



Developing a Cash Flow Plan

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A cash flow plan is a recorded projection of the amount and timing of all cash inflows and cash outflows expected to occur throughout the planning period. Larger farms, substitution of capital assets for labor, and inflation increase the amount of cash required to operate the farm or ranch and make the cash flow plan an increasingly valuable tool in farm financial management. The cash flow plan:

- establishes target levels for income and expenses, which can be used in monitoring progress towards goals
- points out potential problems in meeting financial obligations
- indicates when cash is available for new investments

Although the cash flow plan is important in farm management, it is most effective when used with the balance sheet (OSU Fact Sheet F-752) and income statement (OSU Fact Sheet F-753). These three statements, supported by good farm records, form the core of financial decision making information. Financial planning involves projecting the consequences and results of possible actions, using the financial statements, and then analyzing the projected results. Thus, the potential effect of actions and decisions can be analyzed prior to their implementation and the financial requirements can be evaluated in advance. Comparing budgeted flows with those that actually occur is a useful management technique for monitoring performance.

The Cash Flow Plan

A Cash Flow Statement form is provided with this fact sheet. The form may be used to **document actual cash flows or to develop a projected cash flow plan**. The cash flow may include only business cash flows or both business and personal cash inflows and outflows. Operations with multiple ownership (partnerships, corporations) likely will use the business option, while sole proprietors are more likely to use the form as a consolidated statement. The user may designate at the top of the form which type of cash flow is being developed.

For a monthly cash flow plan, the columns can be used to denote the 12 months of the year. Alternatively, columns can be used to denote bi-monthly, quarterly, or semiannual periods. The first column can serve as a record of the previous year's total for each line. Or, it may be used to enter estimated prices, quantities, or other information pertaining to individual cash inflow or outflow estimates.

The rows correspond to individual cash inflow and outflow items. Additional rows provide space for determining the

projected cash position, borrowing, operating loan payments, and the accumulated loan balance for each period of the year. Sums of each cash inflow and outflow item (rows) for the year are listed in the Totals column. Thus, the values in this column represent the projected annual sources (inflows) and uses (outflows) of cash. The Totals column is also useful as a check column for possible mistakes in the entries for each period.

Steps in Estimating Cash Flow

A cash flow projection should be prepared when farm plans for the coming year are being developed. A good time to plan and prepare the cash flow estimate is at the beginning of the accounting period. For many farm and ranch firms, this will be at the first of the year when information is summarized for income tax returns. For others, it may be during the planning period prior to planting crops, purchasing cattle, or seeking a loan.

Last year's actual entries from hand records, tax forms, or checkbook registers are useful in projecting the cash flow for the coming year. Some record keeping systems provide a complete cash flow summary of the previous year.¹ Another source of information is last year's projections, if available. If a cash flow has not previously been completed, or if major changes in the operation are planned, relying on previous estimates may not be adequate. Crop and livestock budgets also provide input for projecting cash flows. The budgeting procedure can be adjusted from last year's actual figures according to changes in cattle numbers, crop acreage, and expected costs and prices.

Once records and other available information such as enterprise budgets and a farm organization plan for the coming year are gathered, you are ready to begin entering data in the cash flow form. A good starting point is to complete last year's actual column (the first column). This will serve as a check for reasonableness in estimates for the coming year. Rows 1 to 57 may be completed several ways:

1. Estimates of the totals may be entered in the Totals column and then prorated to the periods of expected flow.
2. Entries may be made directly in the appropriate column for each period and summed across to get Totals.

¹ See OSU Extension Facts F-302 for more detailed information about farm record systems available to Oklahoma farmers.

Often, a combination of the two approaches is used. Each section of the Cash Flow Form will be discussed below using an example Oklahoma farm, the Jack and Julie London case. The discussion and illustration will focus on line items on a section-by-section basis.

Cash Inflows

Cash Received from Operations

In this section, total cash receipts are estimated for items sold during the period. Whether the inflows are from sale of inventory or from current production makes no difference. Only cash transactions are reflected in the cash flow. Lines 1 through 6 document expected cash receipts from Livestock Sales (except breeding livestock, which is a capital asset sale), Sales of Livestock Purchased for Resale, Livestock Product Sales, and Crop Sales. Unused lines can be customized to separate receipts by enterprise. In the example, Jack London plans to sell calves from the cow-calf enterprise in March with expected cash income of \$31,064. This figure is entered on line 1.

Cash receipts from stockers, feeders, and any other livestock purchased to be resold are recorded on line 3. For cash flow planning, it is not essential to separate receipts for livestock purchased for resale from other cash receipts (after all, cash is cash). But, most record systems and the income tax schedules require separate entries for sales as well as purchases of livestock to be resold. To better conform to these sources of information, the livestock purchased for resale and raised livestock sales are listed on separate lines for both receipts and expenses in the OSU Cash Flow form. Stockers purchased last October are expected to be sold in March and May and are entered as Sales of Livestock Purchased for Resale (line 3). Estimated March receipts are \$88,494 (before trucking and commissions) and for May are \$33,149.

Cash receipts from crop sales are handled similarly to livestock. Make entries to reflect the marketing plan or estimated marketing each period. For example, if all wheat will be sold at harvest, enter the total for projected wheat sales in the column for the harvest month. Although the marketing plan may change, careful estimates are better in the long run than no plans or estimates at all. Finally, if share-rent arrangements are used for crops or livestock, only the cash portion of the producer's share of sales is included on the cash flow. Although Jack London has some wheat and hay storage, most crop sales occur at harvest. Wheat sales are expected to generate \$59,077 (line 5) in July and milo sales \$18,038 in October (line 6).

Estimated Government Payments (line 7) should be based on anticipated participation in government programs and expected payments for participation. Crop insurance indemnity payments might also be included. Line 8 provides space to estimate cash inflows from Other Farm Income. Receipts from custom work, cash rental of farm business property, and miscellaneous receipts should be included. Jack London does custom work for neighbors and expects to receive \$3,840 in May; \$7,420 in June and July; and \$2,480 in August and September. Patronage Dividends are entered on line 9. Line 10 is used to sum cash operating inflows.

Note: The designated lines of the cash flow statement may not provide sufficient space for the detail needed. For

instance, you may want to keep three crop enterprises on separate lines on the cash flow. These enterprises can be accommodated on lines 8 or 9 or on unused livestock lines. Similar minor changes can be made throughout the cash flow to fit specific needs.

Cash Received from Capital Sales

Cash receipts from the sale of breeding livestock, machinery, equipment, vehicles, real estate and buildings, and nonfarm capital assets are entered in lines 11 through 14. While not all capital sales can be projected in advance, breeding livestock and machinery should be reviewed to anticipate cull cow sales or changes in machinery and equipment that involve cash. Cash sales of any breeding livestock, whether purchased or raised, should be included. For machinery and equipment, record expected cash sales only. Trade transactions do not normally generate cash. In our example, Jack London expects to sell eight cows from the herd and replace them with raised heifers. Cash generated from the sale of culled cows is anticipated to be \$877 in March and \$2,633 in October; a cull bull is projected to bring \$960 in April.

Other Cash Received

Lines 15 to 17 represent nonfarm cash receipts that will be available for use in the farm or ranch business during the coming year. These include nonfarm income; sales of marketable securities; investment income; sale of personal assets/retirement account withdrawals; capital contributions; gifts and inheritances. Nonfarm income may include expected wages and salaries from off-farm work (operator and spouse) plus income from a nonfarm business. Income from the sale of marketable securities, interest and dividends from investments, and royalty payments are combined on the next line. Past experiences are useful in estimating nonfarm receipts. Julie London works off-farm and earns \$726 per month. The Londons receive \$378 per month in royalty income and \$250 in income from rental property for a total of \$628 per month in cash generated by investments.

Total Cash Inflows

Total Cash Inflows (other than new borrowing), line 18, is derived by summing lines 10 through 17. The number in the Totals column (\$307,757 in the example) should equal the sum across periods for line 18 as well as the sum of the totals in lines 10 through 17.

Cash Outflows

Projecting expenditures is generally easier than projecting revenues. Operating expense figures can come from many sources. The previous year's cash expenditures serve as a good starting point. If an actual past cash flow statement is not available, hand records, year-end summaries of computerized records, or tax forms from prior years are useful. The cash flow form is designed to be compatible with IRS Schedule 1040 F, farm record handbooks, and computerized record systems. While the order of line items may differ slightly, you will find each of these sources of information corresponds well with items listed on the form.

For some expenses, adjustments may be needed to reflect changes in the farm plan and expected prices. For other expenses, simply inflating or deflating the previous period's

actual expenditures by an appropriate factor may adequately estimate upcoming expenditures. Use your judgment in applying one or both methods to develop good estimates of anticipated cash outflows. A cash flow plan helps the operator avoid potential cash management problems as well as prepare for possible opportunities as they occur. Jack and Julie, for instance, expect to draw on a line of credit in February, October, November, and January due to cash shortfalls. They must have enough cash in savings to cover the shortfall or must arrange to have additional financing available.

Cash Paid for Operating Expenses

Operating expenses refer to those cash expenses incurred for the period to period operation of the business. If Car/Truck expenses are combined for tax purposes, line 19 may be used to sum the expenses for upkeep of vehicles used in the business (gas, oil, repairs, license tags, insurance, etc.). Alternatively, gas, fuel, oil, repairs, taxes and insurance can be summed with other like items in lines 25, 26, 29, and 33, as Jack London does.

The amount and timing of *Chemicals* (line 20) used will depend on crops grown, pests, disease, weather, and costs of treatment. If the crop and pest management plan is not expected to change significantly, use last year's figures as a guide for this year's cash flow plan. The Londons use chemicals in May and July for weed control in milo.

For line 21, *Custom Hire* (machine work), generate a total expenditure estimate based on the planned crop acreage and predicted or contracted cost per acre. (Note: If crop receipts in line 5 or 6 were listed net of costs of custom work, do not include the deducted costs here as they would be double counted.) These costs may be prorated to months of expenditure. Jack London has an extensive machinery and equipment complement and does not custom hire any work.

Feed expenditures (line 22) will greatly depend upon livestock enterprise plans and feed inventories. Major expenditures may be calculated on an estimated need and expected price basis. If major changes are planned in the livestock operations, the cost of expected requirements should be budgeted based on the new plan. This method is more complicated than the simple inflation mark-up, but also is more accurate. Jack London plans to stay with about the same plan used last year. Thus a major portion of the feed expense will be incurred the first month the stockers are purchased in October. For the other months, last year's feed expenditures are adjusted upward to reflect expected cost increases.

Fertilizers, Lime (line 23) and *Seeds, Plants* (line 30) expenditures depend on planting intentions, soil tests, and input prices. If little change in varieties, planting rates, and application rates is planned, adjusting for acreage and predicted price differences is adequate. On the other hand, major changes require more explicit budgeting. If part or all of the expenses are shared in a rental arrangement, only cash expenditures for this business, not the total cost, should be included in the cash outflows. In the example, the seed is paid for at the time it is delivered for planting. If early purchases are made or late payment is planned, entries should be made accordingly. Jack London's cash outlay for fertilizer, lime, and chemicals occurs primarily during the application months of September and February for wheat and May for grain sorghum.

Freight, Trucking (line 24) depends primarily on how much and when crops and livestock are marketed. For example,

Jack London pays trucking costs for stockers purchased in October. Often only the charges for cattle show up in line 24. Crop hauling costs are included in the Custom Hire (line 21) because they occur as part of the harvest. The timing of freight and trucking expenditures should correspond to the marketing plans for those enterprises. If hauling is not custom hired, most of the cash expenses will appear on other lines such as gas, fuel, oil, labor hired, and repairs.

Projecting *Gas, Fuel, Oil* costs (line 25) for the upcoming year may be quite a task. It may be easiest to take the costs from each period of last year and make a blanket adjustment estimate, based on expected changes in the production plan and input prices. For Jack London, 108 percent of last year's outlays served as an estimate for the coming period. If per acre fuel, oil, and lubricant cost accounts are kept, more accurate estimates may be made by multiplying acres of crops to be planted times estimated costs per acre.

Insurance (line 26) and *Taxes* (line 33) are straight forward. Taxes may include car licenses, state or local sales taxes, state and federal income taxes, federal use taxes, and self-employment taxes for the farm. The previous year's figures are a useful guide for the present year's plan.

Labor Hired (line 27) should include cash wages as well as cash expenditures for employee benefits and employer contributions to employee social security. Jack London expects to need part-time help March through October.

Rents, Leases (line 28) are rather predictable. Cash renting of crop land, pasture, and buildings will comprise the major expenses. Annual, quarterly, or monthly cash payments are entered in the appropriate month(s).

Line 29 allows for estimation of *Repairs, Maintenance* expenses (those not capitalized) in the coming period. The effect of major items on last period's actual repair cost should be considered in anticipating major outlays in the period ahead. For routine repairs, simply increasing or decreasing the previous year's figure based on expected price changes estimates outlays. Based on previous experience, Jack London expects most machinery repair to occur from wheat harvest through planting. While some minor machinery and equipment repair is forecast throughout the year, typically most breakdowns and equipment preparation occur in this period.

Repairs to buildings and fences are less obvious. If major building repairs are planned, the estimated cost should be entered for the appropriate period. Estimates of minor building repair and maintenance should be based on those experienced in the last few years. Since no major repairs are anticipated by Jack London, last period's expenditures were simply increased by 10 percent and prorated throughout the year.

Careful consideration of the entire crop program including expected quantities, the marketing schedule, and on-farm storage availability will serve as the basis for deciding on the cash expenses for *Storage, Warehousing* (line 31). Estimated crop size and cost of storage per unit should be easy to get. The greatest uncertainty may stem from the length of time the crops will remain in storage. Make your best estimate based on previous experience and the marketing plan at the time a cash flow budget is developed. Jack London plans to sell crops at harvest or use on-farm storage so no storage and warehousing costs are shown.

Supplies (line 32) are likely to be less predictable than some other expenses. Last year's figures should be a rea-

CASH FLOW

Business
Consolidated
Personal



Actual
Projected



Covering the period: 2/1/2003 through 1/31/2004

		Last Year	Feb.	March	April	May	June
CASH RECEIVED FROM OPERATIONS							
1	Livestock Sales: a. calves	27,959		31,064			
2	b.						
3	c. Purchased for resale	109,479		88,494		33,149	
4	Livestock Product Sales						
5	Crop Sales: a. wheat	53,189					
6	b. milo	16,234					
7	Government Payments	12,309		5,309	1,585		
8	Other Farm Income	23,840				3,840	7,420
9		18,912					
10	TOTAL CASH RECEIVED FROM OPERATIONS (Sum 1 thru 9)	261,702	0	124,869	1,585	36,989	7,420
CASH RECEIVED FROM CAPITAL SALES							
11	Breeding Livestock Sales	4,471		877	960		
12	Machinery, Equipment, Vehicles				19,500		
13	Real Estate, Buildings						
14	Non-Farm Property						
OTHER CASH RECEIVED							
15	Wages and Salaries	8,276	726	726	726	726	726
16	Investment Income	7,536	628	628	628	628	628
17							
18	TOTAL CASH INFLOWS (Sum 10 thru 17)	281,985	1,354	127,098	23,399	38,343	8,774
CASH PAID FOR OPERATING EXPENSES							
19	Car, Truck						
20	Chemicals					624	
21	Custom Hire						
22	Feed	4,832	49				
23	Fertilizer, Lime	15,871	6,242			3,741	
24	Freight, Trucking	960					
25	Gas, Fuel, Oil	7,511	181	336	177	191	2,242
26	Insurance	3,462		466			
27	Labor Hired	7,129		337	160	176	2,577
28	Rents, Leases	7,703					
29	Repairs, Maintenance	7,634	201	513	116	140	2,479
30	Seeds, Plants	1,201				448	
31	Storage, Warehousing						
32	Supplies	437					
33	Taxes (Ad Valorem)	2,585		1,436			
34	Utilities	1,056	101	97	97	95	95
35	Veterinary, Breeding Fees, Medicine	2,591				527	
36	Miscellaneous	2,239	120	780			
37	Marketing Expense	2,540		1,829		662	
38	Miscellaneous (Accounts Payable)		1,824				
39	Livestock Purchased for Resale						
40	TOTAL CASH OPERATING EXPENSES (Sum 19 thru 39)	66,951	8,718	5,814	550	6,804	7,393
CASH PAID TO PURCHASE CAPITAL ASSETS							
41	Breeding Livestock						
42	Machinery, Equipment, Vehicles			87,999			
43	Real Estate, Buildings						
44	Non-Farm Property						
OTHER CASH PAYMENTS							
45	Cash Withdrawals for Family Living		1,875	1,875	1,875	1,875	1,875
46	Income & Social Security Taxes		10,000				
47	Dividend and Capital Distributions	1,200	100	100	100	100	100
SCHEDULED LOAN PAYMENTS							
48	Operating Notes -Interest	4,008		3,208			
49	-Principal	50,000	50,000		50,000		
50	Term Debt -Interest	18,256	257	293	2,450	2,478	239
51	-Principal	527	531	4,868	4,868	3,540	545
52	Non-Farm Debt -Interest	324	30	29	29	28	28
53	-Principal	857	69	70	70	71	71
54	TOTAL CASH OUTFLOWS (Sum 40 thru 53)	276,291	21,576	149,879	9,962	14,894	10,251
NEW BORROWING							
55	Operating Notes						
56	Term Debt			67,748			
57	Non-Farm Debt						
CASH FLOW SUMMARY							
58	Beginning Cash Balance		6,388	2,000	2,000	2,593	26,242
59	Inflows - Outflows (18 - 54)		(20,222)	(22,781)	13,437	23,649	(1,477)
60	Cash Position (Sum 55 thru 59)		(13,834)	46,968	15,437	26,242	24,765
61	New Borrowing, Line of Credit		15,834				
62	Interest Accrued, Line of Credit		1,107	1,621	117		
63	Line of Credit - Interest Payments			1,621	117		
64	Line of Credit - Principal Payments			43,347	12,727		
65	Ending Cash Balance (60 + 61 + 63 + 64)		6,388	2,000	2,593	26,242	24,765
OUTSTANDING LOAN BALANCES							
66	Line of Credit Principal = 40,240		56,074	12,727	0	0	0
67	Operating Notes Principal = 50,000		50,000	0	0	0	0
68	Term Debt Principal = 198,493		197,966	285,184	260,296	256,756	256,211
69	Non-Farm Debt Principal = 4,204		4,135	4,065	3,995	3,924	3,853
70	TOTAL OUTSTANDING LOANS (66 + 67 + 68 + 69)		308,175	281,976	264,291	260,680	260,064

STATEMENT

Name: Jack and Julie London
Date Prepared: 2/1/2004

	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.		Totals
								1	31,064
								2	0
								3	121,643
								4	0
								5	59,077
	59,077			18,083				6	18,038
				517		6,266		7	13,677
	7,420	2,480	2,480				400	8	23,640
							400	9	400
	66,497	2,480	2,480	18,555	0	6,266	400	10	267,539
				2,633				11	4,470
								12	19,500
								13	0
								14	0
								15	8,712
	726	726	726	726	726	726	726	16	7,536
	628	628	628	628	628	628	628	17	0
								18	307,757
	67,851	3,834	3,834	22,542	1,354	7,620	1,754	19	0
								20	821
	187							21	0
				2,245	417	417	417	22	3,545
			6,608					23	16,591
				400				24	400
				605	181	181	181	25	8,113
	1,856	756	1,226				1,402	26	3,847
	1,473		486					27	7,921
	1,837	1,232	1,169	433				28	8,559
		2,079	6,480					29	8,483
	1,782	844	1,174	651	201	201	201	30	1,334
		319	567					31	0
								32	486
	486					1,436		33	2,872
								34	1,174
	85	95	85	101	101	101	101	35	2,879
				2,352				36	2,488
				50	1,400	138		37	2,822
					331			38	1,824
								39	86,088
				86,088				40	160,247
	7,706	5,325	17,805	92,925	2,631	2,474	2,302	41	1,800
						1,800		42	87,999
								43	
								44	
								45	22,500
	1,875	1,875	1,875	1,875	1,875	1,875	1,875	46	10,000
								47	1,200
	100	100	100	100	100	100	100	48	3,208
								49	
								50	19,398
	234	8,340	226	2,194	2,310	212	207	51	26,283
	550	5,284	556	5,144	3,567	572	577	52	324
	27	27	26	26	25	25	24	53	864
	72	72	73	73	74	74	75	54	383,823
	10,564	21,023	20,663	102,337	10,582	7,132	5,180	55	25,000
				25,000				56	67,749
								57	
								58	
	24,785	82,052	64,863	48,034	2,000	2,000	2,000	59	(76,066)
	57,287	(17,189)	(16,829)	(79,795)	(9,228)	488	(3,406)	60	
	82,082	64,863	48,034	(6,761)	(7,228)	2,488	(1,406)	61	37,229
				8,761	9,228		3,406	62	
					80	245	183	63	1,983
						245	0	64	56,317
						243	0	65	
	82,062	64,863	48,034	2,000	2,000	2,000	2,000	66	
	0	0	0	8,761	17,880	17,746	21,152	67	
	0	0	0	25,000	25,000	25,000	25,000	68	
	255,561	250,377	249,819	244,675	241,108	240,536	239,858	69	
	3,781	3,709	3,636	3,563	3,489	3,415	3,340	70	
	259,442	254,086	253,455	281,999	287,586	286,697	288,451		

CASH FLOW

Business ☐
Consolidated ☐
Personal ☐

Actual ☐
Projected ☐

Covering the period: through

	Last Year	Feb.	March	April	May	June
CASH RECEIVED FROM OPERATIONS						
1 Livestock Sales: a.						
2 b.						
3 c.						
4 Livestock Product Sales						
5 Crop Sales: a.						
6 b.						
7 Government Payments						
8 Other Farm Income						
9						
10 TOTAL CASH RECEIVED FROM OPERATIONS (Sum 1 thru 9)						
CASH RECEIVED FROM CAPITAL SALES						
11 Breeding Livestock Sales						
12 Machinery, Equipment, Vehicles						
13 Real Estate, Buildings						
14 Non-Farm Property						
OTHER CASH RECEIVED						
15 Wages and Salaries						
16						
17						
18 TOTAL CASH INFLOWS (Sum 10 thru 17)						
CASH PAID FOR OPERATING EXPENSES						
19 Car, Truck						
20 Chemicals						
21 Custom Hire						
22 Feed						
23 Fertilizer, Lime						
24 Freight, Trucking						
25 Gas, Fuel, Oil						
26 Insurance						
27 Labor Hired						
28 Rents, Leases						
29 Repairs, Maintenance						
30 Seeds, Plants						
31 Storage, Warehousing						
32 Supplies						
33 Taxes (Ad Valorem)						
34 Utilities						
35 Veterinary, Breeding Fees, Medicine						
36 Miscellaneous						
37						
38						
39 Livestock Purchased for Resale						
40 TOTAL CASH OPERATING EXPENSES (Sum 19 thru 39)						
CASH PAID TO PURCHASE CAPITAL ASSETS						
41 Breeding Livestock						
42 Machinery, Equipment, Vehicles						
43 Real Estate, Buildings						
44 Non-Farm Property						
OTHER CASH PAYMENTS						
45 Cash Withdrawals for Family Living						
46 Income & Social Security Taxes						
47						
SCHEDULED LOAN PAYMENTS						
48 Operating Notes -Interest						
49 Principal						
50 Term Debt -Interest						
51 -Principal						
52 Non-Farm Debt -Interest						
53 -Principal						
54 TOTAL CASH OUTFLOWS (Sum 40 thru 53)						
NEW BORROWING						
55 Operating Notes						
56 Term Debt						
57 Non-Farm Debt						
CASH FLOW SUMMARY						
58 Beginning Cash Balance						
59 Inflows - Outflows (18 - 54)						
60 Cash Position (Sum 55 thru 59)						
61 New Borrowing, Line of Credit						
62 Interest Accrued, Line of Credit						
63 Line of Credit - Interest Payments						
64 Line of Credit - Principal Payments						
65 Ending Cash Balance (60 + 61 + 63 + 64)						
OUTSTANDING LOAN BALANCES						
66 Line of Credit						
67 Operating Notes						
68 Term Debt						
69 Non-Farm Debt						
70 TOTAL OUTSTANDING LOANS (66 + 67 + 68 + 69)						

STATEMENT

Name:
Date Prepared:

	July	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.		Totals
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sonable starting point. One way to avoid making inaccurate estimates is to use this line only for supplies rather than as a catch-all for every small expense item. Try to include most small items in other more descriptive lines. By limiting the sort of items typically included in Supplies, the estimate will be much improved. For Jack London, most of the planned supply costs are for baler twine.

Utilities (line 34) refers to the business portion of the expected utility bills. If this figure has been budgeted in the past, simply adjusting for expected changes in price and use is adequate. It is important to identify the business portion of the utility bill for tax purposes and to prevent double-counting in family living expenses. Since no major changes are planned in Jack London's operation, utilities were marked up 10 percent from last year and rounded to the nearest dollar.

Although *Veterinary, Breeding Fees, Medicine* (line 35) may vary from year to year, certain procedures like vaccinations, insect control, worming, and artificial insemination may be done each year and the projected costs will be based primarily on animal numbers and cost per unit. For less predictable veterinary and medicine expenses, an inflation adjusted typical or average from the past several years is useful.

Line 36 is for entries that do not fit on other lines, either because they are too small to warrant their own line or do not correspond well with any of the lines provided. Line 36 as well as any unused lines from 19 to 38 can be relabeled and used for a specific purpose. If you minimize the items included in the *Miscellaneous* line, analyzing the plan and presenting it to outsiders (e.g. lenders) will be less difficult. In the London case, *Miscellaneous* includes tax consulting fees, producer magazine subscriptions, and memberships in a farm organization and a cattlemen's association.

Because sales commissions are not subtracted from cattle sales, line 37 is used for *Marketing Expense* in the London example. Lines 37 and 38 are blank lines for expenses not previously listed. *Conservation* expenses may be entered on line 37 or 38 and include cash outlays for soil or water conservation or for the prevention of erosion (unless they are treated as capital expenses). Lines 37 and 38 could be used for expenses such as irrigation or unusual expenses such as a tractor overhaul. The Londons had two unusual expenses that were put on accounts payable to be paid off in February.

Line 40 is used to sum monthly requirements for cash operating expenses, lines 19 to 39.

Cash Paid for Items for Resale

Any livestock purchased for resale, such as stockers and feeder cattle, should appear on line 39, *Livestock Purchased for Resale*. Although it is difficult to predict these figures due to the uncertainties of prices, weights, numbers purchased, feed and pasture availability, and the timing of the purchase, the plan should be based on the best information available at the time.

Cash Paid to Purchase Capital Assets

Lines 41 to 43 are for cash outlays to acquire assets with a productive life typically longer than one year, e.g. breeding livestock, machinery, equipment, buildings, fences, land, and major repairs or improvements that depreciate. Entry for these items is straight forward. Simply enter whatever cash outlay is necessary for the appropriate periods of the year. In the London example, a used combine purchase is planned in

March for \$87,999 (line 42). The down payment of \$20,250 will come from this year's cash flow and the remaining \$67,749 will be recorded as new term debt (line 56).

Line 44 is used to record the purchase of nonfarm capital assets.

Other Cash Payments

Cash Withdrawals for Family Living (line 45) and Income and Social Security Taxes (line 46) are intended to be used by those completing a consolidated business and personal cash flow. If this is a business-only cash flow, these lines could be used to reflect salary withdrawals in a partnership. A corporation may want to separate out dividends and salary paid to officers or stockholders and enter these flows on line 47.

Cash Withdrawals for Family Living can be based on past cash withdrawals, adjusted for general increases in costs, and any major changes in expenditures (child starting college, major furniture or appliance purchases, non-typical medical expenses, etc.). The checkbook or farm records supply important information for this estimate. Jack London keeps a separate checking account for family expenditures, which makes estimation easier as well as more accurate. The Londons expect to use \$22,500 in cash during the upcoming year. Although the flows will not be the same every month, an average of \$1,875 per month was considered sufficiently accurate.

The ability to accurately predict Income and Social Security Taxes (line 46) likely will depend on the time of year the cash flow is completed. Because Jack London's cash flow estimates start in February, income and self employment tax estimates can be based on last year's income.

Line 47 will be used to enter dividends and capital distributions if the farm or ranch is incorporated and payments are made to stockholders or if cash generated by the farm will be channeled to an off-farm business.

Scheduled Loan Payments

Lines 48 to 53 list scheduled interest and principal payments on loans. In projecting these payments, the previous year's balance sheet, current loan schedules, or a liabilities schedule (OSU Extension Facts F-792) should be useful in determining balances of principal and interest due by the end of the year. Check your loan schedule to see if the interest portion of payments due is listed separately from principal payments. If other than annual payments are to be made, the amounts must be prorated to the proper periods. A loan schedule or a copy of the original note should indicate the exact amount and timing of the payments.

To estimate payments for this coming year on new term loans, review capital asset purchase plans and expense categories. If financing payments are expected on new loans for capital purchases, make the proper entry(s). A discussion with the lender and use of OSU F-792 "Liabilities Schedule," should increase the accuracy of this estimate.

Total Cash Outflow

Line 54 represents the Total Cash Outflow expected for each period. This line is calculated by adding lines 40 to 53 for each column. If you have been entering estimated year totals only (last column) for some outflows, you should prorate those totals among the months before calculating line 54.

This is a good point to check arithmetic. The sum of lines 19 to 39 in the Totals column should equal the sum across all periods for line 40. In the example, \$160,247 checks as the sum of each set of figures. To check Total Cash Outflow, add the Totals for lines 40 through 53 then compare this figure to the sum across periods for line 54. Both equal \$383,823 for Jack London.

New Borrowing

Lines 55 through 57 summarize money flowing into the operation from new loan obligations. New short term notes of less than one year are entered on line 55, new term debt is entered on line 56, and new nonfarm debt is entered in line 57.

Cash Flow Summary

The cash flow summary section is used to calculate expected line of credit borrowing (if any). The cash position at the end of the month (line 60) is equal to new borrowing plus the beginning cash balance plus monthly net cash flow (the sum of lines 55 to 59).

If the Cash Position is positive but less than the minimum desired ending cash balance, money must be borrowed to bring the Ending Cash Balance up to the minimum level. The amount borrowed is listed in line 61, New Borrowing: Line of Credit. If the Cash Position is positive and greater than the minimum desired cash balance, funds are available to apply to Line of Credit: Interest Payments (line 63) and Line of Credit: Principal Payments (line 64). At times, only enough cash to pay accrued interest and part of principal may be available. Before the amount of principal payment is determined, interest payable should be calculated. If there is no line of credit debt, excess funds are added to the cash balance.

For planning purposes, it may be assumed that all line-of-credit transactions are made at the end of each month. A running total of interest accrued to the line of credit is recorded on line 62. To calculate the interest accrued, multiply the previous month's balance (line 66) by the interest rate and divide by 12 to estimate the accrual in the current month. Add this amount to the interest accrual recorded in the previous month. The London's accrued interest is \$738 at the beginning of the fiscal year (line 62), the principal balance is \$40,240 (line 66), and the interest rate is 11 percent. An additional \$369 interest is accrued during February ($40,240 \times .11 / 12$). The February loan balance of \$56,074 accrues another \$514 interest for a total of \$1,621 at the end of March. Since the March cash position is positive \$46,968, the entire amount of accrued interest can be paid. Subtracting the interest payment and \$2,000 desired minimum balance from the cash position ($46,968 - 1,621 - 2,000$) leaves \$43,347 to be paid on the loan principal balance (line 64). Subtracting \$43,347 from the previous balance of \$56,074 leaves a new balance of \$12,727. The ending cash balance (line 65) is carried forward to the next month's beginning balance.

If the Cash Position is greater than the Line of Credit Balance (line 66) plus the minimum balance plus accrued interest, the Line of Credit Balance can be reduced to zero. Jack London's cash flow summary for April serves as an example. The Beginning Cash Balance is \$2,000 and Inflows-Outflows equals \$13,437 for a Cash Position of \$15,437. Thus, payment on the outstanding operating loan interest as well as principal can be made. First, interest due must again

be calculated. Operating interest was paid up-to-date at the end of March and an outstanding operating debt of \$12,727 remained. Therefore, the April interest payment calculation is based on interest accrued on the Line of Credit Balance during the month of April (line 66):

$$\$12,727 \times .11/12$$

The \$117 (rounded to the nearest dollar) interest payment is then entered on line 63. A total of \$15,320 (\$15,437 - \$117) now remains to pay off the Line of Credit of \$12,727 and meet minimum balance requirements. When the Line of Credit (line 66) is reduced to zero, an Ending Cash Balance (line 65) of \$2,593 (\$15,437 - \$117 - \$12,727) remains. This figure is carried forward as the Beginning Cash Balance (line 58) in May.

When the Cash Position is at least as large as the minimum desired balance, the negative Inflows - Outflows are simply covered from the Beginning Cash Balance. No new borrowing occurs and the difference is the Ending Cash Balance. This situation occurs in the example in June, August, and September. When the Beginning Cash Balance is greater than the minimum desired but not enough to offset a negative Inflows - Outflows, additional capital must be borrowed. Thus, for the Londons in October, New Borrowing: Line of Credit equals the required Ending Cash Balance plus the cash shortfall measured by the Cash Position:

New Borrowing:

$$\text{Line of Credit} = \$2,000 + \$6,761 = \$8,761$$

To complete the cash flow summary, begin at the first period and repeat the calculations for each successive period. The Ending Cash Balance from one period becomes next period's Beginning Cash Balance.

Debt Outstanding

When principal payments are made for notes and term debt (lines 49, 51, and 53) or line of credit loans (line 64), the debt outstanding at the end of the period is reduced by that amount. In the Jack London example, principal payments of \$208 for non-real estate notes and \$319 for real estate notes (\$527 total) are made on term debt in February. Similar principal payments are made in March, but new term debt is also added when the combine is purchased. Thus, term debt outstanding at the end of March equals: \$197,966 (line 68, February) - \$531 (line 51, March) + \$67,749 (line 56, March) = \$265,184 (line 68, March).

Uses of Cash Flow Plan

Projecting the cash flow establishes a plan for the coming year. The farm business operator knows which months borrowing or withdrawal from savings will be necessary and when loan payments or new investments can be made. The cash flow plan provides information needed to establish a loan or line of credit with the lender. If no major operational changes are planned, the lender may expect that the operating loan will be completely paid off at some point during the year. While operations with several enterprises that have overlapping seasonal financing requirements may never completely pay off an operating loan, the projection should indicate the

ability for one enterprise's marketing to substantially reduce the financing attributable to that enterprise.

Projecting the cash flow may point out potential liquidity problems. Liquidity refers to the ability of the business to meet its financial obligations as they come due. One indicator of liquidity from the completed cash flow plan is the Line of Credit balance (line 66). A comparison of the operating loan balance at the beginning and the end of the projection period may also signal potential problems. If the cash flow projection indicates that the operator cannot pay all operating expenses, previous debt commitments, taxes, and family living expenses without an increase in the ending operating loan balance, then liquidity problems exist. The operator should consider, and the lender may suggest, changes in the production plan, reductions in family living expenses, delaying a planned machinery purchase, or refinancing existing debt to reduce the liquidity problem.² Jack London's cash flow projects the ability to reduce the operating loan to zero for several months from April until financing is required for stockers in October.

Projecting the cash flow can also indicate when cash is available for investment purposes. It helps analyze the feasibility of capital purchases and major changes in the farm or ranch operation. Although cash is certainly not the only aspect of investment analysis, it is extremely important in today's business world. One may wish to project cash flows for several years when considering a substantial capital outlay, such as a land purchase.

As capital requirements increase, more farm investments and operating inputs are being financed with borrowed funds. Increases in the level of debt add to risk for both the operator and the lending institution. Thus, it is important that both the farmer or rancher and the lender know when outstanding debts can be paid and the amount of additional debt that the farm or ranch business can support. By projecting the flow of cash in and out of the business, the farm operator can estimate when and how much annual operating debt will be required, make provisions for its repayment, and determine the business' loan repayment capacity for longer term debt obligations. Finally, the lender can determine how much credit the borrower needs

month by month during the year and when the borrower plans to make payments on the operating loan.

Cash flow information is especially useful when the debt repayment schedule is being negotiated at the time a loan is made. For example, if Jack London were using the projected cash flow to establish fixed repayment dates with the lender (rather than the line of credit arrangement portrayed in the example), payments ought to be scheduled in March in conjunction with cattle sales and in July with wheat sales. Each individual should review the cash flow plan with the lender to establish the best timing for repayment. Also, the manager should discuss with the lender the possibility of modifying repayment dates if, as the year progresses, changes occur in expected prices or market readiness of livestock and crops.

Care should be taken in projecting inflows, particularly when they rely on uncertain yields and prices. The ultimate success of cash flow planning depends upon the accuracy of the information and the effort that goes into it. Cash flow planning helps avoid cash flow crises.

Computerized Farm Financial Statements

Estimating costs and returns for each farm enterprise and making the calculations necessary to summarize the cash flows take a considerable amount of time. An OSU spreadsheet program, "Integrated Farm Financial Statements (IFFS)," facilitates calculation of farm enterprise cash flows as well as balance sheets and income statements. The computer program utilizes data from farm enterprise cost and return budgets, and additional information from input forms completed by the farm or ranch operator. For additional information, contact the Department of Agricultural Economics, Room 515 Agricultural Hall, Oklahoma State University, Stillwater, Oklahoma 74078-6026 or Cooperative Extension area agricultural economics specialists.

² See OSU Fact Sheet F-208 "Farmers in Transition: Evaluating Options for Change" for additional suggestions.