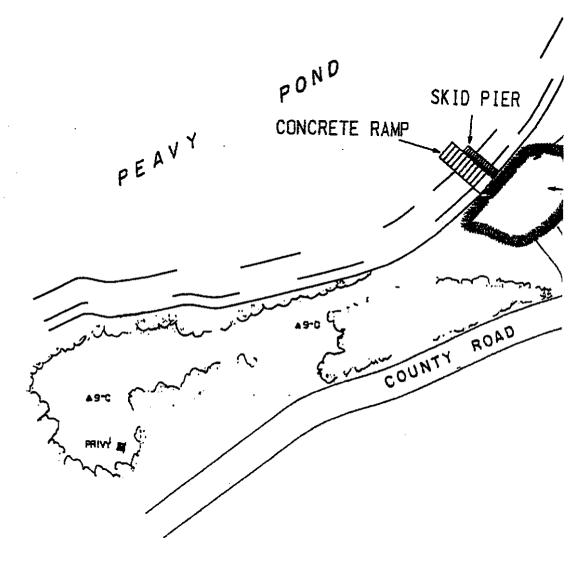
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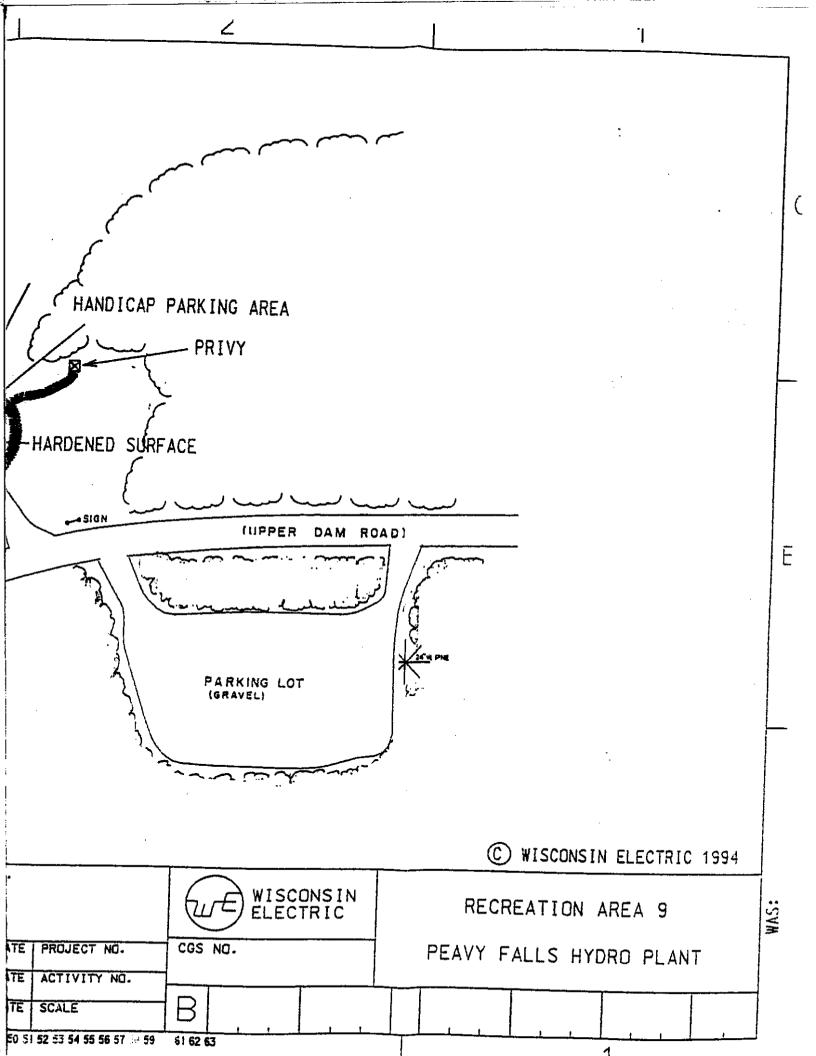
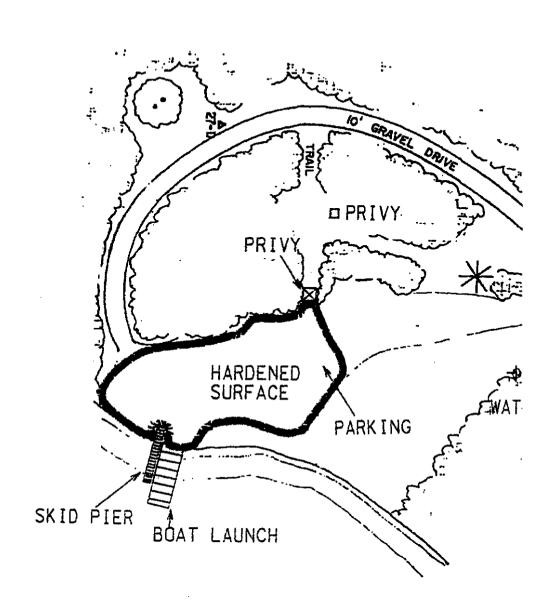


EXHIBIT L Peavy Falls Recreation Area 27



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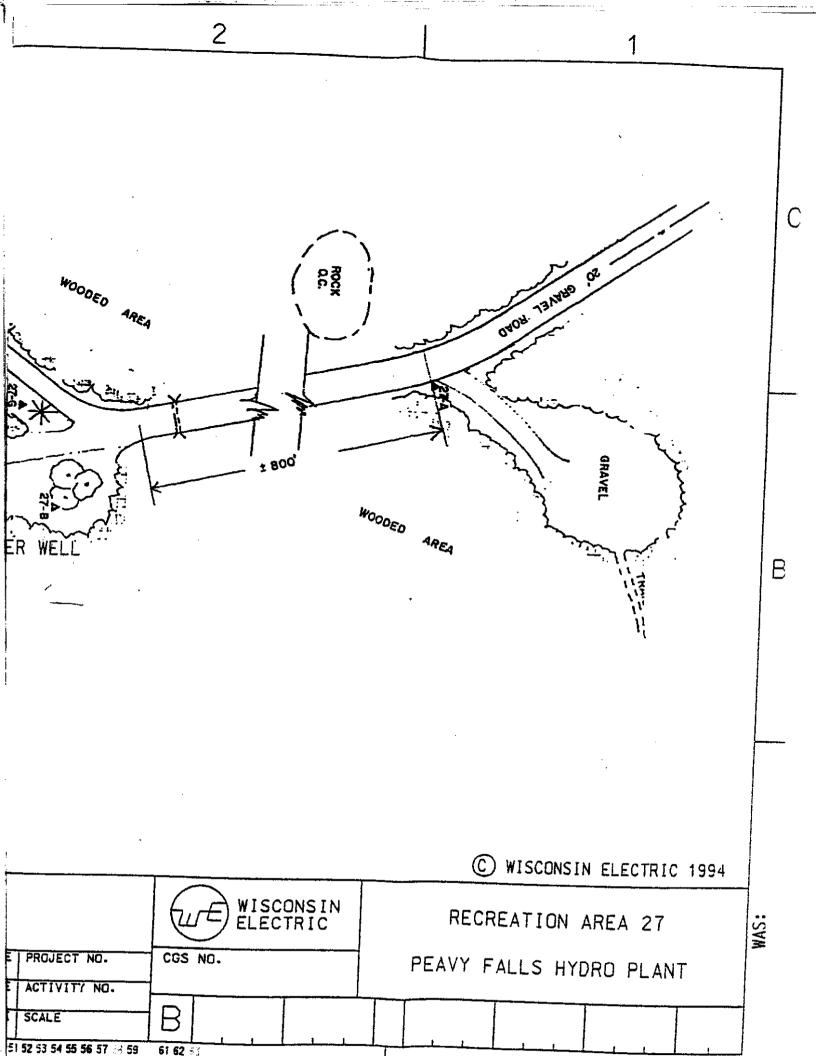
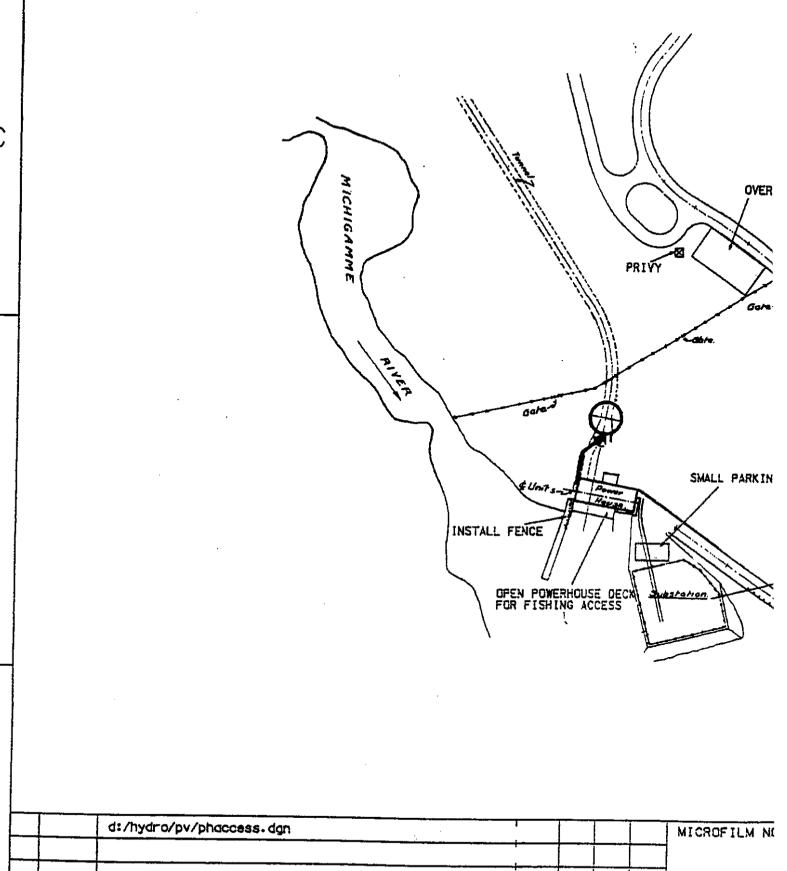


EXHIBIT M Peavy Falls Tailwater Access



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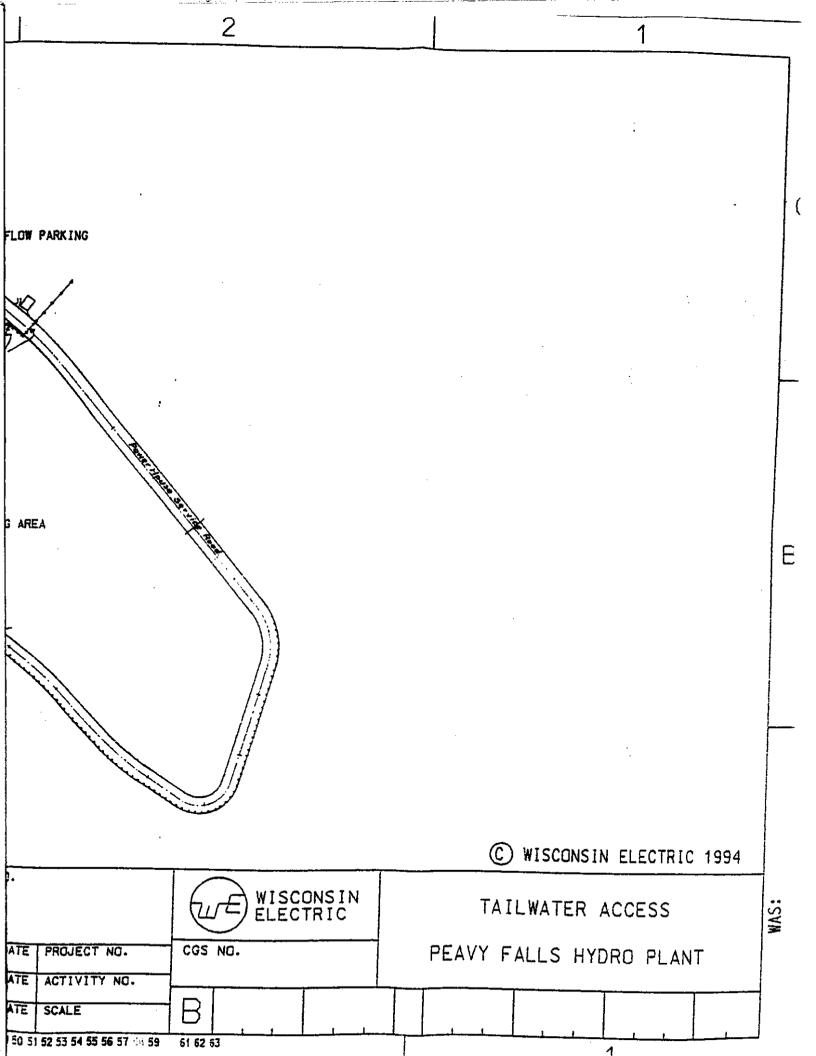
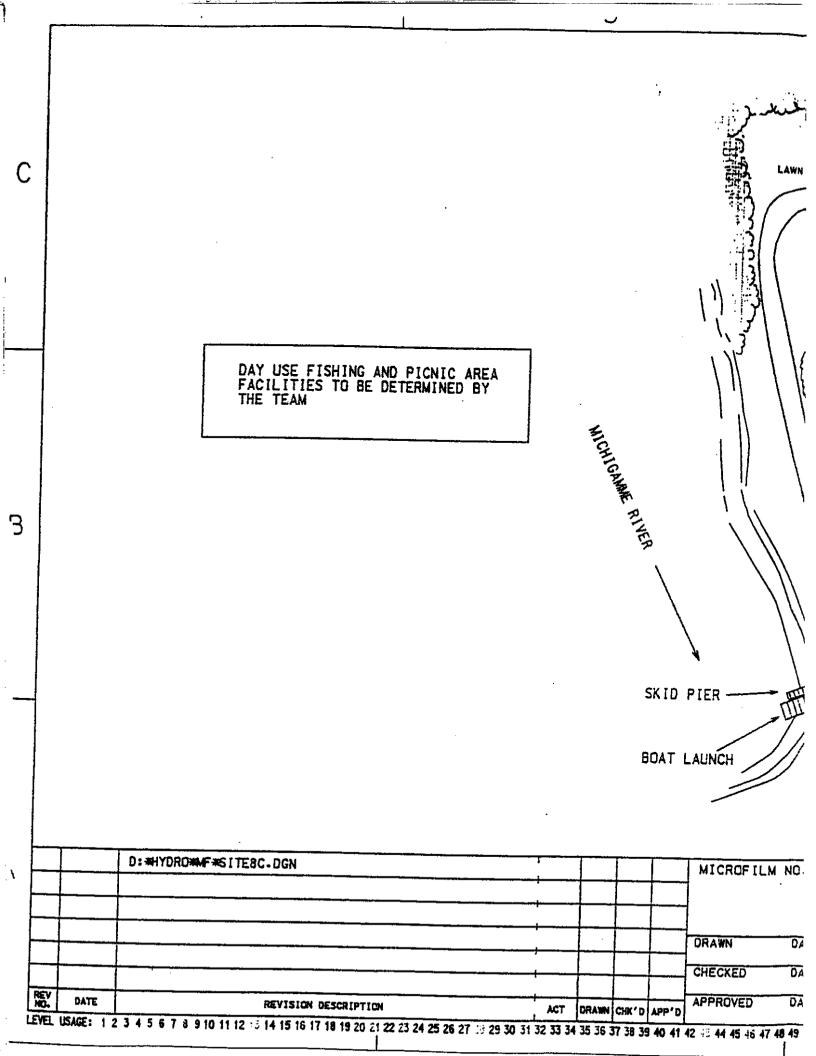


EXHIBIT N Michigamme Falls Recreation Area 8



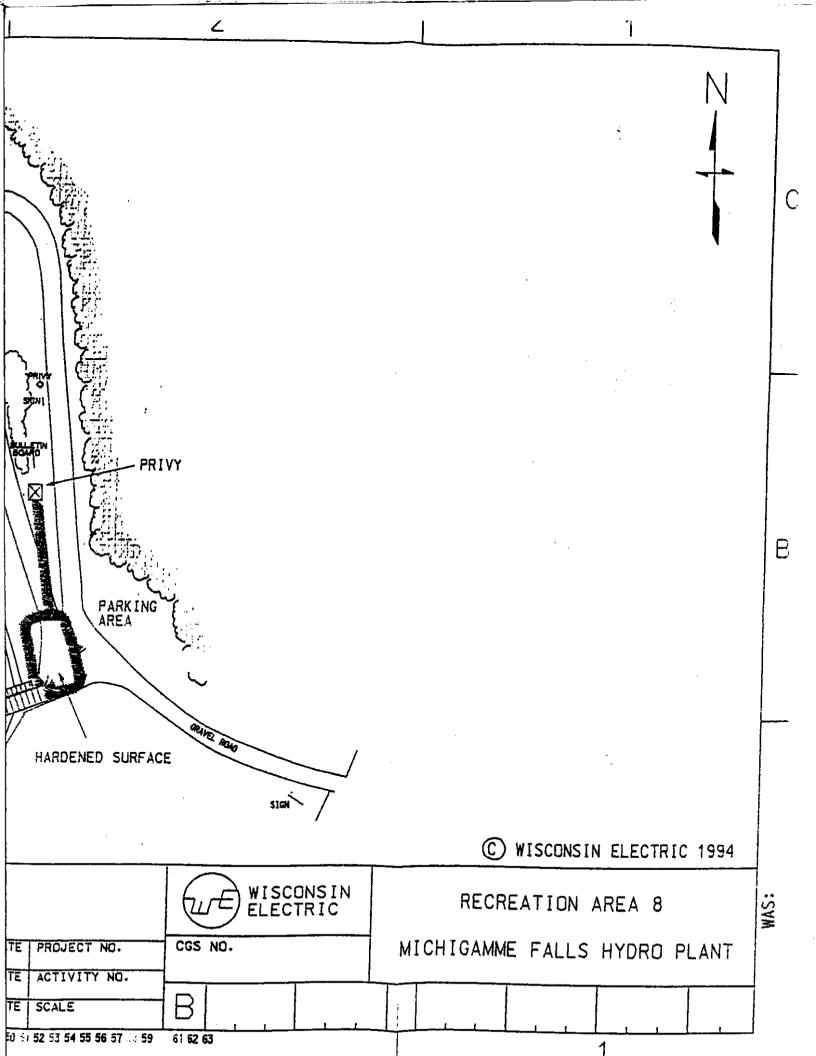
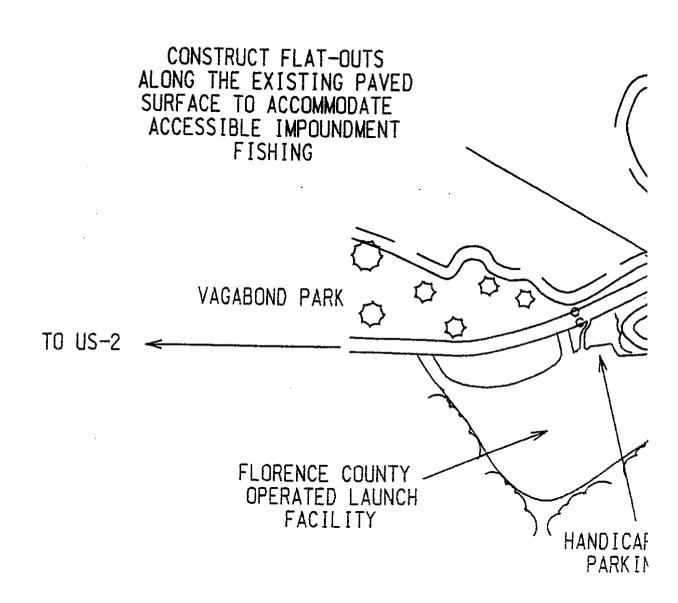


EXHIBIT O Twin Falls Impoundment Fishing

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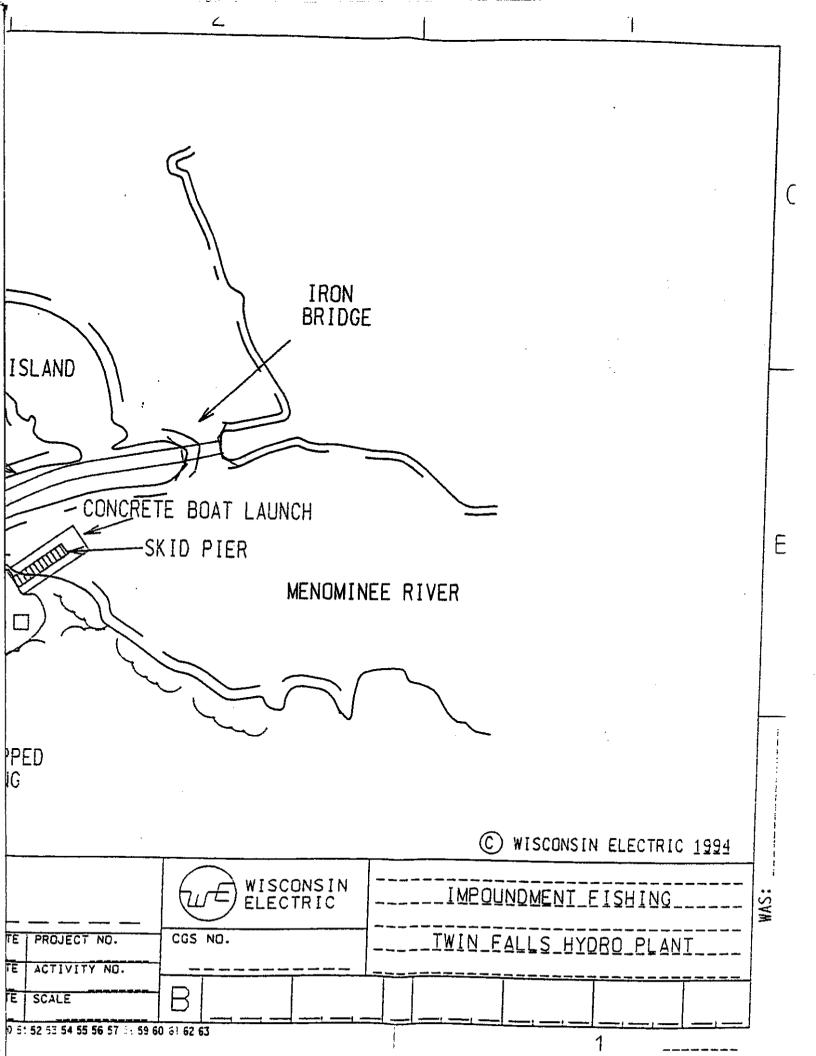
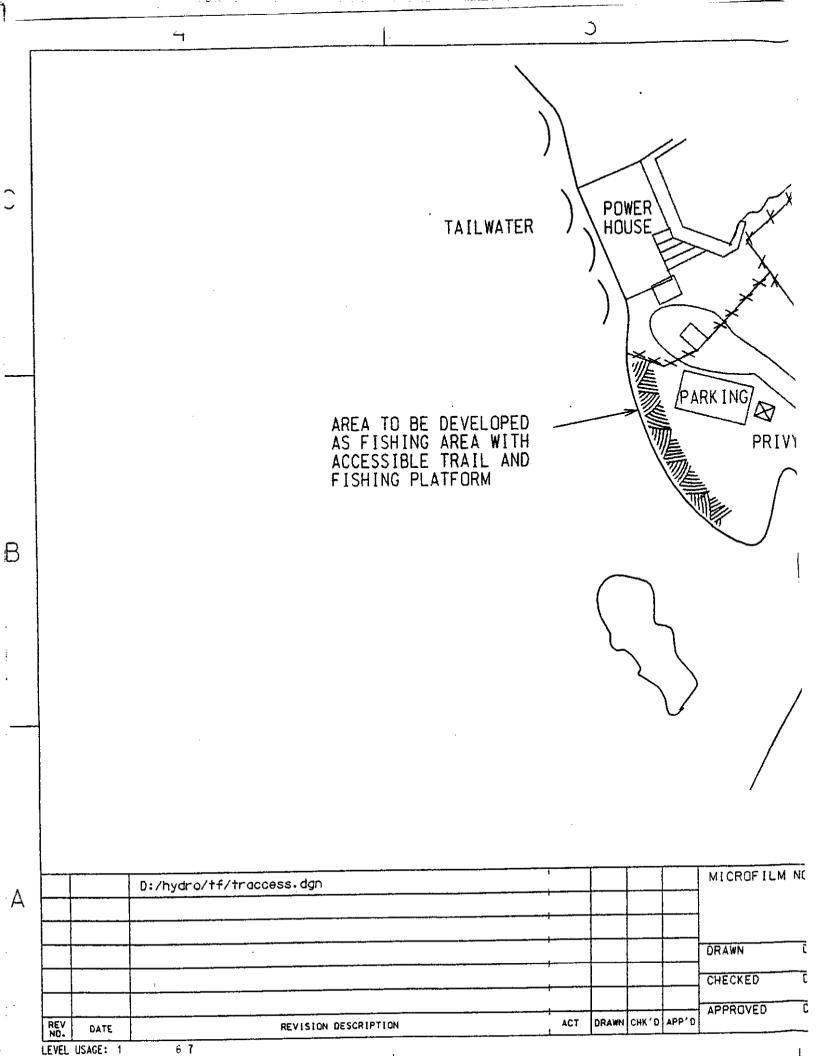


EXHIBIT P Twin Falls Tailwater Access



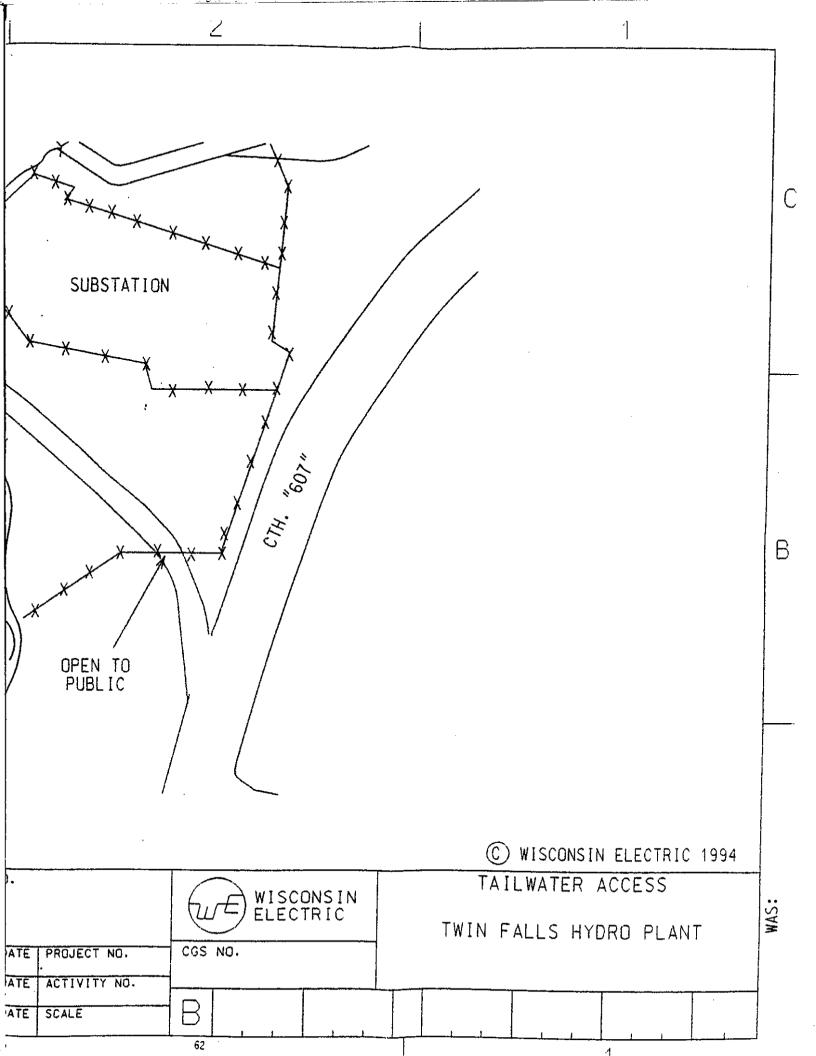
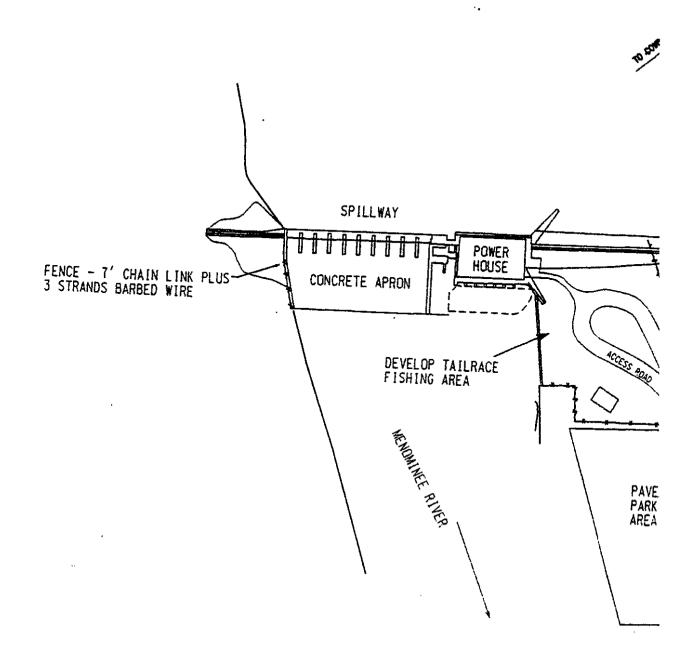


EXHIBIT Q Kingsford Tailwater Access



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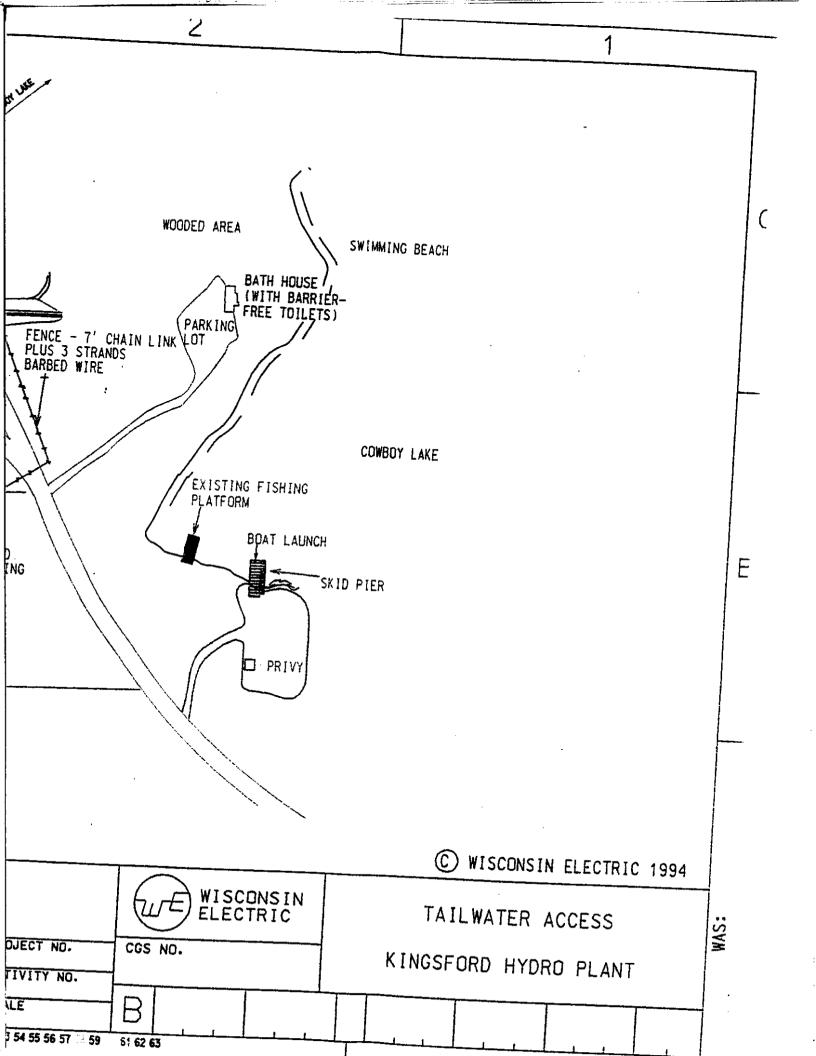
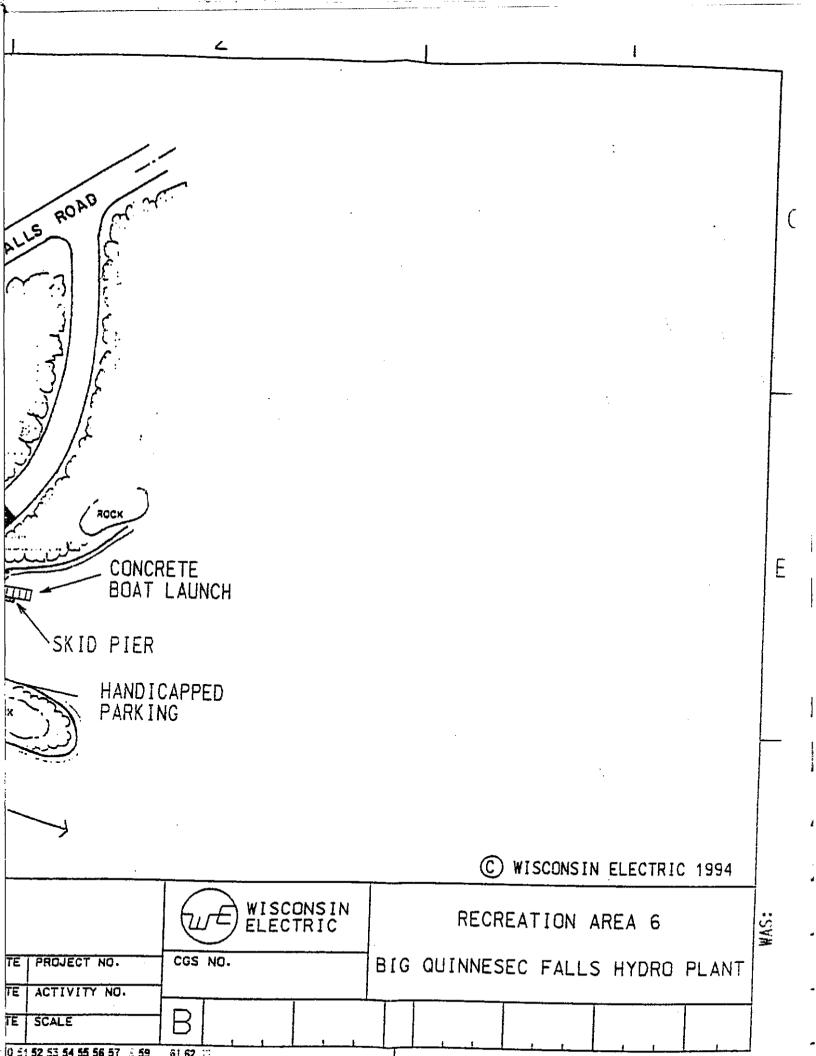


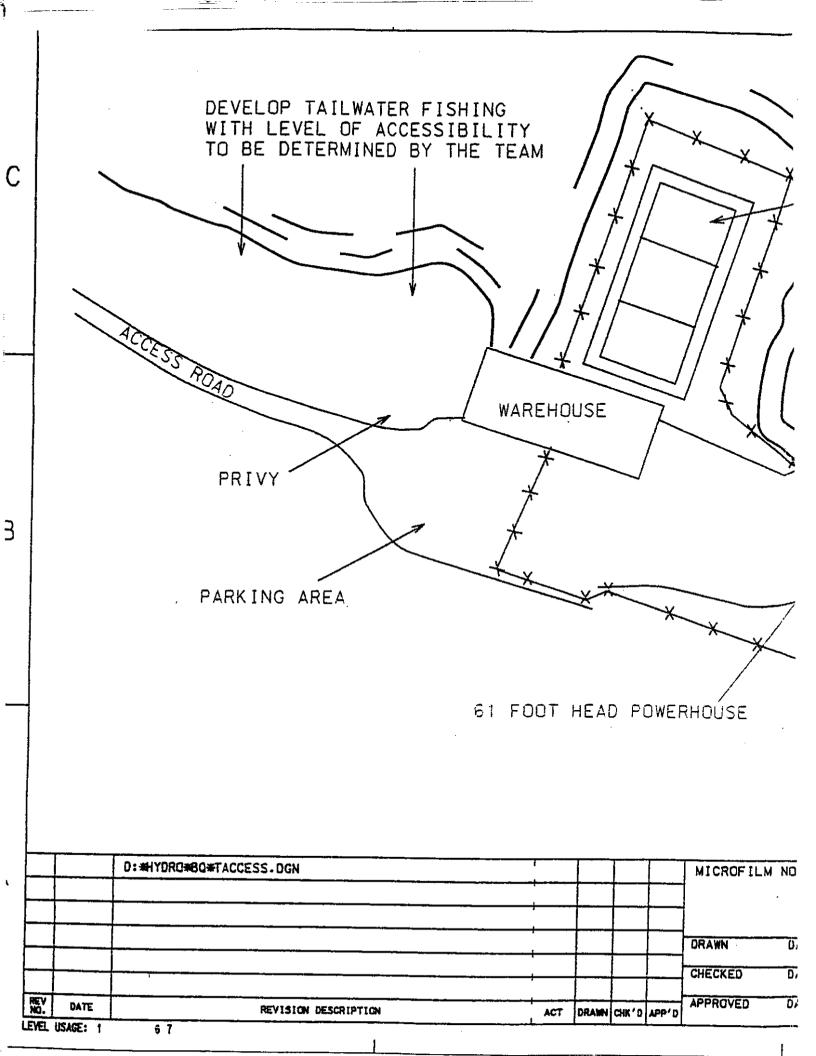
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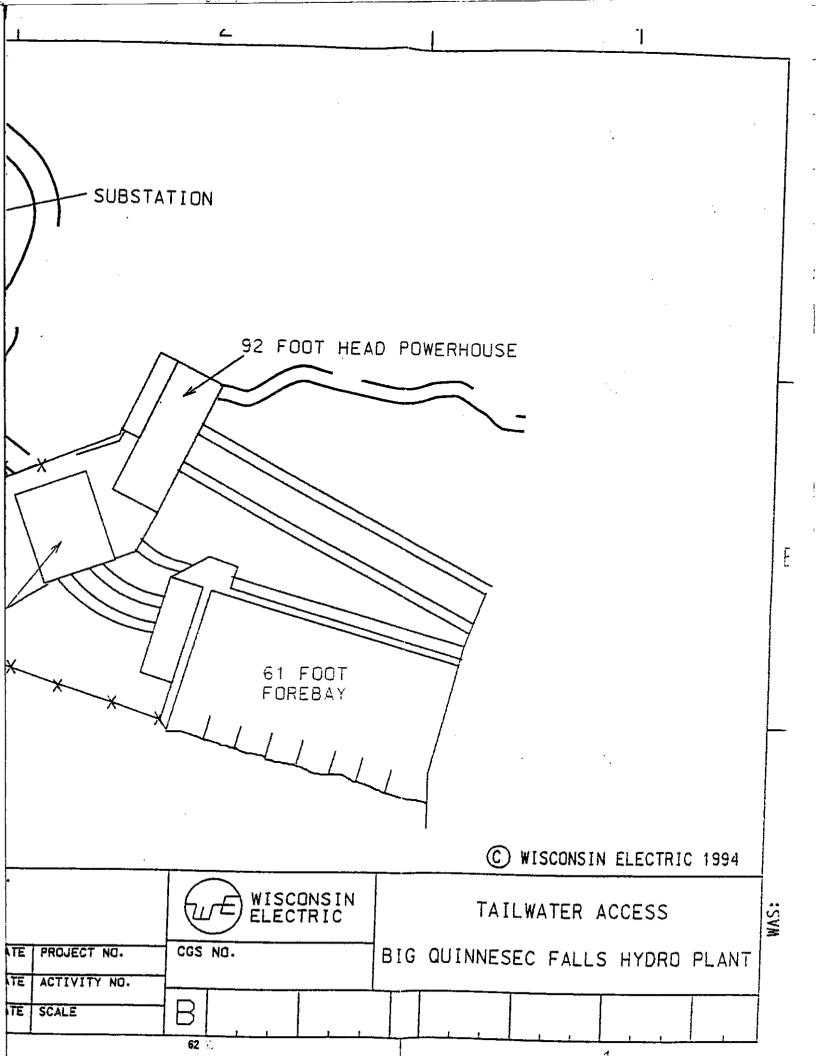
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Woody Debris Management Plan

WOODY DEBRIS MANAGEMENT PLAN Twin Falls Hydroelectric Project

Wisconsin Electric will use the following procedures to help maintain woody debris and vegetative materials in the river system.

Woody debris and vegetative materials that collect near the intakes and Tainter gates at the project will be passed downstream through a spill gate. Generation may be reduced or taken off line during sluicing operations to permit cleaning of the intake racks. The required minimum flow will be maintained during sluicing operations.

Wisconsin Electric does not normally remove woody or vegetative debris from the stream or impoundment except during deep cleaning of the trash racks. When sunken debris accumulates on the trash racks below the level that can be removed during routine raking of the racks, it is sometimes necessary to remove the sunken debris using a crane or other mechanical means. If a significant amount of debris is removed at one time it is not practical or safe to return all the debris to the river. During these operations the debris may be removed from the river, however, this type of cleaning has historically been required less than once in ten years.

Wisconsin Electric has occasionally been approached by clubs and organizations interested in volunteering their time to add fish cribs and other structure to the reservoirs as habitat improvement projects. The resource agencies have also expressed interest in possibly adding structure to project waters. When these opportunities arise Wisconsin Electric will consult with the agencies regarding possible addition of structures or woody debris.

WOODY DEBRIS MANAGEMENT PLAN Kingsford Hydroelectric Project

Wisconsin Electric will use the following procedures to help maintain woody debris and vegetative materials in the river system.

Woody debris and vegetative materials that collect near the intakes and Tainter gates at the project will be passed downstream through a spill gate. Generation may be reduced or taken off line during sluicing operations to permit cleaning of the intake racks. The required minimum flow will be maintained during sluicing operations.

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Reservoir Drawdown Plans

Twin Falls, Kingsford, Big Q Reservoir Drawdown Plan

Maintenance Drawdowns

Drawdowns beyond the normal operating limits may be required from time to time to allow for maintenance of the project structures and/or equipment. The depth, timing, and duration of the drawdown will be dependent upon the specific maintenance required. These maintenance activities are planned well in advance of any required drawdown.

When WE determines that a drawdown is required for project maintenance, we will apply to MDEQ for a drawdown permit to be issued under Part 301 of the MNREPA. WE will apply to MDEQ for a drawdown permit and consult with FWS and WDNR at least 135 days prior to comensing the drawdown. At least 45 days prior to comensing the drawdown, we will apply to FERC for drawdown approval. If MDEQ has issued a permit prior to the FERC filing deadline, it will be included in the application to FERC.

If Michigan law is changed to not require part 301 drawdown permits, WE will consult with MDNR, MDEQ, and FWS at least 120 days before commencing the drawdown. WE will file the drawdown plan with the FERC for approval at least 60 days prior to the start of the drawdown, along with any comments from the these agencies.

The following guidelines will be used for maintenance drawdowns:

When possible drawdowns will be conducted in August and September. Extended drawdown durations will require adjusting the drawdown timing.

A maximum drawdown rate of 0.2 feet per hour.

Minimum daily average outflow during refill will be the lessor of 75% of the daily average inflow or the 75% monthly exceedance flow.

Initially, for drawdowns conducted during ice-free periods, WE will survey the reservoir for stranded fish, return all live stranded fish to the reservoir, and record the GPS coordinates of all locations where stranding occurred. Information gathered during initial survey efforts will be used to determine the level of survey work necessary for future drawdowns.

Emergency Drawdowns

When a drawdown becomes necessary due to FERC order, structural conditions, maintenance requirements or equipment failure without sufficient advance knowledge to provide a 135 day notification period to MDEQ, it will be considered an emergency drawdown.

If an emergency drawdown is required or is ordered by the FERC, WE will notify MDEQ, and FWS within one working day. Notification will include the rate of drawdown, depth, and expected duration. WE will apply to MDEQ for a drawdown permit within 30 days after commencing the drawdown. Unless otherwise ordered or approved by FERC, the following guidelines will be used for these drawdowns: A maximum drawdown rate of 0.2 feet per hour.

Minimum daily average outflow during refill will be the lessor of 75% of the daily average inflow or the 75% monthly exceedance flow.

Hemlock Falls Reservoir Drawdown Plan

Annual Inspection Drawdowns

Routine periodic inspections and maintenance of the turbine at Way dam require a drawdown at Hemlock Falls to dewater the turbine chamber at Way. Inspection drawdowns normally last from one to three days, but could last one or two weeks, or longer, if repairs are required. Inspection drawdowns may be for the purpose of routine inspection and maintenance, an abnormal operating condition, equipment failure, or other condition that necessitates entry into the turbine at Way dam.

The drawdowns will be conducted under the following parameters:

When possible, inspection drawdowns will occur before April 10 or after June 30 to protect spawning fish.

The minimum drawdown target elevation will be 1332.0 ft NGVD

Maximum drawdown rate will be 0.2 ft per hour

During refill, sufficient outflow will be maintained from Hemlock Falls to meet the required Way Dam minimum flow as measured at the USGS gage below Hemlock Falls.

Maintenance Drawdowns

Drawdowns beyond the normal operating limits may be required from time to time to allow for maintenance of the project structures and/or equipment. The depth, timing, and duration of the drawdown will be dependent upon the specific maintenance required. These maintenance activities are planned well in advance of any required drawdown.

When WE determines that a drawdown is required for project maintenance (other than inspection drawdowns), we will apply to MDEQ for a drawdown permit to be issued under Part 301 of the MNREPA. WE will apply to MDEQ for a drawdown permit and consult with FWS at least 135 days prior to comensing the drawdown. At least 45 days prior to comensing the drawdown, we will apply to FERC for drawdown approval. If MDEQ has issued a permit prior to the FERC filing deadline, it will be included in the application to FERC.

If Michigan law is changed to not require part 301 drawdown permits, WE will consult with MDNR, MDEQ, and FWS at least 120 days before commencing the drawdown. WE will file the drawdown plan with the FERC for approval at least 60 days prior to the start of the drawdown, along with any comments from the these agencies.

The following guidelines will be used for maintenance drawdowns:

When possible, drawdowns will be conducted in August and September. Extended drawdown durations will require adjusting the drawdown timing.

A maximum drawdown rate of 0.2 feet per hour.

During refill, sufficient outflow will be maintained from Hemlock Falls to meet the required Way Dam minimum flow as measured at the USGS gage below Hemlock Falls.

Emergency Drawdowns

When a drawdown becomes necessary due to FERC order, structural conditions, maintenance requirements or equipment failure without sufficient advance knowledge to provide a 135 day notification period to MDEQ, it will be considered an emergency drawdown.

If an emergency drawdown is required or is ordered by the FERC, WE will notify MDEQ, and FWS within one working day. Notification will include the rate of drawdown, depth, and expected duration. WE will apply to MDEQ for a drawdown permit within 30 days after commencing the drawdown. Unless otherwise ordered or approved by FERC, the following guidelines will be used for these drawdowns:

A maximum drawdown rate of 0.2 feet per hour.

During refill, sufficient outflow will be maintained from Hemlock Falls to meet the required Way Dam minimum flow as measured at the USGS gage below Hemlock Falls.

Lower Paint Reservoir Drawdown Plan

Maintenance Drawdowns

Drawdowns beyond the normal operating limits may be required from time to time to allow for maintenance of the project structures and/or equipment. The depth, timing, and duration of the drawdown will be dependent upon the specific maintenance required. These maintenance activities are planned well in advance of any required drawdown.

When WE determines that a drawdown is required for project maintenance, we will apply to MDEQ for a drawdown permit to be issued under Part 301 of the MNREPA. WE will apply to MDEQ for a drawdown permit and consult with FWS and WDNR at least 135 days prior to comensing the drawdown. At least 45 days prior to comensing the drawdown, we will apply to FERC for drawdown approval. If MDEQ has issued a permit prior to the FERC filing deadline, it will be included in the application to FERC.

If Michigan law is changed to not require part 301 drawdown permits, WE will consult with MDNR, MDEQ, and FWS at least 120 days before commencing the drawdown. WE will file the drawdown plan with the FERC for approval at least 60 days prior to the start of the drawdown, along with any comments from the these agencies.

The following guidelines will be used for maintenance drawdowns:

When possible drawdowns will be conducted in August and September. Extended drawdown durations will require adjusting the drawdown timing.

A maximum drawdown rate of 0.2 feet per hour.

Minimum flow down the Paint river will be maintained during refill unless low flow condition prevent refill plus minimum flow. In the event of low flow conditions WE will consult with MDNR/MDEQ and FWS on appropriate releases during refill.

Initially, for drawdowns conducted during ice-free periods, WE will survey the reservoir for stranded fish, return all live stranded fish to the reservoir, and record the GPS coordinates of all locations where stranding occurred. Information gathered during initial survey efforts will be used to determine the level of survey work necessary for future drawdowns.

Emergency Drawdowns

When a drawdown becomes necessary due to FERC order, structural conditions, maintenance requirements or equipment failure without sufficient advance knowledge to provide a 135 day notification period to MDEQ, it will be considered an emergency drawdown.

If an emergency drawdown is required or is ordered by the FERC, WE will notify MDEQ, and FWS within one working day. Notification will include the rate of drawdown, depth, and expected duration. WE will apply to MDEQ for a drawdown permit within 30 days after commencing the drawdown. Unless otherwise ordered or approved by FERC, the following guidelines will be used for these drawdowns:

A maximum drawdown rate of 0.2 feet per hour.

Minimum flow down the Paint river will be maintained during refill unless low flow condition prevent refill plus minimum flow. In the event of low flow conditions WE will consult with MDNR/MDEQ and FWS on appropriate releases during refill.

Peavy Falls Reservoir Drawdown Plan

Maintenance Drawdowns

Drawdowns beyond the normal operating limits may be required from time to time to allow for maintenance of the project structures and/or equipment. The depth, timing, and duration of the drawdown will be dependent upon the specific maintenance required. These maintenance activities are planned well in advance of any required drawdown.

When WE determines that a drawdown is required for project maintenance, we will apply to MDEQ for a drawdown permit to be issued under Part 301 of the MNREPA. WE will apply to MDEQ for a drawdown permit and consult with FWS at least 135 days prior to comensing the drawdown. At least 45 days prior to comensing the drawdown, we will apply to FERC for drawdown approval. If MDEQ has issued a permit prior to the FERC filing deadline, it will be included in the application to FERC.

If Michigan law is changed to not require part 301 drawdown permits, WE will consult with MDNR, MDEQ, and FWS at least 120 days before commencing the drawdown. WE will file the drawdown plan with the FERC for approval at least 60 days prior to the start of the drawdown, along with any comments from the these agencies.

The following guidelines will be used for maintenance drawdowns:

When possible drawdowns will be conducted in August and September. Extended drawdown durations will require adjusting the drawdown timing.

A maximum drawdown rate of 0.2 feet per hour.

The minimum daily average outflow during refill will be the lessor of 75% of the daily average inflow or sufficient flow to provide a 1000 CFS daily average flow at Big Quinnesec Falls.

For maintenance drawdowns greater than the normal 1 foot operating drawdown that occur during the icefree period, WE will consult with MDNR, MDEQ, and FWS on the potential fish stranding issue. The large size of the reservoir and the fact that it may take several weeks to complete a drawdown will require consultation to determine what level of effort would be practicle, cost effective, and beneficial based on the specific conditions associated with the drawdown.

Emergency Drawdowns

When a drawdown becomes necessary due to FERC order, structural conditions, maintenance requirements or equipment failure without sufficient advance knowledge to provide a 135 day notification period to MDEQ, it will be considered an emergency drawdown.

If an emergency drawdown is required or is ordered by the FERC, WE will notify MDEQ, and FWS within one working day. Notification will include the rate of drawdown, depth, and expected duration. WE will apply to MDEQ for a drawdown permit within 30 days after commencing the drawdown. Unless otherwise ordered or approved by FERC, the following guidelines will be used for these drawdowns:

A maximum drawdown rate of 0.2 feet per hour.

The minimum daily average outflow during refill will be the lessor of 75% of the daily average inflow or sufficient flow to provide a 1000 CFS daily average flow at Big Quinnesec Falls.

For emergency drawdowns greater than the normal 1 foot operating drawdown that occur during the icefree period, WE will consult with MDNR, MDEQ, and FWS on the potential fish stranding issue. The large size of the reservoir and the fact that it may take several weeks to complete a drawdown will require consultation to determine what level of effort would be practicle, cost effective, and beneficial based on the specific conditions associated with the drawdown.

Michigamme Falls Reservoir Drawdown Plan

Annual Inspection Drawdowns

Routine periodic inspections and maintenance of the turbines at Peavy Falls require a drawdown at Michigamme Falls to dewater the turbine chamber at Peavy Falls. Inspection drawdowns normally last from one to three days, but could last one or two weeks, or longer, if repairs are required. Inspection drawdowns may be for the purpose of routine inspection and maintenance, an abnormal operating condition, equipment failure, or other condition that necessitates entry into the turbine at Peavy Falls.

The drawdowns will be conducted under the following parameters:

When possible, inspection drawdowns will occur before April 10 or after June 30 to protect spawning fish.

The minimum drawdown target elevation will be 1187.0 ft NGVD.

Maximum drawdown rate will be 0.2 ft per hour.

Minimum daily average outflow during refill will be the lessor of 75% of the daily average inflow or the 75% monthly exceedance flow.

Maintenance Drawdowns

Drawdowns beyond the normal operating limits may be required from time to time to allow for maintenance of the project structures and/or equipment. The depth, timing, and duration of the drawdown will be dependent upon the specific maintenance required. These maintenance activities are planned well in advance of any required drawdown.

When WE determines that a drawdown is required for project maintenance (other than inspection drawdowns), we will apply to MDEQ for a drawdown permit to be issued under Part 301 of the MNREPA. WE will apply to MDEQ for a drawdown permit and consult with FWS at least 135 days prior to comensing the drawdown. At least 45 days prior to comensing the drawdown, we will apply to FERC for drawdown approval. If MDEQ has issued a permit prior to the FERC filing deadline, it will be included in the application to FERC.

If Michigan law is changed to not require part 301 drawdown permits, WE will consult with MDNR, MDEQ, and FWS at least 120 days before commencing the drawdown. WE will file the drawdown plan with the FERC for approval at least 60 days prior to the start of the drawdown, along with any comments from the these agencies.

The following guidelines will be used for maintenance drawdowns:

When possible drawdowns will be conducted in August and September. Extended drawdown durations will require adjusting the drawdown timing.

A maximum drawdown rate of 0.2 feet per hour.

Minimum daily average outflow during refill will be the lessor of 75% of the daily average inflow or the 75% monthly exceedance flow.

Emergency Drawdowns

When a drawdown becomes necessary due to FERC order, structural conditions, maintenance requirements or equipment failure without sufficient advance knowledge to provide a 135 day notification period to MDEQ, it will be considered an emergency drawdown.

If an emergency drawdown is required or is ordered by the FERC, WE will notify MDEQ, and FWS within one working day. Notification will include the rate of drawdown, depth, and expected duration. WE will apply to MDEQ for a drawdown permit within 30 days after commencing the drawdown. Unless otherwise ordered or approved by FERC, the following guidelines will be used for these drawdowns: A maximum drawdown rate of 0.2 feet per hour.

Minimum daily average outflow during refill will be the lessor of 75% of the daily average inflow or the 75% monthly exceedance flow.

Way Dam Reservoir Drawdown Plan

Maintenance Drawdowns

Drawdowns beyond the normal operating limits may be required from time to time to allow for maintenance of the project structures and/or equipment. The depth, timing, and duration of the drawdown will be dependent upon the specific maintenance required. These maintenance activities are planned well in advance of any required drawdown.

When WE determines that a drawdown is required for project maintenance, we will apply to MDEQ for a drawdown permit to be issued under Part 301 of the MNREPA. WE will apply to MDEQ for a drawdown permit and consult with FWS at least 135 days prior to comensing the drawdown. At least 45 days prior to comensing the drawdown, we will apply to FERC for drawdown approval. If MDEQ has issued a permit prior to the FERC filing deadline, it will be included in the application to FERC.

If Michigan law is changed to not require part 301 drawdown permits, WE will consult with MDNR, MDEQ, and FWS at least 120 days before commencing the drawdown. WE will file the drawdown plan with the FERC for approval at least 60 days prior to the start of the drawdown, along with any comments from the these agencies.

The following guidelines will be used for maintenance drawdowns:

When possible, drawdowns will be conducted in August and September. Extended drawdown durations will require adjusting the drawdown timing.

A maximum drawdown rate of 0.2 feet per hour.

During refill, sufficient outflow will be maintained from Way Dam to meet the required minimum flow as measured at the USGS gage below Hemlock Falls. If sufficient water is not available to maintain the minimum flow, the consultation provisions of the Operations Compliance Plan will be used.

For emergency drawdowns greater than the normal 5 foot operating drawdown that occur during the ice-free period, WE will consult with MDNR, MDEQ, and FWS on the potential fish stranding issue. The large size of the reservoir and the fact that it may take months to complete a drawdown will require consultation to determine what level of effort would be practicle, cost effective, and beneficial based on the specific conditions associated with the drawdown.

Emergency Drawdowns

When a drawdown becomes necessary due to FERC order, structural conditions, maintenance requirements or equipment failure without sufficient advance knowledge to provide a 135 day notification period to MDEQ, it will be considered an emergency drawdown.

If an emergency drawdown is required or is ordered by the FERC, WE will notify MDEQ, and FWS within one working day. Notification will include the rate of drawdown, depth, and expected duration. WE will apply to MDEQ for a drawdown permit within 30 days after commencing the drawdown. Unless otherwise ordered or approved by FERC, the following guidelines will be used for these drawdowns:

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During refill, sufficient outflow will be maintained from Way Dam to meet the required minimum flow as measured at the USGS gage below Hemlock Falls. If sufficient water is not available to maintain the minimum flow, the consultation provisions of the Operations Compliance Plan will be used.

For emergency drawdowns greater than the normal 5 foot operating drawdown that occur during the icefree period, WE will consult with MDNR, MDEQ, and FWS on the potential fish stranding issue. The large size of the reservoir and the fact that it may take months to complete a drawdown will require consultation to determine what level of effort would be practicle, cost effective, and beneficial based on the specific conditions associated with the drawdown. **Operation Compliance Plans**

WAY DAM OPERATIONS COMPLIANCE PLAN

Staff Gage

A staff gage will be maintained on the dam structure visible to the public from a boat on the impoundment. The gage will be graduated in tenths of a foot. The the upper and lower limits of the summer operating band will be indicated by mounting a red plastic strip on the side of the gage above 1374.3 ft NGVD and below 1369.3 ft NGVD. The staff gage will not cover the winter drawdown operating band.

Automatic Water Level Sensor

WE has an automatic level sensor for the impoundment elevation located on the dam structure. The electronic gage continuously monitors the impoundment elevation and transmits the impoundment elevation to the hydro operation control center via a SCADA (System Control And Data Acquisition) system. The elevation of the impoundment will be manually checked to the nearest 0.1 ft by the plant operator at least once per week. The manual reading is called in to the dispatcher at the control center and is compared to the electronic reading.

The electronic gage may vary from the manual reading because of drift of the electronic readings. The drift is a factor of changes in the electronic gage output signal (due to atmospheric temperature and pressure changes), the conversion of the signal to a digital format within the SCADA system, and normal electronic systems tolerances. While the electronic reading will vary from the manual reading, when a difference of +/- 0.3 foot is noted between the manual reading and the electronic gage, the gage is scheduled for recalibration and is completed within 14 days. The impoundment elevation is automatically recorded hourly by the SCADA system. See Plant Operating Logs section for more detail.

Plant Operating Logs

The plant is operated and monitored around the clock by a dispatcher via a SCADA system. This system monitors generator output on a continuous basis and reports the generation readings in megawatt hours (to the tenth of a megawatt hour) to the central computer. The computer tracks the generator output readings and uses generator discharge tables (MW vs. Flow) to calculate the flow used each hour. Water passed through the spillway is also logged. The dispatcher manually enters the position of any open Tainter gates into the computer system. The underwater spill gate has automatic electronic position indication. The computer calculates the water passed through the open gate(s) using the electronic impoundment elevation reading, gate discharge tables, and the electronic or manually entered gate position.

Each day a daily log for the plant is produced by the computer system that shows the following by hour: impoundment elevation, tailwater elevation, and net head to the nearest one tenth of a foot; water flow through the unit; water wasted (spilled); and generator output in megawatts to the nearest one tenth of a megawatt. Each month the logs are transferred to computer disc and kept at the WE hydroelectric operations office.

Availability of Operating Logs

Plant operating logs for each day are maintained in the SCADA system for a minimum of thirty days. At the end of each month the data is copied to computer disc and the data is allowed to migrate out of the SCADA system files.

Wisconsin Electric will provide copies of the operating logs to the resource agencies for specified dates upon request from the agencies. Requests for these logs can be provided on computer disc for past months records by about the middle of the following month. If a limited amount of data is needed for an

immediate concern from logs that are not yet migrated to disk, we can provide a small number of records of plant logs for the previous thirty days by printing out specific daily log data directly from the SCADA system. However, these requests should be limited to a relatively small number of records due to the limited print capabilities of the SCADA system. We will normally respond to requests for plant operating logs within 10 days.

Plant Outages

Way Dam has an underwater gate that can be operated year round to spill water. The maximum hydraulic capacity is normally 500 CFS, limited due to gate vibration that has caused failure of the upstream bulkhead gate. The underwater spill gate is equipped with remote control capability and an automatic start emergency generator to provide operational capability during power outages. In the event of a power outage or trip of the generating unit, WE will use its remote control capability as required to restore the minimum flow. Minimum flow will normally be restored within 30 minutes.

Stream Gage

In order to provide verification of the flows released by Way and Hemlock Falls, Wisconsin Electric will provide for the maintenance of a telemetered stream gaging station on the Michigamme River below Hemlock Falls. (Currently USGS gage number 04062500.)

Emergency Operation and Flood Events

WE recognizes the importance of license compliance and will make reasonable and prudent efforts to comply with all license articles, however it must be recognized that equipment failures, electrical system disturbances, significant weather events, and other operating emergencies can affect WE?s ability to meet all license requirements. During emergency situations WE will place the highest priority on the safety of the public and safety of the dam structure. In the event of a flood, the project impoundment elevation limits will not apply at flows above the discharge capacity of the gated spillway at normal impoundment elevations.

Notification of Abnormal Operation

HEMLOCK FALLS OPERATIONS COMPLIANCE PLAN

Staff Gage

A staff gage will be maintained on the dam structure visible to the public from a boat on the impoundment. The gage will be graduated in tenths of a foot. The the upper and lower limits of the maximum operating band will be indicated by mounting a red plastic strip on the side of the gage above 1337.6 ft NGVD and below 1335.2 ft NGVD.

Automatic Water Level Sensor

WE has an automatic level sensor for the impoundment elevation located in the power house. The electronic gage continuously monitors the impoundment elevation and transmits the impoundment elevation to the hydro operations control center via a SCADA (System Control And Data Acquisition) system. The elevation of the impoundment will be manually checked to the nearest 0.1 ft by the plant operator at least once per week. The manual reading is called in to the dispatcher at the control center and is compared to the electronic reading.

The electronic gage may vary from the manual reading because of drift of the electronic readings. The drift is a factor of changes in the electronic gage output signal (due to atmospheric temperature and pressure changes), the conversion of the signal to a digital format within the SCADA system, and normal electronic systems tolerances. While the electronic reading will vary from the manual reading, when a difference of +/- 0.2 foot is noted between the manual reading and the electronic gage, the gage is scheduled for recalibration and is completed within 14 days. The impoundment elevation is automatically recorded hourly by the SCADA system. See Plant Operating Logs section for more detail.

Plant Operating Logs

The plant is operated and monitored around the clock by a dispatcher via a SCADA system. This system monitors generator output on a continuous basis and reports the generation readings in megawatt hours (to the tenth of a megawatt hour) to the central computer. The computer tracks the generator output readings and uses generator discharge tables (MW vs. Flow) to calculate the flow used each hour. Water passed through the spillway is also logged. The dispatcher manually enters the position of any open Tainter gates into the computer system. The computer calculates the water passed through the overflow spillway or open gate(s) using the electronic impoundment elevation reading, spillway discharge tables, and, for the Tainter gates, the manually entered gate position.

Each day a daily log for the plant is produced by the computer system that shows the following by hour: impoundment elevation, tailwater elevation, and net head to the nearest one tenth of a foot; water flow through the unit; water wasted (spilled); and generator output in megawatts to the nearest one tenth of a megawatt. Each month the logs are transferred to computer disc and kept at the WE hydroelectric operations office.

Availability of Operating Logs

Plant operating logs for each day are maintained in the SCADA system for a minimum of thirty days. At the end of each month the data is copied to computer disc and the data is allowed to migrate out of the SCADA system files.

Wisconsin Electric will provide copies of the operating logs to the resource agencies for specified dates upon request from the agencies. Requests for these logs can be provided on computer disc for past months records by about the middle of the following month. If a limited amount of data is needed for an

immediate concern from logs that are not yet migrated to disk, we can provide a small number of records of plant logs for the previous thirty days by printing out specific daily log data directly from the SCADA system. However, these requests should be limited to a relatively small number of records due to the limited print capabilities of the SCADA system. We will normally respond to requests for plant operating logs within 10 days.

Plant Outages

Hemlock Falls has an overflow spillway that passes water when the water level rises above the crest of the spillway. When the generator is off line, the open spillway is used to pass the river flow. Tainter gates are also available to pass flows in excess of the open spillway capacity. When the generator is on line the water level is maintained below the crest of the open spillway with no flow over the spillway until flow exceeds the hydraulic capacity of the generating unit.

In the event of a power outage or trip of the generating unit, the water level at Hemlock Falls will increase and the water will flow over the open spillway. WE will use its remote control capability to increase outflow from Way dam to reduce the time required to overflow the open spillway. Flow adjustments at Way Dam will normally be made within 30 minutes and minimum flow will be restored as the water level rises above the crest of the spillway.

Stream Gage

In order to provide verification of the flows released by Way and Hemlock Falls, Wisconsin Electric will provide for the maintenance of a telemetered stream gaging station on the Michigamme River below Hemlock Falls. (Currently USGS gage number 04062500.)

Emergency Operation and Flood Events

WE recognizes the importance of license compliance and will make reasonable and prudent efforts to comply with all license articles, however it must be recognized that equipment failures, electrical system disturbances, significant weather events, and other operating emergencies can affect WE?s ability to meet all license requirements. During emergency situations WE will place the highest priority on the safety of the public and safety of the dam structure. In the event of a flood, the project impoundment elevation limits will not apply at flows above the discharge capacity of the spillway at normal impoundment elevations.

Notification of Abnormal Operation

LOWER PAINT OPERATIONS COMPLIANCE PLAN

Plant Operating Logs

GENERATOR OUTPUT REPORTING. Lower Paint Diversion Dam is equipped with a small induction generator with a capacity of 100 KW and continually releases the required minimum flow. There is no load control capability on this unit. It always runs at full load. Because of the small size of the generator and limited control equipment required, real time generator output data is not available from Lower Paint.

The output of the unit is measured by a kilowatt hour meter in the power house. The meter is read once or twice per week by an operator and the reading is reported to the dispatcher at hydro operations control center. The dispatcher manually logs an assumed 100 KW (0.1 MW) every hour. Each time an actual reading is received from the field the dispatcher must adjust the reported hourly generation readings to correct any accumulated error since the last reading. Any previous over reporting of generation will be corrected by showing zero generation during some of the subsequent hourly readings (even though generation is relatively constant throughout the day) until the total generation reported on the logs is corrected to the actual reading. Previous under reporting of generation will be corrected by showing double generation for some of the subsequent hours until the error is corrected. Although the logs are not completely accurate using this method of preparing plant logs, it is a generally accepted practice when manual entry logs are used.

The dispatchers manually enters the log data into the System Control And Data Acquisition (SCADA) computer. The computer stores the entries in a file and these entries are down loaded to a permanent electronic log at the end of each month.

FLOW REPORTING. The flow through the generator is manually entered into the computer by the dispatcher. A constant flow of 85 CFS is logged for the flow through the unit whenever it is on line, even for the hours that generation corrections are made. Due to generation corrections, there will be some hours where no generation is shown, yet the minimum flow provided by the unit will show on the logs.

Water passed through the spillway is also logged. The dispatcher manually enters the position of any open Tainter gates into the computer system. The computer calculates the water passed through the overflow spillway or open gate(s) using the impoundment elevation, spillway discharge tables, and, for the Tainter gates, the manually entered gate position.

DAILY LOGS. Each day a daily log for the plant is produced by the computer system that shows water flow through the unit; water wasted (spilled); and generator output in megawatts to the nearest one tenth of a megawatt. Each month the logs are transferred to computer disc and kept at the WE hydroelectric operations office.

Availability of Operating Logs

Plant operating logs for each day are maintained in the SCADA system for a minimum of thirty days. At the end of each month the data is copied to computer disc and the data is allowed to migrate out of the SCADA system files.

Wisconsin Electric will provide copies of the operating logs to the resource agencies for specified dates upon request from the agencies. Requests for these logs can be provided on computer disc for past months records by about the middle of the following month. If a limited amount of data is needed for an immediate concern from logs that are not yet migrated to disk, we can provide a small number of records of plant logs for the previous thirty days by printing out specific daily log data directly from the SCADA

system. However, these requests should be limited to a relatively small number of records due to the limited print capabilities of the SCADA system. We will normally respond to requests for plant operating logs within 10 days.

Plant Outages

In the event of a power outage at Lower Paint, the generating unit will go into an overspeed condition and continue to pass the required minimum flow. The unit is designed for overspeed operation and can continue to operate in the overspeed mode until power is restored. No intervention is required to maintain the minimum flow.

Stream Gage

In order to provide verification of the flows released by Lower Paint, Wisconsin Electric will provide for the maintenance of a stream gaging station on the Michigamme River below Hemlock Falls. (Currently USGS gage number 04062000.)

Notification of Abnormal Operation

PEAVY FALLS OPERATIONS COMPLIANCE PLAN

Staff Gage

A staff gage will be maintained on the left side of the intake structure. This location is visible to the public from the left shore at the dam. The gage will be graduated in tenths of a foot. The upper and lower limits of the summer operating band will be indicated by a red strip on the side of the gage above 1283.8 ft NGVD and below 1282.8 ft NGVD. The staff gage will not cover the winter drawdown operating band.

Automatic Water Level Sensor

WE has an automatic level sensor for the impoundment elevation located on the dam structure. The electronic gage continuously monitors the impoundment elevation and transmits the impoundment elevation to the hydro operation control center via a SCADA (System Control And Data Acquisition) system. The elevation of the impoundment will be manually checked to the nearest 0.1 ft by the plant operator at least once per week. The manual reading is called in to the dispatcher at the control center and is compared to the electronic reading.

The electronic gage may vary from the manual reading because of drift of the electronic readings. The drift is a factor of changes in the electronic gage output signal (due to atmospheric temperature and pressure changes), the conversion of the signal to a digital format within the SCADA system, and normal electronic systems tolerances. While the electronic reading will vary from the manual reading, when a difference of +/- 0.2 foot is noted between the manual reading and the electronic gage, the gage is scheduled for recalibration and is completed within 14 days. The impoundment elevation is automatically recorded hourly by the SCADA system. See Plant Operating Logs section for more detail.

Plant Operating Logs

The plant is operated and monitored around the clock by a dispatcher via a SCADA system. This system monitors generator output on a continuous basis and reports the generation readings in megawatt hours (to the tenth of a megawatt hour) to the central computer. The computer tracks the generator output readings and uses generator discharge tables (MW vs. Flow) to calculate the flow used each hour. Water passed through the spillway is also logged. The dispatcher manually enters the position of any open Tainter gates into the computer system. The computer calculates the water passed through the open Tainter gate(s) using the electronic impoundment elevation reading, gate discharge tables, and the manually entered gate position.

Each day a daily log for the plant is produced by the computer system that shows the following by hour: impoundment elevation, tailwater elevation, and net head to the nearest one tenth of a foot; water flow through the units; water wasted (spilled); and generator output in megawatts to the nearest one tenth of a megawatt. Each month the logs are transferred to computer disc and kept at the WE hydroelectric operations office.

Availability of Operating Logs

Plant operating logs for each day are maintained in the SCADA system for a minimum of thirty days. At the end of each month the data is copied to computer disc and the data is allowed to migrate out of the SCADA system files.

Plant Outages

No special provisions are required for plant outages at Peavy Falls. The tailwater of Peavy Falls is the impoundment of the downstream Michigamme Falls project and dewatering of the tailwater does not occur due to lack of flow from Peavy Falls.

Emergency Operation and Flood Events

WE recognizes the importance of license compliance and will make reasonable and prudent efforts to comply with all license articles, however it must be recognized that equipment failures, electrical system disturbances, significant weather events, and other operating emergencies can affect WE?s ability to meet all license requirements. During emergency situations WE will place the highest priority on the safety of the public and safety of the dam structure. In the event of a flood, the project impoundment elevation limits will not apply at flows above the discharge capacity of the spillway at normal impoundment elevations.

Notification of Abnormal Operation

MICHIGAMME FALLS OPERATIONS COMPLIANCE PLAN

Staff Gage

A staff gage will be maintained on the dam structure visible to the public from a boat on the impoundment. The gage will be graduated in tenths of a foot. The the upper and lower limits of the maximum operating band will be indicated by mounting a red plastic strip on the side of the gage above 1189.7 ft NGVD and below 1188.2 ft NGVD.

Automatic Water Level Sensor

WE has an automatic level sensor for the impoundment elevation located in the power house. The electronic gage continuously monitors the impoundment elevation and transmits the impoundment elevation to the hydro operation control center via a SCADA (System Control And Data Acquisition) system. The elevation of the impoundment will be manually checked to the nearest 0.1 ft by the plant operator at least once per week. The manual reading is called in to the dispatcher at the control center and is compared to the electronic reading.

The electronic gage may vary from the manual reading because of drift of the electronic readings. The drift is a factor of changes in the electronic gage output signal (due to atmospheric temperature and pressure changes), the conversion of the signal to a digital format within the SCADA system, and normal electronic systems tolerances. While the electronic reading will vary from the manual reading, when a difference of +/- 0.2 foot is noted between the manual reading and the electronic gage, the gage is scheduled for recalibration and is completed within 14 days. The impoundment elevation is automatically recorded hourly by the SCADA system. See Plant Operating Logs section for more detail.

Plant Operating Logs

The plant is operated and monitored around the clock by a dispatcher via a SCADA system. This system monitors generator output on a continuous basis and reports the generation readings in megawatt hours (to the tenth of a megawatt hour) to the central computer. The computer tracks the generator output readings and uses generator discharge tables (MW vs. Flow) to calculate the flow used each hour. Water passed through the spillway is also logged. The dispatcher manually enters the position of any open Tainter gates into the computer system. The computer calculates the water passed through the open Tainter gate(s) using the electronic impoundment elevation reading, gate discharge tables, and the manually entered gate position.

Each day a daily log for the plant is produced by the computer system that shows the following by hour: impoundment elevation, tailwater elevation, and net head to the nearest one tenth of a foot; water flow through the units; water wasted (spilled); and generator output in megawatts to the nearest one tenth of a megawatt. Each month the logs are transferred to computer disc and kept at the WE hydroelectric operations office.

Availability of Operating Logs

Plant operating logs for each day are maintained in the SCADA system for a minimum of thirty days. At the end of each month the data is copied to computer disc and the data is allowed to migrate out of the SCADA system files.

Plant Outages

In the event of a plant outage, WE will maintain river flows as follows.

During Non-Winter Conditions

In the event of a plant outage that results in loss of flow through the generators, the WE dispatcher will attempt to restore plant power and generator operation using the remote control capabilities of the plant. If the plant cannot be restored by remote control, the dispatcher will operate the remote controlled Tainter gate to restore the required flow through the spillway.

The dam is equipped with an automatic start emergency power generator that will provide power to the dam. Power for the remote control systems is supplied from batteries. When a command to open the gate is issued by the dispatcher, there is a five minute delay before opening to allow the public warning system to complete the warning cycle.

During Winter Conditions

? Winter conditions? will mean the period of time when the dam is set up for winter operation. WE installs bubbler systems at most of its hydro facilities to prevent ice build up on portions of its dams, gates, or other structures. Installation of the bubblers systems takes place during late October and Early November. The bubbler systems must be installed before freezing weather to prevent the bubbler systems themselves from freezing up. Once they are installed they remain in the water until spring when the likelihood for ice build up on the structures and gates is passed. Actual removal dates are weather dependent.

At Michigamme Falls bubbler systems are placed just upstream of the spillway to prevent ice build up on the structure and Tainter gate. Operation of the Tainter gate with the bubbler system in place will result in the bubbler piping system being drawn into the Tainter gate, destroying the bubblers and possibly destroying the gate seals or getting stuck in the open gate. In the context of these operating discussions, winter conditions will include the entire time that the bubbler system is in place preventing remote operation of the Tainter gate.

In the event of a plant outage during winter conditions that results in loss of flow through the generators, the WE dispatcher will attempt to restore plant power and generator operation using the remote control capabilities of the plant. If the plant cannot be restored by remote control, a plant operator will be dispatched to the plant to attempt to start the generators locally. There are various ways for the operator to restore flow locally that cannot be done by remote control. The emergency power generator that provides power to the dam also provides power to the generator governors. This provides for local black plant start capabilities that may provide sufficient flow to meet the minimum flow criteria.

In the event that the operator cannot restore the required flow through the plant, the operator will remove the bubbler system from the upstream side of the Tainter gate and open the gate to restore the required minimum flow.

Emergency Operation and Flood Events

WE recognizes the importance of license compliance and will make reasonable and prudent efforts to

comply with all license articles, however it must be recognized that equipment failures, electrical system disturbances, significant weather events, and other operating emergencies can affect WE?s ability to meet all license requirements. During emergency situations WE will place the highest priority on the safety of the public and safety of the dam structure. In the event of a flood, the project impoundment elevation limits will not apply at flows above the discharge capacity of the spillway at normal impoundment elevations.

Notification of Abnormal Operation

TWIN FALLS OPERATIONS COMPLIANCE PLAN

Staff Gage

A staff gage will be maintained on the dam structure visible to the public from a boat on the impoundment or from the left shore near the dam. The gage will be graduated in tenths of a foot. The the upper and lower limits of the maximum operating band will be indicated by mounting a red plastic strip on the side of the gage above 1112.7 ft NGVD and below 1112.2 ft NGVD.

Automatic Water Level Sensor

WE has an automatic level sensor for the impoundment elevation located on the dam structure. The electronic gage continuously monitors the impoundment elevation and transmits the impoundment elevation to the hydro operation control center via a SCADA (System Control And Data Acquisition) system. The elevation of the impoundment will be manually checked to the nearest 0.1 ft by the plant operator at least once per week. The manual reading is called in to the dispatcher at the control center and is compared to the electronic reading.

The electronic gage may vary from the manual reading because of drift of the electronic readings. The drift is a factor of changes in the electronic gage output signal (due to atmospheric temperature and pressure changes), the conversion of the signal to a digital format within the SCADA system, and normal electronic systems tolerances. While the electronic reading will vary from the manual reading, when a difference of +/- 0.2 foot is noted between the manual reading and the electronic gage, the gage is scheduled for recalibration and is completed within 14 days. The impoundment elevation is automatically recorded hourly by the SCADA system. See Plant Operating Logs section for more detail.

Plant Operating Logs

The plant is operated and monitored around the clock by a dispatcher via a SCADA system. This system monitors generator output on a continuous basis and reports the generation readings in megawatt hours (to the tenth of a megawatt hour) to the central computer. The computer tracks the generator output readings and uses generator discharge tables (MW vs. Flow) to calculate the flow used each hour. Water passed through the spillway is also logged. The dispatcher manually enters the position of any open Tainter gates into the computer system. The computer calculates the water passed through the open Tainter gate(s) using the electronic impoundment elevation reading, gate discharge tables, and the manually entered gate position.

Each day a daily log for the plant is produced by the computer system that shows the following by hour: impoundment elevation, tailwater elevation, and net head to the nearest one tenth of a foot; water flow through the units; water wasted (spilled); and generator output in megawatts to the nearest one tenth of a megawatt. Each month the logs are transferred to computer disc and kept at the WE hydroelectric operations office.

Availability of Operating Logs

Plant operating logs for each day are maintained in the SCADA system for a minimum of thirty days. At the end of each month the data is copied to computer disc and the data is allowed to migrate out of the SCADA system files.

Plant Outages

In the event of a plant outage, WE will maintain river flows as follows.

During Non-Winter Conditions

In the event of a plant outage that results in loss of flow through the generators, the WE dispatcher will attempt to restore plant power and generator operation using the remote control capabilities of the plant. If the plant cannot be restored by remote control, the dispatcher will operate the remote controlled Tainter gate to restore the required flow through the spillway.

The dam is equipped with an independent power source supplied from a distribution substation that will remain energized in the event of a power failure at the plant. Power for the remote control systems is supplied from batteries in the plant. When a command to open the gate is issued by the dispatcher, there is a five minute delay before opening to allow the public warning system to complete the warning cycle.

During Winter Conditions

? Winter conditions? will mean the period of time when the dam is set up for winter operation. WE installs bubbler systems at most of its hydro facilities to prevent ice build up on portions of its dams, gates, or other structures. Installation of the bubblers systems takes place during late October and Early November. The bubbler systems must be installed before freezing weather to prevent the bubbler systems themselves from freezing up. Once they are installed they remain in the water until spring when the likelihood for ice build up on the structures and gates is passed. Actual removal dates are weather dependent.

The bubbler system at Twin Falls is placed just upstream of the spillway to prevent ice build up on the structure and Tainter gates. Operation of the Tainter gates with the bubbler system in place will result in the bubbler piping system being drawn into the Tainter gate, destroying the bubblers and possibly destroying the gate seals or getting stuck in the open gate. In the context of these operating discussions, winter conditions will include the entire time that the bubbler system is in place preventing remote operation of the Tainter gate.

In the event of a plant outage during winter conditions that results in loss of flow through the generators, the WE dispatcher will attempt to restore plant power and generator operation using the remote control capabilities of the plant. If the plant cannot be restored by remote control, a plant operator will be dispatched to the plant to attempt to start the generators locally. There are various ways for the operator to restore flow locally that cannot be done by remote control. Three of the generators are equipped with governors and handwheels that allow for black plant start capabilities. These capabilities may provide sufficient flow to meet the minimum flow criteria.

In the event that the operator cannot restore the required flow through the plant, the operator will remove the bubbler system from the upstream side of the Tainter gate and open the gate to restore the required minimum flow.

Emergency Operation and Flood Events

WE recognizes the importance of license compliance and will make reasonable and prudent efforts to

comply with all license articles, however it must be recognized that equipment failures, electrical system disturbances, significant weather events, and other operating emergencies can affect WE?s ability to meet all license requirements. During emergency situations WE will place the highest priority on the safety of the public and safety of the dam structure. In the event of a flood, the project impoundment elevation limits will not apply at flows above the discharge capacity of the spillway at normal impoundment elevations.

Notification of Abnormal Operation

KINGSFORD OPERATIONS COMPLIANCE PLAN

Staff Gage

A staff gage will be maintained on the dam structure visible to the public from a boat on the impoundment. The gage will be graduated in tenths of a foot. The the upper and lower limits of the maximum operating band will be indicated by mounting a red plastic strip on the side of the gage above 1066.9 ft NGVD and below 1065.9 ft NGVD.

Automatic Water Level Sensor

WE has an automatic level sensor for the impoundment elevation located in the powerhouse. The electronic gage continuously monitors the impoundment elevation and transmits the impoundment elevation to the hydro operation control center via a SCADA (System Control And Data Acquisition) system. The elevation of the impoundment will be manually checked to the nearest 0.1 ft by the plant operator at least once per week. The manual reading is called in to the dispatcher at the control center and is compared to the electronic reading.

The electronic gage may vary from the manual reading because of drift of the electronic readings. The drift is a factor of changes in the electronic gage output signal (due to atmospheric temperature and pressure changes), the conversion of the signal to a digital format within the SCADA system, and normal electronic systems tolerances. While the electronic reading will vary from the manual reading, when a difference of +/- 0.2 foot is noted between the manual reading and the electronic gage, the gage is scheduled for recalibration and is completed within 14 days. The impoundment elevation is automatically recorded hourly by the SCADA system. See Plant Operating Logs section for more detail.

Plant Operating Logs

The plant is operated and monitored around the clock by a dispatcher via a SCADA system. This system monitors generator output on a continuous basis and reports the generation readings in megawatt hours (to the tenth of a megawatt hour) to the central computer. The computer tracks the generator output readings and uses generator discharge tables (MW vs. Flow) to calculate the flow used each hour. Water passed through the spillway is also logged. The dispatcher manually enters the position of any open Tainter gates into the computer system. The computer calculates the water passed through the open Tainter gate(s) using the electronic impoundment elevation reading, gate discharge tables, and the manually entered gate position.

Each day a daily log for the plant is produced by the computer system that shows the following by hour: impoundment elevation, tailwater elevation, and net head to the nearest one tenth of a foot; water flow through the units; water wasted (spilled); and generator output in megawatts to the nearest one tenth of a megawatt. Each month the logs are transferred to computer disc and kept at the WE hydroelectric operations office.

Availability of Operating Logs

Plant operating logs for each day are maintained in the SCADA system for a minimum of thirty days. At the end of each month the data is copied to computer disc and the data is allowed to migrate out of the SCADA system files.

Plant Outages

In the event of a plant outage, WE will maintain river flows as follows.

During Non-Winter Conditions

In the event of a plant outage that results in loss of flow through the generators, the WE dispatcher will attempt to restore plant power and generator operation using the remote control capabilities of the plant. If the plant cannot be restored by remote control, the dispatcher will operate the remote controlled Tainter gate to restore the required flow through the spillway.

The dam is equipped with an automatic start emergency power generator that will provide power to the dam. Power for the remote control systems is supplied from batteries. When a command to open the gate is issued by the dispatcher, there is a five minute delay before opening to allow the public warning system to complete the warning cycle.

During Winter Conditions

?Winter conditions? will mean the period of time when the dam is set up for winter operation. WE installs bubbler systems at most of its hydro facilities to prevent ice build up on portions of its dams, gates, or other structures. Installation of the bubblers systems takes place during late October and Early November. The bubbler systems must be installed before freezing weather to prevent the bubbler systems themselves from freezing up. Once they are installed they remain in the water until spring when the likelihood for ice build up on the structures and gates is passed. Actual removal dates are weather dependent.

At Kingsford bubbler systems are placed just upstream of the spillway to prevent ice build up on the structure and Tainter gates. Operation of the Tainter gate with the bubbler system in place will result in the bubbler piping system being drawn into the Tainter gate, destroying the bubblers and possibly destroying the gate seals or getting stuck in the open gate. In the context of these operating discussions, winter conditions will include the entire time that the bubbler system is in place preventing remote operation of the Tainter gate.

In the event of a plant outage during winter conditions that results in loss of flow through the generators, the WE dispatcher will attempt to restore plant power and generator operation using the remote control capabilities of the plant. If the plant cannot be restored by remote control, a plant operator will be dispatched to the plant to attempt to start the generators locally. There are various ways for the operator to restore flow locally that cannot be done by remote control. The emergency power generator that provides power to the dam also provides power to the generator governors. This provides for local black plant start capabilities that may provide sufficient flow to meet the minimum flow criteria.

In the event that the operator cannot restore the required flow through the plant, the operator will remove the bubbler system from the upstream side of the Tainter gate and open the gate to restore the required minimum flow.

Emergency Operation and Flood Events

WE recognizes the importance of license compliance and will make reasonable and prudent efforts to

comply with all license articles, however it must be recognized that equipment failures, electrical system disturbances, significant weather events, and other operating emergencies can affect WE?s ability to meet all license requirements. During emergency situations WE will place the highest priority on the safety of the public and safety of the dam structure. In the event of a flood, the project impoundment elevation limits will not apply at flows above the discharge capacity of the spillway at normal impoundment elevations.

Notification of Abnormal Operation

BIG QUINNESEC FALLS OPERATIONS COMPLIANCE PLAN

Staff Gage

A staff gage will be maintained on the dam structure visible to the public from a boat on the impoundment. The gage will be graduated in tenths of a foot. The the upper and lower limits of the maximum operating band will be indicated by mounting a red plastic strip on the side of the gage above 1034.9 ft NGVD and below 1033.9 ft NGVD.

Automatic Water Level Sensor

WE has an automatic level sensor for the impoundment elevation located on the dam structure. The electronic gage continuously monitors the impoundment elevation and transmits the impoundment elevation to the hydro operation control center via a SCADA (System Control And Data Acquisition) system. The elevation of the impoundment will be manually checked to the nearest 0.1 ft by the plant operator at least once per week. The manual reading is called in to the dispatcher at the control center and is compared to the electronic reading.

The electronic gage may vary from the manual reading because of drift of the electronic readings. The drift is a factor of changes in the electronic gage output signal (due to atmospheric temperature and pressure changes), the conversion of the signal to a digital format within the SCADA system, and normal electronic systems tolerances. While the electronic reading will vary from the manual reading, when a difference of +/- 0.2 foot is noted between the manual reading and the electronic gage, the gage is scheduled for recalibration and is completed within 14 days. The impoundment elevation is automatically recorded hourly by the SCADA system. See Plant Operating Logs section for more detail.

Plant Operating Logs

The plant is operated and monitored around the clock by a dispatcher via a SCADA system. This system monitors generator output on a continuous basis and reports the generation readings in megawatt hours (to the tenth of a megawatt hour) to the central computer. The computer tracks the generator output readings and uses generator discharge tables (MW vs. Flow) to calculate the flow used each hour. Water passed through the spillway is also logged. The dispatcher manually enters the position of any open Tainter gates into the computer system. The computer calculates the water passed through the open Tainter gate(s) using the electronic impoundment elevation reading, gate discharge tables, and the manually entered gate position.

Each day a daily log for the plant is produced by the computer system that shows the following by hour: impoundment elevation, tailwater elevation, and net head to the nearest one tenth of a foot; water flow through the units; water wasted (spilled); and generator output in megawatts to the nearest one tenth of a megawatt. Each month the logs are transferred to computer disc and kept at the WE hydroelectric operations office.

Availability of Operating Logs

Plant operating logs for each day are maintained in the SCADA system for a minimum of thirty days. At the end of each month the data is copied to computer disc and the data is allowed to migrate out of the SCADA system files.

Plant Operations

During the period of April 10 through June 15, WE will operate the project in a run-of-river mode according to the following plan for the protection of fish spawning. Due to the larger size of the generating units at Big Quinnesec Falls and the physical problems related to operating them at certain flow regimes, it is not possible to always match the generation to the available inflow.

During this specified time period WE will operate the project to minimize outflow fluctuations by using the following method to pass the river flow. The two 8 Megawatt generators in the newer powerhouse will be dispatched first with the two 2 Megawatt generators being dispatched after the larger units. When flows are below the maximum hydraulic capacity of the two larger units, the available units will be operated to match the river inflow whenever possible. When the generation cannot be operated to match inflow due to the physical and mechanical limitations of the units, they will be operated with one unit running continuously and the second unit cycled off and on. When cycling is required it will be done such that during each 6 hour period the project will release an average outflow that is approximately equal to inflow for that period. This cycling will provide reduced fluctuation of the downstream impoundment and allow a close match to run-of-river operation.

Plant Outages

The tailwater of the Big Quinnesec Falls project is the impoundment of the downstream Little Quinnesec Falls project. Dewatering of the tailwater area will not occur for generator trips caused by a power outage. In the event of a power outage it will not be necessary to immediately restore flow through the project and no special plan is required due to power outages. WE will restore flow through the project in sufficient time to prevent a significant reduction in the downstream impoundment elevation.

Emergency Operation and Flood Events

WE recognizes the importance of license compliance and will make reasonable and prudent efforts to comply with all license articles, however it must be recognized that equipment failures, electrical system disturbances, significant weather events, and other operating emergencies can affect WE?s ability to meet all license requirements. During emergency situations WE will place the highest priority on the safety of the public and safety of the dam structure. In the event of a flood, the project impoundment elevation limits will not apply at flows above the discharge capacity of the spillway at normal impoundment elevations.

Notification of Abnormal Operation