

Lake-Dam Committee Meeting Minutes  
2 December 2023

Call to Order - Meeting called to order at 9:30am.

Roll Call Committee Members: (P)=Present; (A)=Absent; (E)=Excused

|                    |                   |                      |
|--------------------|-------------------|----------------------|
| Lou Jackson (P)    | Teddy Lovgren (P) | Deanne Landsverk (P) |
| Dennis Muretta (P) | Jarred Foss (P)   | Duane Landsverk (P)  |
| John McRoberts (P) | Pat Paradise (P)  | Dave Kohler (P)      |
| Maureen Glenn (E)  | Brian Smith (P)   | Karen Kohler (P)     |
| Steve Glenn (E)    | Gary Wilson (P)   | Hannah Landsverk (A) |
| Joel Gray (P)      | Kelly Wieland (A) | Eric Landsverk (A)   |

Guests: John Ingemi 3-244, Dan Bussler 5-92, Dean Dyson 2-200, Tamra Ingwaldson 5-128

**Chairperson's Opening Comments:** Teddy Lovgren

Dennis volunteered to take meeting notes for today's meeting.

Ted Lovgren thanked everyone for attending. Roger is no longer the CAM and will not be attending today's meeting; an announcement will be posted to the LLCC website. Steve and Maureen are also on continuing hiatus while Steve recovers from his recent surgery. Teddy noted a couple accomplishments since the last meeting including: 1) The Lake Limerick weir board removal process has been completed. 2) the Lake Advocates final yearly report on Lake evaluations and overall health status has been received and is under evaluation by the Long Term Lake Health subteam and 3) upgrading of park restrooms is proceeding at a steady pace. Each subject will be addressed in more detail in later sections of the meeting.

**Meeting Minutes approval** [\[Attachment 1\]](#)

Teddy made a motion to accept the October meeting minutes as written, Dennis seconded the motion. No discussion occurred and the minutes were approved (John, Deanne, Duanne, abstained)

**Motions to the Board Status** – None.

**CAM REPORT:** Roger [\[Attachments 2 & 3\]](#)

CAM was not in attendance; Teddy summarized his written report (see attached).

**Parks Report:** John Ingemi reported for Maureen/Steve [\[Attachment 4\]](#)

John Ingemi conducted park surveys in Steve and Maureen's absence. John reported that all parks are in good shape and no major cleanup issues exist. He noted that the new roofs of all restrooms and the new steel doors installed on some of the restrooms really looked "amazing". The boat launch repair at Banbury also looked professionally done.

**Docks/Floats Permits:** Teddy - None.

**Boat Registrations:** Gary – no new boat registrations.

**LD Action Item List:** Teddy [\[Attachment 5\]](#)

The committee reviewed individual action items and status. A summary of discussion includes the following: a) items 1, 2 and 3; Duane and Brian reported that nothing significant has been done on these items over the last month for a variety of reasons. b) Item 4; Dennis reported that he has completed a near final update of the Lake Patrol Guidelines document - see New Business Discussion. c) Item 5; Dennis and Teddy reported that work on updating the vessel registration procedures is progressing and it is anticipated that a draft will be available for review by the next meeting. Item 6; Gary reported that he is continuing to review Vessel Registration data and discuss with the office a data management system for maintaining these records. It is anticipated that quick books will be adaptable to this task.

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**SUBTEAM REPORTS**

**Long Term Lake Health:** Brian reported that the Lake Advocates Bathymetric Survey/Stream Walk report has been received and is under review by the LTLH subteam. Brian plans to call a subteam meeting soon to start discussing both the LA report and other long term lake health issues. This includes the idea of procuring or renting a small, portable suction dredge.

**Parks Improvement:** Dennis reported that planned park upgrades are proceeding at a steady pace. This includes: a) reroofing of all park restrooms and outbuildings is complete. b) replacing restroom doors with steel doors and cypher locks is complete for three parks and a fourth is in work. The fifth, Log Toy, has been held for completion of ADA remodel planning. c) upgrade of Banbury restroom for year around use is 65% complete (power, lighting and heater install complete). One remaining task is to refinish the restroom interior.

**Lake/Dam Operations** – Joel reported the Dam O&M Manual Update is complete. A motion was made by Teddy and seconded by Joel to approve the document subject to final cleanup (removal of highlights, etc.) and forward it to the Board for their approval and review. The motion passed unanimously. A question was asked about the status of stakes placed around the lake shoreline to measure beach erosion. Joel noted that 15 stakes were installed around the lake and that measurements will be taken next spring; may need another year to draw any conclusions. [\[Attachments 6 & 7\]](#)

**\*\*See Motion to Board\*\***

**OLD BUSINESS:**

1. Special Projects Manager – on hold pending HR consultant to review LLCC organization structure. An extensive committee discussion occurred about the use of Chris, who is LLCC's Water Manager in a dual role as Project Manager for the Inn Island repair. This project appears to be languishing, which brings into question the idea of "dual hatted" management roles. In regard to the Inn Island repair project, there was concern regarding "Statement of Objectives" for the work and selection of a contractor to accomplish the project; Mason Count Conservation District (MCD) has been unresponsive to Chris' requests for status. Chris has identified a second source and is seeking input from them on the project. It was also agreed that Chris, would visit the County and discuss permitting requirements for the project. The committee also felt it important that the Board be made aware of this situation. John Ingemi said he would carry the message forward to the Board.
2. Network Drive for Committee Use – no new status.
3. Lake Shore Compliance Audit – no new status
4. Inn Park Sport Court Improvement Proposal Update – subteam has not met for a couple months. Concerns were raised about: a) noise associated with playing Pickleball, b) impact of extending the court 16 feet closer to the shoreline – recommend checking with the County. John Ingemi noted that a survey will be conducted to confirm the property line location adjacent to the sport court.

**NEW BUSINESS**

1. Dam O&M Update – Joel: The Dam O&M manual has been routed through the committee, all comments received incorporated, and the document approved for release to the Board. – See "Lake Dam Operations" report-out above.
2. Lake Patrol Guidelines Update – Dennis reported that a final update to the Guidelines, which incorporates comments from the Compliance committee, has been completed. This draft has been routed through the committee and no further comments provided. A motion was made by Teddy and seconded by Dennis to approve the updated document. During discussion, it was decided that the document needed to be formatted for formal release and submitted for committee review before final approval/motion to the Board. The motion was amended for the Committee to approve

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the Update content only. The motion was approved (with 3 abstentions). Dave offered to help Dennis with formatting the document for release. [\[Attachment 8\]](#)

3. Park Hosts – Dave requested approval to post LLCC Park Host 2024 openings in several periodicals. LLCC typically uses hosts at 4 different parks. Two individuals who served as hosts in 2023 have indicated they will return next year, leaving two openings. A motion to approve this request was made by Teddy, seconded by Dennis and unanimously approved by the committee. Joel will add this CAM action to the Work Order spreadsheet. Dave will follow up with Christy (LLCC Office).
4. Other – Discussion of geese impacts. Dave mentioned that last summer USDA declined to perform geese mitigation due to the low numbers; we need to coordinate with USDA now if we want them to perform geese mitigation next year. This is an annual CAM action and Roger should have all the necessary information/contacts. John Ingemi took an action to coordinate with Christy.

**Guest Input** None.

**Review of Commitments & Action Items:**

Dennis and Dave to finalize the format of Lake Patrol guidelines document. John Ingemi to coordinate with the Board on Inn Island repair issues. Dennis will obtain an accounting of the Park Restroom update expenditures to date vs budgets. Joel will add USDA Geese Mitigation Request to Work Order List and John Ingemi will follow up with Christy.

**Review of Motions to the Board:** Motion passed to recommend Board review and approve “Dam O&M Manual” update. See Motion to the Board below.

**Motion to Adjourn:** Teddy made the motion to adjourn, Dennis seconded and it was unanimously approved; meeting was adjourned at 11am.

Many thanks to Dennis for providing notes for the Meeting Minutes

Next Meeting – Saturday, January 6th, 9:30am in the Crow’s Nest

**Look Ahead:**

Dec 16 – Board of Directors Meeting

Dec 31 – LLCC New Years Eve Celebration @ Inn Great Hall

Jan 6 – Lake Dam Committee Meeting

Jan 20 – Board of Directors Meeting

Feb 3 – Lake Dam Committee Meeting

Feb 17 – Board of Directors Meeting

March 6 – Lake Dam Committee Meeting

March 17 – Board of Directors Meeting

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**Motion to the Board** - The Board is requested to approve the LLCC Dam Operations and Maintenance Manual dated December 2, 2023. The update incorporates inputs from the LLCC CAM, Facilities Manager, Dam Engineer Ken Martig and the Lake Dam Committee. [\[ See Attachments 6 & 7 \]](#)

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Lake-Dam Committee Meeting Minutes  
4 November 2023

Call to Order - Meeting called to order at 9:30 AM.

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|--------------------|-------------------|----------------------|
| Lou Jackson (P)    | Teddy Lovgren (P) | Deanne Landsverk (E) |
| Dennis Muretta (P) | Jarred Foss (P)   | Duane Landsverk (E)  |
| John McRoberts (E) | Pat Paradise (P)  | Dave Kohler (P)      |
| Maureen Glenn (E)  | Brian Smith (P)   | Karen Kohler (P)     |
| Steve Glenn (E)    | Gary Wilson (P)   | Hannah Landsverk (A) |
| Joel Gray (P)      | Kelly Wieland (A) | Eric Landsverk (A)   |

Guests: John Ingemi 3-244, Dan Bussler 5-92, Dean Dyson 2-200

**Chairperson's Opening Comments:** Teddy Lovgren

Jarred volunteered to take notes for today's meeting.

**Meeting Minutes approval** [\[Attachment 1\]](#)

Lou made a motion to accept the October meeting minutes as written, Dennis seconded the motion. No discussion occurred and the minutes were unanimously approved.

**Motions to the Board** – None.

**CAM REPORT:** Roger [\[Attachments 2, 3 & 4\]](#)

Roger was not in attendance, so Teddy summarized his written report (see attached).

**Parks Report:** John Ingemi reported for Maureen/Steve [\[Attachment 5\]](#)

Parks are in great shape. Maintenance/Facilities doing an amazing job. Restrooms winterized and Locked for the season. Port-a-potty installed at Banbury.

**Docks/Floats Permits:** Teddy - None.

**Boat Registrations:** Gary – no new boat registrations.

**LD Action Item List:** Teddy [\[Attachment 6\]](#)

Teddy reviewed action items and status. Discussion: Updating boat registration and performing an audit of WN numbers to lots. This was last done 10+ years ago. Pat made a Motion, Brian seconded, to have the Board ask the LLC office staff to perform the audit of the current boat registration - Motion failed. Discussion ensued; recommended that Lou and Gary coordinate with the Office staff on the available data, audit parameters and determine the scope of effort required.

## **SUBTEAM REPORTS**

**Long Term Lake Health:** Brian – LTLH will get back together to review results of recently completed sediment surveys (Bathymetric, CR Stream Walk, Cranberry Lake Basin, etc.) and dredging recommendations (Leprechaun and Bird Sanctuary); based on LA's report due Nov 15<sup>th</sup>.

**Parks Improvement:** Dennis

- Making good progress on updates to all park restrooms; new metal roofs, metal doors and cypher locks being installed. Subteam meeting held to discuss next steps in updates to Banbury restroom year-round usage update and ADA upgrade of one Log Toy restroom. Next up: landscaping, parking, and other amenity improvements.

**Lake/Dam Operations** – Joel

- Dam O&M Manual Update being finalized; Dave has some corrections he will send to Joel.
- Inn Island Bridge Repair – scheduled for Spring; see Work Order Status
- Inn Island NE Section Repair – See Work Order Status

Lake-Dam Committee Meeting Minutes  
4 November 2023

**OLD BUSINESS:**

1. Special Projects Manager – on hold pending HR consultant to review LLCC organization structure. Brian asked for the status of hiring a project manager and clarification of the Inn Island Repair project plan. Pat and John discussed the roles and responsibilities of the project manager, but this will need to be revisited to ensure everyone knows their role and what needs to be done. Need clarification of Chris' role and responsibilities in regard to the Inn Island Repair project. Teddy invited Committee members to participate in the bi-weekly Work Order Status meeting held with Roger and his management team.
2. Network Drive for Committee Use – no new status.
3. Lake Shore Compliance Audit – pending completion of related Action Item
4. Inn Park Sport Court Improvement Proposal Update – no new status
5. Lake Tours for HOA Members – Lou presented a recommendation for an invitation notice to HOA membership. It was recommended that the invitation be limited to HOA Members only and remove the Chairman's name and email address. Lou will coordinate with the office and boat/pontoon owner volunteers. *[Attachment 7]*

**NEW BUSINESS**

1. Dam O&M Update (Joel) - Dave has corrections that he will send to Joel.
2. Other Topics – Life Jackets at Anglia will be hung under the LLCC sign adjacent to the boat ramp and put away in the storage shed in the office season. Need for Surveys were discussed to obtain member interest for off leash area for dogs, community garden, sport court update, etc. for Lake-Damn, Green Belts & Trails and other Committees. The survey(s) will use survey monkey; may be issued separately by each committee or potentially combined.

**Guest Input** None.

**Review of Commitments & Action Items:**

Lou/Gary: Coordinate with office staff on availability of Boat Registration data and audit scope.

Lou: Update the lake tour invitation.

Joel: Add winter storage of Life Vests at Anglia Park to Work Order list.

**Review of Motions to the Board:** None.

**Motion to Adjourn:** Joel made the motion to adjourn, Lou seconded and it was unanimously approved; meeting was adjourned at 11:17am.

Next Meeting – Saturday, December 2nd, 9:30am in the Crow's Nest

**Look Ahead:**

Nov 18 – Board of Directors Meeting

Dec 2 – Lake-Dam Committee Meeting

Dec 16 – Board of Directors Meeting

Dec 31 – LLCC New Years Eve Celebration @ Inn Great Hall

Jan 6 – Lake-Dam Committee Meeting

Jan 20 – Board of Directors Meeting

Feb 3 – Lake-Dam Committee Meeting

Feb 17 – Board of Directors Meeting

## LD CAM Report

December 2, 2023

### Parks

- Cogent Construction metal roof installations completed November 6
- Downed Olde Lyme tree removal to be completed by December 15
- Anglia bathroom metal doors received and being painted for installation
- Banbury year around bathroom upgrade scheduled to complete 12/15/23
- Anglia walkers gate closure completed though takes force to open
  - o Considering building a lighter door
- Inn Island bridge repair
  - o Handrail repair will be installed scheduled 4/30/24
  - o Bridge metal supports to be coated in spring when dry using work barge
- Inn Island NE shoreline repair
  - o Requested quote from Mason Conservation District engineer for design plans including County shoreline permitting due 12.31.23
  - o HDR engineering contacted as a backup plan
  - o Roger and Chris to meet with Mason County planning dept discussing permittable design

### Dams

- Dam Operations & Maintenance Manual revisions sent to Committee for review

### Lakes

- Data level loggers
  - 1. See attached November report
- Lake Advocates
  - 1. Reports schedule:
    - i. Received November 20 Bathymetry/Cranberry Creek Sediment Erosion Report; forwarded to LD for comments
    - ii. December 31 Annual Aquatic Plant Management/Water Quality Report

## Lakes, Dams and Parks Work Orders Log: 30 November 2023

| Date      | Priority (1,2,3) | Work Order Number | Task  | Safety Issue (Y/N) | Assigned to | Due Date                                     | Completion Date | Requestor/ Task POC | Project Status  |
|-----------|------------------|-------------------|---|--------------------|-------------|--|-----------------|---------------------|---|
| 6/23/2022 | 3                | 2022-19           | Update Dam Operations Manual to address DOE email dated 9 June 2022 regarding emergency drawn down at both Lake Limerick and Lake Leprechaun. | Y                  | Roger       | 12/31/23<br>3/31/23<br>11/15/22<br>9/30/2022 |                 | Roger Milliman      | <p>11/30/23 -- LD to provide review and advance to BOD approval.</p> <p>11/2/23 -- Update provided to LDC for comment. LDC Agenda item for 11/4/23.</p> <p>10/19/23 -- Document receiving final review prior to distribution to LDC.</p> <p>10/05/23 -- Final inputs are being integrated into the Dam Operations Manual by Roger. Updated manual will be distributed to LD members for comment prior to submittal to the BOD for approval to advance it to the Dam Safety Office.</p> <p>9/14/23 -- Final comments updates to be discussed formalized 19 Sept prior to LLCC submittal to DSO.</p> <p>8/31/23 -- Inputs to Operations Manual received from Ken Martig, LLCC Maintenance, and CAM. Joel has integrated comments into manual for CAM review along with questions for clarification.</p> <p>8/17/23 -- No change in status</p> <p>8/3/23 -- While waiting for DSO input, CAM, Chris and Gerardo to meet to investigate possible alternative method to exercise gate valve. (Reference 8/3/23 for historical status)</p>  |
| 2/21/2023 | 3                | 2023-02           | Remove dead snags in the water from at Log Toy park fish dock. Also remove dead trees from Log Toy Park and Olde Lyme Park.                   | Y                  | Gerardo     | 12/15/23<br>11/30/23<br>8/7/23<br>4/21/2023  |                 | Dennis Muretta      | <p>11/30/23 -- Updated schedule as Maintenance / Facilities are currently working on finishing Banbury restroom updates.</p> <p>11/2/23 -- On Schedule</p> <p>10/19/23 -- On Schedule.</p> <p>10/05/23 -- On Schedule (bees hives are still active)</p> <p>9/14/23 -- On Schedule.</p> <p>8/31/23 -- On Schedule.</p> <p>8/17/23 -- No change in status.</p> <p>8/3/23 -- Log Toy Park trees and limbs removed. Olde Lyme Park trees downed, removal is held until nearby bees do not create a hazard to workers.</p> <p>7/20/23 -- BoD approved proposal. Work to remove trees and limbs from parks to commence on 31 July. Parks will be closed during the time work is being performed.</p> <p>7/6/23 -- Proposal from Green Diamond to be presented to BOD for approval. If approved, schedule will be requested from Green Diamond.</p> <p>6/23/23 -- CAM recommending Green Diamond to cut / removed trees from parks. Trees in common areas will be delimbed, but trees will remain in their felled position. Large maple in Log Toy will not be felled.</p> <p>6/8/23 -- Report Received. LD input provided to CAM re: interest in keeping some viable trees for wildlife and esthetics. 3 bids currently in work with tree removal companies.</p> <p>5/25/23 -- Report expected on 26 May.</p> <p>5/11/23 -- Arborist hired to assess Log Toy, Olde Lyme and Common Area trees. Report due soon. Request to BOD to remove trees will be based on report.</p> <p>4/28/23 -- Tree in water at Log Toy removed. CAM to meet with arborist on 1 May to access Log Toy, Olde Lyme, and other LLCC common areas.</p> <p>4/13/23 -- LLCC to hire arborist to assess trees in parks and certain common areas for safety. Tree removal will be based on arborist's report.</p> <p>2/20/23 -- WO Based on park review with LLCC/LD Members 2/20/23</p> |

## Lakes, Dams and Parks Work Orders Log: 30 November 2023

| Date      | Priority (1,2,3) | Work Order Number | Task  | Safety Issue (Y/N) | Assigned to | Due Date                         | Completion Date | Requestor/ Task POC | Project Status  |
|-----------|------------------|-------------------|---|--------------------|-------------|----------------------------------|-----------------|---------------------|---|
| 4/13/2023 | 1                | 2023-04           | Request Lake Advocates to provide Report on the results of the Lake Leprechaun core and visual surveys from 2022 and 2023. Including Dredging recommendations, locations, mechanical vs hydraulic, permit requirements, cost estimate, etc. | N                  | Roger       | 11/15/23<br>6/30/23<br>7/31/2023 | 11/20/2023      | Ted Lovgren         | <p>11/30/23 -- Report received 11/20/23. LD to review and provide comment.</p> <p>11/2/23 -- CAM has requested LA to report on every issue individually rather than mix all the issues together and that any LA recommendations be made with a clear path forward that LD and LLCC can take action on, if needed. Teddy has requested LD review the report, once received, and conduct a Zoom call with LA in order to provide timely feedback to LA and for LLCC to receive realtime clarifications to LA's report.</p> <p>10/19/23 -- CAM to request / remind LA to report out on every issue individually rather than mix all the issues together. LD desires recommendations with a clear path forward that LD and LLCC can take action on, if needed.</p> <p>10/05/23 -- Report to be provided by LA by 15 November.</p> <p>9/14/23 -- ECD to be requested again along with all other dates for LA deliverables.</p> <p>8/31/23 -- CAM contacted LA and they concur to request. ECD to be requested when LA is on-site for the Cranberry Creek streamwalk on 9 Sept.</p> <p>8/3/23 -- WO Task updated. 2023-04(a) added to address Bathymetric Study.</p> <p>7/20/23 -- Still awaiting feedback from LD Committee.</p> <p>7/6/23 -- Draft report received. LD requested to review and comment.</p> <p>6/23/23 -- On schedule. LLCC has provided all required data to LA for the report to be generated.</p> <p>6/8/23 -- No change in status.</p> <p>5/25/23 -- On schedule.</p> <p>5/11/23 --Report due 30 June.</p> <p>4/28/23 -- Bathymetric survey completed for both lakes on 28 April. Data to be provided to LA for reporting back to LLCC. CAM to remind LA of need for recommendation for dredging areas at Lake Leprechaun. CAM will also request an ECD for the report and provide to Lake Dam Comm.</p> <p>4/13/23 --Moved from LD A-I List 4/13/23 in order to capture all LLCC / CAM Actions in one place.</p> |
| 8/3/2023  | 1                | 2023-24(a)        | Provide feedback to LA regarding latest draft Bathymetric Survey Report   | N                  | Roger       | 11/15/23<br>8/31/2023            | 9/14/2023       | LD LTLH             | <p>10/05/23 -- Report to be provided by LA by 15 November.</p> <p>9/14/23 -- LD / LLCC comments provided to LA. ECD to be requested by CAM for all this and all other WO's that have an LA deliverable due.</p> <p>8/31/23 -- CAM remains held for LD's input.</p> <p>8/3/23 -- CAM is held for feedback from Brian Smith as Chair of the LTLH Subcommittee.</p>  |
| 4/13/2023 | 2                | 2023-05           | Meet with Cranberry Lake Foundation with LD and BoD member to establish a relationship and assess path forward for Cranberry Creek detention structure and associated retention pond.   | N                  | Roger       | TBD<br>ASAP                      | 5/25/2023       | Ted Lovgren         | <p>5/25/23 -- Relationship established. Permission received from Lori Cox (CLF) for LA to perform stream and retention pond evaluation.</p> <p>5/11/23 -- Ken to develop LLCC position re: detention structure culvert. LLCC to engage Cranberry Creek Foundation once position is developed, understood and agreed. ECD TBD based on Ken Martig's schedule.</p> <p>4/28/23 -- Cranberry Lake Foundation has advised LLCC of desire to modify the detention structure. Ken Martig, CAM and possibly someone form LD to meet on next week to review situation and compile facts and data in LLCC's reponse to the Foundation.</p> <p>4/13/23 -- Action added based on discussion with CAM.</p>   |



## Lakes, Dams and Parks Work Orders Log: 30 November 2023

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|-----------|------------------|-------------------|--|--------------------|---------------|------------------------|-----------------|---------------------|--|
| 4/13/2023 | 1                | 2023-06           | We should add revising/updating the Project Manager job description. I pinged Roger and John on this action. | N                  | Roger / Tamra | TBD<br>8/31/23<br>ASAP |                 | Ted Lovgren         | <p>11/30/23 -- HR PNW Associates to present to BOD today re: recommendations re: LLCC structure and positions roles and responsibilities. ECD remains TBD.</p> <p>11/2/23 -- No update provided. No change.</p> <p>10/19/23 -- BOD provided a high-level brief by consultant. Plan moving forward still in work. No ECD provided.</p> <p>10/05/23 -- On hold, pending HR Consultant recommendation.</p> <p>9/14/23 -- Employee interviews have started. Employee job descriptions have been provided by LLCC. Committee Chairs will be interviewed regarding roles and responsibilities.</p> <p>8/31/23 -- LLCC has hired a contractor to review LLCC's org chart and job position's statement of work. Contractor to start 15 Sept. WO moved to Pending since there is no schedule assigned and LLCC is now held for subcontractor support.</p> <p>8/17/23 -- Awaiting establishment of LLCC org chart and ensure job scope expectations are understood by BOD and job applicant.</p> <p>8/3/23 -- CAM to schedule interview with PM Candidate.</p> <p>7/20/23 -- Water Manager and Interim PM (Chris) working Inn Island and Bridge Projects. BoD Exec Committee s reviewing recommended Candidate for PM Position. ** See 11/2/23 WO for historical status.</p> |
| 6/7/2023  | 1                | 2023-20           | Water quality report from May testing - Provide due date   | Y                  | Roger         | 12/31/23<br>6/8/2023   |                 | LD/BoD              | <p>11/30/23 -- No Change. On schedule.</p> <p>11/2/23 -- No Change. On schedule.</p> <p>10/19/23 -- Octpber samples sent to IEH. Report remains on schedule.</p> <p>9/14-- Project put into pending status as no changes are expected until deliverable due date.</p> <p>8/31/23 -- Water sample for August was collected by Maintenance and LLCC has provided to IEH Labs.</p> <p>8/17/23 -- LA to provide a summary written report by years end. Any abnormalities prior to years end will be communicated to LLCC with recommended action.</p> <p>8/3/23 -- CAM to request a copy of the charts associated with the data collected on a monthly basis with a very brief summary of what the chart is telling us and whether LLCC has any action.</p> <p>7/20/23 -- IEH reports from May, June sent to LA. July testing performed. CAM only expects one summary report of all testing by 31 December unless something exceptional needs to be communicated to LLCC.</p> <p>7/6/23 -- Still awaiting report from LA. CAM to request new ECD.</p> <p>6/23/23 -- Data received from IEH. Provided to LA for Reporting. June samples taken and provided to IEH</p> <p>6/8/23 -- Report requested. ECD TBD.</p>   |
| 6/9/2023  | 1                | 2023-24           | Install mechanism to ensure limerick dam gate (railroad side) closes entirely after each use                 | N                  | Gerardo       | 12/31/23<br>6/28/2023  |                 | Roger Milliman      | <p>11/30/23 -- Closure of gate is occurring, but not without considerable effort to open the gate. Facilities to investigate mimicing the Park side entrance by installing a lighter gate.</p> <p>11/2/23 -- Mechanism installed. But full closure is not occurring. Maintenance to fabricate an adapter to help ensure the door closes entirely.</p> <p>10/19/23 -- Support pole relocated and set in concrete. Mechanism parts received and expected to be installed soon. On schedule.</p> <p>10/05/23 -- Gerardo has been coordinating with suppliers and is awaiting parts. Support pole needs to be re-located prior to a pneumatic-type closing mechanism can be installed.</p> <p>9/14/24 -- WO reopened. Gerardo working with on-line supplier re: best approach to fix the ability for the gate to close.</p> <p>8/3/23 -- New springs installed. WO Closed.</p> <p>7/20/23 -- 3rd set of springs ordered in dial in to desired tension to close the door safely.</p> <p>7/6/23 -- Facilities re-assessing spring tension to safely close gate.</p> <p>6/23/23 -- Spring procured. On schedule.</p> <p>6/8/28 - Outcome of discussions during LD / CAM WO meeting on 8 June 2023.</p>  |

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|-----------|------------------|-------------------|--|--------------------|-------------|----------------------------------|-----------------|---------------------|--|
| 6/23/2023 | 1                | 2023-25           | LA to perform Cran Creek Stream Walk and provide LLCC with report of findings and recommendation moving forward. | N                  | Roger       | 11/15/23<br>8/31/23<br>7/31/2023 | 11/20/2023      | LD                  | <p>11/30/23 -- Report received 11/20/23. LD to review and provide comment.</p> <p>11/2/23 -- On schedule.</p> <p>10/19/23 -- Octpber samples sent to EHI. Report remains on schedule.</p> <p>10/05/23 -- LA has committed to a delivery date of 11/15. Roger has requested they also weigh-in the issue of whether the Cran Creek Detention Structure is adequate for fish passage (fish friendly).</p> <p>9/14/23 -- Walk concluded on 9/9//23. CAM to request report delivery date along with all the other LA deliverables due to LLCC.</p> <p>8/31/23 -- WO updated to include provision of a report resulting from the streamwalk. ECD TBD</p> <p>8/17/23 -- LA can support on Saturday 9 Sept. CFL notified. LLCC Maintenance to support with access and boat.</p> <p>8/3/23 -- CLF working interenally to find a mutually agreeable date to support the walk. Goal is to complete by end of August.</p> <p>7/20/23 -- Walk scheduled for 12 August. CLF notified.</p> <p>7/6/23 -- LA is expecting to perform walk in August. ECD TBD</p> <p>6/23/23 -- Follow on to proposal received as part of WO 2023-07. This WO supports LTLH subcommittee actions related to sediment in Limerick.</p>   |
| 8/2/2023  | 1                | 2023-31           | Repair Inn Island erosion  | Y                  | Chris       | TBD                              |                 | Roger Milliman      | <p>11/30/23 -- Chris reported that MCD has gone silent. Chris to review MDC heirarchy for LLCC to possibly elevate issue with MDC Mgt. Meanwhile, Chris has reached out to engineering firm HDR requesting a concept design rough pricing. Additionally, Chris will go directly to Mason County with Aquatechnix and Ken Martig designs from 2017(ish) to assess viability with the County.</p> <p>11/2/23 -- Chris remains in contact with MCD. MCD held for internal staff estimates for 2 proposed solutions. ECD TBD.</p> <p>10/19/23 -- Still waiting for MCD feedback.</p> <p>10/05/23 -- Chris is still waiting input from MCD. Roger to ensure Chris will obtain an updated proposal that addresses NTE pricing for the contingencies they include in their proposal so LD and LLCC's BOD has good visibility to project content, risks and associated cost exposure.</p> <p>9/14/23 -- Proposal requested for design. Chris to follow up with MCD for due date and request a rough order of magnitude estimate for executing the proposed design. CAM is comfortable that the data requested from MCD will provide enough information for a PAR to execute the design can be developed.</p> <p>8/31/23 -- Billing rates from MCD received. CAM directed Chris to request a county-friendly design that has a high probability of being successfully permitted.</p> <p>8/17/23 -- Chris is awaiting feedback from MCD (ecd 8/18/23. Expectation is for a proposed shoreline -friendly solution/plan and process to work with Mason County and other stakeholders for approval of plan</p> <p>8/3/23 -- Chris reported he is working with Mason County Conservation District to seek options to repair the island and minimize future erosion. Input from MCCD expected by 10 August.</p> |
| 8/2/2023  | 2                | 2023-32           | Perform maintenance to Inn Bridge  | Y                  | Chris       | 6/30/24<br>12/31/2023            |                 | Roger Milliman      | <p>11/30/23 -- Status put into hiatus due to long leadtime on executing the project.</p> <p>11/2/23 -- Entire project to be performed next spring when weather conditions are more favorable and access to better (drier) wood can be obtained.</p> <p>10/19/23 -- Hand railings to be replaced by year's end. Protective paint covering of steel substructure to be performed in spring during less humid conditions. Joel offered to collect volunteers to support Maintenance with current railing demo to help Maintenance if Gerardo and Chris so desire.</p> <p>10/05/23 -- Project to be moved to June ECD as repairs and maintenance are not well suited for winter performance.</p> <p>9/14/24 -- Chris and Gerardo to compare schedules to determine time to execute this WO. On schedule.</p> <p>8/31/23 -- Materials identified. CAM authorized Chris to procure the materials and continue this project.</p> <p>8/17/23 -- Chris and Gerardo have begun working a Bill of Materials list to address engineering recommendations.</p> <p>8/3/23 -- Chris and Gerardo to meet to start planning to repair / maintain bridge in accordance with recent engineering report and recommendations.</p>   |

## Lakes, Dams and Parks Work Orders Log: 30 November 2023

| Date     | Priority (1,2,3) | Work Order Number | Task   | Safety Issue (Y/N) | Assigned to | Due Date                | Completion Date | Requestor/ Task POC | Project Status  |
|----------|------------------|-------------------|--|--------------------|-------------|-------------------------|-----------------|---------------------|---|
| 8/5/2023 | 1                | 2023-35           | Reroof park restrooms and outbuildings (Capital Project)       | N                  | Roger       | 11/6/2023<br>10/31/2023 | 11/7/2023       | Ted Lovgren         | 11/30/23 -- Project Complete. WO closed.<br>11/2/23 -- Cogent Construction commenced work 2 Nov. ECD 6 Nov.<br>10/19/23 -- Permits obtained from county by contractor. Material ordered. Updated schedule request by CAM.<br>10/05/23 -- Material has been ordered. 4-day job expected to be completed by 10/31/23<br>9/14/24 -- 9 buildings to be reroofed. Congent (contractor) plans to complete by 7 October.<br>8/31/23 -- Contract issued. On schedule.<br>Per meeting LD meeting on 8/5/24   |
| 8/5/2023 | 2                | 2023-36           | Installation of Steel Doors, and cyber locks at park restrooms | N                  | Roger       | 11/15/2023              |                 | Ted Lovgren         | 11/30/23 -- Banbury doors in. Angelia doors received. One of the doors for Log Toy to be ordered (2nd door will be ordered once the ADA dimensions are defined).<br>11/2/23 -- Doors for Banbury received. Doors for Anglia returned as damaged.<br>10/19/23 -- Locks received. Doors for Banbury and Angelia have been ordered.<br>10/05/23 -- Olde Lyme and Tipperary doors have been replaced. Locks remain pending. Gerardo to order doors for Banbury and Angelia Parks. Log Toy to be completed once ADA building updates are completed.<br>9/14/24 -- one door completed at Olde Lyme. Other door, and balance of park doors likely to be custom ordered due to different sizes.<br>8/31/23 -- Doors installed at Tipperary (temp locks). 2 custom doors ordered for Olde Lyme park. Gerardo to follow up with schedule. Balance of doors and locks to be ordered once proof of concept is confirmed at Olde Lyme.<br>Per meeting LD meeting on 8/5/25   |
| 8/5/2023 | 1                | 2023-37           | Upgrade Banbury restroom for year around use                   | N                  | Roger       | 12/31/2023              |                 | Ted Lovgren         | 11/30/23 -- Doors in, Ceiling in, Heaters installed, Water Heater installed Lights installed. Gerardo to work with RAM electric to complete project by 12/31. Dennis to review need for wall covering spec with subteam. Floor coating to be addressed as weather permits. Majority of project to be complete by 12/31.<br>11/2/23 -- Doors received. Reroof commenced 2 Nov. Electrical in work. Heater ordered and H2O heater to be ordered today. Gerardo to review ability to install heater at ground level rather than at ceiling height for better heat distribution.<br>10/19/23 -- Gerardo working with Ram Electric for ceiling heater and on-demand hot water.<br>10/05/23 -- Project remains in-work. Lighting being reworked. Gerardo evaluating the insta-hot water system to support both restrooms. Heating of facility to support pipes from freezing continues to be evaluated.<br>9/14/24 -- Electrical run being accessed by RAM. Gerardo to continue to check in with Dennis re: nuances / ability of build out.<br>8/31/23 -- CAM to issue contract to RAM Electric to run power to building. Gerardo and Dennis will meet to assess interior finish work and whether the work will be done in house.<br>Per meeting LD meeting on 8/5/26 |
| 8/8/2023 | 3                | 2023-38           | Lep Dam valve to be exercised.                                 | N                  | Roger       | 11/1/2023<br>11/10/2023 |                 | Roger Milliman      | 11/30/23 -- Wrench received. Chris confirmed valve is stuck. Chris to perform trade study to either replace / repair the valve or recommend renting pumps when necessary.<br>11/2/23 -- Wrench received. Awaiting adapter ECD 2 Weeks.<br>10/19/23 -- No change in status.<br>10/05/23 -- Chris was not in attendance - no status provided.<br>9/14/23 -- Awaiting availability of torque multiplier from 3rd party (tool to be loaned to LLCC). On schedule.<br>8/31/23 -- Chris believes the valve can be unstuck. Torque multiplier ordered to assist with breaking the valve loose.   |

Park Maintenance Check list

|                 |   | Yes/No      | Attention?       |
|-----------------|---|-------------|------------------|
| Anglia Beach    |   |             |                  |
| 11/28/23        | Garbage can(s) empty? (empty Mon & Fri                | <b>1/2</b>  | <b>Yes</b>       |
|                 | Dog Station has poop bags available?                  | OK          |                  |
|                 | Litter picked up?                                     | OK          |                  |
|                 | Restroom is cleaned and stocked? (Mon & Fri)          | LOCKED      |                  |
|                 | Lawn mown recently?                                   | OK          |                  |
|                 | Ground debris cleaned up?                             | OK          |                  |
|                 | All debris removed from spillway?                     | <b>NO</b>   | <b>Grass(?)</b>  |
|                 | Safety floats are above water at the spillway?        | OK          |                  |
|                 | Notes:  |             |                  |
|                 | <b>Log boom looks like it is sinking in spots.</b>    |             |                  |
|                 | <b>Roofs looked good.</b>                             |             |                  |
|                 |   |             |                  |
|                 |   |             |                  |
| Banbury Park    |   |             |                  |
| 11/28/23        | Garbage can(s) empty? (empty Mon & Fri                | <b>1/2</b>  | <b>Yes</b>       |
|                 | Dog Station has poop bags available?                  | OK          |                  |
| 8:45AM          | Litter picked up?                                     | OK          |                  |
|                 | Restroom is cleaned and stocked? (Mon & Fri)          | OPEN        | Yes              |
|                 | Lawn mown recently?                                   | OK          |                  |
|                 | Ground debris cleaned up?                             | OK          |                  |
|                 | Notes:  |             |                  |
|                 | <b>Bathroom found open but looked ok.</b>             |             |                  |
|                 | <b>Roger was notified. Roofs looked good.</b>         |             |                  |
|                 |   |             |                  |
| Clubhouse/Inn   |   |             |                  |
| 11/28/23        | Garbage can(s) empty? (empty Mon & Fri                | <b>1/2</b>  | <b>Sport Ct.</b> |
|                 | Dog Station has poop bags available?                  | OK          |                  |
|                 | Litter picked up?                                     | OK          |                  |
|                 | Lawn mown recently?                                   | OK          |                  |
|                 | Ground debris cleaned up?                             | Ok          |                  |
|                 | Are pathways swept?                                   | OK          |                  |
|                 | Is the roof free of debris?                           | OK          |                  |
|                 | Notes:  |             |                  |
|                 | <b>Broken bench on far side of island Roger told.</b> |             |                  |
| Leprechaun Park | Dog Station has poop bags available?                  | OK          |                  |
| 11/28/23        | Litter picked up?                                     | OK          |                  |
|                 | Lawn mown recently?                                   | OK          |                  |
|                 | Ground debris cleaned up?                             | OK          |                  |
|                 | Notes:  |             |                  |
|                 | Porta-Potty was clean and recently serviced           | <b>GONE</b> |                  |
|                 |   |             |                  |

Park Maintenance Check list

|                  |  |                |            |
|------------------|--|----------------|------------|
| Log Toy Park     | Garbage can(s) empty? (empty Mon & Fri             | <b>1/2</b>     | <b>YES</b> |
| 11/28/23         | Dog Station has poop bags available?               | OK             |            |
|                  | Litter picked up?                                  | OK             |            |
|                  | Restroom is clean and stocked? (Mon & Fri)         | <b>OPEN #1</b> | <b>YES</b> |
|                  | Lawn mown recently?                                | OK             |            |
|                  | Ground debris cleaned up?                          | OK             |            |
|                  | Notes:   |                |            |
|                  | <b>Restroom unlocked and was used (w/o water)</b>  |                |            |
|                  | <b>Roger notified.</b>                             |                |            |
|                  |  |                |            |
|                  |  |                |            |
| Olde Lyme Park   | Garbage can(s) empty? (empty Mon & Fri             | OK             |            |
| 11/28/23         | Dog Station has poop bags available?               | OK             |            |
|                  | Litter picked up?                                  | OK             |            |
|                  | Restroom is clean and stocked? (Mon & Fri)         | LOCKED         |            |
|                  | Lawn mown recently?                                | OK             |            |
|                  | Ground debris cleaned up?                          | OK             |            |
|                  | Notes:   |                |            |
|                  | <b>Trees fallen over the creek</b>                 |                |            |
|                  |  |                |            |
|                  |  |                |            |
| Way to Tipperary | Garbage can(s) empty? (empty Mon & Fri)            | <b>1/2</b>     | <b>YES</b> |
| 11/28/23         | Dog Station has poop bags available?               | OK             |            |
|                  | Litter picked up?                                  | OK             |            |
|                  | Lawn mown recently?                                | OK             |            |
|                  | Ground debris cleaned up?                          | OK             |            |
|                  | Restroom is cleaned and stocked?                   | LOCKED         |            |
|                  | Is the roof free of debris?                        | OK             |            |
|                  | Notes:   |                |            |
|                  | <b>Picnic table broken and placed up against a</b> |                |            |
|                  | <b>Tree. Roger notified.</b>                       |                |            |
|                  |  |                |            |

Respectfully submitted:

John Ingemi/Tom Alkire

## Lake Dam Committee Action Item Status

As of: 2December2023

| Commitments & Action Items  | Date Assigned | Assigned To  | Due Date  | ECD / Status   |
|---|---------------|--------------|-----------|--|
| Establish Lake Limerick/Leprechaun Shoreline Guide for LD and Compliance Committees to use as an audit tool in order to begin reigning in the many violations observed (but not often reported) by members. | 7-Jan-23      | Duane        | 31-Aug-23 | <b>5Aug2023</b> Duane committed to complete by next LDC meeting.<br>Recommend reviewing LLCC CCRs & Architechural Committee Guidelines, ByLaws, Declaration of Restrictions, etc. on LLCC Website, Association Documents.  |
| Perform Shorline audit in Spring 2023 for non-compliances; non-permitted boat lifts/docks/floats, unauthorized intrusions/constructions, e.g. beach retaining walls, fences, etc.                           | 7-Jan-23      | Lake-Dam     | TBD       | Placeholder for Spring/Summer LD Committee activity. Volunteers will be needed.  |
| LTLH Subteam to investigate feasibility to lease/purchase a portable suction dredge (including permit requirements).  | 29-Jun-23     | LTLH         | TBD       | Action Item on hold pending review of LA Report/Recommendations rcvd Nov 20 on dredging of Lakes.<br>Ken Martig provided photos of a portable suction dredge being used on Lake Limerick (in the 80's/90's?). Suggested as a more economical approach to dredging of both lakes. |
| Lake Patrol Guidelines need to be updated to indentify BoD authorization and use of Go-Pro camera for video/audio recording.  | 5-Aug-23      | Dennis & Lou | TBD       | Lake Patrol has raised concerns that use of Go-Pro camera by LP members to record (audio/video) encounters with Boat owners is not authorized by the BoD.  |

## Lake Dam Committee Action Item Status

As of: 2December2023

| Commitments & Action Items                | Date Assigned | Assigned To           | Due Date | ECD / Status  |
|---|---------------|-----------------------|----------|---|
| Vessel Registration Form/Procedure Update | 7-Oct-23      | Dennis, Dave, John M. | TBD      | <p><b>29Nov2023</b> Working mtg held w/ Dennis, Dave, Teddy; next mtg scheduled for Dec 6.</p> <p><b>15Nov2023</b> Working mtg held with Dennis, Dave and Teddy; next mtg scheduled for Nov29.</p> <p><b>1Nov2023</b> Working mtg held with Dennis, Dave and Teddy; next mtg scheduled for Nov15.</p> <p>The current form and procedure needs to be reviewed/updated to address oversized vessel process (submittal, review, documentation/communication of results, etc.).</p> |
| Vessel Registration Audit                 | 4-Nov-23      | Lou & Gary            | TBD      | <p><b>2Dec2023</b> vessel registration data is under review and discussions with Office regarding the data mgmt system for these records.</p> <p>Coordinate with the LLCC Office to determine the availability of Vessel Registration data, parameters and scope of an audit of existing data and resource requirements.</p>  |
| Park Restroom Updates Expenditures        | 2-Dec-23      | Dennis                | TBD      | Obtain an accounting of expenditures to date vs budgets for the Park Restroom updates.  |
|   |               |                       |          |   |

*Lake Limerick C.C.*



*est. 1966*

Lake Limerick Country Club (LLCC)  
790 East St. Andrews Drive, Shelton, WA 98584  
Phone 360.426.3581 Fax 360.426.8922

# **Dam Operations And Maintenance Manual**

**Limerick Dam #MA14-130  
Leprechaun Dam #MA14-113  
Cranberry Detention Structure #MA14-594**

**Updated December 02, 2023**



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# Section 1-General Information

This manual provides information needed to assure the safe and beneficial Operations and Maintenance of Limerick and Leprechaun Dams and the Cranberry Creek Detention Structure. This manual provides guidance both to LLCC staff, and to individuals familiar with reservoir operations but unfamiliar with these specific dams if regular staff are unavailable. Proper operation and maintenance allows these dams to operate efficiently while protecting the safety of those living downstream.

## GENERAL DESCRIPTION OF THE DAMS

### Limerick Dam #MA14-130

Limerick Dam is an earthen filled dam impounding Lake Limerick, which is used for various recreational purposes. The lake is part of a recreational residential development which includes a golf course in Mason County about six (6) miles from Shelton, Washington. The federal identification number for Limerick Dam is MA14-130. The National Inventory of Dams Number for Lake Limerick is WA00130.

The dam embankment is approximately 400 feet long, 28 feet high and the crest is 16 feet wide. The dam has a 28-inch outlet pipe through its approximate center that can, in an emergency, aid in release of water in addition to flows from the spillway. A concrete spillway with fish ladder is located on the east side of the embankment. Limerick dam impounds 920-acre feet of water at the spillway crest. The dam and spillway are classified as High, Hazard Class 1C.

Lake Limerick receives water from Cranberry Creek, outflow from Lake Leprechaun, 2 small unnamed spring fed streams in the northeast portion of the lake, 1 unnamed stream in the eastern portion of the lake, and natural springs from the lakebed.

### Leprechaun Dam #MA14-113

Leprechaun Dam is an earthen filled dam impounding Lake Leprechaun, which is used for various recreational purposes. This lake is part of a recreational residential development in Mason County about six (6) miles from Shelton, Washington. The federal identification number for Leprechaun Dam is MA14-113. The National Inventory of Dams Number for Lake Leprechaun is WA00113.

The dam embankment is 162 feet long, 12.5 feet high and the crest is 30 feet wide. The dam crest is paved and used as a residential street/county road. A 42-inch pipe through the crest embankment serves the concrete spillway box outflow and has a 15-inch slide gate for lake discharge during repairs. The reservoir capacity is 86-acre feet at the dam's crest. Leprechaun Dam is classified as High, Hazard Class 1C due to its potential for causing damage to downstream dam structures. Water is fed to the reservoir by 2 small creeks and natural springs. Water flows from the reservoir to Lake Limerick at a pool elevation of 456 feet.

### Cranberry Creek Detention Structure #MA14-594

Cranberry Lake is a natural lake and wetland area located ¼ mile west of the Lake Limerick community. The structure was built at the direction of Washington State's Environmental Protection Agency in the 1980's. The Cranberry Detention Structure and basin federal identification is #MA14-594. The structure consists of approximately 7,000 cubic yards of fill, 220 feet long and 60 feet wide. The crest is 18 and 10 feet above the streambed. A gravel road runs its full length. The stream elevation is 461.5 feet. Cranberry Creek Detention Structure is also rated High, Hazard Class 1C. The National Inventory of Dams Number for Cranberry Creek Detention Structure is WA00594 A.K.A. Cranberry Lake Storm Water Detention Dam.

Three 48-inch culverts pass through the center of the structure. The center fish passage culvert starts at elevation 461.5 feet, has a 1.67% slope, and ends at a downstream elevation of 460.5 feet. The other two culverts have inlet elevations of 464.0 feet. As a result, all flows pass through the fish passage culvert until flow rates reach 40 cubic feet per second.

## **Section 2 – Personnel Responsible for Operations and Maintenance**

### Overall Responsibility for Limerick and Leprechaun Dams and Cranberry Creek

#### Detention Structure

Lake Limerick Country Club Board of Directors  
790 East St. Andrews Drive, Shelton, WA 98584  
Phone 360.426.3581 Fax 360.426.8922

#### Responsible Staff

Community Association Manager

Roger Milliman

Office: 360-426-3581

Mobile: 360-589-3790

Facility and Maintenance Manager

Gerardo Ramirez

Office: 360-426-7837

Mobile: 360-490-4392

## Section 3 – Reservoir Operations Plans

### Lake Limerick Operations

#### Reservoir Level Operations

Lake Limerick receives continuous flow from Cranberry Lake to the west, Lake Leprechaun in the northwest, and intermittent stream flows from wetlands to the northeast. Lake Limerick's reservoir levels are maintained for recreational and fish habitat/passage purposes throughout part of the year via a weir board system. The weir boards are installed to increase the elevation of the lake level during the spring, summer and early fall. This is done in part to help the Cranberry Creek watershed fishery by compensating for water that would be otherwise lost to the watershed due to evaporation and water out-flow from the lake. The extra water made available maintains flow in Cranberry Creek downstream from the dam. The higher water levels also help to ensure provision of irrigation water for the golf course, and enhances recreational swimming, fishing, and boating uses. Specific timing of weir board placement and removal is dependent on water inflow, lake water levels, lake usage, and forecasted weather, but usually begins in April and ends in October.

#### Lake Level Management / Annual Weir Board Adjustment Schedule

The lake's water level is raised in the spring by placing eighteen weir boards in a frame six (6) boards wide and three (3) boards high for a total height of 12.0 inches (measured lakeside from the crest of the concrete spillway). Providing no severe rain events are predicted, weir board installation starts the first week of April. The boards are placed so as to not raise the water level more than one (1) inch per day. Traditionally, placing 1 weir board per day within the weir board framework supports this requirement, assuming no abnormal precipitation that would naturally make the lake level rise. Weir board installation is normally completed by the fourth week of April in time for fish planting and Washington State's opening day of fishing season.

Lake Limerick's lake level is monitored on a daily basis via a data logger that digitally measures lake level height. This data set is used to help ensure the lake level height remains near the prescribed lake level height stated above.

The lake level is actively managed via weir board adjustments as needed during the recreational season. Should the prescribed lake level height be deemed undesirable by the LLCC Board of

Directors, weir boards may be added or removed to obtain the desired level for recreational use, support lake health issues, or address other unforeseen issues that could cause harm to the lake or shoreline.

The Lake Limerick's fish ladder weir boards are managed by LLCC during the recreational season and by the Squaxin Tribe during the salmon migration season. Should the lake level fall to a point where water flow through the fish ladder may be compromised, weir boards within the ladder will be removed to help ensure continuous water flow.

Weir boards removed at the end of summer must be removed slowly in order to not decrease lake levels more than one (1) inch per day. Weir boards within the fish ladder are the last to be installed and first to be removed.

Weir board removal may start as early as September 15<sup>th</sup> if lake levels are up and significant rain has begun, or is predicted, to begin soon. If the summer weather has been normal and the weather forecast is for fair weather, weir board removal should start October 1<sup>st</sup>. In any case, weir board removal must start early enough to ensure complete removal by October 31<sup>st</sup> to support salmon migration and reduce shoreline property damage resulting from fall/winter high water levels.

## Equipment Operations-Lake Limerick

### Air Operated Butterfly Valve

The compressed-air-operated butterfly valve is located at the upstream end of the main outlet conduit at Lake Limerick Dam. This valve is used to regulate reservoir levels to allow for dam and lakebed maintenance. It can assist with some release of waters during a flood condition, but controls would be inaccessible once lake levels reach flood stage. Opening the valve in flood conditions would be unsafe, and flow through the conduit would not measurably reduce flood flow down the spillway.

The butterfly valve can only be operated from the cabinet located at the bottom of the concrete platform at the center of the dam crest. Operating the butterfly valve requires the following steps:

1. Get the gate and control box padlock keys from the red emergency cabinet located in the maintenance area on the wall behind the door in the reception area.
2. Get the portable air compressor and generator located in the maintenance shop.

### 3. Valve opening checklist:

- a. For testing, the Outlet flange must be installed to regulate flow. The Outlet flange is located in the Maintenance area on the wall behind the door in the reception area.
- b. For opening during the fall maintenance, the Outlet flange on the streamside of the conduit must be installed and the flow rate through the conduit controlled by air pressure through the valve.
- c. In non-emergency situations only, check the downstream outlet for obstructions-DO NOT ATTEMPT DURING FLOOD CONDITIONS.
- d. Check for any reducers or valves that may need to be adjusted.
- e. For safety purposes, ensure there are no people or unsecured boats etc. on the lake near the valve when it is being exercised.
- f. Install the hose from the compressor to the air fitting located in the gray box mounted on the side of the concrete platform.
- g. Start the generator to power the air compressor. Turn the compressor on to begin filling the system. Monitor the air pressure gauge mounted on the valve box. The valve should begin to open at 50 psi, which will cause an eruption of air bubbles on the lake surface escaping from the outlet conduit. The valve will be 100% open at 80 psi. The maximum pressure rating for this system is 120 psi.
- h. If the butterfly valve is being exercised for testing purposes only, immediately close the valve once it has been proven the butterfly valve works correctly.

### 4. Valve Closing Sequence

- a. Turn off the compressor.
- b. Disconnect the air hose from the air fitting on the valve box.
- c. Turn the red handle slowly to release air pressure from the system.
- d. Monitor the air gauge as air pressure drops.
- e. Inspect the downstream outlet to ensure flow has ceased (if the water has not ceased, close the 2 reducer valves on the Outlet flange and contact LLCC's Dam Engineer).
- f. After all air is released from the system, turn the red handle back to its original position.
- g. Once testing is completed, store the outlet flange back at the maintenance facility.
- h. Reinstall padlocks and return equipment and keys to original locations in the Maintenance facility.

## Lake Leprechaun Operations

### Reservoir Level Operations - Lake Leprechaun

Lake Leprechaun receives flow from a wetland area upstream from the lake. Leprechaun Dam is operated for flood control and recreational uses. During flood control conditions, a large white PVC float diverts floating objects and debris that could plug the 7-foot by 8-foot Spillway box. When lake level elevations are between 467.8 and 470.8 feet the grating on the spillway box must be checked every 3 to 4 hours and all debris removed. At lake level, elevation is 470.8 feet, water will begin to flow over the top of the spillway box at which time the 15-inch gate valve handle will be difficult to operate.

### Annual Weir Board Adjustment Schedule-Lake Leprechaun

The lake level is changed in the spring and fall. Beginning the first week of April, six (6) weir boards are placed in a frame, raising the lake level at a rate not to exceed one (1) inch/day, for a total elevation increase of 15.25 inches. All weir boards will normally be installed by the third week of April to support fish planting prior to the Washington State's opening day of fishing season.

Weir board removal begins October 1, lowering the lake at a rate not to exceed one (1) inch/day, and will normally be completed by October 31.

### Equipment Operations-Lake Leprechaun

#### Manually Operated Slide Gate

The slide gate at Leprechaun Dam is located upstream in the 7-foot by 8-foot spillway box. It is located about 4 feet below the top of the box. This 15-inch valve requires the use of a special "Tee handle" to be operated. The bright orange Tee handle is located in the maintenance shop on the wall in the Golf Bay.

**Routine** gate opening and closing is performed as follows:

1. Gate opening sequence
  - a. Place the drain gate Tee Handle on the gate wheel.
  - b. Rotate the wheel clockwise sixty (60) turns to open the gate fully.
  - c. Rotate the wheel slowly to reduce pressure stress on the valve face.
2. Gate Closing Sequence



- a. Turn the Tee Handle counterclockwise approximately sixty (60) turns to close the gate.

If the wheel becomes difficult to turn when it is nearly closed, turn the wheel back clockwise for ten (10) turns, and then attempt to close the gate again. **DO NOT FORCE** the wheel into the closed position. If the gate cannot be completely closed, seek professional assistance from LLCC's Dam Engineer.

**Emergency** gate opening may be required when necessary to reduce hydrostatic pressure on the dam. In this case, the gate should be opened fully to allow the reservoir to drain as quickly as possible given watershed inflow. The 15-inch valve pipe will add approximately 90 cfs additional outflow from the lake.

Emergency operation is not recommended during dangerously high reservoir levels. The primary spill pipe will already be at or near maximum capacity and opening the slide gate will not significantly increase total discharge from the lake.

# Section 4 – Dam Inspection and Maintenance Plans

## Lake Limerick Inspection and Maintenance Plans

### Monthly Inspections-Lake Limerick

1. Monitor reservoir levels weekly and record monthly.
2. Visually examine condition of:
  - a. Dam crest
  - b. Up and downstream dam faces for seepage, erosion and holes
  - c. Spillway, stilling basin and fish ladder
3. Check Spillway and fish ladder for debris and remove.
4. Check dam face riprap.
5. Visually inspect conduit from downstream end for corrosion, leakage or other significant problems. Monitor seepage near the low-level conduit to detect changes from the 0.5 gallon/minute observed in 2015 State Dam Safety Office (DSO) inspection.
6. Monitor seepage from the toe of the embankment just to the right and left of the conduit outlet.
7. Monitor saturated soils, lush growth and puddles and wet soil on the downstream dam face.
8. Monitor seepage on concrete walls of the spillway and fish ladder. Monitor for changes and if seepage continues, contact LLCC's Dam Engineer.

### Annual Inspections-Lake Limerick

1. Perform detailed annual inspection of all project elements using checklist (Attachment A to this document).
2. Test and operate butterfly valve through complete cycle.
3. Inspect erosion prone areas and record status.

### Five Year Inspections-Lake Limerick

1. Schedule DSO engineer to inspect dam, structures and controls.
2. Note and take photos of dam seepage at spillway or dam face. Monitor for change and if seepage increases, contact LLCC's Dam Engineer.
3. Review and update Emergency Action Plan (EAP) list and submit to DSO.

### Monthly Maintenance-Lake Limerick

1. Inspect for burrowing animals (fill holes with compacted soil).
2. Inspect and maintain the crest elevation.
3. Inspect and remove undesirable vegetation/trees.
4. Maintain upstream slope protection.

### Biannual Maintenance-Lake Limerick

1. Cut the grass at least twice annually or more to support inspections.
2. Grass should be kept no more than 8 inches tall and lower in seepage areas.

### Annual Maintenance-Lake Limerick

1. Gravel roadway as needed to repair and maintain areas that erode or deteriorate.
2. Maintain design elevation of unimproved crest surfaces by filling in ruts and minor depressions.
3. Repair riprap to original state, replace bedding and riprap. Repair riprap voids by adding or moving riprap
4. Remove small trees and brush. DO NOT REMOVE TREES LARGER THAN SIX (6) INCHES IN DIAMETER WITHOUT THE ADVICE OF A PROFESSIONAL ENGINEER.
5. Note and take photos of dam crest and seepage at spillway or dam face and if seepage increases contact LLCC's dam engineer.

### Concrete Spillway Maintenance-Lake Limerick

#### Concrete Features

1. Make repairs to concrete surfaces and joints, including patching cracked areas with a bonding agent, and repair minor cracks by injecting adhesive epoxy.
2. Keep concrete joints and surfaces free from vegetation.  
[NOTE: Assistance from the DSO may be required before making repairs to concrete surfaces and joints because concrete problems may indicate serious dam safety problems. Report any new or changing cracks to Lake Limerick Country Club's dam engineer.]

## Spillway Channel

1. Remove any obstructions or debris from the spillway channel. Lifelines and harnesses must be used and are located in the Maintenance area.
2. Keep drains free and clear. Periodically inspect internal drains to keep them functioning.

## Spillway Basin

1. Remove visible and accessible obstructions to outfalls (large rocks, debris, vegetation, etc.). Keep plunge pool cleaned out.
2. Dewatering of basin for maintenance shall only be done as directed by the dam engineer of the DSO.

## Lake Leprechaun Inspection and Maintenance Plans

### Monthly Inspections-Lake Leprechaun

1. Monitor reservoir levels weekly and record monthly.
2. Inspect gate valve.
3. Visually examine condition of:
  - a. Dam crest.
  - b. Up and downstream dam faces for seepage, erosion and holes.
  - c. Outflow area into Cranberry Creek
  - d. Check spillway channel for debris and remove.

### Annual Inspections-Lake Leprechaun

1. Perform detailed annual inspection of all project elements using checklist (Attachment A to this document)
2. Test and operate all gates and valves through a complete cycle.
3. Inspect erosion prone areas and record status.

### Five-Year Annual Inspection-Lake Leprechaun

1. Schedule DSO engineer to inspect dam, structures and controls.
2. Note and take photos of dam seepage at spillway or dam face. Monitor for change and if seepage increases contact LLCC's dam engineer.
3. Review and update Emergency Action Plan (EAP) list and submit to DSO.

### Monthly Maintenance-Lake Leprechaun

1. Inspect for burrowing animals, fill any holes with compacted dirt.
2. Inspect debris diverter.

### Biannual Maintenance-Lake Leprechaun

4. Cut the grass at least twice annually or more dependent of maintaining ability to visually inspect dam surfaces. Maximum grass height should be 8 inches or shorter to maintain ability to inspect.

### Annual Maintenance-Lake Leprechaun

1. Maintain Crest roadway and crest design elevation. Seal cracks on the asphalt roadway resulting from normal wear and tear. Inform dam engineer of any new cracks or cracks increasing in size.
2. Maintain upstream slope protection. Replace bedding material and riprap to original slopes. Add riprap to voids.
3. Remove vegetation such as Scotch Broom, blackberries, and brushy weeds and trees. DO NOT REMOVE TREES LARGER THAN SIX (6) INCHES IN DIAMETER WITHOUT ADVICE OF AN ENGINEER.
4. Note and take photos of dam seepage at spillway or dam face. Monitor for change and if seepage increases contact LLCC's dam engineer.

## **Cranberry Creek Detention Structure Inspection and Maintenance Plans**

### Monthly Inspections-Cranberry

1. Monitor reservoir level bimonthly
2. Examine dam conditions
  - a. Upstream and downstream dam faces
  - b. Settling basin
  - c. Culverts

### Five-Inspection -Cranberry

1. Schedule DSO engineer to inspect dam, structures and controls.
2. Note and take photos of dam seepage at spillway or dam face.

3. Monitor for change and if seepage increases contact LLCC's Dam Engineer.
4. Review and update Emergency Action Plan (EAP) list and submit to DSO.

### Monthly Maintenance-Cranberry

1. Inspect for burrowing animals, fill any holes with compacted soil. If burrowing is extensive, seek advice from the DSO.
2. Maintain crest roadway.
3. Maintain crest design elevation.
4. Control erosion on upstream and downstream dam faces.
5. Remove vegetation, such as Scotch Broom, blackberries brush and trees. DO NOT REMOVE TREES LARGER THAN SIX (6) INCHES IN DIAMETER WITHOUT ADVICE OF AN ENGINEER.

# Section 5 Approvals

**Prepared by:**

**Signature:**

**Title:**

**Date:**

**Approved by Lake Limerick Board of Directors**

**CAM:**

**Date:**

**President:**

**Date:**

**Vice President:**

**Date**



**Lake Limerick / Lake Leprechaun / Cranberry Creek Detention Structure  
Dam Operations and Maintenance Log Sheet (Checklist and Schedule)**

**Lake Limerick & Lake Leprechaun:**

**Weir Boards:**

- Weir Board Installation Start in April
- Weir Board Installation Complete by 4th week in April
- Weir Board Removal Start no earlier than 01 Oct - lake Level dependent\*
- Weir Board Removal Complete by 31 October - lake level\* dependent

\* Wet or Dry Weather conditions may affect the lake level and should be taken into consideration

**Notes / Comments:**

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**Date** \_\_\_\_\_

**Lake Limerick:**

**Inspection and Maintenance:**

**Inspections:**

Monthly:

- 1. Monitor reservoir levels weekly and record.
- 2. Visually examine condition of:
  - a. Dam crest
  - b. Up and downstream dam faces for seepage, erosion, and holes
  - c. Spillway, stilling basin and fish ladder.
- 3. Check spillway and fish ladder for debris and remove.
- 4. Check dam face riprap.

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- 5. Visually inspect outflow conduit on downstream side for corrosion, leakage or other significant problems. \_\_\_\_\_
- 6. Monitor seepage at the base of the embankment, right and left the outflow conduit. \_\_\_\_\_
- 7. Monitor saturated soils, lush growth and wet soil on the downstream dam face. \_\_\_\_\_
- 8. Monitor seepage on concrete walls of the spillway and fish ladder. Monitor for changes and if seepage continues, contact a professional engineer. \_\_\_\_\_

Annually:

- 1. Perform detailed annual inspection of all elements using checklist. \_\_\_\_\_
- 2. Test and operate butterfly valve through complete cycle. \_\_\_\_\_
- 3. Inspect erosion prone areas and record status. \_\_\_\_\_

**Maintenance:**

Monthly:

- 1. Inspect for burrowing animals and fill holes with compacted soil. \_\_\_\_\_
- 2. Inspect and maintain crest elevation. \_\_\_\_\_
- 3. Inspect and remove undesirable vegetation/trees. \_\_\_\_\_
- 4. Maintain upstream slope riprap protection. \_\_\_\_\_

Bi-Annually:

- 1. Cut the grass twice annually or more to support inspections. \_\_\_\_\_
- 2. Grass should be maintained at no more than 8 inches tall and in the seepage areas. \_\_\_\_\_

Annually:

- |                |  |       |
|----------------|--|-------|
|                | 1. Gravel roadway as needed to repair and maintain areas that erode or deteriorate.  | _____ |
|                | 2. Maintain design elevation of unimproved crest surfaces by filling in ruts and minor depressions.  | _____ |
|                | 3. Repair riprap to original state, replace bedding and riprap. Repair riprap voids by adding or moving riprap                                       | _____ |
|                | 4. Remove small trees and brush. DO NOT REMOVE TREES LARGER THAN SIX (6) INCHES IN DIAMETER WITHOUT THE ADVICE OF A PROFESSIONAL ENGINEER.           | _____ |
|                | 5. Note and take photos of dam crest and seepage at spillway or dam face and if seepage increases contact Lake Limerick Country Club's dam engineer. | _____ |
| Every 5 Years: |  |       |
|                | 1. Review and update EAP list and submit to DSO.   | _____ |
|                | 2. Schedule a DSO engineer to inspect dam, structures and controls.  | _____ |

**Lake Leprechaun:**

**Inspections:**

- Monthly:
- |  |   |       |
|--|---|-------|
|  | 1. Monitor reservoir levels weekly and record monthly.          | _____ |
|  | 2. Inspect gate valve.  | _____ |
|  | 3. Visually examine condition of:                               | _____ |
|  | a. Dam crest.   | _____ |
|  | b. Up and downstream dam faces for seepage, erosion, and holes. | _____ |
|  | c. Outflow area into Cranberry Creek.                           | _____ |
|  | 4. Check spillway channel for debris and remove.                | _____ |

Annually:

  
  

1. Perform detailed annual inspection of all elements using checklist.
2. Test and operate gate valve through a complete cycle.
3. Inspect erosion prone areas and record status.

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**Maintenance:**

Monthly:

1. Inspect for burrowing animals, fill any holes with compacted dirt.

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Bi-Annually:

1. Cut the grass twice annually or more dependent on maintaining ability to visually inspect dam surfaces. Maximum grass height should be 8 inches.

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Annually:

  
  
  

1. Maintain crest roadway and crest design elevation. Seal cracks on the asphalt roadway resulting from normal wear and tear. Inform dam engineer of any new cracks or cracks increasing in size.
2. Maintain upstream slope protection. Replace bedding material and riprap to original slopes. Add riprap to voids.
3. Remove vegetation such as Scotch Broom, blackberries, and brushy weeds and trees. DO NOT REMOVE TREES LARGER THAN SIX (6) INCHES IN DIAMETER WITHOUT ADVICE OF AN ENGINEER.
4. Note and take photos of dam seepage at gate valve structure or dam face. Monitor for change and if seepage increases contact Lake Limerick Country Club's dam engineer.

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Every 5 Years:

  

1. Review and update EAP list and submit to DSO.
2. Schedule DSO engineer to inspect dam, structures and controls.

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**Cranberry Creek Detention Structure**

**Inspections:**

Bi-Monthly:

|                          |
|--------------------------|
| <input type="checkbox"/> |
| <input type="checkbox"/> |
| <input type="checkbox"/> |
| <input type="checkbox"/> |
| <input type="checkbox"/> |

1. Monitor reservoir level bimonthly
2. Examine dam conditions
  - a. Upstream and downstream dam faces
  - b. Settling basin
  - c. Culverts

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**Maintenance:**

|                          |
|--------------------------|
| <input type="checkbox"/> |
| <input type="checkbox"/> |
| <input type="checkbox"/> |
| <input type="checkbox"/> |
| <input type="checkbox"/> |

1. Inspect for burrowing animals, fill any holes with compacted soil. If burrowing is extensive, seek advice from the DSO.
2. Maintain crest roadway.
3. Maintain crest design elevation.
4. Control erosion on upstream and downstream dam faces.
5. Remove vegetation, such as Scotch Broom, blackberries brush and trees. DO NOT REMOVE TREES LARGER THAN SIX (6) INCHES IN DIAMETER WITHOUT ADVICE OF AN ENGINEER.

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Every 5 Years:

|                          |
|--------------------------|
| <input type="checkbox"/> |
| <input type="checkbox"/> |

1. Review and update EAP list and submit to DSO.
2. Schedul DSO engineer to inspect dam, structures and controls.

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Inspection Performed by:

Date Performed and Added to Log Book:

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Printed

# LAKE LIMERICK COUNTRY CLUB LAKE PATROL GUIDELINES

## 1.0 PURPOSE

The Lake Limerick Country Club (LLCC) sponsors a volunteer Lake Patrol on Lake Limerick during the summer season (mid-April through the end of October). The function of the Lake Patrol is to monitor general boating and recreational activities on the lake for general compliance with approved and published Lake Safety Rules and Guidelines. The goal of the Lake Patrol is to positively contribute to safe recreational lake usage by noting rule violations and educating members on proper safety practices. This document standardizes Lake Patrol operating procedures including membership, responsibilities, patrol operations and incident reporting and emergency situations. **Rule violations shall be acted on as appropriate by the LLCC Compliance Committee.**

## 2.0 LAKE PATROL MEMBERSHIP GUIDELINES

The LLCC Lake Patrol is an all-volunteer Lake Limerick Country Club function. Membership guidelines are as follows:

1. The Lake Patrol is led by a designated captain assigned by the Lake Dam committee. The captain is required to be an LLCC member in good standing and is responsible for coordinating all aspects of Lake Patrol activities (see 3.0).
2. Lake Patrol membership is strictly on a volunteer basis. Lake Patrol members must be LLCC members in good standing or LLCC staff or park hosts and at least 18 years of age.
3. Lake Patrol members must commit to a minimum of one complete season unless extenuating circumstances develop over the course of a season which restricts their availability.
4. Lake Patrol members must have a Washington State boater education card (unless exempt).
5. Lake Patrol members are encouraged to get approved training in safe boating practices, first aid and CPR.

## 3.0 LAKE PATROL CAPTAIN RESPONSIBILITIES

The LLCC Lake Patrol captain is lead of the Lake Patrol function and has multiple roles and responsibilities. These include;

1. Maintain a log of all Patrol members including contact information. Encourage and promote new membership.
2. Develop and manage a calendar of Patrol activities
3. Maintain a log of important safety contacts including local fire and police departments, Coast Guard and key community members. Assure a copy of the contact list is in the Patrol boat for ready access.
4. Attend Lake Dam committee meetings and report status of Patrol activities including significant incidents/infractions encountered (unless his/her meeting participation is excused). **Prepare and submit a written report if unable to attend the meeting.**
5. Review and coordinate all member boat registration requests with the Lake Dam Committee. Provide recommendations to the Lake Dam committee on approval/disapproval of each request
6. Provide training to all Patrol members on Lake Limerick Rules and Safety Guidelines, and general operating procedures of the Lake Patrol.
7. Develop and maintain a Lake Patrol Incident Log to record safety incidents/infractions encountered during normal Patrol activities (see section 5.0). Educate Patrol members on requirements for documenting incidents in the log. Prepare LLCC Incident/Complaint forms on a weekly basis based on the Lake Patrol incident log (see 5.0.1).

## 4.0 LAKE PATROL OPERATIONS

The Lake Patrol is intended to be a community friendly function, not a security force, and **its purpose is to promote safe boating practices** and water recreation on Lake Limerick. It is the member's responsibility to understand and abide by published Lake Rules and Safety Guidelines and also exercise proper judgement and caution when participating in water recreation. Members are responsible for their own safety.

To accomplish its objective, the Lake Patrol is tasked with conducting on-lake patrols to monitor general activities, identify and correct unsafe practices and document/report on any incidents encountered. This

## LAKE LIMERICK COUNTRY CLUB LAKE PATROL GUIDELINES

responsibility encompasses fishing, recreational boating and personal/casual water activities (kayaks, canoes, swimming, paddleboards, other)

Lake Patrols should be conducted during times when lake usage is the busiest and the LLCC Lake Patrol boat should be used for all Patrol activities. Patrol member boats may be used with the approval of the Lake Patrol captain. Any private boats must have a clearly visible "Lake Patrol Boat" sign.

Patrols should focus on the following emphasis areas;

1. Observe boating and other activities for unsafe practices and violations of the approved "Lake Safety Rules and Guidelines". Instruct offending individuals on proper practices.
2. Verify boats on the lake have proper LLCC registration decals and Division/Lot numbers are clearly displayed in accordance with documented Lake Rules and Safety Guidelines.
3. Identify public recreational boaters (public access is restricted to fishing only) and request they leave the lake. The Patrol may escort unauthorized boats to the boat launch if necessary.
4. Assure boat speed limits and time restrictions are observed.
5. Document all incidents or infractions observed on the incident log including nature of activity, time and date, member name and lot number and LLCC registration tag numbers. Incident data should be documented by the Patrol member who observed the incident. Patrol members may also issue verbal warnings to boat operators and capture visual evidence of infractions with an onboard camera system (see Section 6.0)

### 5.0 FORMAL INCIDENT AND INFRACTION REPORTING

The Lake Patrol, as previously discussed, is responsible for maintaining a log of significant safety incidents and infractions encountered while on patrol. LLCC members are also encouraged to report incidents they observe to the LLCC office who will then forward them to the Lake Patrol captain for processing. On a weekly basis, the Lake Patrol captain will formally document all incidents/infractions recorded in the incident log on the LLCC Incident/Complaint form and forward them to both the Compliance and Lake Dam committees. Guidelines for incident reporting are as follows:

1. The LLCC Incident/Complaint form (see LLCC Website, Association Documents) shall be used to document boating incidents/infractions that are encountered during patrols. These reports shall be forwarded to both the Compliance and Lake Dam Committees and filed in the LLCC office.
2. Incidents/infractions reported should represent clear violations of the Lake Rules and Safety Guidelines document and have the potential to cause boating accidents, harm to individuals or erosion damage to structures or shorelines. Examples include; 1) having an oversized or unregistered vessel on the lake, 2) operating a vessel in a manner which creates an excessive wake which could damage structures or shorelines, 3) not having safety flags on-board or in-use, 4) disregarding no-wake zones, 5) driving in an erratic manner (excessive swerving, cutting across boating lanes or buoy lines, and turning sharp donuts while pulling skiers or tubers), 6) sitting on boat bows or side railings, or standing due to overloading when underway and 7) others at the discretion of the Lake Patrol captain. Incidents may be categorized into three distinct types; a) minor rule infractions b) major rule infractions which represent significant safety concerns and c) repeat violators.
3. Minor infractions are those which do not pose a significant safety hazard such as improper or missing registration decals, disregarding no wake zones, having an oversized vessel on the lake and others at the discretion of the Lake Patrol captain.
4. Major infractions include those which could result in physical harm to individuals. This includes lack of safety flags on-board or in-use, excessive swerving or cutting across boating lanes or buoy lines, turning sharp donuts while pulling skiers or tubers, sitting on boat bows or sides or standing due to overloading when underway and others at the discretion of the Lake Patrol captain.
3. Issuance of fines or other corrective action resulting from Lake Patrol reports is the responsibility of the Compliance committee. The Lake Dam committee shall be provided copies of all proposed fines or other corrective action.

### 6.0 LAKE PATROL VISUAL AND AUDIO RECORDINGS

Visual and audio recordings of incidents or infractions encountered during patrols may be taken but must be managed as follows;

1. An on-board camera system may be used to capture visual evidence of infractions. The

## LAKE LIMERICK COUNTRY CLUB LAKE PATROL GUIDELINES

capture of audio recordings is ONLY allowed with the consent of all parties being recorded.

2. The Lake Patrol captain shall maintain strict control of all visual and audio recordings taken during patrols. Subsequent access to recordings shall be limited to the Lake Patrol captain, the Lake Dam chairman and co-chairman, Compliance committee members and BOD members.
3. All recordings supporting observed/documented violations shall be provided to the Compliance Committee along with the formal Incident reports for use in determining an appropriate action to take.
4. Dissemination of recordings to parties other than those identified in 6.0.2 requires a formal request be submitted to and approved by, the BOD. Requests must include rationale for requesting access to the recorded data. All requests must be routed through the Compliance Committee and communicated with the Lake Dam committee for general awareness..

### 7.0 EMERGENCY OPERATIONS

If emergency situations are encountered during Lake Patrol, such as fire, physical injury, boat collisions or potential drownings, the Lake Patrol is tasked with;

1. Immediately providing on-site aid to all involved individuals
2. Requesting emergency support by calling 911 and also notifying the LLCC office to provide situational awareness. Lake Patrol members should always have a cell phone available when on patrol.
3. If emergency aid is required (ambulance, fire department or sheriff's office), first responders should be directed to the nearest LLCC park or the WDFW boat launch. Patrol members may transport individuals to this site if they feel they will not cause further injuries to involved individuals as might be expected of any "Good Samaritan" in Washington State.
4. Stopping all boating activities in the immediate vicinity of the incident
5. Gathering relevant incident information and witness information for post incident reports

## LAKE LIMERICK COUNTRY CLUB LAKE PATROL GUIDELINES

6.