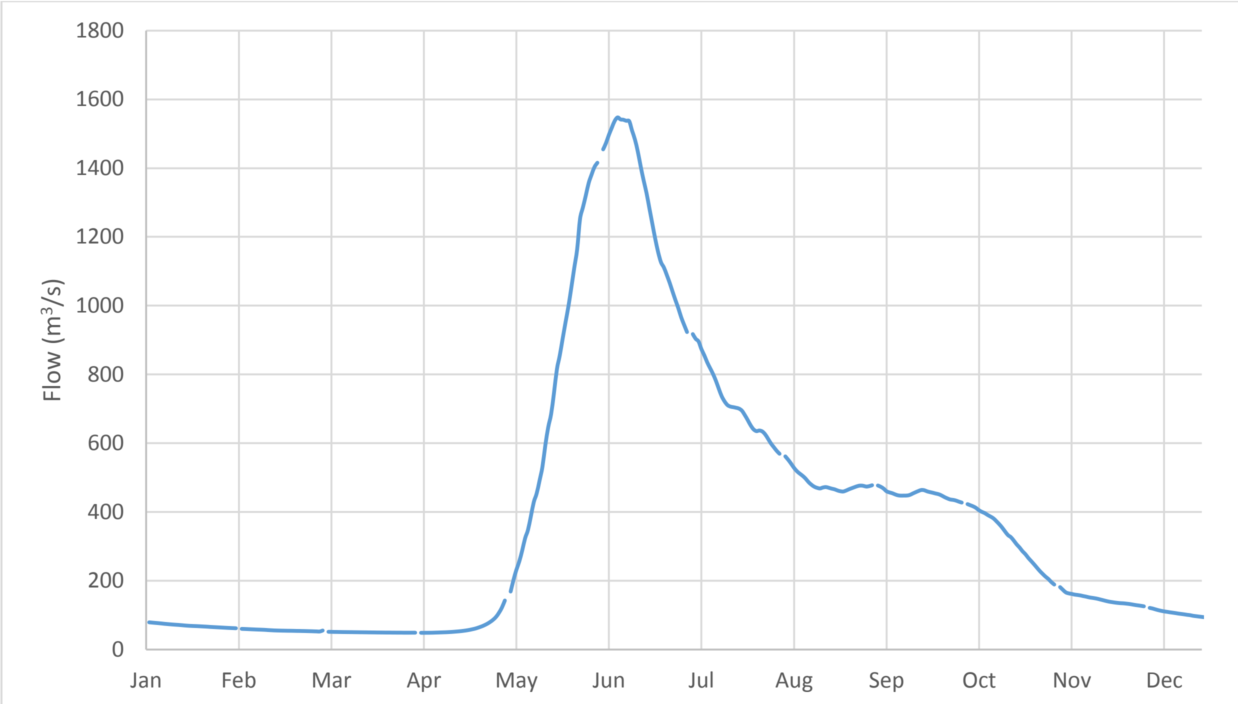


Figure C-6: Hoole Canyon Average Daily Flow

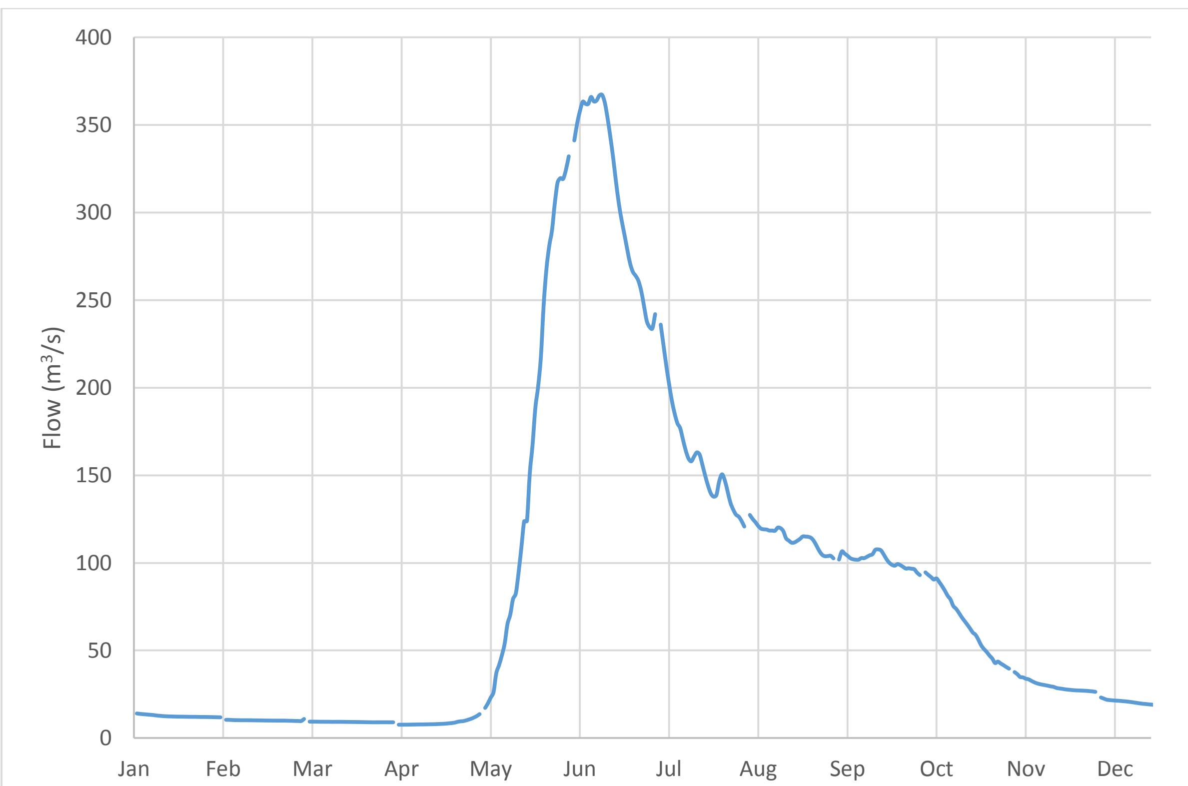


Figure C-7: Middle Canyon Average Daily Flow

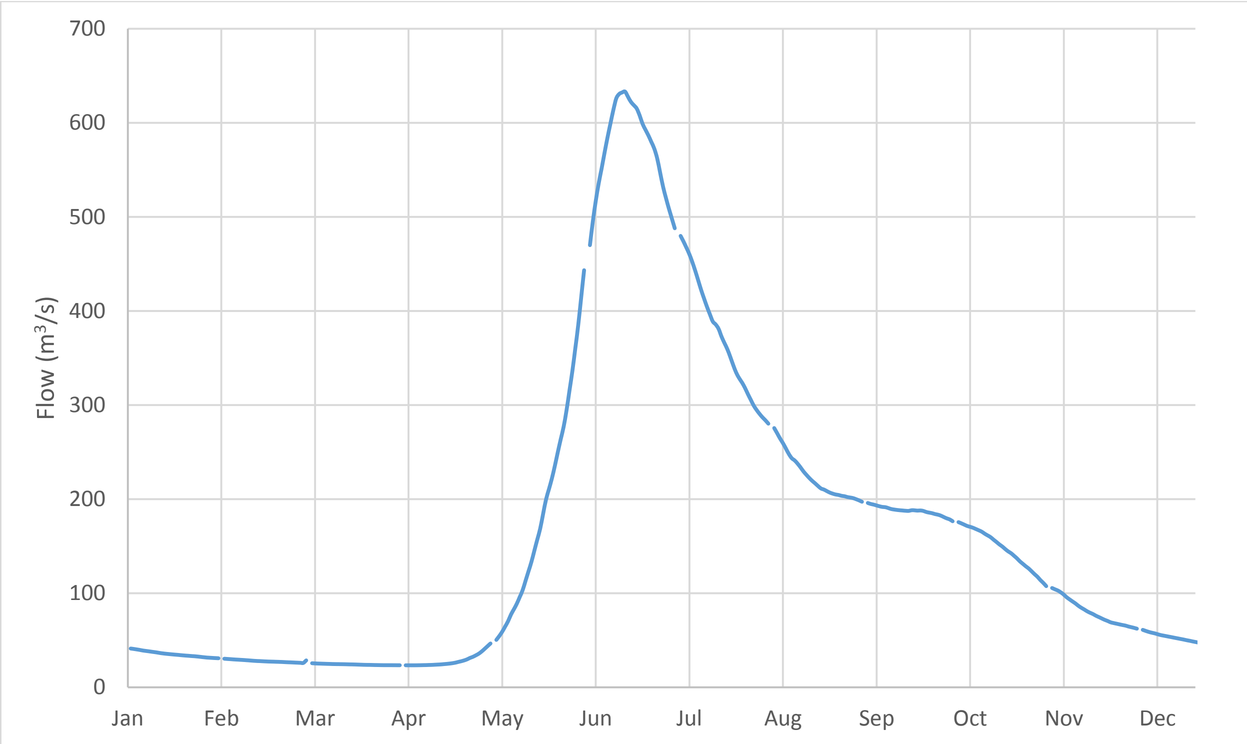


Figure C-8: NWPI Average Daily Flow

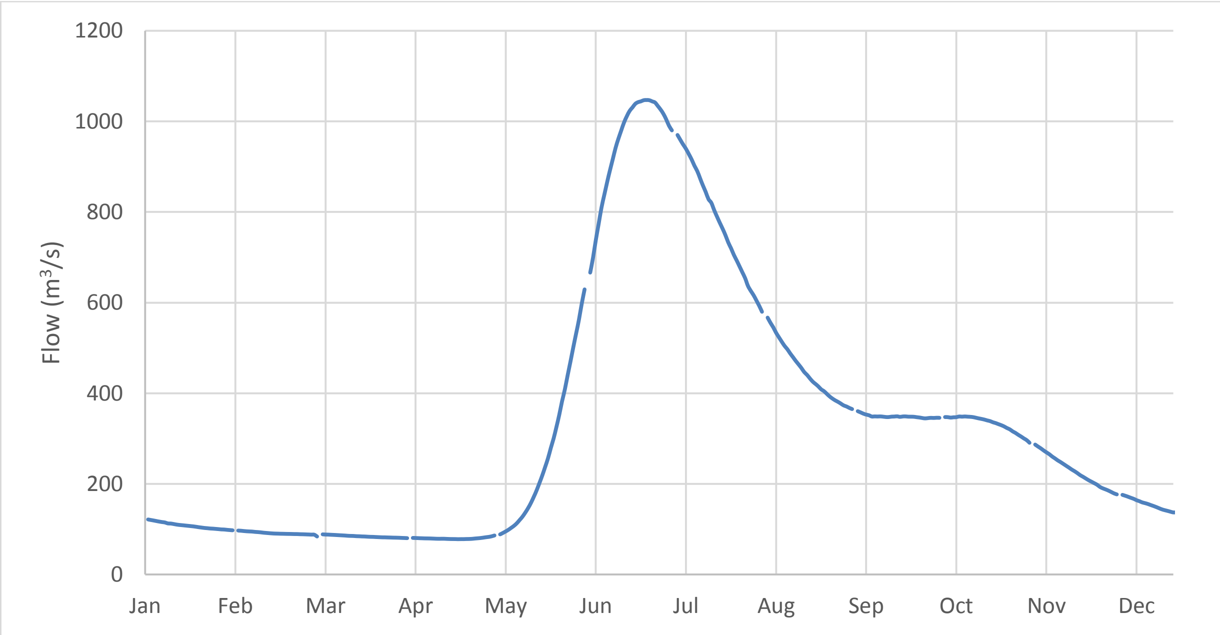


Figure C-9: Slate Rapids Average Daily Flow

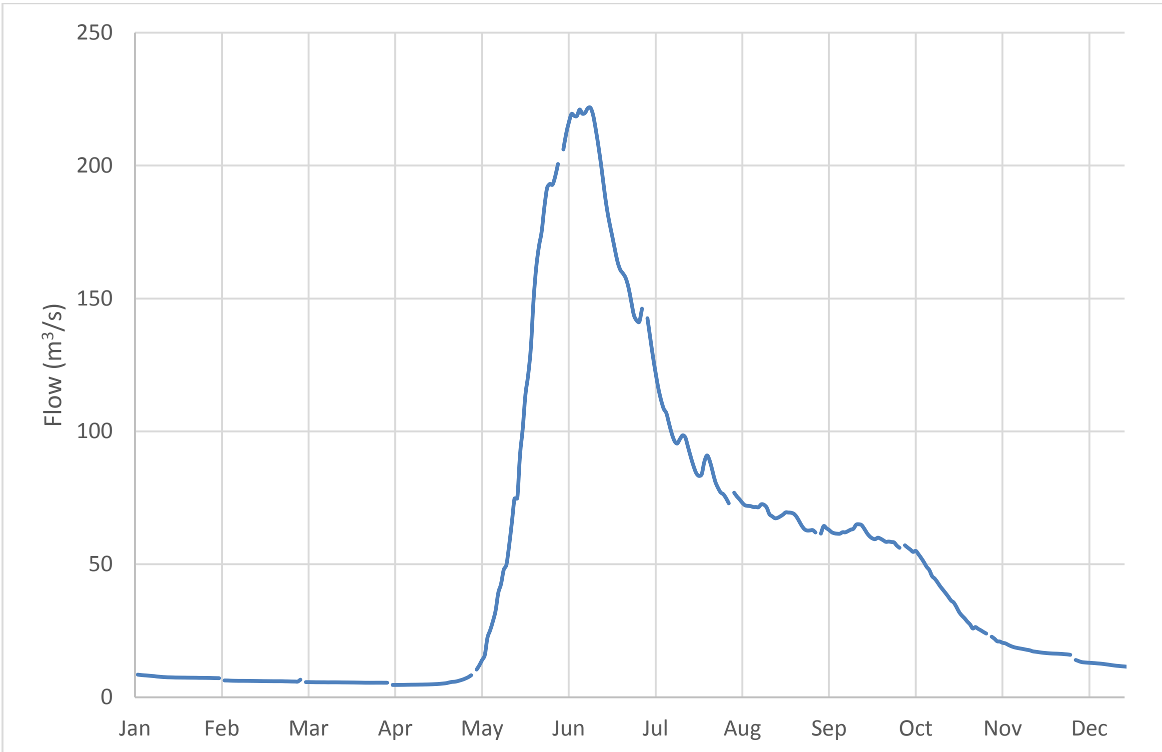


Figure C-10: Two Mile Canyon Average Daily Flow

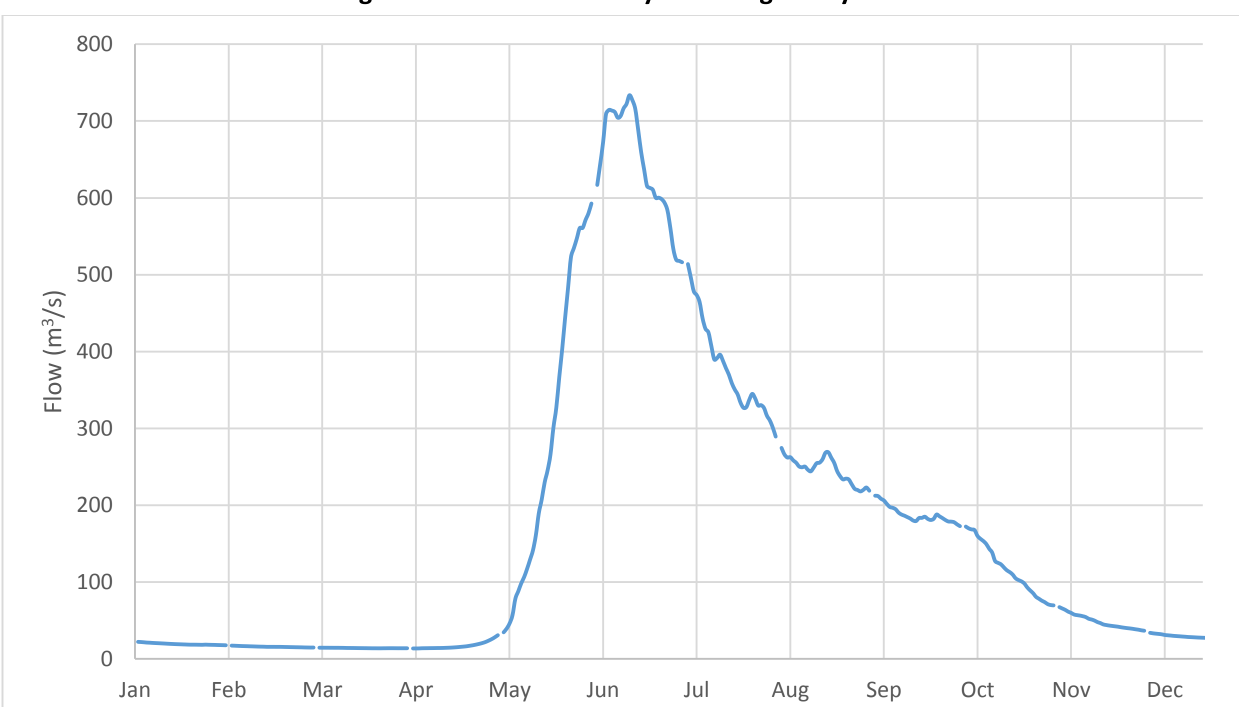
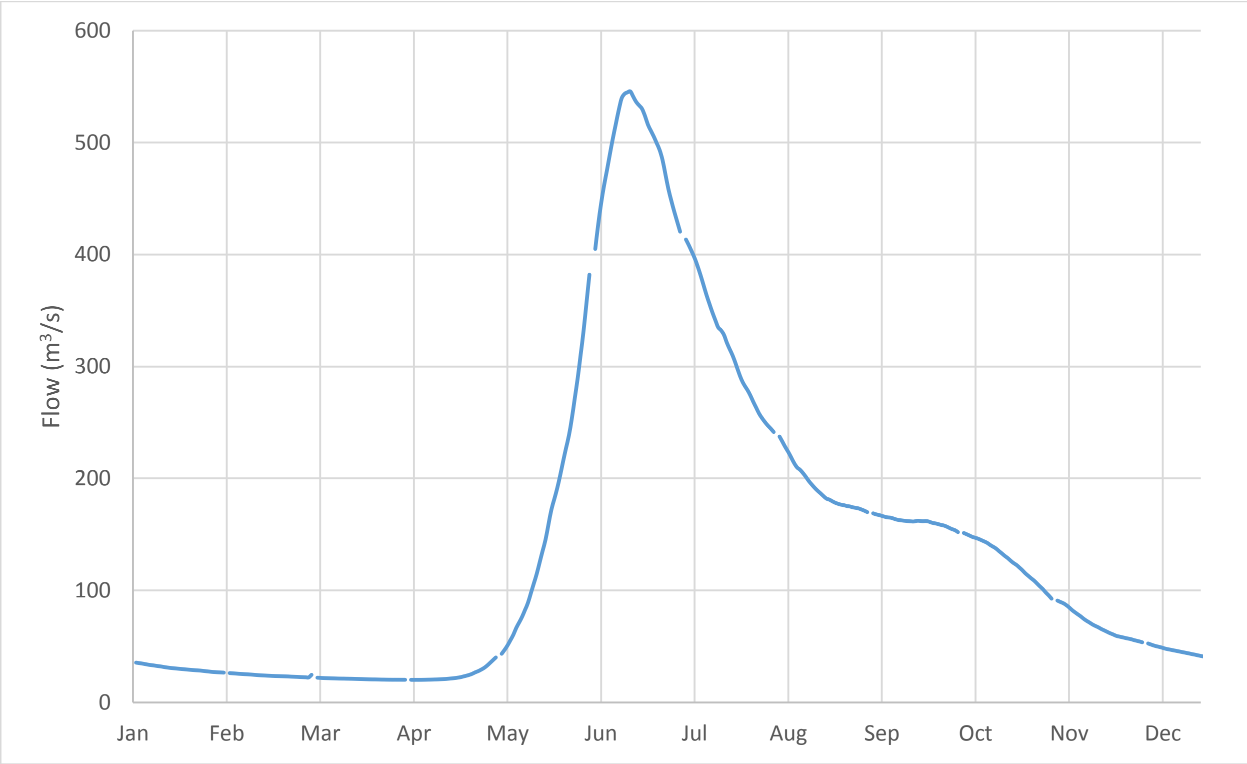


Figure C-11: Upper Canyon Average Daily Flow



C.4 Evaporation

According to the *Hydrological Atlas of Canada*, the Mean Annual Lake Evaporation for the sites of interest identified in the *Site Screening Inventory Part 1 & 2* is between 100 mm and 300 mm. To be conservative, Midgard elected to use 300 mm as the estimated annual evaporation, which represents less than 1mm a day over a period of 365 days.

Realistically, lake evaporation is higher during the summer months and lower during the winter months. At the current stage of the projects, there is no accurate way to quantify the evaporation fluctuation over the year.

While 1 mm a day is an underestimated assumption over the summer, but conservative over the winter; Midgard judges the estimation to be satisfactory for the following reasons:

- It implies conservatism during the winter which is the most desirable energy production period.

- The simulated reservoir storage shows spilled energy over the summer months, rendering the underestimation in evaporation irrelevant for the scope of this paper.

Therefore, 1 mm of daily evaporation was modeled in the storage calculation.

C.5 IFR

A preliminary assessment concluded that the Yukon Next Generation Hydro Projects lie within identified spawning areas for Pacific Salmon.

At this early stage of project development, Midgard has adopted the BC Modified-Tennant Method for the process of setting instream flows that will protect fish and fish habitat in the Yukon streams. The recommended flow thresholds are based on fish-bearing status and historic flow data.

Following the BC Modified-Tennant Method, the *BC Instream Flow Guidelines for Fish* recommends instream flows of:

1) $1.56 \times MAD^{0.63}$ during the spawning period,
2) 20% MAD during the rearing period, and,
3) 20% MAD during the incubation period.

The Normandeau Associates, Inc. analysis on the Yukon River instream flow identifies the Pacific Salmon Life Cycle presented in Table C-1.

Table C-1: Pacific Salmon Life Cycle

Month	Pacific Salmon Life Cycle
Jan	-
Feb	-
Mar	-
Apr	-
May	Rearing
Jun	Rearing
Jul	Spawning, Rearing
Aug	Spawning, Rearing
Sep	Spawning, Incubation
Oct	Spawning, Incubation
Nov	-
Dec	-

Therefore, the IFR used in the storage modelling is presented in Table C-2.

Table C-2: IFR

Month	IFR
Jan	10% of MAD
Feb	10% of MAD
Mar	10% of MAD
Apr	10% of MAD
May	Largest of 20% of MAD and 1.56 X MAD $^{0.63}$
Jun	Largest of 20% of MAD and 1.56 X MAD $^{0.63}$
Jul	Largest of 20% of MAD and 1.56 X MAD $^{0.63}$
Aug	Largest of 20% of MAD and 1.56 X MAD $^{0.63}$
Sep	Largest of 20% of MAD and 1.56 X MAD $^{0.63}$
Oct	Largest of 20% of MAD and 1.56 X MAD $^{0.63}$
Nov	10% of MAD
Dec	10% of MAD

C.6 Reservoir Storage Curves

The available water storage at each site was estimated using elevation-storage curves which approximates the volume of the reservoir at incremental elevations. The volume of the reservoirs was calculated using the average-end area method. The reservoir storage curves were obtained from the YEC Digital Elevation Model (DEM) using Geographic Information System (GIS) software.

The storage curves for the sites of interested identified in the *Site Screening Inventory Part 1 & 2* are shown below.

Figure C-12: Detour Canyon Storage Curve

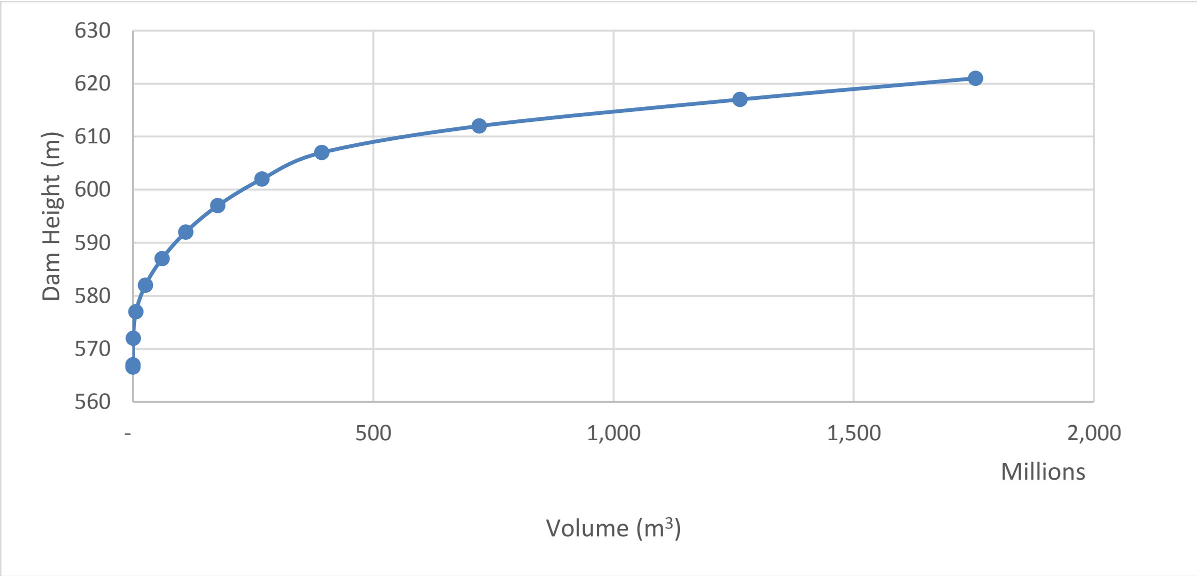


Figure C-13: False Canyon Storage Curve

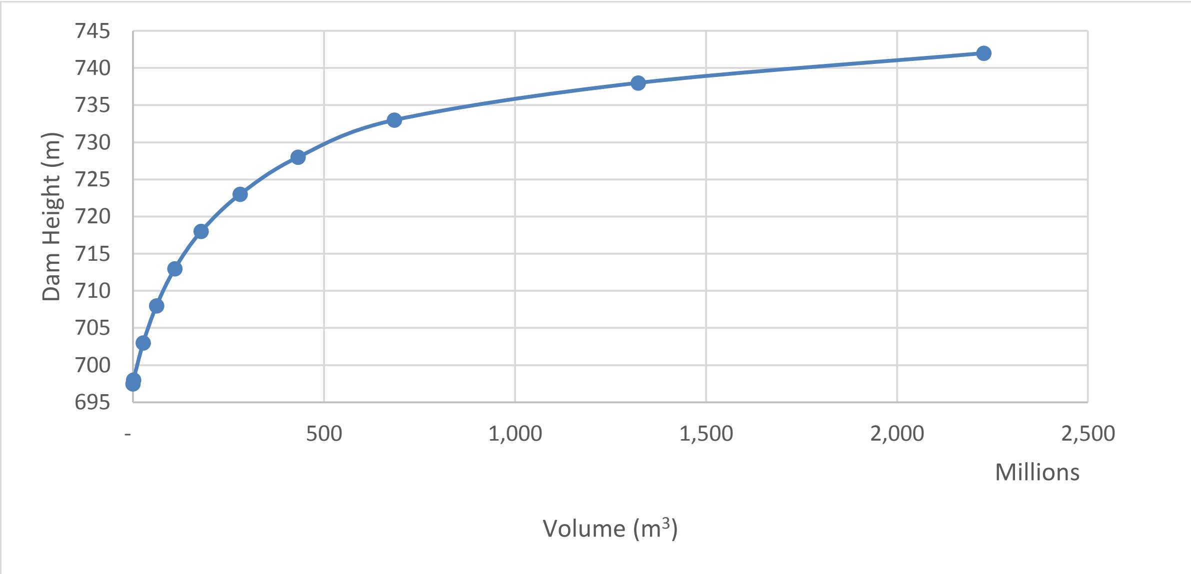


Figure C-14: Fraser Falls Storage Curve

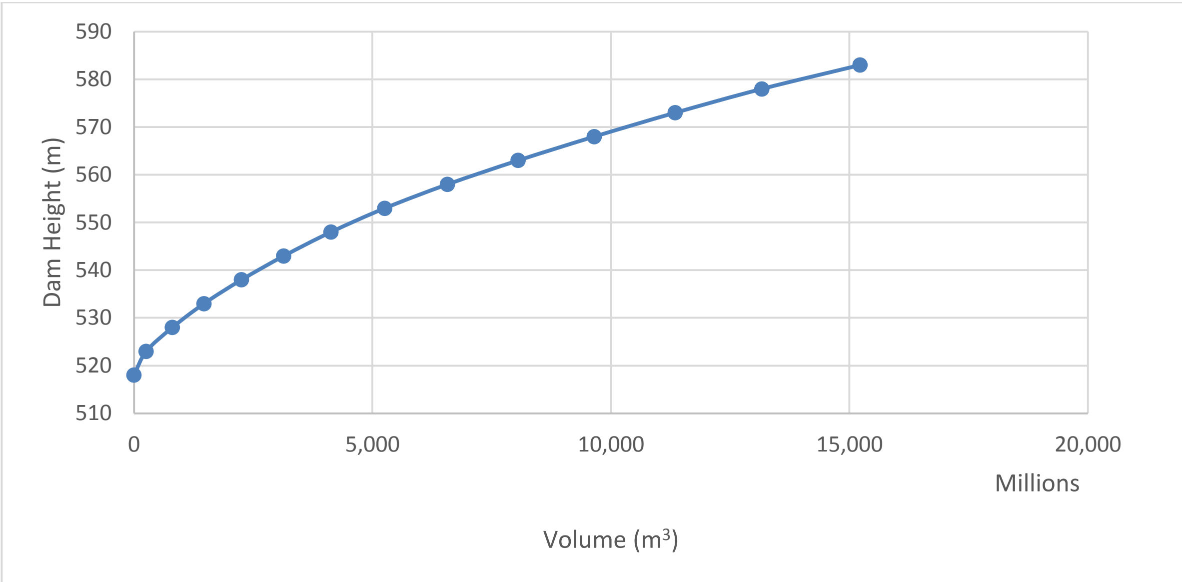


Figure C-15: Granite Canyon Storage Curve

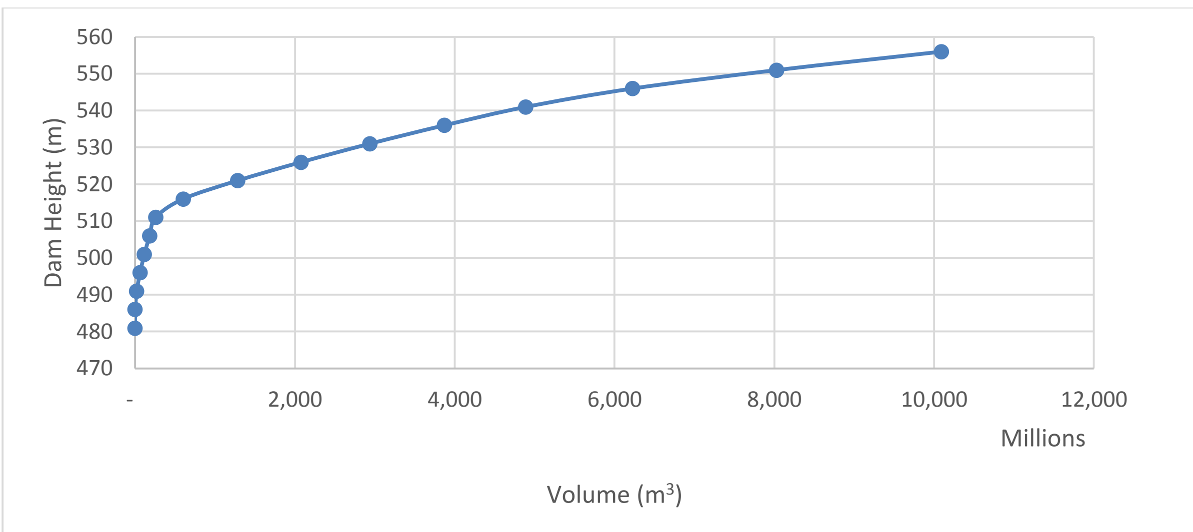


Figure C-16: Hoole Canyon Storage Curve

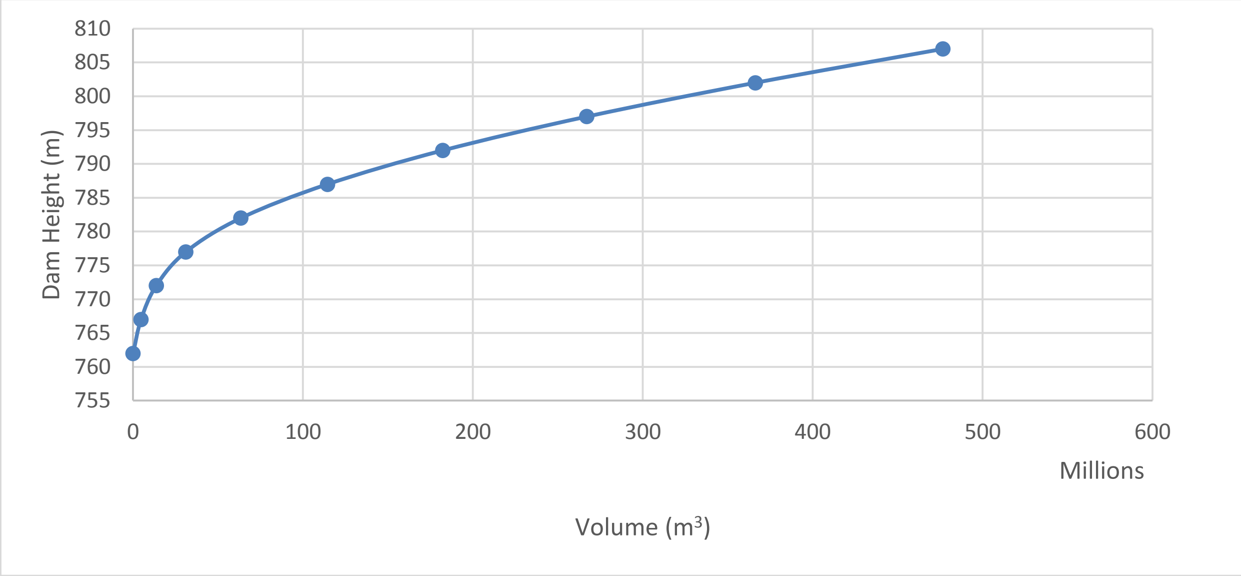


Figure C-17: Middle Canyon Storage Curve

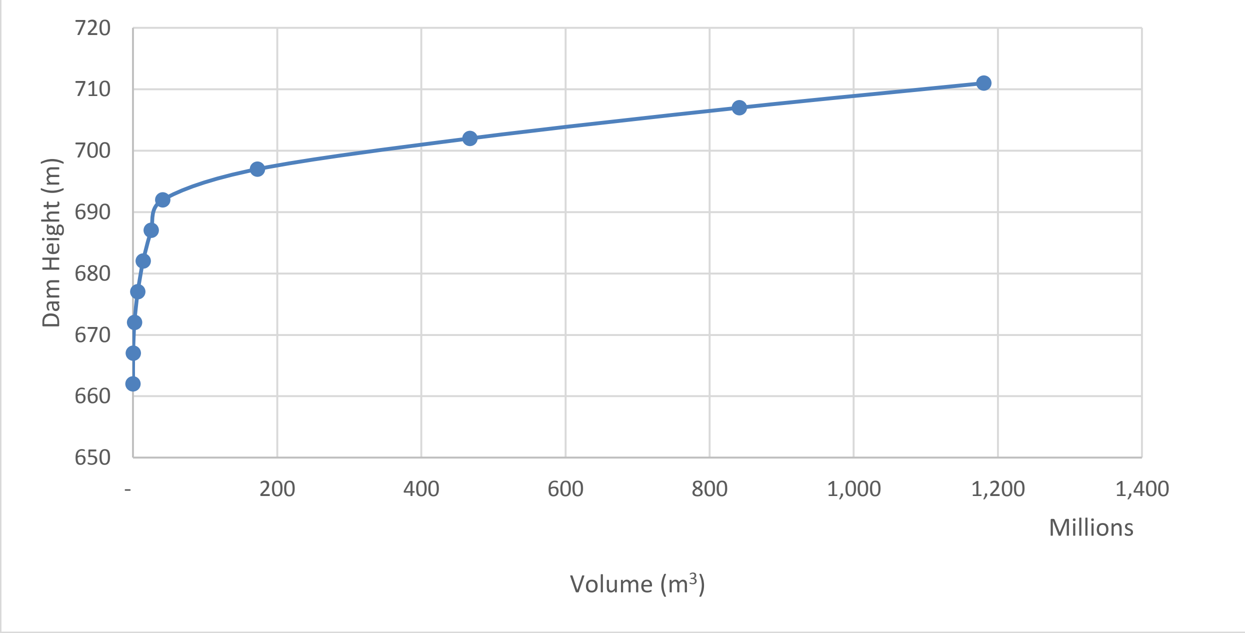


Figure C-18: NWPI Storage Curve

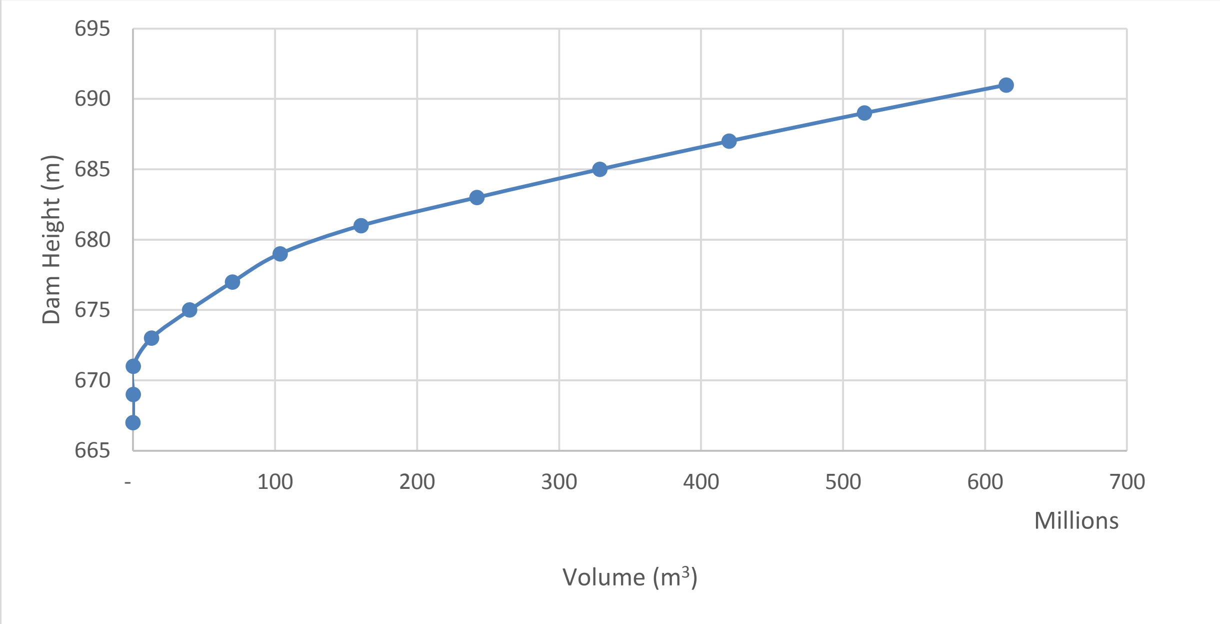


Figure C-19: Slate Rapids Storage Curve

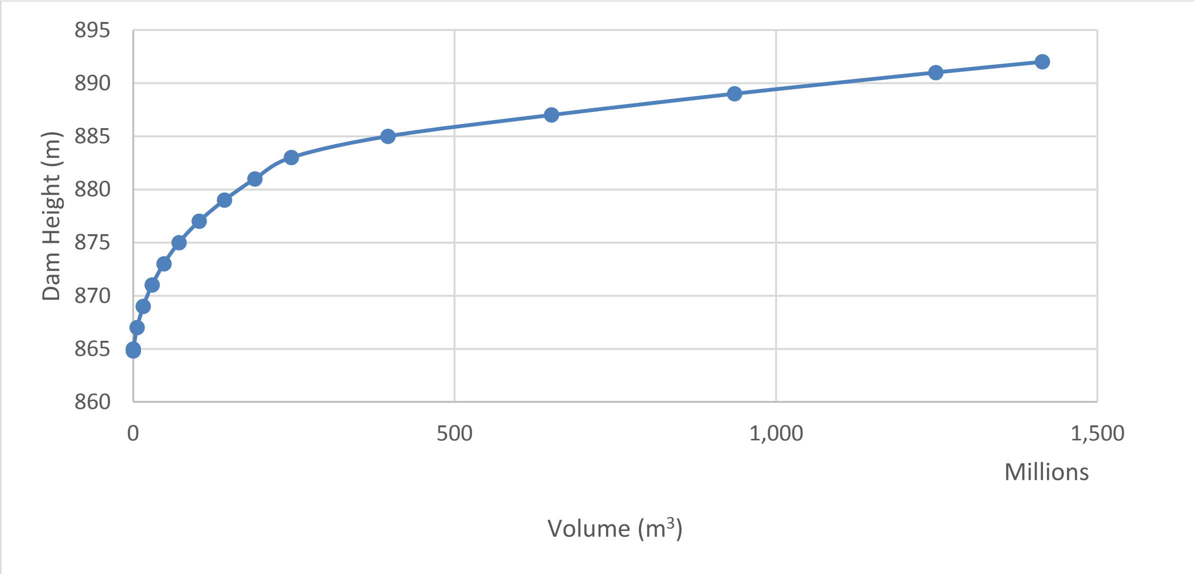


Figure C-20: Two Mile Canyon Storage Curve

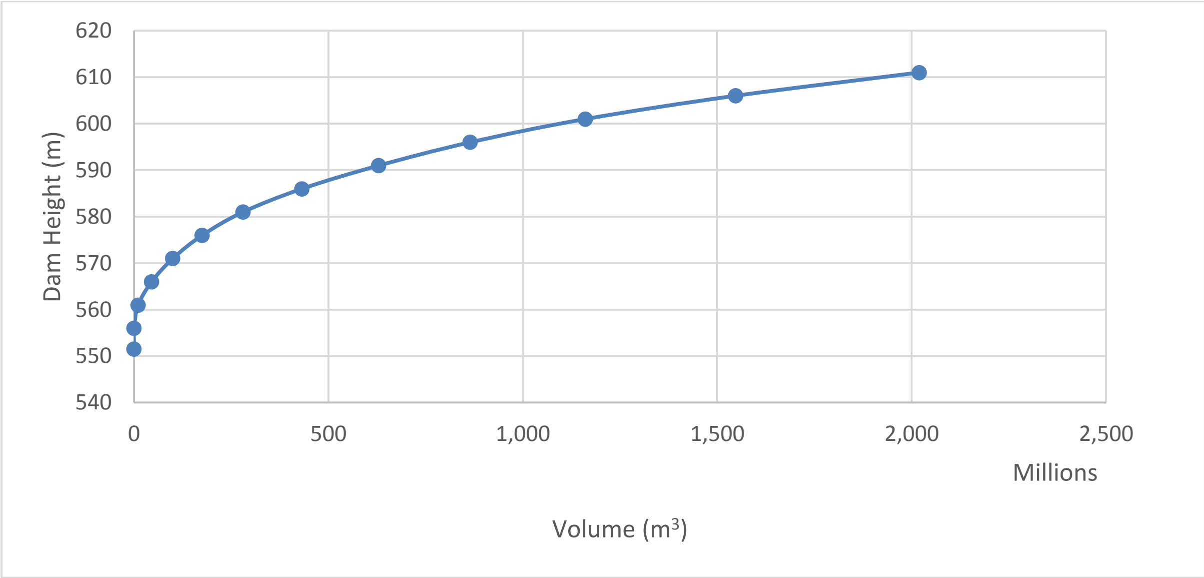
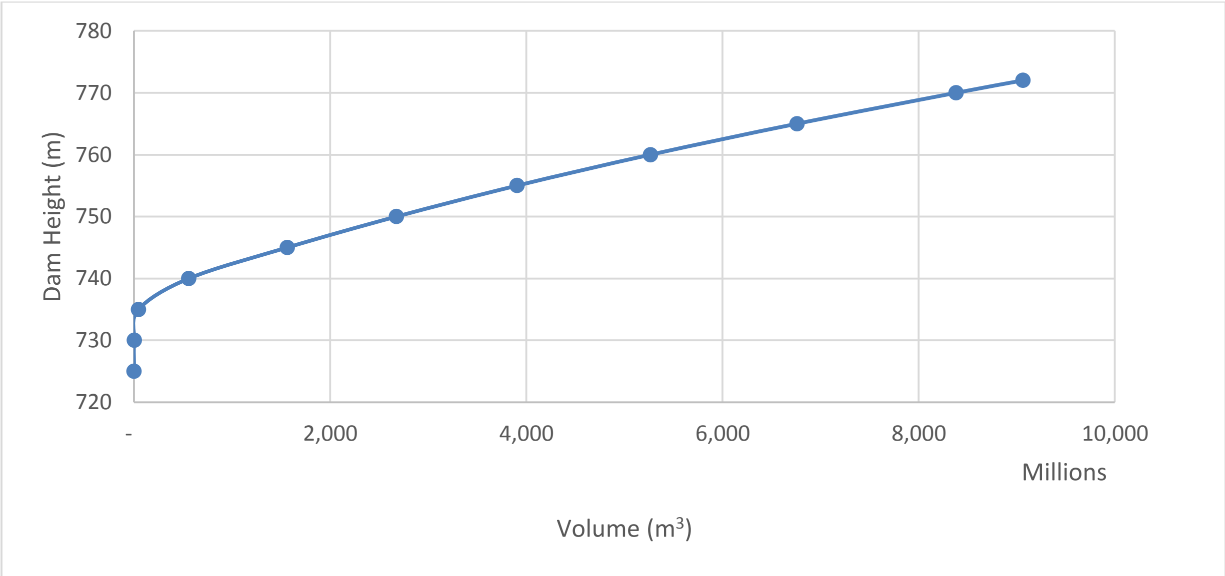


Figure C-21: Upper Canyon Storage Curve



C.7 Average Drawdown

The average drawdown is the average fluctuation of the reservoir water level from FSL over the duration of the synthetic daily flow string.

The average drawdown was kept at 5 m or less when the projects permitted. For the projects that did not provide sufficient storage to meet the energy demand gap within the 5 m drawdown operation, the average drawdown was limited to 10 m.

C.8 Hydraulic Head Losses

The maximum hydraulic head losses were assumed to be 5% of the gross head at design flow. The hydraulic head losses for lower flows were estimated as:

$$Head\ Loss = 5\% \times (FSL - TWL)\left(\frac{Q}{Q_D}\right)^2$$

Where Q_D is the plant design flow.

C.9 Turbine and Generator Efficiencies

Turbine and generator efficiencies were estimated using the Hydrohelp 1.6 software. Hydrohelp is a turbine selection software that helps promoters and designers choose the most appropriate turbine for a given site. The program assesses the operating envelope of all commercially available turbines, discards unsuitable turbines and selects the most appropriate based on approximate cost and other parameters. The program also provides details on the selected turbine, such as an efficiency curve, runner size and setting.

C.10 Transmission and Transformer Losses

A constant transformer efficiency of 99.5% and constant transmission line losses of 1% were assumed.

C.11 Scheduled and Unscheduled Outages

Constant 3% yearly scheduled and unscheduled outages were assumed.

C.12 Station Usage

A constant station usage of 250kW was assumed.

Appendix D: Gap Closure Calculation

A project's gap closure is its ability to generate the desired amount energy at the desired time. For the Yukon, the month with the highest energy value is March and the month with the lowest energy value is July.

A project gap closure expressed as a percentage and is calculated as shown below:

$$Gap\ Closure = \frac{\sum_{Jan}^{Dec} Energy\ Output\ \times Energy\ Value}{\sum_{Jan}^{Dec} Energy\ Demand\ \times Energy\ Value}$$

The monthly energy value is given in Table D-1.

Table D-1: Energy Value

Month	Energy Value (%)
Jan	13.1%
Feb	10.5%
Mar	14.4%
Apr	10.3%
May	7.1%
Jun	5.8%
Jul	3.9%
Aug	4.6%
Sep	4.8%
Oct	5.9%
Nov	8.8%
Dec	10.9%

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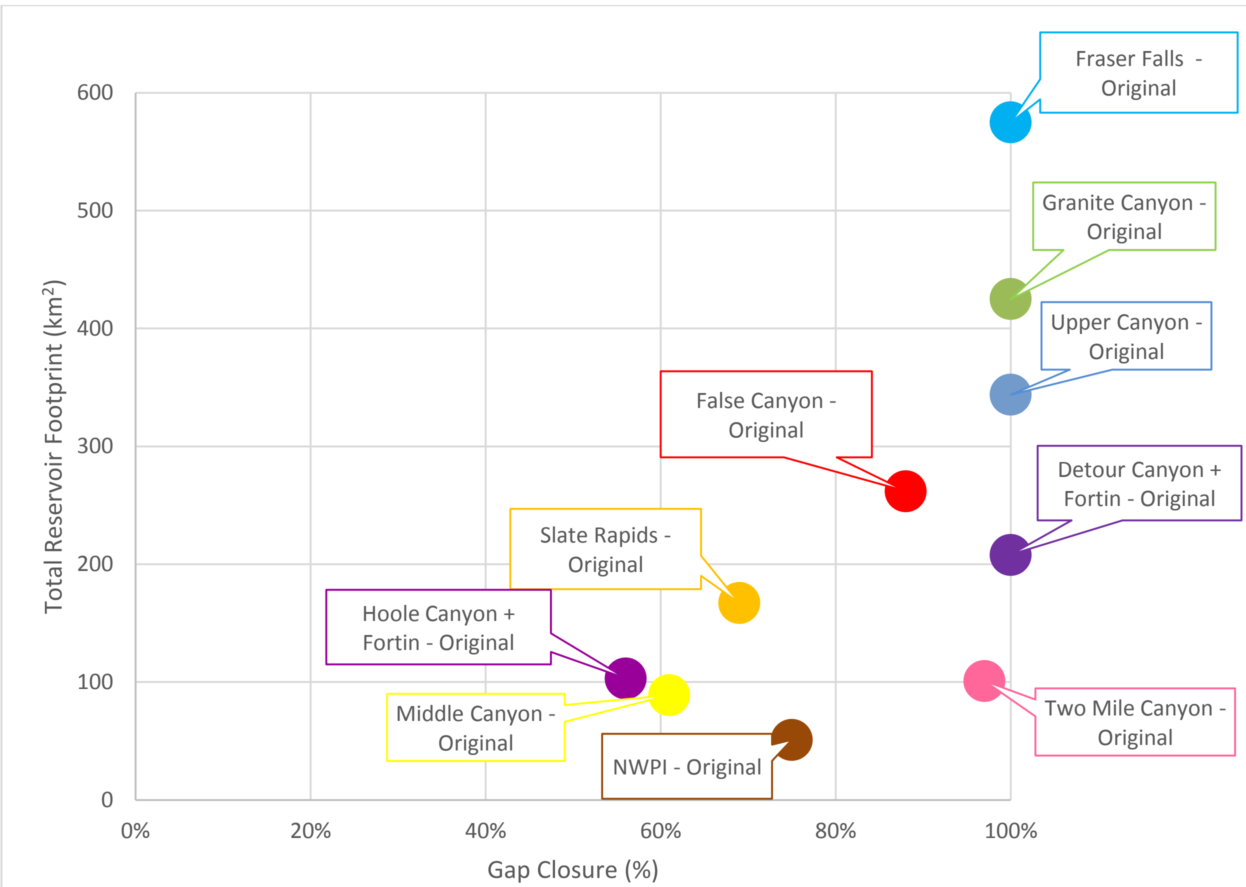
Appendix E: Project Gap Closures and Total Reservoir Footprints Scatter Plots

In the Scalability Assessment Report, the potential projects were studied based on their Incremental Reservoir Footprint and Gap Closures. The projects were also studied based on the Total Reservoir Footprints and the results of the assessment are shown in this section.

The ten project sites identified at the end of the *Site Screening Inventory (Part 2)* were assessed based on their Gap Closure and Total Reservoir Footprint, and the results plotted Figure E-1.

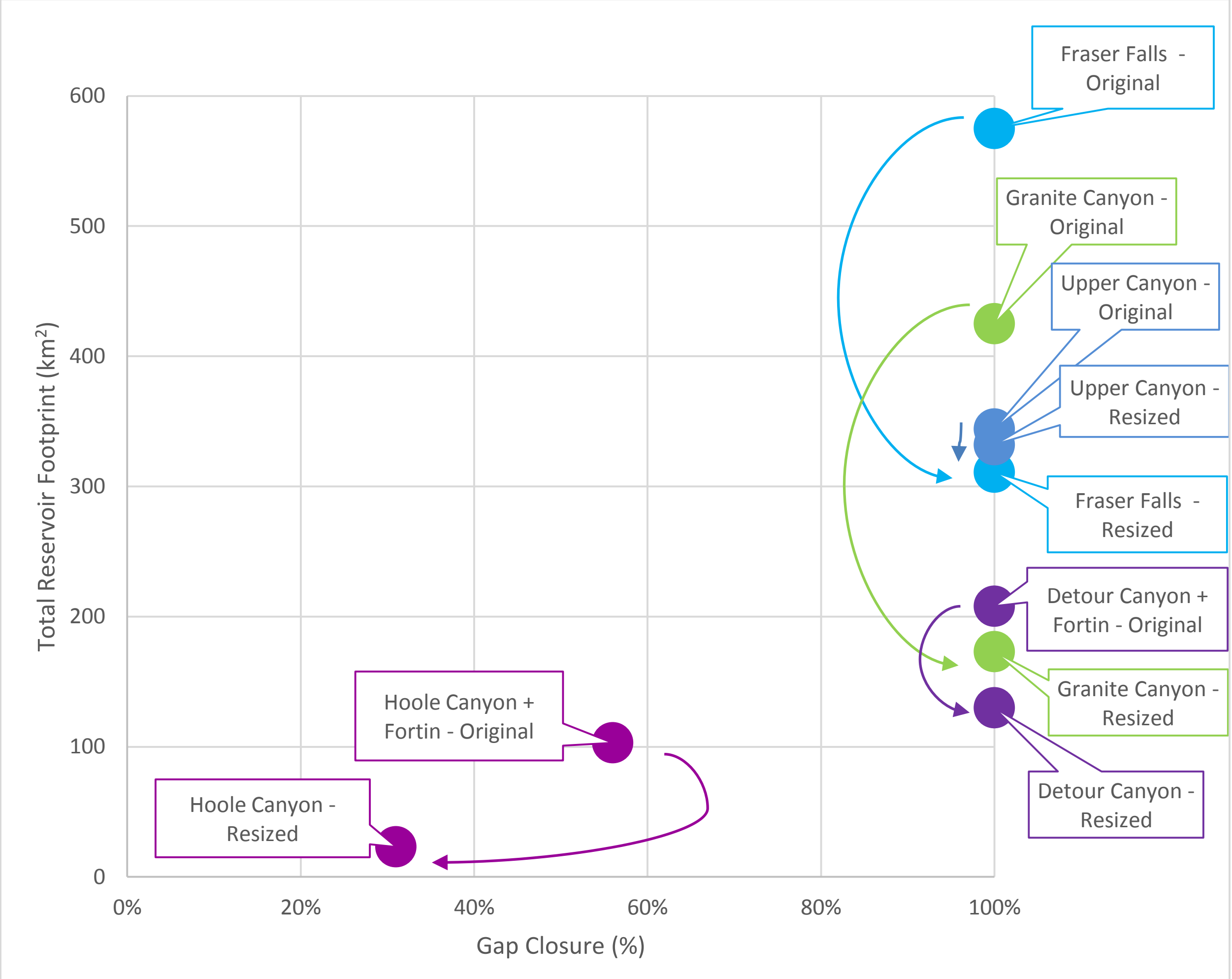
Figure E-1: Original Project Total Reservoir Footprint vs. Gap Closure



Since some of the original project designs appear oversized when compared to the forecast Baseline 2065 energy need, the projects were re-analyzed to identify if standalone project configurations exist that could provide the same Gap Closure score for a smaller Total Reservoir Footprint.

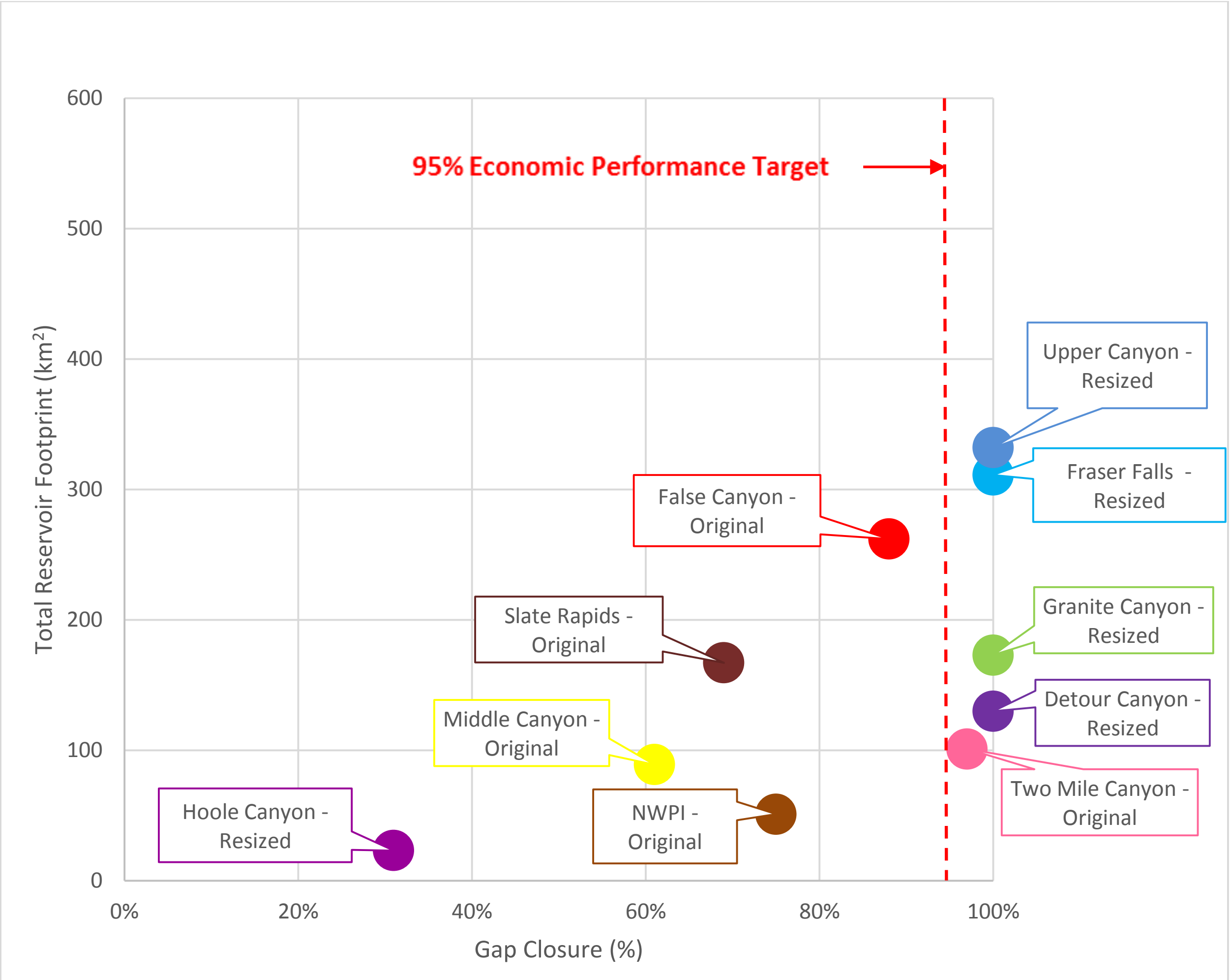
As a result of this resizing evaluation Fraser Falls, Granite Canyon, Upper Canyon, Detour Canyon and Hoole Canyon were resized as shown in Figure E-2.

Figure E-2: Project Resizing - Total Reservoir Footprint vs. Gap Closure



The resized and original project configurations are shown in Figure E-3.

Figure E-3: Standalone: Resized Total Reservoir Footprint vs. Gap Closure

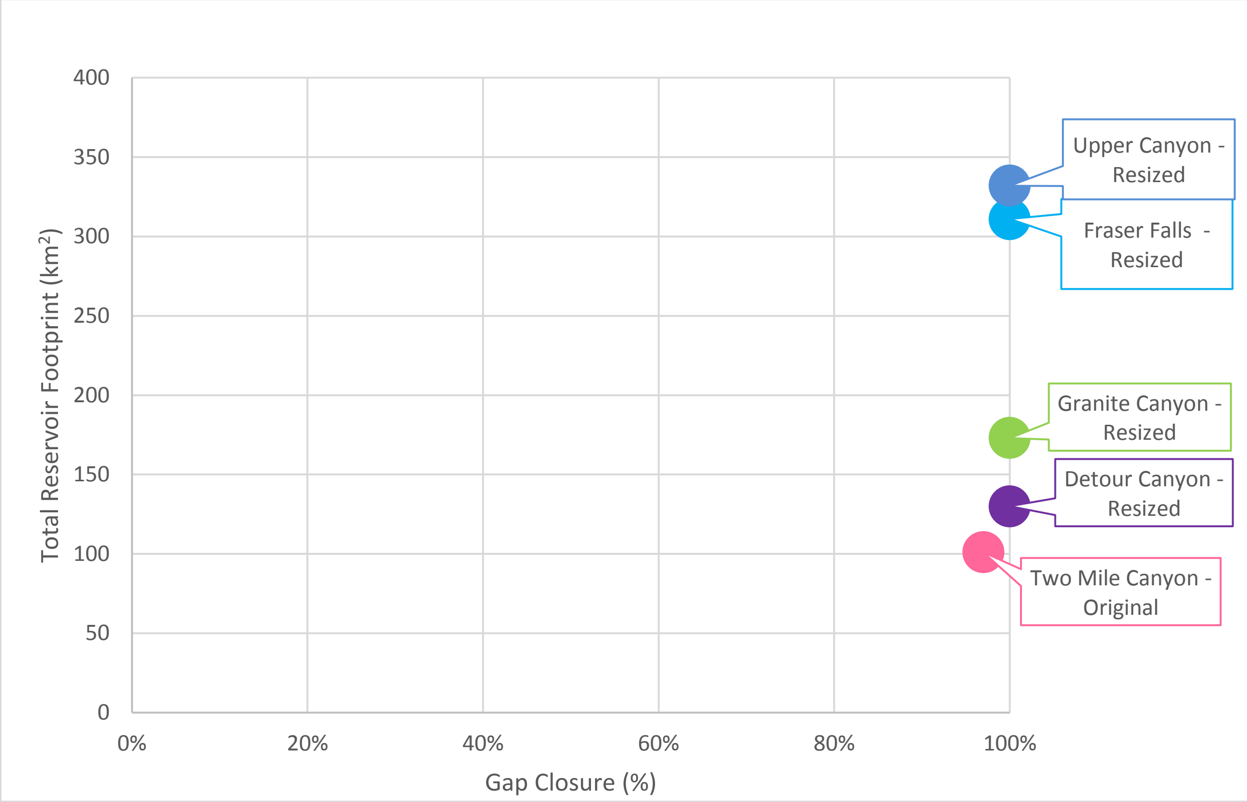


Hoole Canyon, Middle Canyon, Slate Rapids, NWPI, and False Canyon do not achieve the minimum 95% Gap Closure target. Therefore they were removed from further consideration as potential projects.

Upper Canyon, Fraser Falls, Granite Canyon, Detour Canyon and Two Mile Canyon met the minimum 95% Gap Closure and are retained for further analysis as part of the scalability assessment.

In summary, the standalone projects that remain at the end of Step 1 of the scalability assessment are shown in Figure E-4.

Figure E-4: Step 1 – Resizing – Retained Projects – Total Reservoir Footprint vs. Gap Closure



The Total Reservoir Footprint vs. Gap Closure of the cascaded layouts remaining after Screen 1 and 2 of Section 4.2: Cascade Screens are shown in Figure E-5: Cascaded Layouts Total Reservoir Footprints vs. Gap Closure

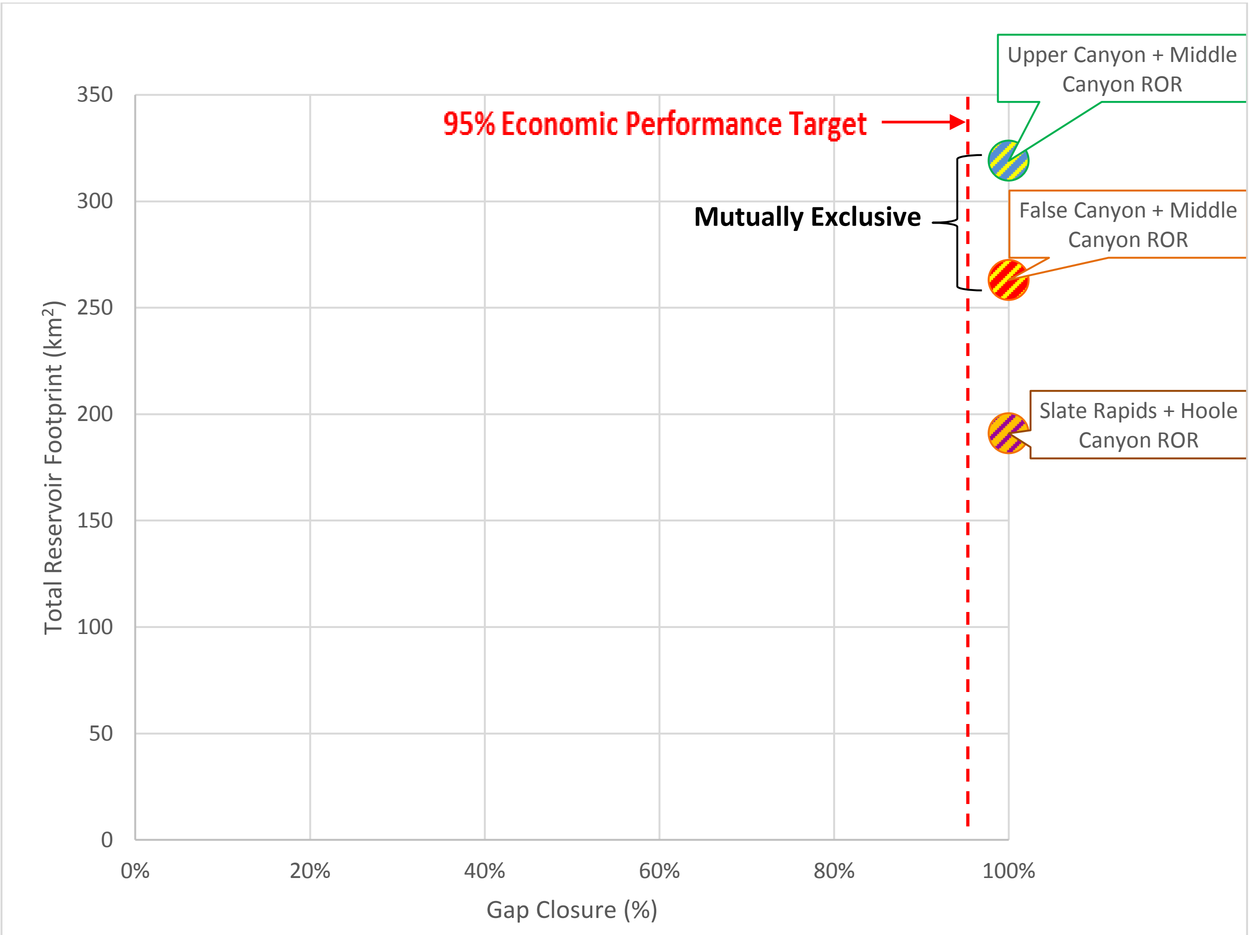
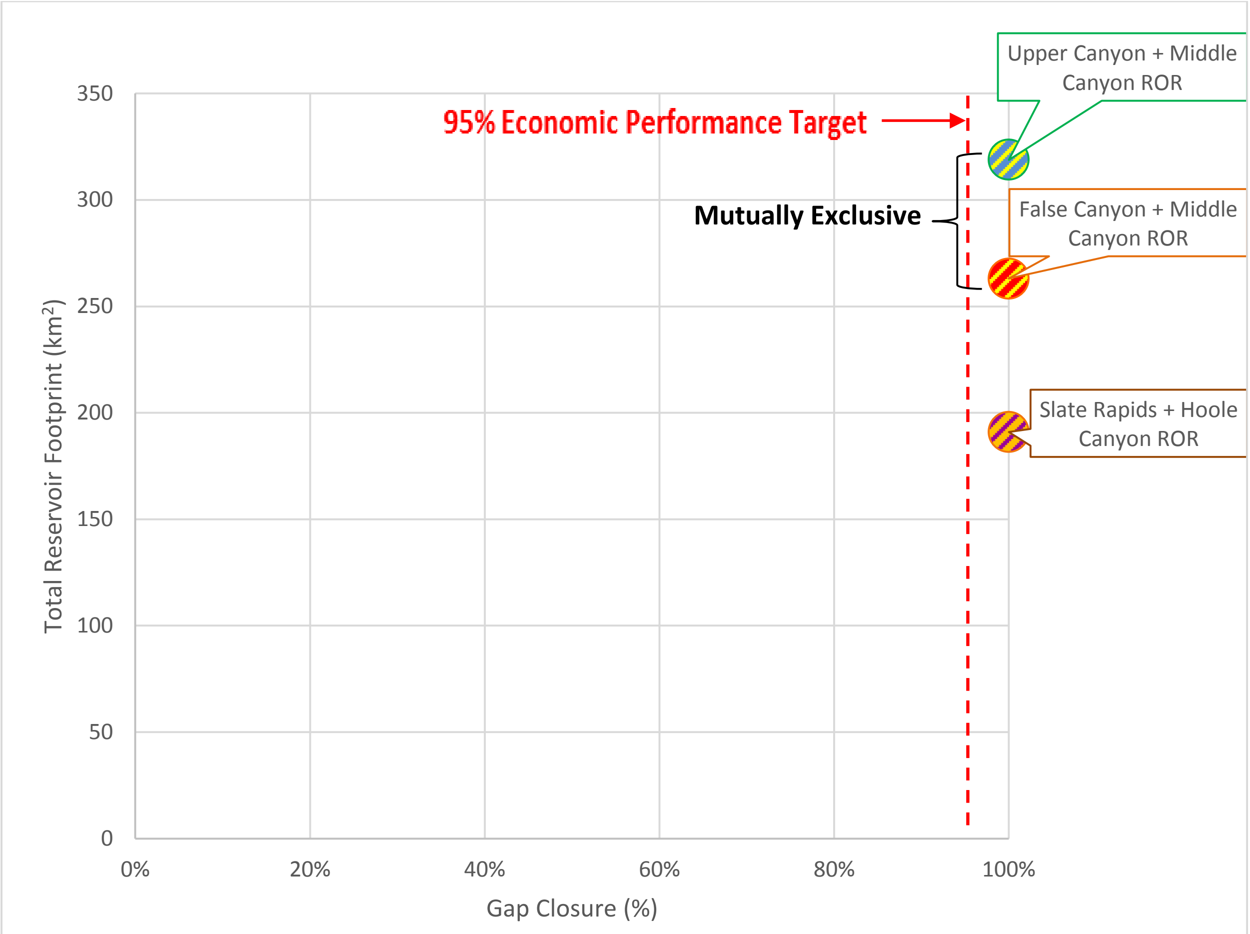


Figure 18

Figure E-5: Cascaded Layouts Total Reservoir Footprints vs. Gap Closure



All of the cascaded layouts are able to achieve the minimum 95% Gap Closure. However, False Canyon + Middle Canyon ROR and Upper Canyon + Middle Canyon ROR are mutually exclusive cascades because Upper Canyon and False Canyon use the same water storage reservoir. Since the cascaded layout of False Canyon + Middle Canyon ROR has the lower footprint, then that cascade becomes the preferred cascade layout. Therefore, the cascaded layout of Upper Canyon + Middle Canyon ROR is discarded from the scalability discussion.

The retained projects from Step 2 of the scalability assessment process are shown in Figure E-6.

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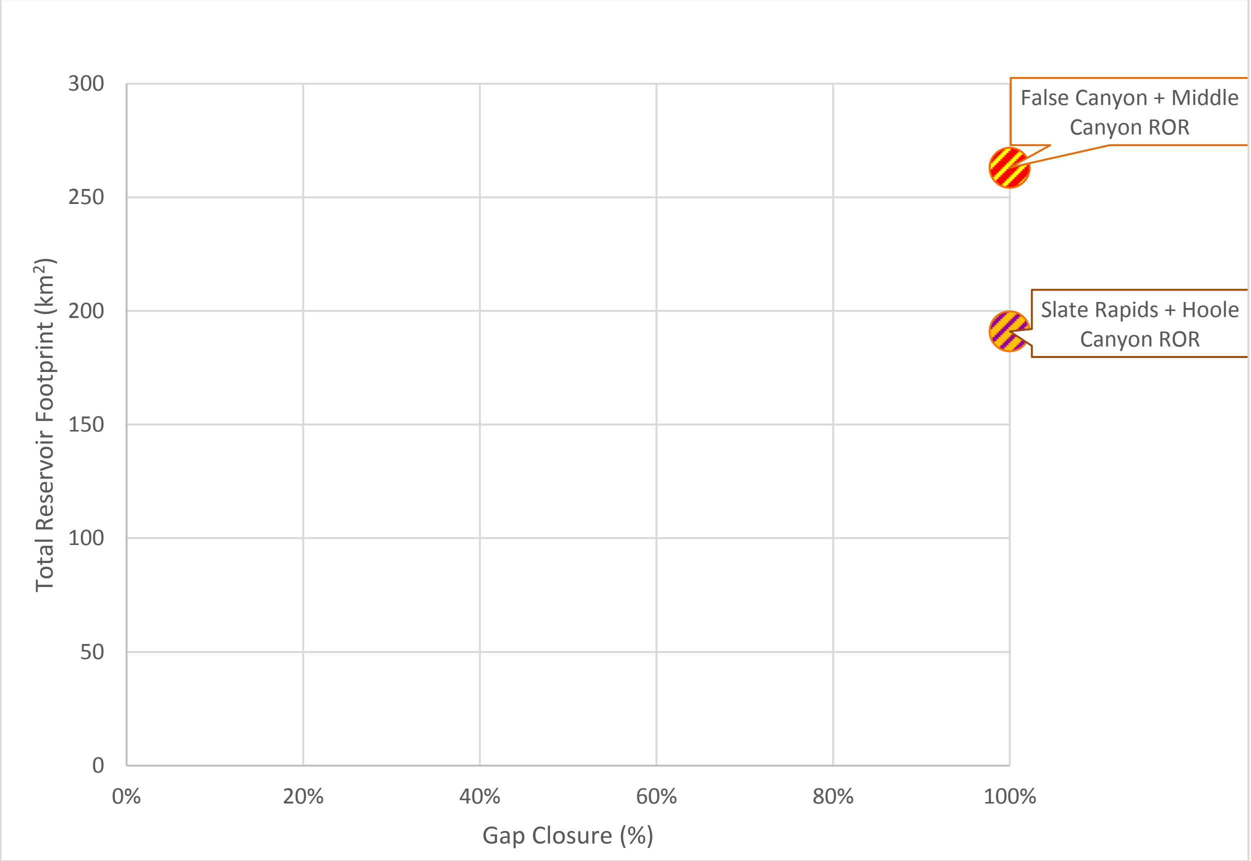
Figure E-6: Step 2 – Cascading – Retained Projects – Total Reservoir Footprint vs. Gap Closure



The project configurations at the end of Step 1 and Step 2 of the scalability assessment process are shown in Figure E-7.

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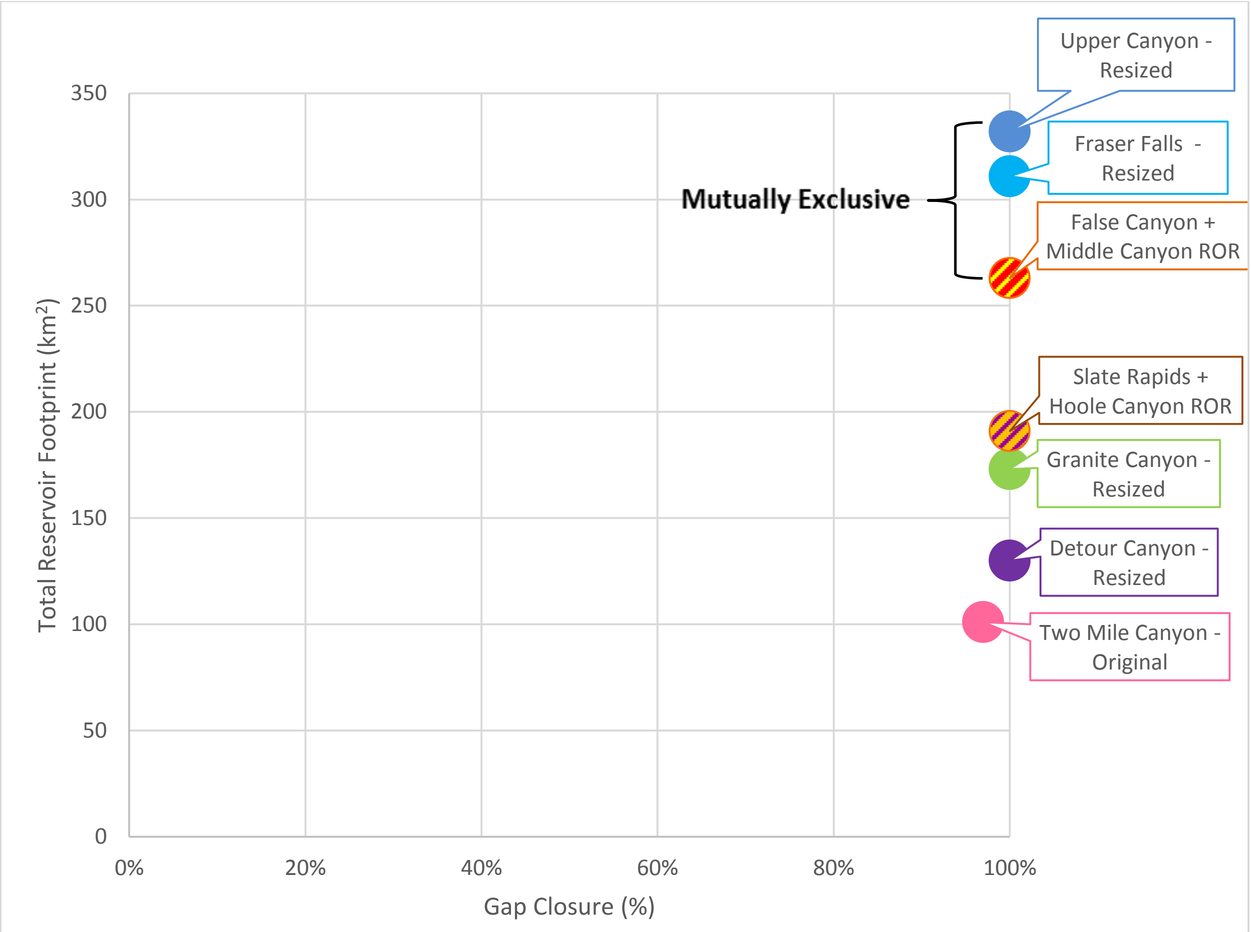
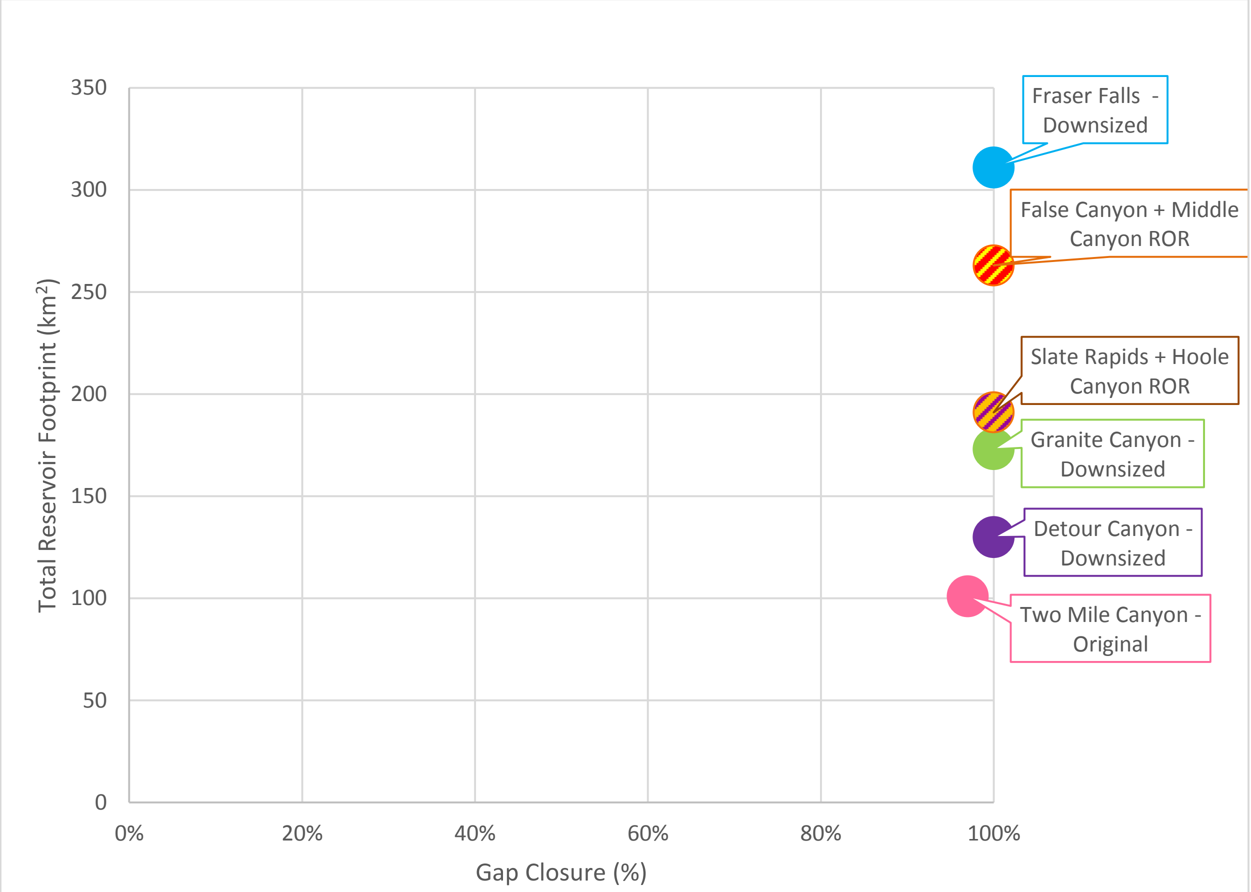
Figure E-7: Retained Project Layouts from Steps 1 & 2 – Total Reservoir Footprint vs. Gap Closure



As mentioned earlier, Upper Canyon and False Canyon are mutually exclusive. Therefore, the cascaded layout of False Canyon + Middle Canyon ROR may not coexist with Upper Canyon. Therefore, since the cascaded layout of False Canyon + Middle Canyon has a smaller footprint than Upper Canyon as a standalone project, Upper Canyon is removed from the scalability discussion.

The remaining projects at the end of Step 3 Reconciliation are shown in Figure E-8.

Figure E-8: Step 3 – Reconciliation – Scalability Short List – Total Reservoir Footprint vs. Gap Closure



Appendix F: Project Gap Closures and Reservoir Footprints

F.1 Standalone Projects

The standalone projects' Gap Closures and reservoir footprints are shown below. The blue line represents the Reservoir Footprint vs. Gap Closure and the red line represents the Dam FSL Height vs. Gap Closure. Each point on a line represents a different FSL height of the dam for every 1 m increment.

Figure F-1: Detour Canyon Reservoir Footprint vs. Gap Closure

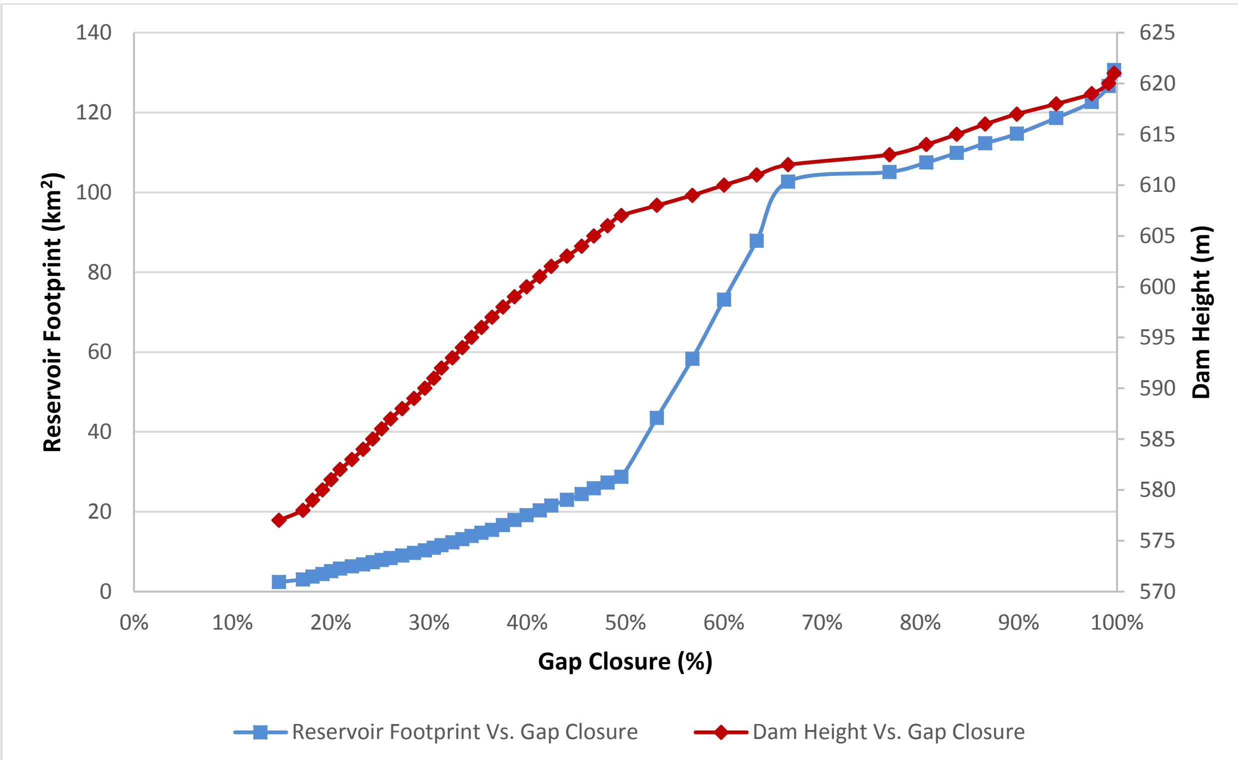


Figure F-2: False Canyon Reservoir Footprint vs. Gap Closure

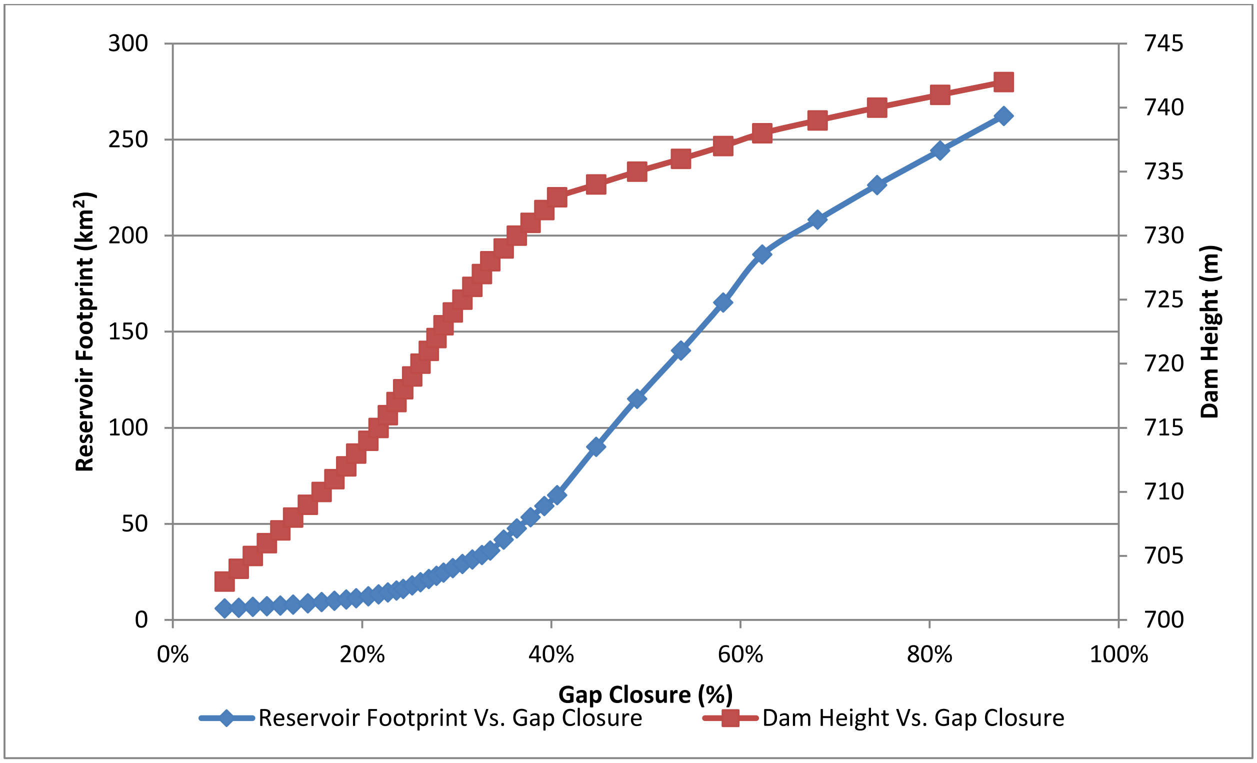


Figure F-3: Fraser Falls Reservoir Footprint vs. Gap Closure

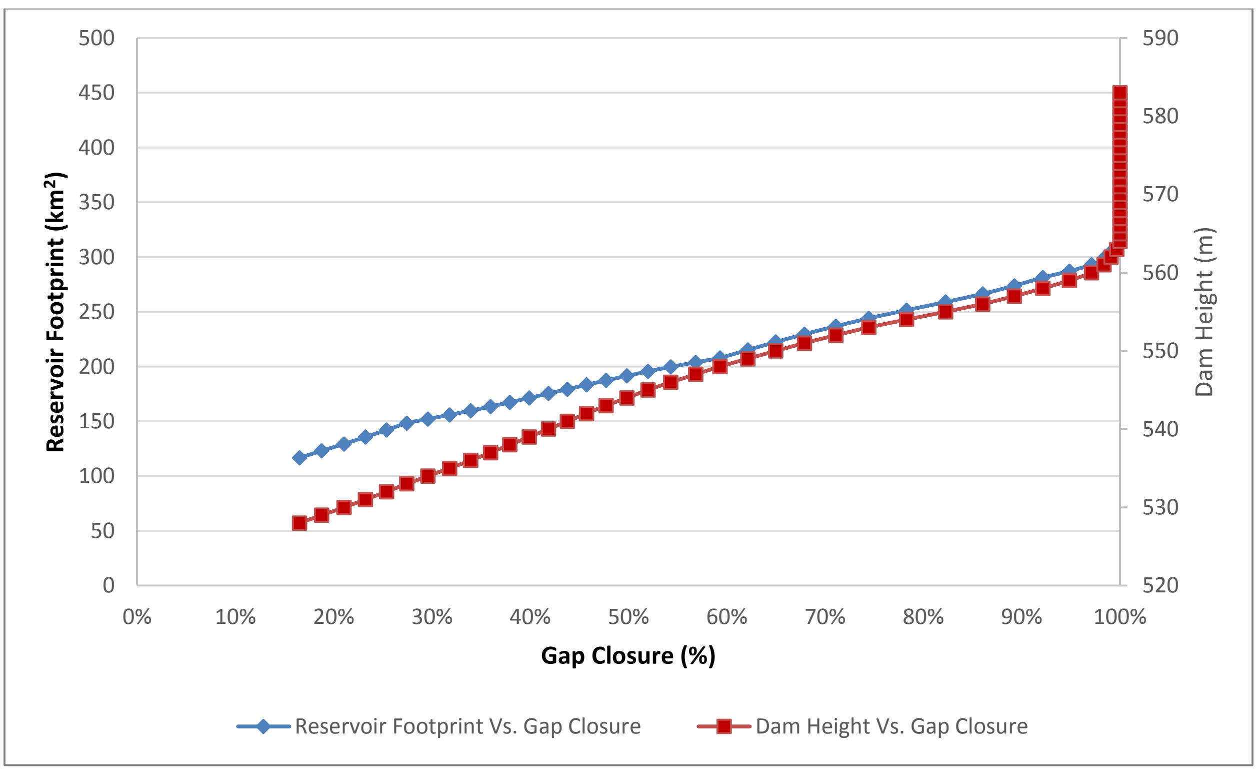


Figure F-4: Granite Canyon Reservoir Footprint vs. Gap Closure

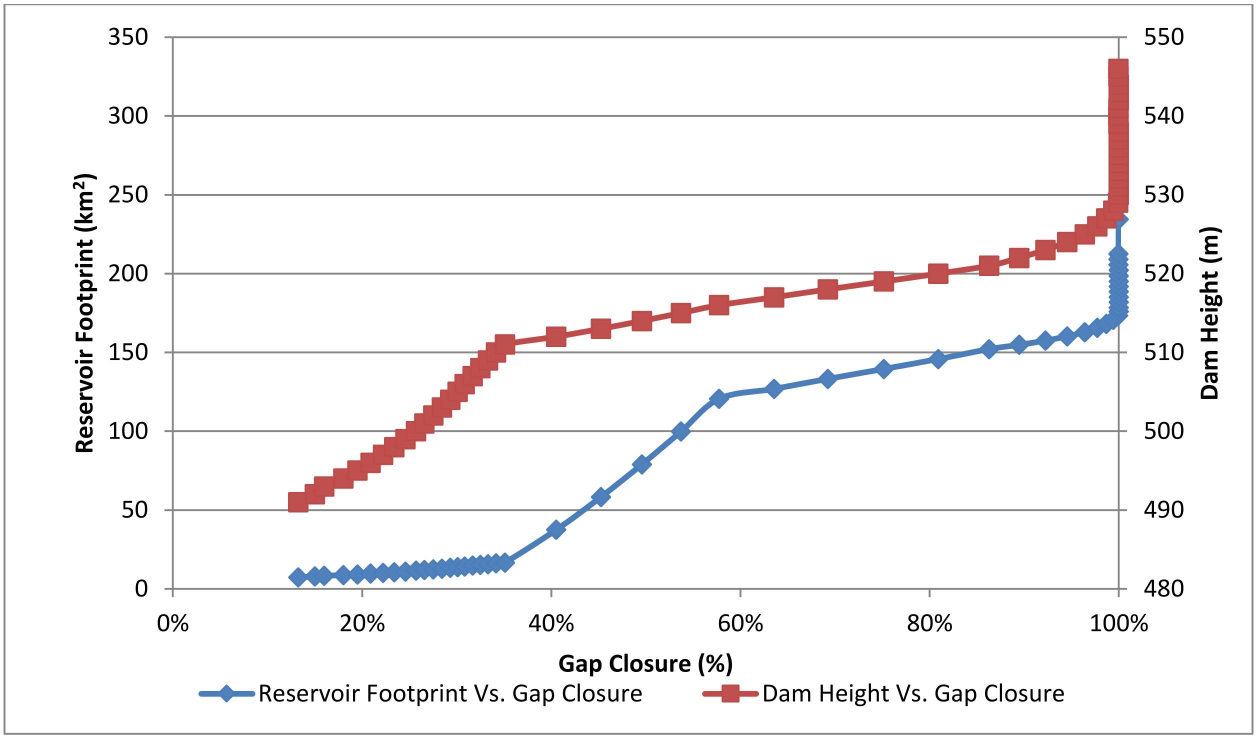


Figure F-5: Hoole Canyon Reservoir Footprint vs. Gap Closure

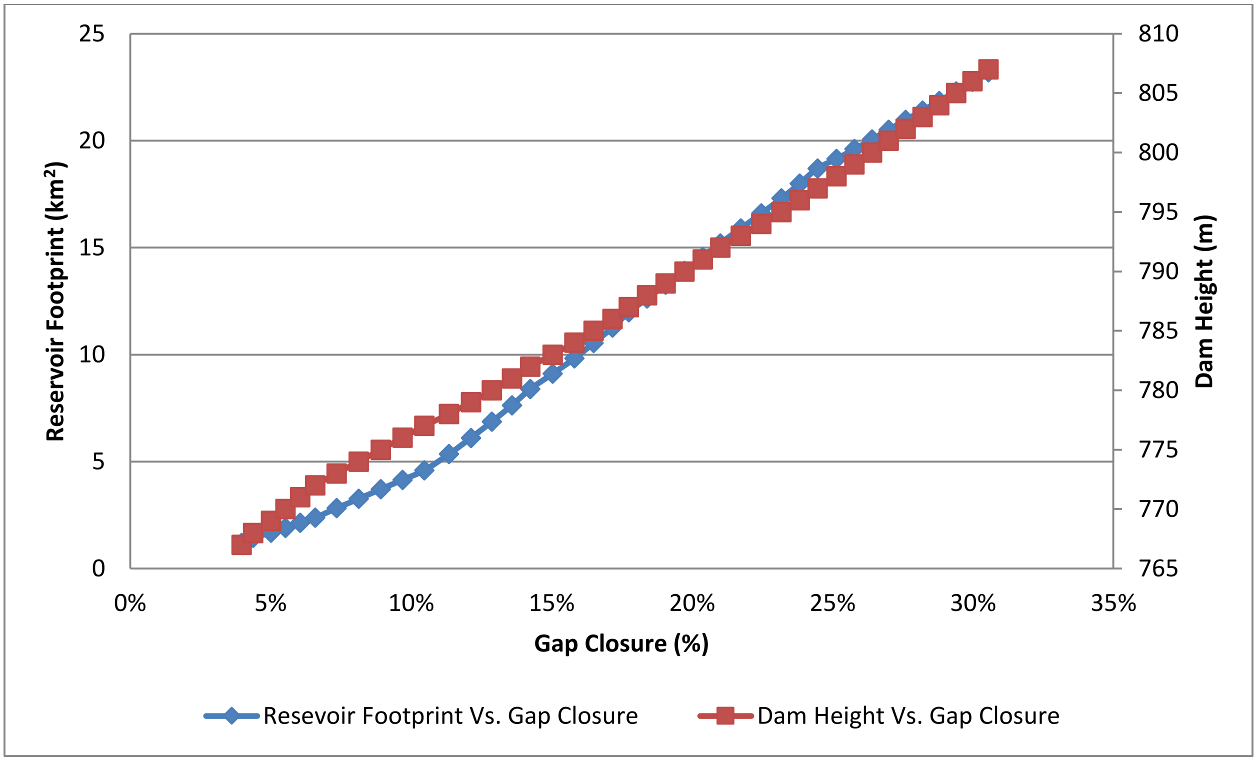


Figure F-6: Middle Canyon Reservoir Footprint vs. Gap Closure

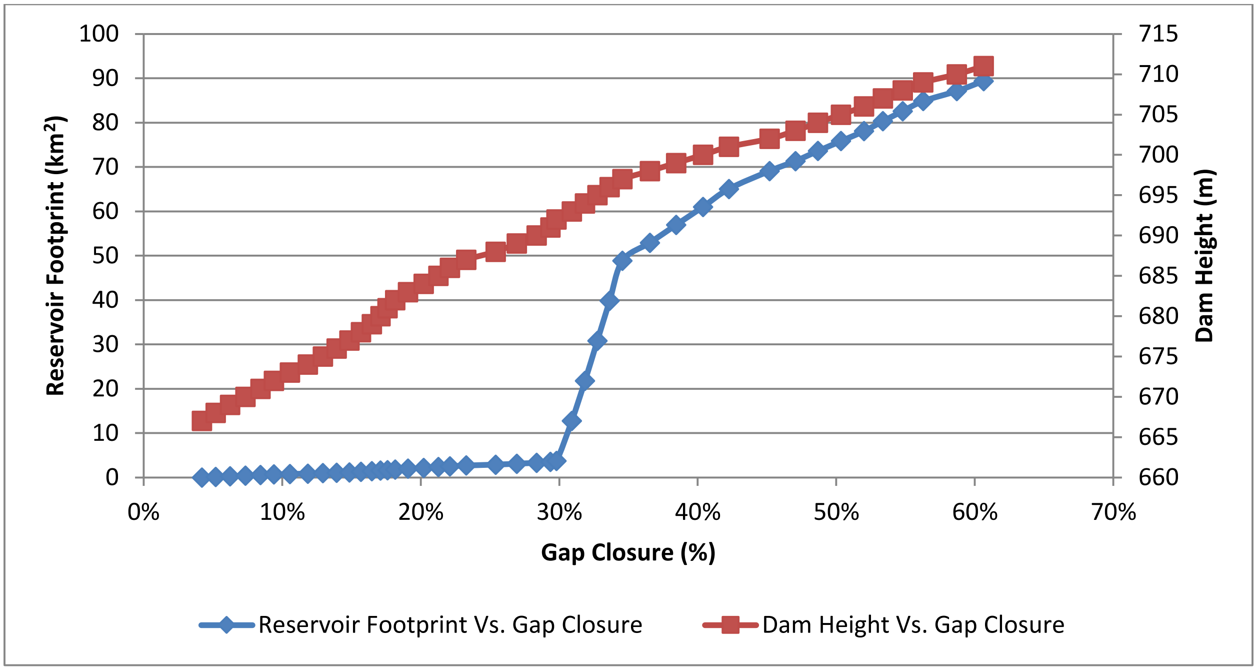


Figure F-7: NWPI Reservoir Footprint vs. Gap Closure

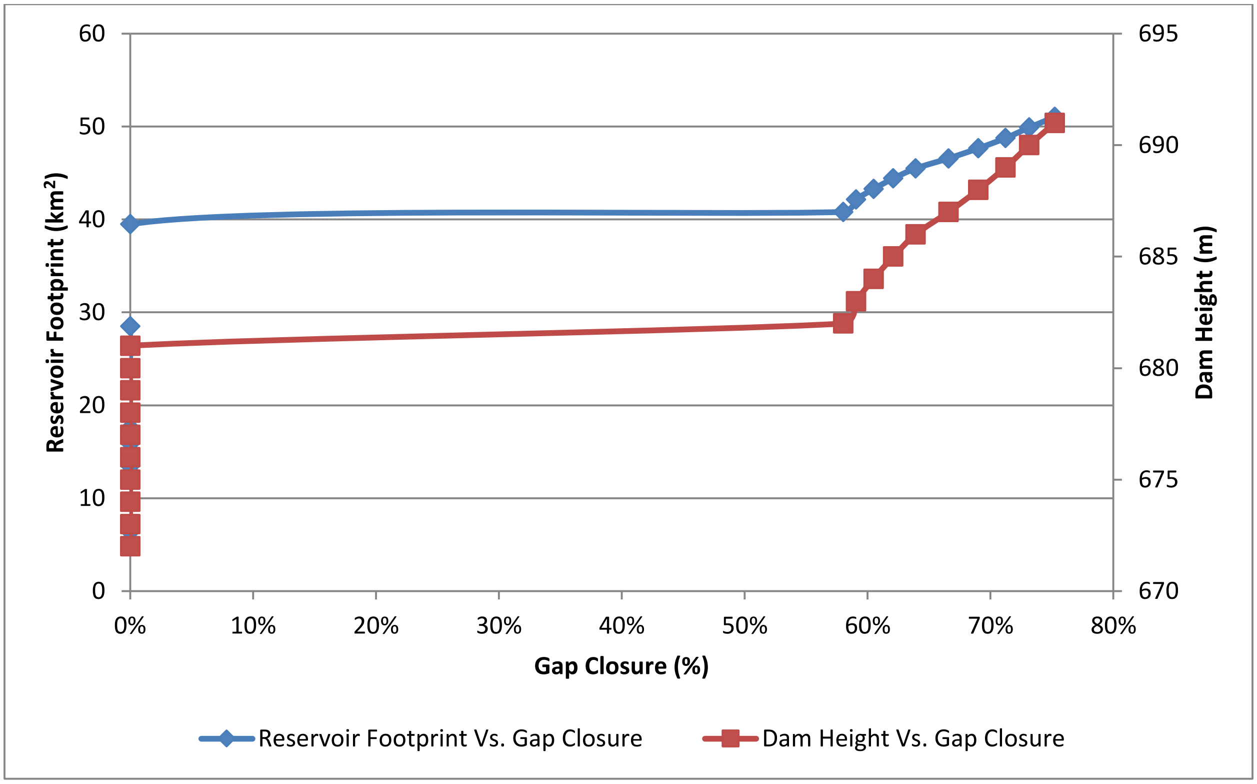


Figure F-8: Slate Reservoir Footprint vs. Gap Closure

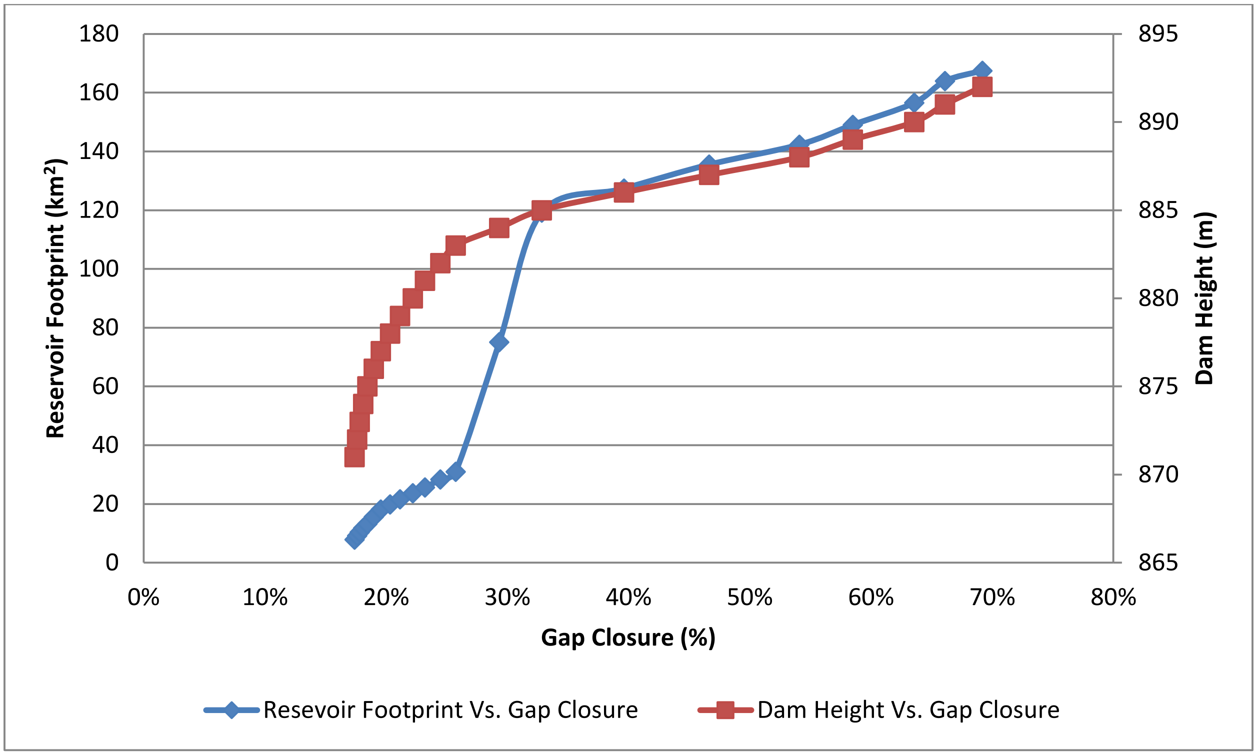


Figure F-9: Two Mile Canyon Reservoir Footprint vs. Gap Closure

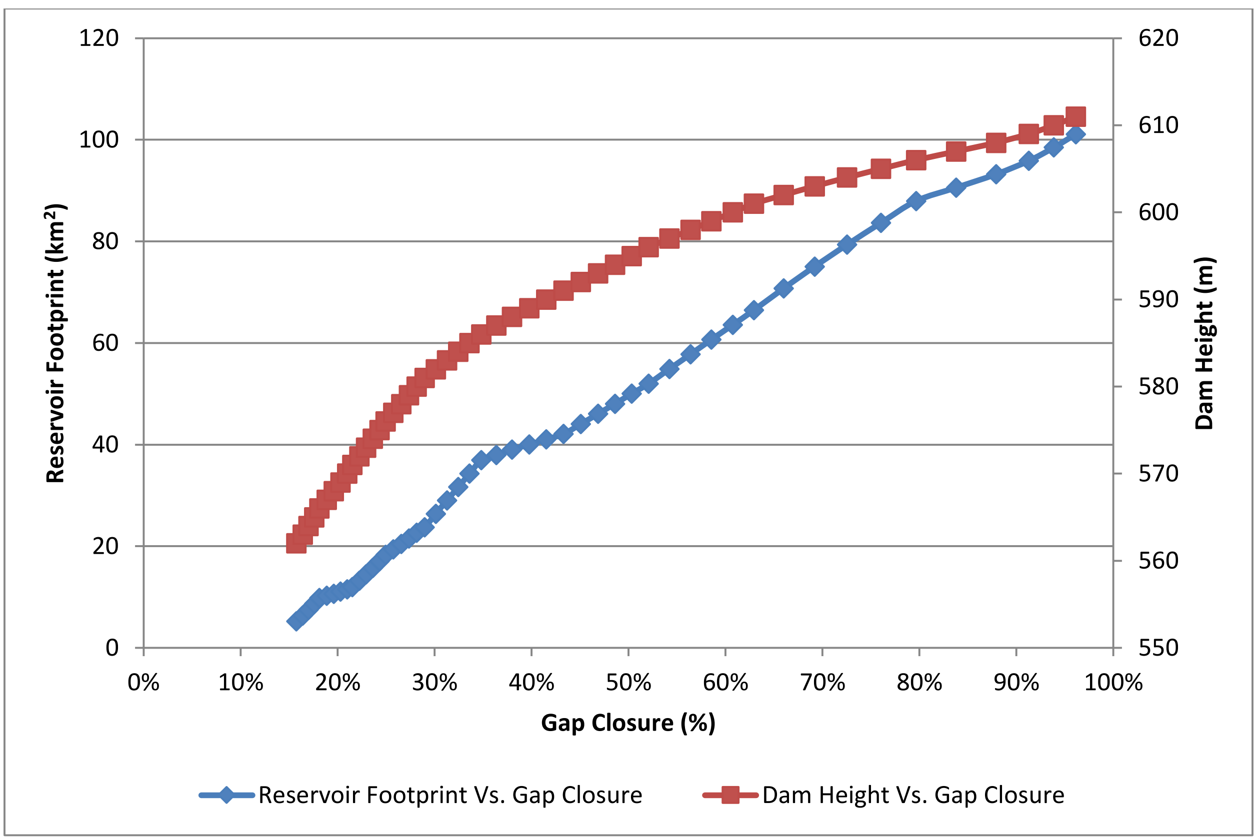
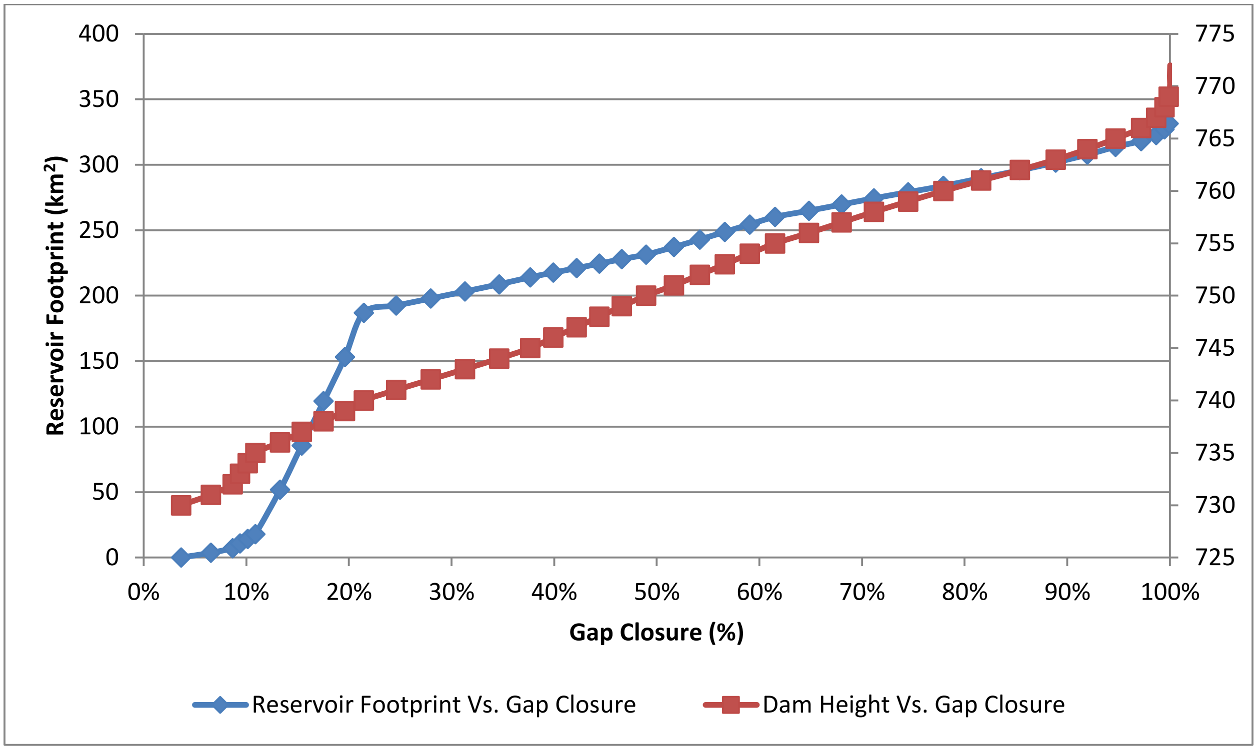


Figure F-10: Upper Canyon Reservoir Footprint vs. Gap Closure

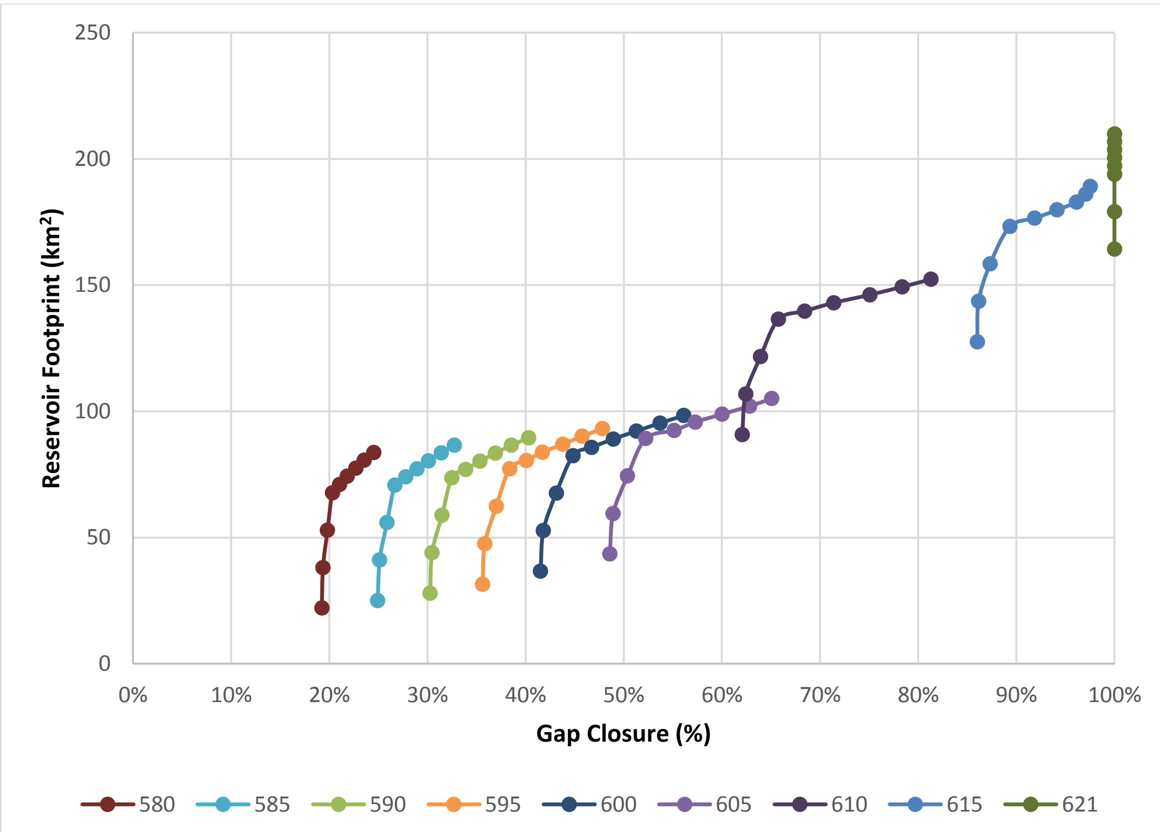


F.2 Fortin Lake Storage Dam

Detour Canyon and Hoole Canyon's Gap Closures and Reservoir Footprints with the addition of Fortin Lake as a storage dam are shown in Figure F-11 and Figure F-12.

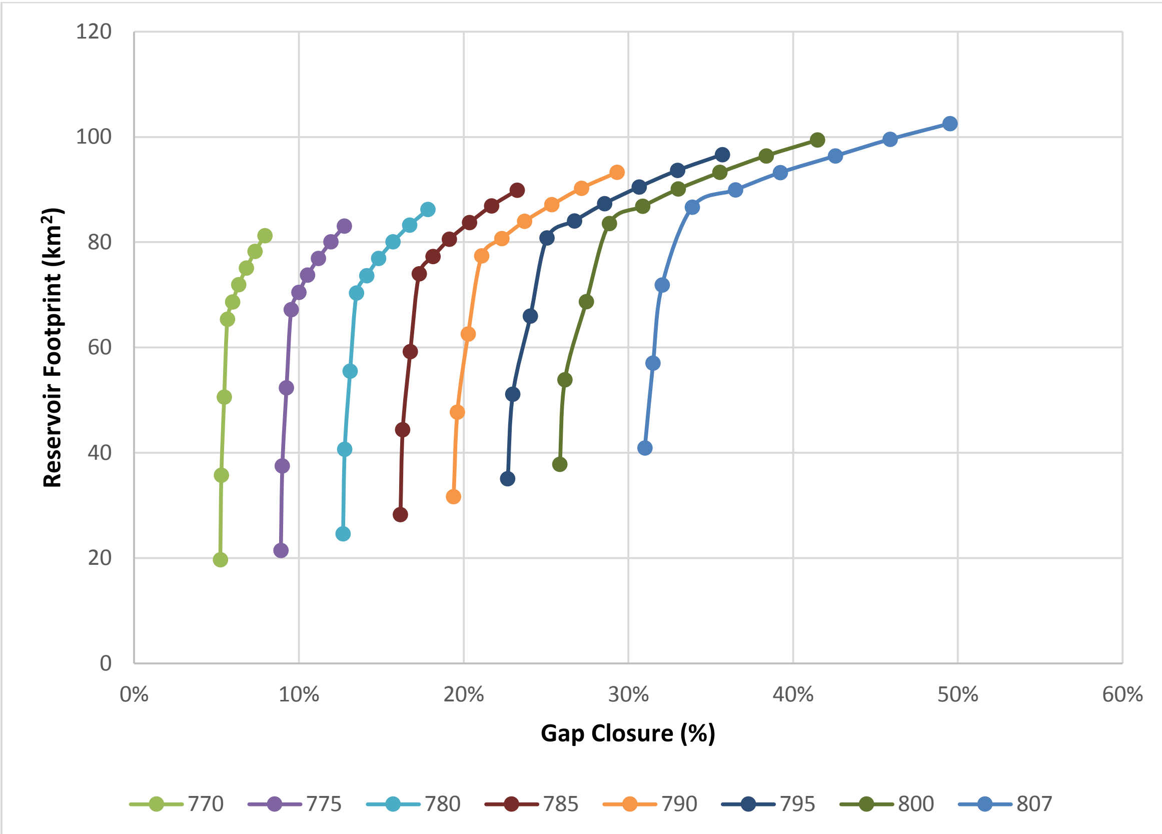
Each colored lines represent a different height of the main dam (Detour Canyon or Hoole Canyon), while each point of the series represents a different height of the storage dam (Fortin Lake) for every 1 m increment. For clarity, the series are plotted every 5 m increment of the upstream dam FSL height up to its maximum FSL height.

Figure F-11: Detour Canyon with Fortin Lake Reservoir Footprint vs. Gap Closure



The far right green line represents the Reservoir Footprint vs. Gap Closure of the potential Detour Canyon dam at a FSL of 621 m ASL. The low point on the green line represents the combination of Detour Canyon at FSL of 621 m ASL and Fortin Lake at its lowest configuration (i.e. 0 m dam height). The low point on the green line shows that Detour Canyon is able to close the energy gap with a 0 m high dam at Fortin Lake. In other words, Detour Canyon is able to close the energy gap without Fortin Lake.

Figure F-12: Hoole Canyon with Fortin Lake Reservoir Footprint vs. Gap Closure



The far right green line represents the Reservoir Footprint vs. Gap Closure of the potential Detour Canyon dam at a FSL of 621 m ASL. The low point on the green line represents the combination of Detour Canyon at FSL of 621 m ASL and Fortin Lake at its lowest configuration (i.e. 0 m dam height). The low point on the green line shows that the main dam is able to close the energy gap without Fortin Lake.

The far right blue line represents the Reservoir Footprint vs. Gap Closure of the potential Hoole Canyon dam at an 807 m height. The high point on the blue line represents the combination of Hoole Canyon at FSL of 807 m ASL and Fortin Lake at its highest configuration. The high point on the blue line shows that the main dam only reaches 50% Gap Closure with the addition of Fortin Lake.

Therefore, Fortin Lake was discarded from the study because it is an inefficient source of water storage compared to the storage reservoirs of the other projects on the shortlist.

F.3 Cascaded Projects

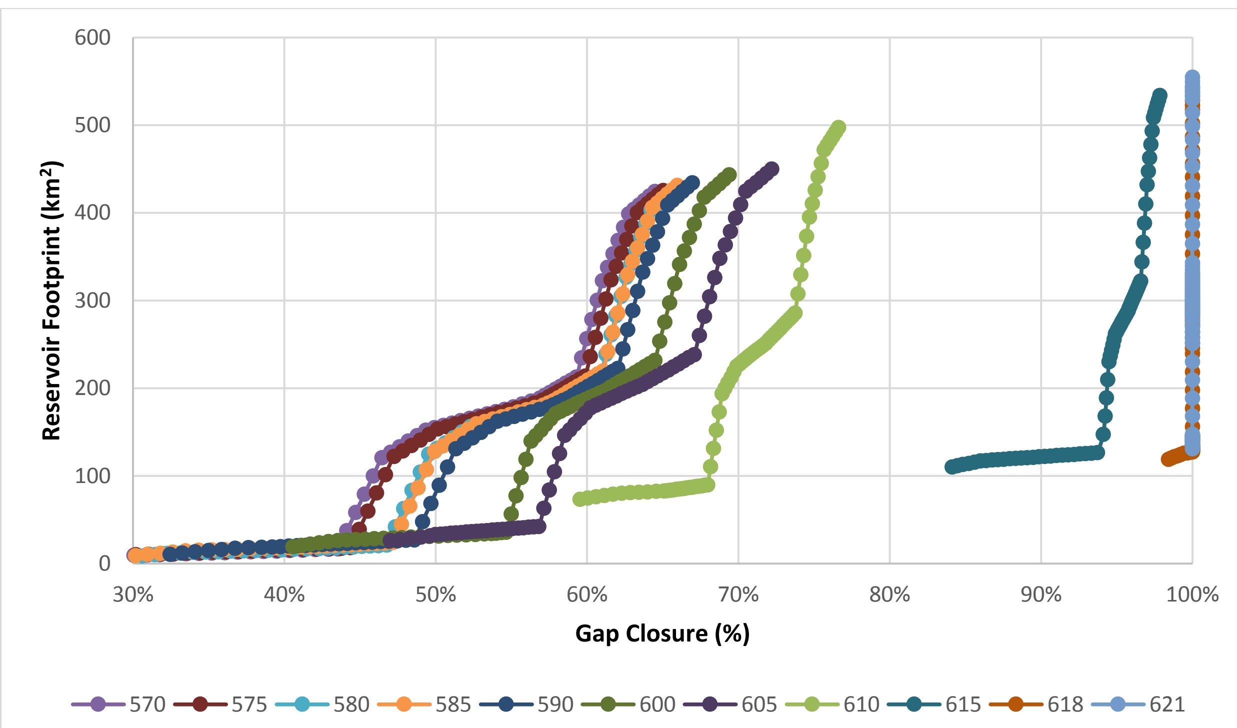
The cascaded projects performances and reservoir footprints are shown below.

For each cascaded layouts, two graphs are shown representing:

1) The reservoir footprint vs. Gap Closure for all configurations of the cascaded layout including each 1 m increment of the upstream dam FSL height combined with each 1 m increment of the downstream ROR FSL height. Each colored series represent a different height of the upstream dam, while each point of the series represents a different height of the downstream ROR project. For clarity, the series are plotted every 5 m increment of the upstream dam FSL height up to the maximum FSL height.
2) The reservoir footprint vs. Gap Closure and Dam Height vs. Gap Closure for all upstream dam FSL height combined with the specific FSL height of the downstream ROR which reaches the highest Gap Closure for the smallest reservoir footprint. The blue line represents the Reservoir Footprint vs. Gap Closure and the red line represents the Dam FSL Height vs. Gap Closure. Each point on a line represents a different FSL height of the upstream dam for each 1 m increment.

The cascaded layout of Detour Canyon + Granite Canyon ROR was discarded in section 4.2 as it did not pass the Screen 2 – Performant Standalone Project. For completeness of the report, the cascade reservoir footprint vs. Gap Closure is shown in Figure F-13.

Figure F-13: Cascaded Detour Canyon + Granite Canyon ROR Reservoir Footprint vs. Gap Closure (All Configurations)



For the cascaded Detour Canyon + Granite Canyon ROR, the far right orange line (overlapped with the light blue line) represents the Reservoir Footprint vs. Gap Closure of the potential cascade with Detour Canyon at a FSL of 618 m ASL. The first point starting from the bottom of the orange line that achieves 100% Gap Closure shows that the cascade is able to meet the Yukon energy gap for a Reservoir Footprint of about 120 km^2. This combined Reservoir Footprint corresponds to the combination of Detour Canyon at FSL of 618 m ASL with Granite Canyon ROR at a FSL of 486 m ASL. The graph showing the Reservoir Footprints vs Gap Closure and Dam Height vs. Gap Closure for Detour Canyon + Granite Canyon ROR at a FSL elevation of 486 m ASL is shown in Figure F-14.

Figure F-14: Cascaded Detour Canyon + Granite Canyon ROR Reservoir Footprint vs. Gap Closure (Granite Canyon FSL – 486 m ASL)

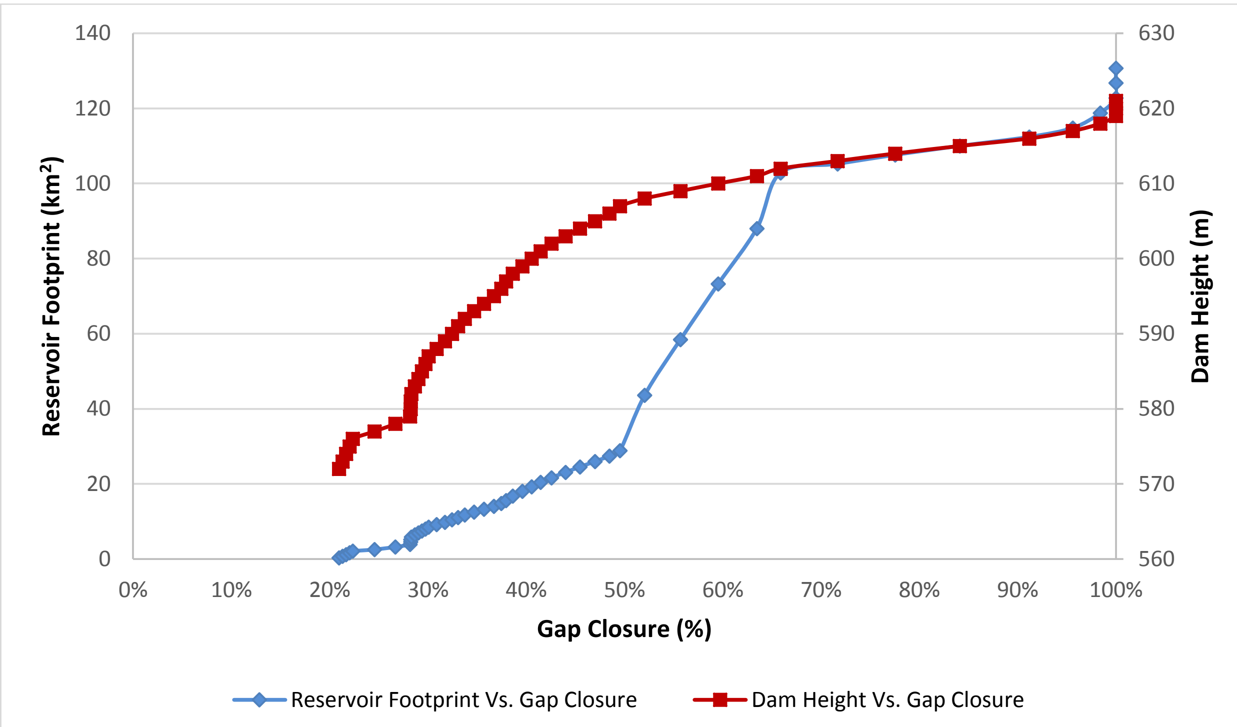
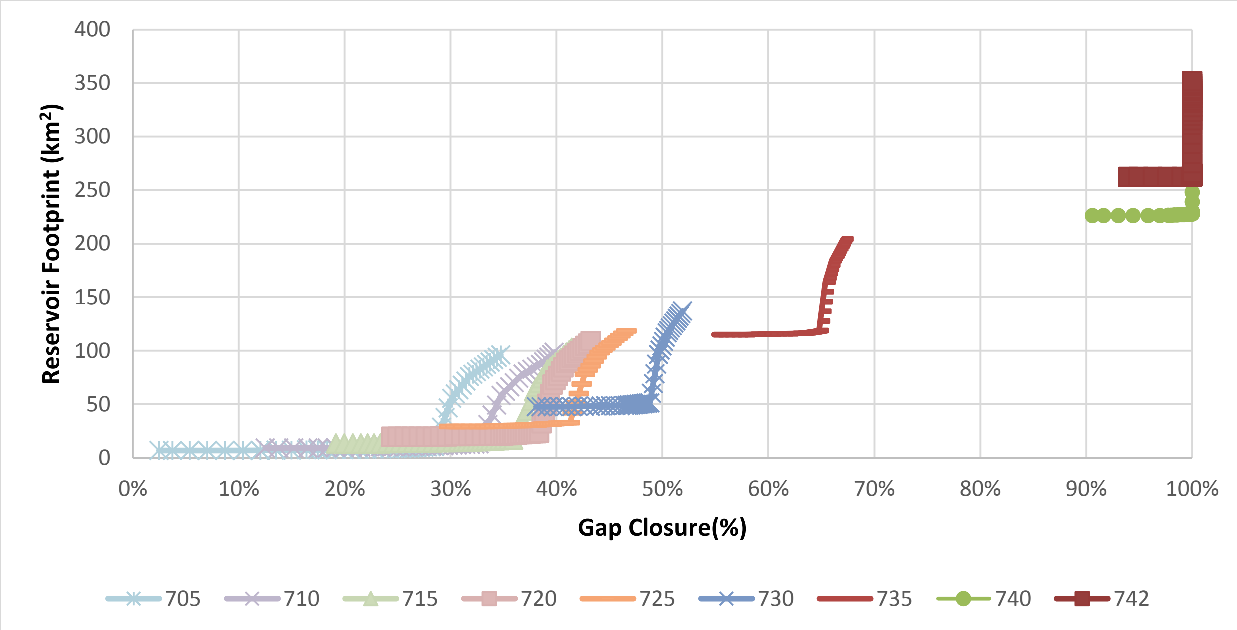


Figure F-15: Cascaded False Canyon + Middle Canyon ROR Reservoir Footprint vs. Gap Closure (All Configurations)

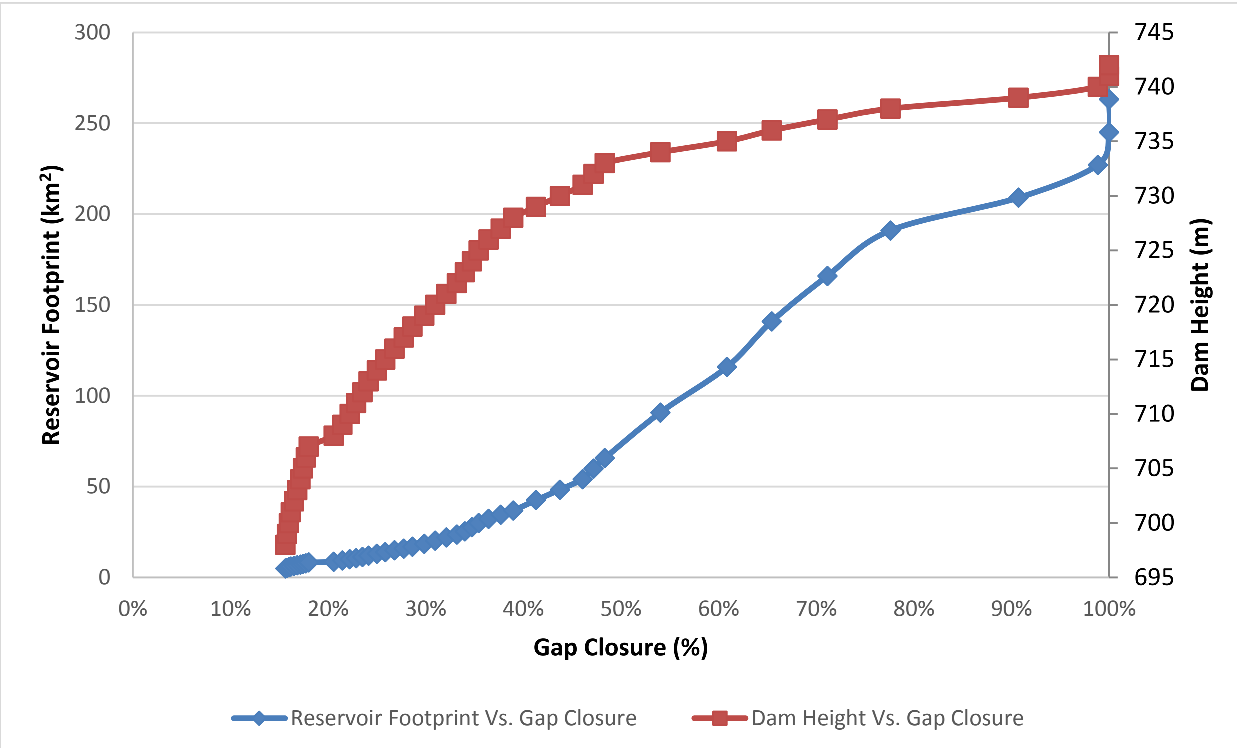


For the cascaded False Canyon + Middle Canyon ROR, the far right orange line represents the Reservoir Footprint vs. Gap Closure of the potential cascade with False Canyon at a FSL of 742 m ASL. The first point from the bottom of the brown line that achieves 100% Gap Closure shows that the cascade is able to meet the Yukon energy gap for a Reservoir Footprint of about 263 km^2. This combined Reservoir Footprint corresponds to the combination of False Canyon at FSL of 642m ASL with Middle Canyon ROR at a FSL of 672 m ASL. Middle Canyon ROR head pond was sized to back up water to the foot of the Robert Campbell highway.

As shown on the far right green line, the cascade of False Canyon + Middle Canyon ROR is able to achieve 100% Gap Closure for a smaller footprint (225 km^2). But the larger reservoir configuration likely represents a more accurate view of what an optimized cascade configuration would look like (i.e. the projects are sized “right” rather than “too small” for the geography found at this cascade).

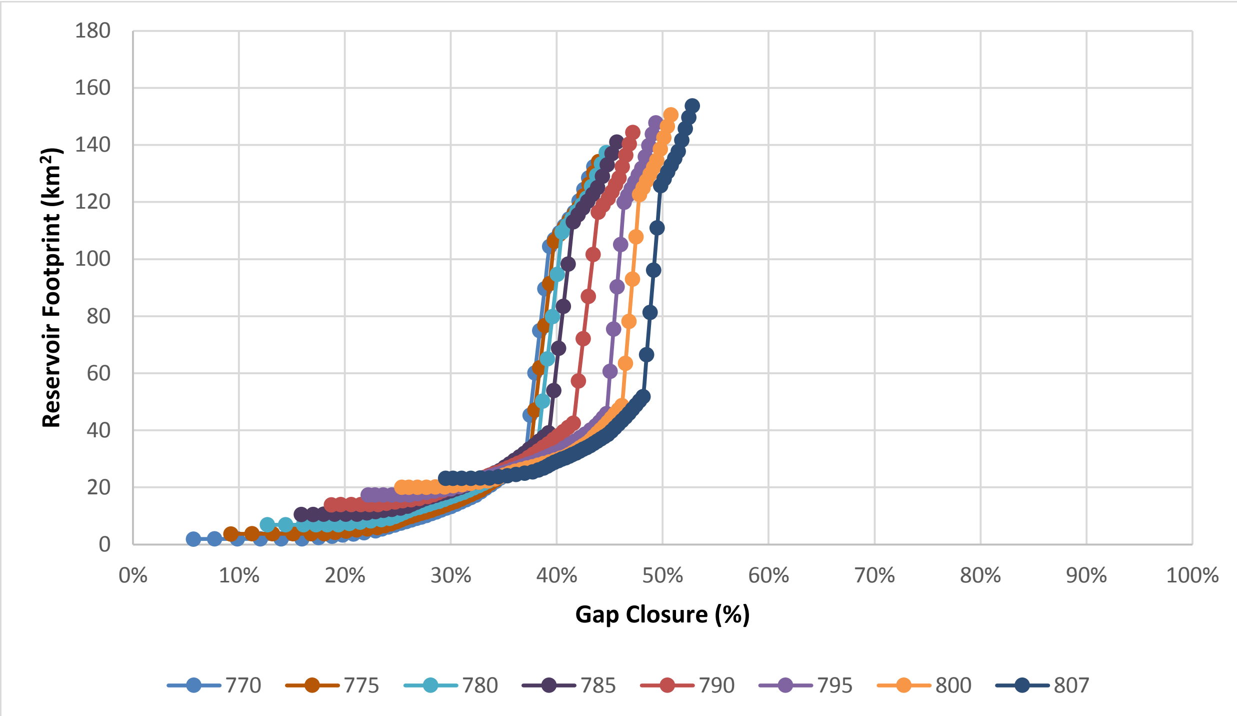
The graph showing the Reservoir Footprints vs Gap Closure and Dam Height vs. Gap Closure for False Canyon + Middle Canyon ROR at a FSL elevation of 672 m ASL is shown in Figure F-16.

Figure F-16: Cascaded False Canyon + Middle Canyon ROR Reservoir Footprint vs. Gap Closure (Middle Canyon FSL – 672 m ASL)



The cascaded layout of Hoole Canyon + Detour Canyon ROR was discarded in section 4.2. For completeness of the report, the cascade Reservoir Footprint vs. Gap Closure is shown in Figure F-17.

Figure F-17: Cascaded Hoole Canyon + Detour Canyon ROR Reservoir Footprint vs. Gap Closure (All Configurations)



For the cascaded Hoole Canyon + Detour Canyon ROR, the far right blue line represents the reservoir footprint vs. Gap Closure of the potential cascade with Hoole Canyon at a FSL of 807 m ASL. The top point on the blue line corresponding to 53% Gap Closure shows that the cascade is unable to meet the Yukon energy gap at its largest configuration of 150 km^2. This combined Reservoir Footprint corresponds to the combination of Hoole Canyon at FSL of 807 m ASL with Detour Canyon ROR at a FSL of 621 m ASL. The graph the Reservoir Footprints vs Gap Closure and Dam Height vs. Gap Closure for Hoole Canyon + Detour Canyon ROR at a FSL elevation of 621 m ASL is shown in Figure F-18.

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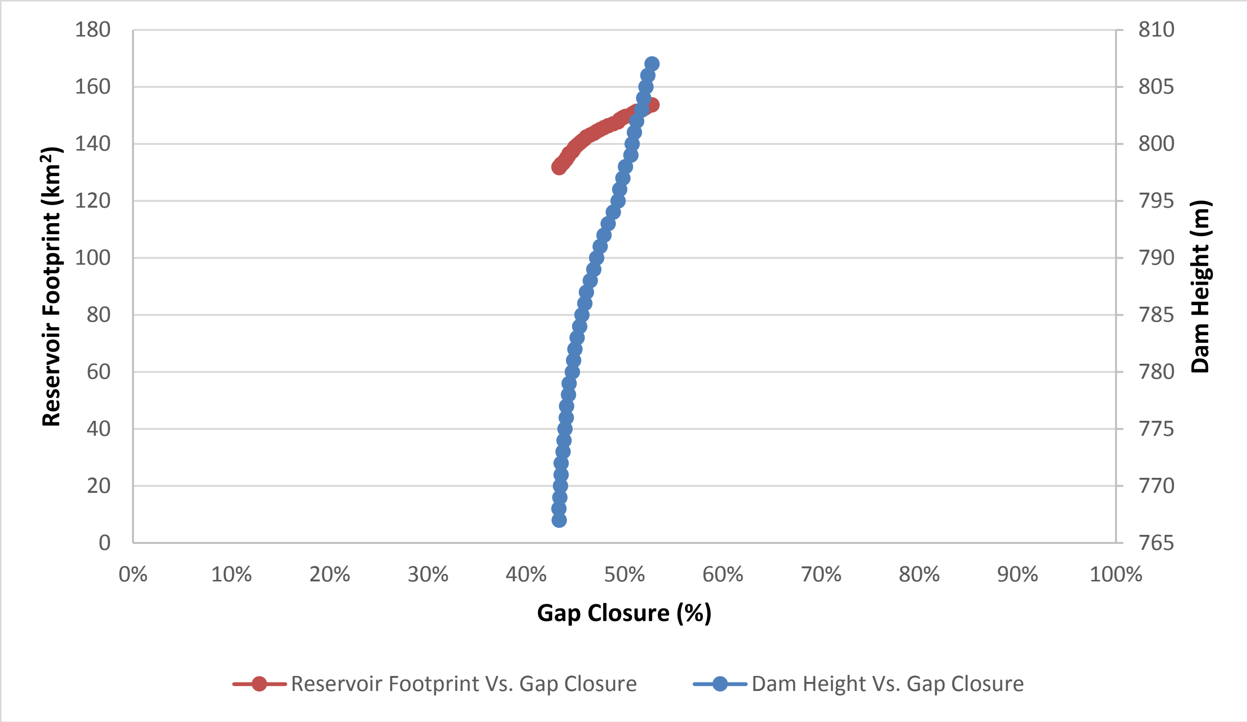
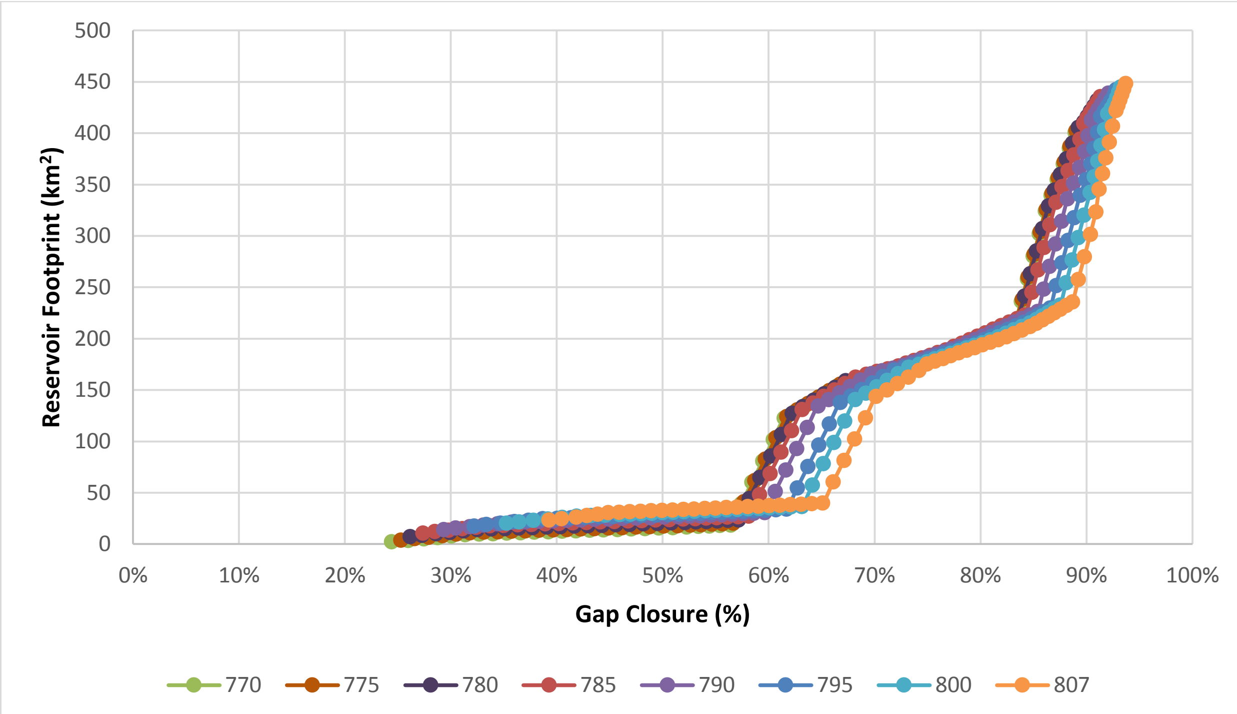
Figure F-18: Cascaded Hoole Canyon + Detour Canyon ROR Reservoir Footprint vs. Gap Closure (Detour Canyon FSL – 621 m ASL)



The cascaded layout of Hoole Canyon + Granite Canyon ROR was discarded in section 4.2. For completeness of the report, the cascade Reservoir Footprint vs. Gap Closure is shown in Figure F-19.

Figure F-19: Cascaded Hoole Canyon + Granite Canyon ROR Reservoir Footprint vs. Gap Closure (All Configurations)



For the cascaded Hoole Canyon + Granit Canyon ROR, the far right orange line represents the Reservoir Footprint vs. Gap Closure of the potential cascade with Hoole Canyon at a FSL of 807 m ASL. The top point on the orange line corresponding to 94% Gap Closure shows that the cascade is unable to meet the Yukon energy gap at its largest configuration of 443 km^2. This combined Reservoir Footprint corresponds to the combination of Hoole Canyon at FSL of 807 m ASL with Detour Canyon ROR at a FSL of 556 m ASL. The graph showing the Reservoir Footprints vs Gap Closure and Dam Height vs. Gap Closure for Hoole Canyon + Detour Canyon ROR at a FSL elevation of 556 m ASL is shown in Figure F-20.

Figure F-20: Cascaded Hoole Canyon + Granite Canyon ROR Reservoir Footprint vs. Gap Closure (Granite Canyon FSL – 556 m ASL)

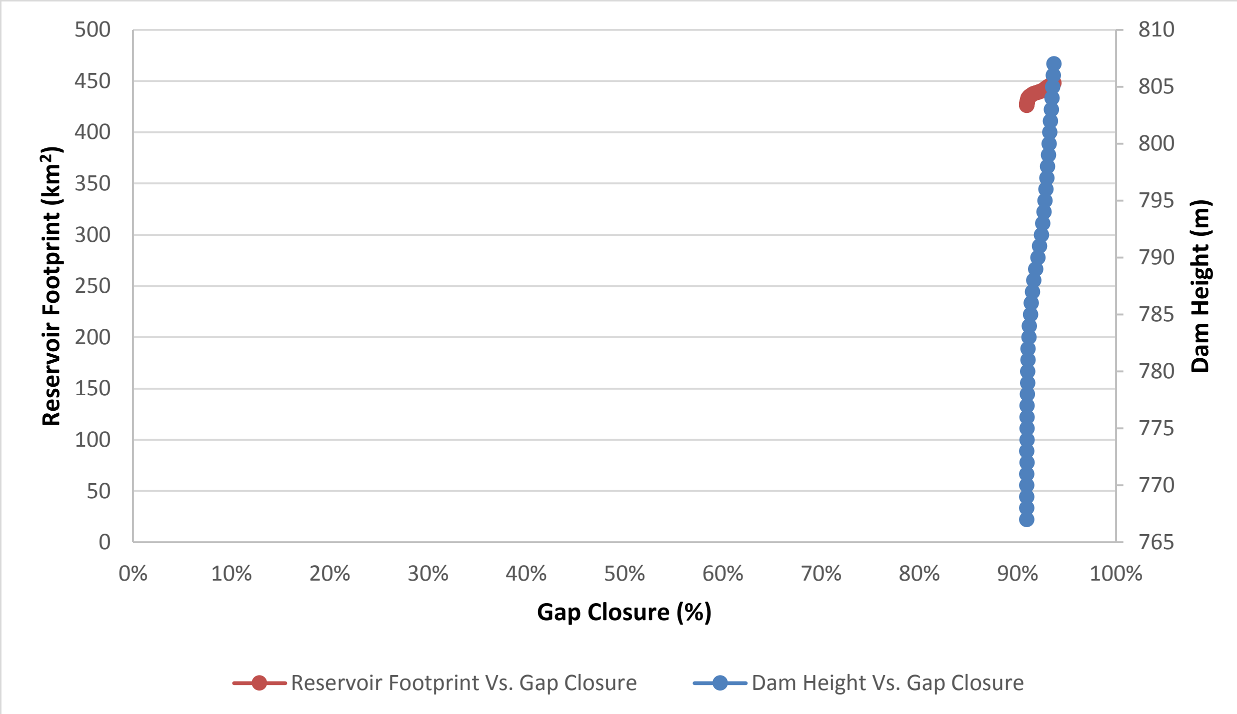
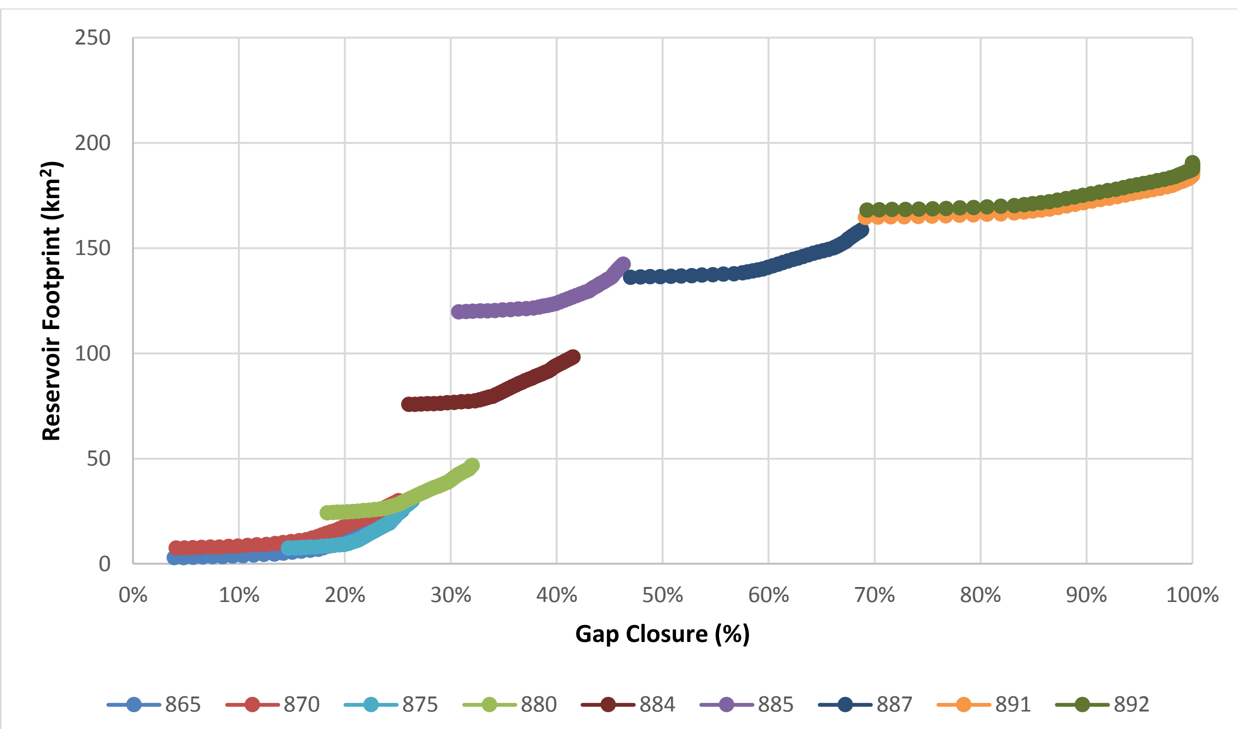


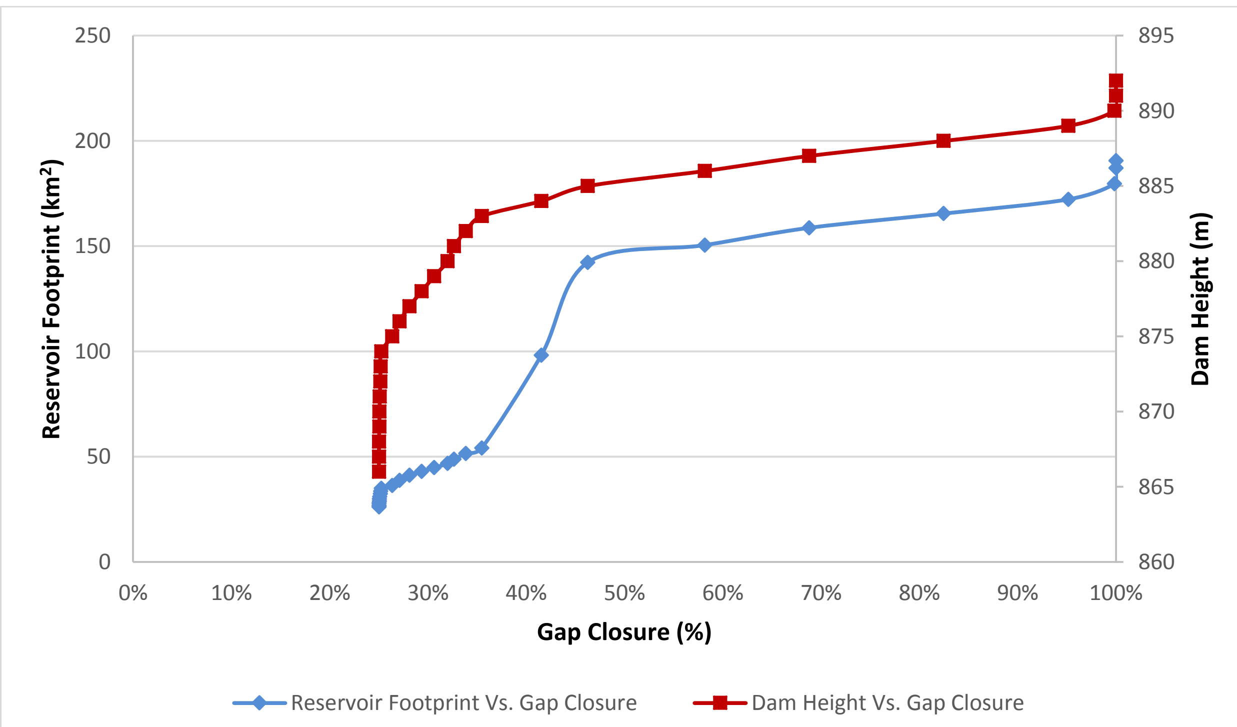
Figure F-21: Cascaded Slate Rapids + Hoole Canyon ROR Reservoir Footprint vs. Gap Closure (All Configurations)



For the cascaded Slate Rapids + Hoole Canyon ROR, the far green orange line represents the Reservoir Footprint vs. Gap Closure of the potential cascade with Slate Rapids at a FSL of 892 m ASL. The first point from the bottom of the green line that achieves 100% Gap Closure shows that the cascade is able to meet the Yukon energy gap for a Reservoir Footprint of about 193 km^2. This combined Reservoir Footprint corresponds to the combination of Slate Rapids at FSL of 892 m ASL with Hoole Canyon ROR at FSL of 807 m ASL. The graph showing the Reservoir Footprints vs Gap Closure and Dam Height vs. Gap Closure for Slate Rapids + Hoole Canyon ROR at a FSL elevation of 807 m ASL is shown in Figure F-22.

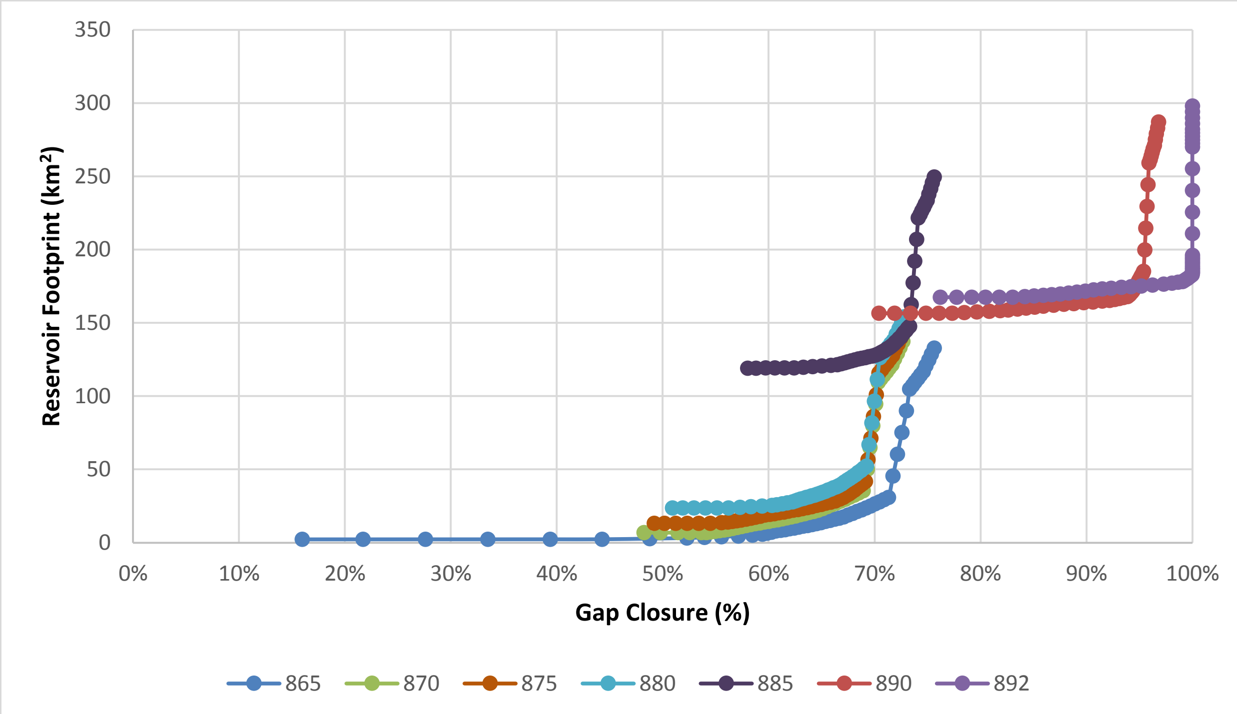
As shown on the far right orange line, the cascade of Slate Rapids + Hoole Canyon ROR is able to achieve 100% Gap Closure for a smaller footprint (183km^2). But the larger reservoir configuration likely represents a more accurate view of what an optimized cascade configuration would look like (i.e. the projects are sized "right" rather than "too small" for the geography found at this cascade).

Figure F-22: Cascaded Slate Rapids + Hoole Canyon ROR Reservoir Footprint vs. Gap Closure (Hoole Canyon FSL – 807 m ASL)



The cascaded layout of Slate Rapids + Detour Canyon ROR was discarded in section 4.2. For completeness of the report, the cascade Reservoir Footprint vs. Gap Closure is shown in Figure F-23.

Figure F-23: Cascaded Slate Rapids + Detour Canyon ROR Reservoir Footprint vs. Gap Closure (All Configurations)



For the cascaded Slate Rapids + Detour Canyon ROR, the far right purple line represents the Reservoir Footprint vs. Gap Closure of the potential cascade with Slate Rapids at a FSL of 892 m ASL. The first point starting from the bottom of the purple line that achieves 100% Gap Closure shows that the cascade is able to meet the Yukon energy gap for a Reservoir Footprint of about 182 km^2. This combined Reservoir Footprint corresponds to the combination of Slate Rapids at FSL of 892 m ASL with Detour Canyon ROR at FSL of 594 m ASL. The graph showing the Reservoir Footprints vs Gap Closure and Dam Height vs. Gap Closure for Slate Rapids + Detour Canyon ROR at a FSL elevation of 594 m ASL is shown in Figure F-24.

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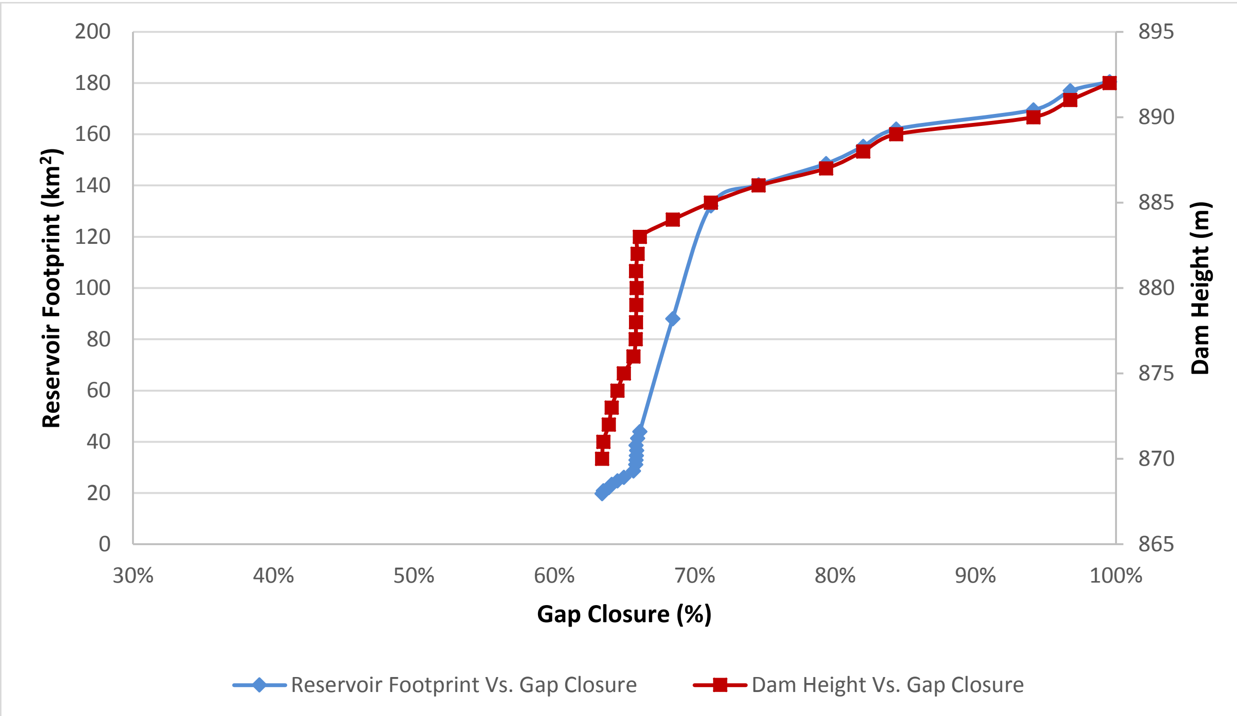
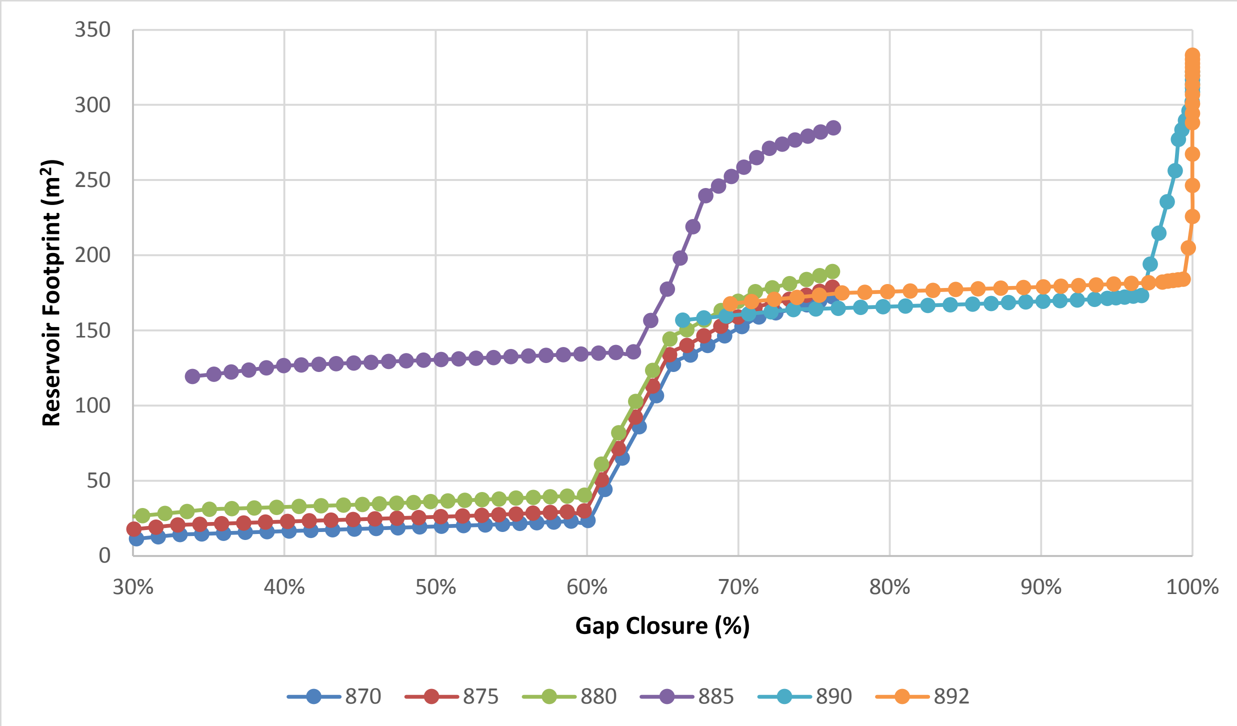
Figure F-24: Cascaded Slate Rapids + Detour Canyon ROR Reservoir Footprint vs. Gap Closure (Detour Canyon FSL – 594 m)



The cascaded layout of Slate Rapids + Granite Canyon ROR was discarded in section 4.2. For completeness of the report, the cascade Reservoir Footprint vs. Gap Closure is shown in Figure F-25.

Figure F-25: Cascaded Slate Rapids + Granite Canyon ROR Reservoir Footprint vs. Gap Closure (All Configurations)



For the cascaded Slate Rapids + Granite Canyon ROR, the far orange line represents the Reservoir Footprint vs. Gap Closure of the potential cascade with Slate Rapids at a FSL of 892 m ASL. The first point starting from the bottom of the orange line that achieves 100% Gap Closure shows that the cascade is able to meet the Yukon energy gap for a Reservoir Footprint of about 226 km^2. This combined Reservoir Footprint corresponds to the combination of Slate Rapids at FSL of 892 m ASL with Granite Canyon ROR at FSL of 512 m ASL. The graph showing the Reservoir Footprints vs Gap Closure and Dam Height vs. Gap Closure for Slate Rapids + Granite Canyon ROR at a FSL elevation of 512 m ASL is shown in Figure F-26.

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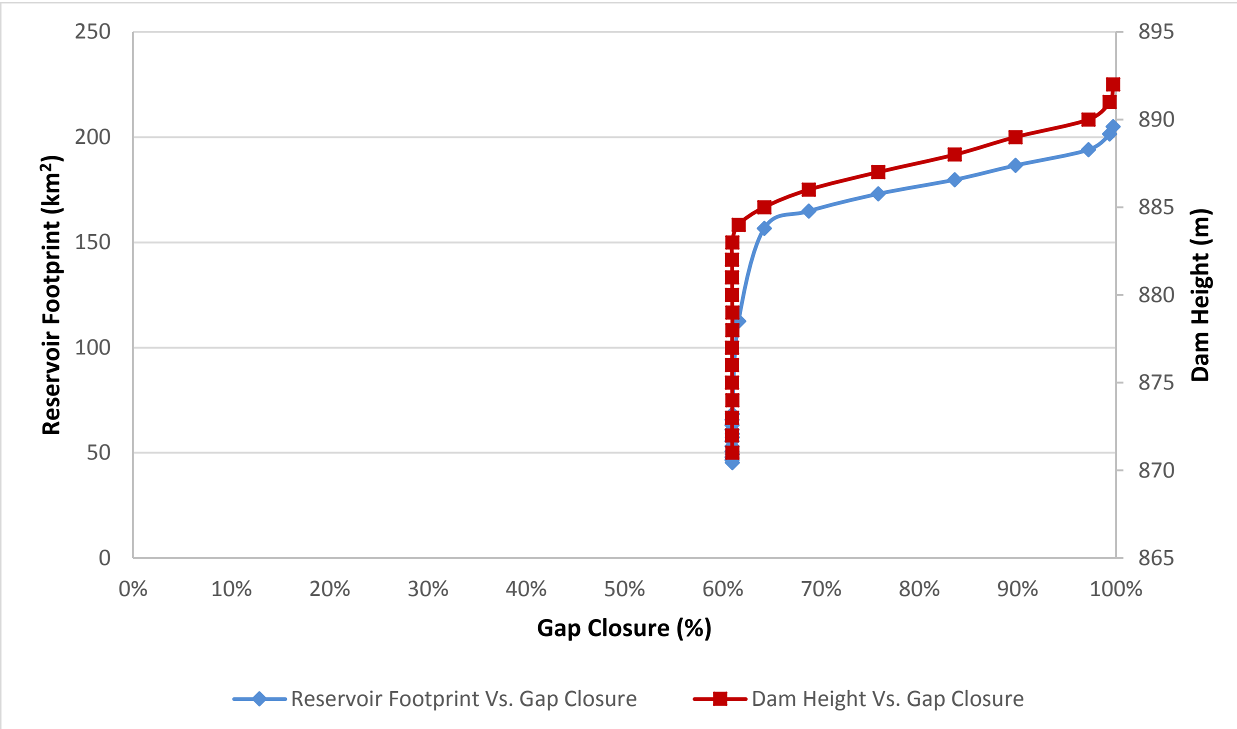
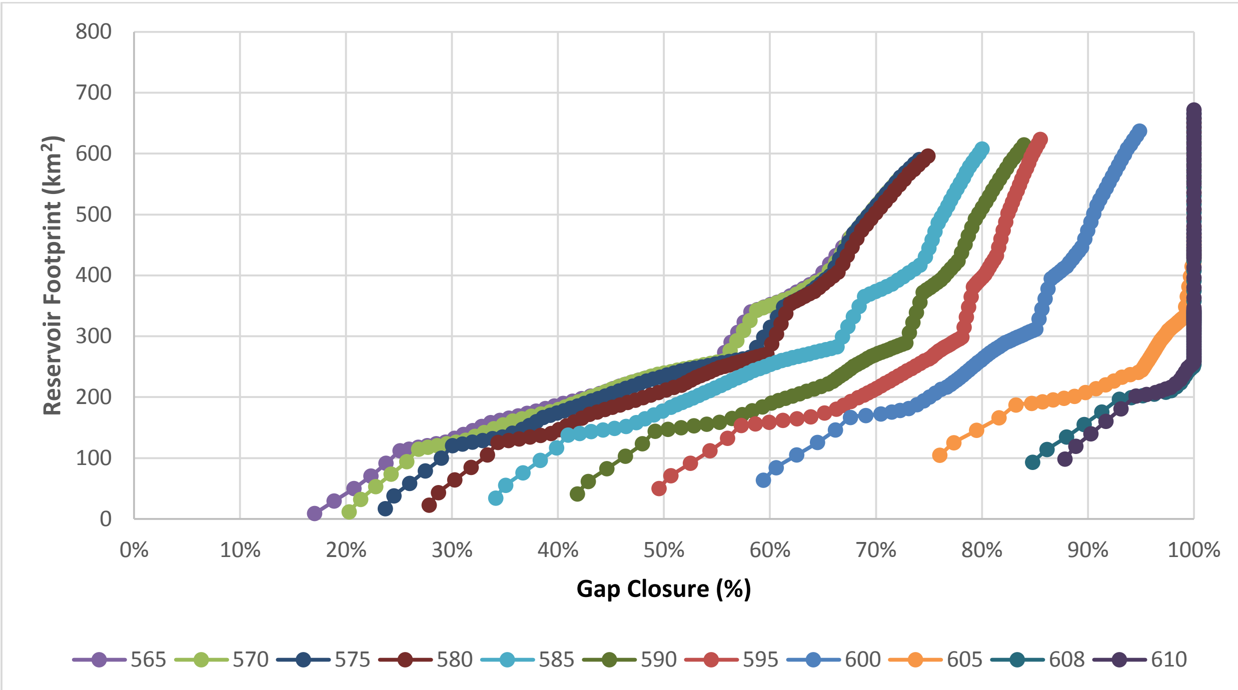
Figure F-26: Cascaded Slate Rapids + Granite Canyon ROR Reservoir Footprint vs. Gap Closure (Granite Canyon FSL – 512 m)



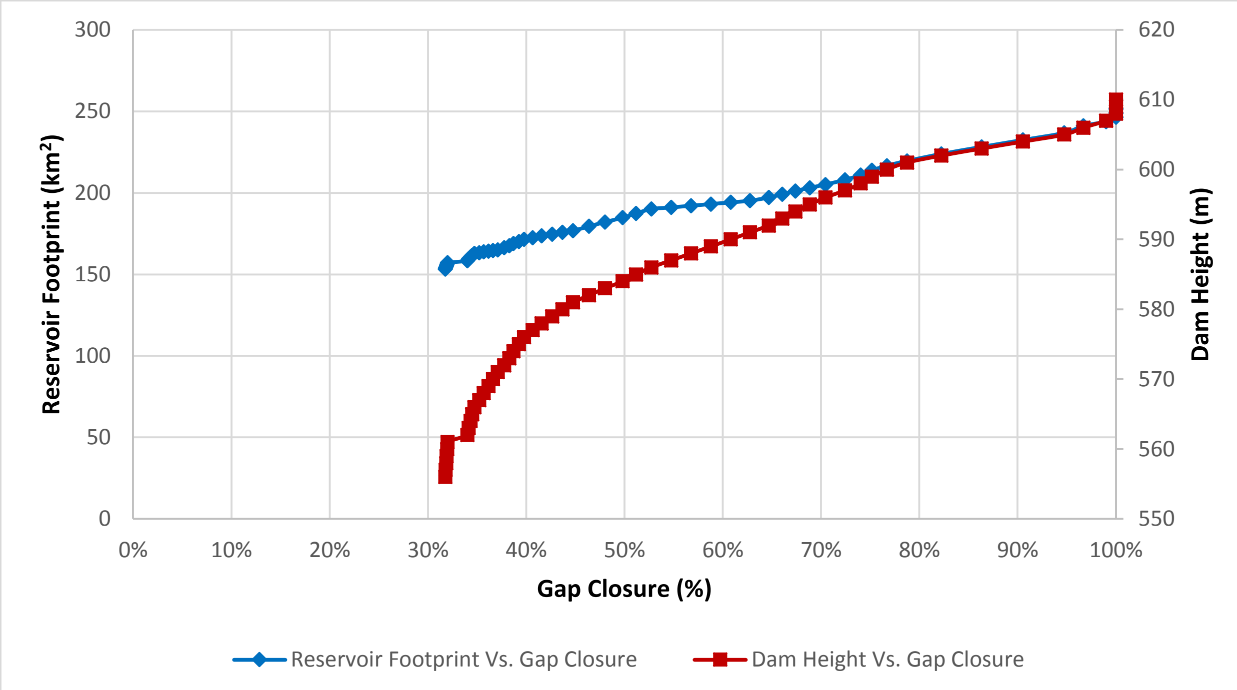
The cascaded layout of Two Mile Canyon + Fraser Falls ROR was discarded in section 4.2. For completeness of the report, the cascade Reservoir Footprint vs. Gap Closure is shown in Figure F-27.

Figure F-27: Cascaded Two Mile Canyon + Fraser Falls ROR Reservoir Footprint vs. Gap Closure (All Configurations)



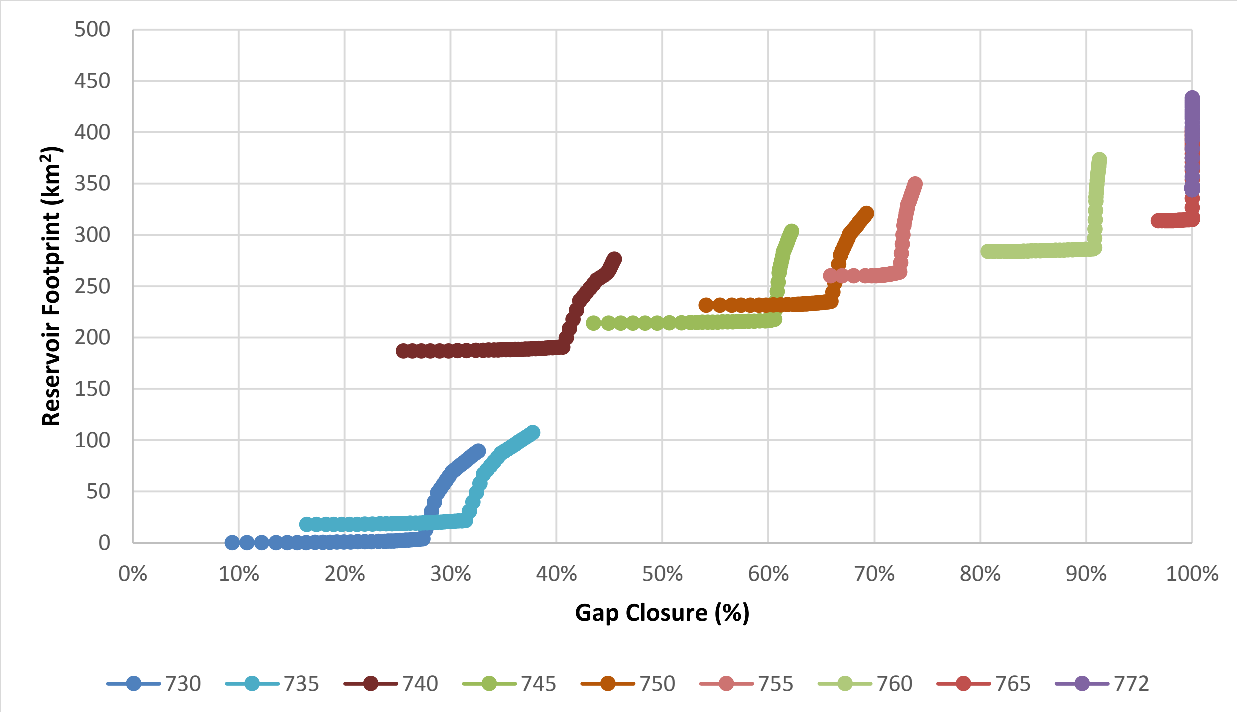
For the cascaded Two Mile Canyon + Fraser Falls ROR, the far blue line (overlapped with the purple line) represents the Reservoir Footprint vs. Gap Closure of the potential cascade with Two Mile Canyon at a FSL of 608 m ASL. The first point starting from the bottom of the orange line that achieves 100% Gap Closure shows that the cascade is able to meet the Yukon energy gap for a Reservoir Footprint of about 246 km^2. This combined Reservoir Footprint corresponds to the combination of Two Mile Canyon at FSL of 802 m ASL with Fraser Falls ROR at FSL of 534 m ASL. The graph showing the Reservoir Footprints vs Gap Closure and Dam Height vs. Gap Closure for Slate Rapids + Granite Canyon ROR at a FSL elevation of 534 m ASL is shown in Figure F-28.

Figure F-28: Cascaded Two Mile Canyon + Fraser Falls ROR Reservoir Footprint vs. Gap Closure (Fraser Falls FSL – 534 m)



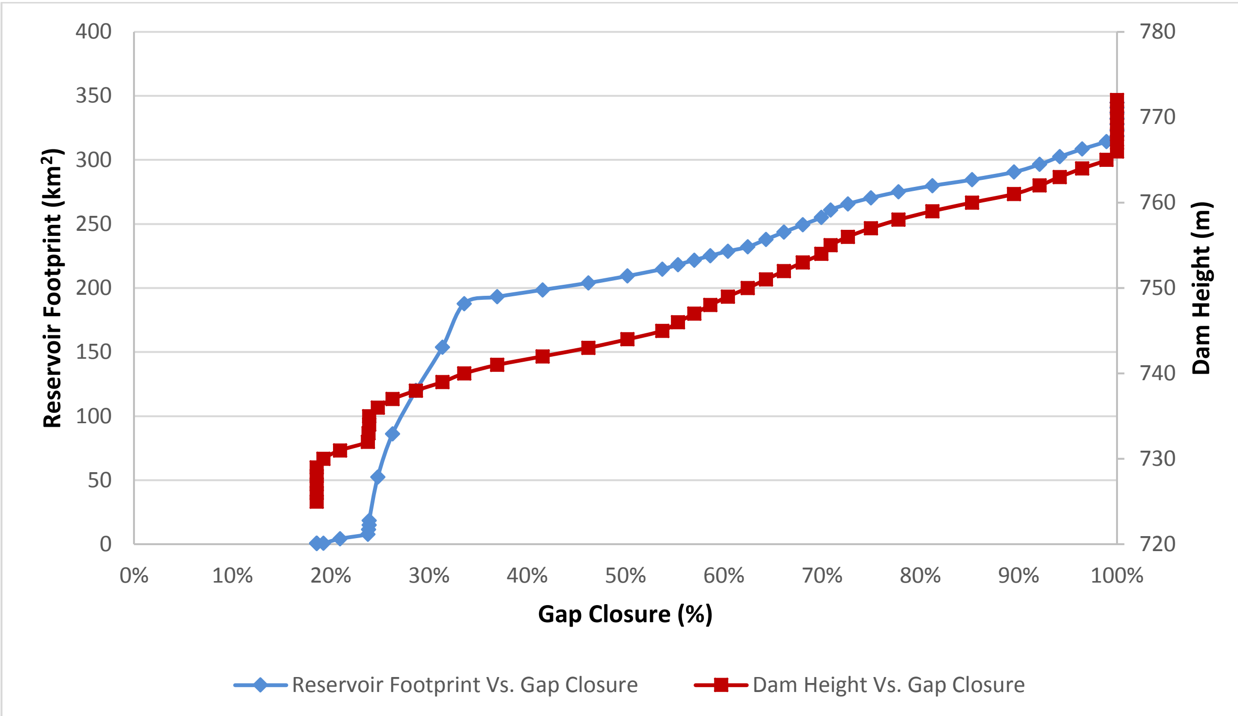
The cascaded layout of Upper Canyon + Middle Canyon ROR was discarded in section 4. For completeness of the report, the cascade Reservoir Footprint vs. Gap Closure is shown in Figure F-29.

Figure F-29: Cascaded Upper Canyon + Middle Canyon ROR Reservoir Footprint vs. Gap Closure (All Configurations)



For the cascaded Upper Canyon + Middle Canyon ROR, the far red line (overlapped with the purple line) represents the Reservoir Footprint vs. Gap Closure of the potential cascade with Upper Canyon at a FSL of 765 m ASL. The first point starting from the bottom of the orange line that achieves 100% Gap Closure shows that the cascade is able to meet the Yukon energy gap for a Reservoir Footprint of about 325 km^2. This combined Reservoir Footprint corresponds to the combination of Slate Rapids at FSL of 765 m ASL with Middle Canyon ROR at FSL of 672 m ASL. The graph showing the Reservoir Footprints vs Gap Closure and Dam Height vs. Gap Closure for Upper Canyon + Middle Canyon ROR at a FSL elevation of 672 m ASL is shown in Figure F-26.

Figure F-30: Cascaded Upper Canyon + Middle Canyon ROR Reservoir Footprint vs. Gap Closure (Middle Canyon FSL – 672 m)



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Appendix G: References

1) British Columbia Instream Flow Guidelines for Fish - British Columbia Ministry of Sustainable Resource Management, and British Columbia Ministry of Water, Land, and Air Protection Victoria, BC -2003
2) Hydrological Atlas of Canada – Mean Annual Lake Evaporation – 1978
3) Tamed Rivers – A Guide to River Diversion Hydropower in British Columbia – Watershed Watch Salmon Society – 2012
4) Yukon River Instream Flow Chinook Salmon Time Series Analysis – Normandeau Associates, Inc – 2012