



Do the Math!

It is recommended that every household store enough water to last for a 3.5 month summer dry season, or 105 days. The following guidelines will help you calculate your total water needs for this period. This information is based on Sanctuary Forest's **Water Storage Guide** and standard water usage estimates from the State Water Resources Control Board.

- Household water use: 55 gallons per day (gpd) per person
- Garden water use: 18.5 gpd per 100 square feet of garden
- Fire protection water reserve: 2500 gallons

Sample Storage Calculation for a 3-person household with a 1600 sq ft garden:



Household Water Need

(Aug 1—Nov 15) = 17,325
(105 days x 3 people x 55 gpd)



Garden Water Need

(Aug 1—Oct 15): 22,496 gallons (based on 76 days x 1600 sq ft x 18.5 gpd per 100 sq ft; this assumes that households will stop irrigating their gardens after October 15, which is recommended)



Fire Protection = 2,500 gallons

Total Household Storage Need = 42,321 gallons for 3.5 months

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Quick Guide to Watershed Technical Consultants

In this time of extended drought, it is more important than ever to be informed about Best Management Practices, water rights compliance, water conservation, and site-specific design for water conservation projects.

This brochure is designed to give an overview of technical consultants working in Humboldt County who specialize in fish-friendly spring management, water rights consultation, engineering, permaculture design, greywater systems, and water conservation savings.



Guide to Watershed Technical Consultants

Madrone Enterprises

Contact Name: Sungnome Madrone
Website: www.madroneenterprises.com
Phone: (707) 677-0431
E-mail: sungnome@madroneenterprises.com

Summary of Services: A full range of watershed services with an emphasis on spring tap development and improvements, general watershed erosion and land management considerations, and road-related erosion control and redesign to protect water tables and supplies. Over 40 years experience in north coast watersheds, with a M.S. Degree in Watershed Management and Hydrology from Humboldt State University.

Cost of Services: \$80 per hour

Kyle Keegan, Permaculture Designer

Phone: (707) 943-1504
E-mail: owlsperch@asis.com

Summary of Services: Integrated design of orchard, animal and food production systems; erosion control, water harvesting and groundwater recharge strategies; oak woodland, grassland, forest and stream restoration.

Cost of Services: \$40 per hour consultation, Minimum \$100 site visit cost

Hollie Hall & Associates

Contact Name: Hollie Hall
Website: www.holliehall.com
Phone: (707) 502-4870
E-mail: holliehall@gmail.com

Summary of Services: Providing rural water users with the information and assistance needed to legalize water diversion, use and storage activities. Confidential and personalized services include: Free phone consultation to identify the appropriate permitting processes and conservation practices for you; Site assessment of water rights and regulatory compliance issues; Full service permit processing related to water diversion, use and storage; Liaison to field agency questions related to your permits; and Review and consultations of water rights permits you have filled out yourself.

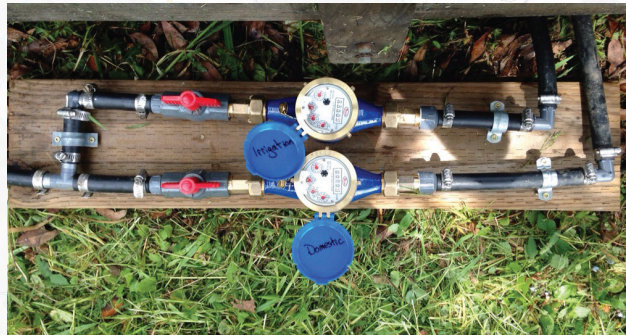
Cost of Services: Varies.

High Tide Permaculture

Contact Name: Dan Mar
Website: www.hightidepermaculture.com
Phone: (707) 633-5403
E-mail: hightidepermaculture@gmail.com

Summary of Services: On-site technical assistance related to water conservation and pollution prevention with a focus on agency regulations, permits and best management practices. Specializing in rainwater catchment and harvesting systems, integrated land-management plans and watershed restoration.

Cost of Services: Varies.



Manhard Consulting

Contact Name: Praj White
Website: www.manhard.com
Phone: (707) 444-3800 ext 7446
E-mail: california@manhard.com

Summary of Services: The team at Manhard Consulting can provide development and permitting services to rural agricultural, restoration, residential and commercial projects. We offer property assessment; planning, zoning, and land use assistance; water rights assistance; permit violation processing and retro-active processing; permitting assistance, including California Department of Fish and Wildlife, Water Quality Control Board Permits, CALFire permits, building code compliance permits, U.S. Army Corps of Engineers permits, county and city use permits, California Environmental Quality Act (CEQA); environmental compliance assistance; site grading and erosion control; water storage design and permitting; building and facility design; structural engineering and construction management.

Cost of Services: Varies.

Pacific Watershed Associates (PWA)

Contact Name: Kathy Moley
Website: www.pacificwatershed.com
Phone: (707) 839-5130
E-mail: kathym@pacificwatershed.com

Summary of Services: PWA has a 26 year track record of working with rural landowners, conducting watershed restoration and land development projects focused on water quality, salmon habitat protection and cost effective design and development of forest and ranch properties. PWA is a full service, one-stop environmental firm specializing in regenerative agriculture design, water resource procurement, storage and permitting, pond design, road design and upgrades, civil engineering, septic design, and a wide range of environmental permitting assistance for all your development needs. PWA is here to help you achieve your land development goals while restoring the environment for future generations to enjoy.

Cost of Services: Variable but cost-effective, depending on landowner needs

LandWater Consulting

Contact Name: Noah Levy
Phone: (707) 499-4788
E-mail: noah@landwaterconsulting.com

Summary of Services: Legal, technical, and permit-related assistance designed to help landowners and water users comply with diversion, storage, and other requirements. Emphasis on helping landowners develop appropriate conservation practices that balance their water and land-use needs with ecological protections, including seeking grants and other incentives to offset costs.

Cost of Services: Varies. Free comprehensive initial phone consultation.

