



**SOUTHERN NEVADA WATER AUTHORITY**

100 City Parkway, Suite 700 • Las Vegas, NV 89106  
MAILING ADDRESS: PO Box 99956 • Las Vegas, NV 89193-9956  
(702) 862-3400 • snwa.com

**October 14, 2009**

**Penny Woods, Project Manager  
Nevada Groundwater Projects  
Bureau of Land Management  
1340 Financial Blvd  
PO Box 12000  
Reno, NV 89520-0006**

**Dear Penny:**

**SUBJECT: UPDATED ESTIMATED PROJECT CONSTRUCTION COSTS, CLARK  
LINCOLN AND WHITE PINE COUNTIES GROUNDWATER  
DEVELOPMENT PROJECT (N-78803)**

Attached is an updated construction cost estimate for the Southern Nevada Water Authority's (SNWA) Clark, Lincoln and White Pine Counties Groundwater Development Project. This cost estimate addresses all of the facilities identified in the December 2008 Conceptual Plan of Development. It has been developed by SNWA using best available information on recent historical costs for similar project components, for use by the Bureau of Land Management and AECOM as part of the environmental impact analysis for the Groundwater Project.

If you have any questions about this information, please contact Lisa Luptowitz at (702) 862-3789.

Sincerely,

**Kenneth A. Albright, P.E.  
Director, Groundwater Resources**

**KAA:LL:df**

**Attachment**

**c: Scott Ellis, AECOM  
Lisa Luptowitz, Senior Environmental Planner, SNWA**

**SNWA MEMBER AGENCIES**

Big Bend Water District • Boulder City • Clark County Water Reclamation District • City of Henderson • City of Las Vegas • City of North Las Vegas • Las Vegas Valley Water District

**Estimated Project Construction Costs**  
**Clark Lincoln and White Pine Counties Groundwater Development Project**  
**(Based on December 2008 Plan of Development)**

| Facilities                                   | Size                 | Quantity  | Average Unit Cost<br>(\$ Millions / Quantity) | Cost<br>(\$ Millions) |
|--|----------------------|-----------|---|-----------------------|
| <b>Proposed Facilities</b>                   |                      |           |   |                       |
| Lateral Pipelines                            | 18 - 54 inches       | 103 miles | \$ 2.51                                       | \$ 259                |
| Main Pipelines                               | 52 - 84 inches       | 203 miles | \$ 5.73                                       | \$ 1,163              |
| Pumping Stations                             | 2,500 - 13,750 HP    | 5         | \$ 16.4                                       | \$ 82                 |
| Pressure Reducing Stations                   |                      | 3         | \$ 3.67                                       | \$ 11                 |
| Regulating Tanks                             | 3 - 10 MG            | 6         | \$ 5.33                                       | \$ 32                 |
| Storage Reservoir                            | 40 MG                | 1         | \$ 21   | \$ 21                 |
| Rate of Flow Control Stations <sup>(1)</sup> | 5 - 134 MGD          | 8         | \$ 5.25                                       | \$ 42                 |
| Water Treatment Facility                     | 150 MGD              | 1         | \$ 4  | \$ 4                  |
| Electrical Substations <sup>(2)</sup>        | 230 / 69 / 25 / 4 kV | 12        | \$ 3.67                                       | \$ 44                 |
| Power Lines                                  | 230 / 69 / 25 kV     | 323 miles | \$ 0.68                                       | \$ 220                |
| Access Roads <sup>(3)</sup>                  | 12 - 26 ft wide      | 305 miles | \$ 0.43                                       | \$ 132                |
| <b>Proposed Facilities Construction Cost</b> |                      |           |   | <b>\$ 2,010</b>       |

|   |                |           |         |               |
|---|----------------|-----------|---------|---------------|
| <b>Future Facilities</b>                    |                |           |         |               |
| Groundwater Production Wells <sup>(4)</sup> |                | 120       | \$ 1.4  | \$ 168        |
| Collector Pipelines <sup>(4)</sup>          | 10 - 30 inches | 180 miles | \$ 1.22 | \$ 220        |
| Pumping Stations                            | 400 HP         | 2         | \$ 3.5  | \$ 7          |
| Pressure Reducing Stations (Hydropower)     |                | 3         | \$ 2.67 | \$ 8          |
| Electrical Substations <sup>(2)</sup>       | 25 kV          | 2         | \$ 2    | \$ 4          |
| Power Lines <sup>(4)</sup>                  | 25 kV          | 180 miles | \$ 0.35 | \$ 63         |
| <b>Future Facilities Construction Cost</b>  |                |           |         | <b>\$ 470</b> |

|   |                 |
|---|-----------------|
| <b>Construction Cost</b>                                | <b>\$ 2,480</b> |
| <b>Program Administration <sup>(5)</sup></b>            | <b>\$ 744</b>   |
| <b>Total</b>  | <b>\$ 3,224</b> |
| <b>Approximate Capital Cost Estimate <sup>(6)</sup></b> | <b>\$ 3,200</b> |

**Notes:**

1. Located at each regulating tank, one at Storage Reservoir and one at existing SNWA facility at terminus.
2. Includes facility electrical substation at each pumping station.
3. Excludes unimproved roads.
4. Number of facilities is an estimated average.
5. Program Administration and Construction Monitoring, which is 30% of construction cost. Includes administration, planning, design, right-of-way, land acquisition, regulatory compliance, species monitoring, land restoration etc.
6. Approximate estimated cost in July 2007 dollars, rounded to nearest \$100 million. Cost does not include contingency, which is typically 30% of construction cost in planning phases.
7. HP = Horse Power, MG = Million Gallons, MGD = Million Gallons per Day, kV = kilo Volts

October 14, 2009