

## **CHAPTER 3. Budget**

### **3.1 Mobile Irrigation Lab Personnel**

The costs associated with hiring and paying MIL members will vary, depending on factors such as the number of members in the MIL, type of MIL, MIL location, and qualifications (see chapter 2) of the MIL members. All of these factors should be considered when preparing a budget regarding the personnel expenses associated with an MIL.

The number of members in an MIL typically depends on the type of MIL. An urban MIL typically requires only one member (who is generally referred to as the MIL team leader; see chapter 2), since most or all of the evaluations are done for private residences with lots no larger than 0.25 acres each. An agricultural MIL requires at least two members (who are generally referred to as an MIL team leader and an MIL team member; see chapter 2), since most or all of the evaluations are done on farms with irrigation systems that typically cover hundreds if not thousands of acres. For cases where evaluations will only be performed on nurseries, an Agricultural MIL will only require one member.

The salaries and benefits of each of the MIL members should be commensurate with their qualifications (see chapter 2), and with the cost of living associated with the geographical area in which the MIL is going to operate. Table 3 is an example of the fiscal year 2009 personnel cost ranges for an Agricultural MIL.

Because of all of the above-referenced factors and how their associated costs can vary with time, purpose and location, it is not possible to include exact costs associated with MIL personnel in this handbook. Instead, anyone interested in new/proposed MIL is encouraged to contact other existing MILs (of the same type as the new/proposed MIL) closest to the area where a new MIL is being proposed, or MILs that have been recently started, to use their personnel budgets as a “starting point” to generate the new/proposed MIL personnel budget.

### **3.2 Equipment**

In order to be operational, each MIL needs to include capital costs associated with the initial purchase of equipment such as, a computer, printer, copier, general Microsoft Office software, office space, and/or a vehicle.

Tables 2a and 2b below have a list of field equipment necessary for the evaluation of most microirrigation systems (microjet and drip), sprinkler systems and subirrigation systems by an Agricultural MIL. This equipment will allow the measurement of flow, pressure, discharge rates and application rates for most systems. Costs can vary year to year and are only estimates. Based on the items listed in Tables 2a and 2b, the estimated total cost of equipment for the startup of one MIL is \$10,457. In addition to the items listed in Tables 2a and 2b, all MIL personnel should have accessories including but not limited to, rubber boots, a rain suit, and safety goggles.

The estimated total cost for startup equipment for one Urban MIL is \$1,057, since such an MIL will not need a portable flow meter or flumes. Table 3 has an example of of fiscal year 2009 range of costs to maintain all equipment on a yearly basis for an Agricultural MIL.

**Table 2a – Basic Equipment for Evaluating Agricultural Microirrigation, and Sprinkler Systems**

<b>Item</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Portable Flow Meter for PVC or Steel Pipes	1	\$7,000	\$7,000
3/4" diameter PE tubing	1 foot	--	--
1" diameter PE tubing	1 foot	--	--
6" diameter PVC pipe SDR 26 (casing	5 feet	\$4.00	\$20.00
Band clamp pincers	1	\$13.00	\$13.00
Band clamps, 1"	20	\$0.20	\$4.00
Calculator	1	\$10.00	\$10.00
Carpenter's level (12")	1	\$4.00	\$4.00
Channel lock pliers (10")	1	\$10.00	\$10.00
Clip board (metal with storage)	1	\$20.00	\$20.00
Fiberglass tape measure (50')	1	\$22.00	\$22.00
Crescent wrench (8")	1	\$12.00	\$12.00
Duct tape	4	\$5.00	\$20.00
Flat file	1	\$6.00	\$6.00
Flow meter (25 gpm) 3/4 " diameter inlet/outlet	3	\$40.00	\$120.00
Funnel (4")	1	\$1.00	\$1.00
Garden trowel	1	\$7.00	\$7.00
Goof plugs (3/16")	1 box	\$2.00	\$2.00
Graduated cylinder, plastic (1000 ml)	1	\$14.00	\$14.00
Graduated cylinder, plastic (100 ml)	1	\$7.00	\$7.00
Hammer, claw	1	\$9.00	\$9.00
Hand level	1	\$4.00	\$4.00
Keyhole saw (10")	1	\$8.00	\$8.00
Knife, utility pocket	1	\$7.00	\$7.00
Micrometer, stainless steel reads inside/outside/depth; reads to 0.001" (1/128)	1	\$36.00	\$36.00
Needle-nose pliers	1	\$15.00	\$15.00
Paper towels	10	\$0.50	\$5.00
Permanent marker	1	\$2.00	\$2.00
Pipe wrench (10")	1	\$20.00	\$20.00
Post hole diggers	1	\$30.00	\$30.00
Pressure gauges (liquid filled)-			
0-15 psi	3	\$21.00	\$63.00
0-30 psi	3	\$21.00	\$63.00
0-60 psi	3	\$21.00	\$63.00
0-100 psi	3	\$21.00	\$63.00
PVC cement	1	\$4.00	\$4.00
Rubber bands – 100	100	\$2.00	\$2.00
Rubber fuel line (1/4" diameter x 12")	1	\$1.00	\$1.00
Screwdriver set (2 slot & 2 Philips)	1	\$15.00	\$15.00
Shovel	1	\$13.00	\$13.00

**Table 2a – Basic Equipment for Evaluating Agricultural Microirrigation, and Sprinkler Systems**

<b>Item</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Soils auger	1	\$50.00	\$50.00
Steel tape measure (25')	1	\$10.00	\$10.00
Stopwatch	2	\$17.00	\$34.00
Survey flags	1 bundle (50)	\$6.00	\$6.00
Tally meter (for counting trees)	1	\$11.00	\$11.00
Tensiometer insertion tool - 36"	1	\$49.00	\$49.00
Tensiometer service kit	1	\$61.00	\$61.00
Tool box (8" x 8" x 16")	2	\$20.00	\$40.00
1/32" - 1/4" drill bits	1 set	\$10.00	\$10.00
1/4" dowels - eight inch pieces	50	\$0.10	\$5.00
Gallon jug	1	\$0.00	\$0.00
Large plastic containers 4" diameter quart (catch cans)	50	\$0.40	\$20.00
Pitot tube x 1/4" fpt	2	\$4.00	\$8.00
Wind speed indicator	1	\$14.00	\$14.00
PE tubing cutter	1	\$12.00	\$12.00
1" fpt x 1" insert adapter	1	\$1.00	\$1.00
1" mpt x 1" insert adapter	1	\$0.20	\$0.20
1" mpt x 1" mpt coupling	1	\$1.70	\$1.70
1" fpt x 1" fpt coupling	1	\$1.50	\$1.50
3/4" fpt x 1" mpt reducing bushing	1	\$0.40	\$0.40
3/4" fpt x 3/4" fpt coupling	1	\$1.10	\$1.10
3/4" fpt x 3/4" insert adapter	1	\$3.00	\$3.00
3/4" mpt x 3/4" insert coupling	1	\$0.20	\$0.20
3/4" mpt x 3/4" mpt coupling	1	\$0.30	\$0.30
1/2" fpt x 10-32 fpt thread adapter	1	\$0.30	\$0.30
1/2" fpt x 1/2" fpt coupling	1	\$0.10	\$0.10
1/2" fpt x 1/2" insert	1	\$0.80	\$0.80
1/2" fpt x 3/4" mpt reducing bushing	1	\$0.30	\$0.30
1/2" mpt x 1/2" insert	1	\$0.20	\$0.20
1/2" mpt x 1/2" mpt lock sleeve drip tube coupling	1	\$0.30	\$0.30
1/2" mpt x 1/2" mpt coupling	1	\$0.10	\$0.10
1/4" fpt x 1/2" mpt reducing bushing	1	\$0.50	\$0.50
1/4" fpt x 1/4" fpt brass coupling	1	\$2.00	\$2.00
1/4" fpt x 3/4" mpt reducing bushing	1	\$0.30	\$0.30
1/4" mpt x 1/4" insert brass	1	\$2.00	\$2.00
3/16" barb x 10-32 m thread coupler	1	\$0.20	\$0.20
3/16" barb x 3/16" barb x 3/16" barb tee	1	\$0.20	\$0.20
3/16" f barbed x 3/16" fpt barbed coupler	1	\$0.20	\$0.20
10-32 m threaded coupler 10-32 m	1	\$0.40	\$0.40
Note: Pipe Fittings: fpt = female pipe thread; mpt = male pipe thread		<b>Total</b>	<b>\$8,057.00</b>

**Table 2b – Equipment needed to measure tailwater in Agricultural Subirrigation systems:**

<b>Item</b>	<b>Quantity</b>	<b>Unit Cost</b>	<b>Total Cost</b>
Flume (large 60 degree with float well)	3	\$800.00	\$2400.00
4” diameter PVC slotted/perforated pipe – 6 ft tall	as-needed	varies	varies
Soil Moisture Measurement Devices	as-needed	varies	varies

The type of vehicle needed will depend on the type of MIL. Urban MILs will generally need a pickup truck with two wheel drive capabilities (or equivalent), while agricultural MILs will need a pickup truck with four wheel drive capabilities, since they will most likely be traveling on farms with dirt roads. An exception to that may be agricultural MILs that will be serving only nurseries; nursery roads are typically well maintained, allowing two wheel drive pickup trucks to be used. Based on the above, the new/proposed MIL will need to include the cost of purchasing or leasing their applicable pickup truck in their budget. Associated annual costs such as automobile insurance, maintenance and operation (fuel) costs will also need to be included. Once the necessary type of vehicle is determined, appropriate written quotes regarding the cost to purchase or lease the vehicle and automobile insurance, will need to be obtained in support of the budget being prepared. Table 3 shows an example of the fiscal year 2009 range to lease a vehicle for an Agricultural MILs.

### **3.3 Training and Education**

As part of the MIL’s employee development plan, annual cost for applicable training, workshops, etc. should be calculated and submitted as part of their annual budget. Table 3 shows an example of fiscal year 2009 range of training and evaluation costs for an Agricultural MILs.

### **3.4 Administrative Costs**

Typically, MILs share office space with a Federal or County office such as NRCS or county government. Often, that office space is provided as an in-kind service to the MIL. A new/proposed MIL is encouraged to contact such Federal or County agencies, to inquire if such in-kind services are available to them. Based on the discussion, the new/proposed MIL may or may not need to include the rental fee of office space in their budget. A similar discussion should occur regarding the use of a computer, printer, copier, and other associated office supplies.

Contractors generally charge an administrative fee for managing contracts associated with an MIL. Most of the contractors that FDACS works with are Soil and Water Conservation Districts or Resource Conservation and Development Councils. Such contractors charge an additional 5% of the total contract cost, for administration of the MIL contract. The new/proposed MIL is encouraged to identify the appropriate administrative cost for their MIL, and include it in their budget. Table 3 shows an example of fiscal year 2009 range of administrative costs for an Agricultural MILs.

### 3.5 Audits

Most state government agencies that receive income of \$50,000 or more are subject to audits. The majority of current MILs are contracted through Soil and Water Conservation Districts or Resource Conservation and Development Councils, which fall into this category. Table 3 shows an example of fiscal year 2009 range of audit costs for an Agricultural MILs.

**Table 3 - Example of Fiscal Year 2009 Operational Cost Ranges for an Agricultural MIL\***

<b>COST CATEGORY</b>	<b>12 MONTH COST RANGE</b>	
<b><i>Personnel</i></b>		
Mobile Lab Team Leader	\$38,000	- \$54,000
Mobile Lab Technician	\$26,000	- \$31,000
Benefits, Unemployment, Social Security	\$13,000	- \$26,000
<b><i>Total Personnel Costs</i></b>	<b>\$64,000</b>	<b>- \$106,000</b>
<b><i>Personnel Training</i></b>		
Technical Training	\$400	- \$1,000
<b><i>Total Staff Training</i></b>	<b>\$400</b>	<b>- \$1,000</b>
<b><i>Equipment</i></b>		
MIL Lab Equipment Replacement/Maintenance	\$400	- \$1,000
Vehicle Lease	In-Kind	- \$6,800
Vehicle Oper and Maint (fuel & service)	In-Kind	- \$4,000
Vehicle Insurance	In-Kind	- \$2,600
<b><i>Total Equipment Costs</i></b>	<b>\$400</b>	<b>- \$14,400</b>
<b><i>Miscellaneous</i></b>		
Quarterly meetings and travel	\$400	- \$2,500
Computer IT and Maintenance	In-Kind	- \$1,600
<b><i>Total Miscellaneous</i></b>	<b>\$400</b>	<b>- \$2,500</b>
<b><i>Administration Costs</i></b>		
Share of Secretarial Services	In-Kind	- \$26,000
Share of Office Space & Utilities	In-Kind	- \$2,400
Share of Office Supplies	In-Kind	- \$2,600
Share of Office/Mobile Telephone Services	In-Kind	- \$2,500
Share of Accounting/Audit Services	\$1,200	- \$5,800
MIL Contract Administration Fee	\$3,400	- \$6,800
<b><i>Total Administration Costs</i></b>	<b>\$6,000</b>	<b>- \$39,400</b>
<b><i>TOTALS:</i></b>	<b>\$72,100</b>	<b>- \$146,700</b>

\* One or two person Agricultural MIL. See also Section 3.2, for Capital costs associated with starting an MIL.