

An aerial photograph of the Port of Milwaukee. The image shows a large industrial complex situated along the Milwaukee River and Lake Michigan. The complex includes numerous large white storage tanks, several large industrial buildings, and a network of railroads. A long bridge or causeway extends from the city into the water. In the background, the city skyline of Milwaukee is visible, including several tall buildings. The water of Lake Michigan is on the right side of the image.

# CIC Update

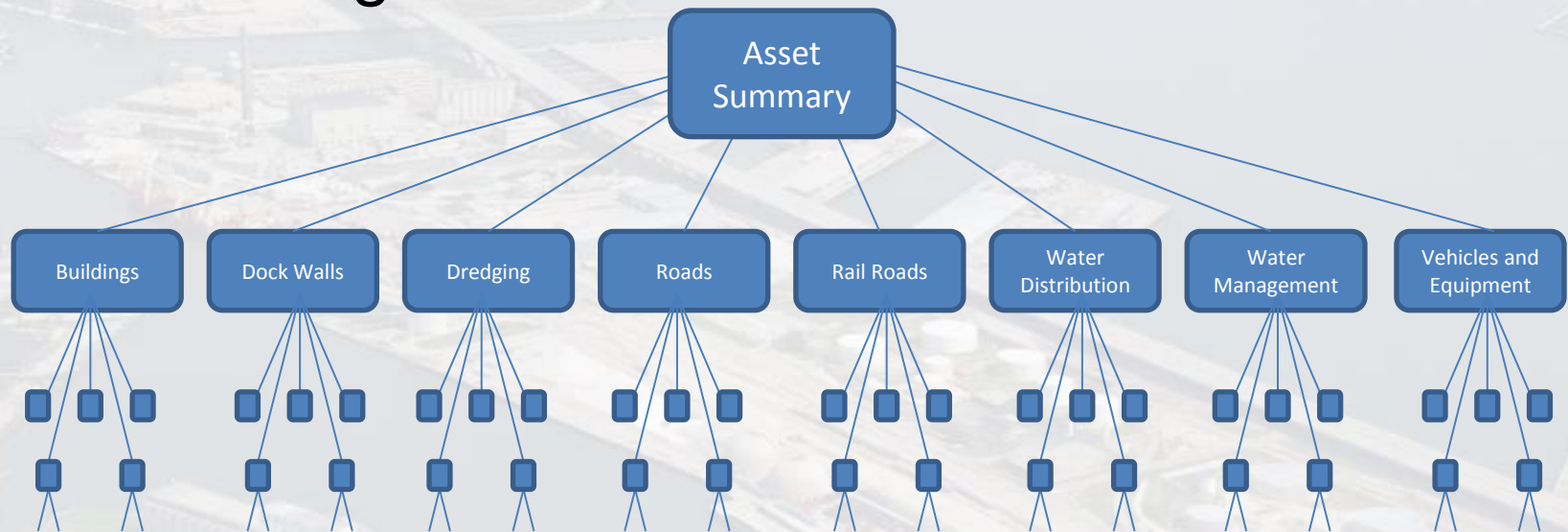
# 2014-2019 Cap. CapEx Request



|  | 2014               | 2015               | 2016               | 2017               | 2018               | 2019               | 2020                |
|--|--------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------------|
| Pier, Berth, and Channel Improvements  | \$200,000          | \$200,000          | \$200,000          | \$200,000          | \$200,000          | \$200,000          | \$1,200,000         |
| *****Grant & Aid*****                  | \$800,000          | \$800,000          | \$800,000          | \$800,000          | \$800,000          | \$800,000          | \$4,800,000         |
| Terminal Resurfacing                   |                    | \$250,000          |                    |                    | \$100,000          |                    | \$350,000           |
| Rail Track & Service Upgrades          | \$500,000          | \$500,000          | \$500,000          |                    |                    |                    | \$1,500,000         |
| Dockwall & Breakwater Rehabilitation   | \$150,000          | \$150,000          | \$150,000          | \$150,000          | \$150,000          | \$150,000          | \$900,000           |
| Port Facilities Systems                | \$100,000          |                    | \$100,000          |                    | \$100,000          |                    | \$300,000           |
| Analyze and Upgrade Sewer System       | \$150,000          | \$150,000          | \$150,000          | \$150,000          | \$150,000          | \$150,000          | \$900,000           |
| Roadway Paving/Service Lanes           |                    |                    | \$100,000          |                    |                    |                    | \$100,000           |
| Demolish & Rehab Facilities            |                    | \$100,000          |                    |                    |                    |                    | \$100,000           |
| Port Security                          | \$50,000           | \$100,000          | \$100,000          | \$100,000          | \$100,000          | \$100,000          | \$550,000           |
| New Crane                              | \$4,000,000        |                    |                    |                    |                    |                    | \$4,000,000         |
| City Heavy Lift Dock                   |                    | \$520,000          |                    |                    |                    |                    | \$520,000           |
| *****Grant & Aid*****                  |                    | \$2,080,000        |                    |                    |                    |                    | \$2,080,000         |
| Energy Initiatives                     |                    |                    | \$100,000          |                    | \$100,000          |                    | \$200,000           |
| Rehab Electrical Svc. So. Harbor Tract |                    | \$100,000          |                    |                    |                    |                    | \$100,000           |
| Secured Ferry Terminal Parking         |                    |                    |                    |                    |                    | \$100,000          | \$100,000           |
| Harbor Maintenance Dredging            | \$50,000           |                    |                    |                    | \$150,000          |                    | \$200,000           |
| *****Grant & Aid*****                  |                    |                    |                    |                    |                    |                    | \$0                 |
| Transload Facility                     |                    |                    |                    | \$350,000          |                    |                    | \$350,000           |
| *****Grant & Aid*****                  |                    |                    |                    | \$1,400,000        |                    |                    | \$1,400,000         |
| <b>Total Cost</b>                      | <b>\$6,000,000</b> | <b>\$4,950,000</b> | <b>\$2,200,000</b> | <b>\$3,150,000</b> | <b>\$1,850,000</b> | <b>\$1,500,000</b> | <b>\$19,650,000</b> |
| <b>Total Grant/Aid</b>                 | <b>\$800,000</b>   | <b>\$2,880,000</b> | <b>\$800,000</b>   | <b>\$2,200,000</b> | <b>\$800,000</b>   | <b>\$800,000</b>   | <b>\$8,280,000</b>  |
| <b>Total City Funding</b>              | <b>\$5,200,000</b> | <b>\$2,070,000</b> | <b>\$1,400,000</b> | <b>\$950,000</b>   | <b>\$1,050,000</b> | <b>\$700,000</b>   | <b>\$11,370,000</b> |

# Project Analysis

Expanded organizational network developed for asset monitoring:

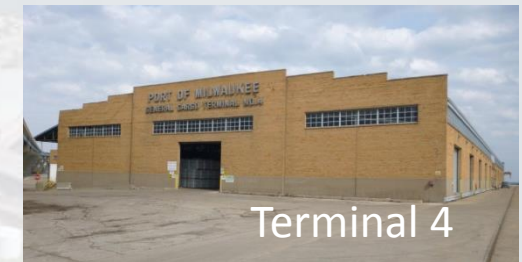


|                     |   |   |   |   |   |   |   |   |
|---------------------|---|---|---|---|---|---|---|---|
| Component Inventory | X | X | X | X | X | X | X | X |
| Budgetary Estimates |   | X |   | X |   | X | X | X |



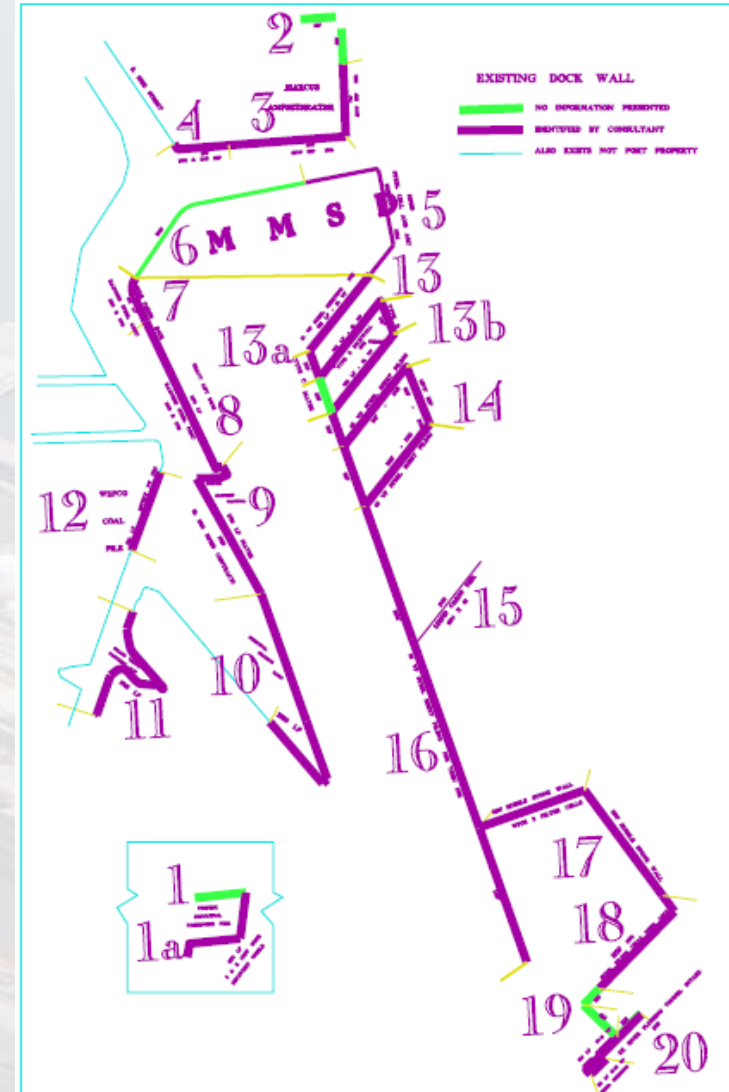
# Buildings

| Building                          | SF             | CRV         | Age |
|-----------------------------------|----------------|-------------|-----|
| x Advanced Boiler & Tank Building | 24,500         | \$2,368,966 | 63  |
| x Bradford Building #1            | 15,000         | \$711,175   | 18  |
| x Bradford Building #2            | 15,000         | \$711,175   | 18  |
| x Coil Warehouse Building         | 50,000         | \$2,241,350 | 15  |
| x Dock Office Building            | 9,692          | \$995,714   | 61  |
| x Ferry Terminal Building         | 7,200          | \$1,695,260 | 9   |
| x General Cargo Terminal #2       | 51,638         | \$2,523,866 | 46  |
| x General Cargo Terminal #3       | 78,711         | \$4,692,445 | 52  |
| x General Cargo Terminal #3A      | 10,000         | \$507,475   | 48  |
| x General Cargo Terminal #4       | 78,711         | \$4,692,445 | 52  |
| x General Cargo Terminal #4A      | 29,000         | \$1,339,793 | 43  |
| Gillen                            | Newly Acquired |             |     |
| x IMC Salt Office                 | 2,016          | \$208,296   | 113 |
| x Milwaukee Bulk Terminal         | 15,546         | \$1,247,502 | 113 |
| x North American Salt Company     | 8,208          | \$712,026   | 58  |
| Port Administration Building      | 12,830         | \$2,256,795 | 21  |
| Port Maintenance Building         | 4,000          | \$272,253   | 13  |
| x Sea Scout Building #1           | 753            | \$25,012    | 56  |
| x Sea Scout Building #2           | 1,920          | \$47,831    | 51  |
| x Seaman's Club Building          | 570            | \$75,534    | 63  |
| x Spraypainting/Sandblasting Shed | 4,000          | \$213,681   | 113 |
| Total                             | 419,295        | 27,538,594  | 49  |



# Dock Walls

- 20 dock wall sections
- 36,303 linear feet
- Various ages
- Need condition assessment
- Average replacement cost
  - US Army Corp of Eng.



# Dock Walls



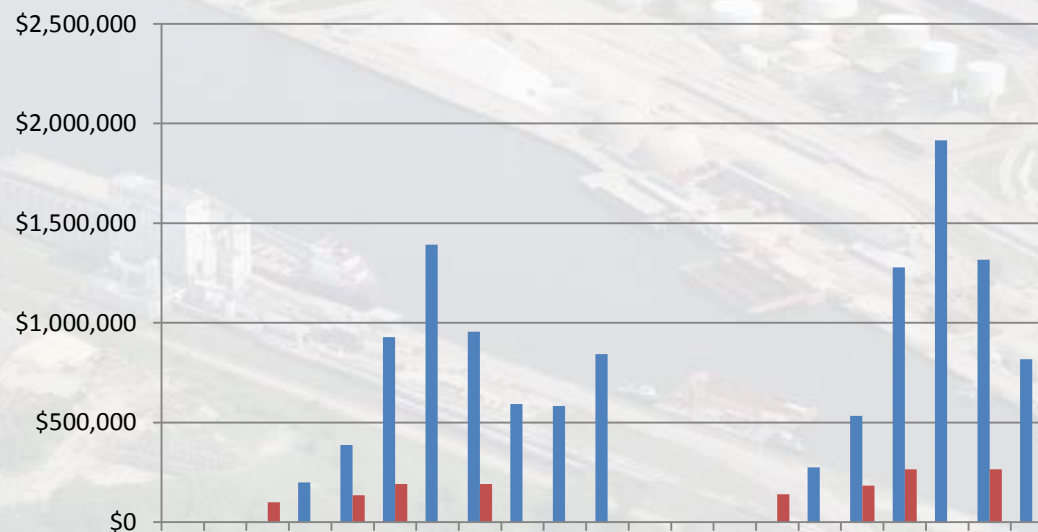
| Wall Number      | Wall Name                           | Age                                | Linear Feet   | Age |
|------------------|-------------------------------------|------------------------------------|---------------|-----|
| 1                | Former Muni Passenger Pier          |                                    | 570           |     |
| 1a               | Discovery World                     | Newer                              | 1,000         |     |
| 2                | Summerfest Grounds                  |                                    | 700           |     |
| 3                | Marcus Amphitheater                 | 1956                               | 1,860         | 50  |
| 4                | E. Erie Street                      | 1934, 1949                         | 397           |     |
| 5                | MMSD Expansion                      | 1984                               | 1,860         |     |
| 6                | MMSD Original                       | 1931?                              | 2,050         | 48? |
| 7                | Bulk Cargo Dock                     | 1980, 1990                         | 465           |     |
| 8                | Heavy Lift Dock                     | 1919, 1922, 1938, 1948, 1958, 2010 | 1,670         |     |
| 9                | Former Carferry Terminal            | 1929, 2010                         | 1,700         |     |
| 10               | Muni Mooring Basin                  | 1917, 1932, 1947, 1959             | 2,800         |     |
| 11               | Former Grand Trunk Slip             |                                    | 1,950         |     |
| 12               | Greenfield Ave Dock (WEPCO)         | 1984 and??                         | 826           | 60  |
| 13               | Pier 1 and Slip 1                   | 1932                               | 2,891         | 56  |
| 13a              | West end of Slip 1                  | 1932                               | 295           | 56  |
| 13b              | East end of Pier 1                  | 1932                               | 347           | 56  |
| 14               | Pier 2                              | 1958                               | 2,609         | 63  |
| 15               | Liquid Cargo Pier                   | 1950                               | 1,054         |     |
| 16               | Majority of E'ly Port Property      | 1932, 1938                         | 5,733         | 50  |
| 17               | N. & E. Sides of Dredging Fill Area | 1975                               | 2,350         |     |
| 18               | Lake Express Ferry Dock             | 1975                               | 1,125         |     |
| 19               | Area N. of E. Russell Ave           | 1938 ?                             | 1,040         |     |
| 20               | K.k. River Flushing Tunnel Intake   | 1939                               | 1,011         | 29  |
| <b>Abandoned</b> |                                     | <b>Total</b>                       | <b>36,303</b> |     |
| 6a               | Under MMSD Expansion                | 1931                               | 990*          | 48  |



# Dock Walls

- Preliminary strategy
  - Plan routine inspections every 12 years
  - Budget for replacement of up to five percent of walls every 12 years

**Inspection and Repairs  
Dock Walls**



# Dredging

- Bathymetric survey (topography of river/lake/Port bed)
  - Including environmental analysis





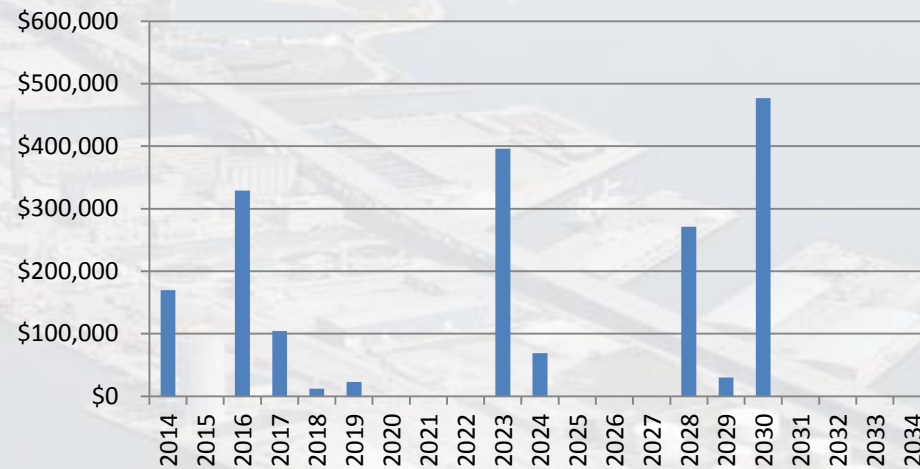
# Roads



|  | Quantity      | Units     | 2014 Unit Cost | 2014 Capital Cost | 20 Year Total Cost | UL | RUL | First Year Funds Requested |
|--|---------------|-----------|----------------|-------------------|--------------------|----|-----|----------------------------|
| <b>Asphalt Roads</b>                   |               |           |                |                   |                    |    |     |                            |
| Car Ferry Drive, Partial Replacement   | 2,870         | SY        | \$36.00        | \$103,320         | \$103,000          | 20 | 0   | 2014                       |
| Fire Lane, Phased Replacement          | 300           | SY        | \$36.00        | \$10,800          | \$28,000           | 20 | 4   | 2018                       |
| Harbor Drive (South), Pavement Overlay | 2,665         | SY        | \$36.00        | \$95,940          | \$104,000          | 20 | 3   | 2017                       |
| Harbor Service Road, Pavement Overlay  | 4,881         | SY        | \$36.00        | \$175,720         | \$255,000          | 20 | 14  | 2028                       |
| Michigan Street, Pavement Overlay      | 1,470         | SY        | \$36.00        | \$52,920          | \$69,000           | 20 | 10  | 2024                       |
| Service Drive                          | 1,853         | SY        | \$36.00        | \$66,720          | \$67,000           | 20 | 0   | 2014                       |
| Terminal #1, Phased Replacement        | 7,316         | SY        | \$36.00        | \$263,387         | \$1,016,000        | 20 | 2   | 2016                       |
| <b>Total</b>                           | <b>21,356</b> | <b>SY</b> |                |                   |                    |    |     |                            |
| <b>Concrete Pavement</b>               |               |           |                |                   |                    |    |     |                            |
| High-Wide Load Route, Partial          | 2,500         | SF        | \$8.00         | \$20,000          | \$53,000           | 50 | 5   | 2019                       |
| Terminal #1, Partial Replacement       | 6,000         | SF        | \$8.00         | \$48,000          | \$186,000          | 50 | 2   | 2016                       |
| <b>Total</b>                           | <b>8,500</b>  | <b>SF</b> |                |                   |                    |    |     |                            |
| <b>Total 20 Year Cost</b>              |               |           |                |                   | <b>\$1,881,000</b> |    |     |                            |

# Roads

## Roads



# Water Distribution

- 30,675 linear feet of mains
  - Cast Iron and Ductile Iron

| Age    | Sections | LF     | Useful Life  | CRV                |
|--------|----------|--------|--------------|--------------------|
| 67-140 | 8        | 4,931  | 150          | \$1,134,130        |
| 49-67  | 19       | 18,466 | 75           | \$4,056,740        |
| 39-48  | 6        | 5,275  | 85           | \$1,213,250        |
| 0-39   | 4        | 2,003  | 100          | \$460,690          |
|        |          |        | <b>Total</b> | <b>\$6,864,810</b> |



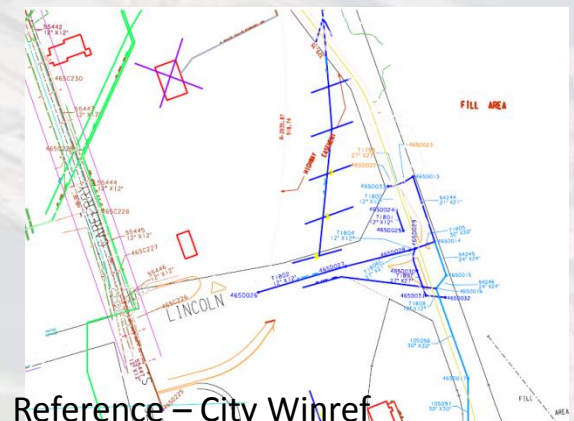
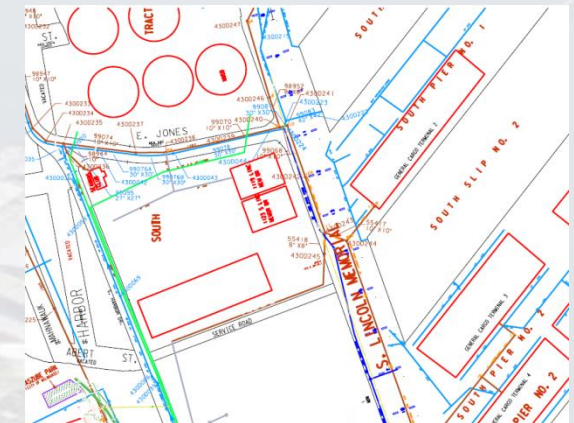
Reference – City Winref



# Sewers

- Four owners:
  - Port, Private, MMSD, State

| Sanitary Mains           |       | LF     | COSTS        |
|--------------------------|-------|--------|--------------|
| Port (Harbor Commission) |       | 17,070 | \$3,840,750  |
| MMSD                     |       | 13,355 | \$5,411,250  |
| Private                  |       | 6,045  | \$1,360,125  |
|                          | Total | 36,470 |              |
| Storm Mains              |       |        | COSTS        |
| Port (Harbor Commission) |       | 13,555 | \$4,142,250  |
| MMSD                     |       | 3,410  | \$1,647,250  |
| Private                  |       | 3,125  | \$726,375    |
| State of Wisconsin       |       | 9,130  | \$2,245,500  |
|                          | Total | 29,220 |              |
| Grand Total              |       | 65,690 | \$19,373,500 |



Reference – City Winref

# Vehicles and Equipment

## Heavy Lifting Equipment

|   |   |    |
|---|---|----|
| Crane 9 Replacement (1952)                          | 1 | EA |
| Crane 9, Rehabilitation                             | 1 | EA |
| Crane 15, Stiff Leg, Theillaker, Replacement (1969) | 1 | EA |
| Crane 15, Stiff Leg, Theillaker, Rehabilitation     | 1 | EA |
| Crane 16, Lima Crawler Replacement (1971)           | 1 | EA |
| Crane 16, Lima Crawler, Rehabilitation              | 1 | EA |
| Crane 17, P&H Crawler, Replacement (1979)           | 1 | EA |
| Crane 17, P&H Crawler, Rehabilitation               | 1 | EA |
| Crane 18, Bucyrus Truck, Replacement(1980)          | 1 | EA |
| Crane 18, Bucyrus Truck, Rehabilitation             | 1 | EA |
| Crane 19, Manitowoc, Replacement (1992)             | 1 | EA |
| Crane 19, Manitowoc, Rehabilitation (1992)          | 1 | EA |



## Material Handling Equipment

|                                |   |    |
|--------------------------------|---|----|
| Fork Lift 58000lb (1995)       | 2 | EA |
| Fork Lift, Kalmar LMV (1996)   | 2 | EA |
| Rebuild Forklift (Heavy)       | 4 | EA |
| Forklift Light (2003)          | 1 | EA |
| HI-LIFT Terex TA64-DFJ (2006)  | 1 | EA |
| Tractor (1986)                 | 1 | EA |
| Tractor (2009)                 | 1 | EA |
| Skid Steer, New Holland (2009) | 1 | EA |



# Vehicles and Equipment

## Trucks

|                        |   |    |
|------------------------|---|----|
| Dodge Dump 2007        | 1 | EA |
| Rebuild Engine         | 1 | EA |
| Pickup 4X4 8600lb 1996 | 1 | EA |
| GMC 1999               | 1 | EA |
| Ford 2000              | 1 | EA |
| Truck and Van 2003     | 1 | EA |
| GMC Sierra Pickup 2009 | 1 | EA |
| Dodge Caravan 2010     | 1 | EA |



## Cars

|                 |   |    |
|-----------------|---|----|
| Ford Focus 2007 | 1 | EA |
|-----------------|---|----|

## Marine Vessels

|                |   |    |
|----------------|---|----|
| Harbor Seagull | 1 | EA |
| Refurbish Tug  | 1 | EA |
| Joey D         | 1 | EA |



# Project Analysis

## Remaining Step:

- Refine the inventory of assets in each category
- Continue development of budgetary estimates/report documents
- Continue to update existing files

