



## Case Study: Boat Pressure Wash Runoff Filtration

### **User Data:**

Empire Marina Drummoyne  
Mr. John Lawler  
308 Victoria Place Drummoyne  
2047 NSW Australia  
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### **Problem:**

At the time John contacted Encyclon, he had just been hit with a fine for uncontrolled runoff. He investigated several filtration systems, but none of them fit his budget. Another concern of the other systems investigated was the use of costly filter parts or filter media; cyclonic filtration requires no filter media. This marina is a mid-sized operation that washes less than 200 hulls per year, and they were facing the elimination of this service. (Due to cost) Empire Marina also had a 50Hz electric requirement, since the Encyclon filter is available in gas or electric we are able to easily modify our pump to fit any power requirements.

### **Solution:**

Our solution was to use an Encyclon Model #651-SP-E-A self-prime filter unit to recycle the wash pad runoff and reuse it for pressure washing. The #651-SP-E-A uses a single 20 gallon per minute type 65 cyclonic cone to purify and remove particulate contaminants down to 5 microns or .00019 inches. The cone has a 98% efficacy rating, however since the water is recycled hundreds of times the 98% efficacy is multiplied endlessly.

### **Follow-up:**

- ❑ The recycle system solved compliance issues and eliminated costly fines
- ❑ The elimination of fines and retained wash business allowed for a quick return on the initial investment

- The savings in water usage is estimated at 1 ½ gallons per foot of waterline.
- As other marinas continue to eliminate the service of hull washing, Empire is poised to gain new customers and continue to sell other value added services associated with boat haul-outs.
- Since the filter cleans the water and places the debris into a wheeled container, the process of shoveling a settlement tank is gone. This results in a labor savings.
- Mr. Lawler (Marina Manager) had the following to say; ***“Can’t recommend the system highly enough for it’s simplicity, reliability or performance.”***

### **Cost Analysis:**

At the time this system was purchased, our complete #651-SP-E was priced at \$4,400. Due to the special electrical requirements of this location the cost for Empire was \$6,473.00, FOB Kenosha Wisconsin.

Here is a breakdown on the capital investment:

Cost: **\$6,473.00**

Estimated Lifespan: **15 years**

Estimated maintenance costs over lifespan **\$500.00**

Total Cost per year: **\$464.86** (6973 / 15)

Average cost in US per foot to was a 32' boat: **\$2.50**

Number of boats required to wash to obtain annual cost (break-even point): **6**

Assuming 300 boats washed per year, average length of 32 foot, amount required to add **per foot** to recover cost over lifetime: **\$.048 (4.8 cents)**

(Although there is a savings in water usage, there is also an increase in electrical usage –It’s a “wash”)

For More Information Contact:

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