

Last reviewed: August 21, 2026

Sump Pump Backup Planning Worksheet

Model a range, then test the complete response chain.

Model energy, test the chain

Planning range, not a guarantee

Estimated hours = (V x Ah x usable fraction x efficiency) / (pump W x duty fraction)

Use only a battery and charger supported by the installed controller. Model several storm duty cycles, reserve margin, battery age, temperature, startup limits, and measured pump behavior. The calculator shows the same disclosed method.

[Open the live runtime calculator](#)

SCENARIO	PUMP W	DUTY %	USABLE %	EFF. %	HOURS	EVIDENCE
Low						M / P / A
Expected						M / P / A
Severe						M / P / A

Commissioning checklist

- ☐ Exact pump, controller, battery, alarm, and charger manuals are present.
- ☐ Visual inspection is from a dry safe location; no damaged battery or wet wiring.
- ☐ Primary and backup floats have independent, unobstructed travel.
- ☐ A manual-approved clean-water test activates primary, backup, and alarm paths.
- ☐ Water exits at the intended outlet; no leak, backflow, or recirculation is seen.
- ☐ Local horn and every remote recipient receive and acknowledge the test.
- ☐ Primary power is restored, controller state is normal, and recharge is confirmed.
- ☐ Test result, correction owner, and next exact-manual due date are recorded.

Response and maintenance record

LOCAL RESPONDER / PHONE

ELECTRICIAN OR PLUMBER

ALARM MEANING / NEXT ACTION

BATTERY MODEL / INSTALL DATE

PUMP CONTRACTOR / PHONE

UTILITY OUTAGE CONTACT

LAST FULL WATER TEST

LAST OUTAGE / RECHARGE CONFIRMED

STOP AND ESCALATE

Stay out of water near electrical equipment. Seek qualified help for rising water, failed pumping, repeated faults, overheated cables, a damaged or swollen battery, sewage, fire, structural damage, or an installation path you cannot verify.

Evidence and exact-manual references

FEMA - Homeowner's Guide to Retrofitting (2025)

FEMA - Urban Flooding Guidance

Liberty Pumps - Model 441 Installation Manual

Zoeller - AquaNot Key ProPak Instructions

Basement Watchdog - BWSP Resources

Discover Battery - Discharge and Application

Discover Battery - Temperature and Capacity

fema.gov P-312

fema.gov urban flooding

libertypumps.com 441 manual

zoellerpumps.com AquaNot

basementwatchdog.com BWSP

discoverbattery.com discharge

discoverbattery.com temperature