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TITLE	<b>DCR Application for a Type A Water Licence</b>
SECTION	7: Site-Specific Water Use
SUBJECT	1: Summary

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## **INTRODUCTION**

This section supports an application for approval to obtain water for site-specific use within the Dehcho Region. It contains site-specific maps, describes the proposed undertaking, provides an estimate of the quantities of water required, outlines the plan for handling waste and summarizes the schedule of activities.



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TITLE        **DCR Application for a Type A Water Licence**  
SECTION     7:    Site-Specific Water Use  
SUBJECT     2:    Blackwater River Compressor Station

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### LOCATION OF UNDERTAKING (PART 3)

The Blackwater River compressor station site coordinates and location of its likely water source are listed in [Table 7-1](#). [Figure 7-1](#) is a site-specific map of the Blackwater River compressor station site.

**Table 7-1: Location of the Blackwater River Compressor Station**

Location of Undertaking	Kilometre Post (KP)	Latitude (DD)	Longitude (DD)	Easting (m)	Northing (m)	UTM Zone
Blackwater River Compressor Station	702.1	63.9225	-124.1274	444707	7088866	10
Water Source – Mackenzie River	-	-	-	-	-	-

### DESCRIPTION OF UNDERTAKING (PART 4)

#### Infrastructure Site for the Blackwater River Compressor Station

A temporary construction camp will be required at the Blackwater River compressor station site. At full occupancy (about 120 personnel), this camp will require a camp support staff of about 20 people. These people are included in the 120-person total. The camp will be occupied year-round during construction.

The infrastructure pad and the 120-person camp at the Blackwater River site will be completed during the winter of 2006-2007. Personnel constructing the compressor station will reside at the camp as soon as it is commissioned. The camp will be occupied until the summer of 2010.

A conceptual drawing of the camp layout is shown in [Section 3](#).

Water for the camp is expected to be sourced from the Mackenzie River. The water will be transported by truck from the source to the camp site for use as camp water. Additional water supply might be required for fire suppression.

#### Blackwater River Compressor Station Site

A limited amount of water will be required for dust suppression and foundation work. This water will be obtained from the supply source and transported to the infrastructure site. It has been included in the estimated water volumes provided in Part 7.

## QUANTITY OF WATER INVOLVED (PART 7)

Daily water truck cycles will bring the necessary volume of water (about 227 L daily per person) to the camp. The quantity of water required for camp use will be dependent upon the number of persons occupying the camp.

The estimate of water requirements is based on the following assumptions:

- the camp will be occupied year round during construction
- camp use is based on an average water consumption of 227 L per person per day, which includes all uses
- camp capacity is 120 persons

The estimated water requirements, based on the above assumptions and including the quantities required for the Blackwater River compressor station, are shown in [Table 7-2](#).

**Table 7-2: Blackwater River Compressor Station Camp Water Requirements**

Description	Water Requirements	
	Total Annual Volume	Average Daily Volume <sup>a</sup>
Site specific water requirements year 1	50 m <sup>3</sup>	1 m <sup>3</sup>
Site specific water requirements year 2	3,500 m <sup>3</sup>	10 m <sup>3</sup>
Site specific water requirements year 3	3,550 m <sup>3</sup>	10 m <sup>3</sup>
Total water requirements over three years	7,100 m <sup>3</sup>	
NOTE: <sup>a</sup> The average daily volume is total annual volume averaged over 365 days.		

Once construction of the facility is complete, the operations phase of the facility will begin. The duration of this phase will coincide with the commercial life of the upstream production fields, and is projected to be about 30 years. Water consumption during normal operations is expected to be about 38 m<sup>3</sup> per year. This water will likely be sourced from the Mackenzie River and be brought in by tanker truck.

## SCHEDULE (PART 13)

Camp operations will be continuous, at varying rates of activity, during the facility construction period, which is currently planned to occur from the summer of 2006 through the summer of 2010 (see [Section 3](#)).

Figure 7.1 has been moved to reduce file size. To view it, click on the link to the figure in the web page List of Figures for this document.



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TITLE        **DCR Application for a Type A Water Licence**  
SECTION     7:    Site-Specific Water Use  
SUBJECT     3:    Ochre River Infrastructure Site

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### LOCATION OF UNDERTAKING (PART 3)

The Ochre River infrastructure site coordinates and location of its likely water source are listed in [Table 7-3](#). [Figure 7-2](#) is a site-specific map of the Ochre River site.

**Table 7-3: Location of the Ochre River Infrastructure Site**

Location of Undertaking	Kilometre Post (KP)	Latitude (DD)	Longitude (DD)	Easting (m)	Northing (m)	UTM Zone
Ochre River Infrastructure Site	757.2	63.4766	-123.6849	465874	7038877	10
Water Source – Mackenzie River	-	-	-	-	-	-

### DESCRIPTION OF UNDERTAKING (PART 4)

#### Ochre River Infrastructure Site

Development activities of the project will require a temporary construction camp to be located at the Ochre River infrastructure site.

Construction of a 120-person camp at the Ochre River site will begin in the summer of 2006. Initial crews will reside at a 60-person barge based mobile camp in the summer of 2006, and at the 120-person Ochre River camp, as soon as it is commissioned in the summer of 2006.

In the summer of 2007, the 120-person Ochre River construction camp will be expanded to a capacity of about 950 personnel. The camp will require a support staff of about 85 people. These people are included in the 950-person total.

Construction personnel will occupy the expanded camp over three winter construction seasons (2007-2008 for right of way clearing, 2008-2009 for pipeline construction and 2009-2010 for commissioning and reclamation). Numbers will peak in mid-winter and taper off toward spring. A reduced camp support staff will remain on the site between construction seasons. Water and sewage treatment facilities will be present in the camp.

A conceptual drawing of the camp layout is shown in [Section 3](#).

The camp will be used to feed and house construction personnel. The largest element of the operations will be catering and housekeeping for the camp

residents. Other activities will include the maintenance operations of the camp and restocking of fuel and supplies by truck.

Water for the camp is expected to be sourced from the Mackenzie River. The water will be transported by truck from the source to the camp site for use as camp water. Additional water supply might be required for fire suppression.

### QUANTITY OF WATER INVOLVED (PART 7)

Daily water truck cycles will bring the necessary volume of water (about 227 L daily per person) to the camp. The quantity of water required for camp use will be dependent upon the number of persons occupying the camp.

The estimate of water requirements is based on the following assumptions:

- the camp will be at capacity during the winter months (122 days)
- the camp will be at about 8.0% capacity during the summer months (122 days)
- water usage during the shoulder months between summer and winter will be less
- camp use is based on an average water consumption of 227 L per person per day, which includes all uses
- camp capacity will be 120 persons, expanding to 950 persons

The estimate of water required, based on the above assumptions, is shown in [Table 7-4](#).

**Table 7-4: Ochre River Infrastructure Site Water Requirements**

Description	Water Requirements	
	Total Annual Volume	Average Daily Volume <sup>a</sup>
Site specific water requirements year 1	600 m <sup>3</sup>	2 m <sup>3</sup>
Site specific water requirements year 2	27,100 m <sup>3</sup>	74 m <sup>3</sup>
Site specific water requirements year 3	27,700 m <sup>3</sup>	76 m <sup>3</sup>
Total water requirements over three years	55,400 m <sup>3</sup>	
NOTE: <sup>a</sup> The average daily volume is total annual volume averaged over 365 days.		

### SCHEDULE (PART 13)

Camp operations will be continuous, at varying rates of activity, from the summer of 2006 through the summer of 2010 (see [Section 3](#)).

Figure 7.2 has been moved to reduce file size. To view it, click on the link to the figure in the web page List of Figures for this document.



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TITLE	<b>DCR Application for a Type A Water Licence</b>
SECTION	7: Site-Specific Water Use
SUBJECT	4: Camsell Bend Infrastructure Site

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### LOCATION OF UNDERTAKING (PART 3)

The Camsell Bend infrastructure site coordinates and location of its likely water source are listed in [Table 7-5](#). [Figure 7-3](#) is a site-specific map of the Camsell Bend site.

**Table 7-5: Location of the Camsell Bend Infrastructure Site**

Location of Undertaking	Kilometre Post (KP)	Latitude (DD)	Longitude (DD)	Easting (m)	Northing (m)	UTM Zone
Camsell Bend Infrastructure Site	927.8	62.1536	-122.5221	524902	6891387	10
Water Source – Mackenzie River	928.3	62.1484	-122.5317	524410	6890800	10

### DESCRIPTION OF UNDERTAKING (PART 4)

#### **Camsell Bend Infrastructure Site**

Development activities of the project will require a temporary construction camp to be located at the Camsell Bend infrastructure site.

Construction of a 120-person camp at the Camsell Bend site will begin in the summer of 2006. Initial crews will reside at the 120-person camp as soon as it is commissioned in the summer of 2006.

In the summer of 2007, the 120-person Camsell Bend construction camp will be expanded to a capacity of about 950 personnel. The camp will require a support staff of about 85 people. These people are included in the 950-person total.

Construction personnel will occupy the camp over three winter construction seasons (2007-2008 for right of way clearing, 2008-2009 for pipeline construction and 2009-2010 for commissioning and reclamation). Numbers will peak in mid-winter and taper off toward spring. A reduced camp support staff will remain on the site between construction seasons. Water and sewage treatment facilities will be present in the camp.

A conceptual drawing of the camp layout is shown in [Section 3](#).

The camp will be used to feed and house construction personnel. The largest element of the operations will be catering and housekeeping for the camp

residents. Other activities will include the maintenance operations of the camp and restocking of fuel and supplies by truck.

Water for the camp is expected to be sourced from the Mackenzie River. The water will be transported by truck from the source to the camp site for use as camp water. Additional water supply might be required for fire suppression.

### QUANTITY OF WATER INVOLVED (PART 7)

Daily water truck cycles will bring the necessary volume of water (about 227 L daily per person) to the camp. The quantity of water required for camp use will be dependent upon the number of persons occupying the camp.

The estimate of water requirements is based on the following assumptions:

- the camp will be at capacity during the winter months (122 days)
- the camp will be at about 8.0% capacity during the summer months (122 days)
- water usage during the shoulder months between summer and winter will be less
- camp use is based on an average water consumption of 227 L per person per day, which includes all uses
- camp capacity will be 120 persons, expanding to 950 persons

The estimate of water required, based on the above assumptions,- is shown in [Table 7-6](#).

**Table 7-6: Camsell Bend Infrastructure Site Water Requirements**

Description	Water Requirements	
	Total Annual Volume	Average Daily Volume <sup>a</sup>
Site specific water requirements year 1	600 m <sup>3</sup>	2 m <sup>3</sup>
Site specific water requirements year 2	27,100 m <sup>3</sup>	74 m <sup>3</sup>
Site specific water requirements year 3	27,700 m <sup>3</sup>	76 m <sup>3</sup>
Total water requirements over three years	55,400 m <sup>3</sup>	
NOTE: <sup>a</sup> The average daily volume is total annual volume averaged over 365 days.		

### SCHEDULE (PART 13)

Camp operations will be continuous, at varying rates of activity, from the summer of 2006 through the summer of 2010 (see [Section 3](#)).

Figure 7.3 has been moved to reduce file size. To view it, click on the link to the figure in the web page List of Figures for this document.



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TITLE	<b>DCR Application for a Type A Water Licence</b>
SECTION	7: Site-Specific Water Use
SUBJECT	5: Trail River Compressor Station

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### LOCATION OF UNDERTAKING (PART 3)

The Trail River compressor station site coordinates and location of its likely water source are listed in [Table 7-7](#). [Figure 7-4](#) is a site-specific map of the Trail River compressor station site.

**Table 7-7: Location of the Trail River Compressor Station**

Location of Undertaking	Kilometre Post (KP)	Latitude (DD)	Longitude (DD)	Easting (m)	Northing (m)	UTM Zone
Trail River Compressor Station	927.8	62.2321	-122.1643	543439	6900320	10
Water Source – Mackenzie River	-	-	-	-	-	-

### DESCRIPTION OF UNDERTAKING (PART 4)

#### Infrastructure Site for the Trail River Compressor Station

A temporary construction camp will be required at the Trail River compressor station site. At full occupancy (about 120 personnel), this camp will require a camp support staff of about 20 people. These people are included in the 120-person total. The camp will be occupied year-round during construction.

Construction of the infrastructure pad and the 120-person camp at the Trail River site will be completed during the winter of 2006-2007. Personnel constructing the compressor station will reside at the camp as soon as it is commissioned in 2007. The camp will be occupied through the summer of 2010.

A conceptual drawing of the camp layout is shown in [Section 3](#).

The camp will be used to feed and house construction personnel. The largest element of the operations will be catering and housekeeping for the camp residents. Other activities will include the maintenance operations of the camp and restocking of fuel and supplies by truck.

Water for the camp is expected to be sourced from the Mackenzie River. The water will be transported by truck from the source to the camp site for use as camp water and fire suppression water or will be put into storage tanks for summer use at the site.

### Trail River Compressor Station Site

A limited amount of water will be required for dust suppression and foundation work. This water will be obtained from the supply source and transported to the infrastructure site. It has been included in the estimated water volumes provided in Part 7.

### QUANTITY OF WATER INVOLVED (PART 7)

Daily water truck cycles will bring the necessary volume of water (about 227 L daily per person) to the camp. The quantity of water required for camp use will be dependent upon the number of persons occupying the camp.

The estimate of water requirements is based on the following assumptions:

- the camp will be occupied year round during construction
- camp use is based on an average water consumption of 227 L per person per day, which includes all uses
- camp capacity is 120 persons

The estimated water requirements, based on the above assumptions and including the quantities required for the Trail River compressor station, are shown in [Table 7-8](#).

**Table 7-8: Trail River Compressor Station Camp Water Requirements**

Description	Water Requirements	
	Total Annual Volume	Average Daily Volume <sup>a</sup>
Site specific water requirements year 1	50 m <sup>3</sup>	1 m <sup>3</sup>
Site specific water requirements year 2	3,500 m <sup>3</sup>	10 m <sup>3</sup>
Site specific water requirements year 3	3,550 m <sup>3</sup>	10 m <sup>3</sup>
Total water requirements over three years	7,100 m <sup>3</sup>	
NOTE: <sup>a</sup> Average daily volume is total annual volume averaged over 365 days.		

Once construction of the facility is complete, the operations phase of the facility will begin. The duration of this phase will coincide with the commercial life of the upstream production fields, and is projected to be about 30 years. Water consumption during normal operations is expected to be about 38 m<sup>3</sup> per year. This water will likely be sourced from the Mackenzie River and be brought in by tanker truck in the winter.

**SCHEDULE (PART 13)**

Camp operations will be continuous during the facility construction period, which is currently planned to occur from the winter of 2006-2007 through the summer of 2010 (see [Section 3](#)).

Figure 7.4 has been moved to reduce file size. To view it, click on the link to the figure in the web page List of Figures for this document.

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TITLE        **DCR Application for a Type A Water Licence**  
SECTION     7:    Site-Specific Water Use  
SUBJECT     6:    McGill Station Infrastructure Site

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### LOCATION OF UNDERTAKING (PART 3)

The McGill Station infrastructure site coordinates and location of its likely water source are listed in [Table 7-9](#). [Figure 7-5](#) is a site-specific map of the McGill Station site.

**Table 7-9: Location of the McGill Station Infrastructure Site**

Location of Undertaking	Kilometre Post (KP)	Latitude (DD)	Longitude (DD)	Easting (m)	Northing (m)	UTM Zone
McGill Station Infrastructure Site	1056.5	61.3756	-120.9003	612208	6806426	10
Water Source – Mackenzie River	-	-	-	-	-	-

### DESCRIPTION OF UNDERTAKING (PART 4)

#### McGill Station Infrastructure Site

Development activities of the project will require a temporary construction camp to be located at the McGill Station infrastructure site.

Construction of a 120-person camp at the McGill Station site will begin in the summer of 2006.

In the summer of 2007, the 120-person McGill Station construction camp will be expanded to a capacity of about 950 personnel. The camp will require a support staff of about 85 people. These people are included in the 950-person total.

Construction personnel will occupy the expanded camp over three winter construction seasons (2007-2008 for right of way clearing, 2008-2009 for pipeline construction and 2009-2010 for commissioning and reclamation). Numbers will peak in mid-winter and taper off toward spring. A reduced camp support staff will remain on the site between construction seasons. Water and sewage treatment facilities will be present in the camp.

A conceptual drawing of the camp layout is shown in [Section 3](#).

The camp will be used to feed and house construction personnel. The largest element of the operations will be catering and housekeeping for the camp residents. Other activities will include the maintenance operations of the camp and restocking of fuel and supplies by truck.

Water for the camp is expected to be sourced from the Mackenzie River. The water will be transported by truck from the source to the camp site for use as camp water. Additional water supply might be required for fire suppression.

### QUANTITY OF WATER INVOLVED (PART 7)

Daily water truck cycles will bring the necessary volume of water (about 227 L daily per person) to the camp. The quantity of water required for camp use will be dependent upon the number of persons occupying the camp.

The estimate of water requirements is based on the following assumptions:

- the camp will be at capacity during the winter months (122 days)
- the camp will be at about 8.0% capacity during the summer months (122 days)
- water usage during the shoulder months between summer and winter will be less
- camp use is based on an average water consumption of 227 L per person per day, which includes all uses
- camp capacity will be 120 persons, expanding to 950 persons

The estimate of water required, based on the above assumptions, is shown in [Table 7-10](#).

**Table 7-10: McGill Station Infrastructure Site Water Requirements**

Description	Water Requirements	
	Total Annual Volume	Average Daily Volume <sup>a</sup>
Site specific water requirements year 1	600 m <sup>3</sup>	2 m <sup>3</sup>
Site specific water requirements year 2	27,100 m <sup>3</sup>	74 m <sup>3</sup>
Site specific water requirements year 3	27,700 m <sup>3</sup>	76 m <sup>3</sup>
Total water requirements over three years	55,400 m <sup>3</sup>	
NOTE: <sup>a</sup> The average daily volume is total annual volume averaged over 365 days.		

### SCHEDULE (PART 13)

Camp operations will be continuous, at varying rates of activity, from the summer of 2006 through the summer of 2010 (see [Section 3](#)).

Figure 7.5 has been moved to reduce file size. To view it, click on the link to the figure in the web page List of Figures for this document.



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TITLE        **DCR Application for a Type A Water Licence**  
SECTION     7:    Site-Specific Water Use  
SUBJECT     7:    Trout River Heater Station

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**LOCATION OF UNDERTAKING (PART 3)**

The Trout River heater station site coordinates and location of its likely water source are listed in [Table 7-11](#). [Figure 7-6](#) is a site-specific map of the Trout River heater station site.

**Table 7-11: Location of the Trout River Heater Station**

Location of Undertaking	Kilometre Post (KP)	Latitude (DD)	Longitude (DD)	Easting (m)	Northing (m)	UTM Zone
Trout River Heater Station	1124.0	60.8096	-120.4726	637493	6744230	10
Water Source – No. 173 (K'eotsee)	1168.2	60.4159	-120.2963	648881	6700786	10

**DESCRIPTION OF UNDERTAKING (PART 4)**

**Infrastructure Site for the Trout River Heater Station**

A temporary construction camp will be required at the Trout River heater station site. At full occupancy (about 40 personnel), this camp will require a camp support staff of about five people. These people are included in the 40-person total. The camp will be occupied year-round during construction.

The infrastructure pad and the 40-person construction camp will be completed during the winter of 2006-2007. Personnel constructing the heater station will reside at the camp as soon as it is commissioned. The camp will be occupied through the summer of 2010.

A conceptual drawing of the camp layout is shown in [Section 3](#).

The camp will be used to feed and house construction personnel. The largest element of the operations will be catering and housekeeping for the camp residents. Other activities will include the maintenance operations of the camp and restocking of fuel and supplies by truck.

Water for the camp is expected to be sourced from K'eotsee. The water will be transported by truck from the source to the camp site for use as camp water and for fire suppression or will be put into storage tanks for summer use at the site.

### Trout River Heater Station Site

A limited amount of water will be required for dust suppression and foundation work. This water will be obtained from the supply source and transported to the infrastructure site. It has been included in the estimated water volumes provided in Part 7.

### QUANTITY OF WATER INVOLVED (PART 7)

Daily water truck cycles will bring the necessary volume of water (about 227 L daily per person) to the camp. The quantity of water required for camp use will be dependent upon the number of persons occupying the camp.

The estimate of water requirements is based on the following assumptions:

- the camp will be occupied year round during construction
- camp use is based on an average water consumption of 227 L per person per day, which includes all uses
- camp capacity is 40 persons

The estimated water requirements, based on the above assumptions and including the quantities required for the Trout River heater station, are shown in [Table 7-12](#).

**Table 7-12: Trout River Heater Station Camp Water Requirements**

Description	Water Requirements	
	Total Annual Volume	Average Daily Volume <sup>a</sup>
Site specific water requirements year 1	-	-
Site specific water requirements year 2	900 m <sup>3</sup>	2 m <sup>3</sup>
Site specific water requirements year 3	900 m <sup>3</sup>	2 m <sup>3</sup>
Total water requirements over three years	1,800 m <sup>3</sup>	
NOTE: <sup>a</sup> The average daily volume is total annual volume averaged over 365 days.		

Once construction of the facility is complete, the operations phase of the facility will begin. The duration of this phase will coincide with the commercial life of the upstream production fields and is projected to be about 30 years. Water consumption during normal operations is expected to be about 31 m<sup>3</sup> per year. This water will likely be sourced from K'eotsee and be brought in by tanker truck during the winter.

**SCHEDULE (PART 13)**

Camp operations will be continuous during the facility construction period, which is currently planned to occur from 2007 through the summer of 2010 (see [Section 3](#)).

Figure 7.6 has been moved to reduce file size. To view it, click on the link to the figure in the web page List of Figures for this document.

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TITLE	<b>DCR Application for a Type A Water Licence</b>
SECTION	7: Site-Specific Water Use
SUBJECT	8: Trout Lake Infrastructure Site

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### LOCATION OF UNDERTAKING (PART 3)

The Trout Lake infrastructure site coordinates and location of its likely water source are listed in [Table 7-13](#). [Figure 7-7](#) is a site-specific map of the Trout Lake site.

**Table 7-13: Location of the Trout Lake Infrastructure Site**

Location of Undertaking	Kilometre Post (KP)	Latitude (DD)	Longitude (DD)	Easting (m)	Northing (m)	UTM Zone
Trout Lake Infrastructure Site	1168.0	60.4650	-120.1378	657368	6706622	10
Water Source – No. 173 (K'eotsee)	1168.2	60.4159	-120.2963	648881	6700786	10

### DESCRIPTION OF UNDERTAKING (PART 4)

#### Trout Lake Infrastructure Site

Development activities of the project will require a temporary construction camp to be located at the Trout Lake infrastructure site.

Construction of a 120-person camp at the Trout Lake site will begin, and be completed, during the winter of 2006-2007.

In the winter of 2007-2008, the 120-person Trout Lake construction camp will be expanded to a capacity of about 900 personnel. The camp will require a support staff of about 80 people. These people are included in the 900-person total.

Construction personnel will occupy the camp over three winter construction seasons (2007-2008 for right of way clearing, 2008-2009 for pipeline construction and 2009-2010 for commissioning and reclamation). Numbers will peak in mid-winter and taper off toward spring. A reduced camp support staff will remain on the site between construction seasons. Water and sewage treatment facilities will be present in the camp.

A conceptual drawing of the camp layout is shown in [Section 3](#).

The camp will be used to feed and house construction personnel. The largest element of the operations will be catering and housekeeping for the camp residents. Other activities will include the maintenance operations of the camp and restocking of fuel and supplies by truck.

Water for the camp is expected to be sourced from K'eotsee. The water will be transported by truck from the source to the camp site for use as camp water and for fire suppression or will be put into storage tanks for summer use at the site.

### QUANTITY OF WATER INVOLVED (PART 7)

Daily water truck cycles will bring the necessary volume of water (about 227 L daily per person) to the camp. The quantity of water required for camp use will be dependent upon the number of persons occupying the camp.

The estimate of water requirements is based on the following assumptions:

- the camp will be at capacity during the winter months (122 days)
- the camp will be at about 8.0% capacity during the summer months (122 days)
- water usage during the shoulder months between summer and winter will be less
- camp use is based on an average water consumption of 227 L per person per day, which includes all uses
- camp capacity will be 120 persons, expanding to 900 persons

The estimate of water required, based on the above assumptions, is shown in [Table 7-14](#).

**Table 7-14: Trout Lake Infrastructure Site Water Requirements**

Description	Water Requirements	
	Total Annual Volume	Average Daily Volume <sup>a</sup>
Site specific water requirements year 1	600 m <sup>3</sup>	2 m <sup>3</sup>
Site specific water requirements year 2	12,900 m <sup>3</sup>	35 m <sup>3</sup>
Site specific water requirements year 3	13,500 m <sup>3</sup>	37 m <sup>3</sup>
Total water requirements over three years	27,000 m <sup>3</sup>	
NOTE: <sup>a</sup> Average daily volume is total annual volume averaged over 365 days.		

### SCHEDULE (PART 13)

Camp operations will be continuous, at varying levels of activity, from the winter of 2006-2007 through the summer of 2010 (see [Section 3](#)).

Figure 7.7 has been moved to reduce file size. To view it, click on the link to the figure in the web page List of Figures for this document.



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TITLE	<b>DCR Application for a Type A Water Licence</b>
SECTION	7: Site-Specific Water Use
SUBJECT	9: Hay River Infrastructure Site

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### LOCATION OF UNDERTAKING (PART 3)

The Hay River infrastructure site coordinates and location of its likely water source are listed in [Table 7-15](#). [Figure 7-8](#) is a site-specific map of the Hay River site.

**Table 7-15: Location of the Hay River Infrastructure Site**

Location of Undertaking	Kilometre Post (KP)	Latitude (DD)	Longitude (DD)	Easting (m)	Northing (m)	UTM Zone
Hay River Infrastructure Site	701.7	63.9237	-124.1251	444821	7088998	10
Water Source – Town of Hay River	-	-	-	-	-	-

### DESCRIPTION OF UNDERTAKING (PART 4)

#### Hay River Infrastructure Site

Development activities of the project will require a temporary construction camp to be located at the Hay River infrastructure site.

Construction of a 300-person camp at the Hay River site will take place over the summer of 2007. The camp will require a support staff of about 27 people. These people are included in the 300-person total.

Construction personnel will occupy the camp continuously from the summer of 2007 to the summer of 2008. In addition, a few logistics personnel (three to six people) will be working at the Hay River site from the summer of 2006 to the winter of 2009-2010.

A conceptual drawing of the camp layout is shown in [Section 3](#).

The camp will be used to feed and house construction personnel. The largest element of the operations will be catering and housekeeping for the camp residents. Other activities will include the maintenance operations of the camp and restocking of fuel and supplies by truck.

Water for the camp is expected to be sourced from the town of Hay River. The water will be transported by truck from the source to the camp site for use as camp water. Additional water supply might be required for fire suppression.

## QUANTITY OF WATER INVOLVED (PART 7)

Daily water truck cycles will bring the necessary volume of water (about 227 L daily per person) to the camp. The quantity of water required for camp use will be dependent upon the number of persons occupying the camp.

The estimate of water requirements is based on the following assumptions:

- the camp will be at capacity from the summer of 2007 through the summer of 2008; with a few logistics personnel present before and after this period
- camp use is based on an average water consumption of 227 L per person per day, which includes all uses
- camp capacity will be 300 persons

The estimate of water required, based on the above assumptions, is shown in [Table 7-16](#).

**Table 7-16: Hay River Infrastructure Site Water Requirements**

Description	Water Requirements	
	Total Annual Volume	Average Daily Volume <sup>a</sup>
Site specific water requirements year 1 <sup>b</sup>	150 m <sup>3</sup>	1 m <sup>3</sup>
Site specific water requirements year 2 <sup>c</sup>	18,700 m <sup>3</sup>	51 m <sup>3</sup>
Site specific water requirements year 3 <sup>c</sup>	18,850 m <sup>3</sup>	52 m <sup>3</sup>
Total water requirements over three years	37,700 m <sup>3</sup>	
NOTE:		
<sup>a</sup> Average daily volume is total annual volume averaged over 365 days.		
<sup>b</sup> Water requirements in the first year are for logistics personnel.		
<sup>c</sup> For the last half of the second year and the first half of the third year, the camp is assume to be at capacity.		

## SCHEDULE (PART 13)

Camp operations will be continuous from the summer of 2007 to the fall of 2008 (see [Section 3](#)).

Figure 7.8 has been moved to reduce file size. To view it, click on the link to the figure in the web page List of Figures for this document.

