A Village Fish Processing Plant: Yes or No?

Can I get workers?
Can I get power and water and waste disposal?
Can I get a good manager?
Are there markets for my product?
Can I get enough fish?
Can I make enough money?

A Planning Handbook

Prepared by
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University of Alaska Anchorage
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People in many Alaska villages are interested in starting fish processing plants. A fish processing plant can provide markets for fishermen, processing jobs and income for village residents, and many other benefits. But starting and operating a village fish processing plant is not easy, and fish processing plants may not work in every village.

This handbook is to help you get started in planning a fish processing plant in your village. It can help you think clearly about whether or not you should start a fish processing plant. It provides step-by-step advice about questions you need to ask and decisions you need to make.

As part of this handbook, we have included case studies of experiences some western Alaska villages have had with fish processing plants. These may give you ideas of things to do—and things to avoid—when you are thinking about a fish processing plant for your village.
Handbook Summary A Village Fish Processing Plant: Yes or No?

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People in many Alaska villages are interested in starting fish processing plants. Every year, the Economic Development Administration (EDA) in Alaska receives requests from villages for help in building and equipping small processing plants. A fish processing plant can provide markets for fishermen, processing jobs and income for village residents, and many other benefits. But starting and operating a fish processing plant is not easy, and fish processing plants may not work in every village. The EDA sponsored this planning handbook to help you decide whether a fish processing plant could work in your village.

Here we summarize some of the main points you need to think about in planning a fish processing plant. The rest of this handbook provides many more details. Most of what we do in this summary and in the handbook is ask you questions. We also explain why having answers to these questions is important and suggest ways of finding out what you need to know.

A good way to start thinking about whether a fish processing plant makes sense in your village is to ask yourself some “reality check” questions—for instance, whether you can get enough fish for a processing plant. If you can answer “yes” to these basic reality check questions, then a fish plant could work in your village. But if you can’t answer yes to every question, it would probably be difficult for a fish processing plant to succeed in your village.

After you consider the reality check questions, then you can move on to the “planning step” questions. These ask you to think about many different things involved in starting and running a fish plant—such as what products you will produce, what markets you will sell to, and what kinds of building and equipment you will need. If you answer these planning step questions, you’ll have much of the information you need to apply for a loan or grant to build a fish plant.

The biggest question is whether you can earn enough money to stay in business. Doing a financial analysis can help you think about this question. Even if you get a grant to pay for your buildings and equipment, your plant will still have many other costs every year, such as buying fish and paying workers. For your financial analysis, you need to estimate these costs and add them up to see how they compare with how much money you expect to earn from selling your fish. You also need to think about how unexpected circumstances—such as low fish runs or low selling prices—might affect your plant’s finances.

Planning a fish plant is a lot of work—but building, equipping, and operating a fish plant is much more work. Careful planning at the beginning can help you decide whether you can make enough money for the plant to operate successfully—and to make all that work worthwhile.
Reality Check Questions

There are many “reality check” questions you should ask yourself before planning a fish processing plant. Here we discuss seven of the most important. If you can’t answer “yes” to all of them, it would probably be difficult for a fish processing plant to succeed in your village.

1. Will there be enough fish?

In the Alaska fish business, there's no guarantee that there will always be fish. The run failures in western Alaska in recent years are a reminder of one of the biggest risks in the fish business—not enough fish.

Think carefully about whether your fish plant will be able to process and sell enough fish to cover your costs. In a low-run year, when you don't sell many fish, you still have to pay fixed costs such as loans and plant maintenance. If these fixed costs aren't spread out over enough fish, your costs per pound of fish can be very high.

2. Will fishermen sell you the fish?

Having a fish processing plant in your village doesn't guarantee that fishermen—even the fishermen from your village—will sell their fish to your plant. Other buyers may compete with you for fish. They may offer fishermen higher prices than you can offer. They may offer better services, such as tendering or cash loans. You need to think about whether you will be able to compete with other buyers.

Even if there isn't any competition at the moment, there might be in the future. The best years, when there are lots of fish or high prices, are also the years when you're most likely to have competition from other buyers.

3. Can you get a good plant manager?

To succeed, a fish plant must have a good manager. During the season, being a fish plant manager is a full-time job, 7 days a week, 24 hours a day. Managers need to be good with people: good at hiring people who can do the work, teaching them how to do it, and getting them to do the work well. Managers need to be good with equipment—from boat engines to ice-making machines to vacuum sealers. They need to know how to use equipment, how to maintain it, and how to fix it when it breaks—or how to find someone who can fix it.

Managers need to be good at keeping track of how much money is being spent and how much money is coming in. They need to find ways of not spending too much. They have to know what supplies are needed and to order them in time.

Can someone in your village manage your fish plant? If not, every year you will need to find someone who can come to the village to manage the plant during the season.
4. Can you get the workers you need?

Fish plant workers have to be there whenever fish are delivered, ready to work until all the fish are processed. If there are a lot of fish, they may have to work overtime and on holidays, bingo nights, or other special days when most people would rather not work. Fish processing needs to be done carefully so your products are good quality and can sell for a good price. Each worker needs to be trained—which costs time and money—so you need workers who will stay all season and come back in other years.

You will need to keep your costs down, so you won't necessarily be able to pay your workers high wages. Probably you won't be able to pay much more than other fish plants are paying.

Are there local residents who will do the work you need? If not, every year you will need to hire people from outside the village. Those workers will need places in the village where they can live and eat.

5. Can you get the water, power, and waste disposal you need?

A fish plant uses a lot of water and a lot of electricity. It also makes a lot of fish waste that has to be disposed of in ways that are strictly regulated. If the power goes off and you can't process fish or keep them cold, you can lose a lot of fish and a lot of money very quickly. If the waste disposal system isn't working, inspectors can shut the plant down. Can you get water and power and waste disposal—where and when you need it—at a price you can afford?

6. Can you find markets for your products?

A fish plant can't succeed just by producing high-quality products. You also have to be able to sell your products, at prices high enough to cover your costs. Chances are that customers won't come to your village to find you. You'll need to have someone working for you—either directly or as an agent—who knows about finding customers and selling fish. Finding customers and selling fish takes time and costs money.

You need to make sure your plant makes products customers want. They probably won't pay more for your products than they pay other fish processors for similar products. What they are willing to pay may vary widely, even from week to week, depending on what other choices they have. You need to plan how you will sell your fish before you process them—especially if you're selling fresh fish. You need to think just as carefully about selling fish as you do about processing fish—and be just as good at it.

7. Can you get reliable transportation to take your product to market?

Even if you produce high quality fish and have customers who want to buy them, your fish plant can't succeed unless you have a reliable way to get the fish to your customers at a reasonable cost. If you're selling fresh fish that need to be shipped by air, your transportation costs and reliability will depend mostly on what length runway your village has, what kind of planes can land on it, how often they can't fly because of bad weather, and how far they need to fly to get to a larger airport with jet service.
Planning Steps for a Village Fish Processing Plant

There are many steps in planning a fish plant. Here are some of the most important questions you’ll need to answer in planning your fish plant, deciding whether it can work, and getting financing. It takes experience and expertise to plan a fish plant. You’ll probably need advice. Make sure you get advice from people who understand fish markets, fish processing, and the special conditions in building and operating fish plants in Alaska villages.

**Goals:** Why do you want to start a fish plant in your village? Frequently mentioned goals are markets and better prices for fishermen, and processing jobs and income for village residents.

**Financial objectives:** How much money does the plant need to make? Even if making money isn’t your main goal, you still need to think about how much money you need to make to stay in business.

**Manager:** Who will manage the plant? A good manager is critical, particularly for your first season, when you are getting started.

**Products:** What products will the plant produce? Which products make the most sense will depend on your fish resources and your costs, compared with those of your competitors.

**Markets:** What are your markets? What kinds of buyers will want your products? What are their needs and expectations? Thinking about your markets before you build your plant is absolutely essential. Buying and processing fish without markets where you can sell your products is a sure way to fail.

**Prices:** What prices will buyers pay for your products? Fish prices rarely stay the same. They will probably go up or down in the future. Think about how prices may change, due to factors such as changes in the fish supply or changes in demand in markets for your products.

**Competitors:** Who will you be competing with? Your competitors may be other Alaska processors, or even fish farmers from other countries. Your products will have to be as good as their products—and you will have to match their prices.

**Sales:** Who will market and sell your products? You may handle your own sales, or work with a broker. Either way, selling fish takes time and costs money. And it is just as important for your plant as making good products.
Fish buying: *How much fish will you buy?* Think carefully about fish runs in your area, competition from other buyers, and how you will get fishermen to sell to you instead of to other buyers.

Fish costs: *What prices will you pay fishermen?* You will probably need to match the prices other buyers are paying. What you pay for fish will probably change from year to year, along with the prices you and your competitors are receiving for fish products.

Fish quality: *How will you get good quality fish?* You’ll need to make sure your fishermen handle their fish carefully so your products can meet the rising market quality standards. You may need to provide ice.

Tendering: *How will you get fish to the plant?* If fishermen can’t deliver their fish to your plant, you will need to provide tendering.

Plant capacity: *What is the most fish you will need to process per day?* How big a plant you need depends on how much fish you plan to buy and also on the timing of the harvest.

Plant location: *Where will your plant be?* You need a location where fishermen or tenders can deliver fish, with suitable soil conditions for building, and access to electricity, fresh water, and waste disposal.

Utilities: *How will you get electricity, water, and waste disposal?* You need to plan how much power, water and waste disposal you will need—and how you will get those services.

Regulations: *How will you meet government regulations?* Fish processing—like all food processing—is highly regulated, because fish that aren’t processed safely can make people sick or even kill them. You’ll need to meet many regulations and obtain permits from many agencies before you’ll be allowed to operate.

Building: *What type of building will you need?* Your fish plant must comply with special regulations for fish plant construction. It must be laid out so fish move efficiently from offloading to processing to storage.

Equipment: *What equipment will you need?* The equipment you buy will determine what products you can produce, how many workers you need, how much power you need, and your maintenance costs.

Workers: *How many workers will you need?* Also think about when you will need workers, what kinds of skills they will need, and whether you can hire workers from your village. If you bring in workers from outside the village, you need to plan for where they will live and eat.

Training: *What kinds of training will workers need?* Every year, new workers will need training in the many different kinds of work involved in fish processing.

Transportation: *How will you transport your products to market?* If you are producing fresh products, you also need to plan ways of dealing with problems, such as bad weather, that might delay shipments.

Business structure: *What type of business will the fish plant be?* Some of the options includes cooperatives, corporations, or private family businesses. It is important to get a good Board of Directors that learns enough about the fish processing business to make good decisions.

Financing: *Where will the money come from?* There are many costs in building a plant, buying equipment, and starting up the plant. How you finance these costs—from equity investments, grants, or loans—will determine how much debt you will need to pay back, as well as who controls the plant. You may need financing from more than one source.
Financial Analysis
A critical part of planning a fish plant is a financial analysis to see whether you can meet your financial objectives. For your financial analysis, you need to add up all your costs, and compare them with the money you expect to make from selling your fish.

Adding up Your Costs
Building and operating a fish plant involves many kinds of costs. Part of a financial analysis is estimating and adding up these different costs. Here are some of the most important costs you will need to think about:

• **Building and equipment costs:** If you get a grant to finance your plant, it may pay for your buildings and equipment. But if you borrow money, then you will have to make loan payments each year until the loan is paid off.

• **Overhead costs:** These include the manager's salary; building and equipment maintenance; insurance, accounting services, training and marketing.

• **Fish costs:** These include payments to fishermen, as well as costs of ice, tendering, and fish taxes. The price you pay fishermen will probably vary from year to year, depending on what other buyers are paying and what prices you sell your products for.

• **Processing costs:** These include employee wages and benefits, utilities, and packaging. Your processing costs will depend partly on how efficiently you use your labor—do the workers spend lots of time waiting for fish or equipment repairs? Costs will also depend on your processing yields—the weight of your final product compared with the weight of fish you buy.

• **Selling costs:** These include costs of shipping your product to market, cold storage charges, and sales commissions.
Comparing Revenues and Costs

You can estimate your revenues based on the volumes you expect to sell of each product and the prices you expect to receive. By comparing your estimated revenues with your estimated costs, you can see how much money the plant is likely to make or lose.

You won't know exactly what your costs and revenues will be until you actually build and operate your plant. Many important factors—such as prices and production volumes—are very difficult to predict in advance. As part of your financial analysis you should calculate how your plant's financial performance might be affected if your production or prices end up higher or lower than you expect. Your financial analysis can also help show you which products are most profitable and which kinds of equipment are most suitable. Government and lending organizations will usually want to see a financial analysis before giving you grants or loans.

Village Experience

About 15 local fish plants have been built in western Alaska in the past 20 years. The history of these plants is mixed. Some of them are no longer operating, and some have operated only intermittently or never operated. Some have had trouble finding markets for their products. Some have had trouble getting workers. Some have had problems with equipment that wasn't what they needed. Some have had trouble getting the state and federal permits they need to operate. Most have had trouble getting enough fish in recent years, with the disastrous crash in salmon runs in western Alaska.

But some village processing plants overcame these problems and operated and provided economic benefits to their villages. Two factors that helped plants succeed were reliable supplies of fish and dedicated managers. The most successful plants have mostly been smaller operations that didn't depend on having lots of fish, lots of workers, or lots of money.

Village processing plants can provide jobs for rural Alaskans: Emmonak residents filleting thawed chum salmon, April 2000.
Conclusions

Commercial fisheries are the most important economic resource for many Alaska villages. Fish processing plants provide an opportunity for villages to share in more of the value created by those fisheries. They can provide new markets for fishermen and jobs and income for village residents. But as we’ve said in this summary, many things have to come together for a village fish plant to succeed.

Consumers pay good money for good fish—but fish plants don’t get all the money. Much of the money goes to people in the distribution chain that gets the fish from the fish plant to the consumer. The big question is whether there will be enough for the fish plant to pay fishermen, processing workers and for utilities and other processing costs.

Past experiences show that realistic planning is critical. Circumstances differ in every village. If you are considering a fish plant for your village, be sure to think about whether you can pass the “reality check” questions, and whether you can earn enough money to stay in business. A fish plant may be a good opportunity for your village. Or you may decide that a simpler operation, such as a fish buying station, is a better choice.

Nothing is certain in life, and every successful business requires taking risks. But be realistic, and avoid wishful thinking. Careful planning can help your fish plant succeed not just on paper but after you actually build it.
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